BIG DAISHOWA

# Volume 5

## HIGH PERFORMANCE TOOLING SOLUTIONS




01/2025




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.

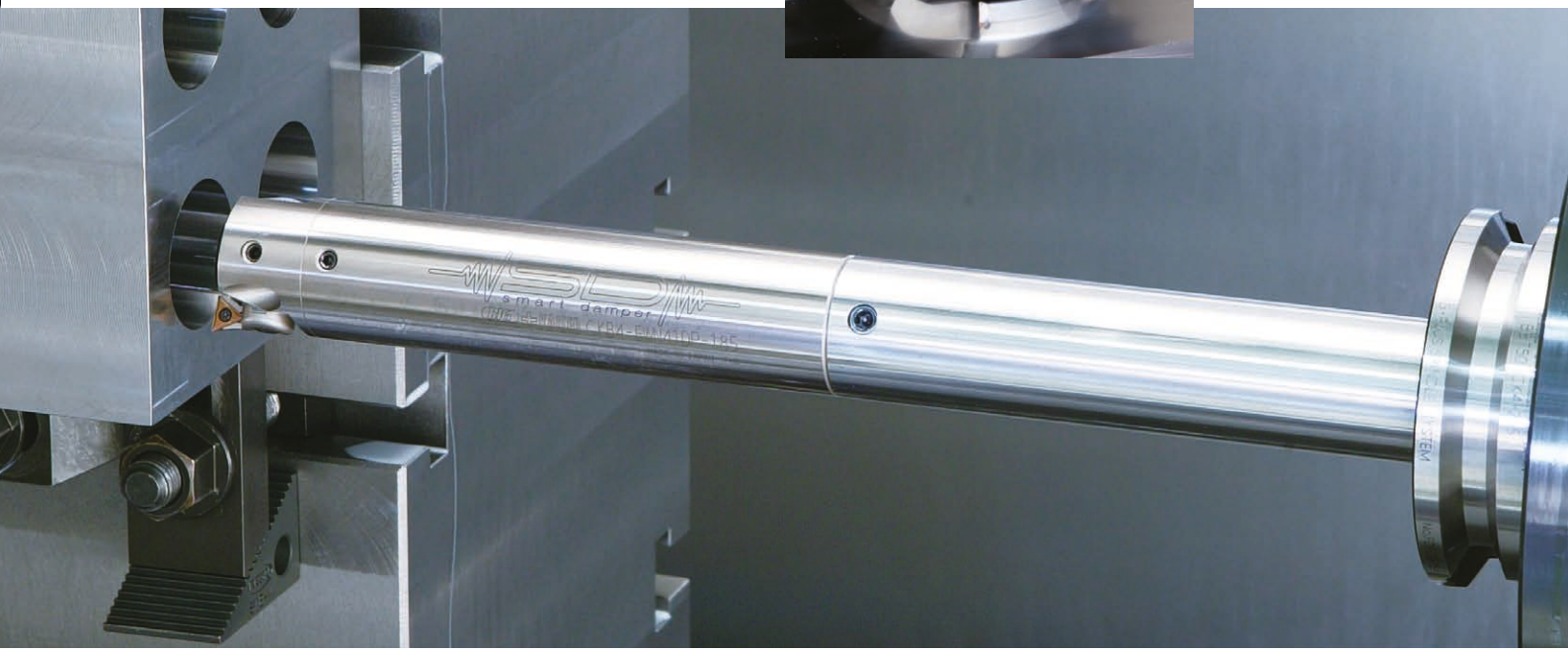


# OUR VISION OF **PRECISION**



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 | **> 700**<br>(>200 grinding machines) |
| Employees worldwide | **> 1.000** |
| Production floorspace worldwide | **> 200.000 m²** |
| Tech Centers | **3**<br>(Japan, Switzerland, USA) |

| | |
|---|---|
| Logistic Centers | **>15.000 m² in total**<br>(Japan, Switzerland, Germany, USA) |
| Wide product range | CAPTO 3-4-5-6-8 /<br>HSK 15-20-25-32-40-50-63-100-125 Type A-C-E-F-T /<br>BT/BBT30-40-50<br>DV/BDV30-40-50<br>CV/BCV30-40-50 |

# PRODUCTION POWER

**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

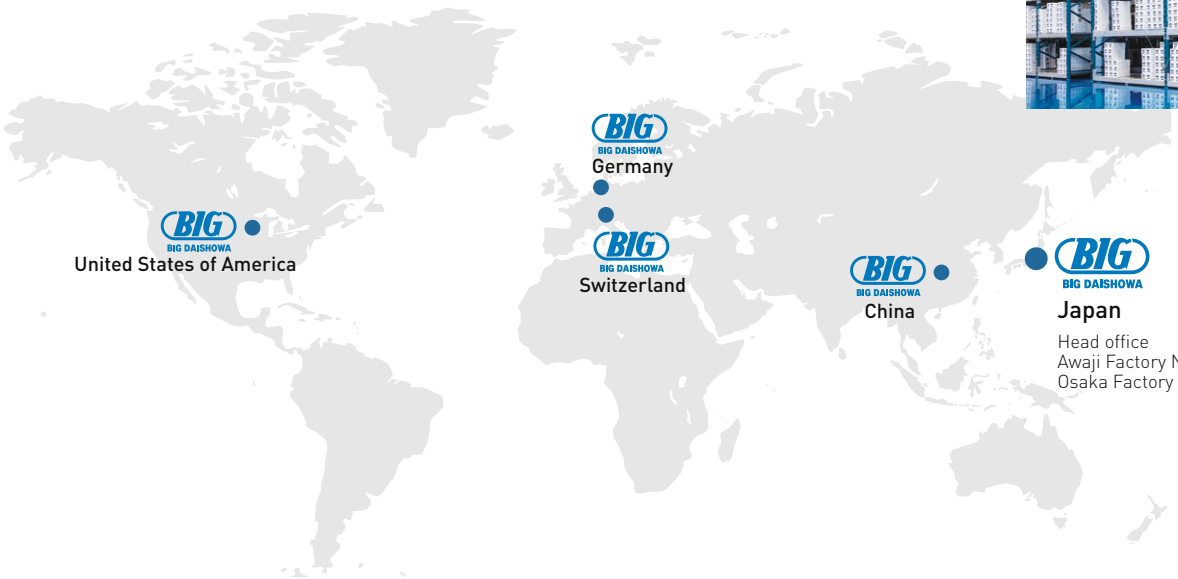
## State-of-the-art distribution center that consolidates inspected products for rapid shipment.

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







# Content


TOOL HOLDERS

| | | |
|---|---|---|
| Tool Holders BBT/BT (JIS B6339) | 59 | A.1 |
| Tool Holders BDV/DV (DIN 69871) | 141 | A.2 |
| Tool Holders HSK | 179 | A.3 |
| Tool Holders BIG CAPTO | 251 | A.4 |
| Tool Holders and Components CK | 273 | A.5 |
| Tool Holders Cylindrical Shank | 281 | A.6 |
| Modular Turning / Lathe Tools | 293 | A.7 |
| Collets & Accessories | 337 | A.8 |

MODULAR BORING TOOLS

| | | |
|---|---|---|
| Rough Boring Heads | 397 | B.1 |
| Fine Boring Heads with Peripherical Cutting Edge | 409 | B.2 |
| Fine Boring Heads with Centric Cutting Edge | 419 | B.3 |
| OD Turning Holders | 433 | B.4 |
| CK Presetter | 437 | B.5 |
| Indexable Inserts | 441 | B.6 |
| Spare Parts | 463 | B.7 |

CUTTING TOOLS

| | | |
|---|---|---|
| Indexable End Mills | 469 | C.1 |
| Chamfer Mills | 497 | C.2 |

MEASURING INSTRUMENTS

| | | |
|---|---|---|
| Measuring Instruments | 521 | D.1 |

## Collet Chucks

### MEGA Micro Chuck

Features ▶ P. 29




| | |
|---|---|
| BBT Shank | 60 |
| BDV Shank | 142 |
| HSK Shank | 180/236/244 |
| BIG CAPTO Shank | 252 |
| Cylindrical Shank | 282 |
| For N/C Lathe | 330 |


## Collet Chucks

### MEGA New Baby Chuck

Features ▶ P. 30




| | |
|---|---|
| BBT Shank | 62 |
| BDV Shank | 144 |
| HSK Shank | 182/238/245 |
| BIG CAPTO Shank | 254 |


## Collet Chucks

### MEGA E Chuck

Features ▶ P. 31




| | |
|---|---|
| BBT Shank | 66 |
| BDV Shank | 146 |
| HSK Shank | 186/246 |
| BIG CAPTO Shank | 257 |


## Collet Chucks

### New Baby Chuck

Features ▶ P. 32




| | |
|---|---|
| BT Shank | 68 |
| DV Shank | 147 |
| HSK Shank | 188 |
| Cylindrical Shank | 283 |
| For N/C Lathe | 325 |


## Collet Chucks

### New Baby Chuck Type NRA

Features ▶ P. 32




| | |
|---|---|
| BBT Shank | 73 |
| HSK Shank | 190 |


## Milling Chucks

### MEGA Double Power Chuck

Features ▶ P.33




| | |
|---|---|
| BBT Shank | 74 |
| BDV Shank | 149 |
| HSK Shank | 191/247 |
| BIG CAPTO Shank | 259 |


## Milling Chucks

### MEGA Perfect Grip

Features ▶ P. 34




| | |
|---|---|
| BBT Shank | 78 |
| DV Shank | 150 |
| HSK Shank | 195 |


## Milling Chucks

### New Hi-Power Milling Chuck

Features ▶ P. 37




| | |
|---|---|
| BBT Shank | 79 |
| BDV Shank | 151 |
| HSK Shank | 196 |
| BIG CAPTO Shank | 261 |
| CK Shank | 276 |
| Cylindrical Shank | 286 |


## Milling Chucks

### New Hi-Power Milling Chuck Type NRA

Features ▶ P.37




| | |
|---|---|
| BBT Shank | 82 |
| HSK Shank | 199 |


## Hydraulic Chuck

### Hydraulic Chuck

Features ▶ P.35/36




| | |
|---|---|
| BBT Shank | 83 |
| BDV Shank | 154 |
| HSK Shank | 200/240 |
| BIG CAPTO Shank | 262 |
| Cylindrical Shank | 285 |
| For N/C Lathe | 334 |


## Mold Chuck

### Mold Chuck

Features ▶ P.41




| | |
|---|---|
| BBT Shank | 92 |
| HSK Shank | 205 |


## Shrink Chuck

### Shrink Chuck




| | |
|---|---|
| BBT Shank | 93 |
| BDV Shank | 157 |
| HSK Shank | 206 |
| BIG CAPTO Shank | 265 |
| Cylindrical Shank | 288 |

## CK Shanks

### CK Shanks



Features ▶ P. 38


| | |
|---|---|
| BT/BBT Shank | 96 |
| DV/BDV Shank | 158 |
| HSK Shank | 208/249 |
| BIG CAPTO Shank | 289 |
| Reductions, Extensions | 274 |
| Cylindrical Shank | 289 |


## CK Shanks

### Smart Damper CK Shanks



Features ▶ P. 40


| | |
|---|---|
| BBT Shank | 101 |
| BDV Shank | 160 |
| HSK Shank | 210 |


## Tool Holders

### Face Mill Arbors Type FMH




| | |
|---|---|
| BBT Shank | 102 |
| BDV Shank | 161 |
| HSK Shank | 211 |
| BIG CAPTO Shank | 267 |


## Tool Holders

### Smart Damper Basic Holders for Milling Heads



Features ▶ P. 42/43


| | |
|---|---|
| BBT Shank | 104 |
| BDV Shank | 163 |
| HSK Shank | 213 |


## Tool Holders

### Super Keyless Chuck




| | |
|---|---|
| BBT Shank | 106 |
| HSK Shank | 215 |


## Tool Holders

### Morse Taper Holders




| | |
|---|---|
| BBT Shank | 107 |
| BIG CAPTO Shank | 270 |


## Tool Holders

### Side Lock Holders Type TSL




| | |
|---|---|
| BBT Shank | 108 |
| HSK Shank | 215 |
| BIG CAPTO Shank | 268 |


## Tool Holders

### Side Lock Holders for Weldon




| | |
|---|---|
| BBT Shank | 109 |
| BDV Shank | 165 |
| HSK Shank | 216 |
| BIG CAPTO Shank | 269 |


## Tool Holders

### Built-in Damper SMART DAMPER Screw-On-Holder




| | |
|---|---|
| BBT Shank | 110 |


## Tool Holders

### Screw-On-Holder




| | |
|---|---|
| BBT Shank | 111 |
| BDV Shank | 166 |
| HSK Shank | 217 |


## Tool Holders

### Side Cutter Arbors




| | |
|---|---|
| BBT Shank | 112 |
| BIG CAPTO Shank | 270 |


## Tool Holders

### BIG CAPTO Basic Holders




| | |
|---|---|
| BBT Shank | 113/272 |

## Tapping Holders

MEGA Synchro Tapping Holder
Features ▸ P. 44




| | |
|---|---|
| BBT Shank | 114 |
| BDV Shank | 167 |
| HSK Shank | 219 |
| BIG CAPTO Shank | 271 |
| CK Shank | 277 |
| Cylindrical Shank | 290 |
| For N/C Lathe | 331 |


## Angle Heads

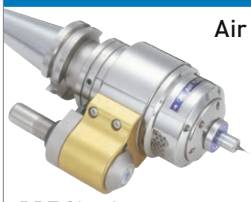
Angle Heads
Features ▸ P. 46




| | |
|---|---|
| BBT Shank | 116 |
| BDV Shank | 169 |
| HSK Shank | 221 |
| Stop Block | 395 |


## High-Speed Air Spindle

Air Turbine Spindle
Features ▸ P. 47




| | |
|---|---|
| BBT Shank | 136 |
| BDV Shank | 175 |
| HSK Shank | 233 |
| Stop Block | 395 |


## Tool Holders and Components CK

Reductions
▸ 274



Extensions
▸ 275

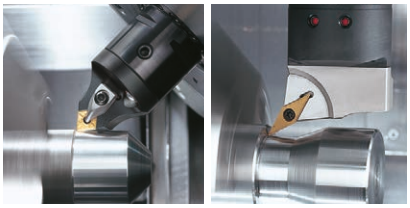


MEGA Synchro Tapping Holder
Features ▸ P. 44
▸ 277



## Modular Turning

Modular Turning




| | |
|---|---|
| Millturn Tooling | 294 |
| BBT-M Shank | 296 |
| HSK-T Shank | 306 |
| BIG CAPTO Shank | 314 |


## Smart Damper Turning

Smart Damper Turning
Features ▸ P. 43




| | |
|---|---|
| HSK-T Shank | 313 |
| BIG CAPTO Shank | 324 |
| Cylindrical Shank | 332 |


## N/C Lathe Tooling

N/C Lathe Tooling




| | |
|---|---|
| N/C Lathe Tooling | 325 |


## Collets & Accessories

Collets & Accessories



Wrench




| | |
|---|---|
| Accessories | 340 |


## Accessories

Tooling Mate
▸ 385



Torque Fit
▸ 387



## Accessories

Kombi Grip
▸ 386



Assembling unit ST Lock
▸ 386



## Accessories

TK Cleaners
▸ 388



α Wiper Cleaners
▸ 388

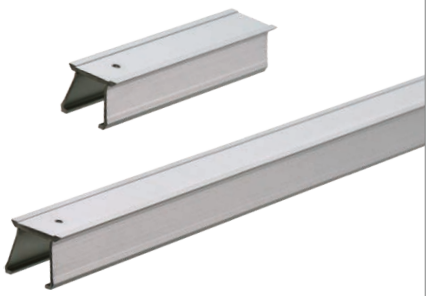


Spindle Cleaners
▸ 389



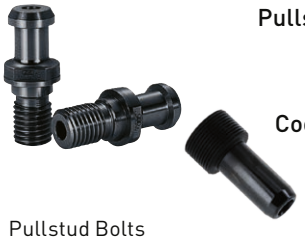
## Accessories

T-Slot Clean




| | |
|---|---|
| T-Slot Clean | 391 |

## Accessories



Pullstud Bolts

Coolant Pipe


Pullstud Bolts 392
Coolant Pipe 250
Pullstud Wrenches 393


## Rough Boring

MW Rough Boring Heads

Features ▶ P. 39




MW 398


## Rough Boring

SW Rough Boring Heads
SW Smart Damper Rough Boring Heads

Features ▶ P. 39




SW 399
SW Smart Damper 403


## Rough Boring

Large Diameter Rough Boring

Features ▶ P. 40




Large Diameter Rough Boring 405


## Fine Boring

EWN Fine Boring Heads
EWN Smart Damper
Fine Boring Head

Features ▶ P. 39




EWN 410
EWN Smart Damper 411


## Fine Boring

EWE Digital Fine Boring Heads

Features ▶ P. 40




EWE 412


## Fine Boring

EWB Balanced Fine Boring Head

Features ▶ P. 40




EWB 414


## Fine Boring

Large Diameter Fine Boring Tools

Features ▶ P. 40




Large Diameter Fine Boring 415


## Fine Boring

Fine Boring Heads with Centric Cutting Edge

Features ▶ P. 40




EWN 420/422
EWE 423
EWB 424


## Fine Boring

EW MicroFine Boring Heads




EW Micro Head 431


## Fine Boring

CK Carbide Cylindrical Shank




EW 432


## OD Turning Holders

EWN Head Type S/M/L




Type S 434
Type M 434
Type L 435

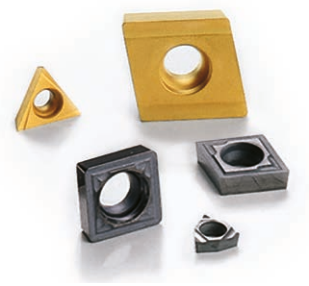
## CK Presetter

CK Presetter




CKP 437


## Indexable Inserts




Indexable Inserts 442


## Cutting Conditions Table / Spare Parts




Cutting Conditions Table 451
Spare Parts 464


## Cutting Tools

Fullcut Mill FCM

Features ▶ P. 50




BBT Shank 470
BDV Shank 472
HSK Shank 473
BIG CAPTO Shank 476
Cylindrical Shank 477


## Cutting Tools

Fullcut Mill FCR

Features ▶ P. 51




BBT Shank 484
BDV Shank 486
HSK Shank 487
Cylindrical Shank 489


## Cutting Tools

Fullcut Mill FCM - Arbor Type




Arbor Type 479


## Cutting Tools

Surface Mill

Features ▶ P. 52




Surface Mill 494


## Cutting Tools

Speed Finisher




Speed Finisher 495


## Cutting Tools

C-Cutter




Standard Type 498
CKB Type 498
Universal Type 499


## Cutting Tools

C-Cutter Mini

Features ▶ P. 52




Multi Insert Type 502
Single Insert Type 503
Bolt Hole Type 505
Spot Facing Type 506
CKB Type 507
Universal Type 507


## Cutting Tools

R-Cutter

Features ▶ P. 53




Front and Back Chamfering 510
Front Chamfering 511
CKB Type 512


## Cutting Tools

C-Centering Cutter

Features ▶ P. 53




C-Centering Cutter 514

## Cutting Tools

Center Boy



Center Boy 515

## Cutting Tools

C-Cutter Boy



C-Cutter Boy 516

## Cutting Tools

BF-Cutter



BF-Cutter 517

## Cutting Tools

CK Chamfering Tool for Boring Tools



CR 519

## Measuring Tools

Point Master
Accu Center



PMP 522
PMC 523
PMG 524
Accu Center 527

## Measuring Tools

Tool Master
▶ 527
Features ▶ P. 49



Base Master
▶ 525



## Measuring Tools

Centering Tool for Lathes
Features ▶ P. 49



Centering Tool for Lathes 534

## Measuring Tools

Lathe Master



Lathe Master 534

## Measuring Tools

Alignment Tool
▶ 528



Dyna Force
▶ 529

## Measuring Tools

Dyna Test
Features ▶ P.55



BBT Shank 530
BDV Shank 530
NT Shank 530
HSK Shank 531
BIG CAPTO Shank 531

## Measuring Tools

Dyna Contact



Dyna Contact 532

## Measuring Tools

Level Master
Features ▶ P. 56



Level Master 533

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

(Example) BBT30 - 32-L150 — Index with this model, excluding BBT, BT, BDV, DV, HSK, ST and C.


| Number | Product Name | | Listed Page |
|---|---|---|---|
| 20/32/50-L□ | Dyna Test | HSK-A | 531 |
| | Dyna Test | HSK-E | 531 |
| | Dyna Test | HSK-F | 531 |
| 25/32/40-L□ | Dyna Test | BIG CAPTO | 531 |
| 32/50-L□ | Dyna Test | BBT | 530 |
| | Dyna Test | NT | 530 |
| 50-L□ | Dyna Test | BDV | 530 |
| 694.□ | Insert Clamping Screw Set | | 449 |

## A

| | | | |
|---|---|---|---|
| AC□CS | Collet Stoppers for C Collet | | 365 |
| ACCU-C□ | Accu Center | | 527 |
| AG35- | AG35 Adapter for ANGLE HEAD | | 129, 173, 227 |
| AG45/NBS□- | Angle Head New Baby Chuck Type | BBT | 131 |
| | Angle Head New Baby Chuck Type | HSK-A | 229 |
| AG90- | Angle Head New Baby Chuck Type | BBT | 120 |
| AG90- | Angle Head Compact Type | BBT | 119 |
| | Angle Head Compact Type | HSK-A | 221 |
| AG90- | Angle Head Light Weight New Baby Chuck Type | BBT | 116 |
| | Angle Head Light Weight Tapper Type | BBT | 117 |
| AG90/AGH□- | Angle Head Build-Up Type | BBT | 128 |
| | Angle Head Build-Up Type | BDV | 172 |
| | Angle Head Build-Up Type | HSK-A | 226 |
| AG90/HMC□- | Angle Head HMC Type | BBT | 130 |
| | Angle Head HMC Type | BDV | 171 |
| | Angle Head HMC Type | HSK-A | 228 |
| AG90/NBS□- | Angle Head New Baby Chuck Type | BBT | 121 |
| | Angle Head New Baby Chuck Type | BDV | 169 |
| | Angle Head New Baby Chuck Type | HSK-A | 222 |
| AG90/NBS□W- | Angle Head New Baby Chuck Twin Head Type | BBT | 126 |
| | Angle Head New Baby Chuck Twin Head Type | HSK-A | 224 |
| AG90/NBS□-□LS | Angle Head New Baby Chuck Extralong Type | BBT | 124 |
| AG90-CA□SG- | Angle Head Light Weight Small Bore Type | BBT | 118 |
| AG90-CA□SGM- | Angle Head Small Bore Type | BBT | 134 |
| | Angle Head Small Bore Type | HSK-A | 232 |
| AGB□- | Angle Head Small Bore Type (Base Unit) | BBT | 134 |
| | Angle Head Small Bore Type (Base Unit) | HSK-A | 232 |
| AGU/NBS□- | Angle Head Universal Type | BBT | 132 |
| | Angle Head Universal Type | BDV | 174 |
| | Angle Head Universal Type | HSK-A | 230 |
| AGU30/NBS□- | Angle Head AGU30 Type | BBT | 133 |
| | Angle Head AGU30 Type | HSK-A | 231 |
| ARG | Indexable Inserts for Fullcut Mill FCM | | 480 |
| ATC□ | Alignment Tool for ATC arm | | 528 |
| AWC□ | α Wiper Cleaners | | 388 |

## B

| | | | |
|---|---|---|---|
| B□ | Insert Holder Clamp Screw | | 465 |
| B□-DCLNR | Cartridges for Boring Bar / Turning Adapter | for Lathes | 333 |
| B□-DDUNR | Cartridges for Boring Bar / Turning Adapter | for Lathes | 333 |
| B□-DTFNR | Cartridges for Boring Bar / Turning Adapter | for Lathes | 333 |
| B□-SCLCR | Cartridges for Boring Bar / Turning Adapter | for Lathes | 332 |
| B□-SDUCR | Cartridges for Boring Bar / Turning Adapter | for Lathes | 332 |

| | | | |
|---|---|---|---|
| **B□-STUCR** | Cartridges for Boring Bar / Turning Adapter | **for Lathes** | **332** |
| **B□-STUPR** | Cartridges for Boring Bar / Turning Adapter | **for Lathes** | **332** |
| **B□-SVPBR** | Cartridges for Boring Bar / Turning Adapter | **for Lathes** | **332** |
| **BBT50-BBT40-□** | Adapter for BBT50 taper shank | **BBT** | **471** |
| **BFM□** | BF-Cutter | **ST** | **517** |
| **BFN□** | Square Tool Holder | | **405** |
| **BH** | Square Tool Holder | **BBT-M** | **304** |
| | Square Tool Holder | **HSK-T** | **310** |
| | Square Tool Holder | **BIG CAPTO** | **320** |
| **BM-50GH** | Base Master | | **525** |
| **BM-50H** | Base Master | | **525** |
| **BM-50MH** | Base Master | | **525** |
| **BMM-□** | Base Master Mini | | **526** |
| **BPS□-□** | Baby Perfect Seals | | **354** |
| **BR□** | Balance Ring Clamp Screw (EWB BORING HEAD) | | **467** |
| **BRG** | Indexable Inserts for Fullcut Mill FCR | | **490** |
| **BSL** | Boring Bar Holder | **BBT-M** | **305** |
| | Boring Bar Holder | **HSK-T** | **312** |
| | Boring Bar Holder | **BIG CAPTO** | **322** |
| **BSLA** | Sleeve for BSL Boring Bar Holders | | **373** |
| **BW-CKB□-EWN** | Balance Weight (OD Turning Holders) | | **434** |
| **BW-M□** | Balance Weight (OD Turning Holders) | | **434** |
| **BWN200FB** | Balance Weight (Large Diameter Fine Boring Tools) | | **415** |
| **BWN200FB-AL** | Balance Weight (Large Diameter Fine Boring Tools) | | **416, 417** |
| **BWN200PB-AL** | Balance Weight (Large Diameter Fine Boring Tools) | | **416, 417** |


## C


| | | | |
|---|---|---|---|
| **C□-** | C Collets | | **365** |
| **C□-** | BIG CAPTO Basic Holders | **BBT** | **113** |
| | BIG CAPTO Basic Holders | **BIG CAPTO** | **272** |
| **C□-30/45/60** | C-Cutter Mini, Single Insert Type (Front Chamfering) | **ST** | **504** |
| **C□-3060/45/6030B** | C-Cutter Mini, Multi Insert Type (Front & Back Chamfering) | **ST** | **502** |
| **C□-45B** | C-Cutter Mini, Single Insert Type (Front & Back Chamfering) | **ST** | **503** |
| **C□C** | C-Cutter Standard Type | **ST** | **498** |
| **C□-C□** | Extensions / Reductions | **BIG CAPTO** | **272** |
| **C0525** | C-Cutter Boy | **ST** | **516** |
| **C0825** | Base Clamp Screw (Large Diameter Boring Tools) | | **467** |
| **C0830** | Weight Clamp Screw (Large Diameter Boring Tools) | | **467** |
| **C1030** | Cartridge Clamp Screw (Large Diameter Rough Boring Tools) | | **467** |
| **C1250** | Slide Clamp Screw (EWN200 Boring Head large diameter) | | **467** |
| **C1603B** | Indexable Insert for C-Cutter Boy | | **516** |
| **C5/85A-40** | C-Cutter Universal Type | **ST** | **499** |
| **CA□** | Collet for Angle Head Small Bore Type | | **384** |
| **CB□-□** | Blade for CK Chamfering Tool | | **519** |
| **CB□-□CW** | Blade for CK Chamfering Tool (Indexable Type) | | **519** |
| **CBN91-CKB5** | Offsetter (OD Turning Tools) | | **435** |
| **CB-TW200** | Clamp Base (Large Diameter Rough Boring Tools) | | **405** |
| **CB-TW200-AL** | Aluminum Clamp Base (Large Diameter Rough Boring Tools) | | **406** |
| **CBY□** | Center Boy | **ST** | **515** |
| **CBY□** | Indexable Bit for Center Boy | | **515** |
| **CC□□06** | Indexable Inserts for Boring Head | | **446** |
| **CC□□07** | Indexable Inserts for Boring Head | | **446** |
| **CC□□07** | Indexable Inserts for BF-Cutter | | **518** |
| **CC□□09** | Indexable Inserts for Boring Head | | **446** |
| **CC□□09** | Indexable Inserts for BF-Cutter | | **518** |
| **CC□□12** | Indexable Inserts for Boring Head | | **447** |
| **CC□□16** | Indexable Inserts for Boring Head | | **447** |
| **CG0525S** | C-Cutter Boy - Guide Pad Set | | **516** |
| **CK□-EWN□DP-** | EWN Smart Damper Fine Boring Head | | **411** |

## C


| | | | |
|---|---|---|---|
| **CK□S** | CK Set Screw | | 450 |
| **CK6-ATE□** | Tapping Holders | | 278 |
| **CKB□-** | CK Shanks | **BBT** | 96 |
| | CK Shanks | **BDV** | 158 |
| | CK Shanks | **HSK-A** | 208 |
| | CK Shanks | **HSK-F** | 249 |
| | CK Shanks | **BIG CAPTO** | 266 |
| | CK Shanks | **ST** | 289 |
| **CKB□-□** | Reductions | | 274 |
| **CKB□-□** | Extensions | | 275 |
| **CKB□-□-□** | CK Long Shanks | **BBT** | 100 |
| **CKB□-C□** | C-Cutter CKB Type | | 498 |
| **CKB□-C□-45B-□** | C-Cutter Mini CKB Type | | 507 |
| **CKB□DP** | Smart Damper Extensions | | 275 |
| **CKB□DP-** | Smart Damper CK Shanks | **BBT** | 101 |
| | Smart Damper CK Shanks | **BDV** | 160 |
| | Smart Damper CK Shanks | **HSK-A** | 210 |
| **CKB□-HMC□** | Milling Chucks | | 276 |
| **CKB□-MGT□** | MEGA Synchro Tapping Holder | | 277 |
| **CKB□-RC□B-□** | R-Cutter CKB Type | | 512 |
| **CKB□-SL□** | Offsetter (OD Turning Tools) | | 434 |
| **CKB□-SW□DP-** | SW Smart Damper Rough Boring Heads | | 403 |
| **CKB7-SLN□ALDP-** | Smart Damper for Large-Diameter Boring | | 407, 417 |
| **CKP150-AM** | CK Presetter (Arm) | | 438 |
| **CKP150ZA** | CK Presetter | | 438 |
| **CKP550** | CK Presetter | | 439 |
| **CKP-DGZ** | CK Presetter (Dial Gauge Set) | | 438 |
| **CKP-DGZS** | CK Presetter (Dial Gauge Set) | | 438 |
| **CM□** | Indexable Inserts for C-Cutter Mini | | 508 |
| **CM□** | Indexable Inserts for BF-Cutter | | 518 |
| **CM□** | Indexable Inserts for Surface Mill | | 494 |
| **CM□-45B** | C-Cutter Mini, Single Insert Type (Bolt Hole & Tap Starting Hole -Front & Back Chamfer) | **ST** | 505 |
| **CM5/85A-30** | C-Cutter Mini Universal | **ST** | 507 |
| **CN□** | C-Centering Cutter | **ST** | 514 |
| **CN□** | Inserts for C-Centering Cutter | | 514 |
| **CPG20-□** | CPG Collet | | 366 |
| **CP-JA** | Joint Adapter (For CPG Collet) | | 366 |
| **CPW** | Clamping Wrench (For HSK Coolant Pipe) | | 250 |
| **CR□-□** | CK Chamfering Tool for Boring Tools | | 519 |
| **CR1025** | Battery (For EWE Digtal Boring Head) | | 466 |
| **CT90** | Stylus for CTL-90 | | 534 |
| **CTL-90** | Centering Tool for Lathes | | 534 |
| **CW□A/AZX/ADLC** | Inserts for C-Cutter | | 500 |
| | Insert for CK Chamfering Tool | | 519 |
| **CZ□-45B-** | C-Cutter Mini, Single Insert Type (Back Chamfering) | **ST** | 506 |


## D


| | | | |
|---|---|---|---|
| **DA-T□** | Wrench | | 302, 493 |
| **DC-□P** | Dyna Contact | | 532 |
| **DCLN□** | 90° Integral Tool Holder Type F | **BIG CAPTO** | 319 |
| **DCLNN** | 45° Integral Tool Holder Type S | **BIG CAPTO** | 317 |
| **DDHNN** | 45° Integral Tool Holder Type S | **BIG CAPTO** | 317 |
| **DDJN□** | 90° Integral Tool Holder Type F | **BIG CAPTO** | 319 |
| **DF□** | Dyna Force | | 529 |
| **DFA-1** | Dyna Force / Display | | 529 |
| **DFC-1** | Dyna Force / Cable | | 529 |
| **DF-P□** | Exclusive Pullstud Bolts for Dyna Force | | 529 |

## E


| | | | |
|---|---|---|---|
| **EB□AJ** | Insert Holder for Boring | | 429 |
| **EB□N** | Insert Holder for Boring | | 426 |
| **EBH□-□** | Insert Holders for EWB | | 414 |
| **EC□** | Straight Collet for Boring Heads | | 426, 430 |
| **ECGM** | Indexable Inserts for Boring | | 442 |
| **EN15** | Insert Holder for EW Micro Head | | 431 |
| **ENH□-□/E/F/J/S** | Insert Holder for Fine Boring Head | | 413 |
| **ENH7-□/F/J/S** | Insert Holder for Large Diameters / EWN Boring Head | | 415 |
| **EPS□-□** | MEGA E Perfect Seals | | 357 |
| **ERC□** | MEGA ER Collets | | 358 |
| **ERN□** | ER Nuts | | 360 |
| **EWB□-□CK□** | EWB Balanced Fine Boring Head | | 414 |
| **EWB2-□CK□** | EWB Fine Boring Head | | 424 |
| **EWE-** | Common Parts for EWE Boring Head | | 466 |
| **EWE□-□CK□** | EWE Digital Fine Boring Head | | 423 |
| **EWE□-□CKB□** | EWE Digital Fine Boring Head | | 412 |
| **EWN□-□CKB□** | EWN Fine Boring Heads | | 410 |
| **EWN04□-** | EWN Fine Boring Head | | 420 |
| **EWN2-□CK□** | EWN Fine Boring Head | | 422, 434 |
| **EWN2-□ER□** | EWN Fine Boring Head (ER Chuck Type) | | 422 |
| **EWN200** | EWN Large Diameter Boring Head | | 415 |
| **EWN200AL** | EWN Large Diameter Boring Head | | 416 |


## F


| | | | |
|---|---|---|---|
| **F□** | Basic Holder Type F (90°) | **BBT-M** | 303 |
| | Basic Holder Type F (90°) | **HSK-T** | 309 |
| | Basic Holder Type F (90°) | **BIG CAPTO** | 318 |
| **F□-DCLN□** | Cartridges Type F for Turning Tool (90°) | | 301 |
| **F□-DDJN□** | Cartridges Type F for Turning Tool (90°) | | 301 |
| **F□-DTJN□** | Cartridges Type F for Turning Tool (90°) | | 301 |
| **F□-SVQB□** | Cartridges Type F for Turning Tool (90°) | | 301 |
| **FCM□-** | Fullcut Mill FCM - for Standard Type | **BBT** | 470 |
| | Fullcut Mill FCM - for Standard Type | **BDV** | 472 |
| | Fullcut Mill FCM - for Standard Type | **HSK-A** | 473 |
| | Fullcut Mill FCM - for Standard Type | **HSK-E** | 475 |
| | Fullcut Mill FCM - for Standard Type | **BIG CAPTO** | 476 |
| | Fullcut Mill FCM - for Standard Type | **ST** | 477 |
| | Fullcut Mill FCM - for Oversize Type | **ST** | 478 |
| **FCM□L-** | Fullcut Mill FCM - for Long Nose Type | **BBT** | 471 |
| | Fullcut Mill FCM - for Long Nose Type | **HSK-A** | 474 |
| **FCR□-** | Fullcut Mill FCR - for Standard Type | **BBT** | 484 |
| | Fullcut Mill FCR - for Standard Type | **BDV** | 486 |
| | Fullcut Mill FCR - for Standard Type | **HSK-A** | 487 |
| | Fullcut Mill FCR - for Oversize Type | **ST** | 489 |
| **FCR□L-** | Fullcut Mill FCR - for Long Nose Type | **BBT** | 485 |
| | Fullcut Mill FCR - for Long Nose Type | **HSK-A** | 488 |
| **FK□-** | FK Wrenches | | 369 |
| **FLN□** | Flange for Large Diameter Boring Tools | | 405 |
| **FM□-PLS□** | Speed Finisher | | 495 |
| **FM□-SFM□** | Surface Mill | | 494 |
| **FMH□-** | Face Mill Arbors Type FMH | **BBT** | 102 |
| | Face Mill Arbors Type FMH | **BDV** | 161 |
| | Face Mill Arbors Type FMH | **HSK-A** | 211 |
| | Face Mill Arbors Type FMH | **BIG CAPTO** | 267 |
| **FMH□-FCM□** | Fullcut Mill FCM - Arbor Type | | 479 |
| **FONBC□-□** | FONBC Coolant Collets | | 348 |
| **FS□LC** | Hook wrench for Super Keyless Chuck (FS) | | 372 |

## G


| | | | |
|---|---|---|---|
| GRG-02 | Grease Gun | | 450 |


## H


| | | | |
|---|---|---|---|
| H□ | Radial Adjusting Screw (MW BORING HEAD) | | 464 |
| H□ | Screw for Side Lock Holder / EWN / EWE / EWB | | 464 |
| H□ | Locking Screw (For Center Boy) | | 515 |
| H□FS□ | Clamping Screw for Mold Chuck | | 384 |
| HDA□ | Adjusting Screw for Hydraulic Chuck | | 371 |
| HDC□ | Hydraulic Chuck Standard | BBT | 87 |
| | Hydraulic Chuck Standard | BDV | 156 |
| | Hydraulic Chuck Standard | HSK-A | 203 |
| | Hydraulic Chuck Standard | BIG CAPTO | 264 |
| HDC□ | Hydraulic Chuck Lathe Type - Standard | for Lathes | 334 |
| HDC□E | Hydraulic Chuck E Type | BBT | 91 |
| HDC□J | Hydraulic Chuck Jet Through | BBT | 85 |
| | Hydraulic Chuck Jet Through | BDV | 155 |
| | Hydraulic Chuck Jet Through | HSK-A | 202 |
| | Hydraulic Chuck Jet Through | BIG CAPTO | 263 |
| HDC□L | Hydraulic Chuck Standard | BBT | 89 |
| | Hydraulic Chuck Standard | BDV | 156 |
| HDC□S | Hydraulic Chuck Super Slim | BBT | 83 |
| | Hydraulic Chuck Super Slim | BDV | 154 |
| | Hydraulic Chuck Super Slim | HSK-A | 200 |
| | Hydraulic Chuck Super Slim | HSK-E | 240 |
| | Hydraulic Chuck Super Slim | HSK-F | 248 |
| | Hydraulic Chuck Super Slim | ST | 285 |
| | Hydraulic Chuck Super Slim | BIG CAPTO | 262 |
| HDC□S-□UP | Hydraulic Chuck Ultra Precision Type | HSK-E | 243 |
| HDC□XS | Hydraulic Chuck Extra Slim | HSK-E | 242 |
| HMA-M□ | Adjusting Screw for MEGA-D / HMC | | 367 |
| HMC□ | New Hi-Power Milling Chuck | BIG CAPTO | 261 |
| HMC□S | New Hi-Power Milling Chuck Type S | BBT | 79 |
| | New Hi-Power Milling Chuck Type S | BDV | 151 |
| | New Hi-Power Milling Chuck Type S | HSK-A | 196 |
| | New Hi-Power Milling Chuck Type S | BIG CAPTO | 261 |
| HMC□S-□NRA | New Hi-Power Milling Chuck Type NRA | BBT | 82 |
| | New Hi-Power Milling Chuck Type NRA | HSK-A | 199 |
| HMC12J | New Hi-Power Milling Chuck Type HMC12J | BBT | 81 |
| | New Hi-Power Milling Chuck Type HMC12J | BDV | 153 |
| | New Hi-Power Milling Chuck Type HMC12J | HSK-A | 198 |
| | New Hi-Power Milling Chuck Type HMC12J | ST | 286 |
| HSK□-CP | Coolant Pipes | | 250 |
| HSK□-CPM | Coolant Pipes 1° swing type (DIN) for Form A/E | | 250 |
| HSK□-PG | HSK Plug Screw | | 250 |


## I


| | | | |
|---|---|---|---|
| ISL□- | Side Lock Holders for Weldon | BBT | 109 |
| | Side Lock Holders for Weldon | BDV | 165 |
| | Side Lock Holders for Weldon | HSK-A | 216 |
| | Side Lock Holders for Weldon | BIG CAPTO | 269 |


## J


| | | | |
|---|---|---|---|
| JS-M | Joint Screw (For CPG Collet) | | 366 |

## K


| | | | |
|---|---|---|---|
| KG□R | Kombi Grip | | 386 |
| KLC□- | Super Keyless Chuck | BBT | 106 |


## L


| | | | |
|---|---|---|---|
| LM-□ | Lathe Master | | 534 |
| LM□CS | Lathe Master Collar Set | | 534 |
| LSN35 | Lifting Screw Set for Speed Finisher | | 496 |
| LVM-01 | Level Master | | 533 |
| LVM-WL | Level Master Wireless | | 533 |


## M


| | | | |
|---|---|---|---|
| M□- | Screw-On Holder | BBT | 111 |
| | Screw-On Holder | BDV | 166 |
| | Screw-On Holder | HSK-A | 217 |
| M1010-25 | Extension (OD Turning Holders) | | 434 |
| M25526IP-2P | Insert Holder Clamp Screw (EW MICRO HEAD) | | 465 |
| MEC□-□ | MEGA E Collets | | 356 |
| MEGA□D- | MEGA Double Power Chuck Type D | BBT | 74 |
| | MEGA Double Power Chuck Type D | HSK-A | 191 |
| | MEGA Double Power Chuck Type D | HSK-F | 247 |
| MEGA□DPG | MEGA Perfect Grip | BBT | 78 |
| | MEGA Perfect Grip | DV | 150 |
| | MEGA Perfect Grip | HSK-A | 195 |
| MEGA□DS- | MEGA Double Power Chuck Type DS | BBT | 76 |
| | MEGA Double Power Chuck Type DS | BDV | 149 |
| | MEGA Double Power Chuck Type DS | HSK-A | 193 |
| | MEGA Double Power Chuck Type DS | HSK-F | 247 |
| | MEGA Double Power Chuck Type DS | BIG CAPTO | 259 |
| MEGA□E- | MEGA E Chuck | BBT | 66 |
| | MEGA E Chuck | BDV | 146 |
| | MEGA E Chuck | HSK-A | 186 |
| | MEGA E Chuck | HSK-F | 246 |
| | MEGA E Chuck | BIG CAPTO | 257 |
| MEGA□N- | MEGA New Baby Chuck | BBT | 62 |
| | MEGA New Baby Chuck | BDV/DV | 144 |
| | MEGA New Baby Chuck | HSK-A | 182 |
| | MEGA New Baby Chuck | HSK-E | 238 |
| | MEGA New Baby Chuck | HSK-F | 245 |
| | MEGA New Baby Chuck | BIG CAPTO | 254 |
| MEGA□S | MEGA Micro Chuck Type S | BBT | 61 |
| | MEGA Micro Chuck Type S | BDV/DV | 143 |
| | MEGA Micro Chuck Type S | HSK-A | 181 |
| | MEGA Micro Chuck Type S | HSK-E | 237 |
| | MEGA Micro Chuck Type S | HSK-F | 244 |
| | MEGA Micro Chuck Type S | ST | 282 |
| | MEGA Micro Chuck Type S | BIG CAPTO | 253 |
| | MEGA Micro Chuck Type S | for Lathes | 330 |
| MEGA□S-□T | MEGA Micro Chuck Type T | BBT | 60 |
| | MEGA Micro Chuck Type T | BDV/DV | 142 |
| | MEGA Micro Chuck Type T | HSK-A | 180 |
| | MEGA Micro Chuck Type T | HSK-E | 236 |
| | MEGA Micro Chuck Type T | HSK-F | 244 |
| | MEGA Micro Chuck Type T | BIG CAPTO | 252 |
| MEGAER□ | MEGA ER Grip | for Lathes | 328 |
| MEN | MEGA E Nuts | | 356 |
| MER□SN | MEGA ER Solid Nut | | 360 |

## M


| | | |
|---|---|---|
| **MERN□** | MEGA ER Nut | 360 |
| **MERPS□** | MEGA ER Perfect Seal | 361 |
| **MGN** | MEGA Nuts Standard Type (For MEGA New Baby Chuck) | 351 |
| **MGN□F** | MEGA Nuts Flat Type (For MEGA New Baby Chuck) | 351 |
| **MGN□S** | MEGA Nuts (For MEGA Micro Chuck) | 342 |
| **MGN□S-□J** | MEGA Micro Coolant Nut | 343 |
| **MGN□S-PS** | MEGA Micro Seal Nut | 342 |
| **MGN□T** | MGT Nut (MEGA Syncro Tapping Holder) | 382 |
| **MGR□A-N** | Adapter (Digital MEGA Torque Wrench) | 370 |
| **MGR□** | MEGA Wrench | 368, 383 |
| **MGR□TL** | MEGA Torque Wrench | 369 |
| **MGR□TTL** | MEGA Torque Wrench | 369 |
| **MGR-TL/P** | Digital MEGA Torque Wrench | 370 |
| **MGT□-** | MEGA Synchro Tapping Holder **BBT** | 114 |
| | MEGA Synchro Tapping Holder **BDV/DV** | 167 |
| | MEGA Synchro Tapping Holder **ST** | 290 |
| | MEGA Synchro Tapping Holder **BIG CAPTO** | 271 |
| **MGT□-□-** | Tap Holders for MEGA Synchro Tapping Holder DIN | 374, 376, 378, 380 |
| **MGT□-M/U/P□-** | Tap Holders for MEGA Synchro Tapping Holder JIS | 375, 377, 379, 381 |
| **MGT□OR** | O-Ring Set for MEGA Syncro Tapping Holder | 382 |
| **MGT□SA□** | Syncro Adjuster for MEGA Syncro Tapping Holder | 382 |
| **MGT□SS** | Set Screw for MEGA Syncro Tapping Holder | 382 |
| **MGT3-** | MEGA Synchro Tapping Holder MGT3 **BBT** | 115 |
| | MEGA Synchro Tapping Holder MGT3 **HSK-A** | 220 |
| | MEGA Synchro Tapping Holder MGT3 **ST** | 291 |
| | MEGA Synchro Tapping Holder MGT3 **for Lathes** | 331 |
| **MGT36-** | MEGA Synchro Tapping Holder MGT36 **BBT** | 114 |
| | MEGA Synchro Tapping Holder MGT36 **BDV/DV** | 168 |
| | MEGA Synchro Tapping Holder MGT36 **HSK-A** | 219 |
| **MGT36-** | Tap Holders for MEGA Synchro Tapping Holder JIS | 381 |
| **MGT36-** | Tap Holders for MEGA Synchro Tapping Holder DIN | 380 |
| **MGT36SL□** | Side Lock Bolt Set for MGT36 | 383 |
| **MPS□-□** | MEGA Perfect Seals | 352 |
| **MT□-CKB□-□** | Morse Taper shanks with tang | 279 |
| **MT□M-CKB□-□-M□** | Morse Taper with thread | 279 |
| **MTA□-** | Morse Taper Holders **BBT** | 107 |
| | Morse Taper Holders **HSK-A** | 218 |
| | Morse Taper Holders **BIG CAPTO** | 270 |
| **MW□** | MW Rough Boring Heads **ST** | 398 |
| **MW16BS** | Belleville Spring (MW BORING HEAD) | 464 |
| **MW16SS** | Clamping Screw (MW BORING HEAD) | 464 |
| **MW□E** | Cartridge for MW Boring Head | 398 |
| **MW0404** | Indexable Inserts for MW Boring Head | 445 |


## N


| | | |
|---|---|---|
| **NBA□B** | Adjusting Screws for Collet Chucks | 351 |
| **NBB** | Cases for New Baby Collets | 350 |
| **NBB□S** | Collet Protective Cases | 343 |
| **NBC□-□** | New Baby Collets | 344 |
| **NBC□-□E** | New Baby Collets for Endmills | 347 |
| **NBC□-CE** | Collet Ejectors | 350 |
| **NBC□E-CE** | Collet Ejectors | 350 |
| **NBC□S-□** | Micro Collets | 291, 331, 340, 383 |
| **NBJ** | Collet Removers | 350 |
| **NBK□** | New Baby Wrenches | 369 |
| **NBK□TL/TLS** | New Baby Torque Wrenches | 369 |
| **NBN** | New Baby Nuts | 351 |

| | | | |
|---|---|---|---|
| **NBS□-□** | New Baby Chuck | **BT** | 68 |
| | New Baby Chuck | **DV** | 147 |
| | New Baby Chuck | **HSK-A** | 188 |
| | New Baby Chuck | **ST** | 283 |
| | New Baby Chuck | **for Lathes** | 325 |
| **NBS□-□** | New Baby Chuck Extra Short | **BBT** | 72 |
| **NBS□-□NRA** | New Baby Chuck Type NRA | **BBT** | 73 |
| | New Baby Chuck Type NRA | **HSK-A** | 190 |


## 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 | | 364 |
| **OR-S□** | O-ring for Straight Collet (EWN/EWE/EWB Cylindrical Tool Type) | | 464 |
| **OSL□-** | Sleeves for Side Lock Holder | | 373 |


## P


| | | |
|---|---|---|
| **PJC□-** | PJC Collets | 363 |
| **PJC□OR** | O-Ring Set (PJC / PSC / CPG) | 367 |
| **PKG□** | Key Grip (MEGA PERFECT GRIP / CPG) | 367 |
| **PL□** | Indexable Inserts for Speed Finisher | 495 |
| **PLP** | Presetter for Speed Finisher | 496 |
| **PLW-□** | Pullstud Wrenches | 393 |
| **PMC-□** | Point Master PMC Series | 523 |
| **PMG-□** | Point Master PMG Series | 524 |
| **PMP-□** | Point Master Pro Series | 522 |
| **PS-□** | PS Ring for Perfect Seal | 353 |
| **PSC□-** | PSC Collets | 364 |
| **PSP□** | Spring (MEGA PERFECT GRIP / CPG) | 367 |


## R


| | | | |
|---|---|---|---|
| **RBE** | Jig Boring Bit | | 425 |
| **RBX□-□S-□** | Air Turbine Spindle Side Through Type | **BBT** | 137 |
| **RBX□-□S-□** | Air Turbine Spindle Side Through Type | **BDV** | 176 |
| **RBX□-□S-□** | Air Turbine Spindle Side Through Type | **HSK-A** | 234 |
| **RBX□-□S-□H** | Air Turbine Spindle Manual Type | **BBT** | 138 |
| **RBX□-□S-□H** | Air Turbine Spindle Manual Type | **BDV** | 177 |
| **RBX□-□S-□H** | Air Turbine Spindle Manual Type | **HSK-A** | 235 |
| **RBX□C-□S-□** | Air Turbine Spindle Center Through Type | **BBT** | 136 |
| **RBX□C-□S-□** | Air Turbine Spindle Center Through Type | **BDV** | 175 |
| **RBX□C-□S-□** | Air Turbine Spindle Center Through Type | **HSK-A** | 233 |
| **RC□** | R-Cutter - Front Chamfering | **ST** | 511 |
| **RC□ACP300** | Indexable Inserts for R-Cutter | | 513 |
| **RC□B** | R-Cutter - Front & Back R Chamfering | **ST** | 510 |


## S


| | | | |
|---|---|---|---|
| **S□** | Tool Carrier Clamp Screw (EWB BORING HEAD) | | 466 |
| **S□** | Basic Holder Type S (45°) | **BBT-M** | 303 |
| | Basic Holder Type S (45°) | **HSK-T** | 308 |
| | Basic Holder Type S (45°) | **BIG CAPTO** | 316 |
| **S□DS** | Insert Clamping Screw Set for Fullcut Mill (FCM / FCR) | | 493 |
| **S□-DCLNN** | 45° Cartridges Type S | | 300 |
| **S□-DDHNN** | 45° Cartridges Type S | | 300 |
| **S□-DDJN□** | 45° Cartridges Type S | | 300 |
| **S□-DTJN□** | 45° Cartridges Type S | | 300 |
| **S□S** | Insert Clamping Screw Set for Boring | | 449 |

## S


| | | | |
|---|---|---|---|
| S□S-□IP | Insert Clamping Screw Set for Boring | | 449 |
| S□S-A/B/S | Insert Clamping Screw Set for Boring | | 449 |
| S□S-T□ | Insert Clamping Screw Set for Boring | | 449 |
| S□-SVLB□ | 45° Cartridges Type S | | 300 |
| S□-SVQBN | 45° Cartridges Type S | | 300 |
| SB-□ | Semi-Finished Stop Blocks | | 395 |
| SBT□-ASC | Flange Face Cleaner | BBT | 390 |
| SBT30-DF10 | Dyna Force | | 529 |
| SC□ | Spindle Cleaners | | 389 |
| SC□□06 | Indexable Inserts for Boring | | 445 |
| SC□□07 | Indexable Inserts for Boring | | 445 |
| SC□□09 | Indexable Inserts for Boring | | 445 |
| SC□□12 | Indexable Inserts for Boring | | 445 |
| SCA□- | Side Cutter Arbors | BBT | 112 |
| | Side Cutter Arbors | BIG CAPTO | 270 |
| SCE-□ | α Tooling Cleaners | | 389 |
| SCH | Collet Hook | | 367 |
| SC-HSK□ | Spindle Cleaners | | 389 |
| SC-MEC□ | Taper Cleaners | | 388 |
| SC-MER□ | Taper Cleaners | | 388 |
| SC-NBC□ | Taper Cleaners | | 388 |
| SC-NBC□S | Taper Cleaners | | 388 |
| SDB□DP | Smart Damper Turning | ST | 332 |
| SDB□DP | Smart Damper Turning Adapter | BIG CAPTO | 324 |
| | Smart Damper Turning Adapter | HSK-T | 313 |
| SDF□ | Smart Damper Basic Holders for Mills | BBT | 104 |
| | Smart Damper Basic Holders for Screw-On | BBT | 110 |
| | Smart Damper Basic Holders for Mills | BDV | 163 |
| | Smart Damper Basic Holders for Mills | HSK-A | 213 |
| SDF□-FMH□DP | Smart Damper Damper Heads for Mills | | 105, 164, 214 |
| SDF□-M□DP | Smart Damper Damper Heads for Screw-On | | 110 |
| SDV□-ASC | Flange Face Cleaner | BDV | 390 |
| SKL□- | Super Keyless Chuck | BBT | 106 |
| | Super Keyless Chuck | HSK-A | 215 |
| SL□F-HDC□ | Hydraulic Chuck Lathe Type - Type F | for Lathes | 335 |
| SL□R-HDC□ | Hydraulic Chuck Lathe Type - Type R | for Lathes | 336 |
| SLN□- | Slide for Large Diameter Boring Tools | | 405, 415 |
| SLN□-□AL | Aluminum Slide for Large Diameter Boring Tools | | 406, 416 |
| SMGR-TL/P | Digital MEGA Torque Wrench Set | | 370 |
| SNBC | New Baby Collet Sets | | 350 |
| SNT□-DF□ | Dyna Force | | 529 |
| SRC□- | Shrink Chuck Standard | BBT | 95 |
| | Shrink Chuck Standard | BDV | 157 |
| | Shrink Chuck Standard | HSK-A | 207 |
| | Shrink Chuck Standard | BIG CAPTO | 265 |
| SRC□J- | Shrink Chuck Jet Through | BBT | 94 |
| SRC□S- | Shrink Chuck Slim | BBT | 93 |
| | Shrink Chuck Slim | HSK-A | 206 |
| | Shrink Chuck Slim | ST | 288 |
| | Shrink Chuck Slim | BIG CAPTO | 265 |
| SRC□SS- | Shrink Chuck Super Slim | ST | 287 |
| SSL□- | Mold Chuck | BBT | 92 |
| | Mold Chuck | HSK-A | 205 |
| SST□-MEGA□S- | MEGA Micro Chuck Set | ST | 282 |
| ST□-M□- | Cylindrical Toolholder | ST | 426 |
| ST□-SL□ | Side Lock Cylindrical Toolholder | ST | 427, 430 |
| ST□W-AJ□ | Carbide Cylindrical Toolholder | ST | 429 |
| ST□W-CKB□- | Carbide Bars for Boring | ST | 432 |

| | | | |
|---|---|---|---|
| **ST□W-EB□-** | Carbide Cylindrical Insert Holder | **ST** | **420, 425** |
| **ST□W-EW□-** | EW Micro Head | **ST** | **431** |
| **ST□W-M□-** | Carbide Cylindrical Toolholder | **ST** | **426** |
| **ST□W-MW□-** | MW Rough Boring Heads | **ST** | **398** |
| **ST12B-C0525** | C-Cutter Boy | **ST** | **516** |
| **ST15-50K** | Alternative Stylus | | **524** |
| **ST16-SL□-** | Cylindrical Toolholder (OD Turning Holders) | | **434** |
| **ST28/38-** | Alternative Stylus | | **524** |
| **ST4W/7W-EB□** | EWN04-7 / EWN04-15 Cylindrical Tool | | **420** |
| **STL40** | Assembling unit ST Lock | | **386** |
| **SVQB□** | 90° Integral Tool Holder Type F | **BIG CAPTO** | **319** |
| **SVQBN** | 45° Integral Tool Holder Type S | **BIG CAPTO** | **317** |
| **SW□-□CKB□** | SW Rough Boring Heads | | **399** |
| **SW□A** | SW Cartridge Type SC | | **401** |
| **SW□E** | SW Cartridge Type CC | | **402** |
| **SW□N** | SW Cartridge Type ZN | | **402** |
| **SW□BS** | Belleville Spring (SW BORING HEAD) | | **464** |
| **SW□RS** | Radial Adjusting Screw (SW BORING HEAD) | | **464** |
| **SW□SS** | Clamping Screw (SW BORING HEAD) | | **464** |


## T


| | | | |
|---|---|---|---|
| **TAD□** | Turning Adapter | **HSK-T** | **313** |
| | Turning Adapter | **BIG CAPTO** | **324** |
| **TC□□11** | Indexable Inserts for Boring | | **444** |
| **TF-□** | Torque Fit | | **387** |
| **TKC□** | TK Cleaners | | **388** |
| **TM-100N** | Tool Master | | **527** |
| **TMA□-□** | Tooling Mate / Torque Fit Adapter | | **387** |
| **TMBA-M□** | Clamp Bolt for Face Mill Arbor | | **372** |
| **TMS□-□** | Tooling Mate | | **385** |
| **TMS□-□R** | Tooling Mate | | **385** |
| **TMS-HSK-A125** | Tooling Mate | | **385** |
| **TP□□07** | Indexable Inserts for Boring | | **442** |
| **TP□□08** | Indexable Inserts for Boring | | **443** |
| **TS□-S** | T-Slot Clean | | **391** |
| **TSB□** | Grip Bar for Hydraulic Chuck | | **371** |
| **TSL□-** | Side Lock Holders Type TSL | **BBT** | **108** |
| | Side Lock Holders Type TSL | **HSK-A** | **215** |
| | Side Lock Holders Type TSL | **BIG CAPTO** | **268** |
| **TW□A/E/EL** | Cartridge (Large-Diameter TW Boring Head) | | **405** |
| **TW□BS** | Belleville Spring (Large-Diameter TW 200 / EWN200 Head) | | **467** |
| **TW200E/EL-SC** | E Type Cartridge for Step Cutting | | **406** |
| **TW200RS** | Radial Adjusting Screw (Large Dliameter Type) | | **467** |


## W


| | | |
|---|---|---|
| **WC□□02** | Indexable Inserts for Boring | **442** |


## X


| | | |
|---|---|---|
| **XF1** | Air Filter Regulator for RBX | **384** |


## Z

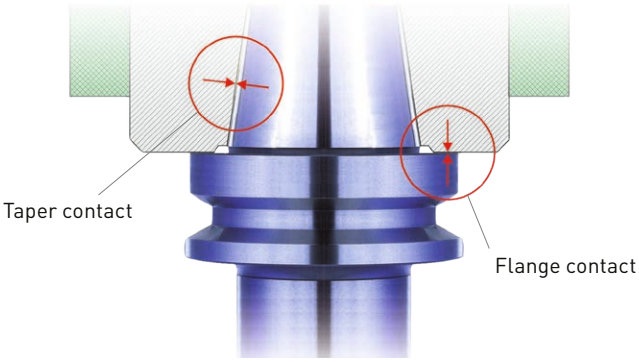

| | | |
|---|---|---|
| **ZNMU□** | Indexable Inserts for SW Boring Head | **447** |

# 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



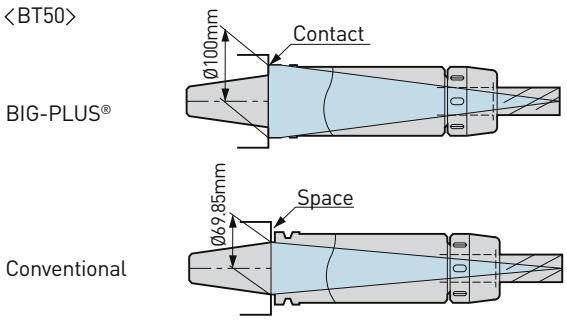

**Basic concept**

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.

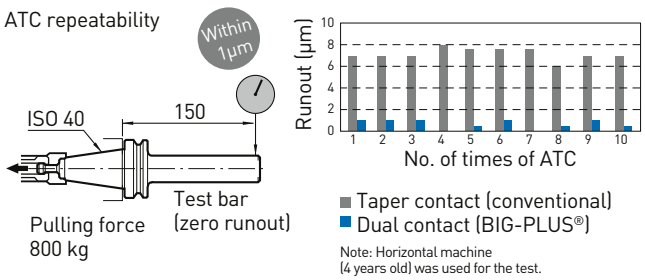
| | Conventional | BIG-PLUS® |
|---|---|---|
| BT50 | Ø 69.85 | Ø 100 |
| BT40 | Ø 44.45 | Ø 63 |
| BT30 | Ø 31.75 | Ø 46 |

**Increased contact diameter (example of BT50)**




**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.



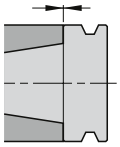

Note: Horizontal machine (4 years old) was used for the test.

**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.

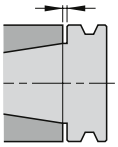
BIG-PLUS® Spindle + BIG-PLUS® Holder

Contact



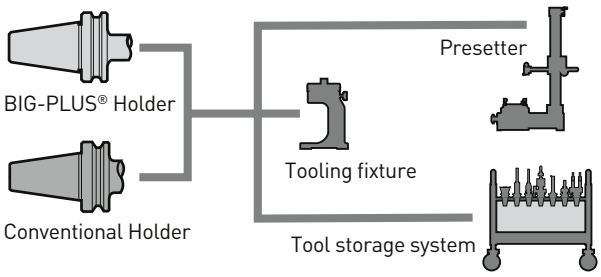
Conventional Spindle + BIG-PLUS® Holder

Clearance



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**



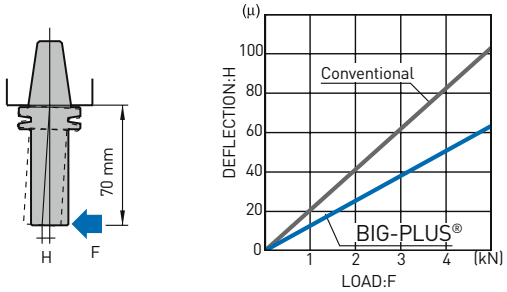



**Minimized deflection for maximum machining, accuracy and superior finish**

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

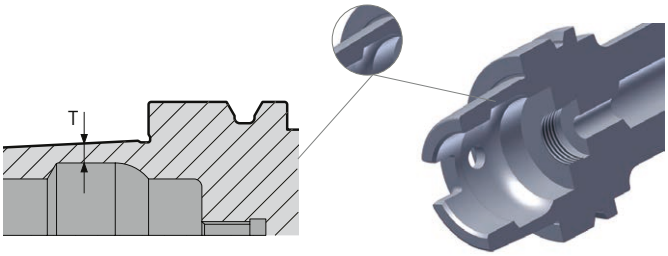
Selected materials and strict control of dimensional accuracy for the optimum quality. Wide range of standard holders to meet all production requirements.





**Premium material selection**

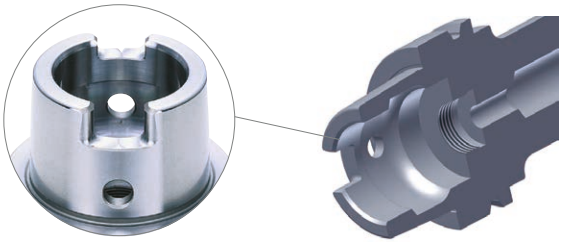
Since HSK is a hollow taper shank, the material has a critical role for optimum performance. BIG DAISHOWA uses carefully selected high grade alloy steels. Particularly, BIG DAISHOWA uses premium materials for HSK 40 and smaller where the cross section of shank taper is very thin.




| 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.









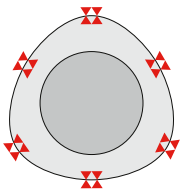
**Polygonal tapered dual contact tooling system**



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**

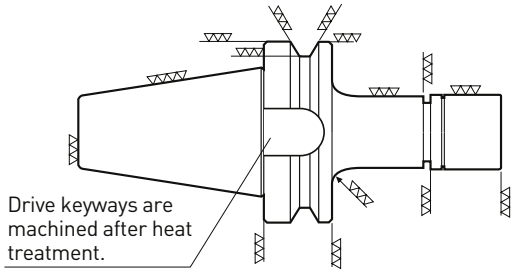
NEW



# 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.

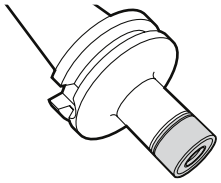



**Easy and firm clamping by the MEGA Wrench**
The unique MEGA Wrench has a one way clutch system with roller bearings and a ratchet function which is capable of safely and evenly applying force to the entire nut periphery.





**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



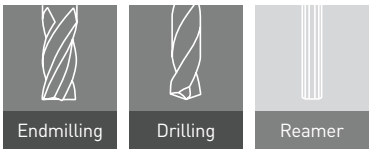
**MEGA E Chuck**
For end mills and reamers
Clamping range:
Ø 3 - 12 mm



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

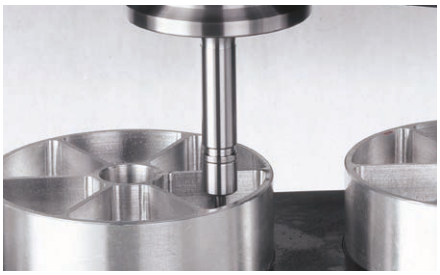


# MEGA Micro Chuck

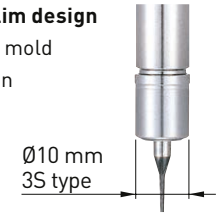



- max. 60 000 min$^{-1}$
- Clamping range: Ø 0.45 - 8.05
- 0.1 mm increments for higher precision





**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.

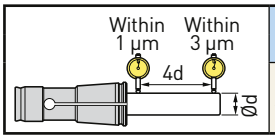



**High concentricity**
100% concentricity inspection. Within 1 µm at nose is guaranteed.



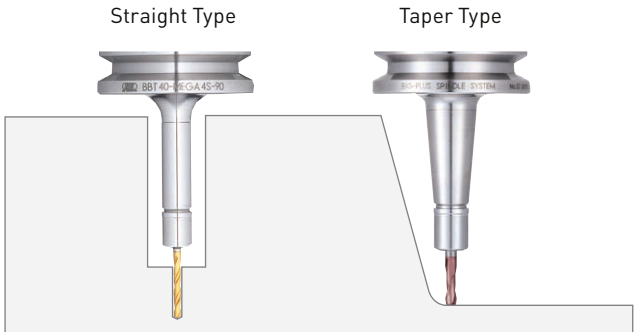
High precision Micro Collet

Collet concentricity




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

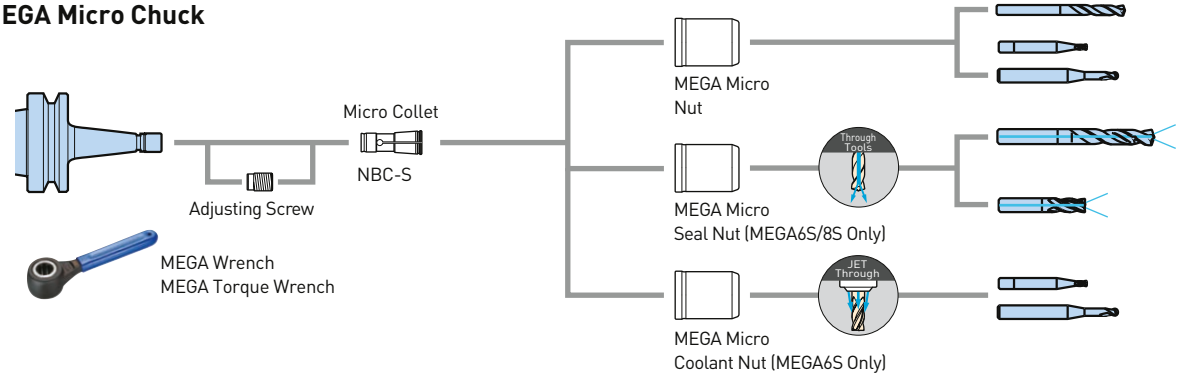
**Three versions are available**
Straight Type: where access is restricted
Taper Type: for increased rigidity
Cylindrical Shank Type: for increased versatility



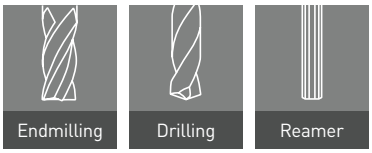

**Cylindrical Shank Type**
Flexible tool layout, for tighter and deeper area



## MEGA Micro Chuck



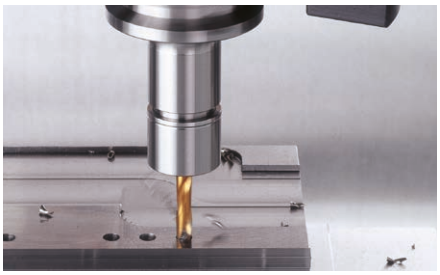
# MEGA New Baby Chuck




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





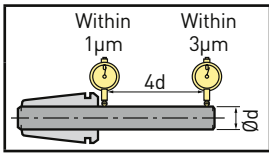
**High precision collet, close to submicron**

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



High precision NBC Collet

Collet concentricity



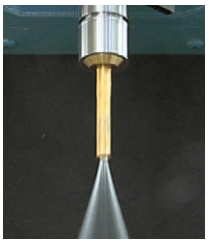

| Collet class | Max. runout | |
|---|---|---|
| | At nose | 4xD |
| AA | Within 1 µm | Within 3 µm |

**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



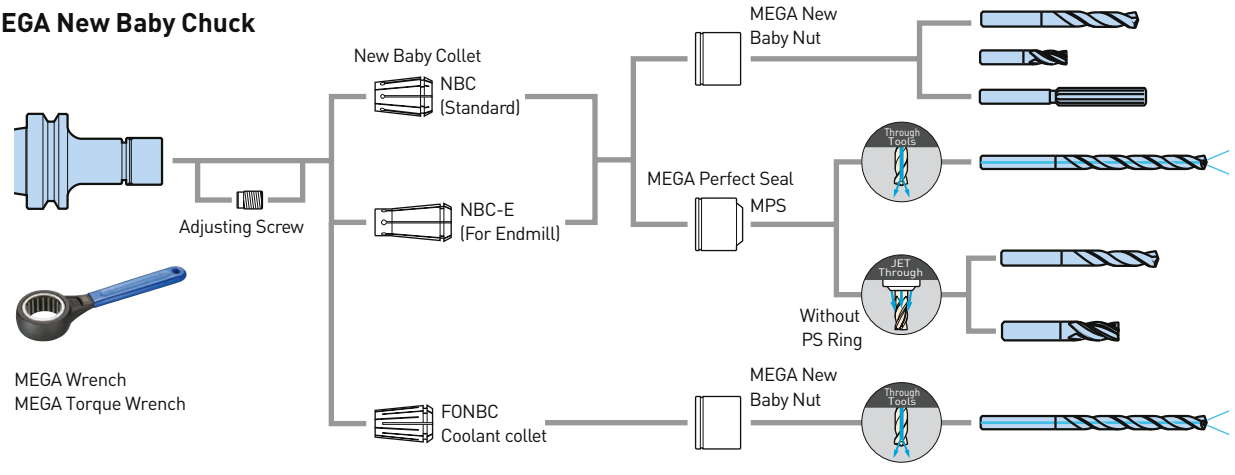
MGN nut
For high speed



MPS nut
For efficient coolant supply

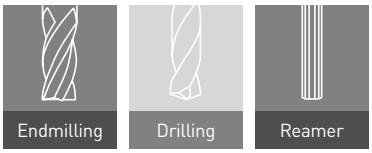


## MEGA New Baby Chuck



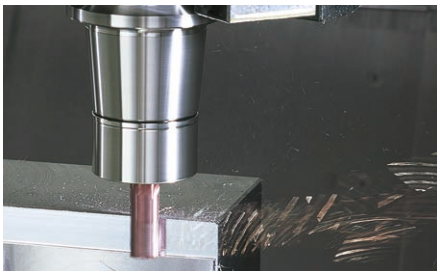
# MEGA E Chuck

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





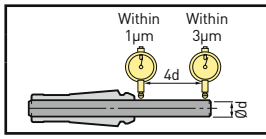
**High concentricity**

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



High precision MEGA E Collet

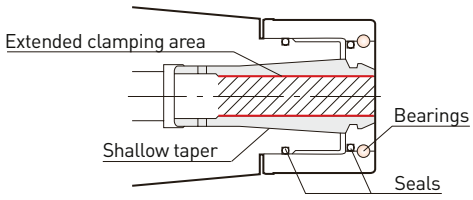
Collet concentricity



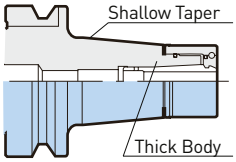

| Collet class | Max. runout | |
|---|---|---|
| | At nose | 4xD |
| AA | Within 1 µm | Within 3 µm |

**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.

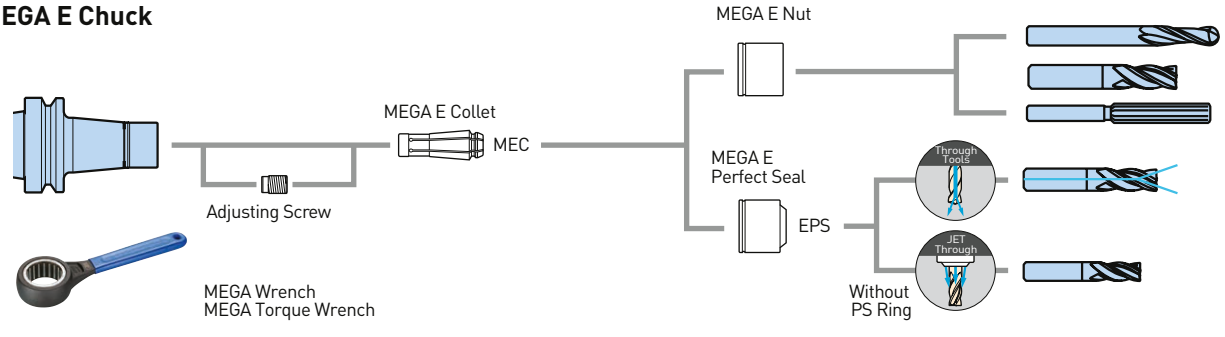


MEGA E Perfect Seal



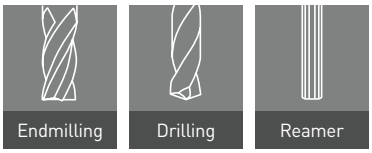
Ideal for burnishing drills and reamers due to extended gripping length.

## MEGA E Chuck

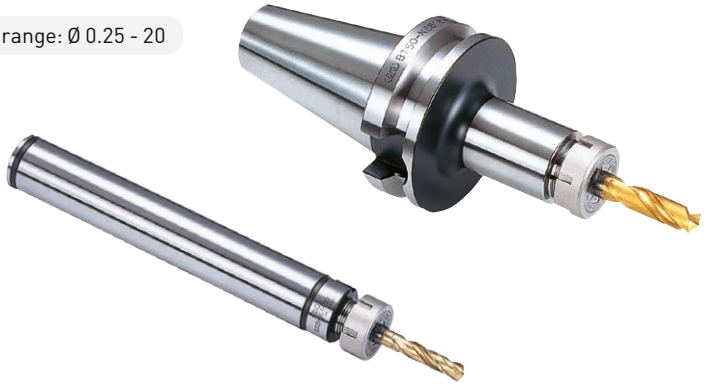


# New Baby Chuck

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**



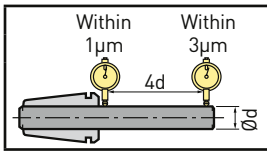
New Baby Chuck satisfies all requirements for accuracy, clamping force and clamping range, by utilizing the ideal 12˚ taper angle.

**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**

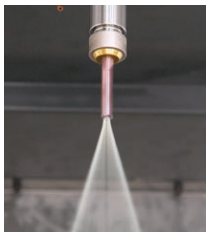


- Since the threads greatly influences accuracy, they are finished after heat treatment. Therefore, bad influence from clamping action is eliminated, which enhance clamping performance.
- A nut incorporates a thrust bearing with steel balls that prevents stress to a collet and allows a smooth clamping 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**

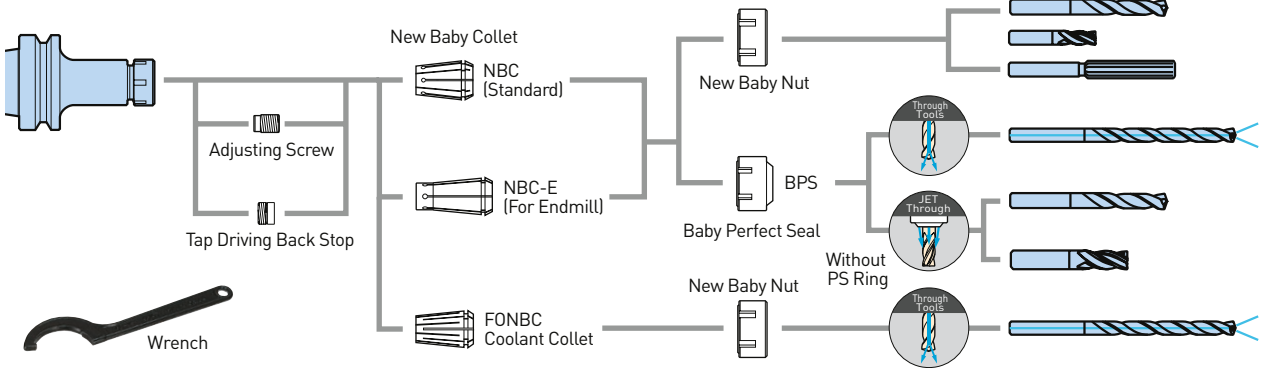


Simple structure allows for easy adjustment of runout accuracy. Compensates for increased runout of machine tool spindles caused by extended use.

Tool edge runout: 2µm or less

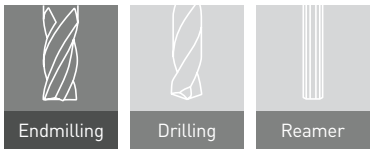
- Uniform hole diameter
- Improved surface roughness
- Increased tool life

## New Baby Chuck



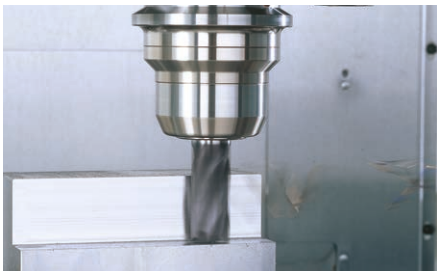
# MEGA Double Power Chuck

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

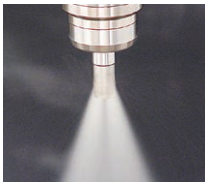



Tightened

**Secure coolant supply**

Two types are designed for the most effective coolant supply.

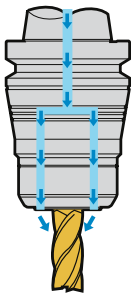
- Improved surface finish
- Extended tool life
- Smoother chip evacuation
- Cooling & lubrication of tools



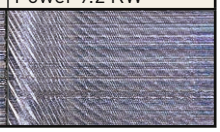
Type D
through tools



Type DS
jet through



Cutting conditions

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

Various type of straight collets are available.



For jet through
**PJC collet**



For through tools
**PSC collet**

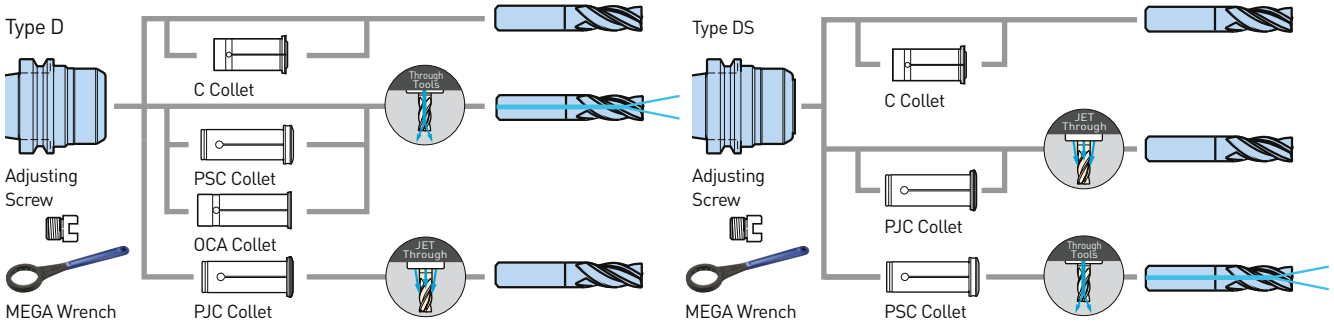


For through tools
**OCA collet**



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**

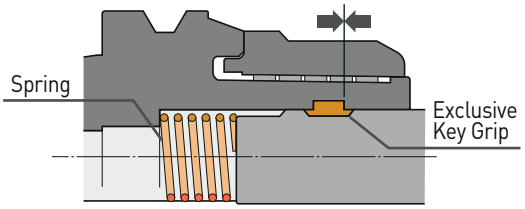
The key grip grooves provide channels for high volume coolant to the cutter. Effective end milling of HRSA's requires a high volume of coolant to the cutting edge to dissipate heat and aid in the removal of chips.





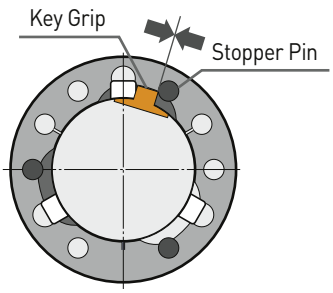
**Anti-Pullout mechanism**

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**

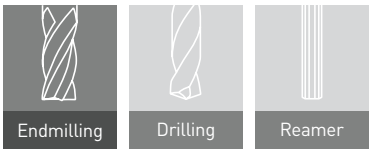
The same anti pullout function is available for straight collet. CPG collet can be used for MEGA Double Power Chuck and New Hi-Power Milling Chuck.





# New Hi-Power Milling Chuck

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



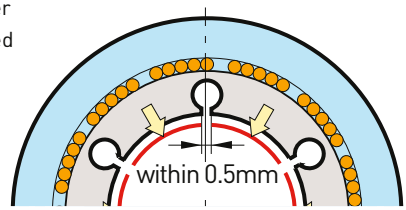

- Clamping range: Ø 16 - 42





**Secure and reliable slit design**

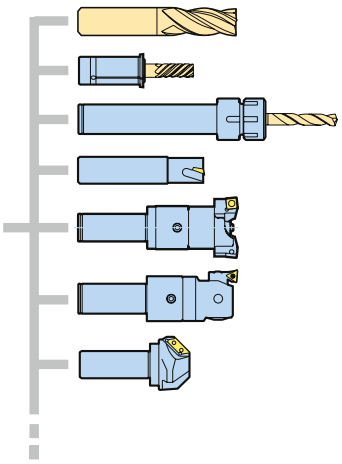
The annular section needs to be substantial in order to provide rigidity but retain the ability to collapse in order to provide sufficient grip. The section of the Hi-Power Milling Chuck has combined holes and slits at regular intervals in order to combine both requirements.




**Basic tool for various applications**

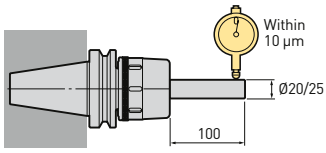
New Hi-Power Milling Chuck is a good basic tool. Not only for milling tool, but also for boring tools, chamfering tools and various applications.

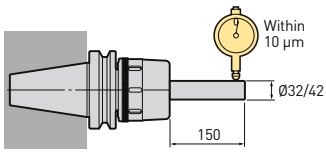




**Precise concentricity**

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

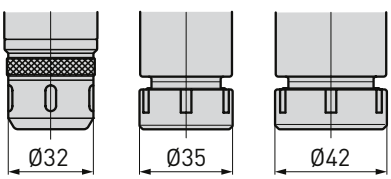
**Runout adjustable RA holder**

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



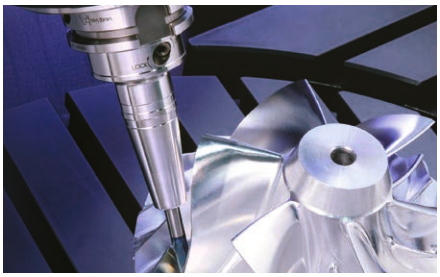



Peripheral coolant supply to cutting edge

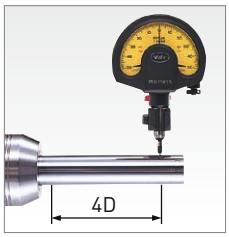
# Hydraulic Chuck

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.

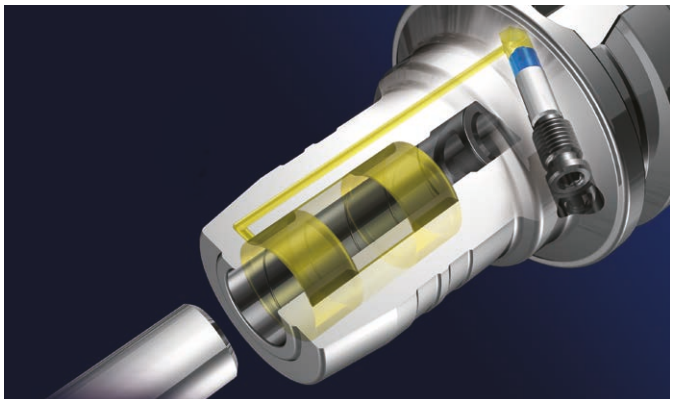
**Easy clamping with 1 wrench**

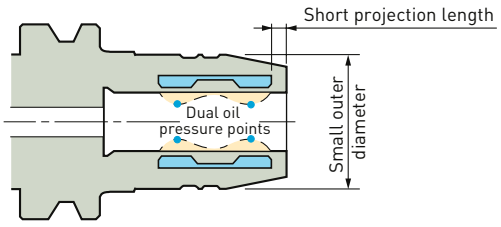


The cutting tool can be clamped or unclamped easily and securely with just 1 wrench. Extremely good repeatability and runout accuracy are guaranteed.

**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.





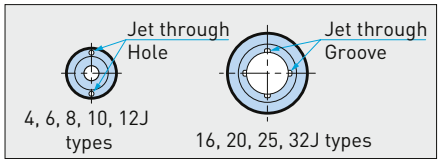

**Complete sealing mechanism prevents oil-leaks**

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.



Endmilling | Drilling | Reamer





**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.



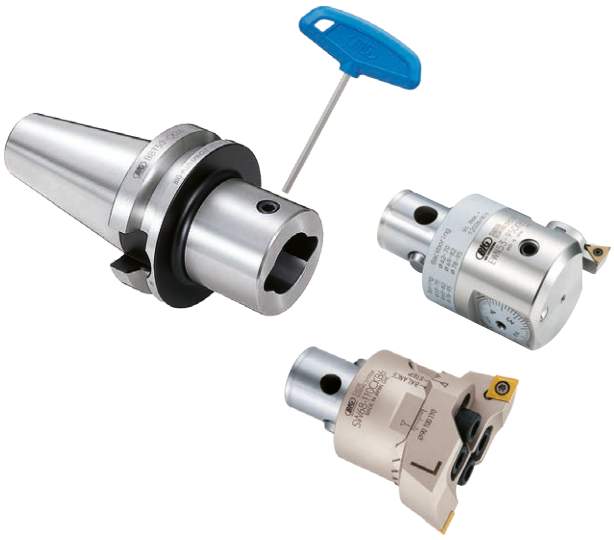
Tip diameter
Min. Ø 20 mm
Max. 35.000min$^{-1}$



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

# KAISER Boring Tools

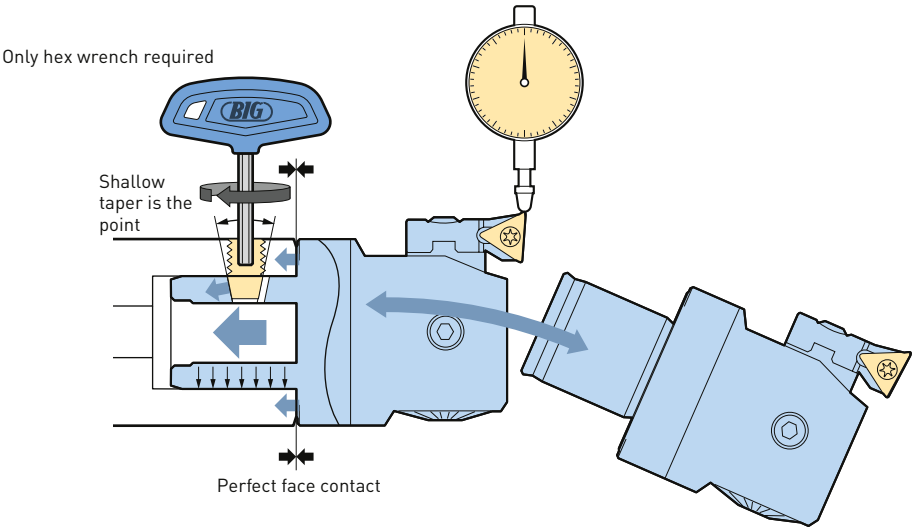
KAISER Boring is the most reliable and accurate modular boring head in the world. By using the unique modular connection, from Ø 2 mm to over Ø 200 mm can be covered by a combination of 7 main bodies and various Rough and Fine Boring head.





**Simple but reliable CK Connection**

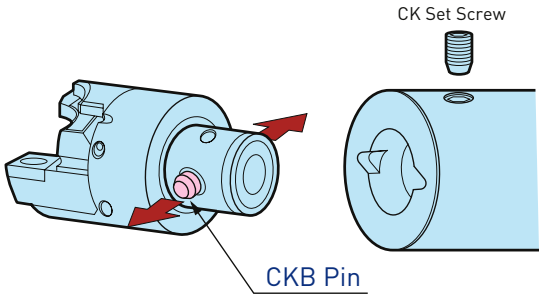
The CK Connection is a simple method for securely and powerfully clamping flange faces with a single wrench.
Moreover, even if the same boring head is repeatedly attached and removed, the cutting edge position does not vary by more than 2 microns. This accurate clamping allows boring diameter setup to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

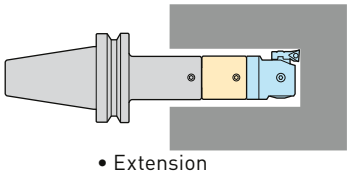
**Safe structure at high torque**

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.

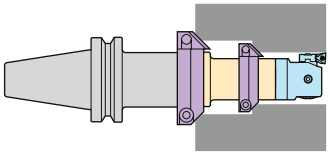



**Rapid adaptation to special tools**

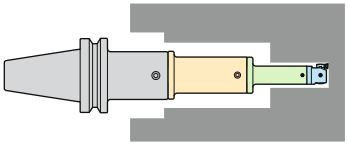
This is a freely combinable modular system that can be used to assemble special tools with standard items, allowing flexible compatibility.



• Extension



• Chamfering



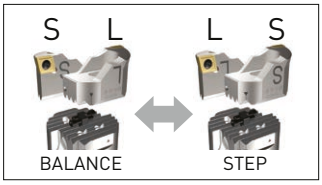
• Reduction

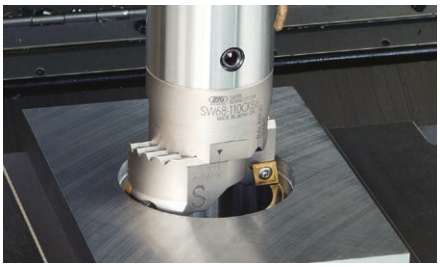
# KAISER Boring Heads Overview

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)



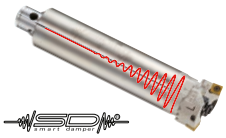





**High rigidity SW boring head**
- Ø 20 - 203 mm
- Serrated for high connection rigidity



**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
- Prebalanced design supports high-speed boring
- Abundance of insert holders



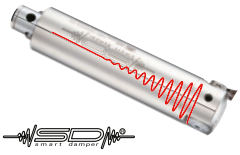
**EWB boring head**
High speed
- Ø 32 - 105/Ø 100 - 203 mm (Aluminum)
- 0.01mm/Ø scale
- Built-in automatic precision balancing unit
- Vc Max. 2 000m/min.





**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 1 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

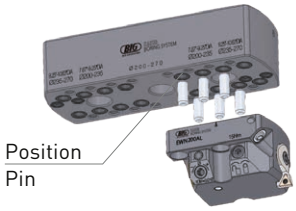
**EWE boring head**
Digital boring head with wireless communication
- Ø 1 - 54 mm
- Digital display means the adjustment amount can be read at a glance
- Waterproof and dustproof structure (IP69K equivalent)



**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 - 880 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.

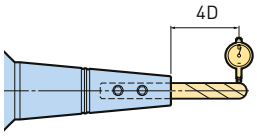
BIG-PLUS Dual-Contact

- Max. 15 000 min$^{-1}$

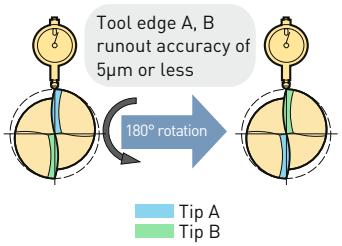




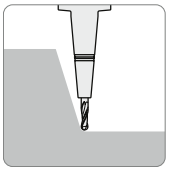
**Runout accuracy within 5µm**
2-flute ball endmills achieve a runout accuracy within 5µm. Both easy handling of side lock holder and high accuracy are realized.

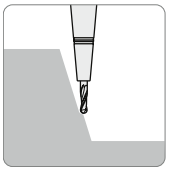


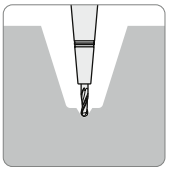

* Ensure the tip of the ball endmill is in 90° phase to the clamping bolt when clamping. (Endmill shank tolerance; h6)




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

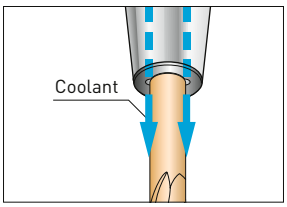

Close to wall


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**



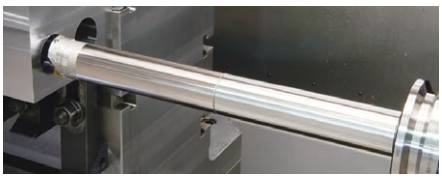

Center through coolant or oil mist can be ejected through the two coolant slits, allowing for a secure supply of coolant to the cutting edges. This helps in machining hard materials.

# 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

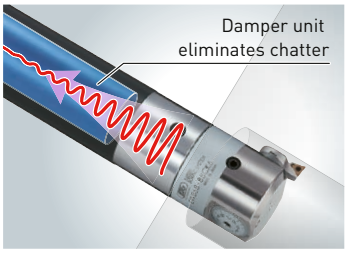
**CK Extension Type**
Just combine it with your standard KAISER Boring Head/ CK Shank to achieve damping countermeasures.



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

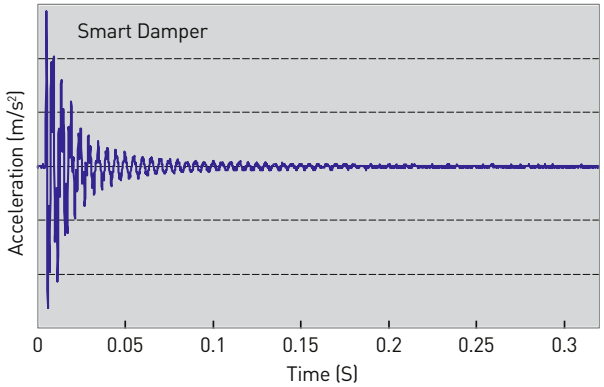
**Damping mechanism**
Smart Damper incorporates unique damping mechanism functioning both counter and friction dampers. Patent-pending counter weight maximizes effect of the friction damper. Vibration is absorbed effectively and higher machining accuracy is achieved.

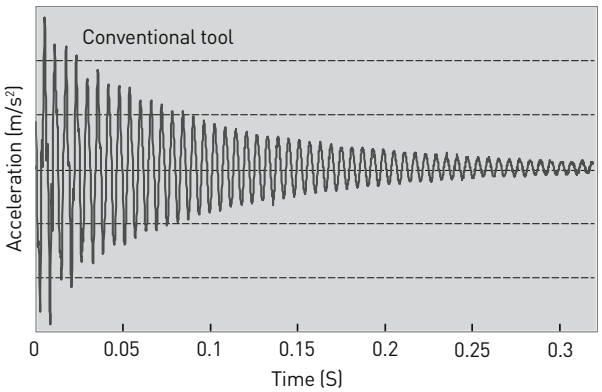
**Chatter suppressing mechanism**



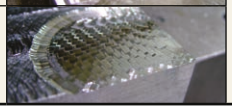

An incorporated unique damper that functions as both a counter damper and friction damper. Patent-pending counter weight maximizes effect of the friction damper. Chatter is absorbed effectively and higher machining accuracy is achieved.

**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<br>Fz=1.0/tooth<br>Ap=2.0 mm<br>Overhang=<br>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<br>Depth=408 mm<br>(L/D=6)<br>Insert radius=<br>R0.4<br>Feed=0.2 mm/<br>rev<br>Depth of cut=<br>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.

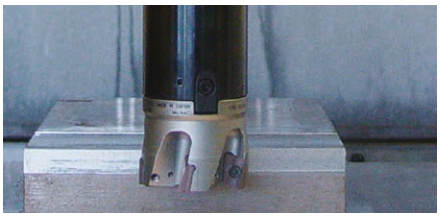


## Smart Damper Face Mill Arbor

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.

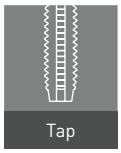




Cartridges can be exchanged according to the application (ISO insert).



# MEGA Synchro Tapping Holder

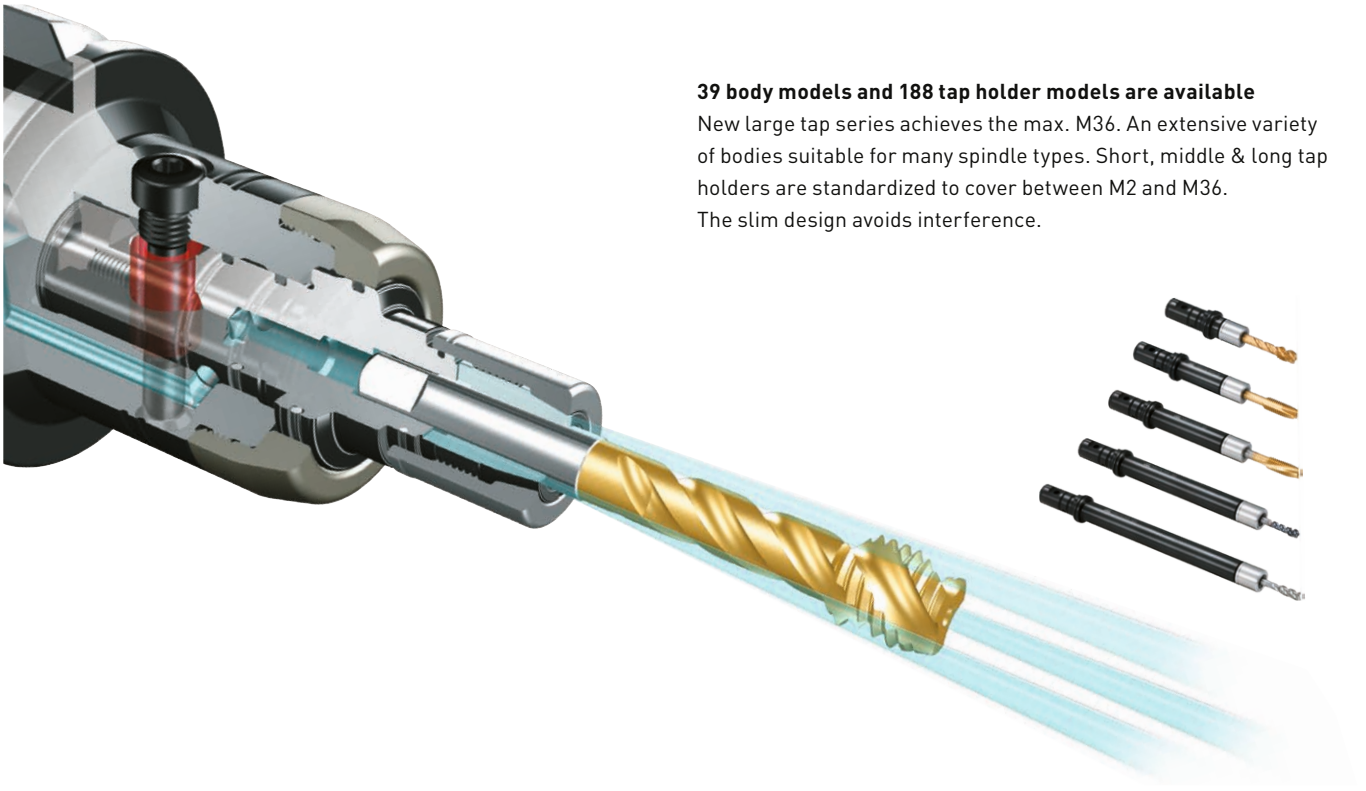



Compensates for synchronization errors during rigid tapping. Improves thread quality and tool life by reducing thrust loads caused by synchronization errors up to 90%.

- 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.



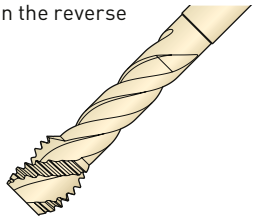
**MEGA Synchro Tapping Holder compensates for synchronization errors with any type of tap**

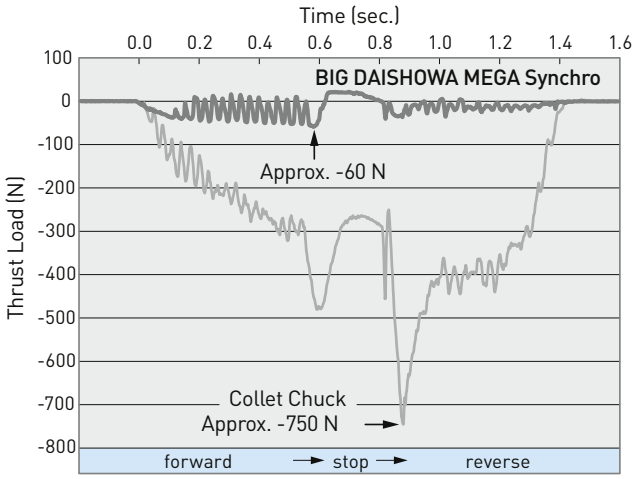
Minimized thrust load to both the tap and workpiece improves thread quality and tap life.

**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**

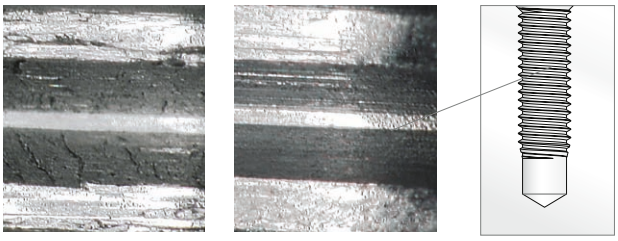
MEGA Synchro reduces load to approx. 60N. This is less than 1/10th of the load compared to a collet chuck. Approx. 750N of reversal load is applied to a tap held with a collet chuck.

**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)



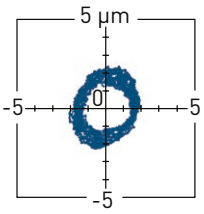
Collet chuck MEGA Synchro

**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

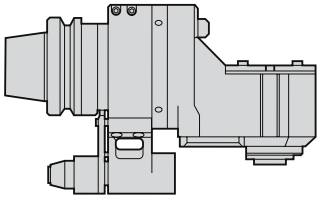
Angle Heads eliminate multiple set-ups, combine vertical, horizontal and angular operations on one machine. One original set-up saves time, speeds production and guarantees accuracy.

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

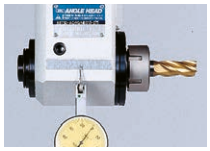


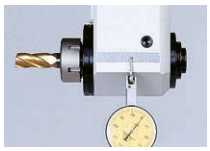
**Compact design assures rigidity**

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.

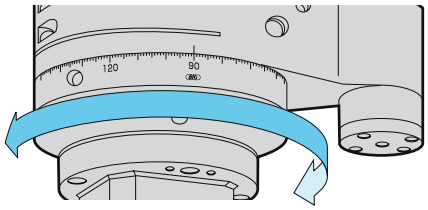


**Cutter head adjustable 360°**





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

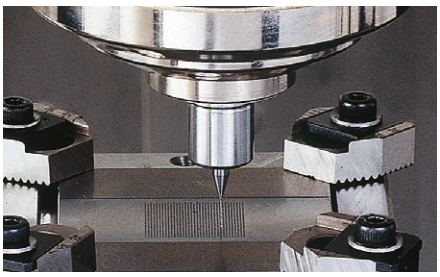


# Air Turbine Spindle

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

- Max. 80 000 $min^{-1}$



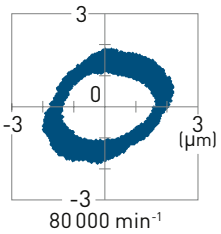


**Dynamic runout accuracy**

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

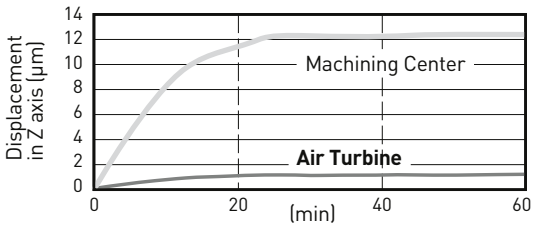
Plotted position of a test bar at the max. spindle speed (see image on the right).




**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

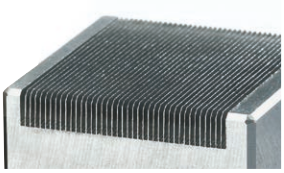


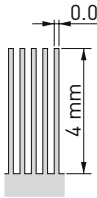

**Application examples**

**RBX7**

**Aluminum A2017**

Outstanding runout accuracy permits perfect thin wall cutting.



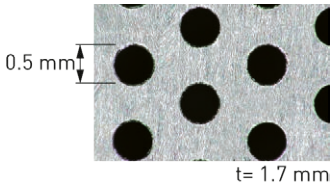



| | |
|---|---|
| Cutter | Ø 0.5 mm rib-endmill |
| Spindle Speed | 70 000 $min^{-1}$ |
| Cutting Feed | 1 500 mm/min |
| D.O.C | ap = 0.02 mm |

**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

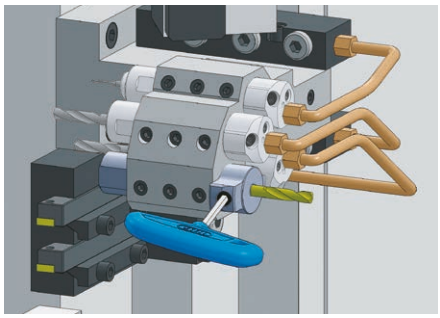
# Hydraulic Chucks for Swiss lathe





**3 types for all tool posts**

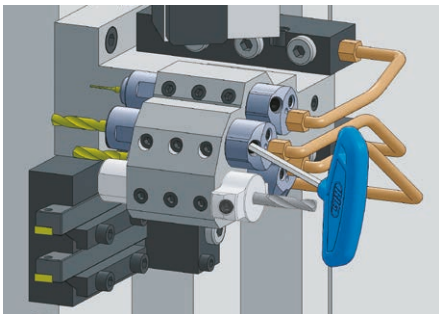
Standard Type



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



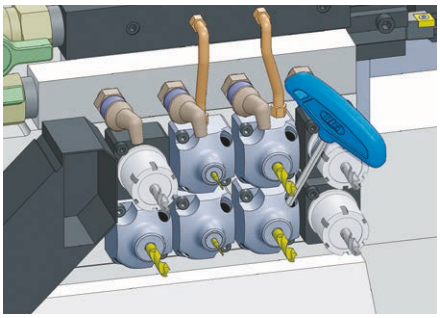
F Type



Tightening from the opposite side of the cutting tool.



R Type

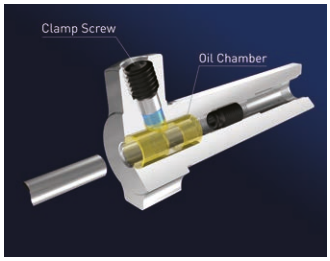


Easy handling of cutting tools by avoiding adjacent tools.



**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.



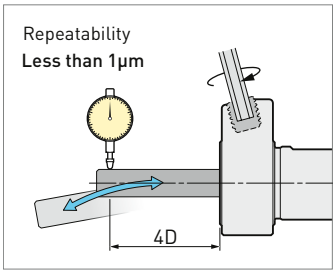

**Safe and quick operation**

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.



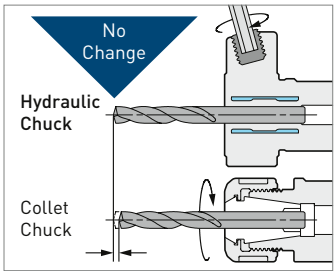
**±1µm repeatability**

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**

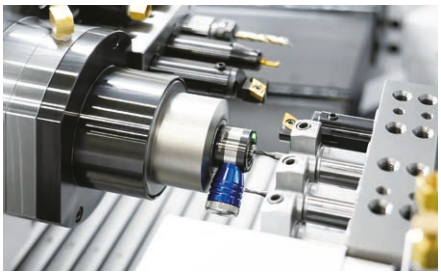
Since the tool projection length does not change after the clamping, it is easy to control the tool projection length in the machine.



# 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



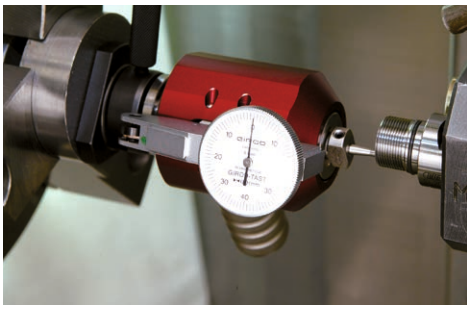





# Centering Tool for Lathes

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



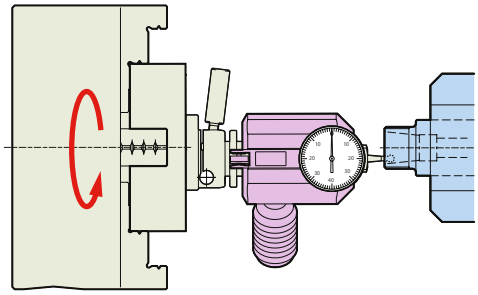



Dial Gauge (0.01 mm)

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.

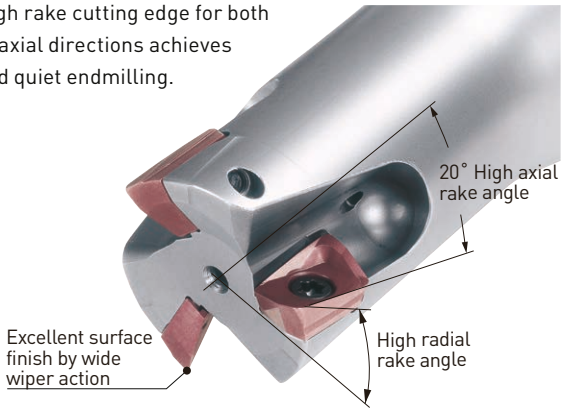






**Sharp cutting edge by both high radial and axial rake angles**

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




**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

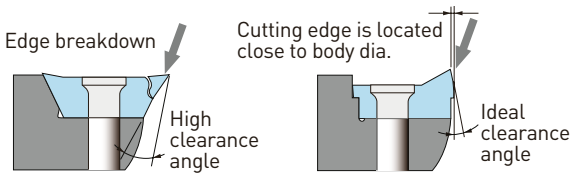





Slotting



**Strong cutting edge reduces edge chipping**

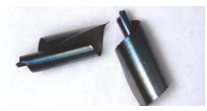



**Amazing cutting performance even on #40 taper machine**

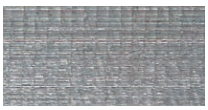
Comparison of axial DOC between integral type with face contact and straight shank type. 3.6 times higher cutting performance than other manufacturer.

**Cutting condition**

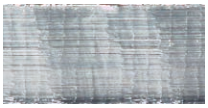
| | |
|---|---|
| Machine: | BBT40 (BIG-PLUS®) |
| Slot milling: | 20 mm |
| Work material: | C50 (S50C) |
| Spindle speed: | 2 400 min$^{-1}$ |
| Speed: | V = 150 m/min |
| Feed: | 0.12 mm/tooth |

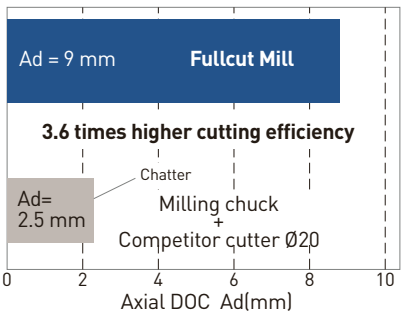






Excellent surface





## 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



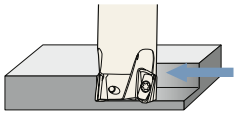
HSK Type



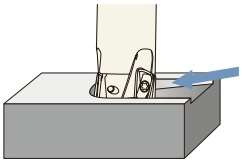
Cylindrical Shank Type



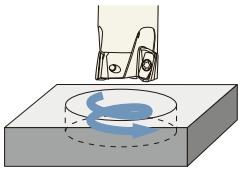
**Shoulder Milling**



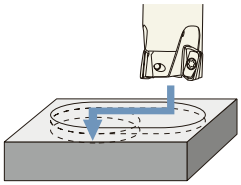
**Ramping**



**Helical Milling**

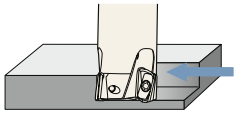


**Peck-Drilling**



## 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



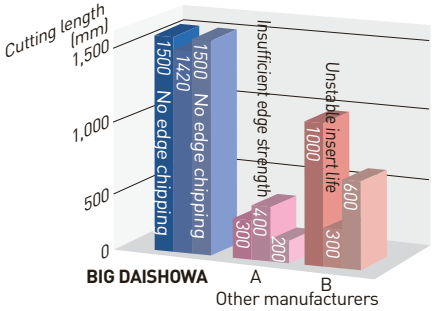
Arbor Type



**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.

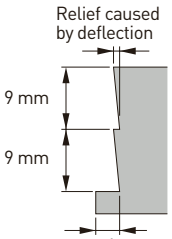



**Finishing with indexable endmill - Why not?**

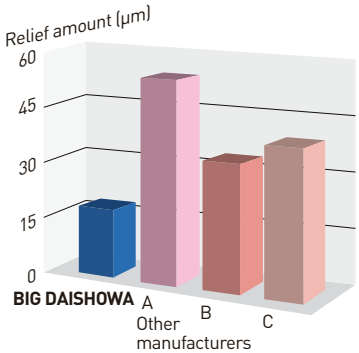


Insert with the minimum nose radius of 0.2 mm and superb squareness to achieve high precision end milling comparable with solid carbide tools.

| | |
|---|---|
| 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.

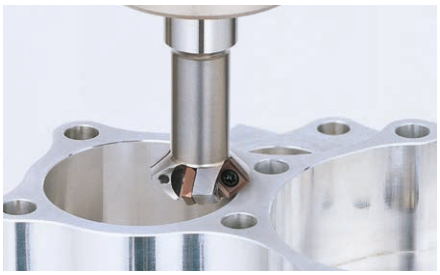


# C-Cutter Mini

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



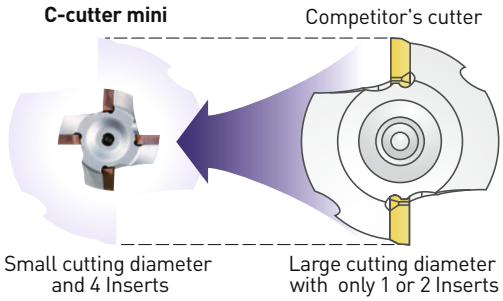


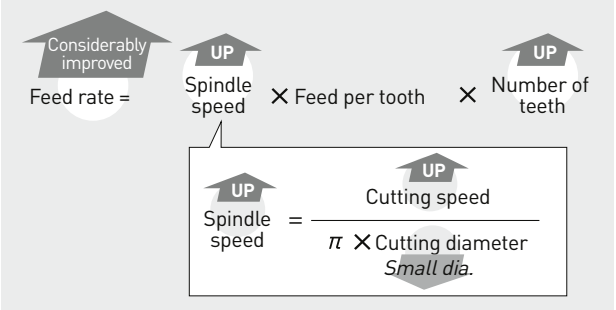
**4 Inserts, small diameter and new coating achieve triple effect**

**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.



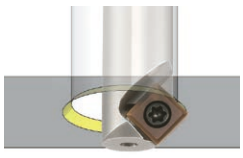




**World smallest hex insert**
Highly-efficient back chamfering from 6 mm starting hole diameter. 3-corner insert saves cost.



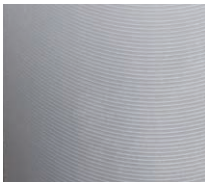

**New series for starting hole for tapping are available from M8 to M20 range**





## 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



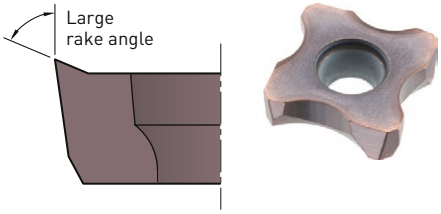
## R-Cutter

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



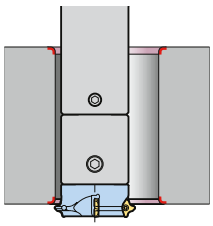


**Excellent sharpness with new insert shape!**
R-CUTTER is the first in the industry to use an insert with a large rake angle that's capable of producing clean surfaces with no vertical streaking.




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

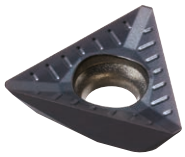




## C-Centering Cutter

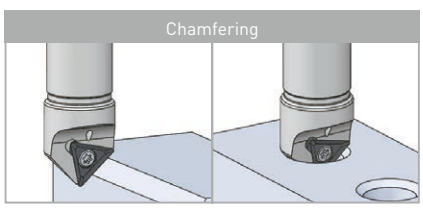
For centering and chamfering with a carbide insert.

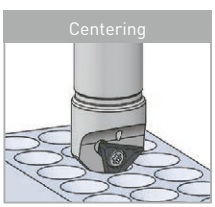




Negative insert tip shape dramatically improves the life

**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

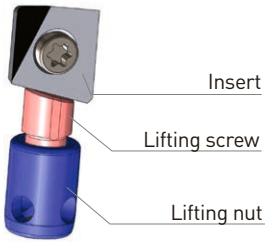
Amazing improvement of surface finish at high speed cutting.
RZ = 0.55 µm with aluminum die casting ADC12
RZ = 0.67 µm with gray cast iron FC250

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



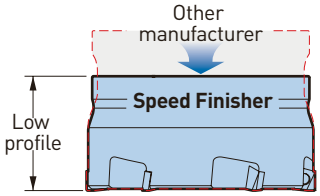



**Quick adjustment of cutting edge height**
After clamping the insert, lifting screw lifts up the insert directly by revolving the lifting nut from its side. Simple construction aids easy adjusting operation. Fine pitch thread of the lifting screw ensures precise adjustment.






**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.

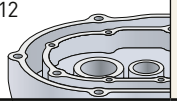
- The cutting edge presetting is required



**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.



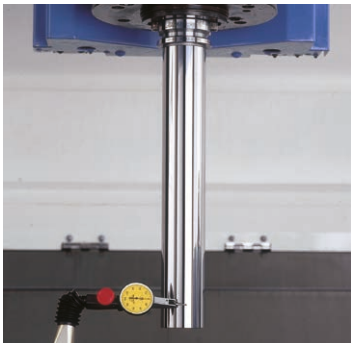
**Application example**
(Cutter: Ø 80 mm)

| Workpiece | Conditions | Surface Roughness | Height Difference | No. of Workpieces | Result |
|---|---|---|---|---|---|
| Crankcase ADC12  | Cutting speed: 4 000 m/min<br>Spindle speed: 15 900 $min^{-1}$<br>Feed rate: 9 550 mm/min<br>Depth of cut: 2.5 mm | Ra=0.08 µm<br>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)





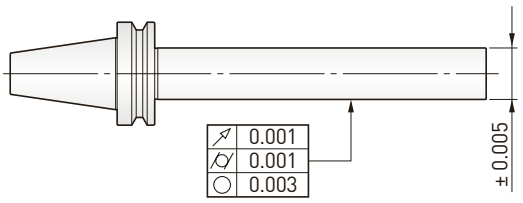
**Dyna Test**

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.



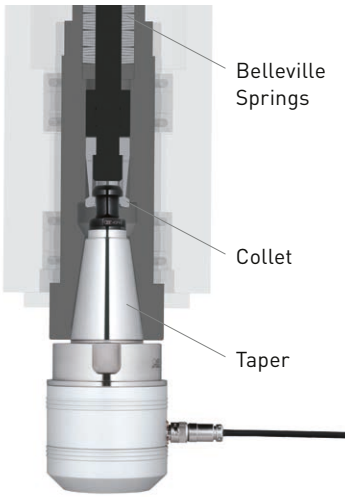

| | |
|---|---|
| **Runout** | 0.001 mm |
| **Roundness** | 0.001 mm |
| **Cylindricity** | 0.003 mm |
| **Roughness** | Ra: 0.1 µm |
| **Diameter tol.** | ± 0.005 mm |

# 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**



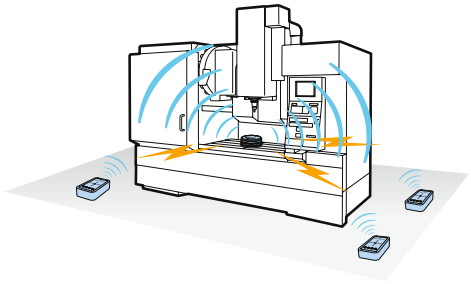
**Wireless Type**



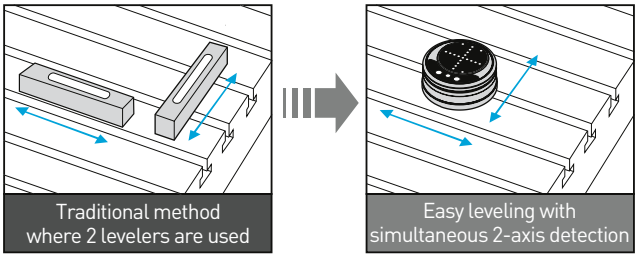



**Easy leveling with the remote display**

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

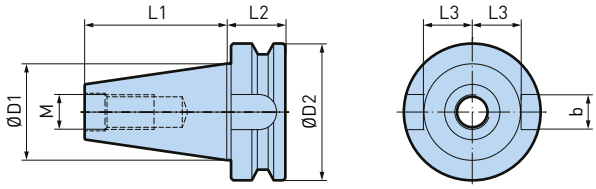


**The starting point for the high precision cutting is proper tightening.**

| | | |
|---|---|---|
| **Insufficient tightening** | Variant cutting edge position | Cutting Error<br>Dimensional Error |
| **Over tightening** | Collet deformation<br>Deteriorted runout | Shorter Cutter Life<br>Shorter Tool Holder Life |

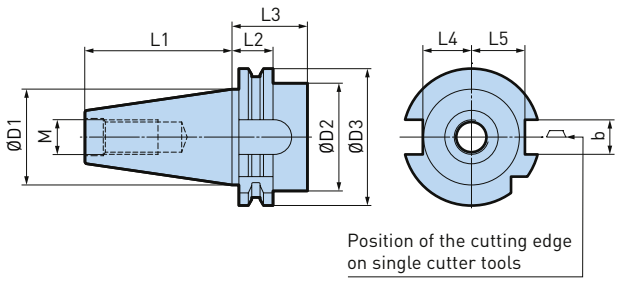
## Steep taper shanks JIS B6339 / BT / BBT

| 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 |



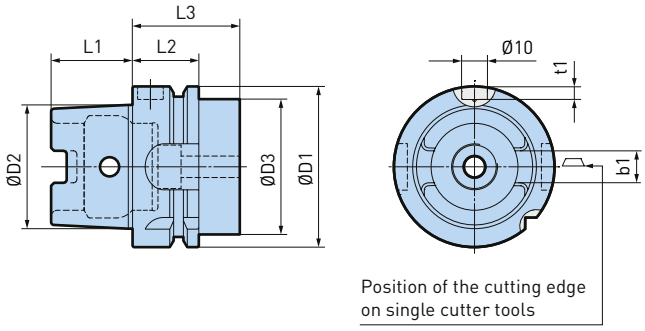

## Steep taper shanks DIN 69871 / DV / BDV

| 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 |



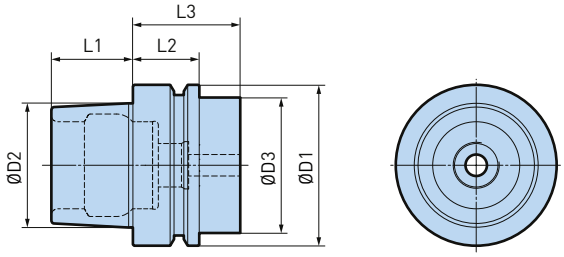

## Hollow taper shanks DIN 69893, form A

| 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 |



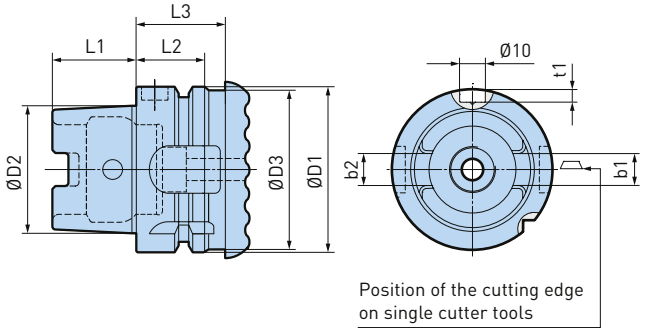

## Hollow taper shanks DIN 69893, form E

| 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 |



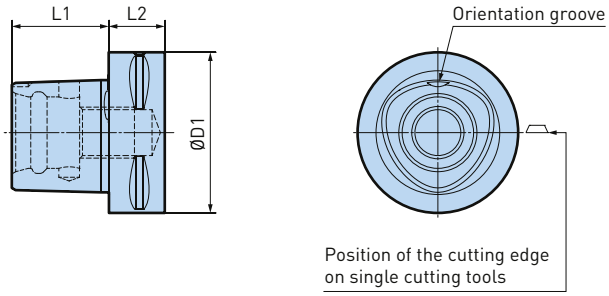

## Hollow taper shanks ISO 12164-3, form T

| 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

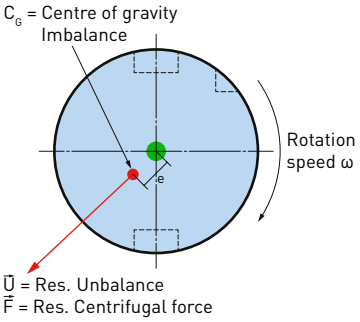



Fig. 2: unbalanced

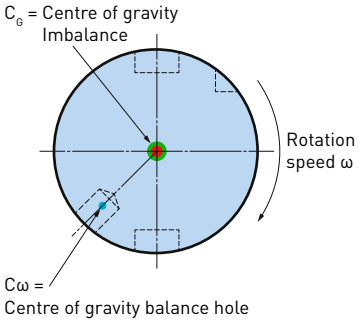



Fig. 3: balanced

**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 |
| Mold Chucks | 92 |
| Shrink Chucks | 93 |
| CK Shanks | 96 |
| Face Mill Arbors | 102 |
| Smart Damper Face Mill | 104 |
| Super Keyless Chucks | 106 |
| Morse Taper Holders | 107 |
| Side Lock Holders | 108 |
| Screw-On-Holder | 110 |
| Side Cutter Arbors | 112 |
| BIG CAPTO Basic Holder | 113 |
| MEGA Synchro Tapping Holder | 114 |
| Angle Heads | 116 |
| Air Turbine Spindle | 136 |




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

# MEGA Micro Chuck Type T

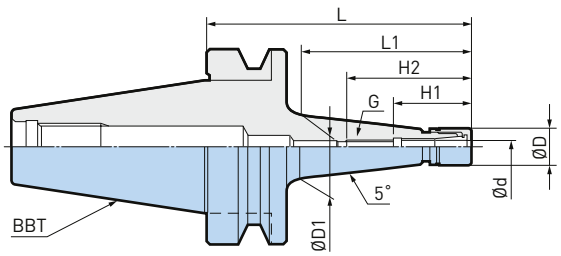
Tapered and slim design, minimal interference combined with maximized rigidity.

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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 342 | ▶ 342 | ▶ 340 | ▶ 368 | ▶ 388 | ▶ 343 |

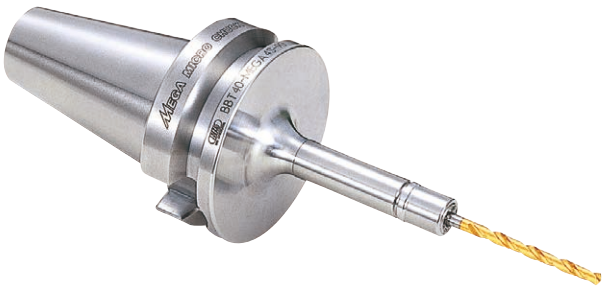
# MEGA Micro Chuck Type S

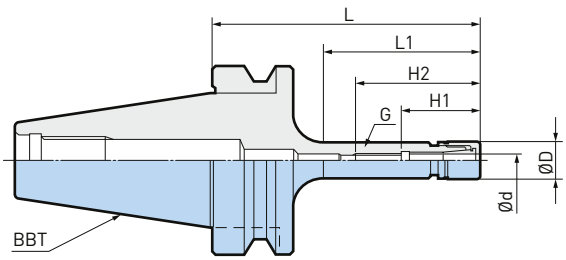
Reduced diameter design is ideal for high speed applications and machining in tight spaces.

Coolant Through Hole

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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 342 | ▶ 342 | ▶ 340 | ▶ 368 | ▶ 388 | ▶ 343 |

# MEGA New Baby Chuck

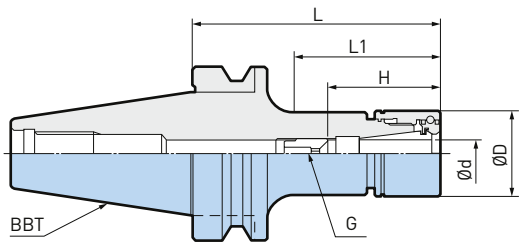
Ideal ultra precision collet holders for high speed machining. A wide range of lengths and a variety of collet series covers all machining applications.

Coolant Through Hole

BIG-PLUS Dual-Contact

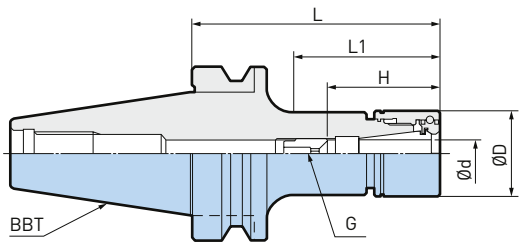
A.1






**ø0.25 - 25.4mm**

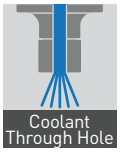
| Model | Article No. | Ød | ØD | L | L1 | H | max. min-1 | Collet Model | Nut Model | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| BBT30-MEGA6N-60 | 969.509 | 0.25 - 6 | 20 | 60 | 32 | 23 - 43 | 40,000 | NBC6 | MGN6 | 0.45 |
| BBT30-MEGA6N-75 | 969.341 | 0.25 - 6 | 20 | 75 | 47 | 23 - 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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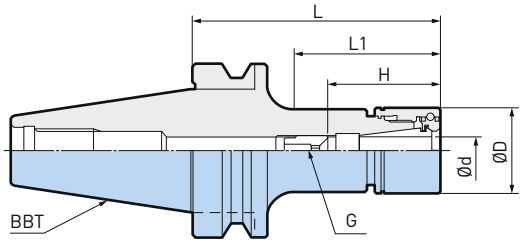
# MEGA New Baby Chuck



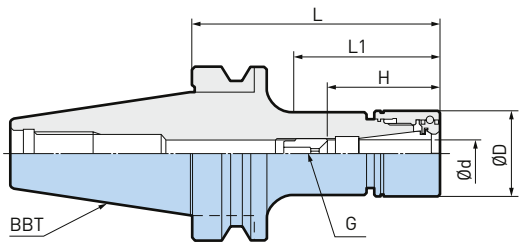




A.1




| 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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 351 | ▶ 352 | ▶ 344 | ▶ 368 | ▶ 351 | ▶ 388 |

# MEGA E Chuck

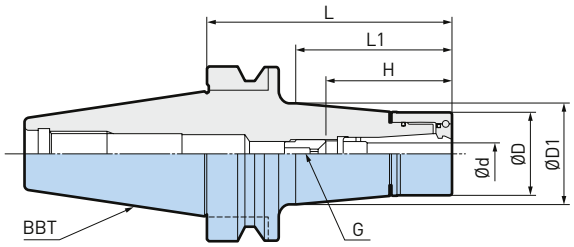
Collet chuck designed for milling with high concentricity and rigidity in hard materials.

Coolant Through Hole

BIG-PLUS Dual-Contact

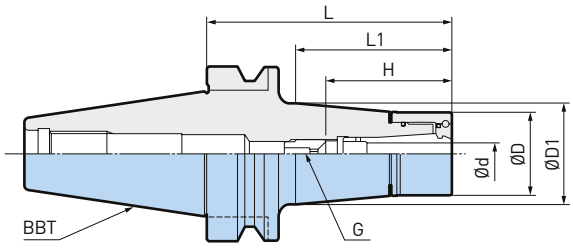
A.1






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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 356 | ▶ 357 | ▶ 356 | ▶ 368 | ▶ 351 | ▶ 388 |

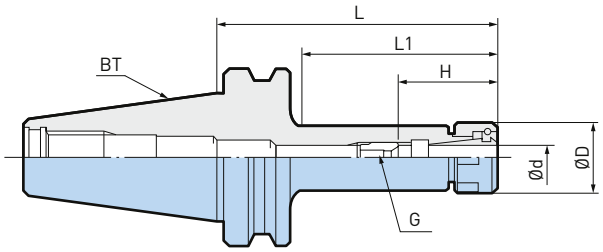
# New Baby Chuck

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

Coolant Through Hole

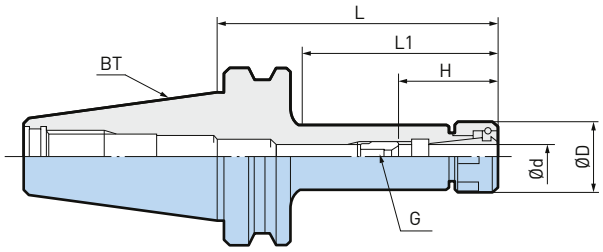
A.1






**ø0.25 - 20mm**

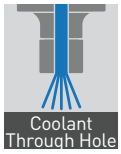
| Model | Article No. | Ød | ØD | L | L1 | H | Collet Model | Nut Model | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| BT30-NBS6-45 | 961.901 | 0.25 - 6 | 20 | 45 | 20 | 20 - 40 | NBC6 | NBN6 | 0.42 |
| BT30-NBS6-60 | 961.917 | 0.25 - 6 | 20 | 60 | 32 | 20 - 40 | NBC6 | NBN6 | 0.45 |
| BT30-NBS6-75 | 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 |



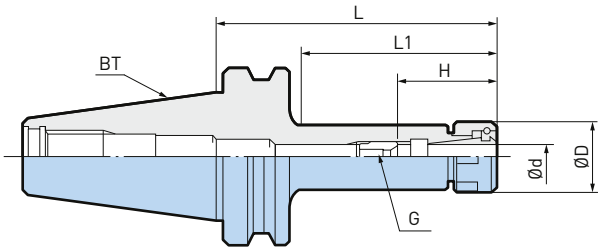

| Model | Article No. | Ød | ØD | L | L1 | H | Collet Model | Nut Model | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| BT40-NBS6-60 | 961.931 | 0.25 - 6 | 20 | 60 | 23 | 20 - 40 | NBC6 | NBN6 | 1.10 |
| BT40-NBS6-75 | 968.596 | 0.25 - 6 | 20 | 75 | 38 | 20 - 40 | NBC6 | NBN6 | 1.10 |
| BT40-NBS6-90 | 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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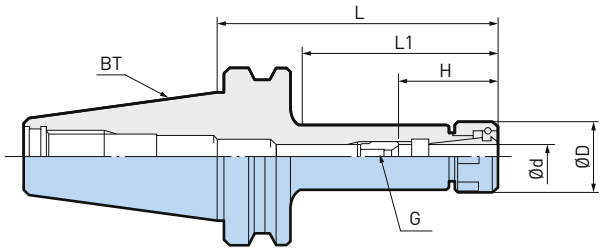
# New Baby Chuck






| 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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 351 | ▶ 354 | ▶ 344 | ▶ 369 | ▶ 351 | ▶ 388 |

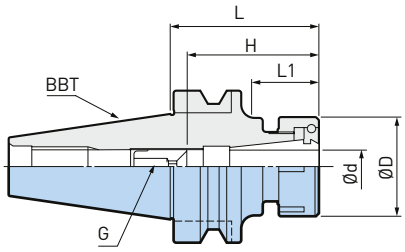
# New Baby Chuck Extra Short

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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 351 | ▶ 354 | ▶ 344 | ▶ 369 | ▶ 351 | ▶ 388 |

# New Baby Chuck Type NRA

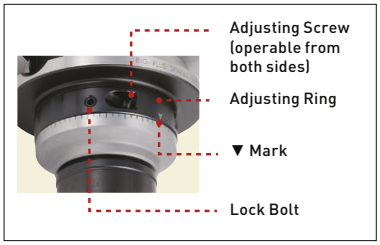
New Baby Chuck holder with runout adjustable tool function.

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.

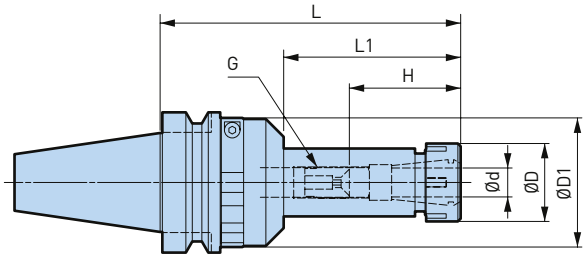



Fig. 1

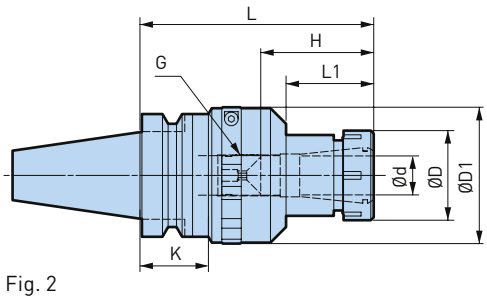



Fig. 2

**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 |
|---|---|---|---|
|  |  |  |  |
| ▶ 344 | ▶ 351 | ▶ 354 | ▶ 369 |

# MEGA Double Power Chuck Type D

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








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 |

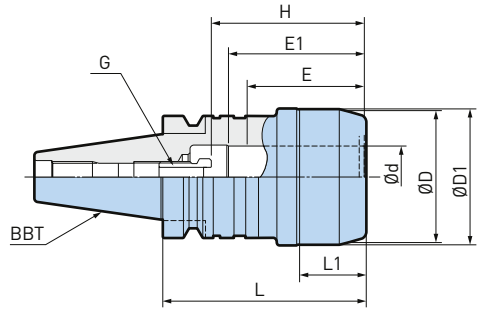



Fig. 1

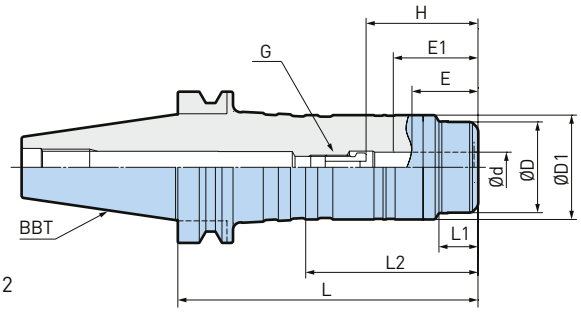



Fig. 2

| 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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 363 | ▶ 364 | ▶ 364 | ▶ 365 | ▶ 368 | ▶ 367 |

# 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.

Coolant Through Hole

BIG-PLUS Dual-Contact







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 |

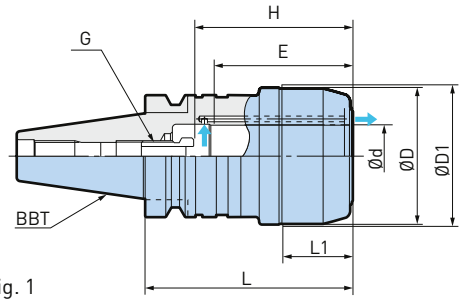


Fig. 1

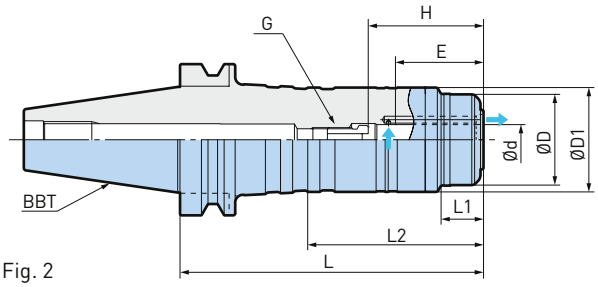


Fig. 2

| 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 |
|---|---|---|---|---|
|  |  |  |  |  |
| ▶ 363 | ▶ 364 | ▶ 365 | ▶ 368 | ▶ 367 |

# MEGA Perfect Grip

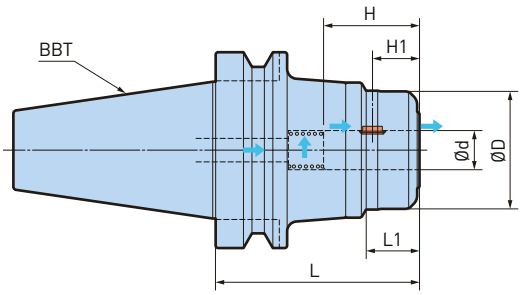
100% security against pulling out of the cutting tool under any torque load.

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1







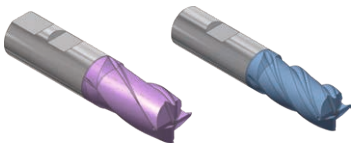

**ø16 - 32mm**

| 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 |

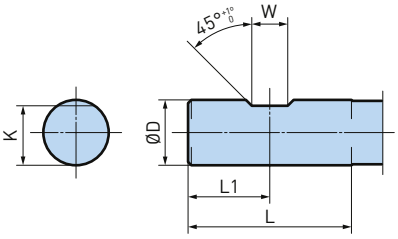
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Key grip and spring are included with each holder.
3. MEGA wrench is to be ordered separately.
4. „H1" shows distance from center of key grip to front end.

## Weldon Shank Standards

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

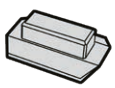


**Ø 25/32 mm** **Ø 20 mm**




| 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 |
|---|---|---|
|  |  |  |
| ▶ 367 | ▶ 367 | ▶ 368 |

# 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





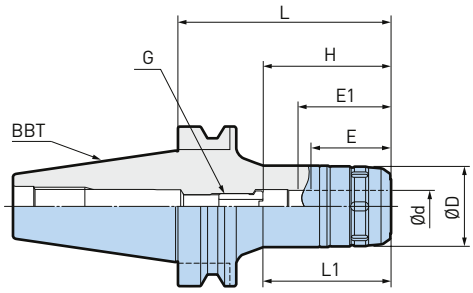



Fig. 1

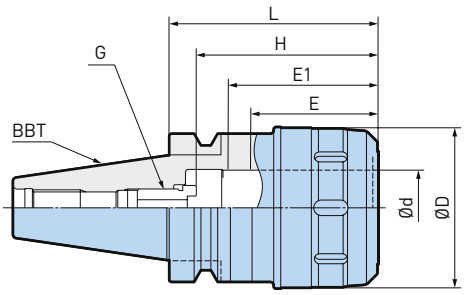



Fig. 2

**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

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1

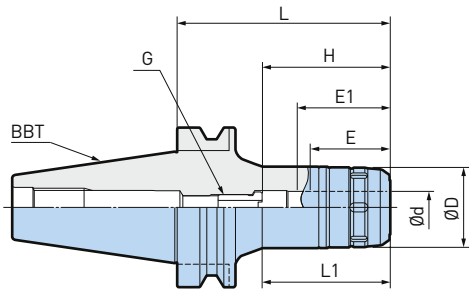



Fig. 1

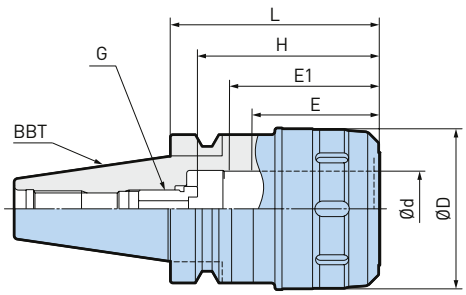



Fig. 2

| 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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 363 | ▶ 364 | ▶ 364 | ▶ 365 | ▶ 369 | ▶ 367 |

# New Hi-Power Milling Chuck Type HMC12J

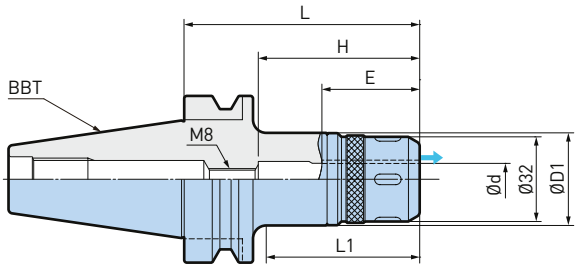
Extremely slim and rigid design with jet through coolant.

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 |
|---|---|
|  |  |
| ▶ 363 | ▶ 369 |

# New Hi-Power Milling Chuck Type NRA

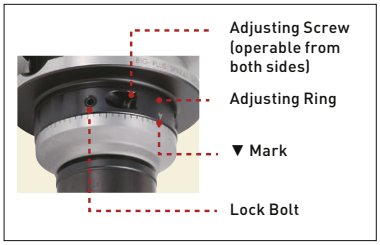
New Hi-Power Milling Chuck with runout adjustable function.

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.

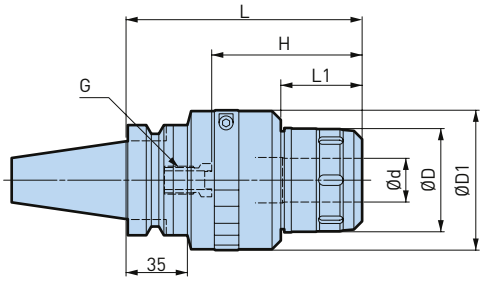



Fig. 1

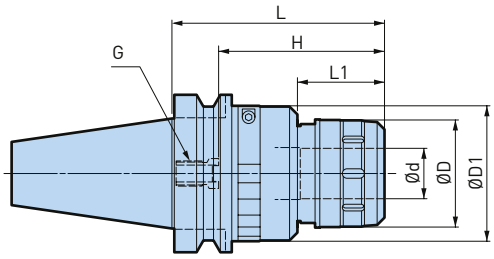



Fig. 2

**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 |
|---|---|---|---|---|
|  |  |  |  |  |
| ▶ 369 | ▶ 367 | ▶ 363 | ▶ 364 | ▶ 365 |

# Hydraulic Chuck Super Slim

Ultra precise hydraulic chuck with extremely slim design.

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1



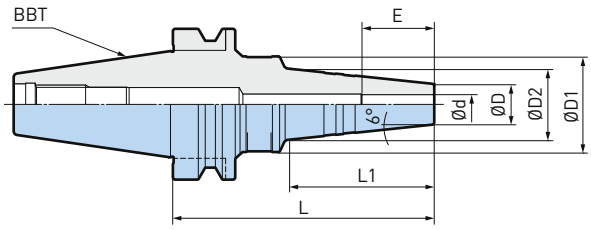



Fig. 1

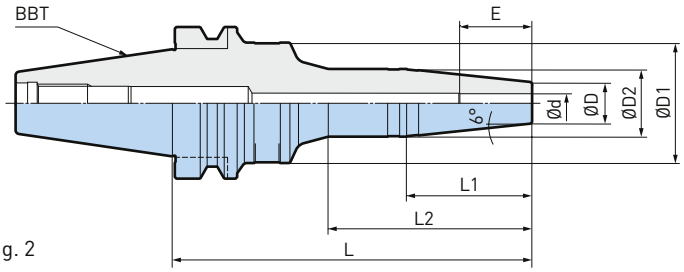



Fig. 2

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 |

continues on the next page

# Hydraulic Chuck Super Slim

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1

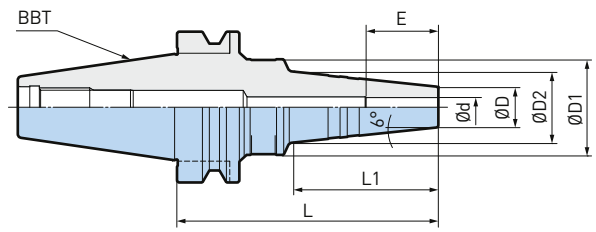



Fig. 1

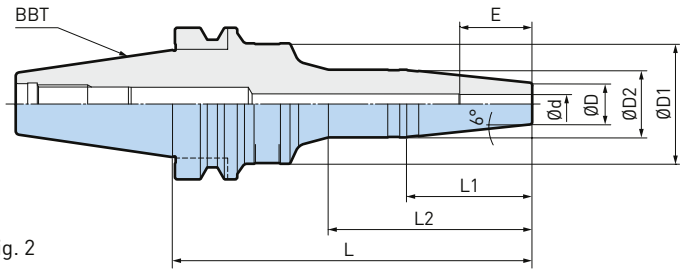



Fig. 2

| 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



► 388

# 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





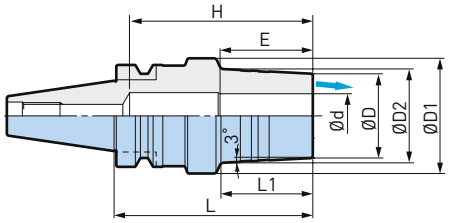



Fig. 2

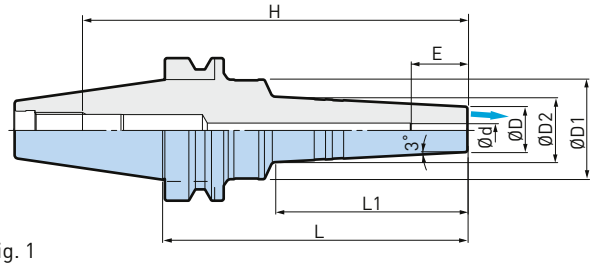



Fig. 1

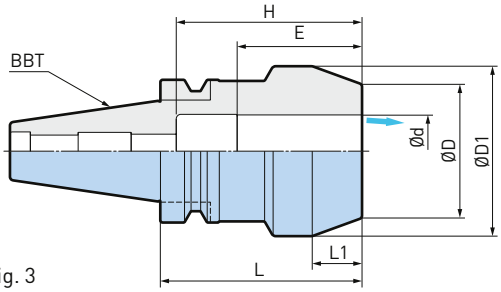
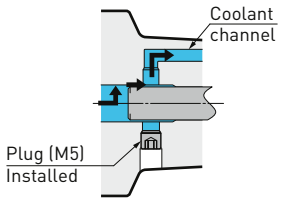


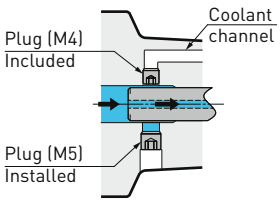

Fig. 3

**ø4 - 32mm**

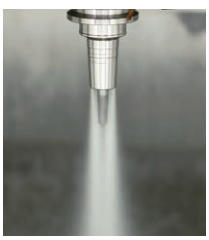
| Model | Article No. | Fig. | Ød | ØD | ØD1 | ØD2 | L | L1 | L2 | H | E | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BBT30-HDC4J-60 | 805.077 | 1 | 4 | 20 | 46 | 23 | 60 | 28 | - | (84) | 19 | 0.50 |
| BBT30-HDC4J-90 | 807.372 | 1 | 4 | 20 | 42 | 26 | 90 | 50 | - | (113) | 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 |




Peripheric

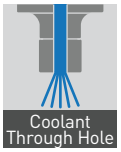



Center Through



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# Hydraulic Chuck Jet Through







A.1

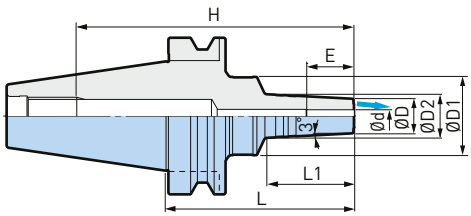



Fig. 4

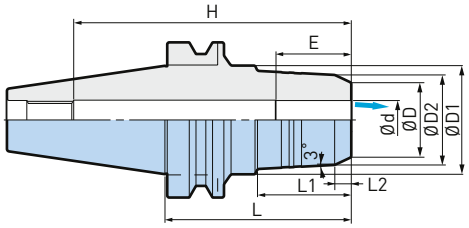



Fig. 5

| 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



► 388

# Hydraulic Chuck Standard

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

Coolant Through Hole

BIG-PLUS Dual-Contact





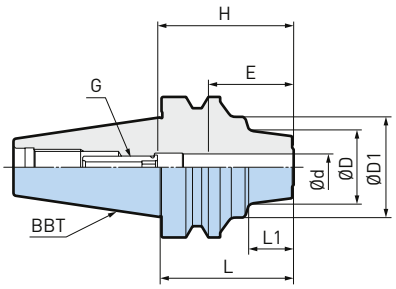



Fig. 1

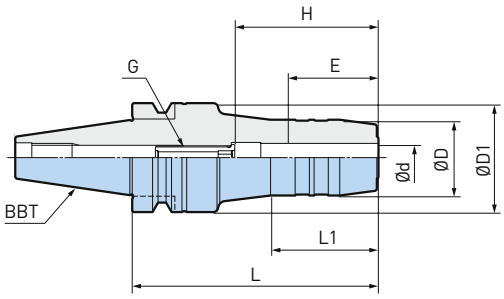



Fig. 2

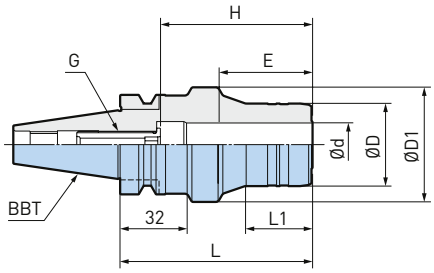



Fig. 3

**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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# Hydraulic Chuck Standard

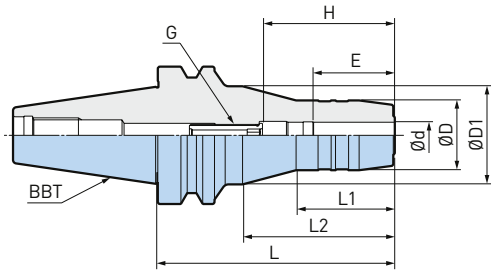



Fig. 4

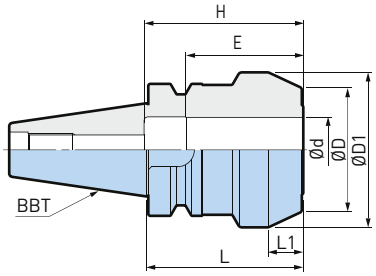



Fig. 5

| 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 |

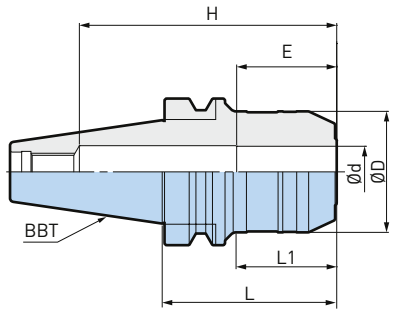



Fig. 6

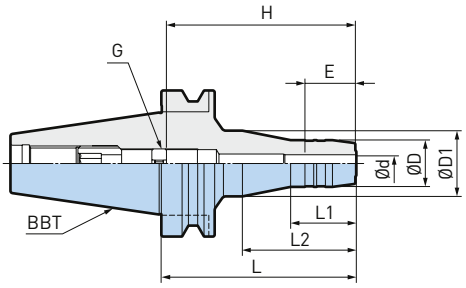



Fig. 7

| 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 |

continues on the next page

# Hydraulic Chuck Standard



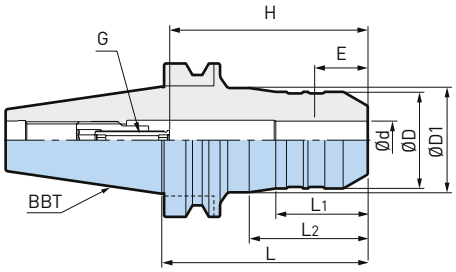



Fig. 8

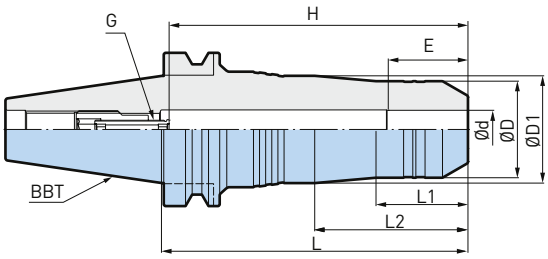



Fig. 9

| 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 |
|---|---|---|---|
|  |  |  |  |
| ▶ 363 | ▶ 364 | ▶ 371 | ▶ 388 |

# Hydraulic Chuck E Type

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

Coolant Through Hole

BIG-PLUS Dual-Contact





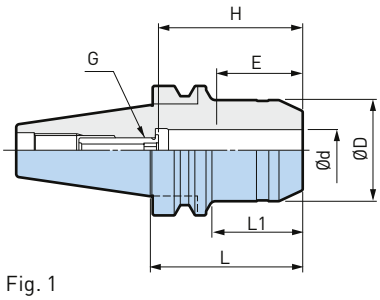



Fig. 1

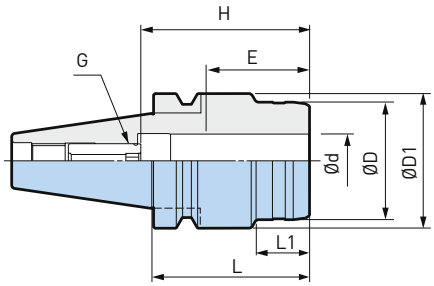



Fig. 2

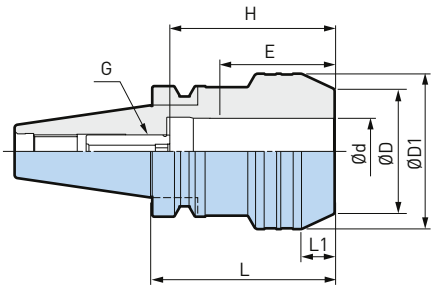



Fig. 3

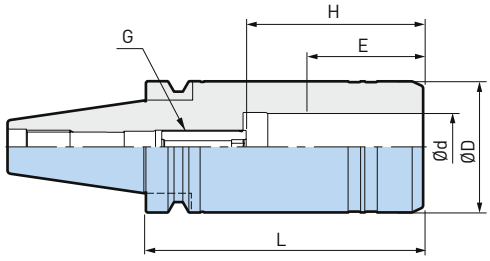



Fig. 4

**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 |
|---|---|---|---|
|  |  |  |  |
| ▶ 363 | ▶ 364 | ▶ 371 | ▶ 388 |

# Mold Chuck

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

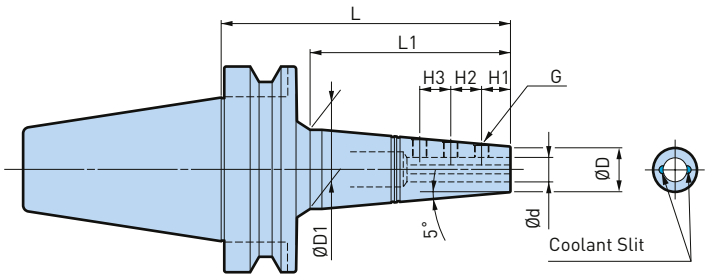
Coolant Through Hole

BIG-PLUS

Dual-Contact

A.1






**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



▶ 384

# Shrink Chuck Slim

Slim design reduces outer diameter for machining in tight spaces.

Coolant Through Hole

BIG-PLUS Dual-Contact



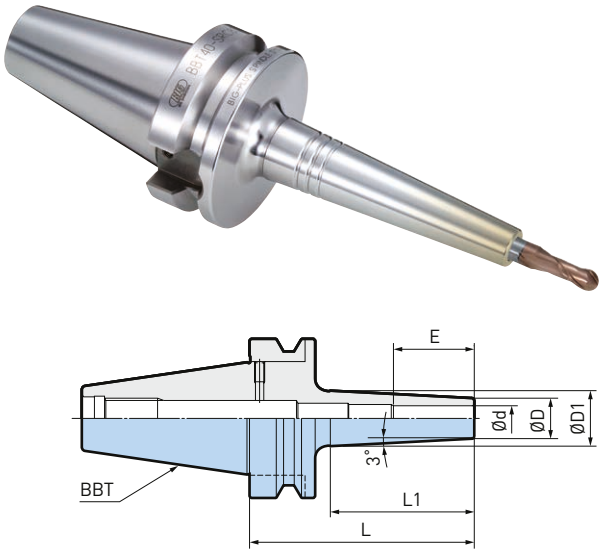





Fig. 1

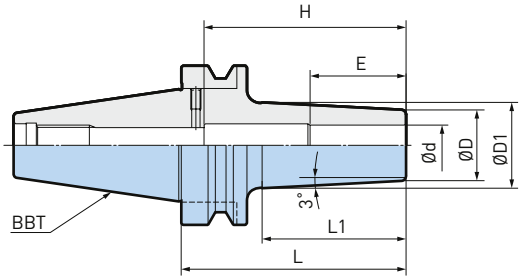



Fig. 2

**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



► 388

# Shrink Chuck Jet Through

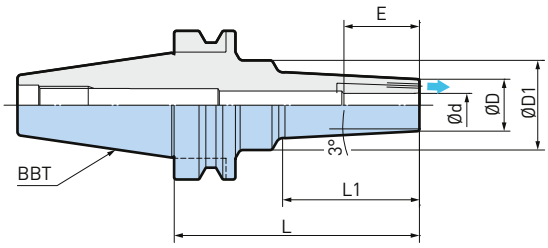
Efficient coolant supply to the cutting tool periphery.

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1






**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



► 388

# Shrink Chuck Standard

Substantial body provides higher rigidity.

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1



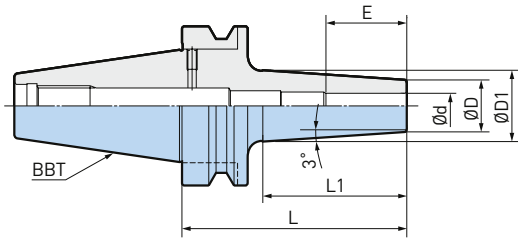



Fig. 1

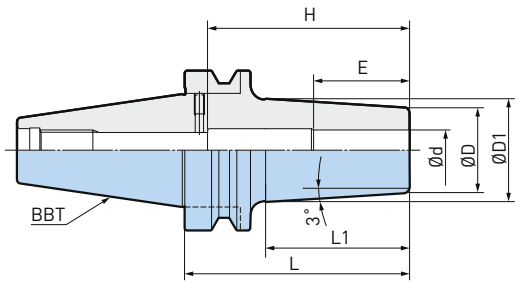



Fig. 2

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.

# CK Shanks with Center Through Coolant

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1



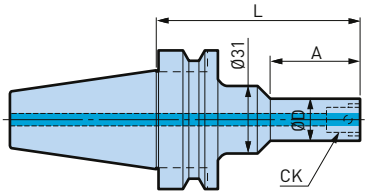
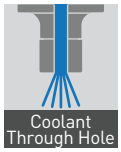



Fig. 1

**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 |









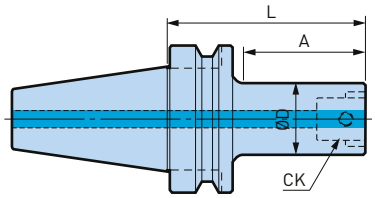



Fig. 2

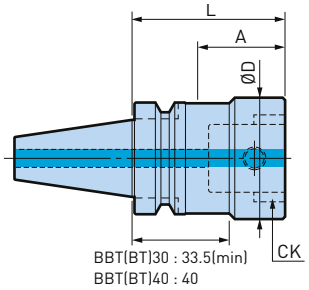



Fig. 3

| 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 |
|---|---|
|  |  |
| ▶ 410 | ▶ 399 |

# CK Shanks with Center Through Coolant

Coolant Through Hole

A.1



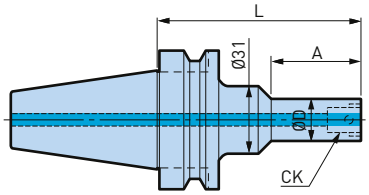



Fig. 1

| 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 |

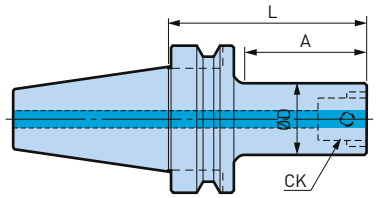



Fig. 2

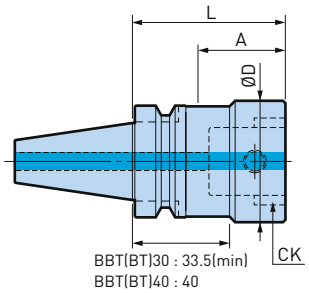



Fig. 3

| 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 |
|---|---|
|  |  |
| ▶ 410 | ▶ 399 |

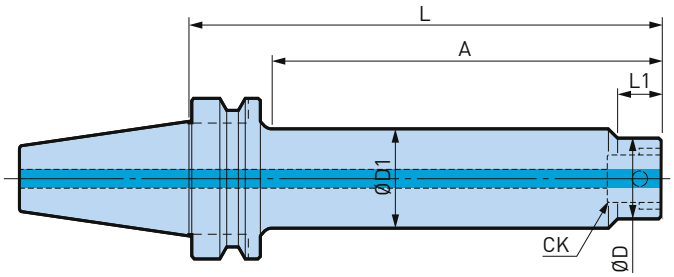
# Extra Long CK Shanks with Center Through Coolant

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 |

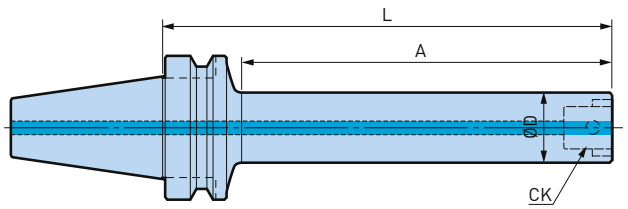
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Cutting edge and drive key grooves are located in the same orientation.

**Accessories & Spare Parts**

| Fine Boring Heads | Rough Boring Heads |
|---|---|
|  |  |
| ▶ 410 | ▶ 399 |

# 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 |
|---|---|
|  |  |
| ▶ 410 | ▶ 399 |

# Face Mill Arbors Type FMH

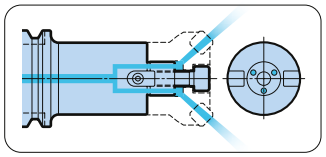
Coolant ports on the face.

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1





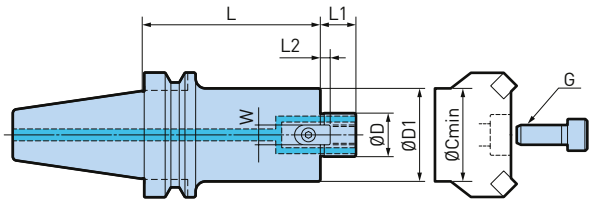



Fig. 1

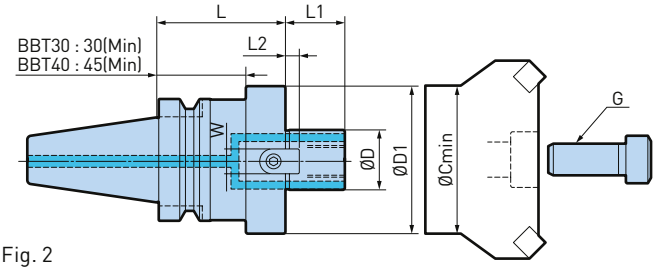



Fig. 2

| 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 |
|---|---|
|  |  |
| ► 372 | ► 479 |

# Smart Damper Basic Holders for Milling Heads

Coolant Through Hole

BIG-PLUS Dual-Contact

A.1



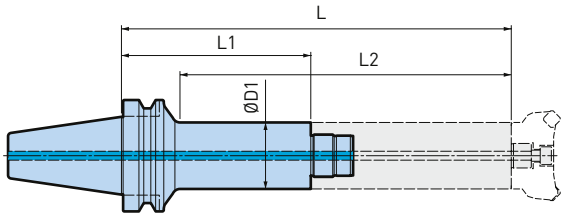



Fig. 1

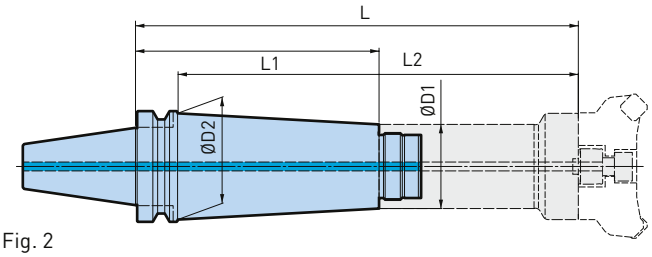



Fig. 2

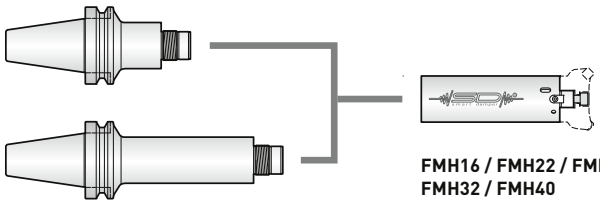
| Model | Article No. | Fig. | ØD1 | ØD2 | L | L1 | L2 | Damper Head Model | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| BBT50-SDF28-38-80 | - | 1 | 38 | - | 250 | 80 | 195 | FMH16DP-38 | 4.30 |
| BBT50-SDF28-38-130 | - | 1 | 38 | - | 300 | 130 | 245 | FMH16DP-38 | 4.70 |
| BBT50-SDF28-38-180 | - | 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



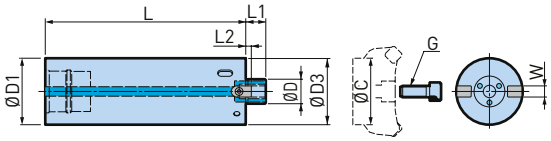



Fig. 1

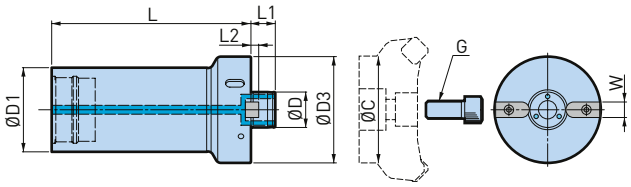



Fig. 2

| 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 |
|---|---|
|  |  |
| ▶ 369 | ▶ 372 |

# Super Keyless Chuck

Securely chucks the drill with simple operation.

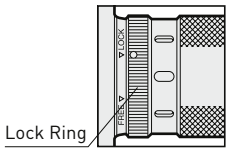
BIG-PLUS Dual-Contact

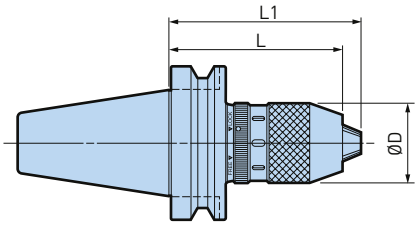




**Reverse lock mechanism (SKL13)**

- 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)



► 372

# Morse Taper Holders

Precise finish of inner taper guarantees high concentricity.

BIG-PLUS Dual-Contact

A.1



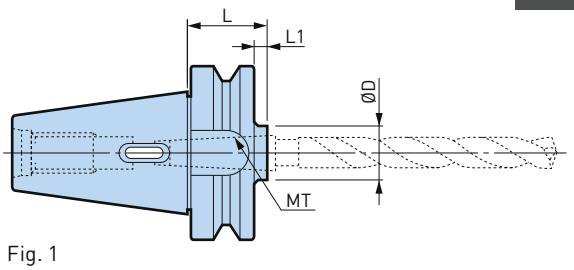



Fig. 1

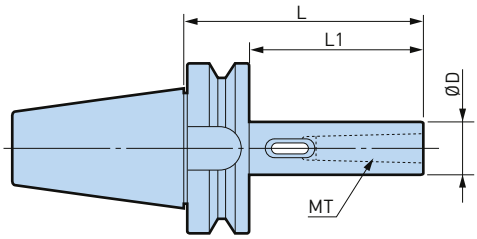



Fig. 2

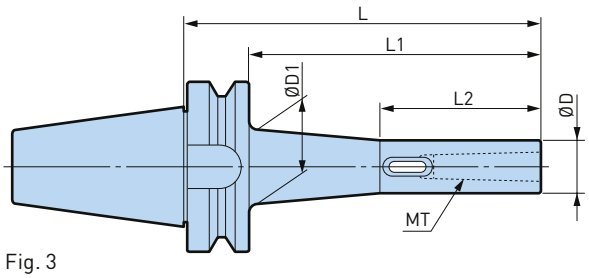



Fig. 3

| 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



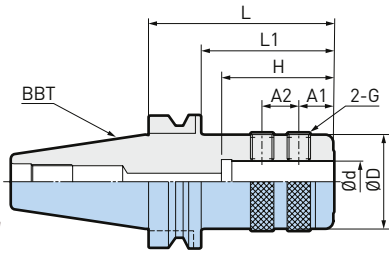



Fig. 1

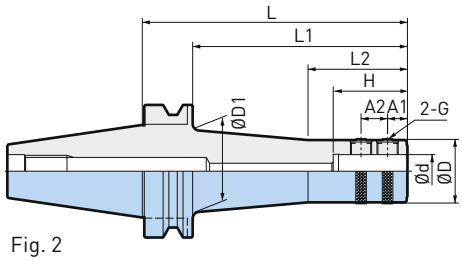



Fig. 2

**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



▶ 373

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



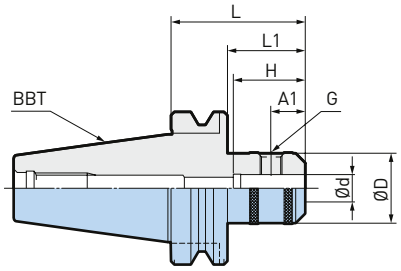



Fig. 1

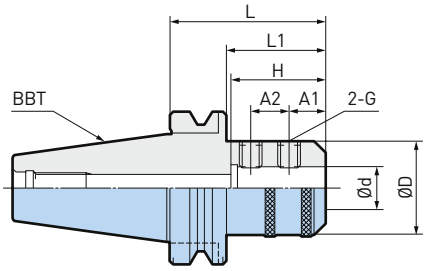



Fig. 2

**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.

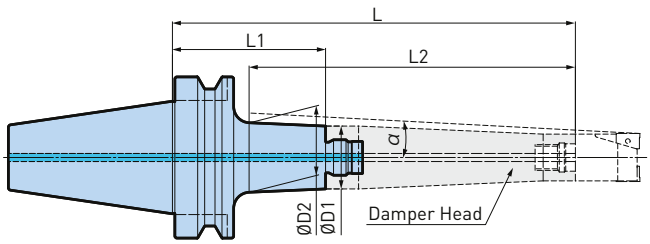
## Smart Damper Basic Holders for Screw on

Coolant Through Hole

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



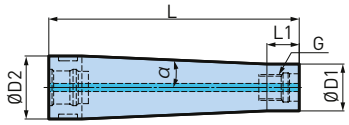



Fig. 1

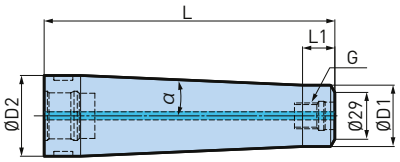
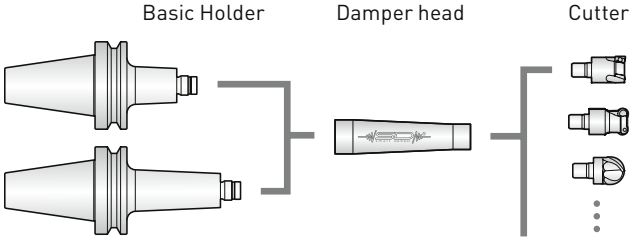



Fig. 2

| 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.

# Screw-On Holder

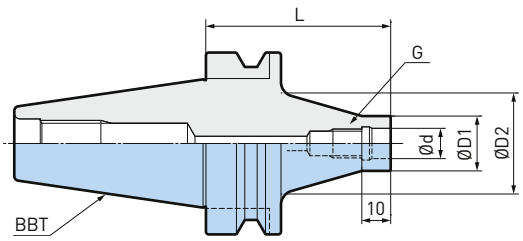
General metric screw-on type cutting tools can be used with these models.

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 |

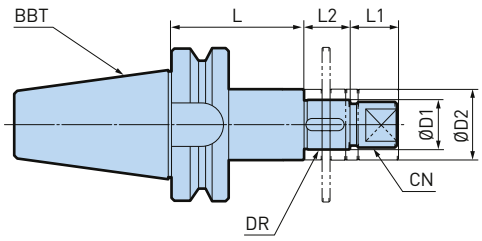
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.

# 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.

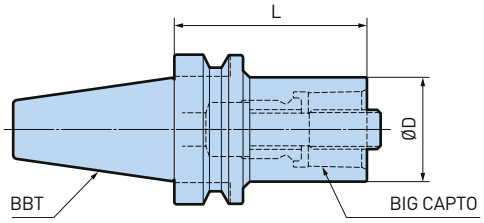
# BIG CAPTO Basic Holders

Coolant Through Hole

BIG-PLUS 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.

A.1

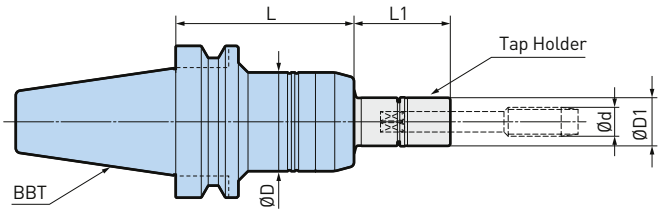
## MEGA Synchro Tapping Holder

Coolant Through Hole

BIG-PLUS Dual-Contact

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






**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.

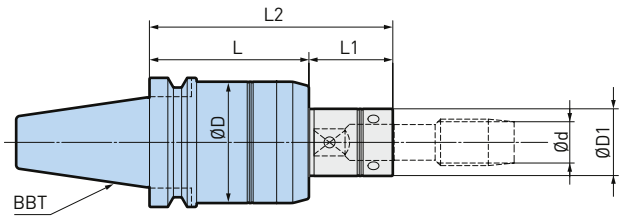
## MEGA Synchro Tapping Holder MGT36

Coolant Through Hole

BIG-PLUS Dual-Contact

For large Tap MGT36






**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 |
|---|---|---|
|  |  |  |
| ▶ 374 | ▶ 368 | ▶ 382 |

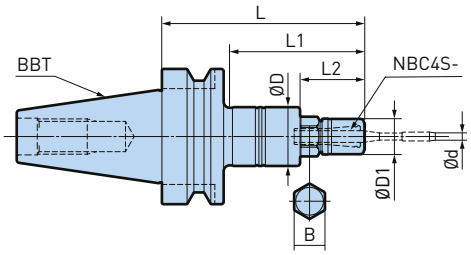
# MEGA Synchro Tapping Holder MGT3

For small tapping tools: Type MGT3

BIG-PLUS Dual-Contact







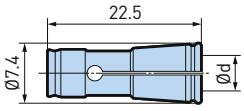

**M1 - M3**

| 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 |
| -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.

### Accessories & Spare Parts

MEGA Wrenches



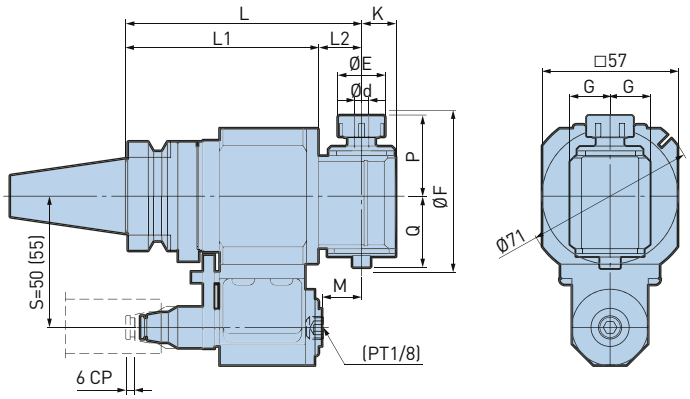
▶ 368

# Angle Head Light Weight New Baby Chuck Type

BIG-PLUS Dual-Contact

A.1

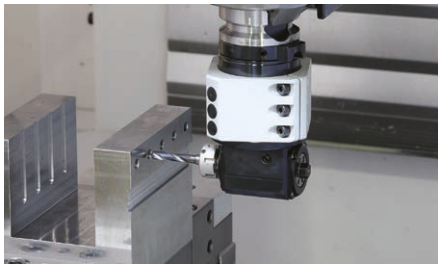





**ø0.25 - 6mm**

| 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



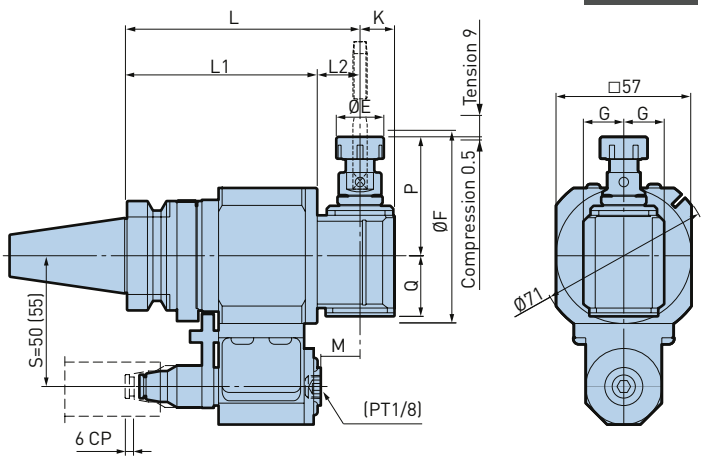
► 344

# 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



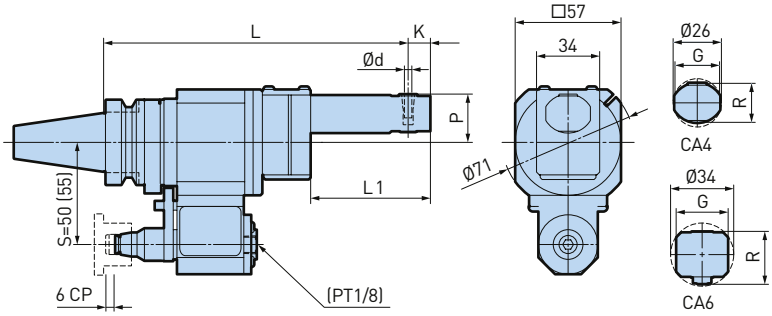
► 344

# 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



► 384

# 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



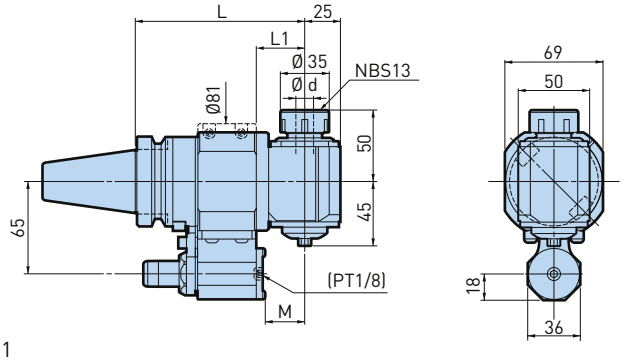



Fig. 1



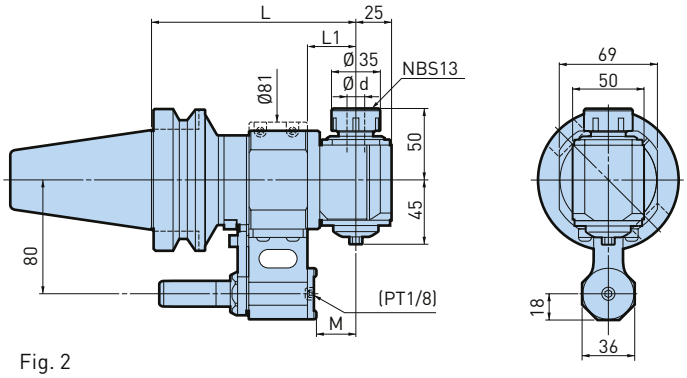



Fig. 2

**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 |
|---|---|
|  |  |
| ► 344 | ► 395 |

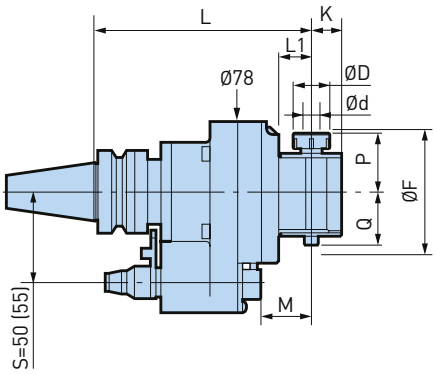
# Angle Head New Baby Chuck Type

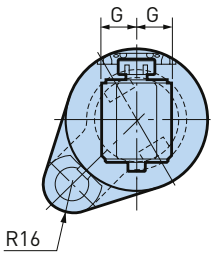
High run-out accuracy due to NBC technology.

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



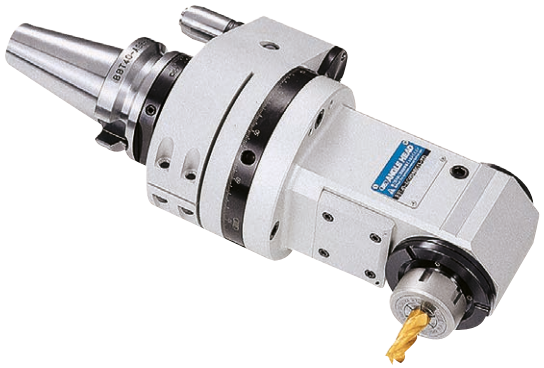
▶ 344

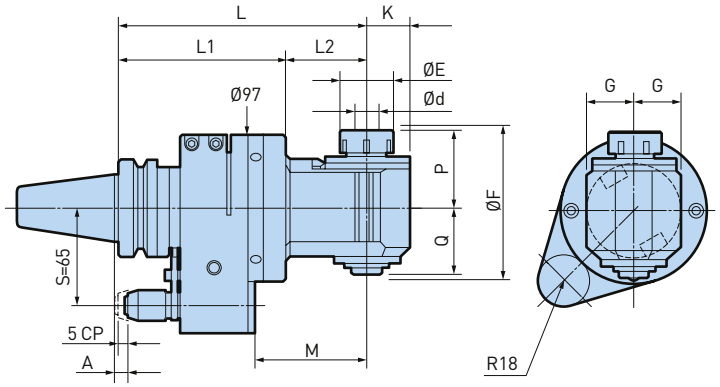
# Angle Head New Baby Chuck Type

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 |

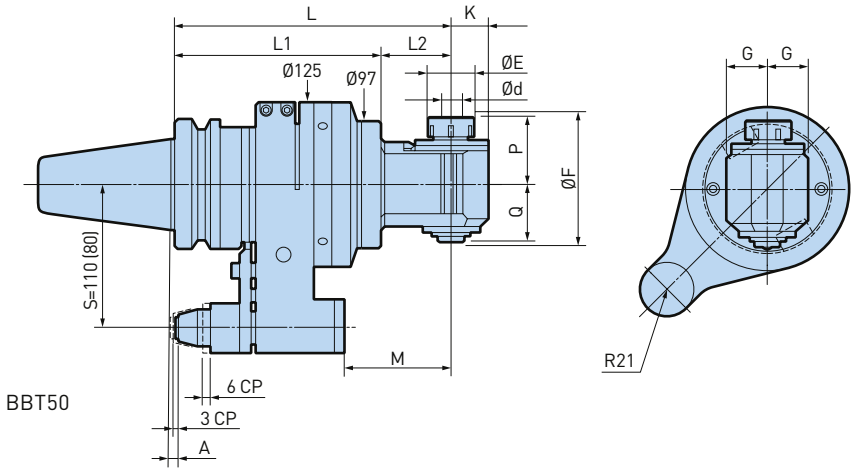
High rigidity S type with reinforced Locating Pin part is also available. Add the letter S at the end when ordering.

continues on the next page

# 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 |
|---|---|
|  |  |
| ▶ 344 | ▶ 395 |

**NEW BABY CHUCK Insertion Length List**

| Model | Tool adjustment amount | Max. insertion length | Adjust Screw |
|---|---|---|---|
| BBT30-AG90-6-99 | - | 33 | - |
| BBT30-AG90-6-120 | | | |
| BBT30-AG90-8-125 | | 40 | |
| BBT30-AG90-10-125 | | 45 | |
| BBT30-AG90-13-125 | | 52 | |
| BBT40-AG90/NBS6 | - | 33 | - |
| BBT40-AG90/NBS10 | | 45 | |
| BBT40-AG90/NBS13 | | 52 | |
| BBT40-AG90/NBS20-185□ | | 70 | |
| BBT40-AG90/NBS20S-165S | | | |
| BBT40-AG90/NBS10W-185□ | | 60 | |
| BBT40-AG45/NBS10-215□ | | 45 | |
| BBT40-AG45/NBS13-220□ | | 52 | |
| BBT40-AGU/NBS13-270 | | 50 | |
| BBT40-AGU30/NBS13-240 | 41 - 53 | 73 | NBA13B |
| BBT40-AG90-13-120 | - | 50 | - |
| BBT40-AG90-13-170 | | | |
| BBT40-OAG90-13-170 | 36 - 40 | 60 | NBA13B |

| Model | Tool adjustment amount | Max. insertion length | Adjust Screw |
|---|---|---|---|
| AG35-NBS10 | 35 - 45 | 72 | NBA10B |
| AG35-NBS13 | 41 - 60 | 80 | NBA13B |
| AG35-NBS16 | 45 - 60 | 82 | NBA16B |
| AG35-NBS20 | 48 - 60 | | NBA20B |
| AG35-ONBS13N | - | 73 | - |
| AG35-ONBS20N | | 78 | |
| BBT50-AG90/NBS6 | - | 33 | - |
| BBT50-AG90/NBS10 | | 45 | |
| BBT50-AG90/NBS13 | | 52 | |
| BBT50-AG90/NBS20-230□ | | 70 | |
| BBT50-AG90/NBS16H-215□ | | 98 | |
| BBT50-AG90/NBS10W-230□ | | 60 | |
| BBT50-AG45/NBS10-260□ | | 45 | |
| BBT50-AG45/NBS13-265□ | | 52 | |
| BBT50-AGU/NBS20-315 | | 50 | |
| BBT50-AGU30/NBS20-295 | 48 - 65 | 85 | NBA20B |
| BBT50-AG90-13-145 | - | 50 | - |
| BBT50-AG90-13-195 | | | |
| BBT50-OAG90-13-195 | 36 - 40 | 60 | NBA13B |

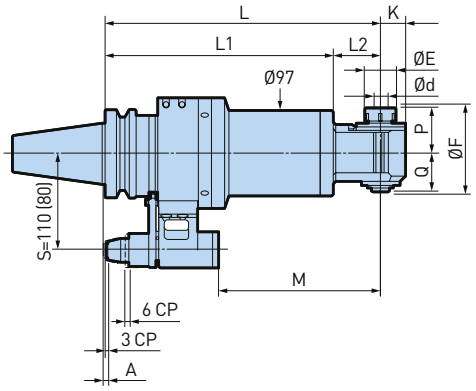
# Angle Head New Baby Chuck Extralong Type

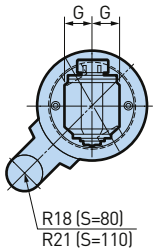
For drilling and key slotting in deep cavities of large workpieces.

BIG-PLUS Dual-Contact

A.1

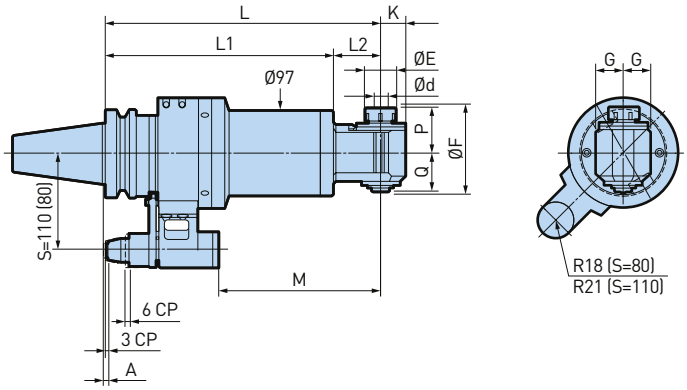





**ø0.25 - 20mm**

| 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 |
|---|---|
|  |  |
| ▶ 344 | ▶ 395 |

# 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



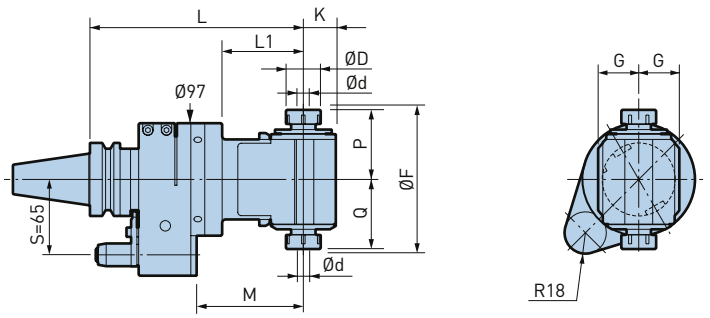



Fig. 1

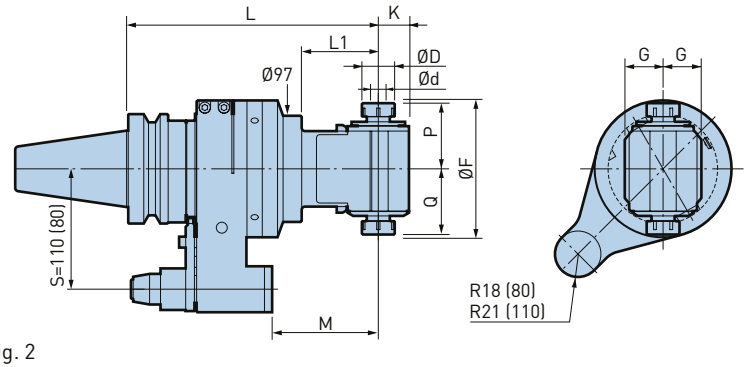



Fig. 2

| 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**

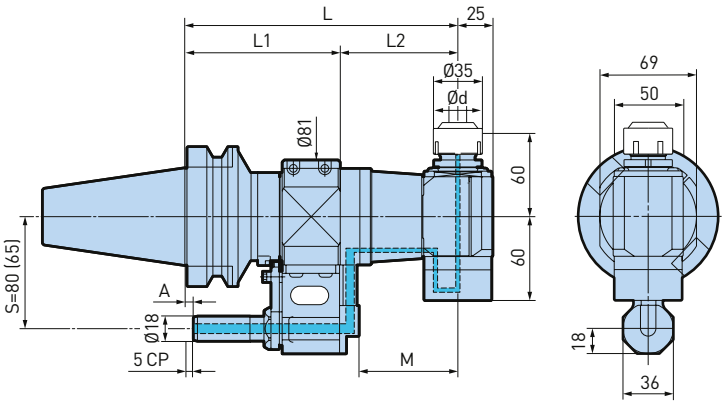
| New Baby Collets | Semi-Finished Stop Blocks |
|---|---|
|  |  |
| ▶ 344 | ▶ 395 |

# Angle Head New Baby Chuck Oil Coolant Type

BIG-PLUS Dual-Contact

Feeds coolant through the cutting tool via the stop block.



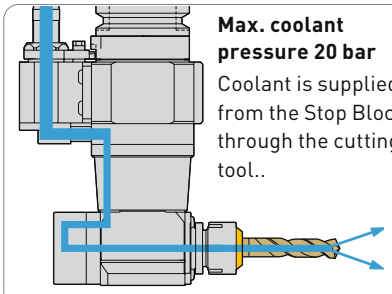



A.1

**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 |
|---|---|---|
|  |  |  |
| ▶ 354 | ▶ 344 | ▶ 395 |

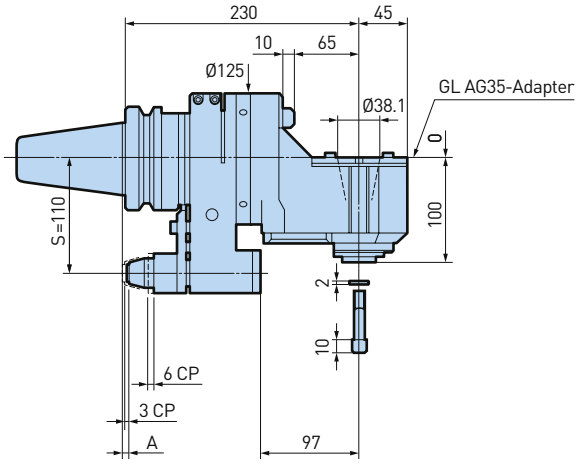
# Angle Head Build-Up Type

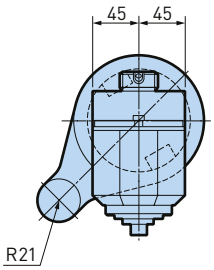
Designed for greater rigidity by having the face of the spindle bore in line with the center of the machine spindle. Also helps minimize interference problems with ATC and storage problems within the magazine.

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 "S" at the end 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.

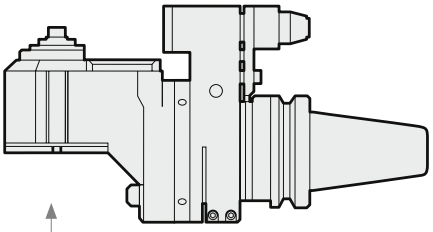
**Accessories & Spare Parts**

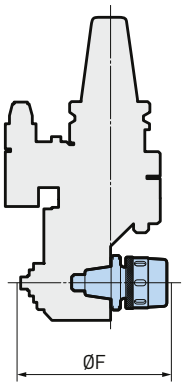
Semi-Finished Stop Blocks

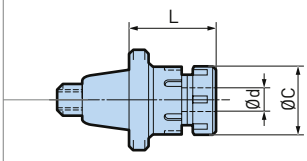


▶ 395

## AG35 adapters



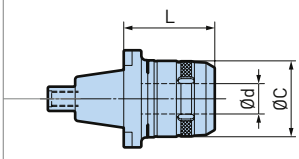



### AG35 adapters New Baby Chuck

| 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 |

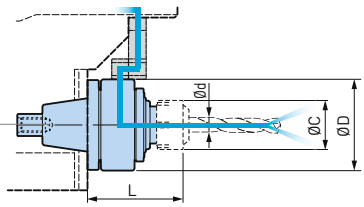
1. Collet and wrench are to be ordered separately.




### 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 |

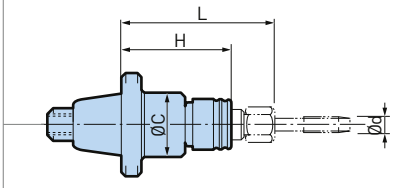
1. Wrench (FK45-50L) is included.




### 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 |

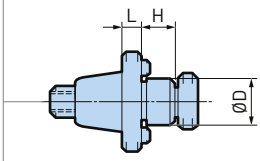
1. Baby Perfect Seal nut with sealing mechanism is required. (optional)
2. Anti-rotation block set is to be ordered separately. (Model: AG35-BL)
3. Collet and wrench are to be ordered separately.




### AG35 adapters Auto Tapper Type B (automatic depth control)

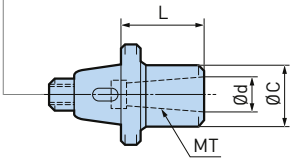
| Model | Article No. | Ød | ØC | L | H | Head | Weight (kg) |
|---|---|---|---|---|---|---|---|
| AG35-ATB12E | 802.435 | M4 - M12 | 40.5 | 80 | 72 | AG35 | 0.85 |
| AG35-ATB20E | 802.436 | M8 - M20 | 57.5 | 115 | 102.5 | AG35 | 1.65 |

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 |

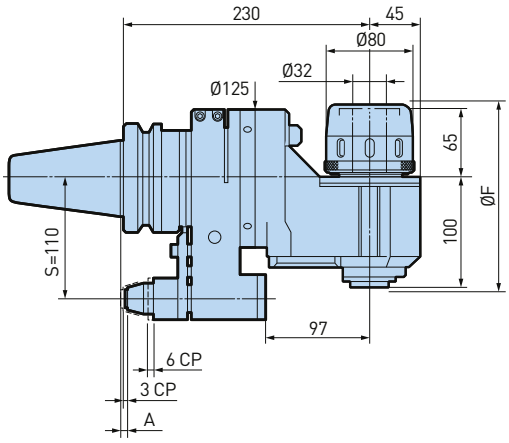
# Angle Head HMC Type

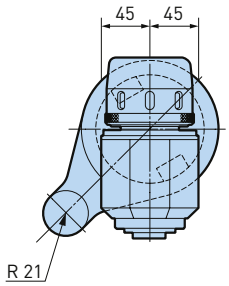
Improved versatility is achieved from the 32 mm Milling Chuck by using parallel reduction collets and other accessories.

BIG-PLUS Dual-Contact

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 "S" at the end 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 |
|---|---|---|
|  |  |  |
| ▶ 365 | ▶ 395 | ▶ 369 |

# Angle Head New Baby Chuck Type 45 degree

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



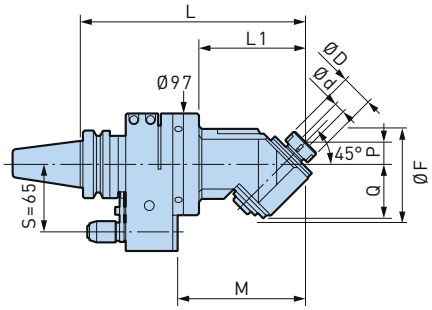



Fig. 1

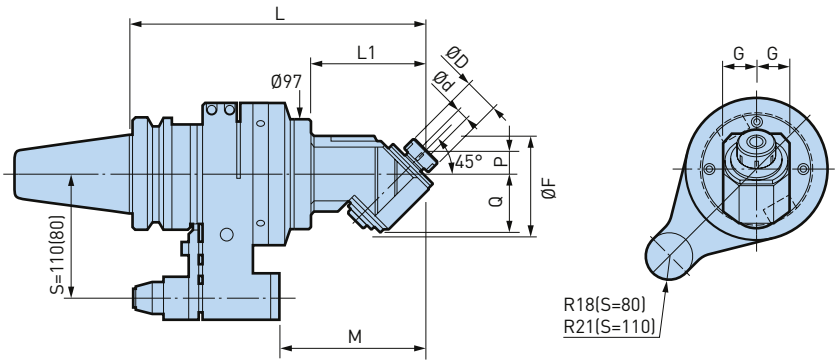



Fig. 2

| 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 |
|---|---|---|
|  |  |  |
| ▶ 344 | ▶ 395 | ▶ 369 |

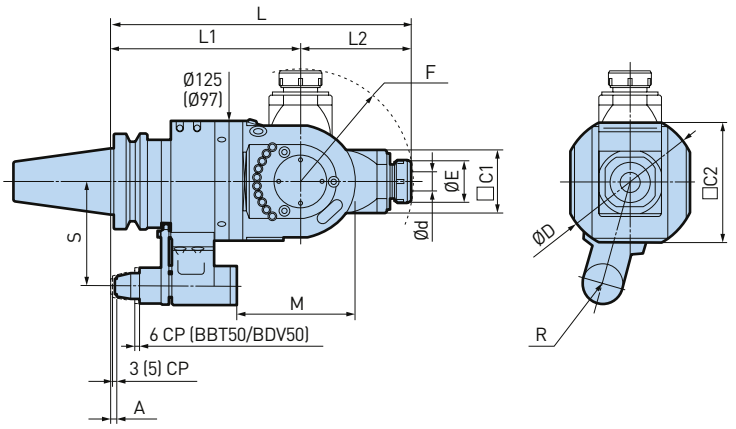
# Angle Head Universal Type

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!

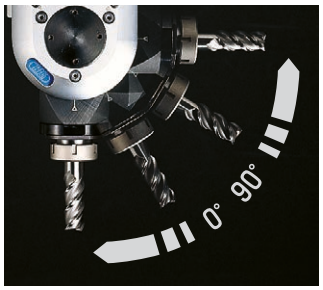
A.1






| 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 |

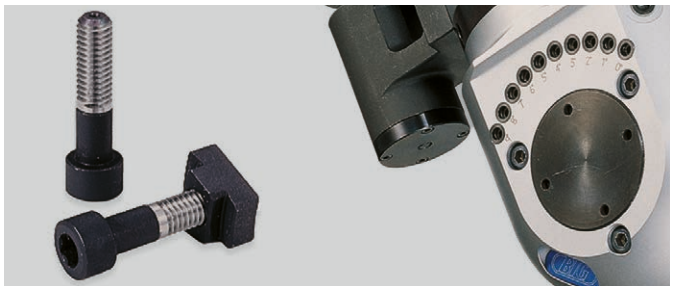
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. The standard fixed length A is 8 mm for BBT40 and 6 mm for BBT50. Other lengths are available upon request.
4. Figures in ( ) in the drawing indicate dimensions for BBT40.
5. Nut and 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 |
|---|---|
|  |  |
| ▶ 344 | ▶ 395 |

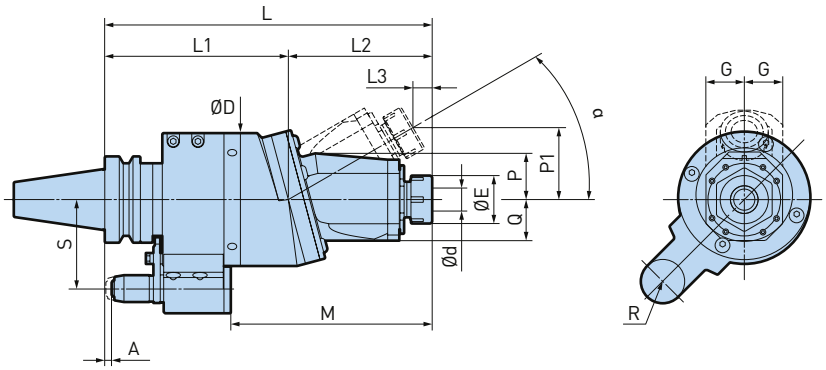
# Angle Head AGU30 Type

BIG-PLUS Dual-Contact

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





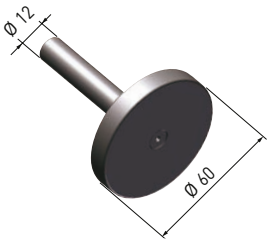


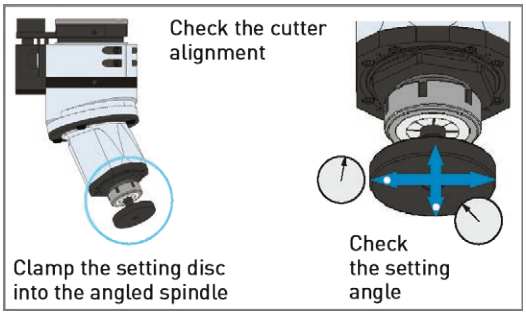

| Model | Article No. | Ød | ØD | ØE | L | L1 | L2 | L3 | G | Q | P | P1 max. | R | S | M | max. min-1 | Collet Model | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BBT40-AGU30/NBS13-240 | 802.481 | 2.5 - 13 | 97 | 35 | 240 | 135 | 105 | 14 | 29 | 30 | 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 |

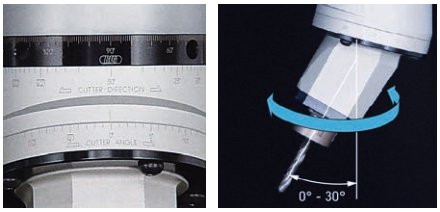
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. The standard fixed length A is 8 mm for BBT40 and 6 mm for BBT50. Other lengths are available upon request.
4. Coolant can be supplied through the locating pin.
5. New Baby Nut, wrench 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 |
|---|---|
|  |  |
| ▶ 344 | ▶ 395 |

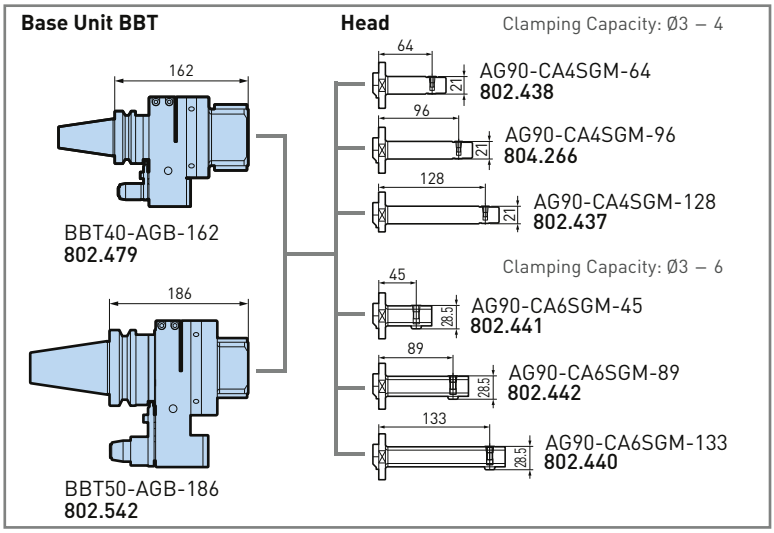
# Angle Head Small Bore Type

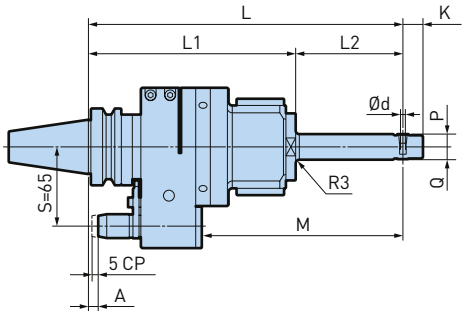
Angular operation in a Ø 30 mm bore (min.) is possible. Modular heads enhance versatility. Head is aligned with spindle center for easy programing.

BIG-PLUS Dual-Contact

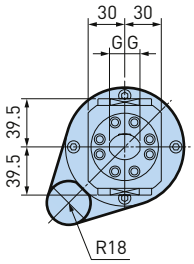
A.1

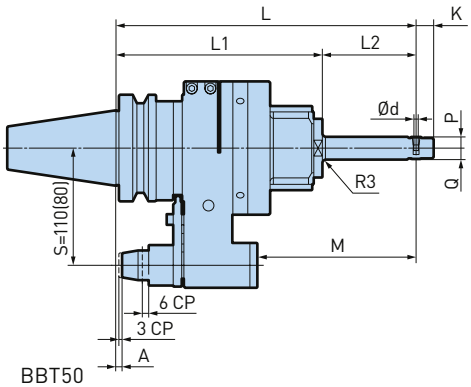




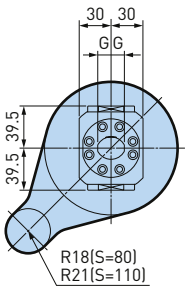




BBT40




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 |
|---|---|
|  |  |
| ► 384 | ► 395 |

## 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

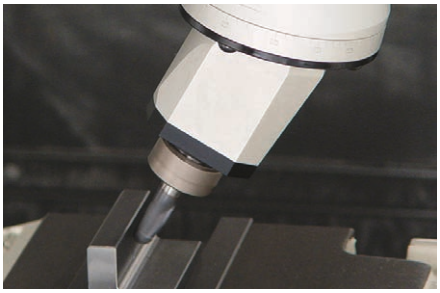
**S-Type**
BBT50-AG90/AGH35-230S
(with AG35-FMA25.4-20)
**Workpiece:** Carbon Steel C55
**Cutter:** 80 mm Face Mill
**Cutting Depth:** 3 mm
**Spindle Speed:** 600 $min^{-1}$
**Cutting Speed:** 150 m/min
**Cutting Feed:** 360 mm/min



### 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

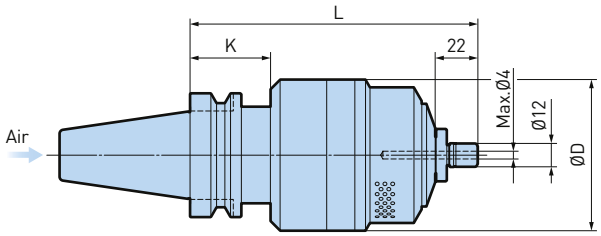


# Air Turbine Spindle Center Through Type

BIG-PLUS Dual-Contact

A.1






**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**

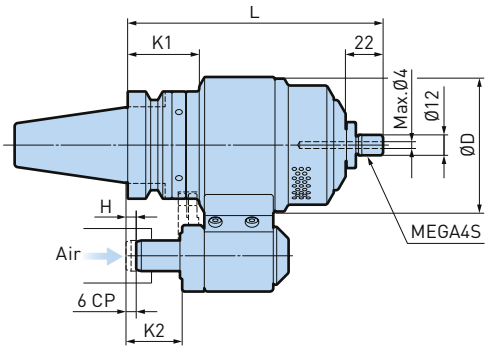
| MEGA Nuts | Micro Collets | MEGA Wrenches | Air Filter Regulator for RBX |
|---|---|---|---|
|  |  |  |  |
| ▶ 342 | ▶ 340 | ▶ 368 | ▶ 384 |

# Air Turbine Spindle Side Through Type

BIG-PLUS Dual-Contact








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**

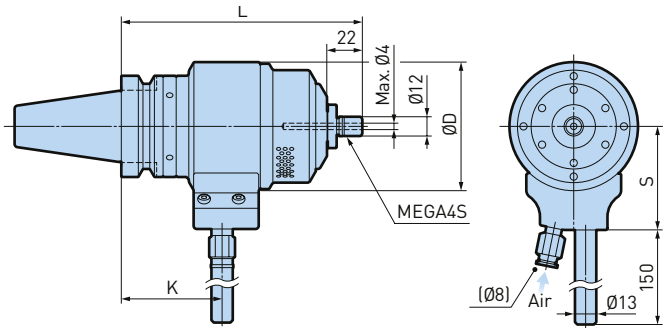
| MEGA Nuts | Micro Collets | MEGA Wrenches | Semi-Finished Stop Blocks | Air Filter Regulator for RBX |
|---|---|---|---|---|
|  |  |  |  |  |
| ▶ 342 | ▶ 340 | ▶ 368 | ▶ 395 | ▶ 384 |

# Air Turbine Spindle Manual Type

BIG-PLUS® Dual-Contact

A.1






**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**

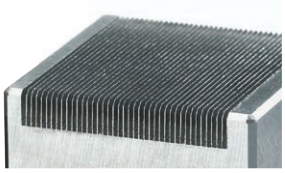
| MEGA Nuts | Micro Collets | MEGA Wrenches | Air Filter Regulator for RBX |
|---|---|---|---|
|  |  |  |  |
| ▶ 342 | ▶ 340 | ▶ 368 | ▶ 384 |

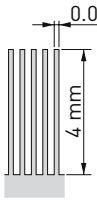
## Application Examples

### RBX7

**Aluminium A2017**

Outstanding runout accuracy permits perfect thin wall cutting.

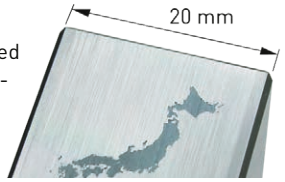





| | |
|---|---|
| Cutter | Ø 0.5 mm Rib-endmill |
| Spindle Speed | 70 000 min$^{-1}$ |
| Cutting Feed | 1500 mm/min |
| D.O.C | ap = 0.02 mm |

**Prehardened steel HRC40**

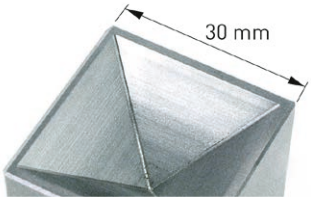
Drastic time reduction by ultra high speed rotation. Excellent dynamic runout accuracy makes DOC of 5 µm clearly visible.




| | |
|---|---|
| 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**

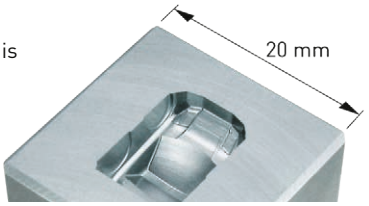
Overall cutting length of 656 m can be achieved with one ball nose endmill. Drastically extended tool life.




| | |
|---|---|
| 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**

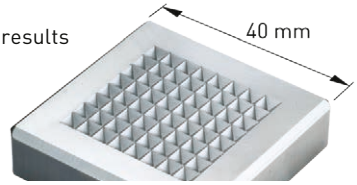
Original 5hour operation in MC is reduced to 2 hours.




| | |
|---|---|
| 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**

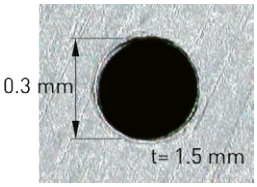
No thermal expansion of spindle results in finely detailed surface finish.




| | |
|---|---|
| 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.

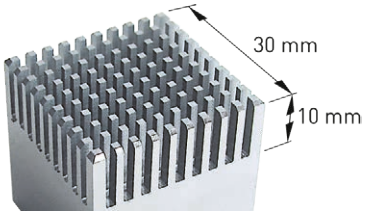



| | |
|---|---|
| Cutter | Ø 0.3 mm Solid drill |
| Spindle Speed | 75 000 min$^{-1}$ |
| Cutting Feed | 200 mm/min |
| Peck | ap = 0.03 mm |

### RBX5

**Prehardened steel HRC40**

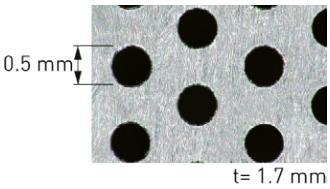
Even a taper endmill that has high cutting forces can achieve stable cutting.




| | |
|---|---|
| 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 | 142 |
| MEGA New Baby Chuck | 144 |
| MEGA E Chuck | 146 |
| New Baby Chuck | 147 |
| MEGA Double Power Chuck | 149 |
| MEGA Perfect Grip | 150 |
| New Hi-Power Milling Chuck | 151 |
| Hydraulic Chucks | 154 |
| Shrink Chuck | 157 |
| CK Shanks | 158 |
| Face Mill Arbors | 161 |
| Smart Damper Face Mill | 163 |
| Side Lock Holders | 165 |
| Holders for Screw-On Cutter | 166 |
| MEGA Synchro Tapping Holder | 167 |
| Angle Heads | 169 |
| Air Turbine Spindle | 175 |




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

A.2

# MEGA Micro Chuck Type T

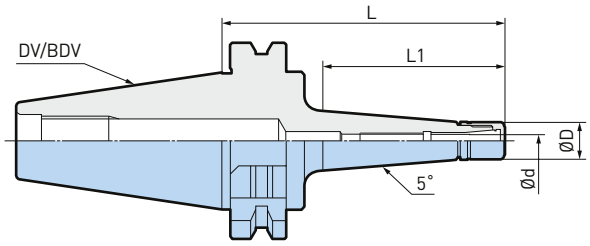
Tapered and slim design, minimal interference combined with maximized rigidity.

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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 342 | ▶ 342 | ▶ 340 | ▶ 368 | ▶ 388 | ▶ 343 |

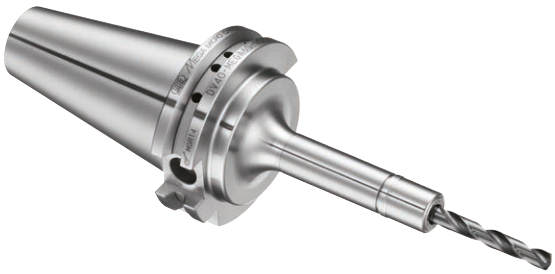
# MEGA Micro Chuck Type S

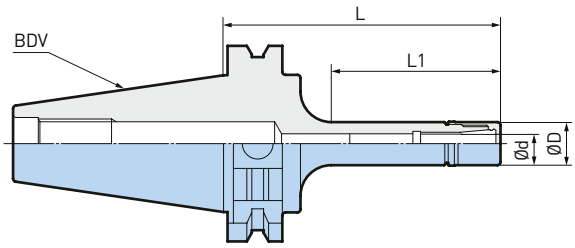
Micro diameter design is ideal for high speed applications in tight areas.

Coolant Through Hole

BIG-PLUS Dual-Contact








**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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 342 | ▶ 342 | ▶ 340 | ▶ 368 | ▶ 388 | ▶ 343 |

# MEGA New Baby Chuck

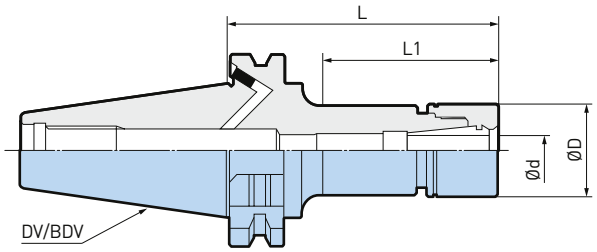
Ideal ultra precision collet holders for high speed machining. Wide range of lengths and a variety of collet series covers all machining applications.

Coolant Through Hole

BIG-PLUS Dual-Contact

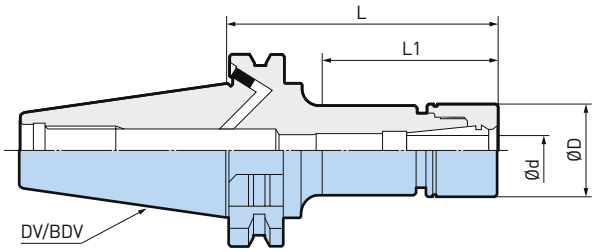







**ø0.25 - 25.4mm**

| 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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 351 | ▶ 352 | ▶ 344 | ▶ 368 | ▶ 351 | ▶ 388 |

# MEGA E Chuck

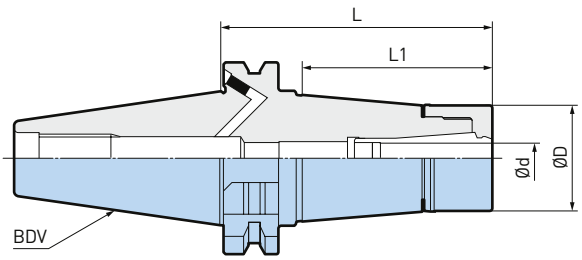
Collet chuck designed exclusively for endmilling with high concentricity and rigidity.

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**

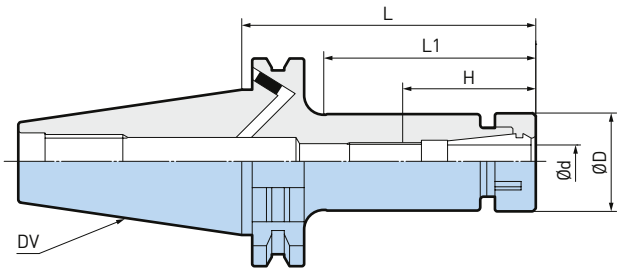
| MEGA E Nuts | MEGA E Perfect Seals | MEGA E Collets | MEGA Wrenches | Adjusting Screws NBA | Taper Cleaners |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 356 | ▶ 357 | ▶ 356 | ▶ 368 | ▶ 351 | ▶ 388 |

# New Baby Chuck

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

Coolant Through Hole






A.2

**ø0.25 - 20mm**

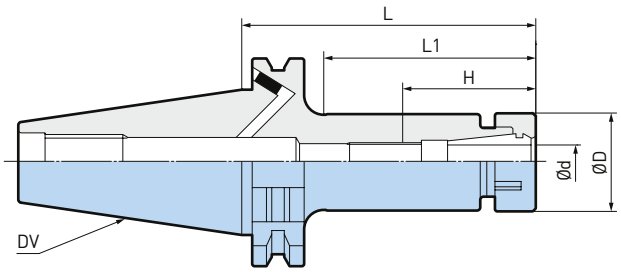
| Model | Article No. | Ød | ØD | L | L1 | H | Collet Model | Nut Model | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| DV40-NBS6-60 | 961.831 | 0.25 - 6 | 20 | 60 | 34 | 20 - 40 | NBC6 | NBN6 | 0.90 |
| DV40-NBS6-90 | 969.032 | 0.25 - 6 | 20 | 90 | 60 | 20 - 40 | NBC6 | NBN6 | 1.00 |
| DV40-NBS6-135 | 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 |

continues on the next page

# 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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 351 | ▶ 354 | ▶ 344 | ▶ 369 | ▶ 351 | ▶ 388 |

# 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







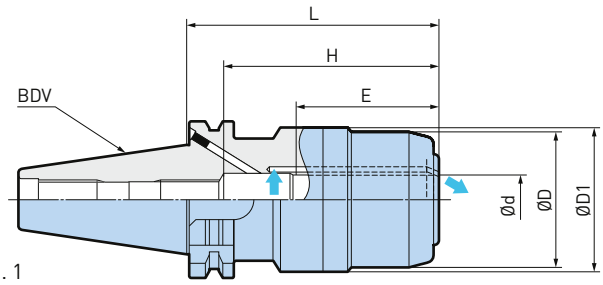



Fig. 1

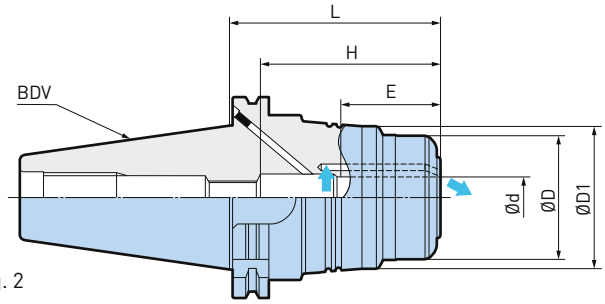



Fig. 2

**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 |
|---|---|---|---|---|
|  |  |  |  |  |
| ▶ 363 | ▶ 364 | ▶ 365 | ▶ 368 | ▶ 367 |

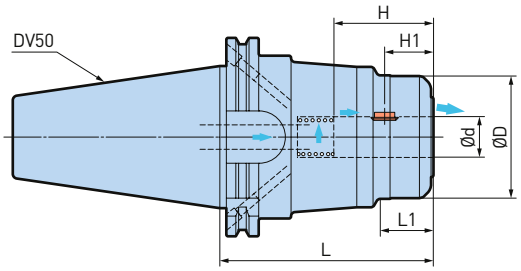
# MEGA Perfect Grip

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

Coolant Through Hole









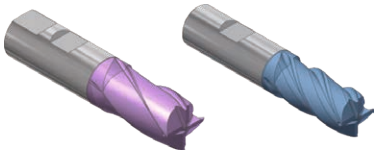

**ø20 - 32mm**

| Model | Article No. | Ød | ØD | L | L1 | H | H1 | Weight (kg) |
|---|---|---|---|---|---|---|---|---|
| DV50-MEGA20DPG-105ADF | 805.808 | 20 | 60 | 105 | 27 | 49 | 24 | 4.80 |
| DV50-MEGA25DPG-105ADF | 805.809 | 25 | 70 | 105 | 33 | 55 | 23 | 5.00 |
| DV50-MEGA32DPG-105ADF | 805.810 | 32 | 80 | 105 | 41 | 59 | 23 | 5.20 |

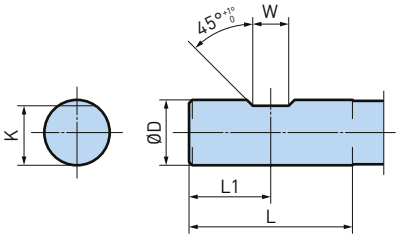
1. Key grip and spring are included with each holder.
2. MEGA wrench is to be ordered separately.
3. „H1" shows distance from center of key grip to front end.

## Weldon Shank Standards

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

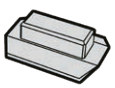


**Ø 25/32 mm** **Ø 20 mm**




| 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 |
|---|---|---|
|  |  |  |
| ▶ 367 | ▶ 367 | ▶ 368 |

# New Hi-Power Milling Chuck Type S

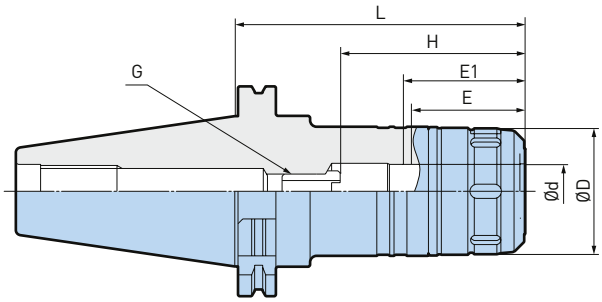
The original design assures heavy machining with high power and precision.

Coolant Through Hole

BIG-PLUS Dual-Contact





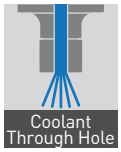



**ø20 - 42mm**

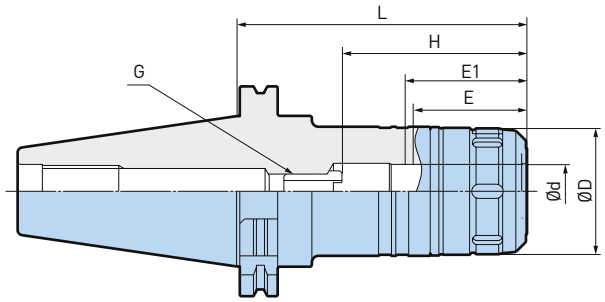
| Model | Article No. | Ød | ØD | L | H | E | E1 | Wrench | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| BDV40-HMC20S-85 | 962.121S | 20 | 50 | 85 | 69 - 79 | 50 | 56 | FK45-50L / MGR50L | 1.70 |
| BDV40-HMC20S-105 | 800.972 | 20 | 50 | 105 | 69 - 79 | 50 | 56 | FK45-50L / MGR50L | 1.80 |
| 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 |

continues on the next page

# 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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 363 | ▶ 364 | ▶ 364 | ▶ 365 | ▶ 369 | ▶ 367 |

# New Hi-Power Milling Chuck Type HMC12J

Extremely slim and rigid design with jet through coolant.

Coolant Through Hole

BIG-PLUS Dual-Contact







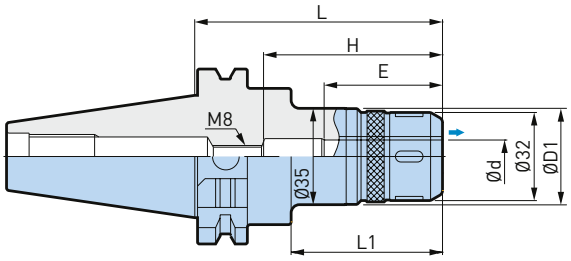



Fig. 1

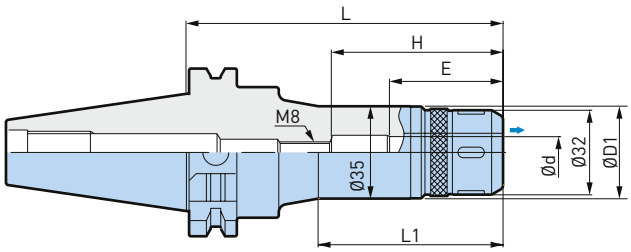



Fig. 2

**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 |
|---|---|
|  |  |
| ▶ 363 | ▶ 369 |

# Hydraulic Chuck Super Slim

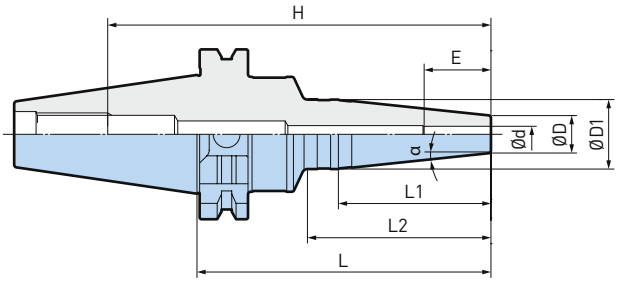
Ultra precise hydraulic chuck with extremely slim design.

Coolant Through Hole

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



► 388

# Hydraulic Chuck Jet Through

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

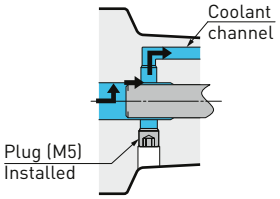




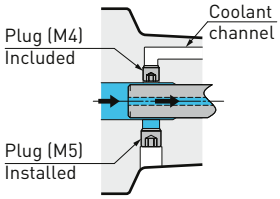


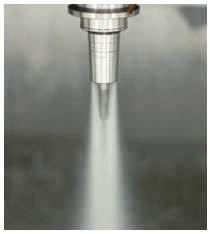


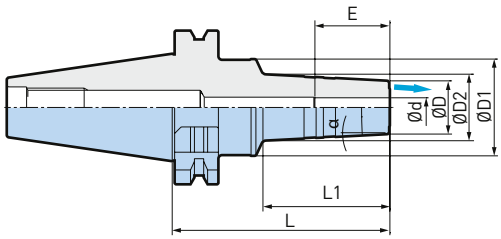
Peripheric




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 | 28 | 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 | 13 | 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



► 388

# Hydraulic Chuck Standard

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

Coolant Through Hole

BIG-PLUS Dual-Contact

A.2



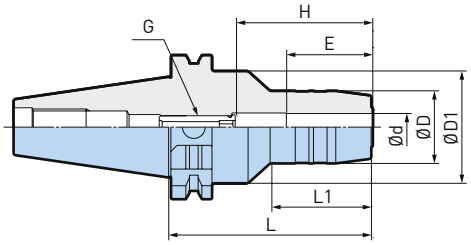



Fig. 1

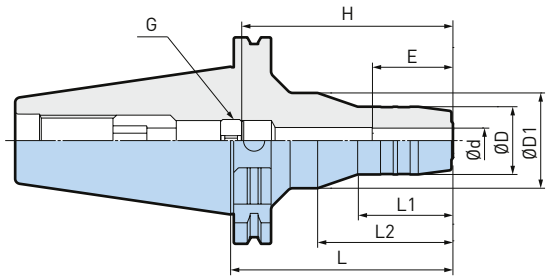



Fig. 2

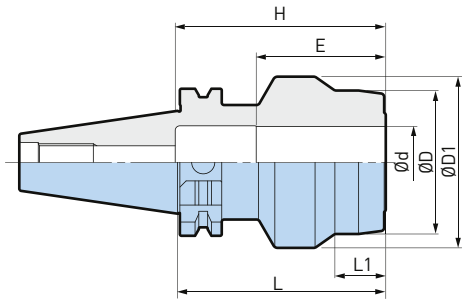



Fig. 3

**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 |
|---|---|---|---|
|  |  |  |  |
| ▶ 363 | ▶ 364 | ▶ 371 | ▶ 388 |

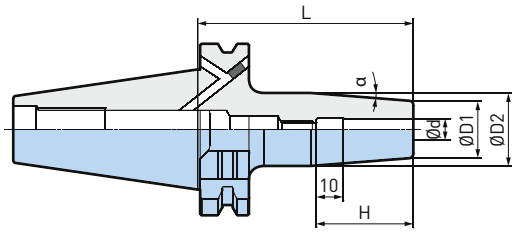
# Shrink Chuck Standard

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



► 388

# CK Shanks with Center Through Coolant



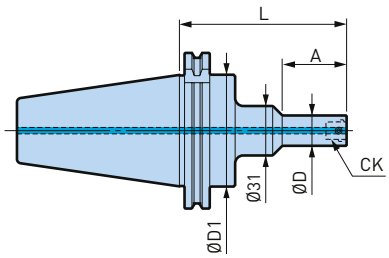



Fig. 1

| 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 |

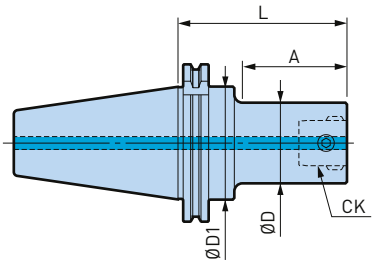



Fig. 2

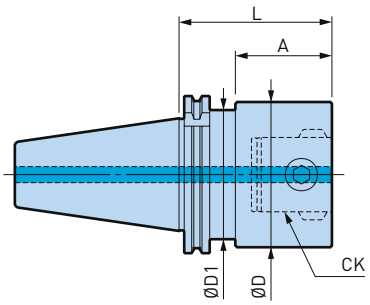



Fig. 3

| 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 |
|---|---|
|  |  |
| ▶ 410 | ▶ 399 |

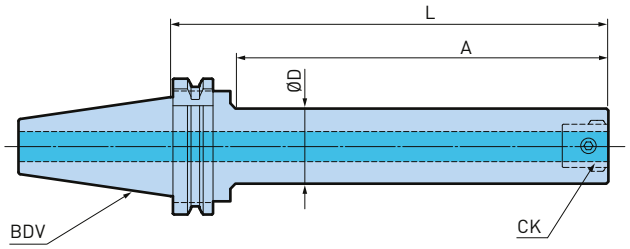
# Smart Damper CK Shanks

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 |
|---|---|
|  |  |
| ▶ 410 | ▶ 399 |

# Face Mill Arbors Type FMH

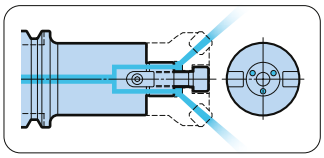
For cutters that have a coolant bore through the face.

Coolant Through Hole

BIG-PLUS Dual-Contact







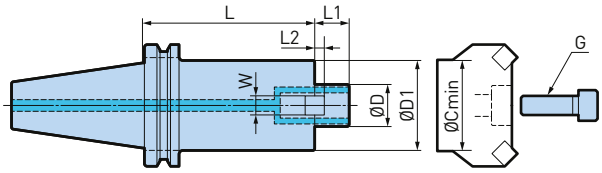



Fig. 1

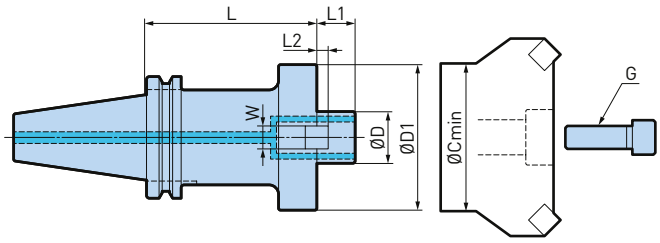
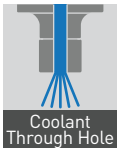



Fig. 2

| 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 |

continues on the next page

# Face Mill Arbors Type FMH







A.2

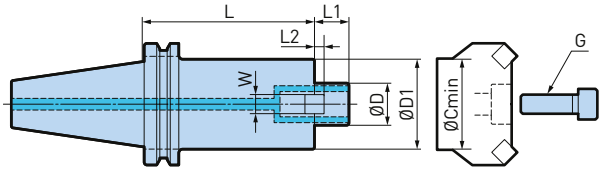



Fig. 1

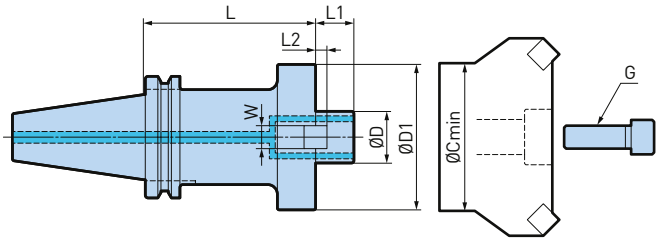



Fig. 2

| 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



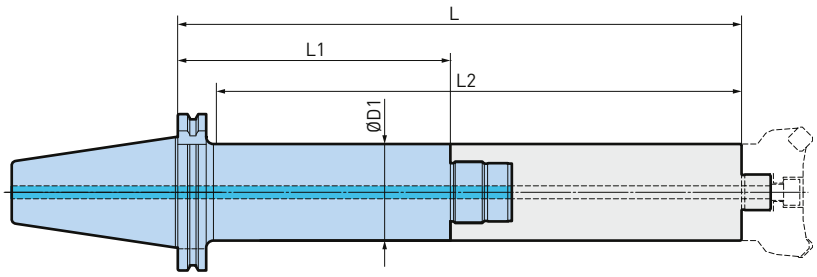
▶ 372

# Smart Damper Basic Holders for Milling Heads

Coolant Through Hole

BIG-PLUS Dual-Contact





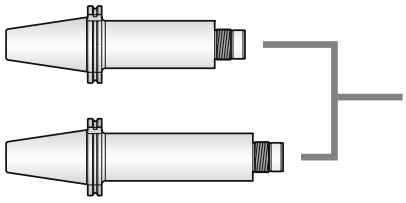



| Model | Article No. | ØD1 | L | L1 | L2 | Damper Head Model | Weight (kg) |
|---|---|---|---|---|---|---|---|
| BDV50-SDF36-47-170 | 805.296 | 47 | 350 | 170 | 325 | FMH_DP-47 | 4.90 |
| BDV50-SDF36-60-170 | 805.298 | 60 | 350 | 170 | 325 | FMH_DP-60 | 6.20 |
| BDV50-SDF36-60-220 | 805.299 | 60 | 400 | 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



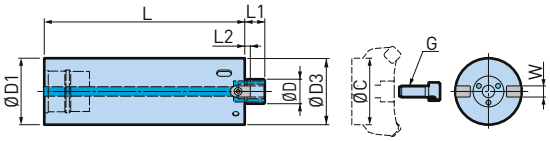



Fig. 1

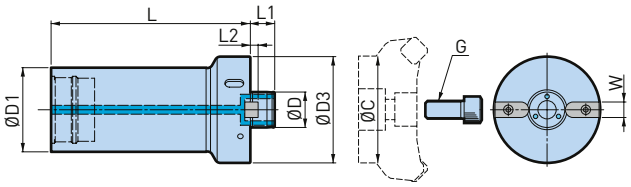



Fig. 2

| 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 |
|---|---|---|
|  |  |  |
| ▶ 369 | ▶ 372 | ▶ 479 |

# Side Lock Holders for Weldon

Coolant Through Hole

BIG-PLUS Dual-Contact





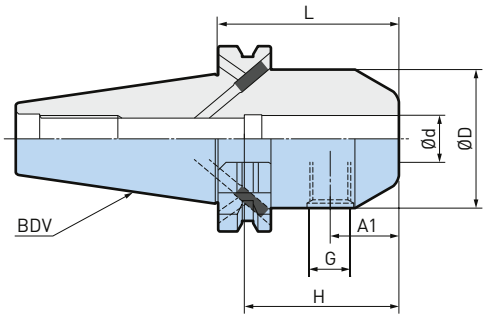



Fig. 1

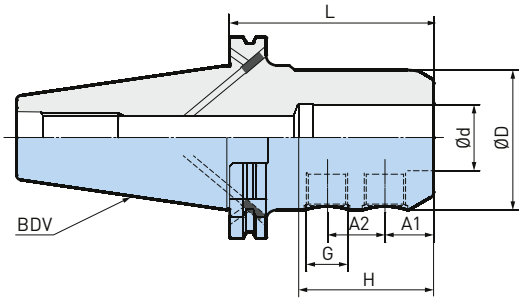



Fig. 2

**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

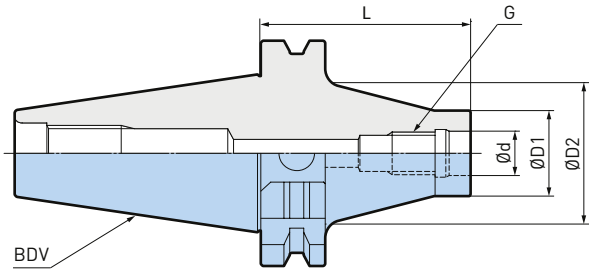
General metric screw-on type cutting tools can be used with these models.

Coolant Through Hole

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.

# MEGA Synchro Tapping Holder

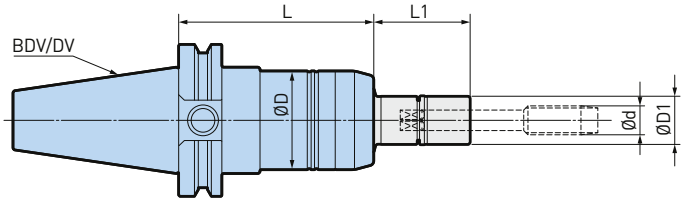
Compensates for synchronization errors during rigid tapping. Improves thread quality and tool life by reducing thrust loads caused by synchronization errors up to 90%.

Coolant Through Hole

BIG-PLUS Dual-Contact








**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 |
|---|---|---|
|  |  |  |
| ▶ 374 | ▶ 368 | ▶ 382 |

# MEGA Synchro Tapping Holder MGT36

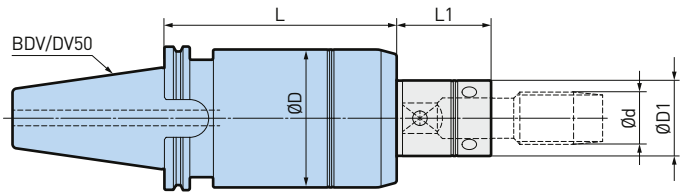
For large Tapping Type MGT36

Coolant Through Hole

BIG-PLUS Dual-Contact








**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**

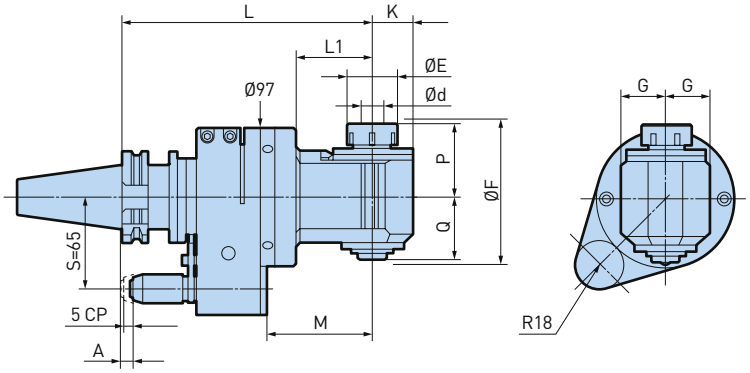
| Tap Holders MGT36 | Accessories |
|---|---|
|  |  |
| ▶ 380 | ▶ 382 |

# 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.






BDV40



**ø0.25 - 20mm**

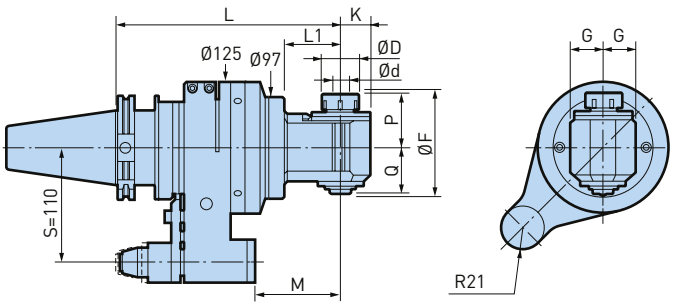
| Model | Article No. | Ød | ØE | ØF | L | L1 | G | K | M | P | Q | max. min-1 | Collet Model | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BDV40-AG90/NBS6-180 | 802.553 | 0.25 - 6 | 20 | 67 | 180 | 55 | 21 | 17 | 77 | 33 | 29 | 6,000 | NBC6 | 5.10 |
| BDV40-AG90/NBS6-210 | 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 |

continues on the next page

# Angle Head New Baby Chuck Type

BIG-PLUS Dual-Contact

A.2




BDV50

**ø0.25 - 20mm**

| Model | Article No. | Ød | ØE | ØF | L | L1 | G | K | M | P | Q | max. min-1 | Collet Model | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
|---|---|
|  |  |
| ▶ 344 | ▶ 395 |

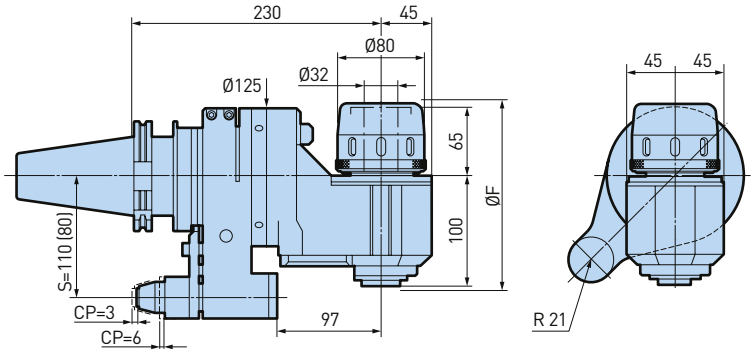
# Angle Head HMC Type

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

BIG-PLUS Dual-Contact








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 "S" at the end 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 |
|---|---|---|
|  |  |  |
| ► 365 | ► 395 | ► 369 |

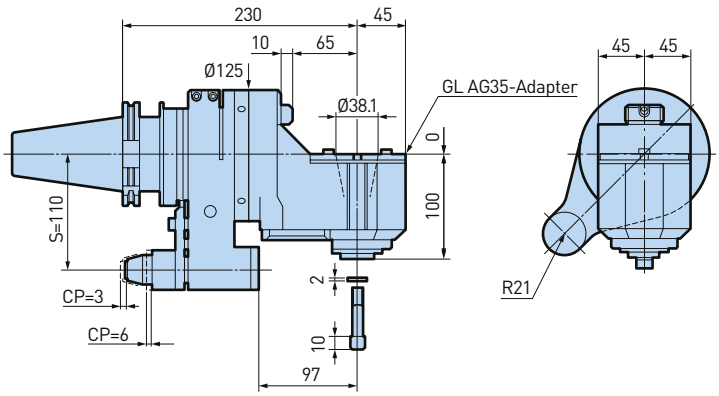
# Angle Head Build-Up Type

Dual-Contact

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.

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 "S" at the end 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.

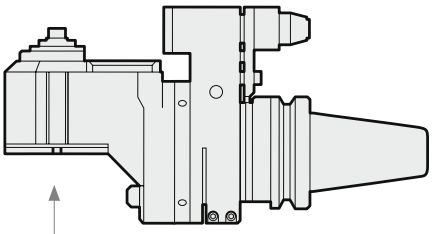
**Accessories & Spare Parts**

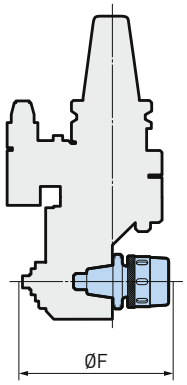
Semi-Finished Stop Blocks

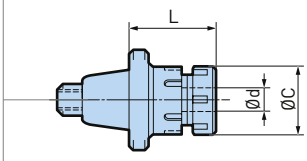


► 395

## AG35 adapters



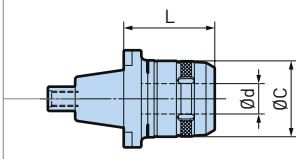



### AG35 adapters New Baby Chuck

| 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 |

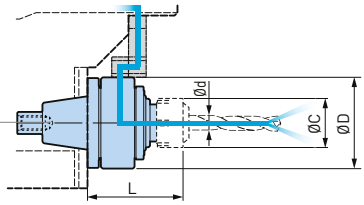
1. Collet and wrench are to be ordered separately.




### 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 |

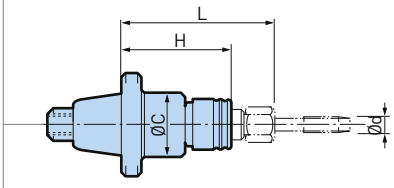
1. Wrench (FK45-50L) is included.




### 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 |

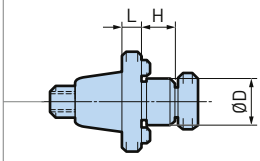
1. Baby Perfect Seal nut with sealing mechanism is required. (optional)
2. Anti-rotation block set is to be ordered separately. (Model: AG35-BL)
3. Collet and wrench are to be ordered separately.




### AG35 adapters Auto Tapper Type B (automatic depth control)

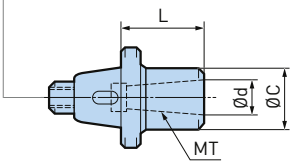
| Model | Article No. | Ød | ØC | L | H | Head | Weight (kg) |
|---|---|---|---|---|---|---|---|
| AG35-ATB12E | 802.435 | M4 - M12 | 40.5 | 80 | 72 | AG35 | 0.85 |
| AG35-ATB20E | 802.436 | M8 - M20 | 57.5 | 115 | 102.5 | AG35 | 1.65 |

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 |

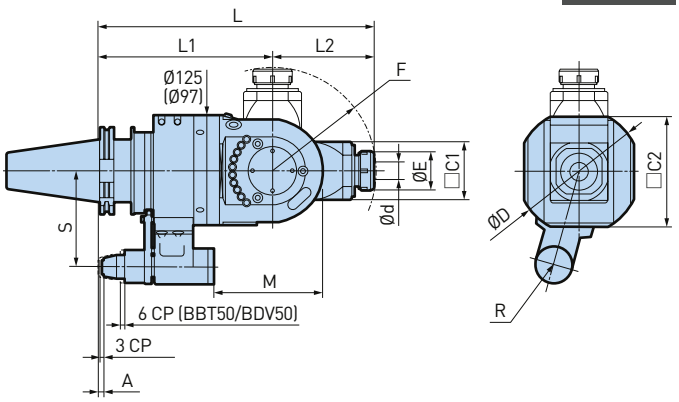
# Angle Head Universal Type

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!



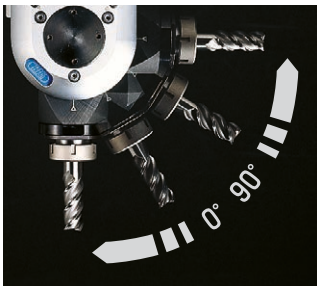





**ø2.5 - 20mm**

| 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 |

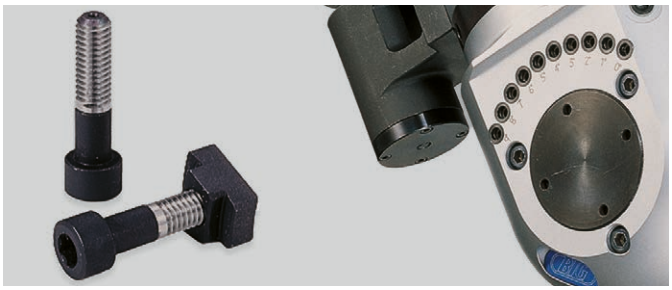
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Exclusive Stop Block is required.
3. Standard fixed length A is 6 mm for BDV50 and 8 mm for BDV40. Other lengths are available upon request.
4. Figures in ( ) in the drawing indicate dimensions for BDV40.
5. Nut and wrench 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**

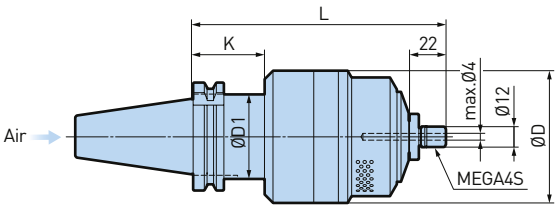
| New Baby Collets | Semi-Finished Stop Blocks |
|---|---|
|  |  |
| ▶ 344 | ▶ 395 |

# 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**

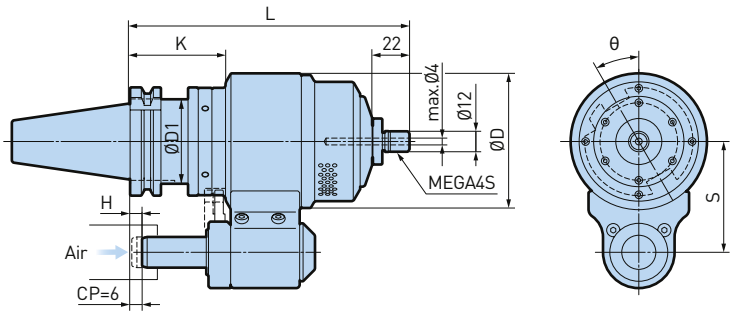
| MEGA Nuts | Micro Collets | MEGA Wrenches | Air Filter Regulator for RBX |
|---|---|---|---|
|  |  |  |  |
| ▶ 342 | ▶ 340 | ▶ 368 | ▶ 384 |

# 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°.

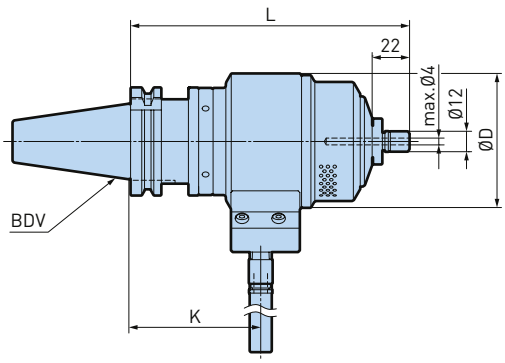
**Accessories & Spare Parts**

| MEGA Nuts | Micro Collets | MEGA Wrenches | Semi-Finished Stop Blocks | Air Filter Regulator for RBX |
|---|---|---|---|---|
|  |  |  |  |  |
| ▶ 342 | ▶ 340 | ▶ 368 | ▶ 395 | ▶ 384 |

# 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.

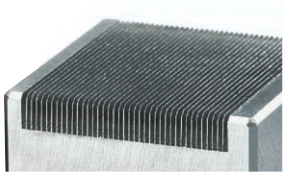
**Accessories & Spare Parts**

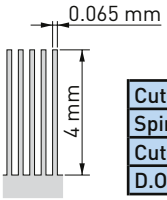
| MEGA Nuts | Micro Collets | MEGA Wrenches | Air Filter Regulator for RBX |
|---|---|---|---|
|  |  |  |  |
| ▶ 342 | ▶ 340 | ▶ 368 | ▶ 384 |

## Application Examples

### RBX7

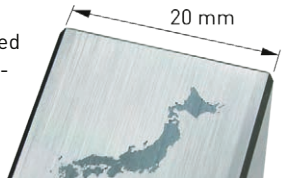
**Aluminium A2017**
Outstanding runout accuracy permits perfect thin wall cutting.





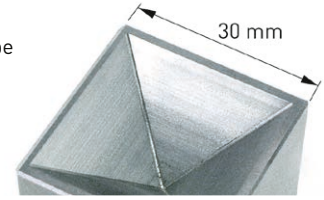

| | |
|---|---|
| Cutter | Ø 0.5 mm Rib-endmill |
| Spindle Speed | 70 000 min$^{-1}$ |
| Cutting Feed | 1500 mm/min |
| D.O.C | ap = 0.02 mm |

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



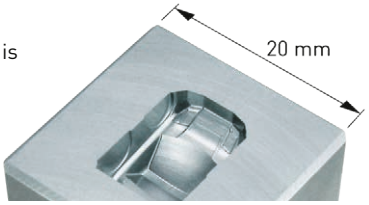

| | |
|---|---|
| Cutter | R0.1 mm Ball nose endmill |
| Spindle Speed | 80 000 min$^{-1}$ |
| Cutting Feed | 400 mm/min |
| D.O.C | ap = 0.01 mm |

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



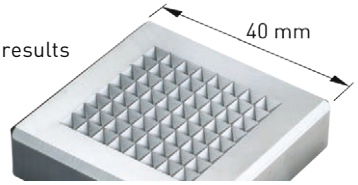

| | |
|---|---|
| Cutter | R0.5 mm Ball nose endmill |
| Spindle Speed | 65 000 min$^{-1}$ |
| Cutting Feed | 4 200 mm/min |
| D.O.C | ap = 0.02 mm; ae = 0.05 mm |

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



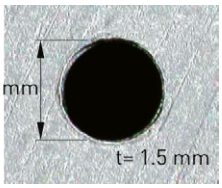

| | |
|---|---|
| Cutter | R0.2 mm Ball nose endmill |
| Spindle Speed | 70 000 min$^{-1}$ |
| Cutting Feed | 1000 mm/min |
| D.O.C | ap = 0.01 mm |

**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 |

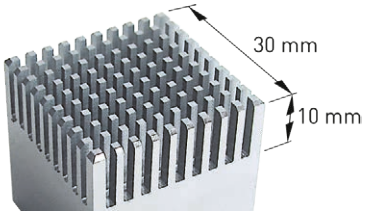
**Aluminium A2017**
High-precision drilling is possible without center drill operation. Even after 3500 holes, no problems can be found on the cutting edge.




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

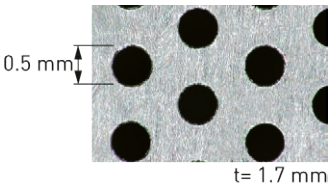
### RBX5

**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 | 180 | 236 | 244 |
| MEGA New Baby Chuck | 182 | 238 | 245 |
| MEGA E Chuck | 186 | | 246 |
| New Baby Chuck | 188 | | |
| MEGA Double Power Chuck | 191 | | 247 |
| MEGA Perfect Grip | 195 | | |
| New Hi-Power Milling Chuck | 196 | | |
| Hydraulic Chucks | 200 | 240 | 248 |
| Mold Chuck | 205 | | |
| Shrink Chuck | 206 | | |
| CK Shanks | 208 | | 249 |
| Face Mill Arbors | 211 | | |
| Smart Damper Face Mill | 213 | | |
| Super Keyless Chuck | 215 | | |
| Side Lock Holders | 215 | | |
| Screw-On-Holder | 217 | | |
| Morse Taper Holder | 218 | | |
| MEGA Synchro Tapping Holder | 219 | | |
| Angle Heads | 221 | | |
| Air Turbine Spindle | 233 | | |
| HSK Accessories | 250 | 250 | 250 |

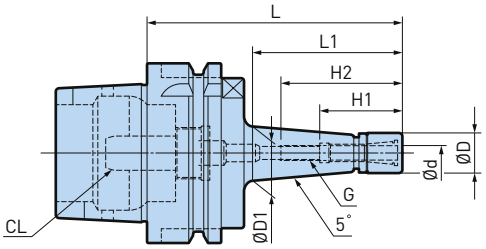

**Please use the model name for inquiries and orders.**
(e.g. BBT30-MEGA3S-45T)

# MEGA Micro Chuck Type T

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

Coolant Through Hole






A.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**

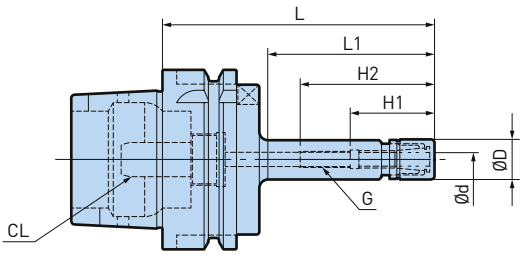
| MEGA Nuts | Micro Seal Nuts | Micro Collets | MEGA Wrenches | Taper Cleaners | Collet Protective Cases | Coolant Pipes |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| ▶ 342 | ▶ 342 | ▶ 340 | ▶ 368 | ▶ 388 | ▶ 343 | ▶ 250 |

# 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 |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| ▶ 342 | ▶ 342 | ▶ 340 | ▶ 368 | ▶ 388 | ▶ 343 | ▶ 250 |

# 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.

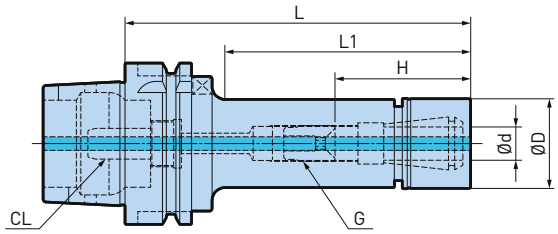
Coolant Through Hole



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 |

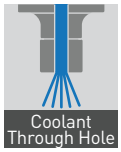





| Model | Article No. | Ød | ØD | L | L1 | H | max. min-1 | Collet Model | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| HSK-A50-MEGA6N-75 | 805.252 | 0.25 - 6 | 20 | 75 | 37 | 23 - 43 | 30,000 | NBC6 | 0.60 |
| HSK-A50-MEGA6N-100 | 978.031 | 0.25 - 6 | 20 | 100 | 60 | 23 - 43 | 25,000 | 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 |

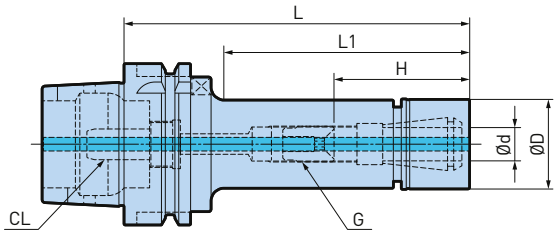
continues on the next page

# 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 |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| ▶ 351 | ▶ 352 | ▶ 344 | ▶ 368 | ▶ 351 | ▶ 388 | ▶ 250 |

# MEGA E Chuck

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

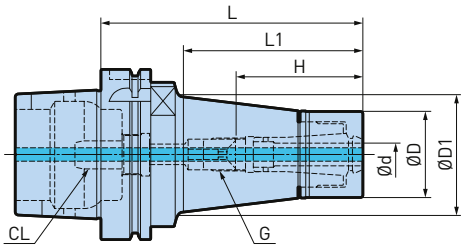
Coolant Through Hole



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 |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| ▶ 356 | ▶ 357 | ▶ 356 | ▶ 368 | ▶ 351 | ▶ 388 | ▶ 250 |

# New Baby Chuck

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

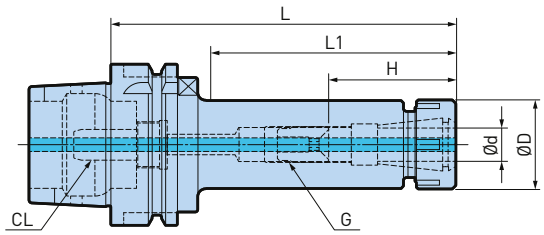
Coolant Through Hole



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**

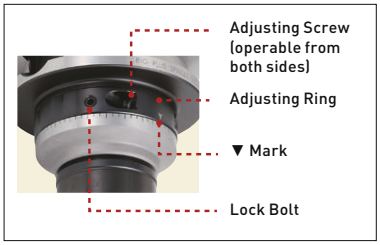
| New Baby Nuts | Baby Perfect Seals | New Baby Collets | New Baby Wrenches | Adjusting Screws NBA | Taper Cleaners | Coolant Pipes |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| ▶ 351 | ▶ 354 | ▶ 344 | ▶ 369 | ▶ 351 | ▶ 388 | ▶ 250 |

# New Baby Chuck Type NRA

New Baby Chuck with runout adjustable tool function.

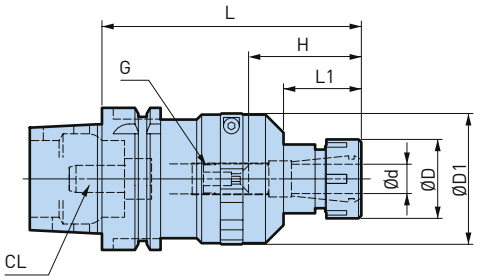
Coolant Through Hole






**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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 351 | ▶ 344 | ▶ 250 | ▶ 369 | ▶ 354 | ▶ 351 |

# 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





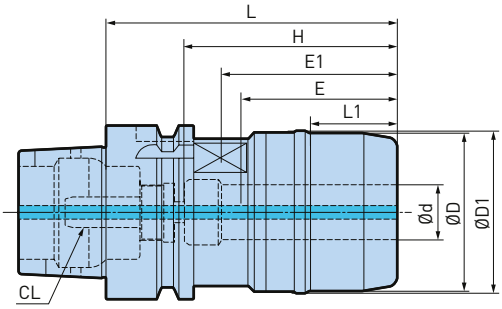



Fig. 1

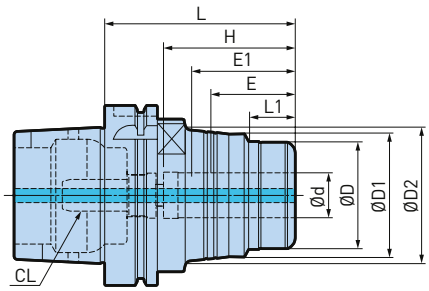



Fig. 2

**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 |

continues on the next page

# MEGA Double Power Chuck Type D

Coolant Through Hole



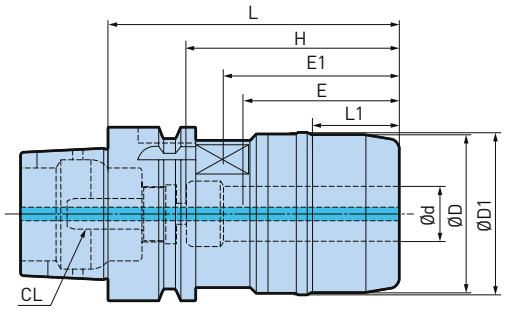



Fig. 1

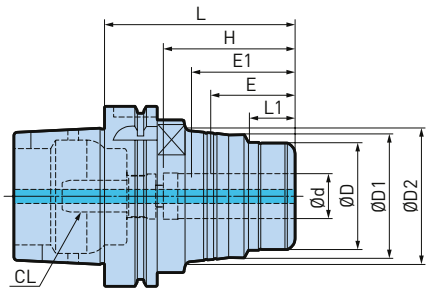



Fig. 2

| 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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 363 | ▶ 364 | ▶ 364 | ▶ 365 | ▶ 368 | ▶ 250 |

# 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







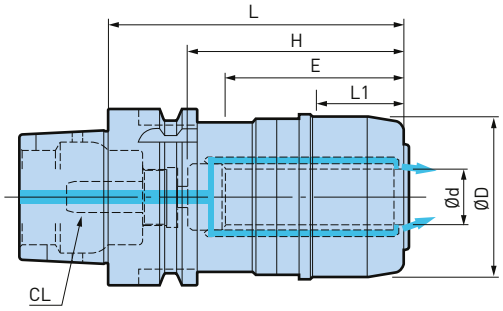



Fig. 1

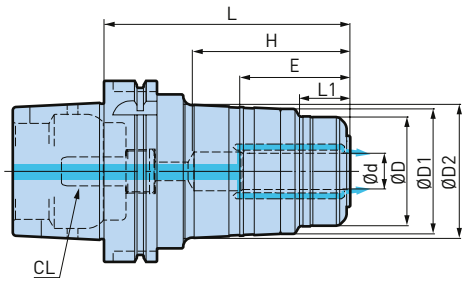



Fig. 2

**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

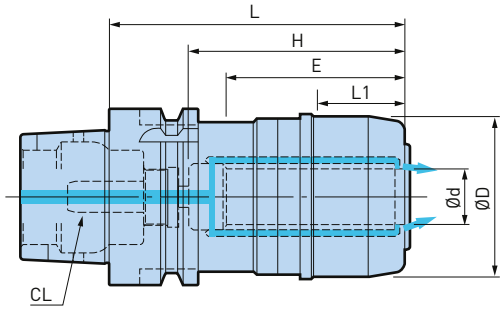



Fig. 1

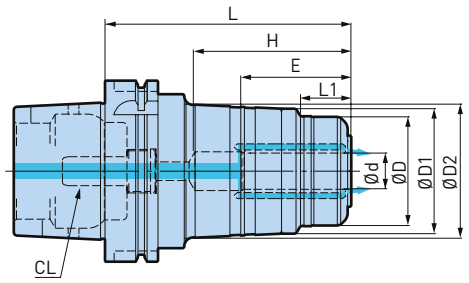



Fig. 2

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**

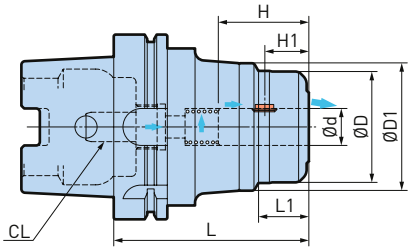
| PJC Collets | PSC Collets | C Collets | MEGA Wrenches | Adjusting Screws HMA | Coolant Pipes |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 363 | ▶ 364 | ▶ 365 | ▶ 368 | ▶ 367 | ▶ 250 |

# MEGA Perfect Grip

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

Coolant Through Hole









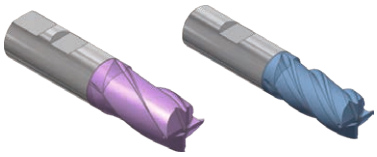

**ø16 - 32mm**

| 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 |

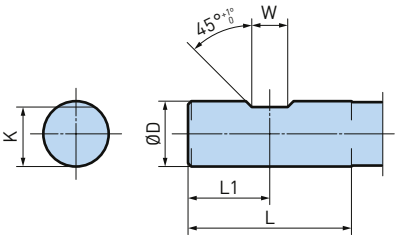
1. Key grip and spring are included with each holder.
2. MEGA wrench is to be ordered separately.
3. „H1" shows distance from center of key grip to front end.
4. Coolant pipe (CL) is to be ordered separately.

## Weldon Shank Standards

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

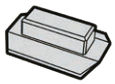


**Ø 25/32 mm** **Ø 20 mm**




| 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 |
|---|---|---|---|
|  |  |  |  |
| ▶ 367 | ▶ 367 | ▶ 368 | ▶ 250 |

# New Hi-Power Milling Chuck Type S

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






A.3

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 |

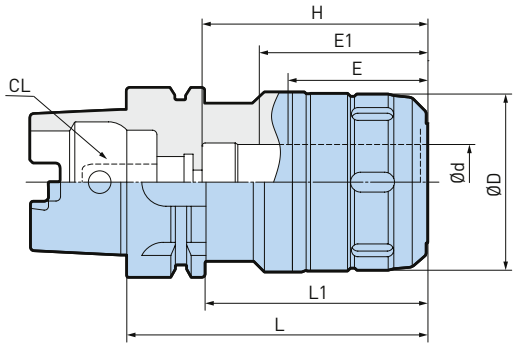



Fig. 1

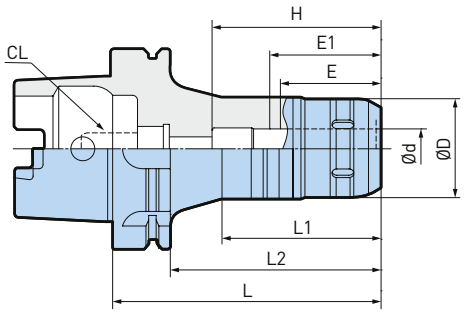



Fig. 2

| Model | Article No. | Fig. | Ød | ØD | L | L1 | L2 | H | E | E1 | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| ▶ 363 | ▶ 364 | ▶ 364 | ▶ 365 | ▶ 369 | ▶ 367 | ▶ 250 |

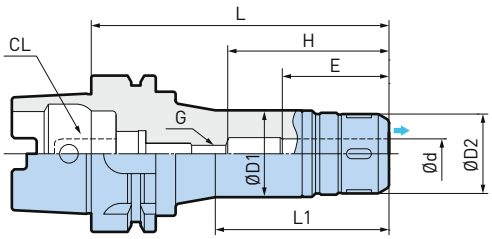
# New Hi-Power Milling Chuck HMC12J

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**

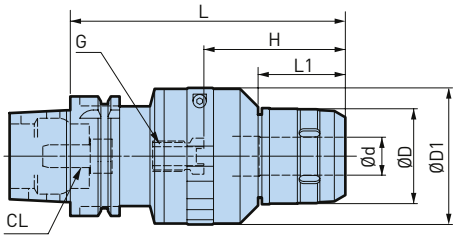
| PJC Collets | FK Wrenches | Coolant Pipes |
|---|---|---|
|  |  |  |
| ▶ 363 | ▶ 369 | ▶ 250 |

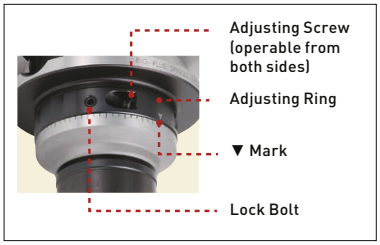
# New Hi-Power Milling Chuck Type NRA

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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 369 | ▶ 365 | ▶ 364 | ▶ 363 | ▶ 367 | ▶ 250 |

# Hydraulic Chuck Super Slim

Ultra precise hydraulic chuck with extremely slim design.

Coolant Through Hole



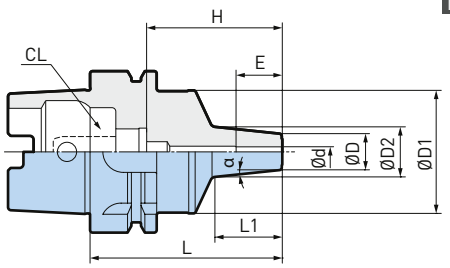



Fig. 1

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 |

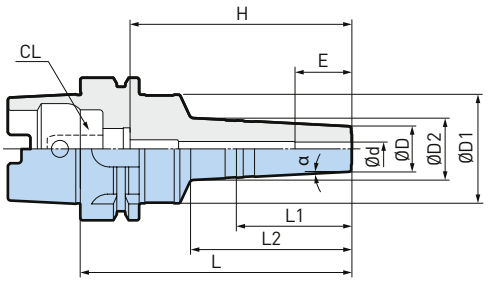



Fig. 2

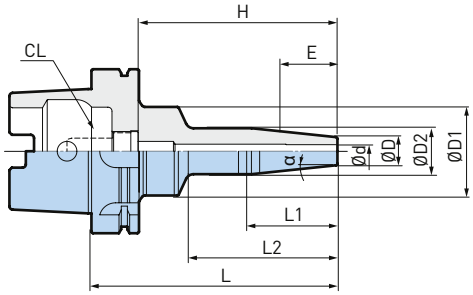



Fig. 3



| 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**

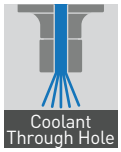
- Use only cutting tools that have a shank tolerance within h6.
- Roughing endmills are not recommended for use with hydraulic chucks.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)
- Do not tighten the clamping screw without first inserting a cutting tool into 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 |
|---|---|
|  |  |
| ▶ 388 | ▶ 250 |

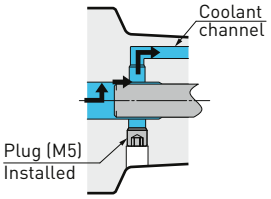
# Hydraulic Chuck Jet Through

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

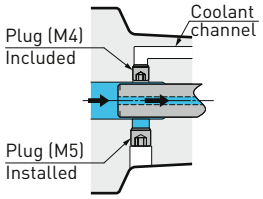


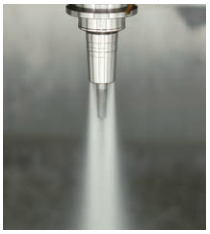



Peripheric




Center Through



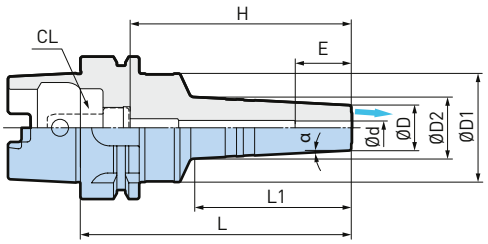



Fig. 1

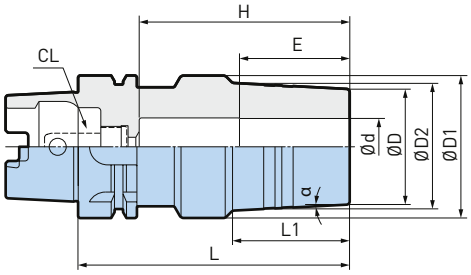



Fig. 2

**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 |
|---|---|
|  |  |
| ▶ 388 | ▶ 250 |

# Hydraulic Chuck Standard

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

Coolant Through Hole



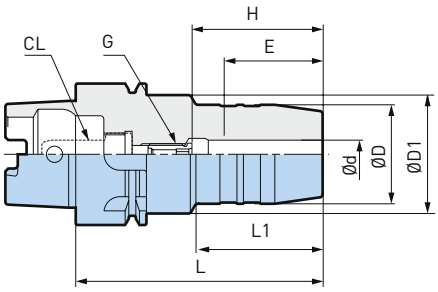



Fig. 1



**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 |

continues on the next page

# Hydraulic Chuck Standard

Coolant Through Hole



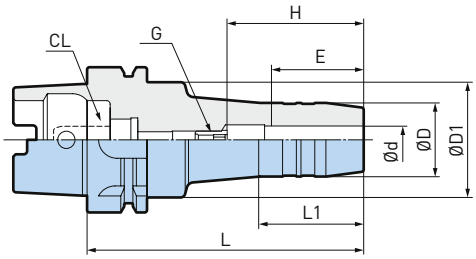



Fig. 2

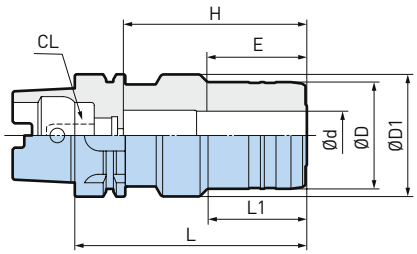



Fig. 3

| 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**

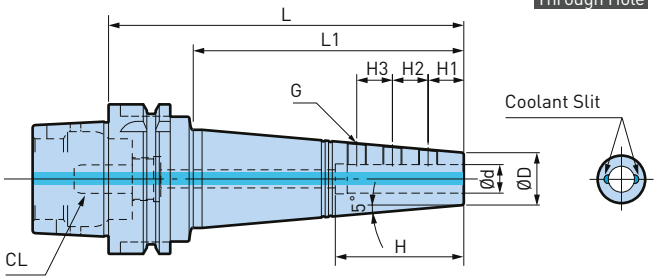
| PJC Collets | PSC Collets | Adjusting Screws HDA | α Wiper Cleaners | Coolant Pipes |
|---|---|---|---|---|
|  |  |  |  |  |
| ▶ 363 | ▶ 364 | ▶ 371 | ▶ 388 | ▶ 250 |

# 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 |
| HSK-A100-SSL8-150 | 806.830 | 8 | 15 | 150 | 111 | 121 | 13,5 | 18 | - | M6 | 2.80 |
| HSK-A100-SSL10-150 | 806.831 | 10 | 17 | 150 | 111 | 121 | 15 | 20 | - | M6 | 2.90 |
| HSK-A100-SSL12-150 | 806.832 | 12 | 22 | 150 | 111 | 60 | 15 | 16 | 16 | M8 | 3.00 |
| HSK-A100-SSL12-200 | 806.833 | 12 | 22 | 200 | 161 | 60 | 15 | 16 | 16 | M8 | 3.70 |
| HSK-A100-SSL16-150 | 806.834 | 16 | 26 | 150 | 110 | 65 | 15 | 20 | 22 | M8 | 3.30 |
| HSK-A100-SSL16-200 | 806.835 | 16 | 26 | 200 | 160 | 65 | 15 | 20 | 22 | M8 | 4.00 |
| HSK-A100-SSL20-150 | 806.836 | 20 | 30 | 150 | 110 | 80 | 15 | 25 | 25 | M8 | 3.40 |
| HSK-A100-SSL20-200 | 806.837 | 20 | 30 | 200 | 160 | 80 | 15 | 25 | 25 | M8 | 4.20 |

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 |
|---|---|
|  |  |
| ▶ 384 | ▶ 250 |

# Shrink Chuck Slim

Slim design reduces interference contours.

Coolant Through Hole

A.3



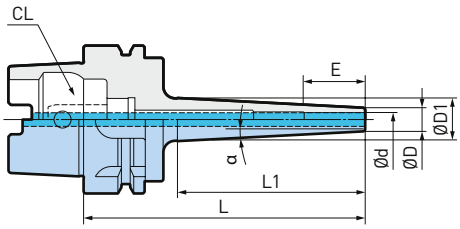



Fig. 1

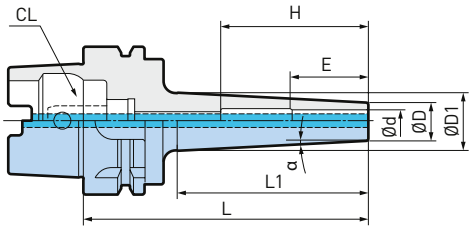



Fig. 2

**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 |
|---|---|
|  |  |
| ▶ 388 | ▶ 250 |

# Shrink Chuck Standard

Stable body provides high rigidity.

Coolant Through Hole





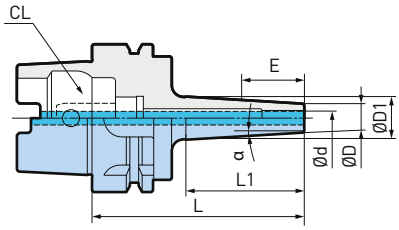



Fig. 1

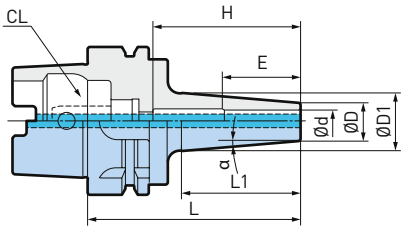



Fig. 2

**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**

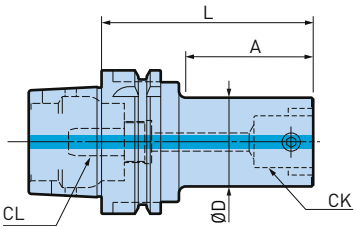
| α Wiper Cleaners | Coolant Pipes |
|---|---|
|  |  |
| ► 388 | ► 250 |

# CK Shanks with Center Through Coolant

With drive key grooves and orientation notch.

Coolant Through Hole

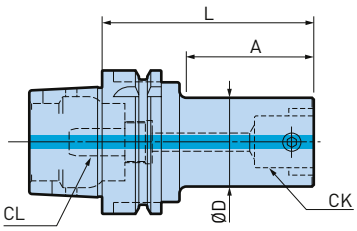





A.3

**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 |






| 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 |
|---|---|---|
|  |  |  |
| ▶ 250 | ▶ 410 | ▶ 399 |

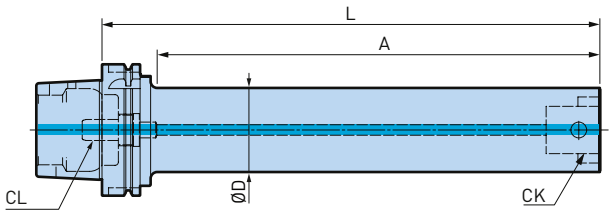
# Smart Damper CK Shanks

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

Anti-Vibration

Coolant Through Hole






A.3

| 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**

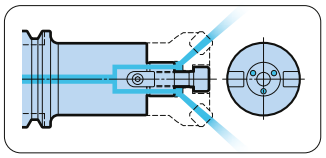
| Coolant Pipes | Fine Boring Heads | Rough Boring Heads |
|---|---|---|
|  |  |  |
| ▶ 250 | ▶ 410 | ▶ 399 |

# Face Mill Arbors Type FMH

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

Coolant Through Hole





A.3

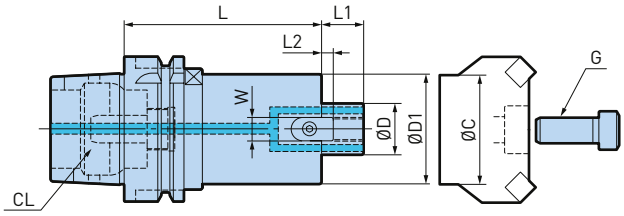



Fig. 1

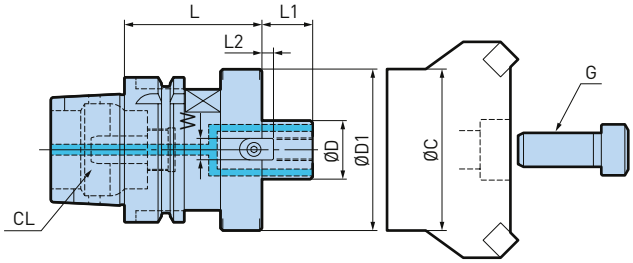



Fig. 2

| 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 |

continues on the next page

# Face Mill Arbors Type FMH

Coolant Through Hole



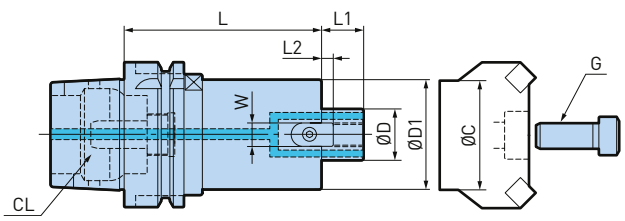



Fig. 1

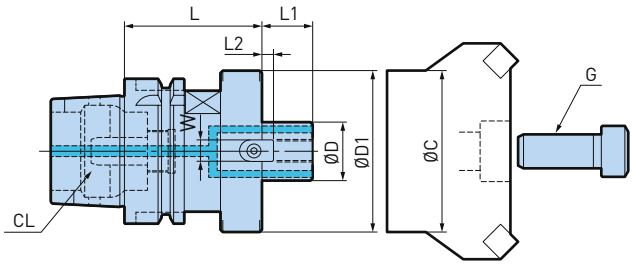



Fig. 2

| Model | Article No. | Fig. | ØD | ØD1 | L | L1 | L2 | W | G | ØC min. | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
| HSK-A125-FMH32A-78-60 | 806.591 | 1 | 32 | 78 | 60 | 22 | 7 | 14 | M16 | 58 | 4.80 |
| HSK-A125-FMH32A-96-105 | 806.592 | 1 | 32 | 96 | 105 | 22 | 7 | 14 | M16 | 58 | 7.90 |
| HSK-A125-FMH40A-80-90 | 806.593 | 1 | 40 | 80 | 90 | 26 | 8.5 | 16 | M20 (MBA-M20H) | 70 | 6.30 |

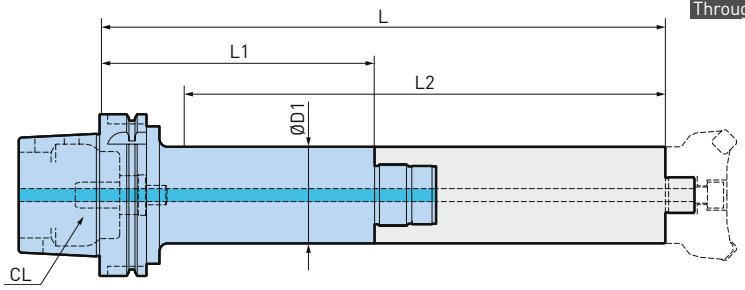
1. Clamp bolt is included.
2. By using a clamping screw with a through bore, coolant is supplied through the screw
3. Coolant pipe (CL) is to be ordered separately.

**Accessories & Spare Parts**

| Clamp Bolts | Coolant Pipes |
|---|---|
|  |  |
| ▶ 372 | ▶ 250 |

# Smart Damper Basic Holders for Mills






Coolant Through Hole

A.3

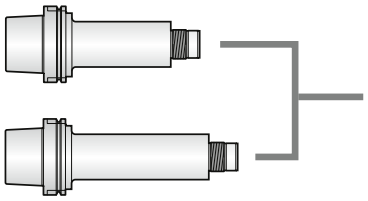
| Model | Article No. | ØD1 | L | L1 | L2 | Damper Head Model | Weight (kg) |
|---|---|---|---|---|---|---|---|
| HSK-A100-SDF36-47-170 | 804.976 | 47 | 350 | 170 | 310 | FMH_DP-47 | 4.40 |
| HSK-A100-SDF36-47-220 | 804.978 | 47 | 400 | 220 | 360 | FMH_DP-47 | 5.00 |
| HSK-A100-SDF36-60-170 | 804.977 | 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



► 250

# Smart Damper Damper Heads for Mills

Coolant Through Hole

Anti-Vibration

A.3



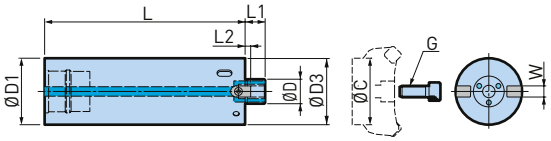



Fig. 1

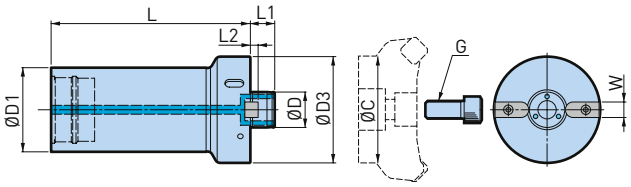



Fig. 2

| 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

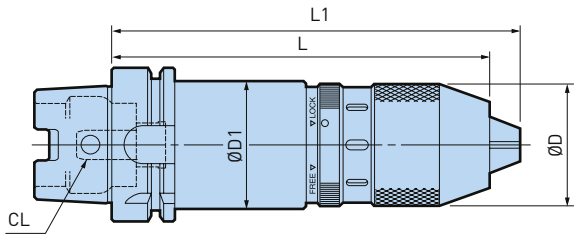
**Accessories & Spare Parts**

| FK Wrenches | Clamp Bolts | Fullcut Mill FCM - Arbor Type |
|---|---|---|
|  |  |  |
| ▶ 369 | ▶ 372 | ▶ 479 |

## Super Keyless Chuck

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






**ø0.5 - 13mm**

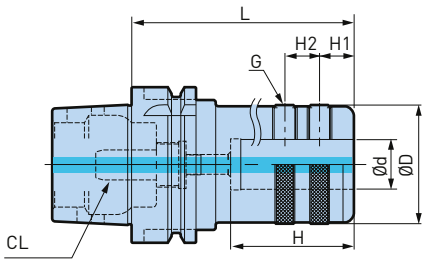
| Model | Article No. | Ød | ØD | ØD1 | L | L1 | Wrench | Weight (kg) |
|---|---|---|---|---|---|---|---|---|
| HSK-A63-SKL13-155 | 805.282 | 0.5 - 13 | 51 | 53 | 155 | 167.5 | FS13LC | 2.36 |

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

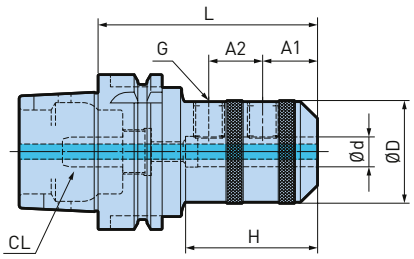


► 373

# 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



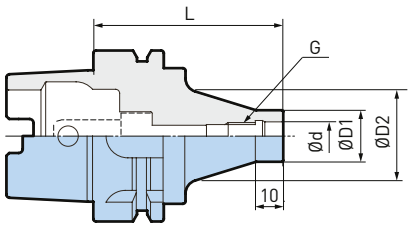
► 250

# Holders for Screw-On Cutter

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

Coolant Through Hole





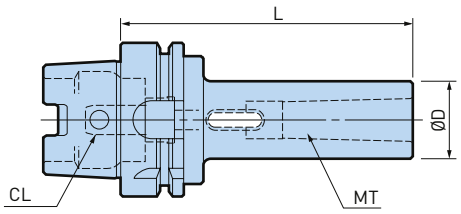

A.3

| 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.

# 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 |

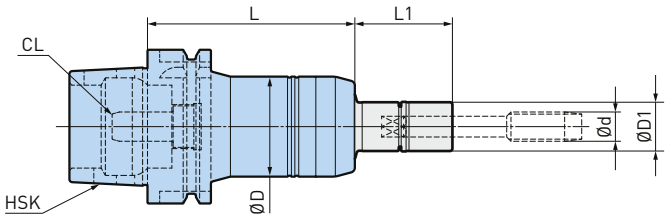
1. Coolant pipe (CL) is to be ordered separately.

# 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**

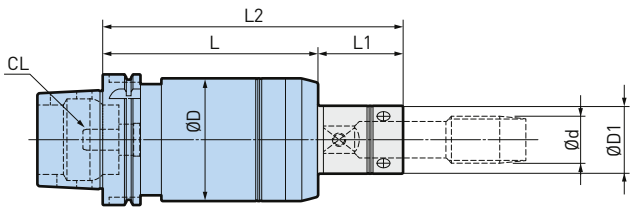
| Model | Article No. | Tap Holder | Ød | ØD | ØD1 | L | L1 | Weight (kg) |
|---|---|---|---|---|---|---|---|---|
| HSK-A40-MGT6-80 | 965.601 | MGT6 | M3-M8 | 36 | 16 | 80 | 30 - 200 | 0.54 |
| HSK-A40-MGT12-85 | 965.602 | MGT12 | M5-M12 / P1/8 | 41 | 20 | 85 | 30 - 200 | 0.63 |
| HSK-A50-MGT6-85 | 965.603 | 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.

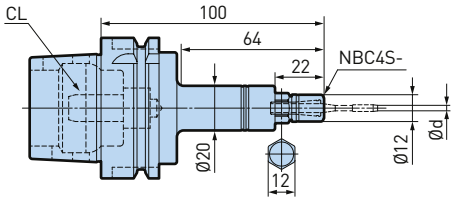
**Accessories & Spare Parts**

| Tap Holder | MEGA Wrenches | Accessories | Coolant Pipes |
|---|---|---|---|
|  |  |  |  |
| ▶ 374 | ▶ 368 | ▶ 382 | ▶ 250 |

# MEGA Synchro Tapping Holder

For small Tapping: Type MGT3






A.3

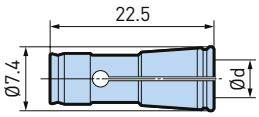
**M1 - M3**

| 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 |
| -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.

### Accessories & Spare Parts

MEGA Wrenches



▶ 368

# Angle Head Compact Type

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



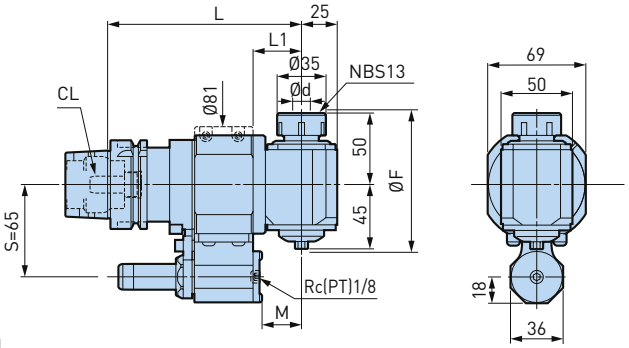



Fig. 1



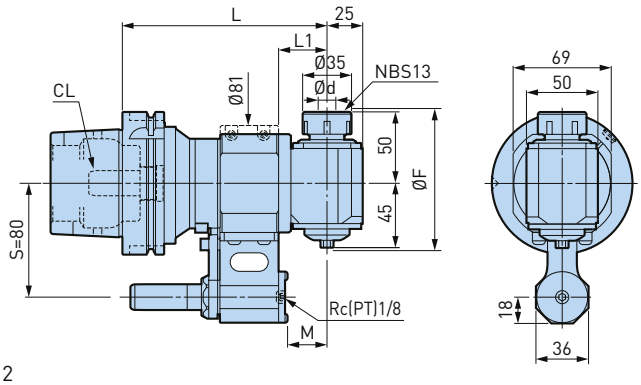



Fig. 2

| 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

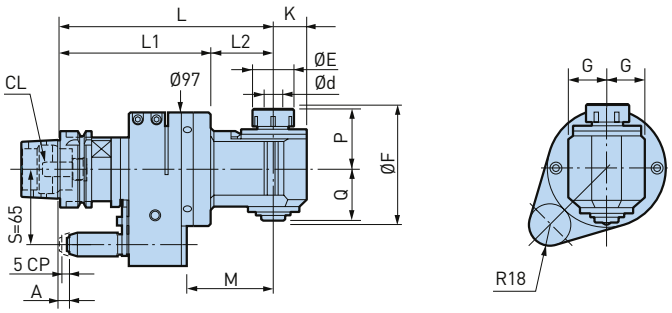
**Accessories & Spare Parts**

| New Baby Collets | Semi-Finished Stop Blocks |
|---|---|
|  |  |
| ▶ 344 | ▶ 395 |

# 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.

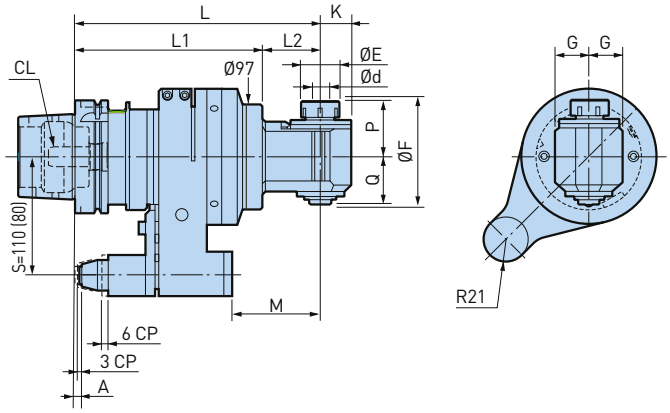





HSK-A63

| 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 |
|---|---|---|
|  |  |  |
| ▶ 344 | ▶ 395 | ▶ 250 |

# 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.





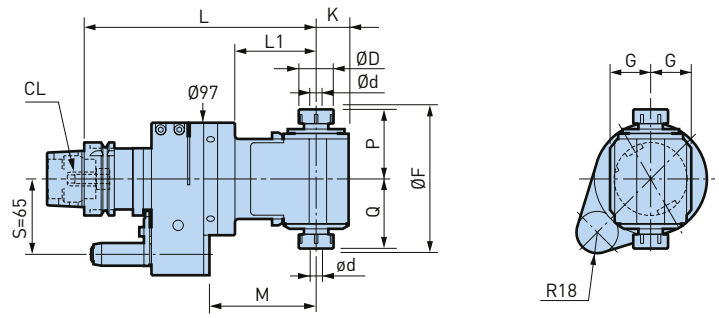



Fig. 1

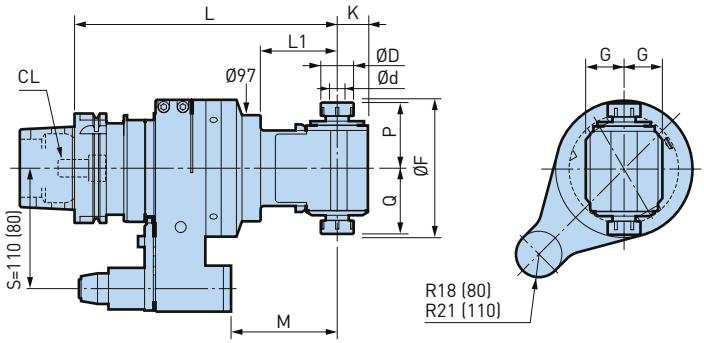



Fig. 2

| 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.

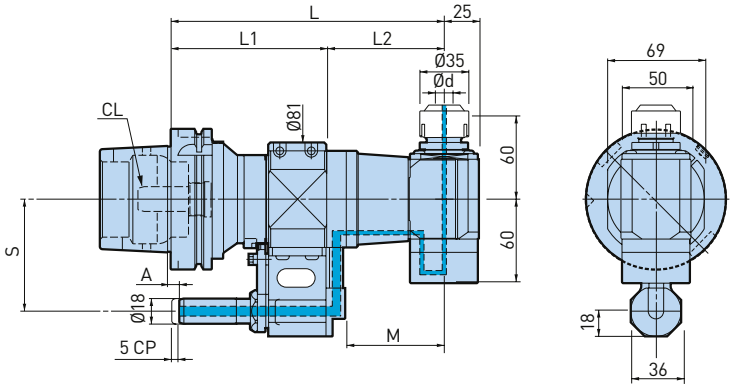
High rigidity S type with reinforced Locating Pin part is also available. Add the letter S at the end when ordering.

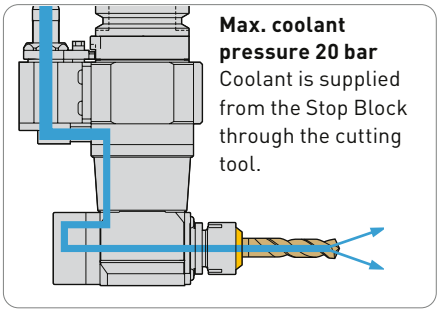
**Accessories & Spare Parts**

| New Baby Collets | Semi-Finished Stop Blocks |
|---|---|
|  |  |
| ▶ 344 | ▶ 395 |

# 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 |

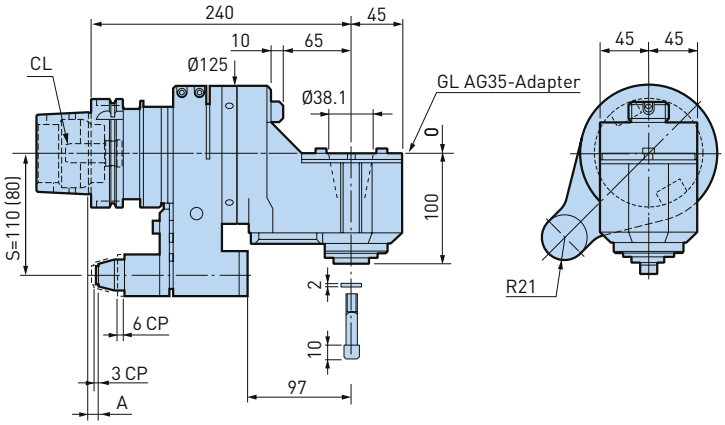
**Accessories & Spare Parts**

| Baby Perfect Seals | New Baby Collets | Semi-Finished Stop Blocks |
|---|---|---|
|  |  |  |
| ▶ 354 | ▶ 344 | ▶ 395 |

# 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 "S" at the end 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.

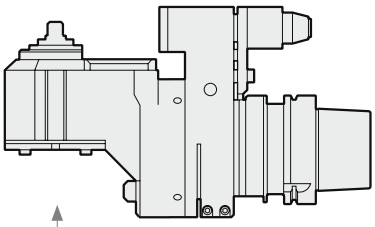
**Accessories & Spare Parts**

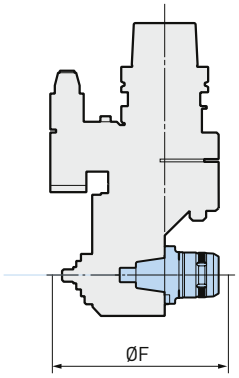
Semi-Finished Stop Blocks

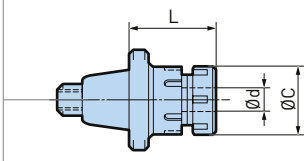


► 395

## AG35 adapters



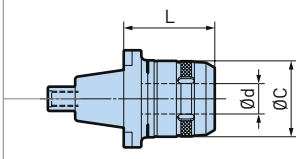



### AG35 adapters New Baby Chuck

| 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 |

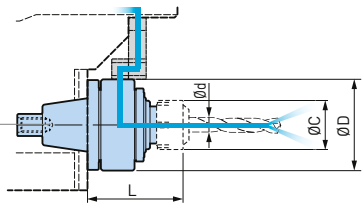
1. Collet and wrench are to be ordered separately.




### 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 |

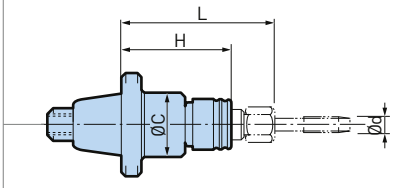
1. Wrench (FK45-50L) is included.




### 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 |

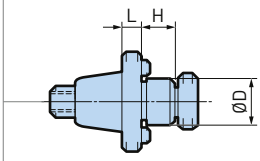
1. Baby Perfect Seal nut with sealing mechanism is required. (optional)
2. Anti-rotation block set is to be ordered separately. (Model: AG35-BL)
3. Collet and wrench are to be ordered separately.




### AG35 adapters Auto Tapper Type B (automatic depth control)

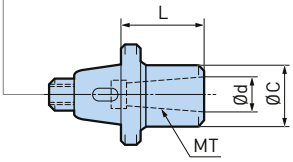
| Model | Article No. | Ød | ØC | L | H | Head | Weight (kg) |
|---|---|---|---|---|---|---|---|
| AG35-ATB12E | 802.435 | M4 - M12 | 40.5 | 80 | 72 | AG35 | 0.85 |
| AG35-ATB20E | 802.436 | M8 - M20 | 57.5 | 115 | 102.5 | AG35 | 1.65 |

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 |



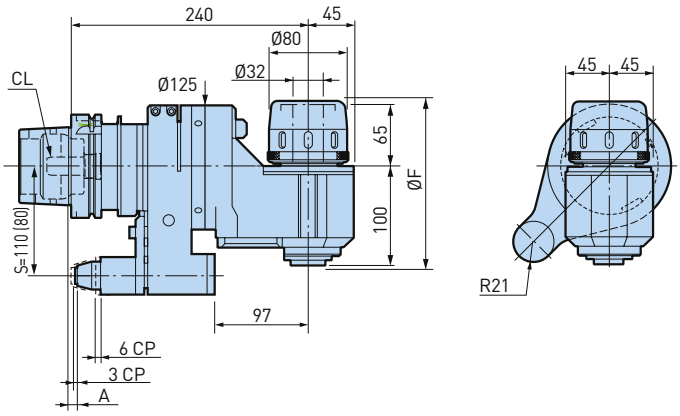

### AG35 adapters Morse Taper Adapter

| 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 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 |
|---|---|
|  |  |
| ► 365 | ► 395 |

# Angle Head New Baby Chuck Type

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



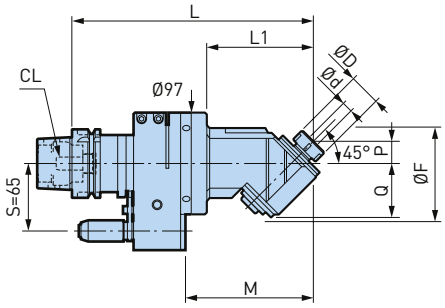



Fig. 1

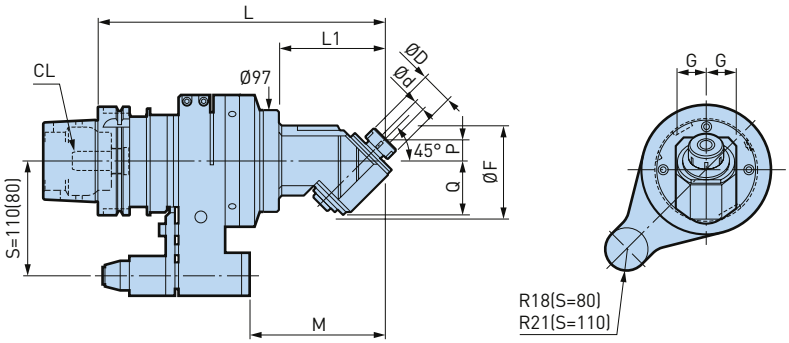



Fig. 2

| 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.

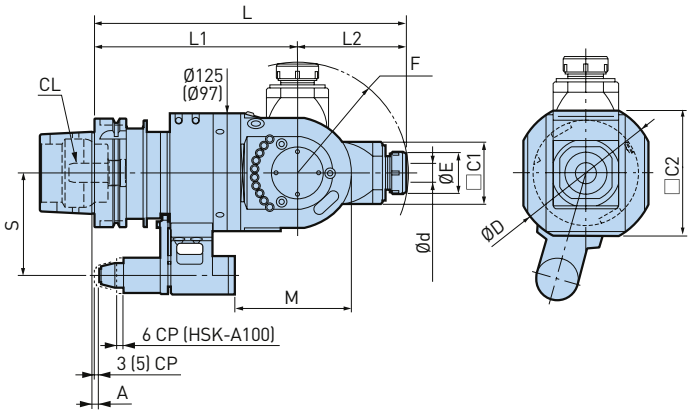
**Accessories & Spare Parts**

| New Baby Collets | New Baby Wrenches | Semi-Finished Stop Blocks |
|---|---|---|
|  |  |  |
| ▶ 344 | ▶ 369 | ▶ 395 |

# Angle Head Universal Type

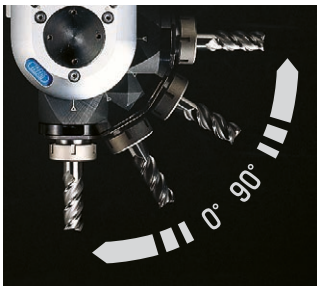
Suitable for cutting angles between 0°and 90°. In addition to that the cutter head can be rotated a full 360°, increasing flexibility!






| 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 |

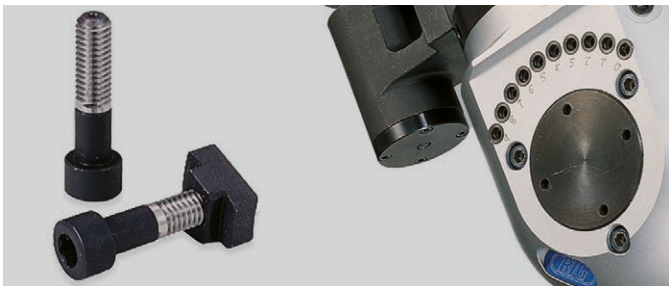
1. Exclusive Stop Block is required.
2. Figures in ( ) in the drawing indicate dimensions for HSK-A63.
3. Nut and wrench are included.
4. New Baby Collet is to be ordered separately.
5. Coolant can be supplied through the locating pin.
6. Coolant pipe (CL) is to be ordered separately.
7. „CP" indicates 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.

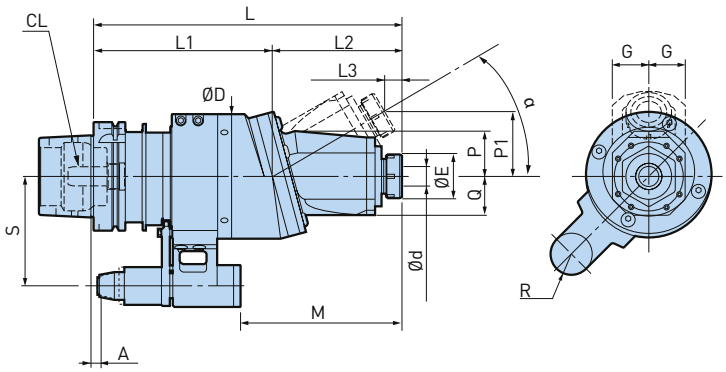
**Accessories & Spare Parts**

| New Baby Collets | Semi-Finished Stop Blocks |
|---|---|
|  |  |
| ▶ 344 | ▶ 395 |

# Angle Head AGU30 Type

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



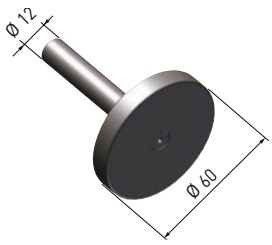


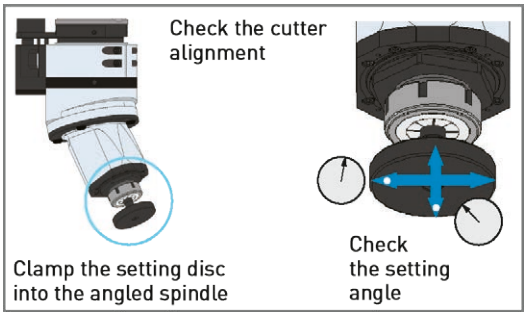

| Model | Article No. | Ød | ØD | ØE | L | L1 | L2 | L3 | G | Q | P | P1 max. | R | S | max. min-1 | Collet Model | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HSK-A63-AGU30/NBS13-255 | 802.735 | 2.5 - 13 | 97 | 35 | 255 | 150 | 105 | 14 | 29 | 30 | 34 | 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 |

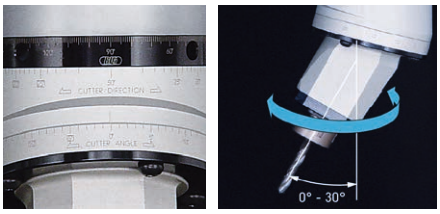
1. Exclusive Stop Block is required.
2. Standard fixed length A is 6 mm for HSK-A100 and 8 mm for HSK-A63. Other lengths are available upon request.
3. New Baby Nut, wrench and setting disc are included.
4. Coolant can be supplied through the locating pin.
5. Coolant pipe (CL) is to be ordered separately.

## 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 |
|---|---|
|  |  |
| ▶ 344 | ▶ 395 |

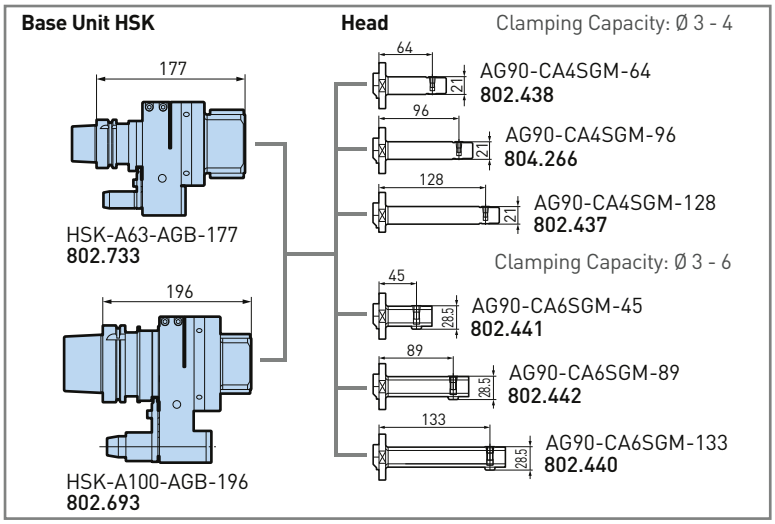
# Small Bore Type

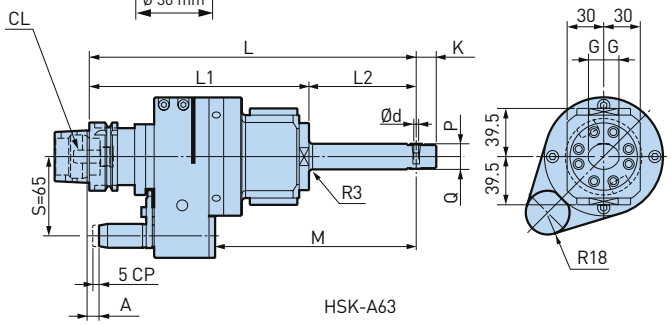
Angular operation from a Ø 30 mm bore is possible. Modular heads enhance versatility. Head is aligned with spindle center for easy programming.

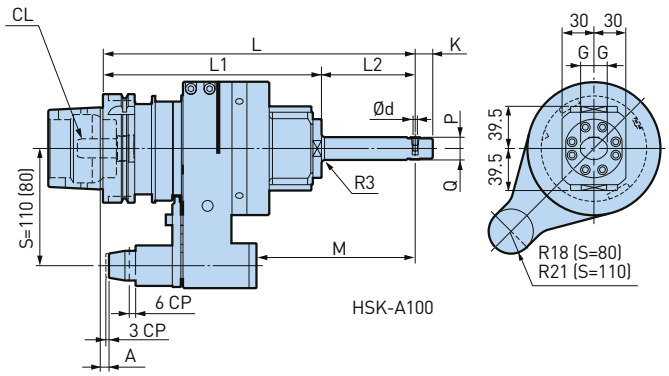







| Model | Article No. | Base Unit | Head | Ød | L | L1 | L2 | G | K | M | P | Q | Ratio | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HSK-A63-AG90-CA4SGM-241 | 802.727 | HSK-A63-AGB-177 | AG90-CA4SGM-64 | 3 - 4 | 241 | 185 | 56 | 12.5 | 16.5 | 133 | 10.5 | 10.5 | 1:1.06 | 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 |

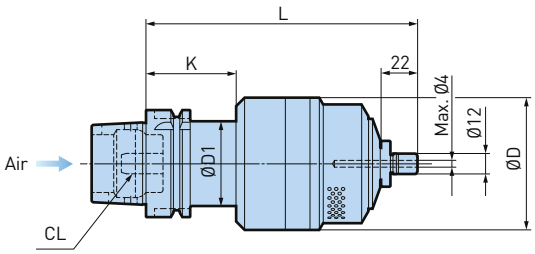
1. Standard fixed length A is 6 mm for HSK-A100 and 8 mm for HSK-A63. Other lengths are available upon request.
2. Article No. for HSK-A100 is with S = 110. S = 80 type for HSK-A100 is also available upon request.
3. Coolant-through hole is not available.
4. Exclusive collet is to be ordered separately.
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 |
|---|---|
|  |  |
| ▶ 395 | ▶ 384 |

# Air Turbine Spindle Center Through Type








| 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 |

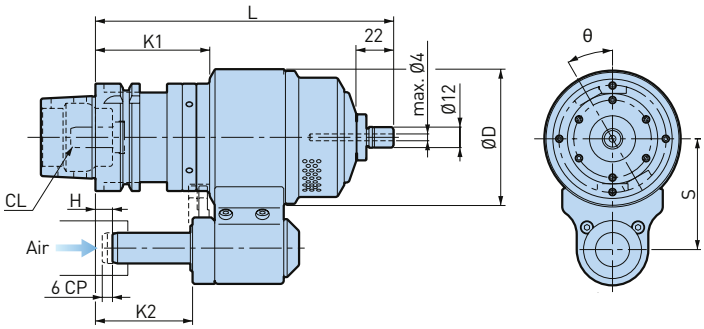
1. Nut and wrench are included.
2. Collet (NBC4S-_) and XF1 (air unit) are to be ordered separately.
3. Coolant pipe (CL) is to be ordered separately.
4. Dry and clean air is an essential condition for the use of this product. Therefore, coolant should never be supplied through the spindle of the machine using the Air Turbine Spindle.

**Accessories & Spare Parts**

| MEGA Nuts | Micro Collets | MEGA Wrenches | Air Filter Regulator for RBX |
|---|---|---|---|
|  |  |  |  |
| ▶ 342 | ▶ 340 | ▶ 368 | ▶ 384 |

# Air Turbine Spindle






A.3

| 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 |

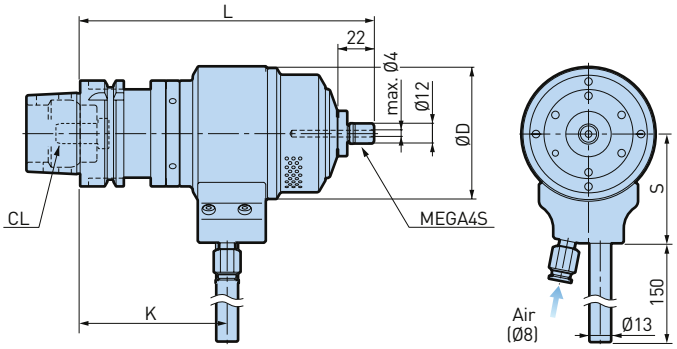
1. Exclusive Stop Block is required.
2. Nut and wrench are included.
3. Collet (NBC4S-_) and XF1 (air unit) are to be ordered separately.
4. Coolant pipe (CL) is to be ordered separately.
5. Dry and clean air is an essential condition for the use of this product. Therefore, coolant should never be supplied 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 |
|---|---|---|---|---|
|  |  |  |  |  |
| ▶ 342 | ▶ 340 | ▶ 368 | ▶ 395 | ▶ 384 |

# Air Turbine Spindle Manual Type






A.3

| 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**

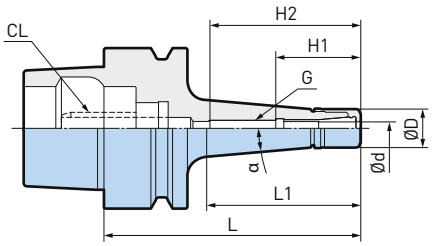
| MEGA Nuts | Micro Collets | MEGA Wrenches | Air Filter Regulator for RBX |
|---|---|---|---|
|  |  |  |  |
| ▶ 342 | ▶ 340 | ▶ 368 | ▶ 384 |

# 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**

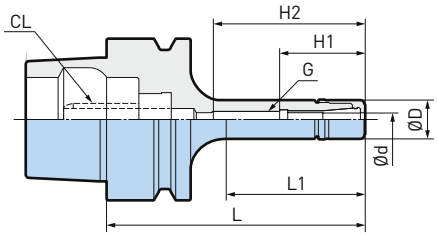
| MEGA Nuts | Micro Seal Nuts | Micro Collets | MEGA Wrenches | Taper Cleaners | Collet Protective Cases | Coolant Pipes |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| ▶ 342 | ▶ 342 | ▶ 340 | ▶ 368 | ▶ 388 | ▶ 343 | ▶ 250 |

# 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 |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| ▶ 342 | ▶ 342 | ▶ 340 | ▶ 368 | ▶ 388 | ▶ 343 | ▶ 250 |

# 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 |

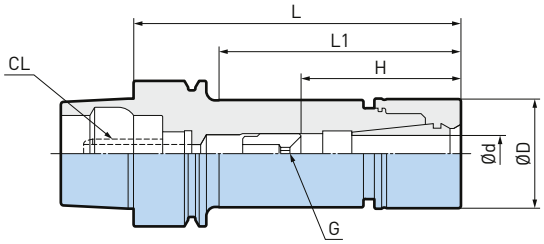



Fig. 1

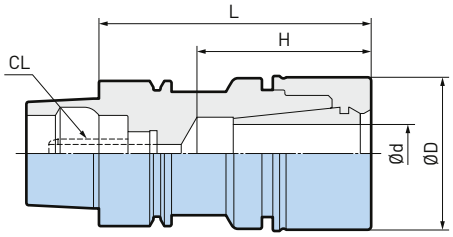



Fig. 2



| 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 |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| ▶ 351 | ▶ 352 | ▶ 344 | ▶ 368 | ▶ 351 | ▶ 388 | ▶ 250 |

# Hydraulic Chuck Super Slim

Ultra precise hydraulic chuck with extremely slim design.





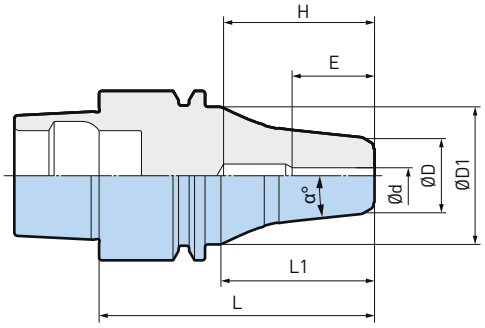



Fig. 1

**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 |

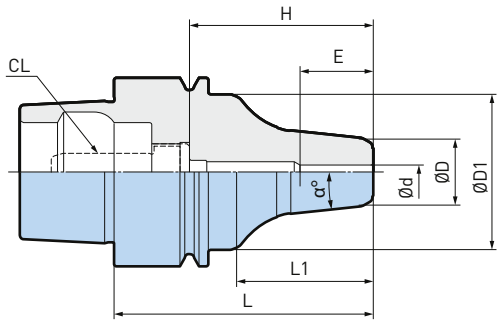



Fig. 2

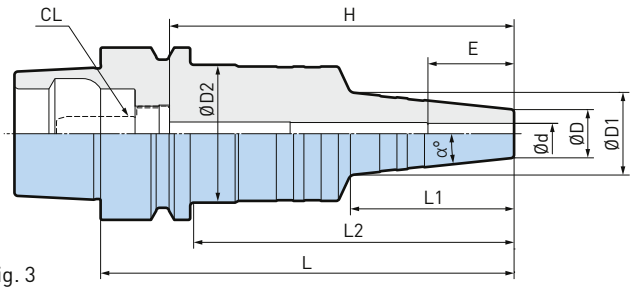



Fig. 3

| 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.

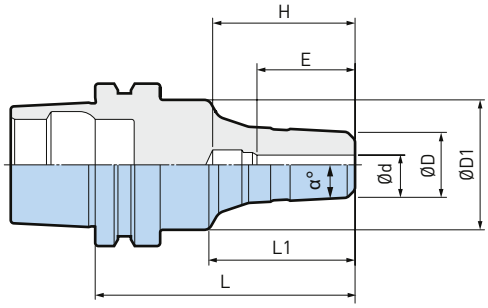
**Accessories & Spare Parts**

| α Wiper Cleaners | Coolant Pipes |
|---|---|
|  |  |
| ► 388 | ► 250 |

# 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



▶ 388

# 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





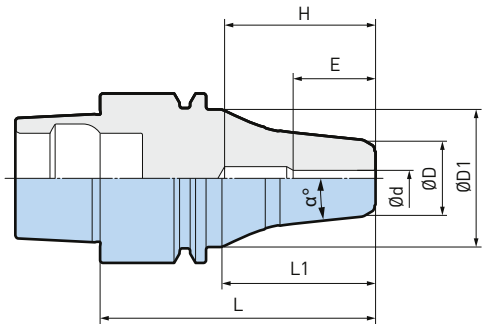



Fig. 1

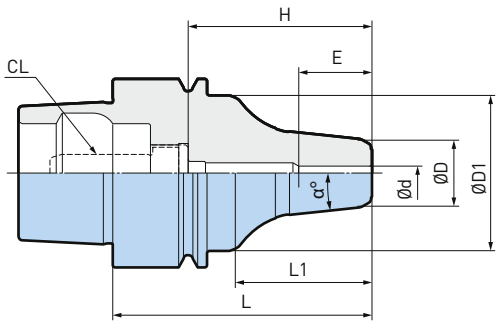



Fig. 2

**ø3 - 6mm**

| Model | Article No. | Fig. | Ød | ØD | ØD1 | L | L1 | α | E | H | max. min-1 | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HSK-E25-HDC3.175S-40UP | 807.119 | 1 | 3.175 | 14 | 20 | 40 | 27 | 6° | 16 | 22 | 60,000 | 0.09 |
| 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-HDC3.175S-52UP | 807.121 | 1 | 3.175 | 14 | 26 | 52 | 29 | 6° | 16 | 28 | 45,000 | 0.19 |
| 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-HDC3.175S-55UP | 807.124 | 2 | 3.175 | 14 | 33 | 55 | 29 | 6° | 16 | 39 | 42,000 | 0.29 |
| 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**

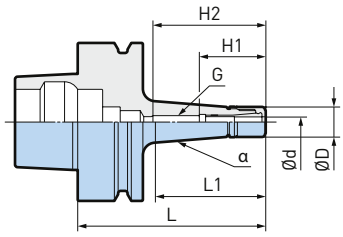
| α Wiper Cleaners | Coolant Pipes |
|---|---|
|  |  |
| ▶ 388 | ▶ 250 |

## 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 |

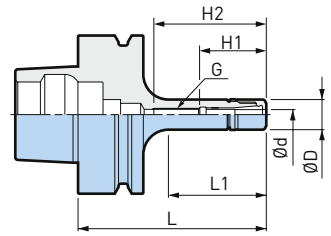
1. MEGA nut is included in delivery.
2. Coolant pipe (CL) is to be ordered separately.

## 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**

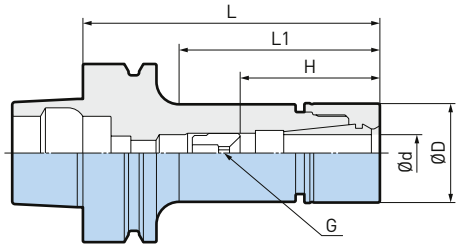
| MEGA Nuts | Micro Seal Nuts | Micro Collets | MEGA Wrenches | Taper Cleaners | Collet Protective Cases | Coolant Pipes |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| ▶ 342 | ▶ 342 | ▶ 340 | ▶ 368 | ▶ 388 | ▶ 343 | ▶ 250 |

# 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








**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

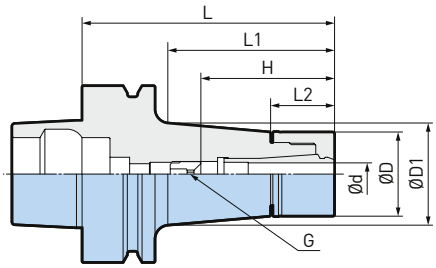
| MEGA Nuts | MEGA Perfect Seals | New Baby Collets | MEGA Wrenches | Adjusting Screws NBA | Taper Cleaners | Coolant Pipes |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| ▶ 351 | ▶ 352 | ▶ 344 | ▶ 368 | ▶ 351 | ▶ 388 | ▶ 250 |

# 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**

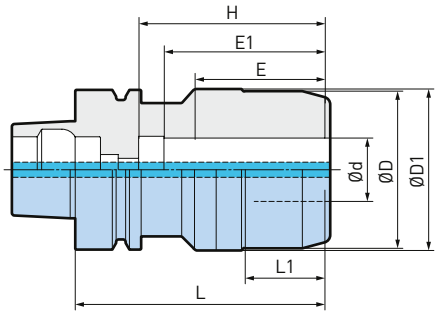
| MEGA E Nuts | MEGA E Perfect Seals | MEGA E Collets | MEGA Wrenches | Adjusting Screws NBA | Taper Cleaners | Coolant Pipes |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| ▶ 356 | ▶ 357 | ▶ 356 | ▶ 368 | ▶ 351 | ▶ 388 | ▶ 250 |

## 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 |

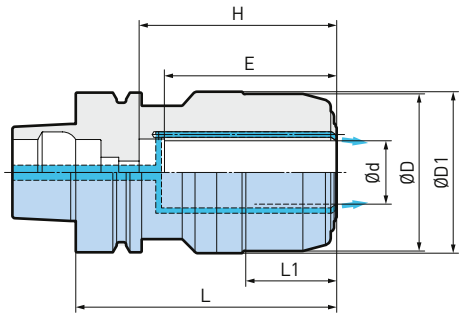
1. Wrench and coolant pipe (CL) is to be ordered separately.
2. "E" is the min. clamping length.
3. "E1" is the min. clamping length for optimum use with center through coolant.
4. "H" is the max. tool shank length that can be inserted for these models.

## 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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 363 | ▶ 364 | ▶ 364 | ▶ 365 | ▶ 368 | ▶ 250 |

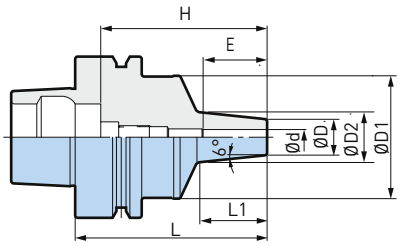
# Hydraulic Chuck Super Slim

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 |

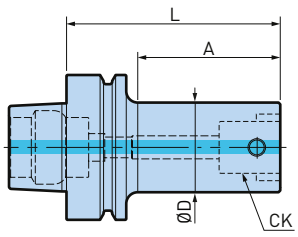
1. Adjusting screw cannot be used.
2. "H" is the max. tool shank length that can be inserted for these models.
3. "E" is the min. clamping length.
4. Coolant pipe (CL) is to be ordered separately.

**Accessories & Spare Parts**

| Coolant Pipes | ɑ Wiper Cleaners |
|---|---|
|  |  |
| ▶ 250 | ▶ 388 |

# CK Shanks with Center Through Hole








**CK1 - CK5**

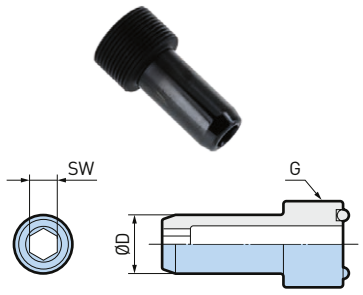
| Model | Article No. | CK | ØD | L | A | Weight (kg) |
|---|---|---|---|---|---|---|
| HSK-F63-CKB1-78 | - | CK1 | 19 | 77.5 | 40 | 0.80 |
| HSK-F63-CKB2-90 | - | CK2 | 24 | 89.5 | 58 | 0.80 |
| HSK-F63-CKB3-100 | - | CK3 | 31 | 100 | 69 | 1.00 |
| HSK-F63-CKB4-93 | - | CK4 | 39 | 93 | 62 | 1.20 |
| 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 |
|---|---|---|
|  |  |  |
| ▶ 250 | ▶ 410 | ▶ 399 |

## Coolant Pipes

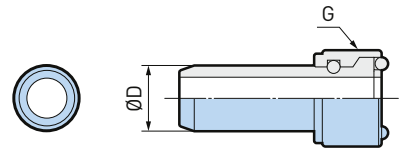



| Model | Article No. | ØD | G | SW |
|---|---|---|---|---|
| HSK25-CP | 978.921 | 5 | M8 P1 | 2.5 |
| HSK32-CP | 978.909 | 6 | M10 P1 | 3 |
| HSK40-CP | 978.913 | 8 | M12 P1 | 4 |
| HSK50-CP | 801.071 | 10 | M16 P1 | 5 |
| HSK63-CP | 969.475 | 12 | M18 P1 | 6 |
| HSK80-CP | 802.828 | 14 | M20 P1.5 | 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.

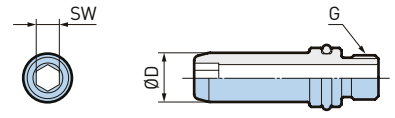


## Coolant Pipes 1° swing type (DIN) for Form A/E




| 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 |

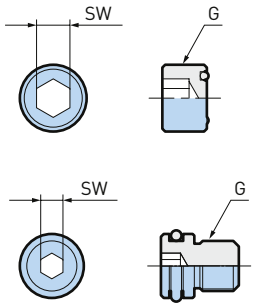
## Coolant Pipes Coolant Pipe Form F




| 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 | 252 |
| MEGA New Baby Chuck | 254 |
| MEGA E Chuck | 257 |
| MEGA Double Power Chuck | 259 |
| New Hi-Power Milling Chuck | 261 |
| Hydraulic Chucks | 262 |
| Shrink Chucks | 265 |
| CK Shanks | 266 |
| Face Mill Arbors FMH | 267 |
| Side Lock Holders | 268 |
| Side Cutter Arbors / Morse Taper Holders | 270 |
| MEGA Synchro Tapping Holder | 271 |
| Extensions / Reductions | 272 |
| BBT / BIG CAPTO Basic Holders | 272 |



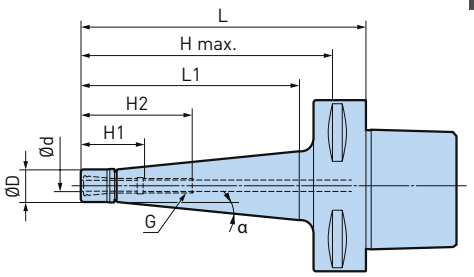

**Please use the model name for inquiries and orders.**
(e.g. BBT30-MEGA3S-45T)

# 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**

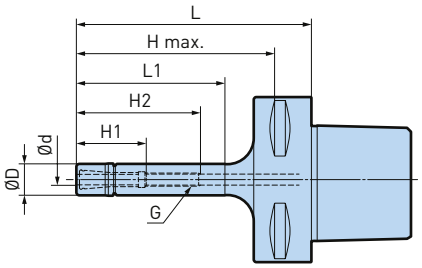
| MEGA Nuts | Micro Seal Nuts | Micro Collets | MEGA Wrenches | Taper Cleaners | Collet Protective Cases |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 342 | ▶ 342 | ▶ 340 | ▶ 368 | ▶ 388 | ▶ 343 |

# 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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 342 | ▶ 342 | ▶ 340 | ▶ 368 | ▶ 388 | ▶ 343 |

# 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.

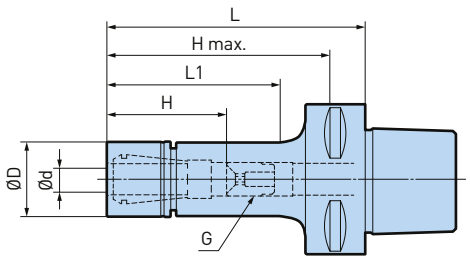
Coolant Through Hole



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 |

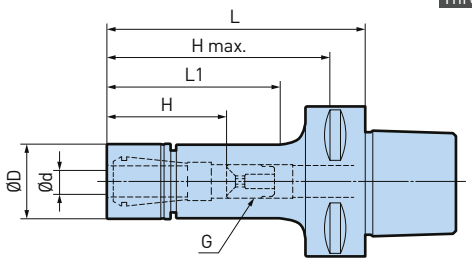
A.4

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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**

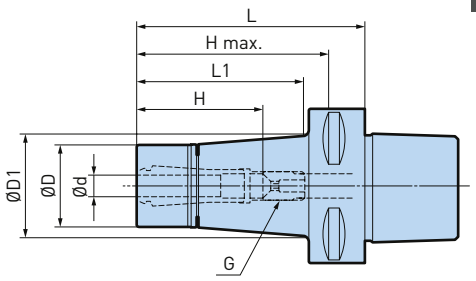
| MEGA Nuts | MEGA Perfect Seals | New Baby Collets | MEGA Wrenches | Adjusting Screws NBA | Taper Cleaners |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 351 | ▶ 352 | ▶ 344 | ▶ 368 | ▶ 351 | ▶ 388 |

# MEGA E Chuck

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

Coolant Through Hole








ø3 - 12mm

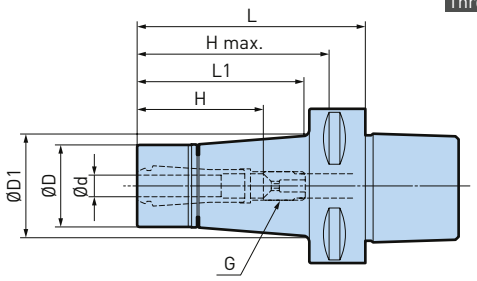
| Model | Article No. | Ød | ØD | ØD1 | L | L1 | H | H max. | Collet Model | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| C4-MEGA6E-50 * | 800.683 | 3 - 6 | 25 | 26 | 50 | 25 | 44 | 44 | MEC6 | 0.34 |
| C4-MEGA8E-50 * | 800.685 | 3 - 8 | 30 | 31 | 50 | 28 | 44 | 44 | MEC8 | 0.50 |
| 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 |

continues on the next page

# 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.

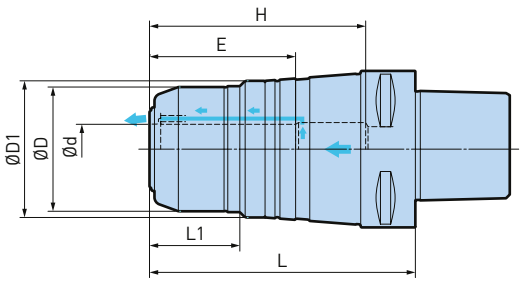
**Accessories & Spare Parts**

| MEGA E Nuts | MEGA E Perfect Seals | MEGA E Collets | MEGA Wrenches | Adjusting Screws NBA | Taper Cleaners |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 356 | ▶ 357 | ▶ 356 | ▶ 368 | ▶ 351 | ▶ 388 |

# 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.








A.4

ø16 - 32mm

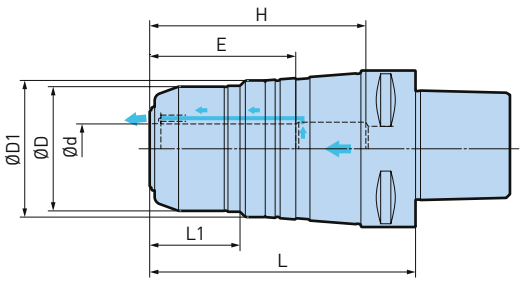
| Model | Article No. | Ød | ØD | ØD1 | L | L1 | H | E | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| C4-MEGA16DS-70 | 800.680 | 16 | 46 | 47 | 71 | 27 | 65 | 48 | 0.80 |
| C4-MEGA20DS-65 | 800.682 | 20 | 50 | 51 | 66 | 32 | 60 | 50 | 0.70 |
| C5-MEGA16DS-65A | 803.141 | 16 | 42 | 52.6 | 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 |

continues on the next page

# 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**

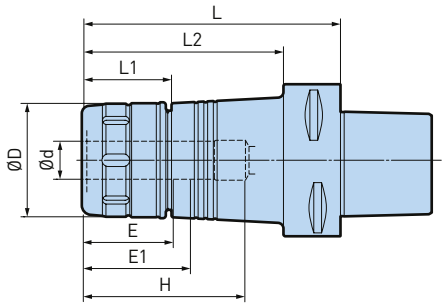
| PJC Collets | PSC Collets | C Collets | MEGA Wrenches | Adjusting Screws HMA |
|---|---|---|---|---|
|  |  |  |  |  |
| ▶ 363 | ▶ 364 | ▶ 365 | ▶ 368 | ▶ 367 |

# 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






A.4

**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**

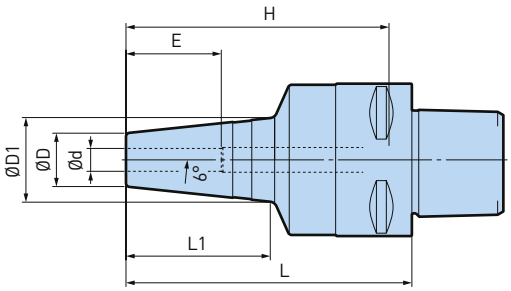
| PJC Collets | OCA Collets | PSC Collets | C Collets | FK Wrenches | Adjusting Screws HMA |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 363 | ▶ 364 | ▶ 364 | ▶ 365 | ▶ 369 | ▶ 367 |

# 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**

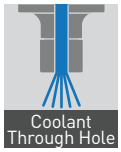
α Wiper Cleaners



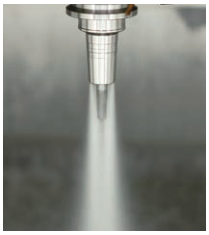
► 388

# Hydraulic Chuck Jet Through

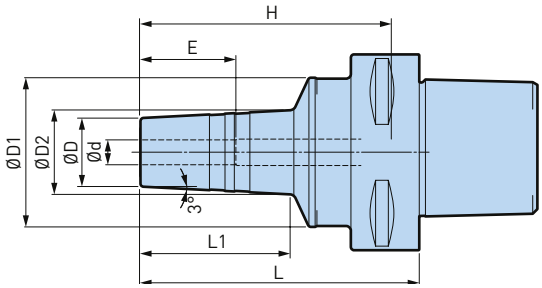
Hydraulic chuck provides efficient coolant supply through the cutting tool or periphery of the cutting tool.



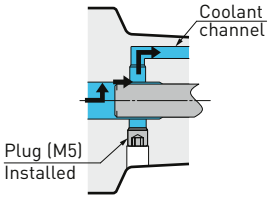


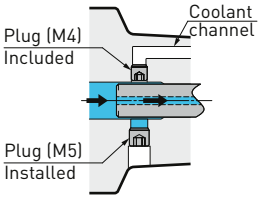





Peripheric




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



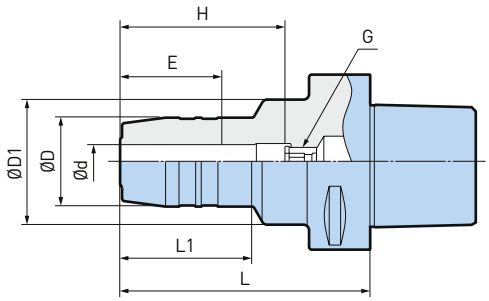
► 388

# 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.

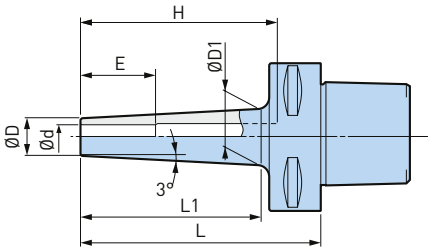
**Accessories & Spare Parts**

| PJC Collets | PSC Collets | Adjusting Screws HDA | α Wiper Cleaners |
|---|---|---|---|
|  |  |  |  |
| ▶ 363 | ▶ 364 | ▶ 371 | ▶ 388 |

## Shrink Chuck Slim

Slim design reduces outer diameter for machining in tight spaces.








**ø6 - 12mm**

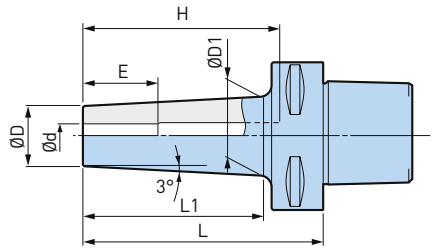
| Model | Article No. | Ød | ØD | ØD1 | L | L1 | E | H | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| C6-SRC6S-120 | 973.709 | 6 | 10 | 19.5 | 120 | 92 | 26 | 111 | 0.90 |
| C6-SRC6S-165 | 973.710 | 6 | 10 | 24 | 165 | 133 | 26 | 156 | 1.00 |
| C6-SRC8S-120 | 973.711 | 8 | 13 | 22.5 | 120 | 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 |

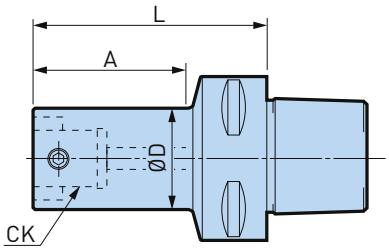
1. Use a carbide shank cutter with tolerance h6.
2. Please refer to the operation manual of heating / cooling equipment, as some equipment may not be compatible.

# 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**

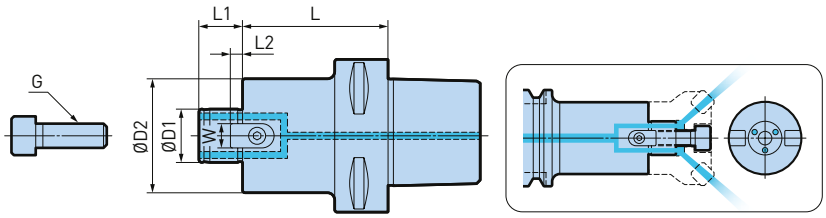
| Rough Boring Heads | Fine Boring Heads |
|---|---|
|  |  |
| ▶ 399 | ▶ 410 |

# Face Mill Arbors Type FMH

For cutters that require a coolant hole through the pilot.

Coolant Through Hole








| 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**

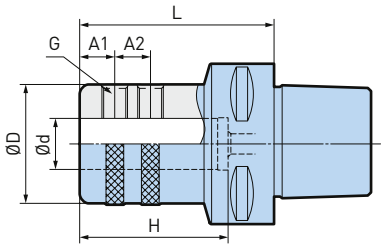
Clamp Bolts



▶ 372

# 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**

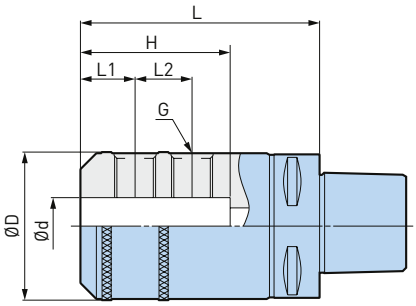
Sleeves for TSL & OSL



► 373

# Side Lock Holders for Weldon






Coolant Through Hole



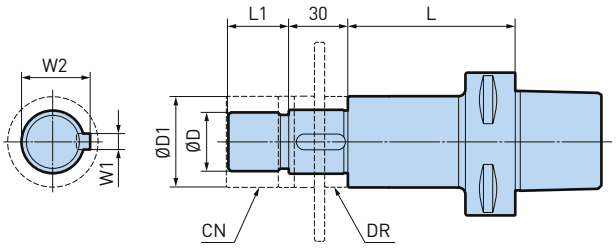
ø16 - 32mm

| 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





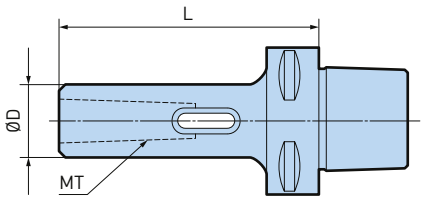

A.4

| 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





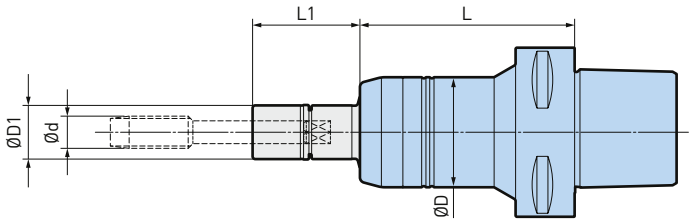

| Model | Article No. | MT No. | ØD | L | Weight (kg) |
|---|---|---|---|---|---|
| C5-MTA1-95 | 973.572 | 1 | 25 | 95 | 0.70 |
| C5-MTA2-110 | 973.573 | 2 | 32 | 110 | 0.90 |
| C5-MTA3-130 | 973.574 | 3 | 40 | 130 | 1.20 |
| C6-MTA1-95 | 973.575 | 1 | 25 | 95 | 1.00 |
| C6-MTA2-110 | 973.576 | 2 | 32 | 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 |

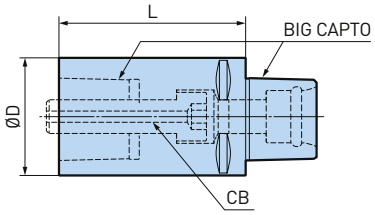
1. Tap holder and wrench are to be ordered separately.
2. Synchronized tapping function is required on the machine.

**Accessories & Spare Parts**

| Tap Holder | MEGA Wrenches | Accessories |
|---|---|---|
|  |  |  |
| ▶ 374 | ▶ 368 | ▶ 382 |

## Extensions





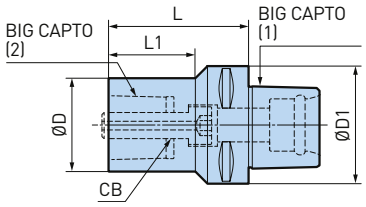

| Model | Article No. | BIG CAPTO | ØD | L | Weight (kg) |
|---|---|---|---|---|---|
| C6-C6-100 | 803.738 | C6 | 63 | 100 | 2.20 |
| C8-C8-100 | 803.740 | C8 | 80 | 100 | 3.60 |

A.4

1. Hexagon socket head cap screw (CB) is included. M20xP2 / Tightening Torque 170 Nm

## Reductions



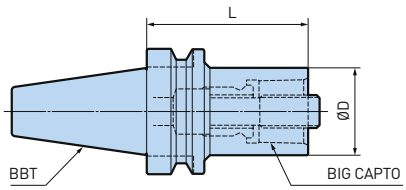


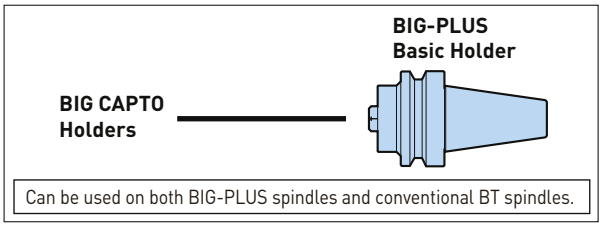

| Model | Article No. | BIG CAPTO | ØD | ØD1 | L | L1 | Weight (kg) |
|---|---|---|---|---|---|---|---|
| C6-C5-75 | 803.737 | C6 (1) - C5 (2) | 50 | 63 | 75 | 46 | 1.40 |
| C8-C6-85 | 803.739 | C8 (1) - C6 (2) | 63 | 80 | 85 | 50 | 2.60 |

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






| 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

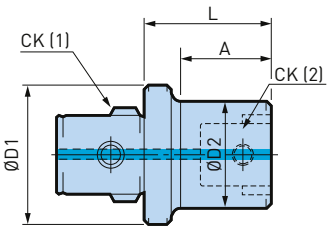

| | |
|---|---|
| **Reductions** | **274** |
| **Extensions / Smart Damper Extensions** | **275** |
| **Milling Chucks** | **276** |
| **MEGA Synchro Tapping Holder** | **277** |
| **Tapping Holders** | **278** |
| **Morse Taper Shanks** | **279** |




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

# Reductions






Coolant Through Hole

| 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 |

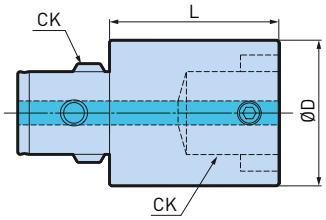


### Accessories & Spare Parts

| Fine Boring Heads | Rough Boring Heads |
|---|---|
|  |  |
| ▶ 410 | ▶ 399 |

# 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 |

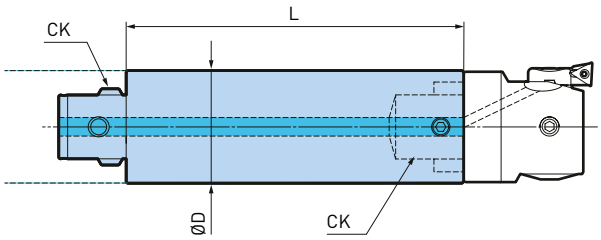
1. * Two pieces of CK-screws are included.



# 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**

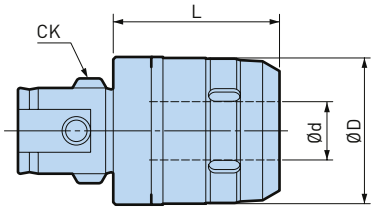
| Fine Boring Heads | Rough Boring Heads |
|---|---|
|  |  |
| ▶ 410 | ▶ 399 |

# 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**

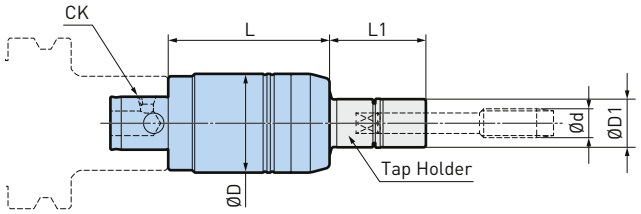
| OCA Collets | C Collets | FK Wrenches |
|---|---|---|
|  |  |  |
| ▶ 364 | ▶ 365 | ▶ 369 |

## 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.

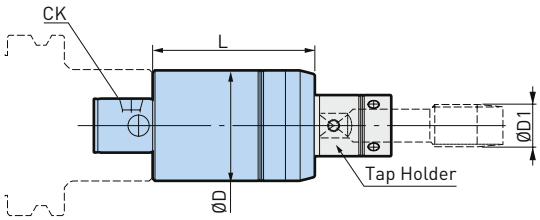
A.5

## 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 |

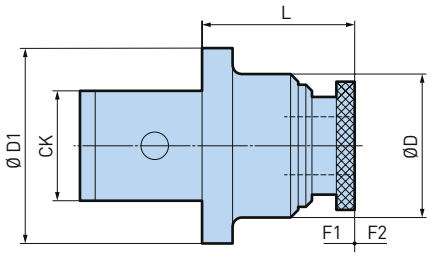
1. Tap holder is to be ordered separately.
2. Synchronized tapping function is required on the machine.

### Accessories & Spare Parts

| Tap Holder | MEGA Wrenches | Accessories |
|---|---|---|
|  |  |  |
| ▶ 374 | ▶ 368 | ▶ 382 |

# Tapping Holders



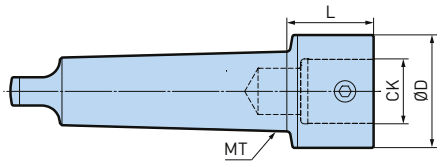



A.5

| 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 |

A.5

## Morse Taper with thread



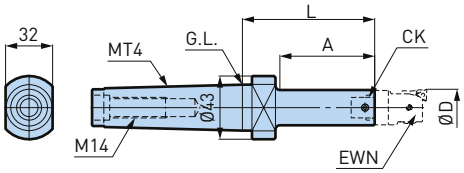



Fig. 1

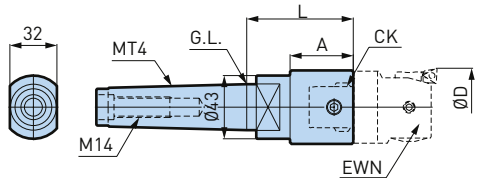



Fig. 2

| 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 |
|---|---|
|  |  |
| ▶ 410 | ▶ 399 |

# Tool Holders Cylindrical Shank


| | |
|---|---|
| MEGA Micro Chuck | 282 |
| New Baby Chuck | 283 |
| Hydraulic Chucks | 285 |
| New Hi-Power Milling Chuck | 286 |
| Shrink Chuck | 287 |
| CK Shanks | 289 |
| MEGA Synchro Tapping Holder | 290 |
| Other Products | 292 |




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

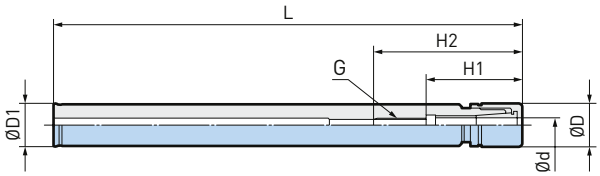
A.6

# 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**

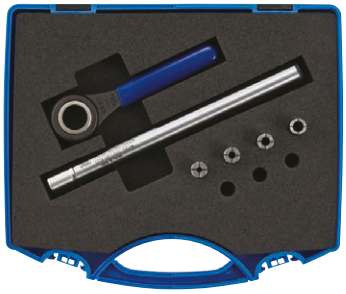
| Model | Article No. | Ød | ØD | ØD1 | L | H1 | H2 | G | Collet Model | Nut Model | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ST10-MEGA3S-120 | 961.777 | 0.45 - 3.25 | 10 | 10 | 120 | 22 | 38 | M4 P0.7 | NBC3S | MGN3S | 0.06 |
| ST12-MEGA4S-80 | 100268.002.0 | 0.45 - 4.05 | 12 | 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.

A.6

# 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**

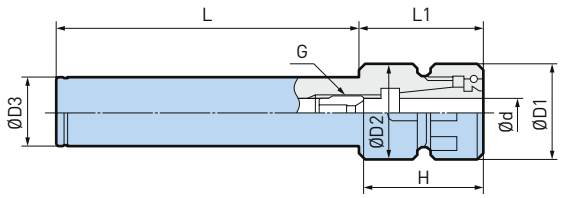
| MEGA Nuts | Micro Seal Nuts | Micro Collets | MEGA Wrenches | Collet Protective Cases | Taper Cleaners |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 342 | ▶ 342 | ▶ 340 | ▶ 368 | ▶ 343 | ▶ 388 |

# 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 | 82 | 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 |

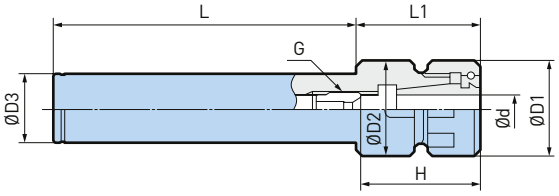
A.6

continues on the next page

# New Baby Chuck

Coolant Through Hole






| 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 |

A.6

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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 351 | ▶ 354 | ▶ 344 | ▶ 369 | ▶ 351 | ▶ 388 |

# Hydraulic Chuck Super Slim

Ultra precise hydraulic chuck with extremely slim design.

Coolant Through Hole



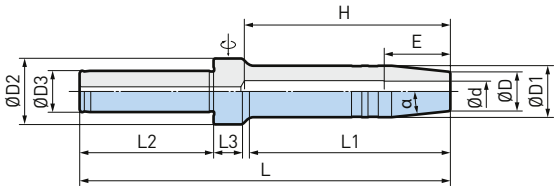



Fig. 1

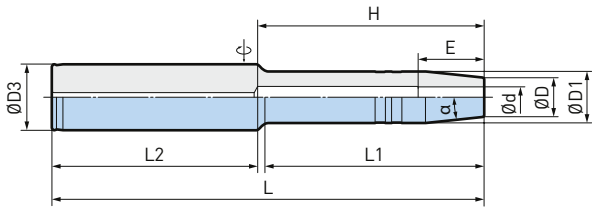



Fig. 2

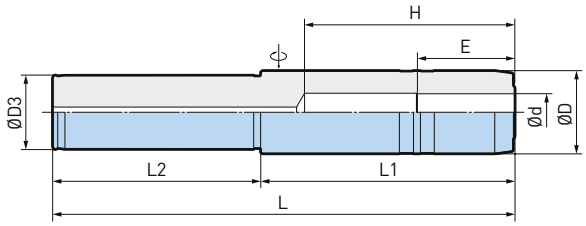



Fig. 3

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.

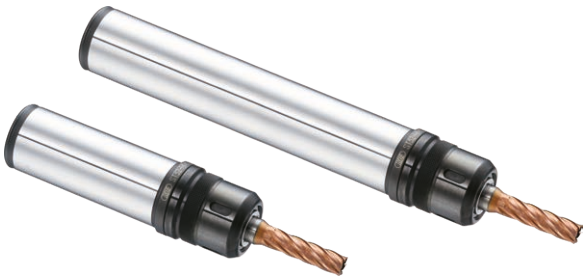
**Accessories & Spare Parts**

| PJC Collets | PSC Collets | α Wiper Cleaners |
|---|---|---|
|  |  |  |
| ▶ 363 | ▶ 364 | ▶ 388 |

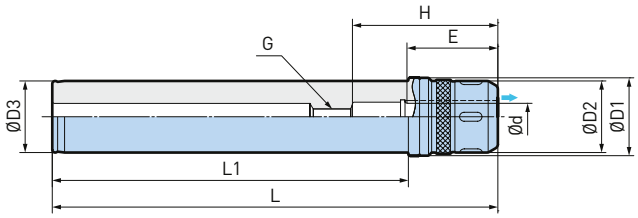
# New Hi-Power Milling Chuck HMC12J

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 |
|---|---|
|  |  |
| ▶ 363 | ▶ 369 |

# Shrink Chuck Super Slim

Slim design reduces interference contours of the holder

Coolant Through Hole



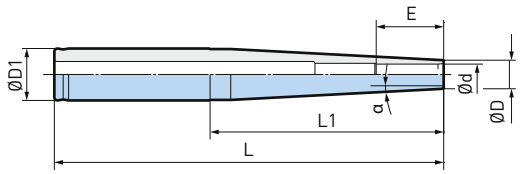



Fig. 1

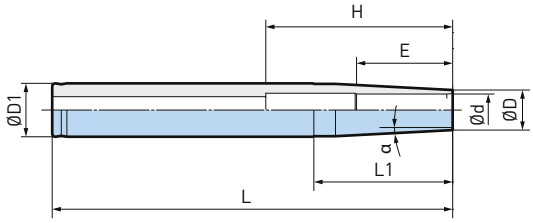



Fig. 2

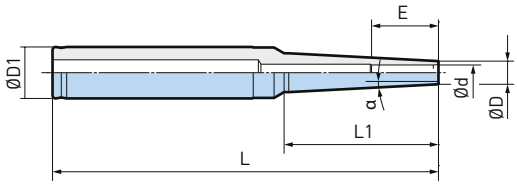



Fig. 3

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



▶ 388

# Shrink Chuck Slim

Slim design reduces interference contours of the holder.

Coolant Through Hole





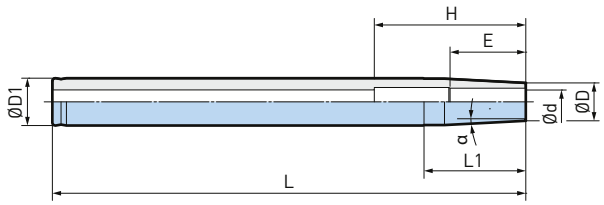



Fig. 1

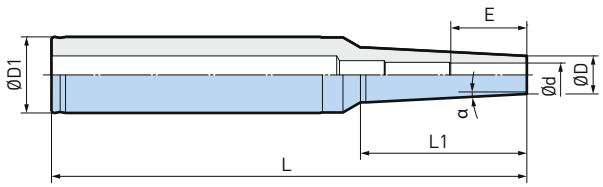



Fig. 2

**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



► 388

# CK Shanks

Coolant Through Hole



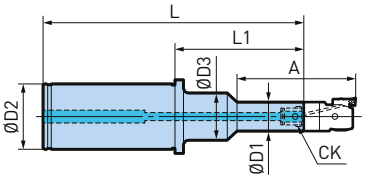



Fig. 1

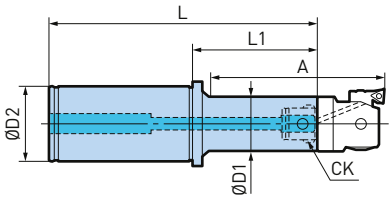



Fig. 2

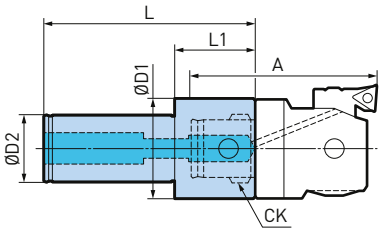



Fig. 3

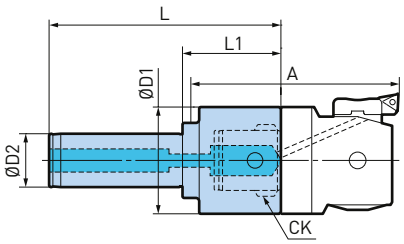



Fig. 4

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**

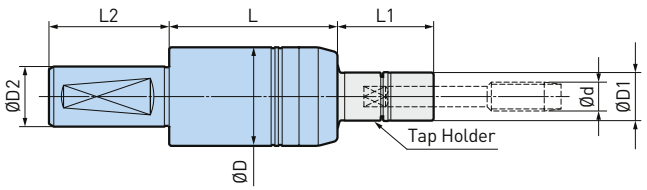
| Fine Boring Heads | Rough Boring Heads |
|---|---|
|  |  |
| ▶ 410 | ▶ 399 |

# 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 |
|---|---|---|
|  |  |  |
| ▶ 374 | ▶ 368 | ▶ 382 |

# MEGA Synchro Tapping Holder

For small Tap MGT3



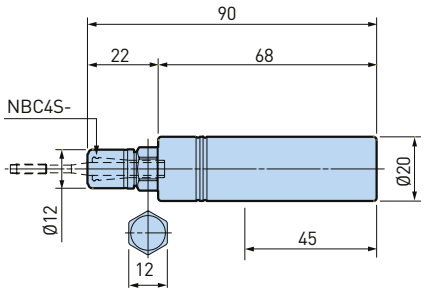



Fig. 1

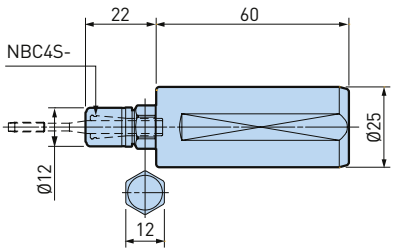



Fig. 2

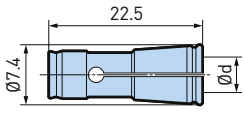


| Model | Article No. | Fig. | Weight (kg) |
|---|---|---|---|
| ST20-MGT3-90 | 978.356 | 1 | 0.18 |
| SLS25-MGT3-22 | 804.115 | 2 | 0.25 |

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 |
| -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.

### Accessories & Spare Parts

MEGA Wrenches



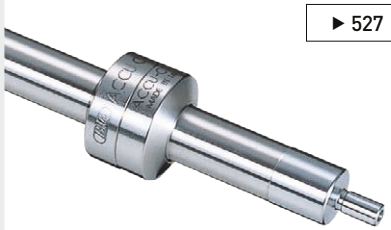
▶ 368

## Other products with cylindrical shank



▶ 522

**Point Master**
- Touch probe and edge finder
- High precision stroke and interchangeable stylus for measuring different applications



▶ 527

**Accu Center**
- Edge finder
- Simple and precise edge finder offering repeatability within 3 µm



▶ 477

**Fullcut Mill**
- Indexable insert endmill
- Shoulder and slot milling cutter with both high radial and axial rake angle

A.6



▶ 498

**C-Cutter**
- Wide range chamfer mill
- Reduced number of tools and tool change time



▶ 502

**C-Cutter Mini**
- Ultra high feed chamfer mill
- 4 inserts and small tool diameter minimize cutting speed



▶ 510

**R-Cutter**
- Corner rounding mill
- Front & back chamfering
- 4 inserts multiply feed rate



▶ 514

**C-Centering Cutter**
- Centering and chamfer with insert
- Stable and long life time operation with insert



▶ 515

**Center Boy**
- Center and chamfer in one
- Accurate centering and chamfering can be obtained in a single operation



▶ 517

**BF-Cutter**
- Back spot facing tool for cap screw hole Selected spot facing diameters suitable for cap screws



▶ 420

**EWN Fine Boring**
- EWN 04-7 is the world smallest boring head available from Ø0.4 bore



▶ 421

**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



▶ 325

**Turning Tool Series**
- Various turning tool tools for NC lathe and Swiss Lathe machines.

# Modular Turning / Lathe Tools


| | |
|---|---|
| **Modular Turning Overview** | **294** |
| **Selection Guide** | **298** |
| BBT SERIES | |
| **Turning Tool System Chart** | **296** |
| **Modular Turning Tools** | **303** |
| HSK-T SERIES | |
| **Turning Tool System Chart** | **306** |
| **Modular Turning Tools** | **308** |
| **Turning Adapter** | **313** |
| BIG CAPTO SERIES | |
| **Turning Tool System Chart** | **314** |
| **Modular and Monoblock Turning Tools** | **316** |
| **Turning Adapter** | **324** |
| N/C LATHE TOOLING | |
| **Collet Chucks** | **325** |
| **Tapping Holder** | **331** |
| **Smart Damper Turning and Turning Cartridge** | **332** |
| **Hydraulic Chucks** | **334** |




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

A.7

# Revolutionary modular system for turning

## 45° (Tilt Type) **S Type**

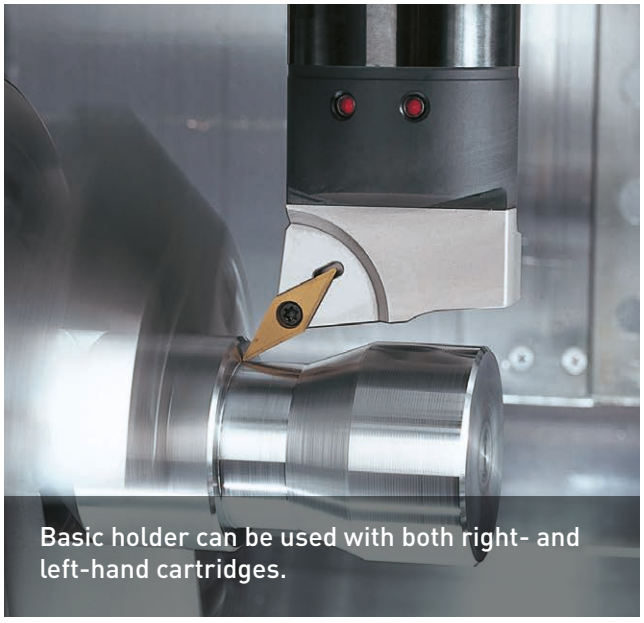


Tilting the "B" axis 45° minimizes the cutting forces transmitted to the machine spindle.



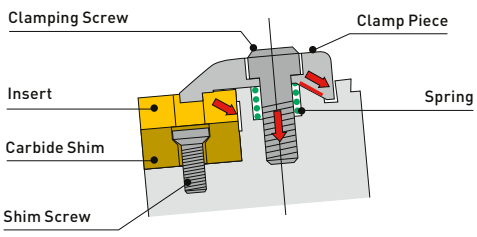



## 90° (Right Angle Type) **F Type**



Basic holder can be used with both right- and left-hand cartridges.



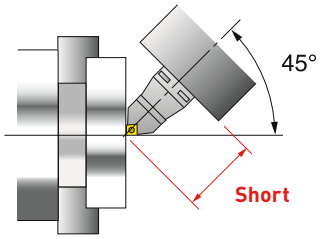

### A double-clamping system that utilizes a "Push and Draw" mechanism to fix inserts securely

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

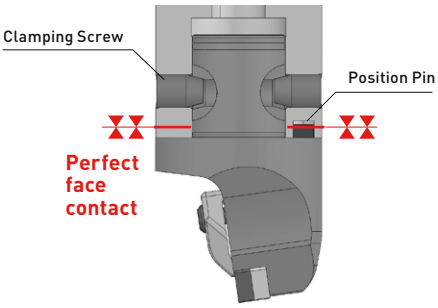
Tool length can be minimized.

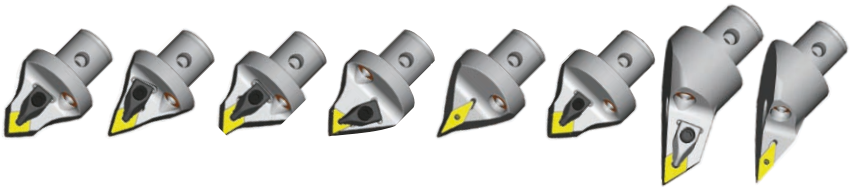



A total of 15 types of cartridges are available to support various applications

### Strong clamping system

The two shallow-tapered clamping screws securely maintain contact between the cartridge and the basic holder flange face.

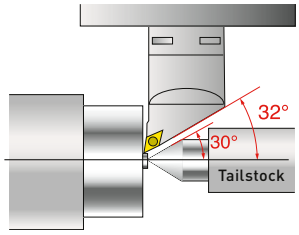


A.7

### Comprehensive interference countermeasures

A series of "near-center" type cartridges are available, eliminating interference with the tailstock.

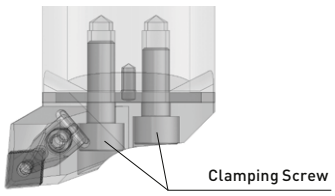


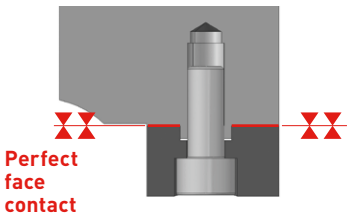

13 types of cartridges are available to support various applications

Both right hand and left hand are available.

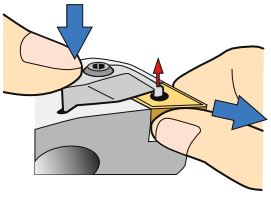
### Strong clamping system

In the F Type clamping system, cartridges are fixed using the two front clamping screws. The interlocking drive slot receives the cutting torque firmly.





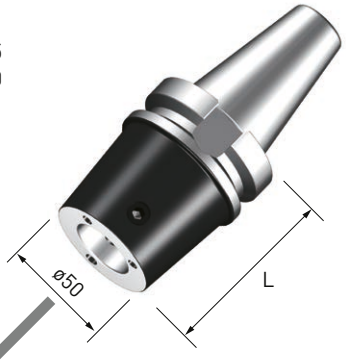
### Easy attachment and removal of inserts

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.

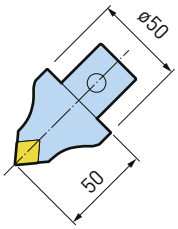
45°

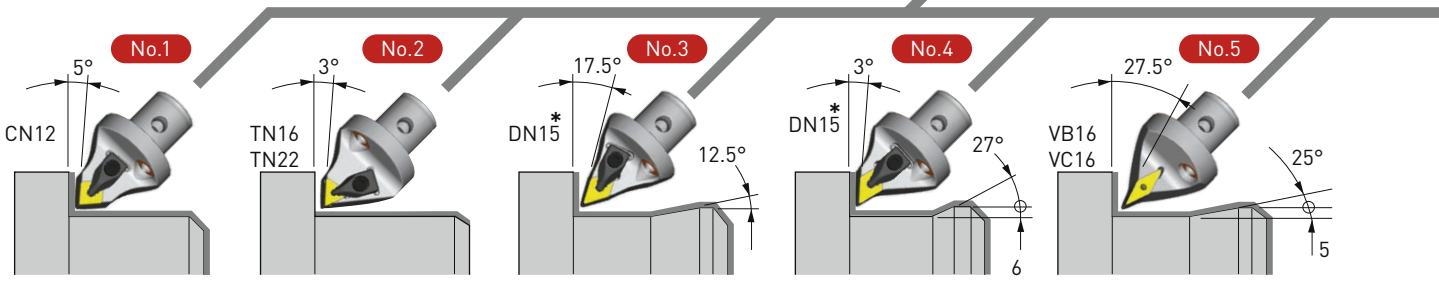
**S Type**
**Basic Holder**

BBT40M- S50- 75
BBT50M- S50- 120




**S Type** (Tilt Type)
Cartridge




**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



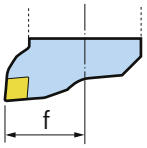

**S Type**
**Basic Holder**



**S Type**
**Cartrige**

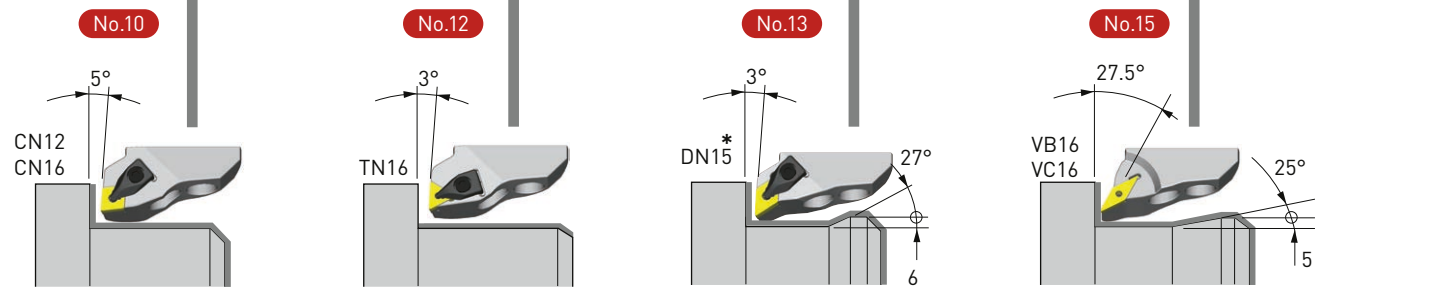


No.1
No.3
No.5
No.8




| | f |
|---|---|
| **F50** | 35 |
| **F63** | 45 |

**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**

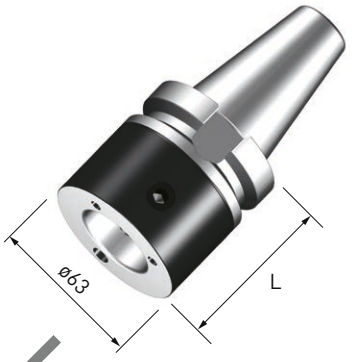
**F63-DDJNR-45035-15**
**-DDJNL-45035-15**

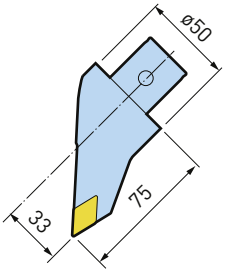
**F63-SVQBR-45035-16**
**-SVQBL-45035-16**

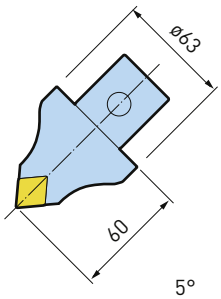
* When using a DN1506 insert (thickness: 6.35mm), replace the standard carbide shim with the DNS1506 (optional).

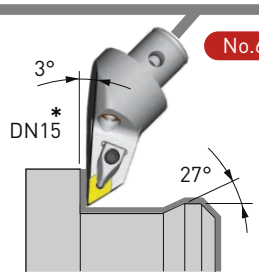
## S Type
## Basic Holder

BBT50M- S63- 110

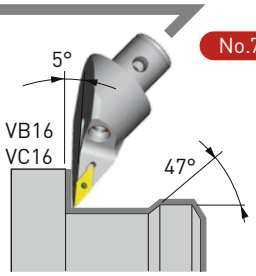


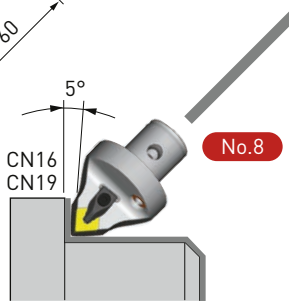



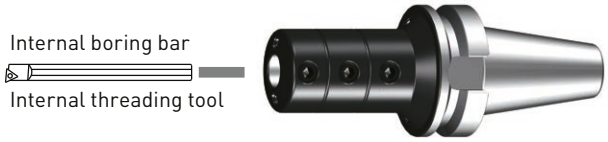

**S50-DDJNR-33075-15**
**-DDJNL-33075-15**




**S50-SVLBR-33075-16**
**-SVLBL-33075-16**



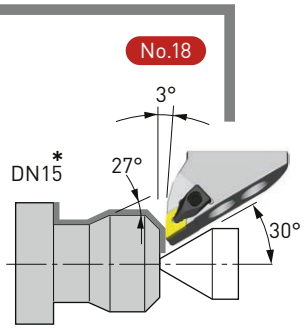

**S63-DCLNN-00060-16**
**-DCLNN-00060-19**




Side Lock Holder
for Boring Bar



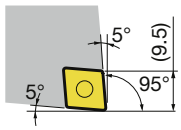
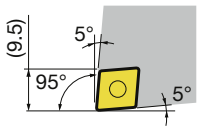
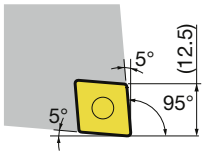
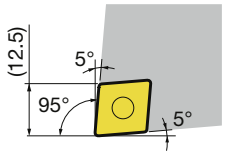
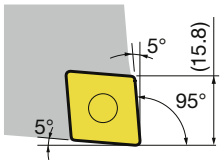
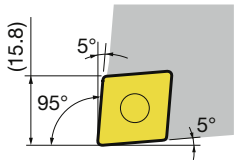
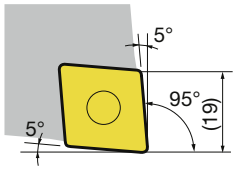
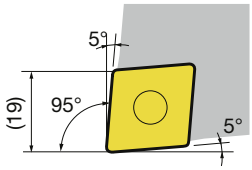
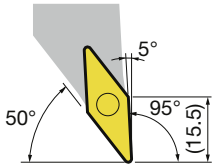
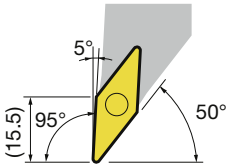
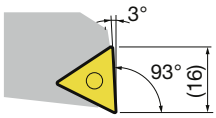
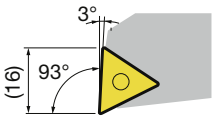
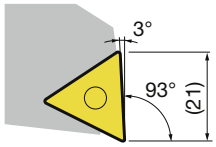
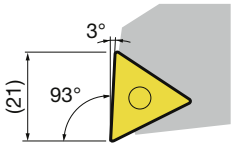
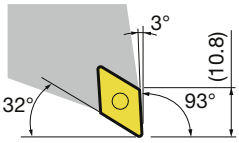
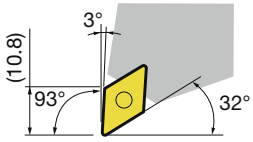

Square Tool Holder



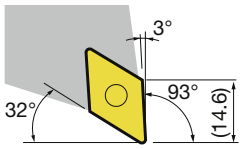
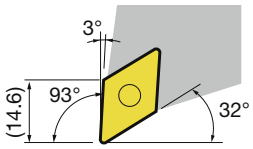
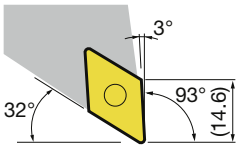
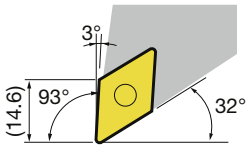
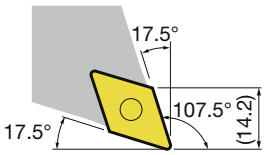
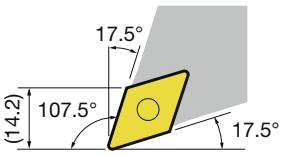
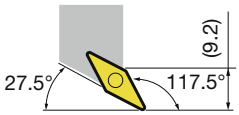
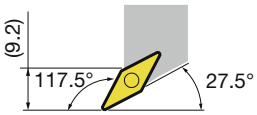
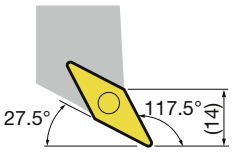
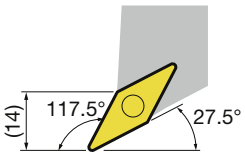

**F50-DDJNR-35050-15**
**-DDJNL-35050-15**

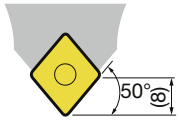
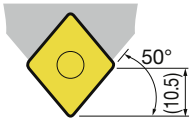
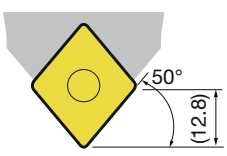
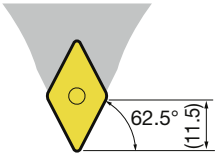
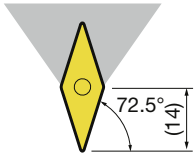
**F63-DDJNR-45055-15**
**-DDJNL-45055-15**

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 |  |  |

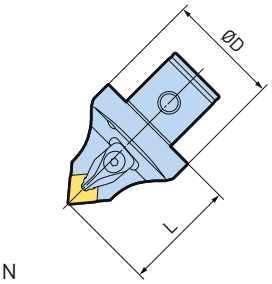
A.7

| 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 |  |  |

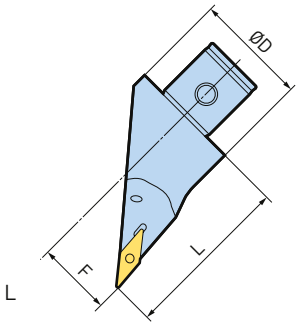
| Neutral | | | | |
|---|---|---|---|---|
| Insert | | | | |
| CN12 | CN16 | CN19 | DN1504 (DN1506) | VB1604 / VC1604 |
| No.1  | No.8-1  | No.8-2  | No.3  | No.5  |

# 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° |

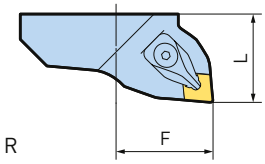
| Entering Angle | |
|---|---|
| J | 93° |
| L | 95° |
| H | 107.5° |
| Q | 117.5° |

| Relief Angle | |
|---|---|
| N | 0° Negative |
| B | 5° Positive |

| Hand | |
|---|---|
| R | Right Hand |
| L | Left Hand |
| N | Neutral |

# 90° Cartridges Type F

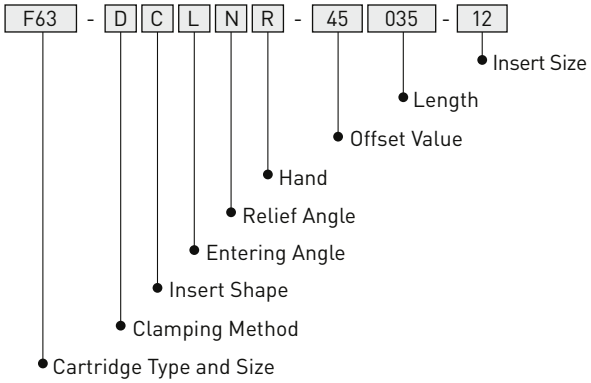



| Model | Article No. | Type | Hand | Entering Angle | Insert | L | F | No. | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| F50-DCLNR-35035-12 | 973.064 | F50 | R | 95° | CN1204 | 35 | 45 | 10 - 1 | 0.25 |
| F50-DCLNL-35035-12 | 973.065 | F50 | L | 95° | CN1204 | 35 | 45 | 10 - 1 | 0.25 |
| F50-DCLNR-35035-16 | 973.066 | F50 | R | 95° | CN1606 | 35 | 45 | 10 - 2 | 0.24 |
| F50-DCLNL-35035-16 | 973.067 | F50 | L | 95° | CN1606 | 35 | 45 | 10 - 2 | 0.24 |
| F50-DTJNR-35035-16 | 973.068 | F50 | R | 93° | TN1604 | 35 | 45 | 12 | 0.24 |
| F50-DTJNL-35035-16 | 973.069 | F50 | L | 93° | TN1604 | 35 | 45 | 12 | 0.24 |
| F50-DDJNR-35035-15 | 973.070 | F50 | R | 95° | DN1504 * (DN1506) | 35 | 45 | 13 | 0.22 |
| F50-DDJNL-35035-15 | 973.071 | F50 | L | 95° | DN1504 * (DN1506) | 35 | 45 | 13 | 0.23 |
| F50-DDJNR-35050-15 | 973.072 | F50 | R | 95° | DN1504 * (DN1506) | 50 | 45 | 18 | 0.30 |
| F50-DDJNL-35050-15 | 973.073 | F50 | L | 95° | DN1504 * (DN1506) | 50 | 45 | 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° |

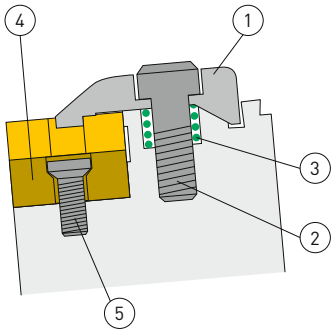
| Entering Angle | |
|---|---|
| J | 93° |
| L | 95° |
| H | 107.5° |
| Q | 117.5° |
| U | 93° |

| 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 T-4.
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.

# Clamping screw Set

Clamping screw Set- Type S

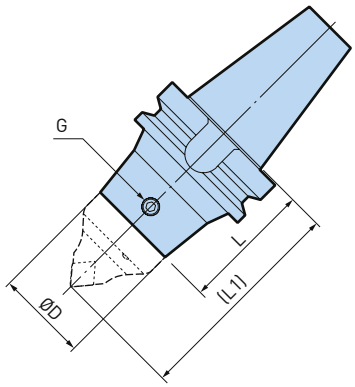


| Model | Article No. | Type |
|---|---|---|
| CK5S | 805.891 | S50 |
| CK6S | 805.892 | S63 |

1. 2 screws and 1 wrench are included

## BBT(M) Basic Holder Type S (45°)





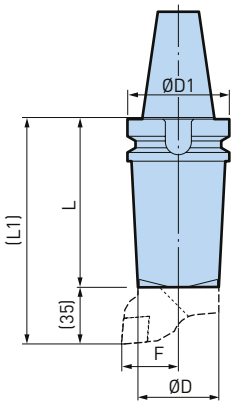

| Model | Article No. | ØD | L | L1 | Clamp Screw | Weight (kg) |
|---|---|---|---|---|---|---|
| BBT40M-S50-75 | 978.160 | 50 | 75 | 125 | CK5S | 1.70 |
| BBT50M-S50-120 | 804.877 | 50 | 120 | 170 | CK5S | 5.40 |
| BBT50M-S63-110 | 804.878 | 63 | 110 | 170 | CK6S | 5.40 |

1. Clamping screw is included.

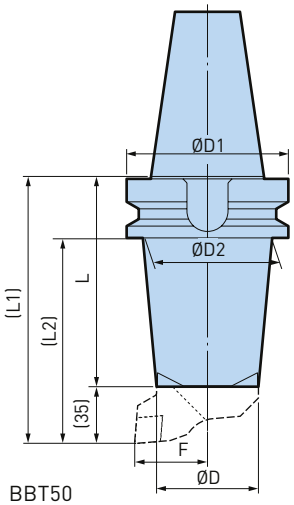


## BBT(M) Basic Holder Type F (90°)






BBT40



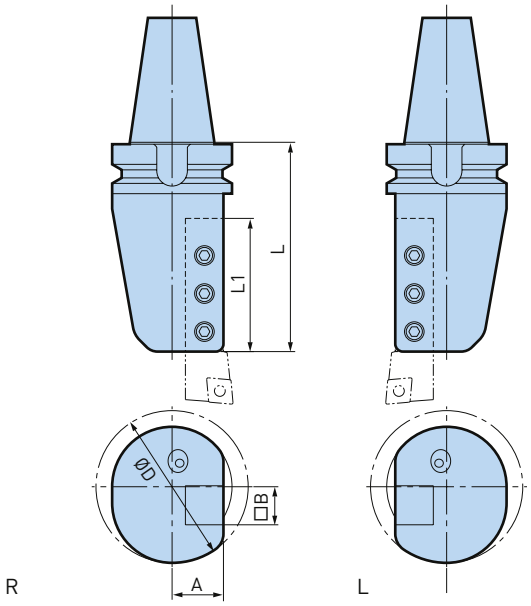

BBT50

| 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°)



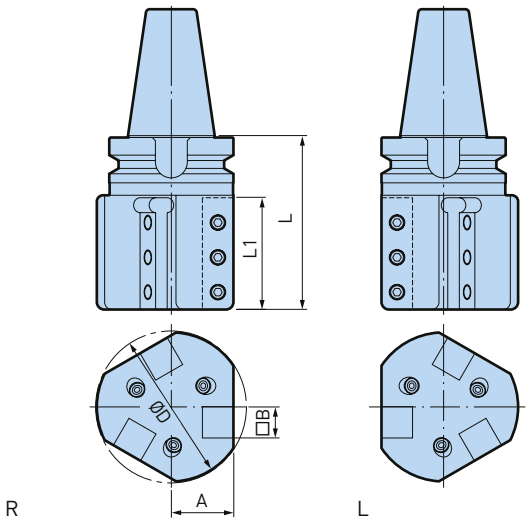



| Model | Article No. | Hand | ØD | L | L1 | A | B | Weight (kg) |
|---|---|---|---|---|---|---|---|---|
| BBT40M-180-BH20L-110 | 978.161 | L | 80 | 110 | 70 | 27 | 20 | 2.80 |
| BBT40M-180-BH20R-110 | 800.153 | R | 80 | 110 | 70 | 27 | 20 | 2.80 |
| BBT40M-180-BH25L-130 | 978.248 | L | 90 | 130 | 90 | 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°)



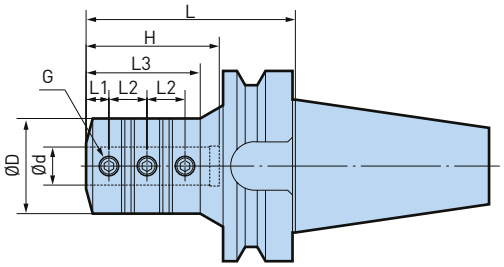



| Model | Article No. | Hand | ØD | L | L1 | A | B | Weight (kg) |
|---|---|---|---|---|---|---|---|---|
| BBT40M-180-3BH20L-110 | 800.151 | L | 90 | 110 | 70 | 35 | 20 | 3.30 |
| BBT40M-180-3BH20R-110 | 800.152 | R | 90 | 110 | 70 | 38 | 20 | 3.30 |
| BBT50M-180-3BH25L-140 | 800.312 | L | 120 | 140 | 90 | 50 | 25 | 9.40 |
| BBT50M-180-3BH25R-140 | 800.313 | R | 120 | 140 | 90 | 50 | 25 | 9.20 |

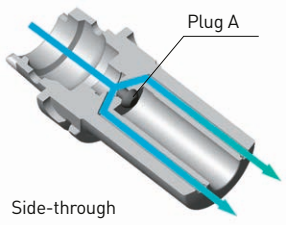
1. 60° indexing is required to the machine tool spindle.

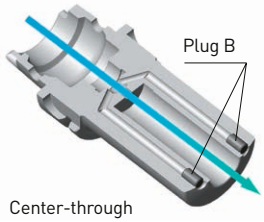
# BBT(M) Boring Bar Holder






| 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 |



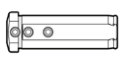

Interchangeable between center-through and side-through coolant supply by using plugs.
Adjustment for either right hand or left hand is also possible.

| 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<br>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

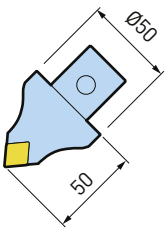


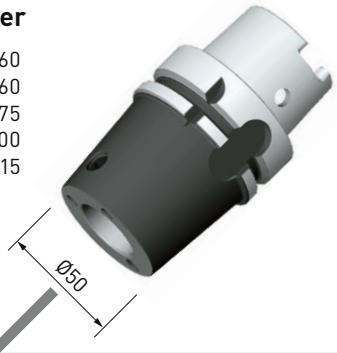
► 373

45°

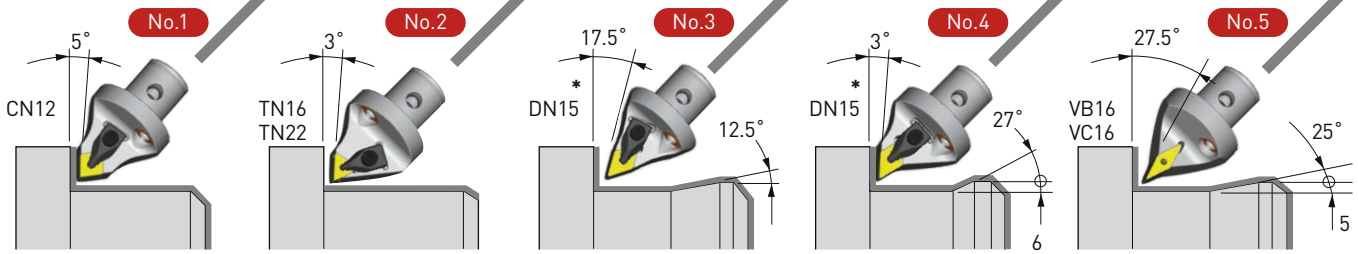
**S50**
**Type S basic holder**

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

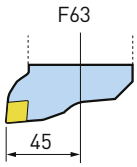
S50-SVQBN-00050-16

* 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**

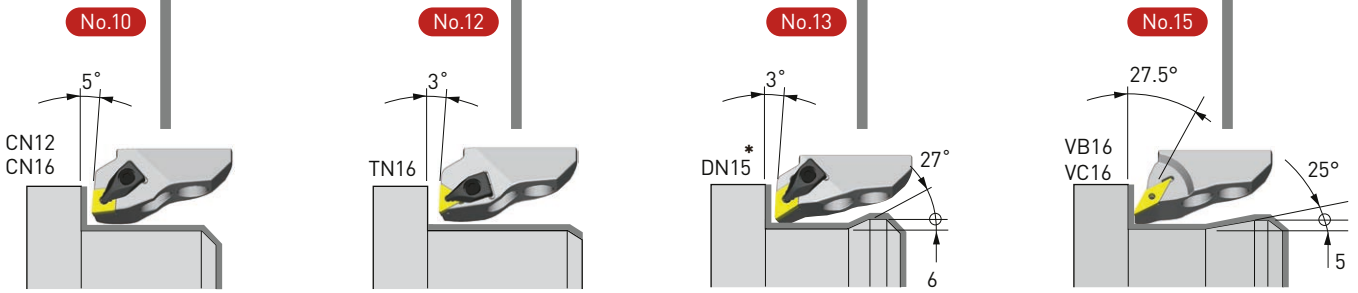


**Type S cartridge**



No.1
No.3
No.5
No.8

**Type F cartridge**




F63-DCLNR-45035-12(16)
-DCLNL-45035-12(16)

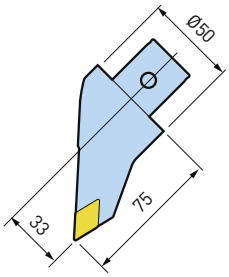
F63-DTJNR-45035-16
-DTJNL-45035-16

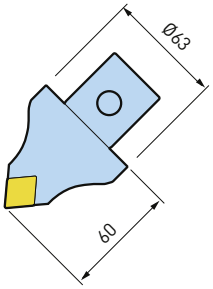
F63-DDJNR-45035-15
-DDJNL-45035-15

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).

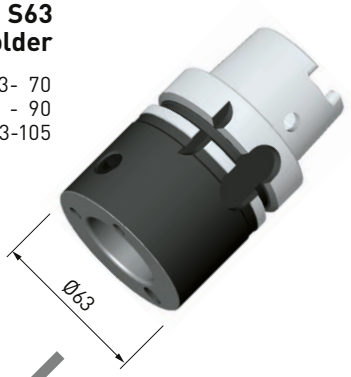
A.7

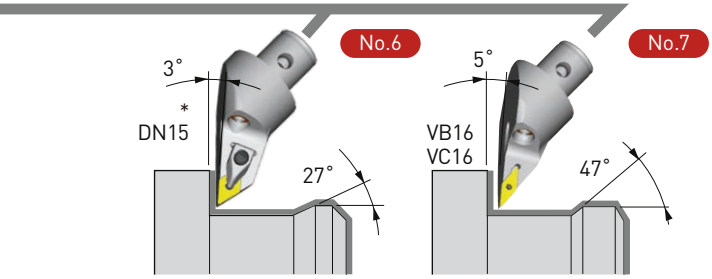



**S63**
**Type S basic holder**

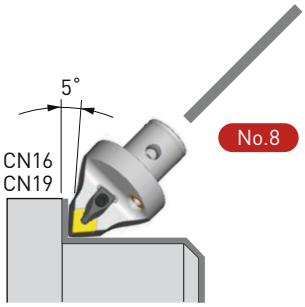
HSK-T 63-S63- 70
- 90
HSK-T100-S63-105




S50-DDJNR-33075-15
-DDJNL-33075-15

S50-SVLBR-33075-16
-SVLBL-33075-16



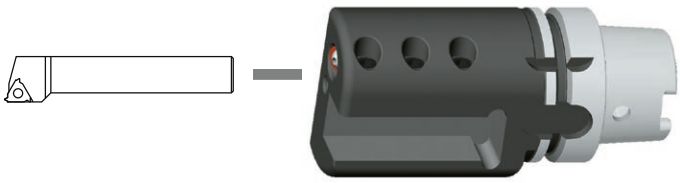

S63-DCLNN-00060-16
-DCLNN-00060-19

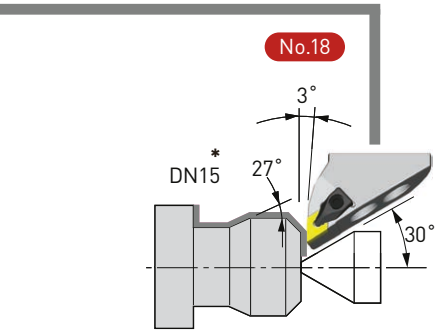
A.7

**Boring bar holder**



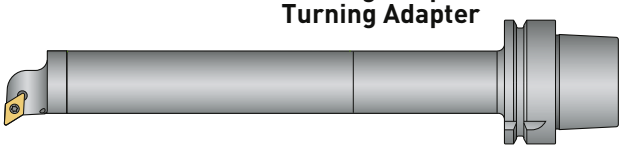
**Square tool holder 180°**






F63-DDJNR-45055-15
-DDJNL-45055-15

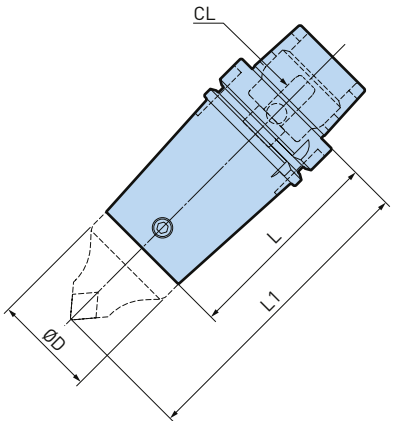
**SMART DAMPER**
**Turning Adapter/**
**Turning Adapter**



# 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 | Clamping screw Set |
|---|---|---|
|  |  |  |
| ▶ 300 | ▶ 250 | ▶ 302 |

# 90° Basic Holders Type F

Coolant Through Hole



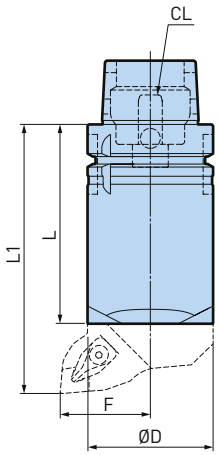



Fig. 1

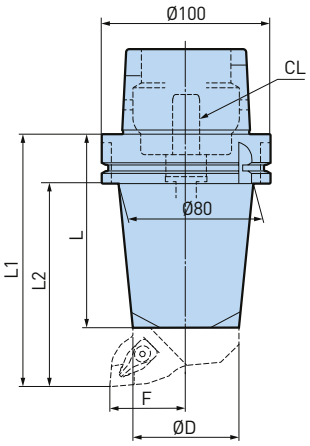



Fig. 2

| 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**

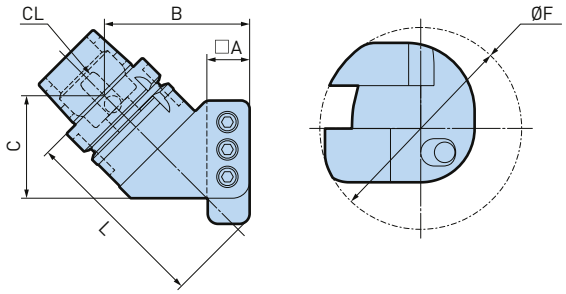
| 90° Cartridges Type F | Coolant Pipes |
|---|---|
|  |  |
| ► 301 | ► 250 |

## Square Tool Holders - 45° Type

Coolant Through Hole



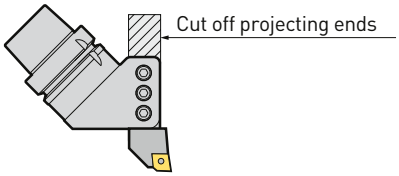
R




| 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



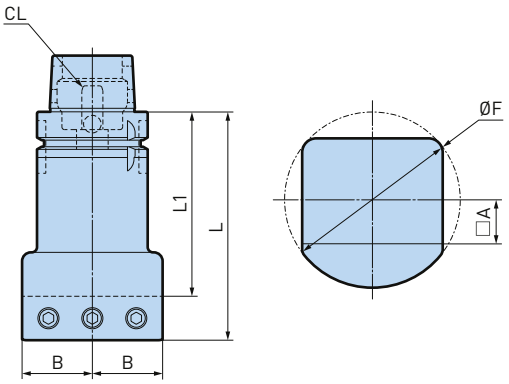

**Caution**

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

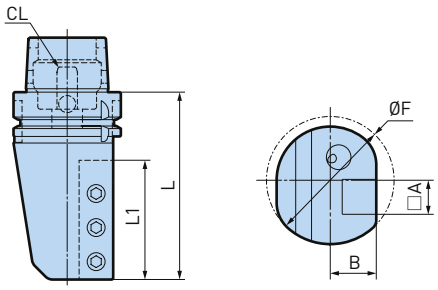


► 250

## 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 |

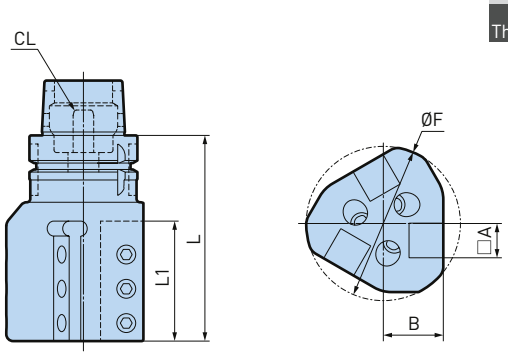
1. Coolant pipe (CL) is to be ordered separately.



## 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



► 250

# Boring Bar Holders

Application: boring and thread cutting

Coolant Through Hole



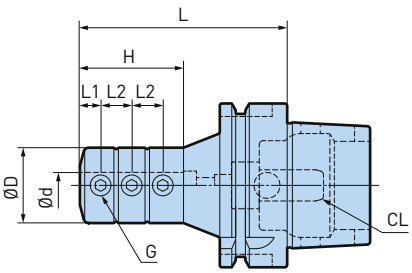



Fig. 1

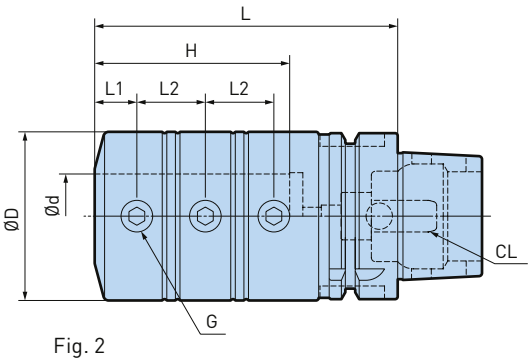
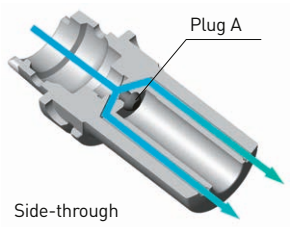


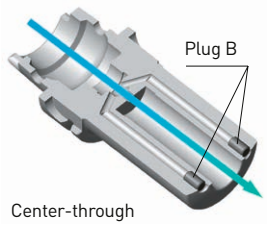

Fig. 2

**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.



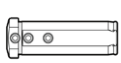




Interchangeable between center-through and side-through coolant supply by using plugs.
Adjustment for either right hand or left hand is also possible.

| 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<br>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 |
|---|---|
|  |  |
| ▶ 373 | ▶ 250 |

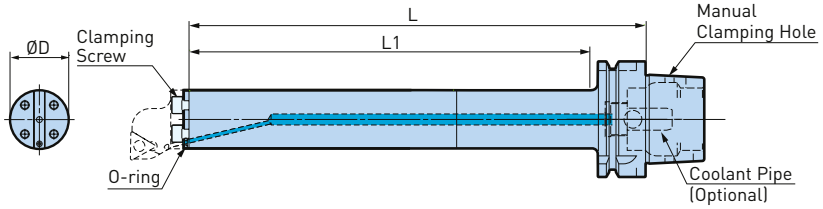
## Smart Damper Turning Adapter



Anti-Vibration

Coolant Through Hole






| Model | Article No. | Cartridge | ØD | L | L1 | Clamp Screw | O-Ring | Weight (kg) |
|---|---|---|---|---|---|---|---|---|
| HSK-T63-SDB40DP-172 | 101127.001.0 | B32 | 32 | 172 | 145 | C0510(M5x10L) | SDB20 OR-2P | 1.90 |
| HSK-T63-SDB40DP-250 | 101127.002.0 | B32 | 32 | 250 | 219 | C0510(M5x10L) | SDB20 OR-2P | 2.40 |
| HSK-T63-SDB50DP-235 | 101127.003.0 | B40 | 40 | 235 | 204 | C0610(M6x10L) | SDB20 OR-2P | 3.40 |
| HSK-T63-SDB50DP-315 | 101127.004.0 | B40 | 40 | 315 | 284 | C0610(M6x10L) | SDB20 OR-2P | 4.10 |

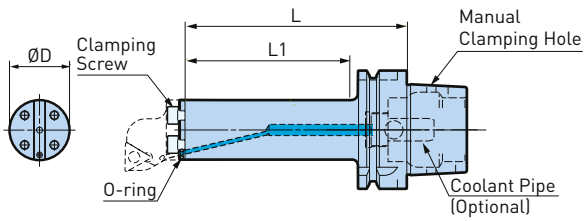
1. Clamp bolts (3 pcs.) and o-rings (2 pcs.) are included.
2. Cartridge is to be ordered separately.
3. Coolant pipe (CL) and inserts are to be ordered separately.

A.7

## Turning Adapter

Coolant Through Hole






| Model | Article No. | Cartridge | ØD | L | L1 | Clamp Screw | O-Ring | Weight (kg) |
|---|---|---|---|---|---|---|---|---|
| HSK-T63-TAD40-125 | 101128.001.0 | B32 | 32 | 125 | 94 | C0510(M5x10L) | SDB20 OR-2P | 1.30 |
| HSK-T63-TAD50-155 | 101128.002.0 | B40 | 40 | 155 | 124 | C0610(M6x10L) | SDB20 OR-2P | 1.90 |

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.

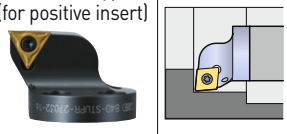
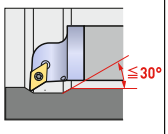
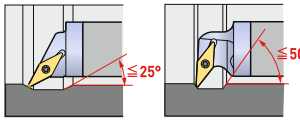
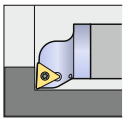
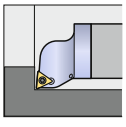
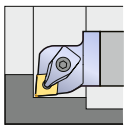
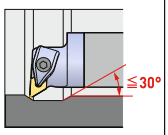
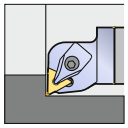
**Accessories & Spare Parts**

Cartridges for Smart Damper

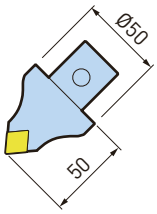


▶ 332

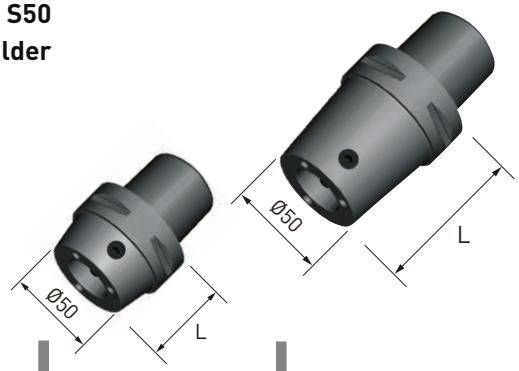
Spare Parts ▶ 333

| Application | Inner ange 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 | |
| |  |  | |  | |

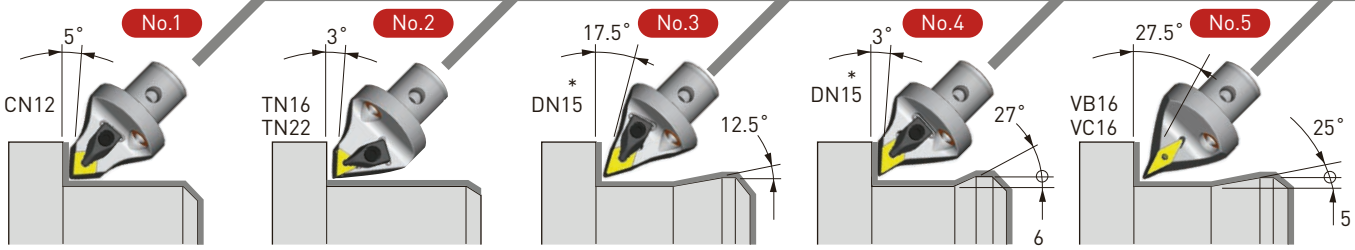
## S50
### Type S basic holder




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

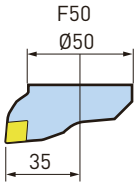
S50-DDJNR-00050-15
-DDJNL-00050-15

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

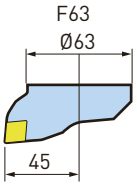
C5-F50- 25
- 50
- 85
-125



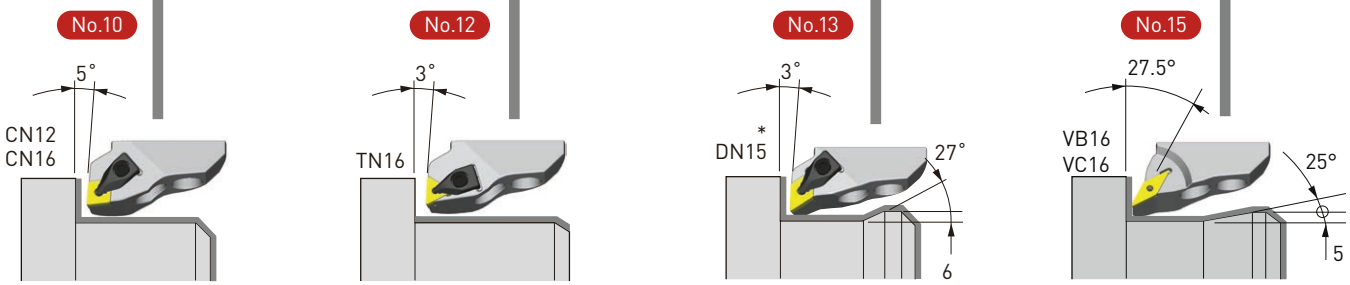

## F63
### Type F
### basic holder

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

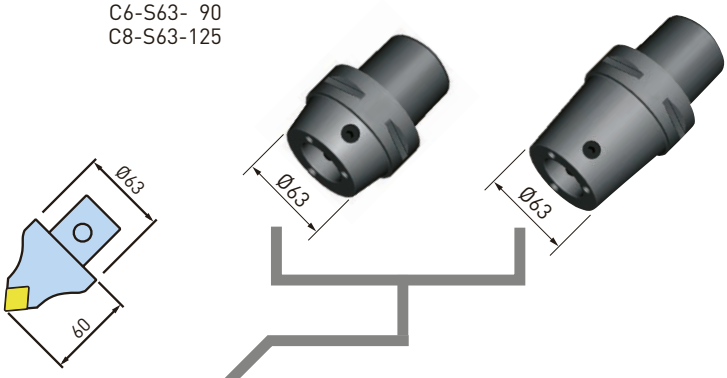
F50-DDJNR-35035-15
-DDJNL-35035-15
F63-DDJNR-45035-15
-DDJNL-45035-15

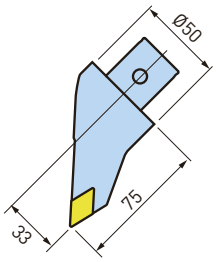
F63-SVQBR-45035-16
-SVQBL-45035-16

* In case of DN1506 insert (thickness of 6.35 mm), please replace the standard Carbide Shim by DNS1506 (option).

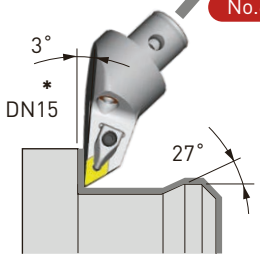
## S63
### Type S basic holder

C6-S63- 90
C8-S63-125



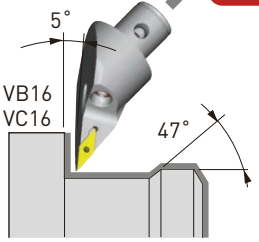




No.6



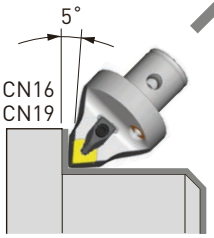

S50-DDJNR-33075-15
-DDJNL-33075-15

No.7




S50-SVLBR-33075-16
-SVLBL-33075-16

No.8

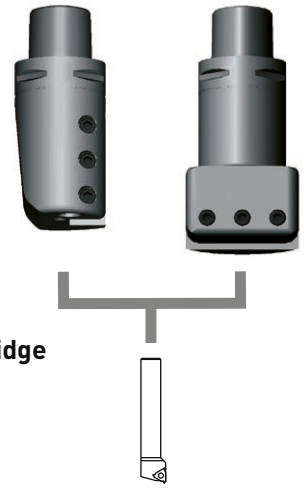



S63-DCLNN-00060-16
-DCLNN-00060-19

Square tool holder

### S50/S63
### Type S
### basic holder

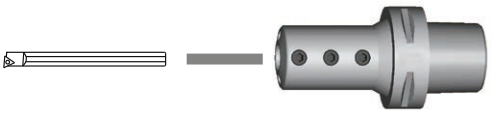




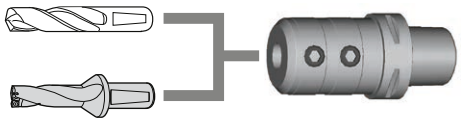
### Type S cartridge



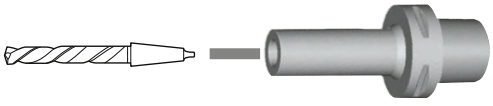
No.1
No.3
No.5
No.8



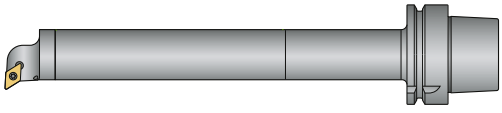
Boring bar holder



Side lock holder

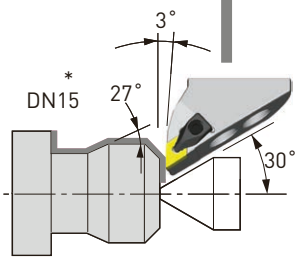


Morse taper holder

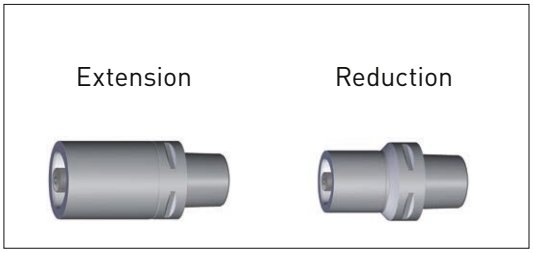


SMART DAMPER Turning Adapter/ Turning Adapter

No.18



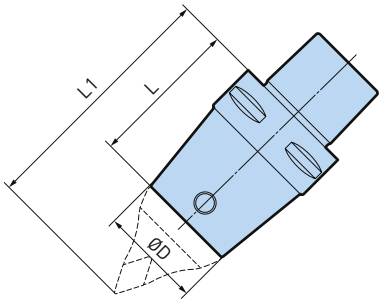

F50-DDJNR-35050-15
-DDJNL-35050-15
F63-DDJNR-45055-15
-DDJNL-45055-15



# 45° Basic Holders Type S

Coolant Through Hole





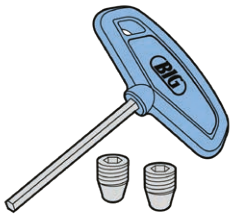

| Model | Article No. | Type | ØD | L | L1 | Clamp Screw | Weight (kg) |
|---|---|---|---|---|---|---|---|
| C5-S50-40 | 973.001 | S50 | 50 | 40 | 90 | CK5S | 0.60 |
| C5-S50-55 | 973.002 | S50 | 50 | 55 | 105 | CK5S | 0.80 |
| C5-S50-75 | 973.003 | S50 | 50 | 75 | 125 | CK5S | 1.10 |
| C6-S50-45 | 973.005 | 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

## Clamping screw Set

Clamping screw Set- Type S



| Model | Article No. | Type | Screw |
|---|---|---|---|
| CK5S | 805.891 | S50 | M10 x P1.0 |
| CK6S | 805.892 | S63 | M10 x P1.0 |

1. 2 screws and 1 wrench are included

### Accessories & Spare Parts

45° Cartridges Type S



► 300

# 45° Integral Tool Holder Type S



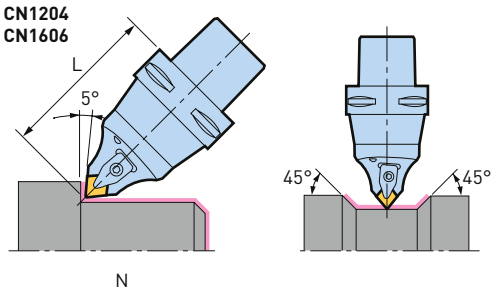



Fig. 1

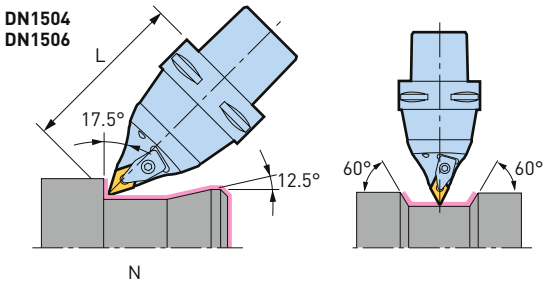



Fig. 2

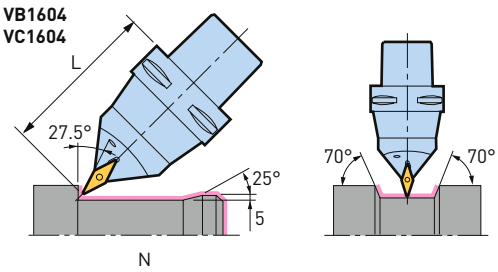



Fig. 3

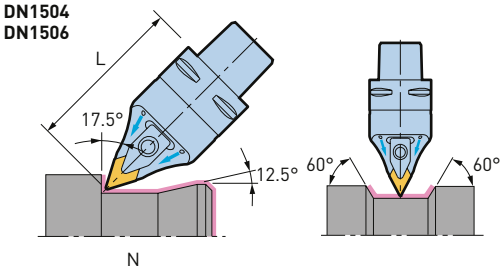



Fig. 4

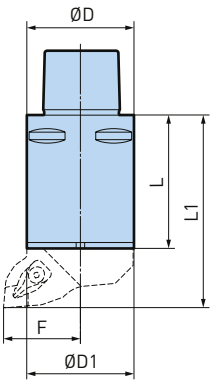
| Model | Article No. | Fig. | Hand | L | Entering Angle | Insert | Clamp Piece | No. | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| C4-DDHNN-00075-15 | 101356.001.0 | 4 | N | 75 | 107.5° | DN1504 * (DN1506) | SCP2S | 3 | 0.53 |
| C5-DCLNN-00105-12 | 800.691 | 1 | N | 105 | 95° | CN1204 | 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).

A.7

**Accessories & Spare Parts**

90° Cartridges Type F



▶ 301

# 90° Integral Tool Holder Type F

Coolant Through Hole



Fig. 1

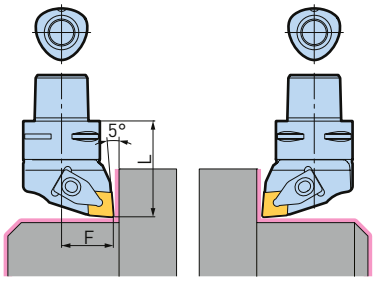



Fig. 2

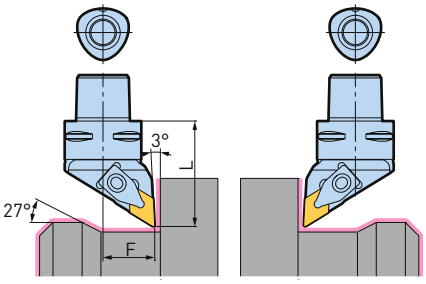
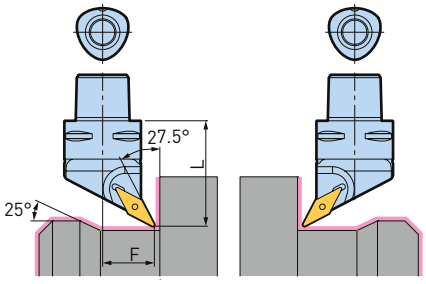



Fig. 3

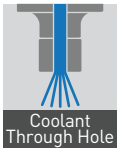


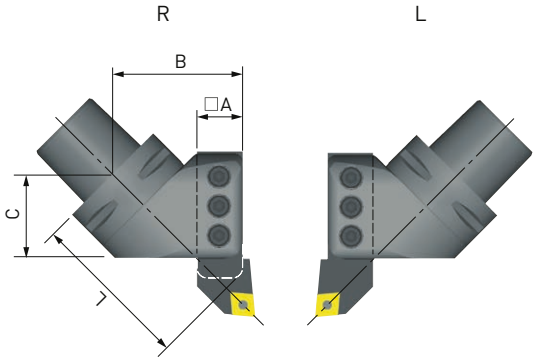

A.7

| 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

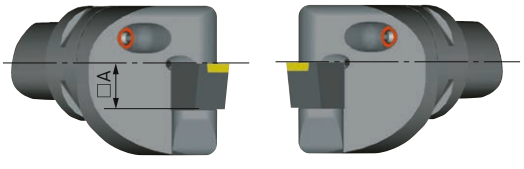


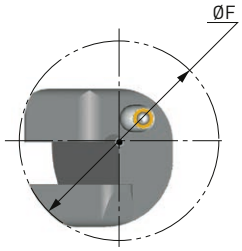



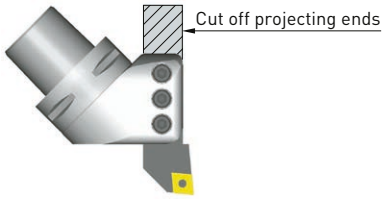

| Model | Article No. | Hand | □A | B | C | L | ØF | Weight (kg) |
|---|---|---|---|---|---|---|---|---|
| C5-45-BH20L-5838 | 973.027 | L | 20 | 58 | 38 | 73 | 94 | 1.20 |
| C5-45-BH20R-5838 | 973.026 | R | 20 | 58 | 38 | 73 | 94 | 1.20 |
| C6-45-BH25L-7752 | 800.776 | L | 25 | 77 | 52 | 100 | 118 | 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.

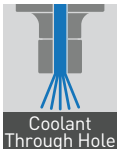


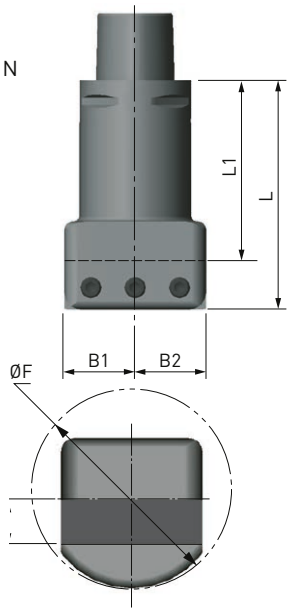



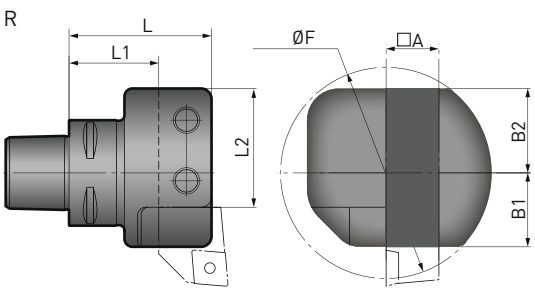

A.7

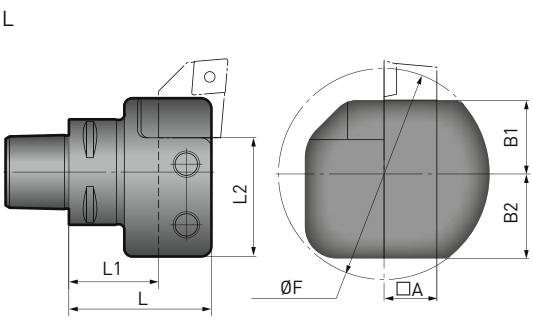
## Square Tool Holders - 90° Type



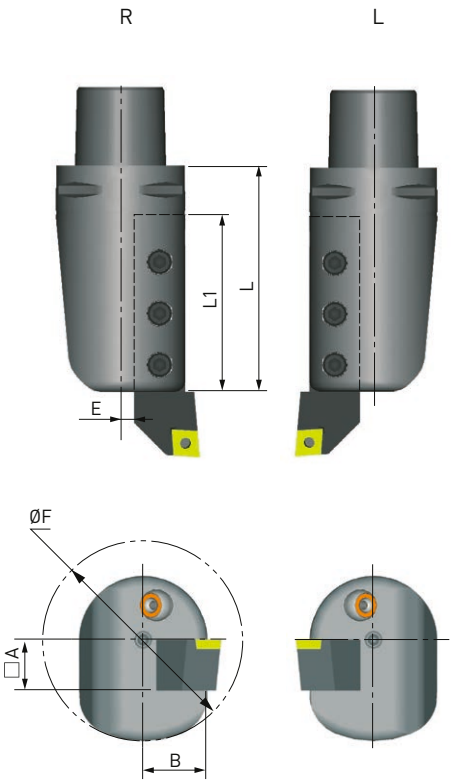




| Model | Article No. | Hand | □A | B1 | B2 | L | L1 | L2 | ØF | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| C3-90-BH16L-2547 | 807.646 | L | 16 | 25 | 27 | 47 | 30 | 40 | 70 | 0.63 |
| C3-90-BH16R-2547 | 807.647 | R | 16 | 25 | 27 | 47 | 30 | 40 | 70 | 0.63 |
| C4-90-BH20L-2854 | 806.957 | 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 |



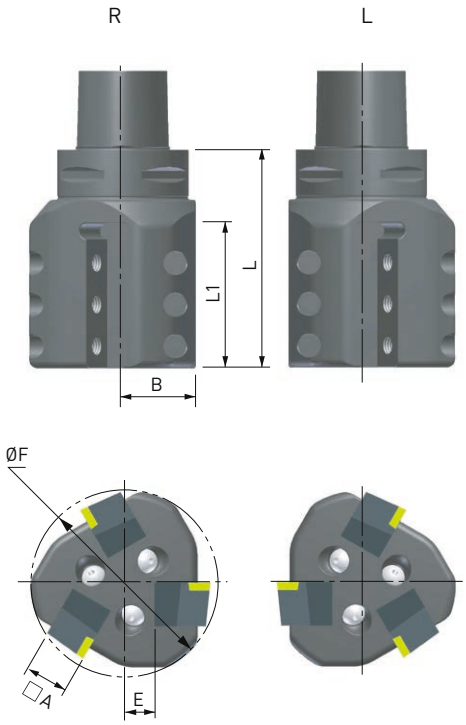
## Square Tool Holders - 180° Type




| 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.

# Boring Bar Holders

Application: boring and thread cutting




Coolant Through Hole

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 |

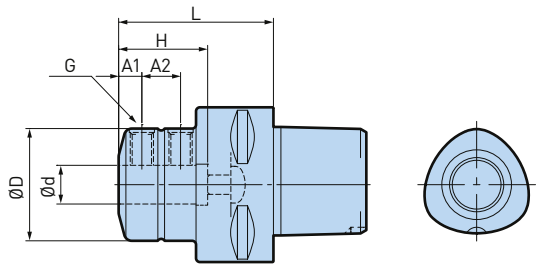



Fig. 1

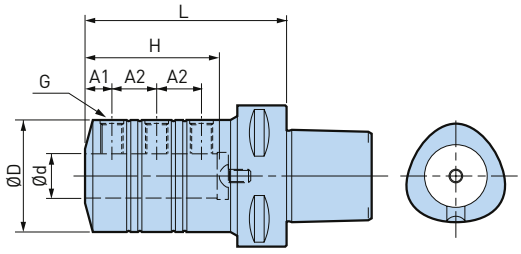
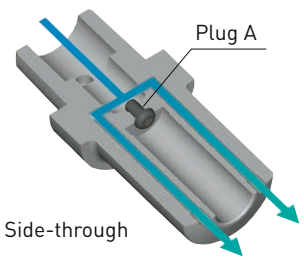


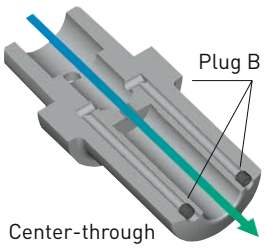

Fig. 2

| 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 |



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.

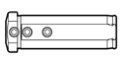
For C5, C6 and C8

| 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

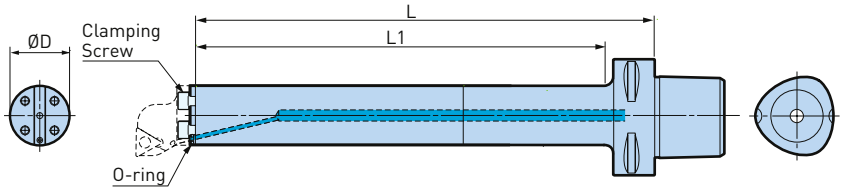


▶ 373

## Smart Damper Turning Adapter







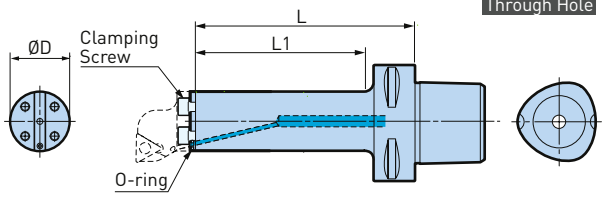

| Model | Article No. | Cartridge | ØD | L | L1 | Clamp Screw | O-Ring | Weight (kg) |
|---|---|---|---|---|---|---|---|---|
| C6-SDB40DP-168 | 101126.001.0 | B32 | 32 | 168 | 145 | C0510(M5x10L) | SDB20 OR-2P | 2.00 |
| C6-SDB40DP-245 | 101126.002.0 | B32 | 32 | 245 | 218 | C0510(M5x10L) | SDB20 OR-2P | 2.50 |
| C6-SDB50DP-230 | 101126.003.0 | B40 | 40 | 230 | 203 | C0610(M6x10L) | SDB20 OR-2P | 3.40 |
| C6-SDB50DP-310 | 101126.004.0 | B40 | 40 | 310 | 283 | C0610(M6x10L) | SDB20 OR-2P | 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.

## Turning Adapter



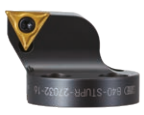



| Model | Article No. | Cartridge | ØD | L | L1 | Clamp Screw | O-Ring | Weight (kg) |
|---|---|---|---|---|---|---|---|---|
| C6-TAD40-120 | 101129.001.0 | B32 | 32 | 120 | 93 | C0510(M5x10L) | SDB20 OR-2P | 1.40 |
| C6-TAD50-150 | 101129.002.0 | B40 | 40 | 150 | 123 | C0610(M6x10L) | SDB20 OR-2P | 2.00 |

1. Clamp bolts (3 pcs.) and o-rings (2 pcs.) are included.
2. Cartridge is to be ordered separately.
3. Inserts are not included.

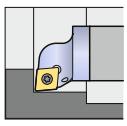
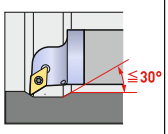
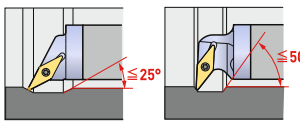
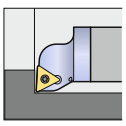
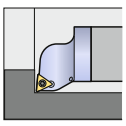
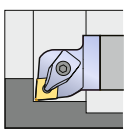
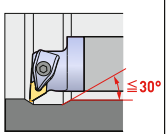
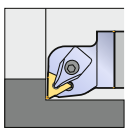
**Accessories & Spare Parts**

Cartridges for Smart Damper



▶ 332

Spare Parts ▶ 333

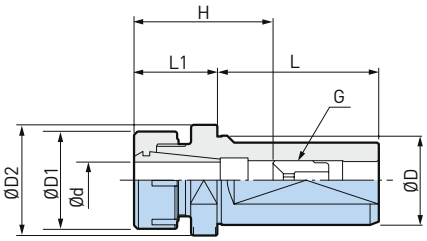
| Application | Inner ange face machining | Copy machining | | Blind hole machining | |
|---|---|---|---|---|---|
| Shape | 80° rhombic | 55° rhombic | 35° rhombic | Triangular | |
| Screw-on type (for positive insert)  | CC1204  | DC11T3   | VB1604   | TP1604  | TC1102  |
| Double clamp type (for negative insert)  | CN1204  | DN1104 DN1504 DN1506   | — | TN1604  | |

# 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 |
|---|---|---|---|---|
|  |  |  |  |  |
| ▶ 351 | ▶ 354 | ▶ 344 | ▶ 369 | ▶ 351 |

# 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 |

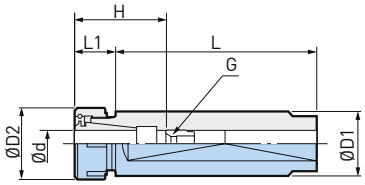



Fig. 1

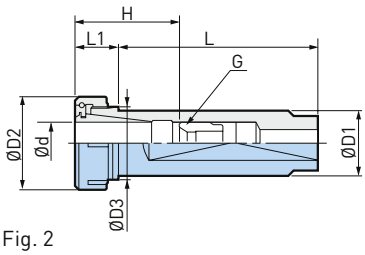



Fig. 2

| 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**

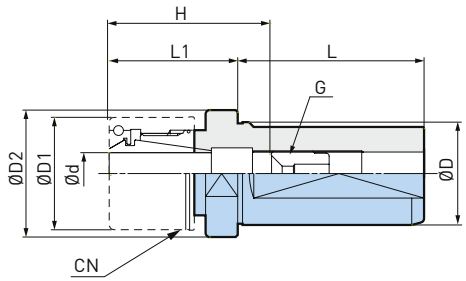
| New Baby Nuts | Baby Perfect Seals | New Baby Collets | New Baby Wrenches | Adjusting Screws NBA |
|---|---|---|---|---|
|  |  |  |  |  |
| ▶ 351 | ▶ 354 | ▶ 344 | ▶ 369 | ▶ 351 |

# 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**

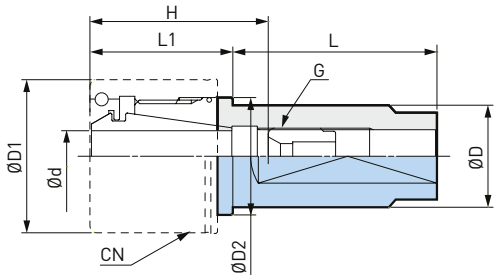
| MEGA ER Nut | ER Nuts | MEGA ER Perfect Seal | MEGA ER Collets | MEGA Wrenches | Adjusting Screws NBA |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 360 | ▶ 360 | ▶ 361 | ▶ 358 | ▶ 368 | ▶ 351 |

# 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**

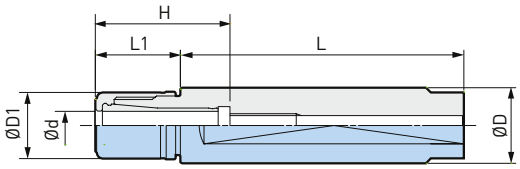
| MEGA ER Nut | ER Nuts | MEGA ER Perfect Seal | MEGA ER Collets | MEGA Wrenches | Adjusting Screws NBA |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 360 | ▶ 360 | ▶ 361 | ▶ 358 | ▶ 368 | ▶ 351 |

# 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 |

A.7

1. MEGA nut is included in delivery.
2. MEGA wrench is to be ordered separately.

**Accessories & Spare Parts**

| MEGA Nuts | Micro Seal Nuts | Micro Collets | MEGA Wrenches |
|---|---|---|---|
|  |  |  |  |
| ▶ 342 | ▶ 342 | ▶ 340 | ▶ 368 |

# MEGA Synchro Tapping Holder

For small Tap MGT3



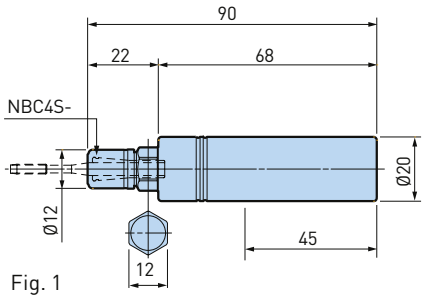



Fig. 1

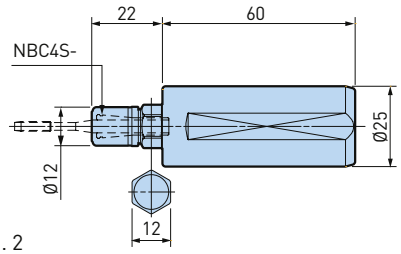



Fig. 2

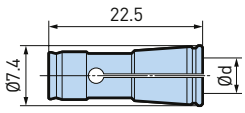
| Model | Article No. | Fig. | Weight (kg) |
|---|---|---|---|
| ST20-MGT3-90 | 978.356 | 1 | 0.18 |
| SLS25-MGT3-22 | 804.115 | 2 | 0.25 |

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 |
| -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.

### Accessories & Spare Parts

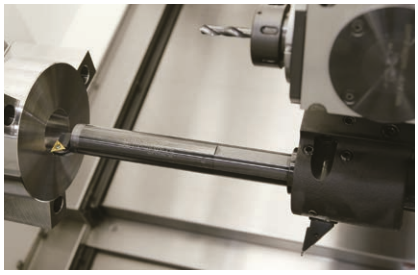
MEGA Wrenches



▶ 368

## Smart Damper Turning





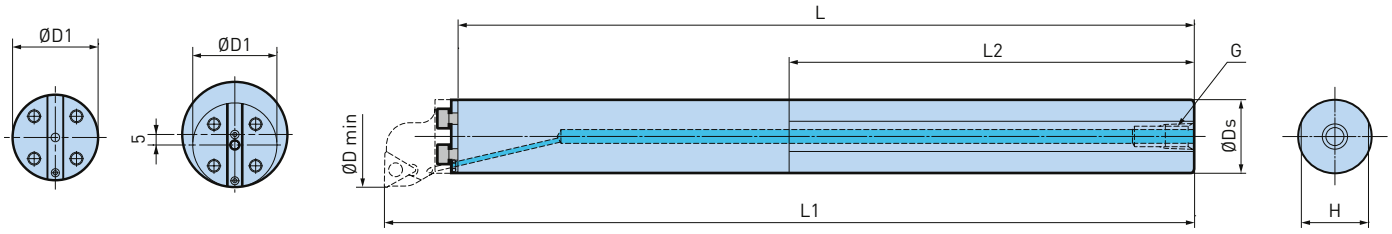



Fig. 1 Fig. 2

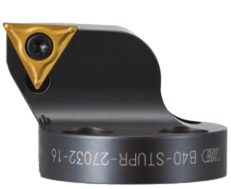
A.7

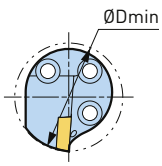
| Model | Article No. | Fig. | Cartridge | ØD | ØDs | ØD1 | L | L1 | L2 | H | G | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ST32-SDB40DP-320 | 806.422 | 1 | B32 | 40 | 32 | 32 | 320 | 352 | 176 | 30 | PT1/4 | 2.20 |
| ST40-SDB50DP-410 | 806.423 | 1 | B40 | 50 | 40 | 40 | 410 | 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 Smart Damper

**Positive**





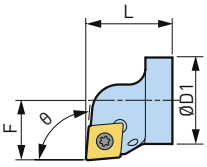




Fig. 1

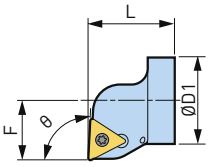



Fig. 2

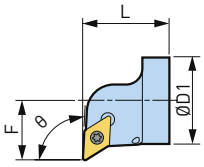



Fig. 3

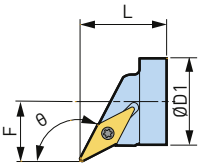



Fig. 4

| 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-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-SVPBR-27032A-16 | - | 4 | B40 | VB1604 | R | 40 | 32 | 27 | 117.5° | S3.5S-15IP | 0.13 |

**Negative**



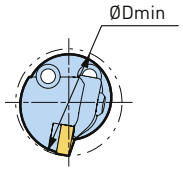



Fig. 1

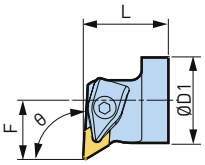



Fig. 2

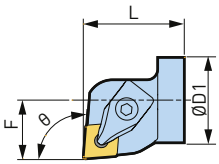


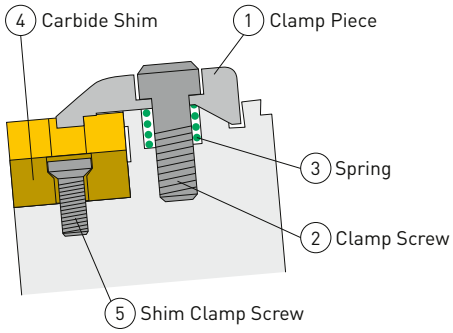

Fig. 3

| 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 |
| S4 S-15IP | 806.624 | M4 × 8 | FS-15IP |
| S5 S-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 |

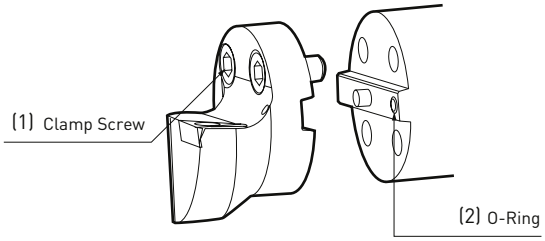
1. 1 pc. each of the carbide shim and shim clamp screw are included in the set.
2. The tightening wrench is a torx wrench.

**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 )**

| Model | (1) | ⬡SW | N·m | (2) |
|---|---|---|---|---|
| SDB40DP TAD40 | C0510 | 4 | 7 | SDB200R-2P |
| SDB50DP TAD50 | C0610 | 5 | 10 | |

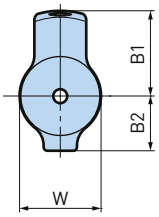
1. (1) Clamping Screw x 1p
2. (2) O-Ring x 2p

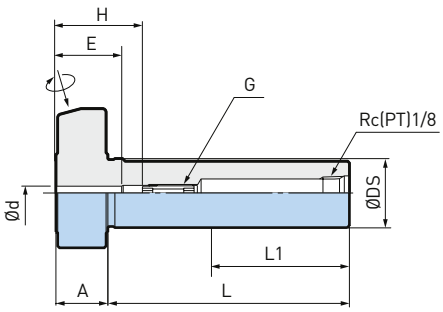
# Hydraulic Chuck Lathe Type - Standard

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**

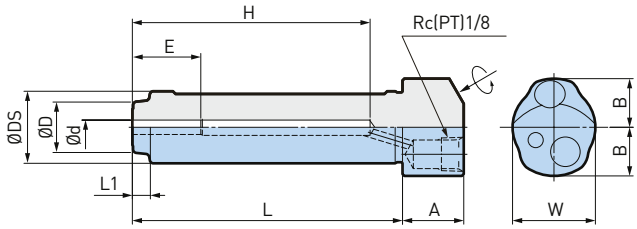
| Adjusting Screws HDA | Adjusting Screws NBA |
|---|---|
|  |  |
| ▶ 371 | ▶ 351 |

# 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.



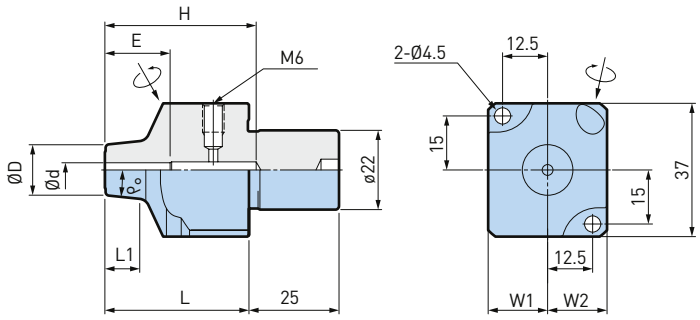


## Hydraulic Chuck Lathe Type - Type R

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 |

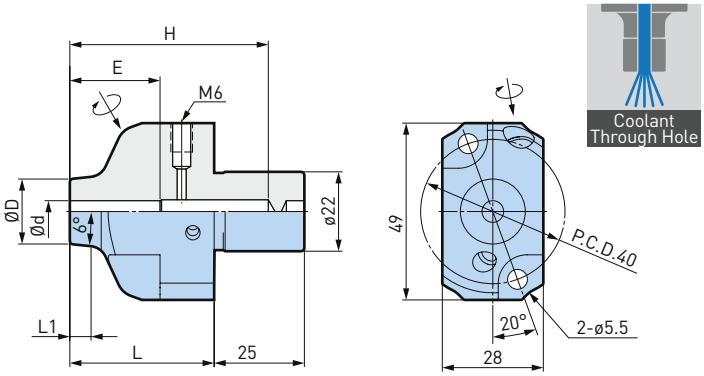
A.7

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**

▶ 526



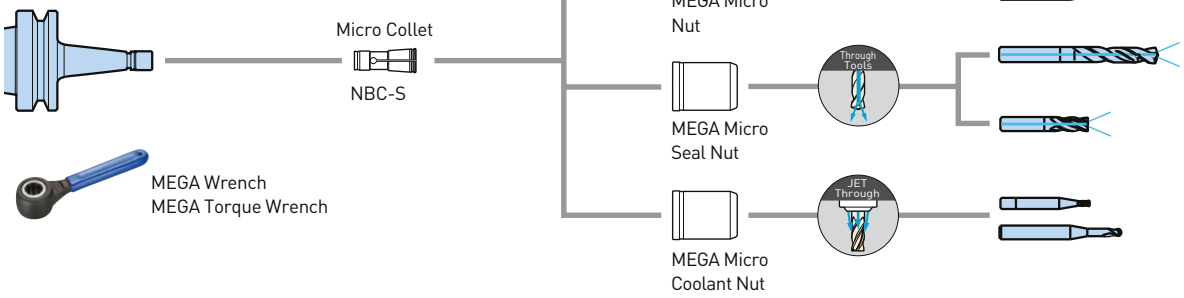
**Centering tool for lathe CTL-90**

▶ 534

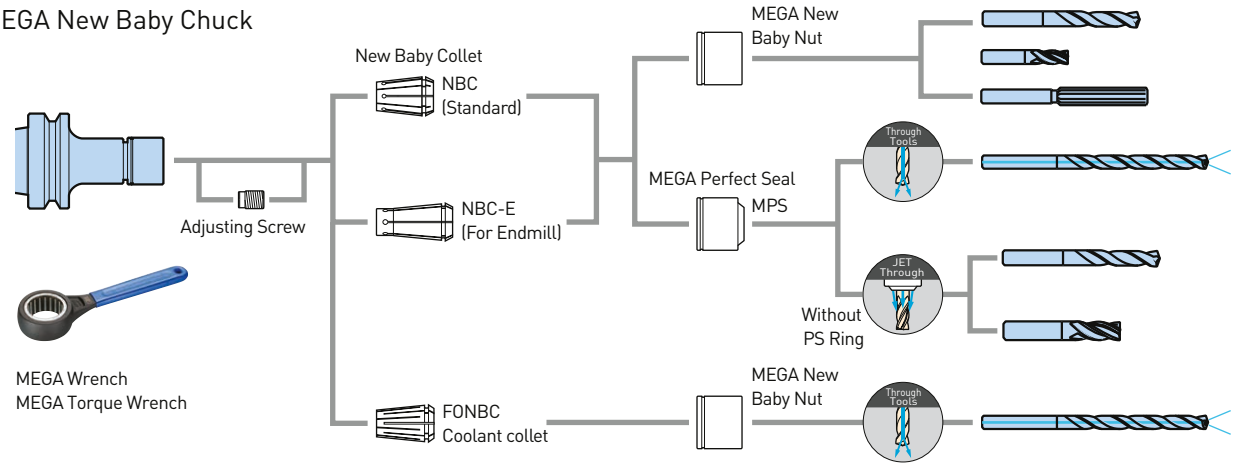
# Collets & Accessories


| | |
|---|---|
| Overview | 338 |
| Micro Collets | 340 |
| MEGA Nut / Micro Seal Nut / Micro Collet Case | 342 |
| New Baby Collets (NBC/FONBC/NBC-E) | 344 |
| New Baby Collet Set / Collet Ejector / Collet Remover | 350 |
| MEGA Nut / New Baby Nut | 351 |
| Adjusting Screws | 351 |
| MEGA Perfect Seal / Baby Perfect Seal (MPS/BPS) | 352 |
| MEGA E Collets / MEGA E Nut | 356 |
| MEGA E Perfect Seal (EPS) | 357 |
| MEGA ER Collets / Collet Remover | 358 |
| MEGA ER Nut | 360 |
| MEGA ER Perfect Seal (MERPS) | 361 |
| Straight Collets (PJC/PSC/OCA/C/CPG) | 363 |
| MEGA Wrench / MEGA Torque Wrench / New Baby Wrench / FK Wrench | 368 |
| Digital MEGA Torque Wrench | 370 |
| Adjusting Screws / Test Bar for Hydraulic Chuck / Reduction Sleeve | 371 |
| MEGA Synchro Tapping Holder Accessories | 374 |
| Air Filter Regulator for RBX / Collet for Angle Head Small Bore Type | 384 |
| Tooling Mate / Kombi Grip | 385 |
| Torque Fit | 387 |
| Cleaners | 388 |
| T-Slot Clean | 391 |
| Pullstud Bolt / Pullstud Wrench | 392 |
| Set Up Information for Angle Heads / Air Turbine Spindle | 394 |

## MEGA Micro Chuck

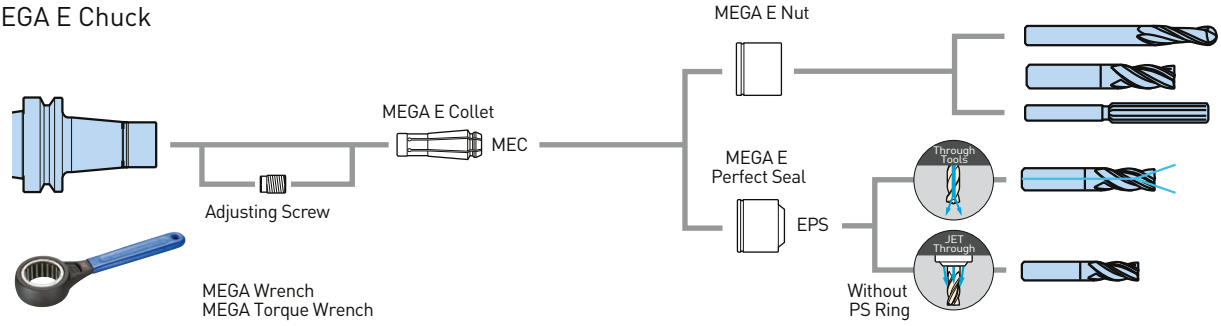



## MEGA New Baby Chuck

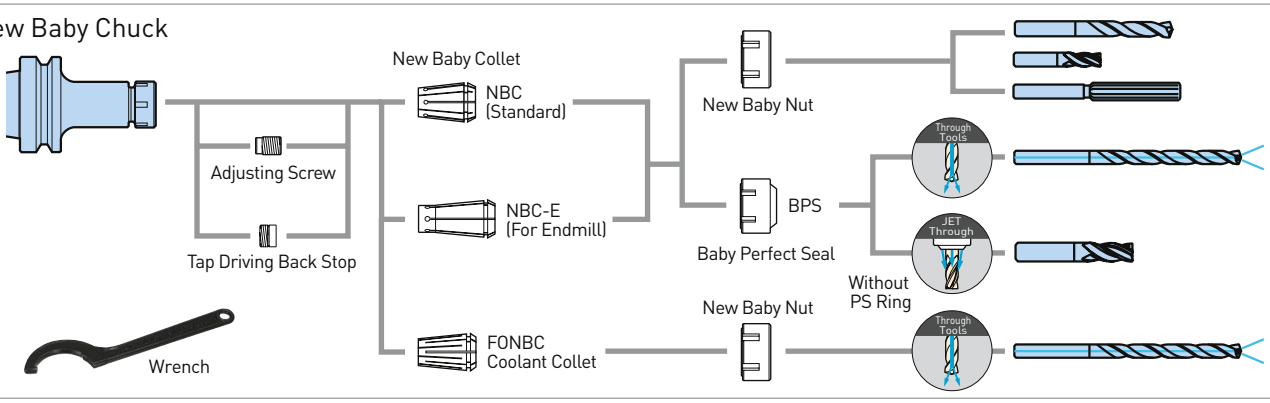



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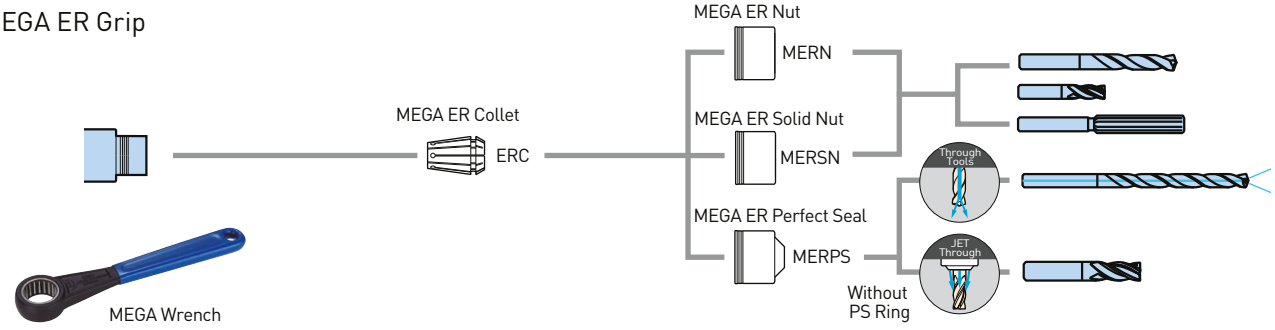
## MEGA E Chuck



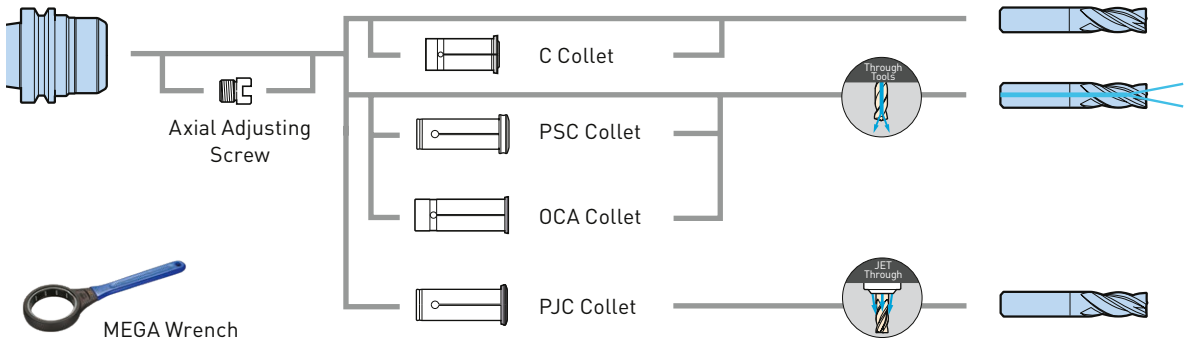

## New Baby Chuck



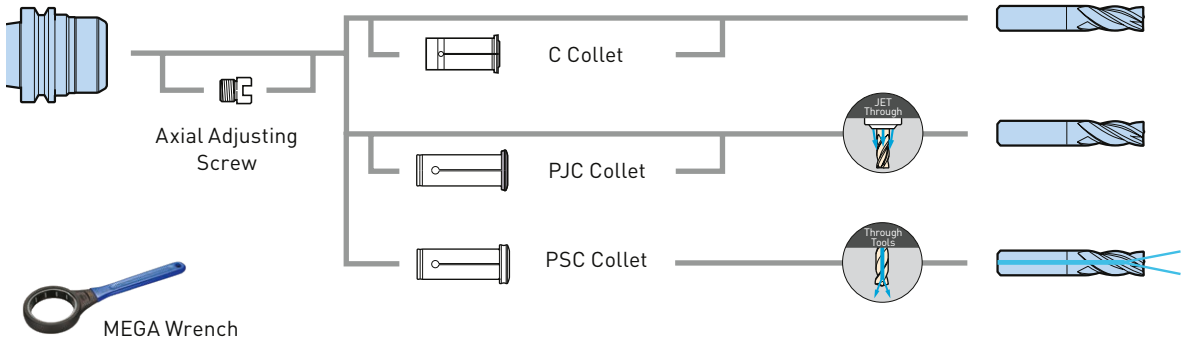

## MEGA ER Grip



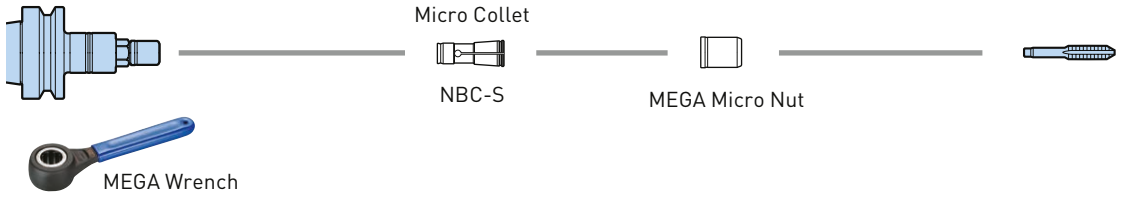
## MEGA Double Power Chuck D type



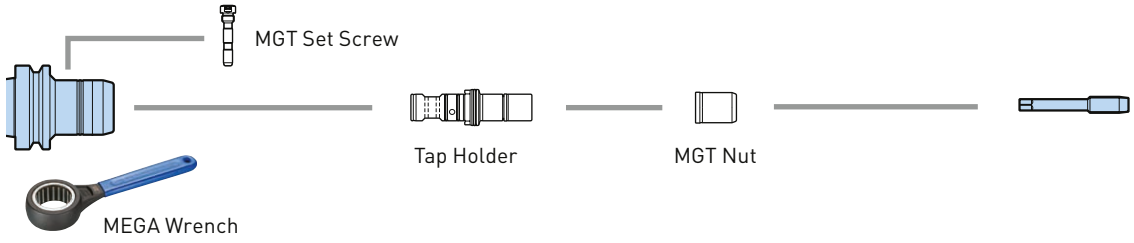

## MEGA Double Power Chuck DS type



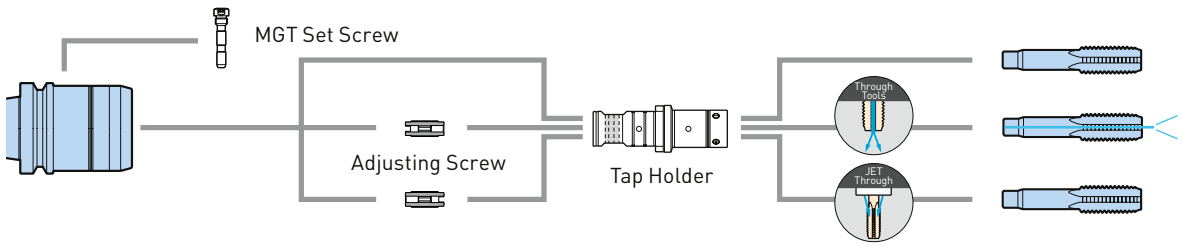

## MEGA Synchro Tapping Holder MGT3




## MEGA Synchro Tapping Holder MGT6, 12 and 20




## MEGA Synchro Tapping Holder MGT36

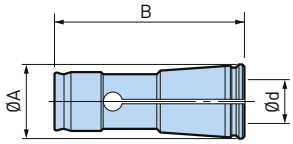


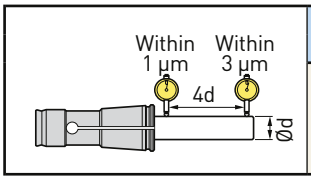

A.8

# 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 |

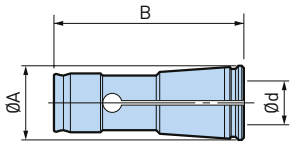
MEGA3S

| 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 |

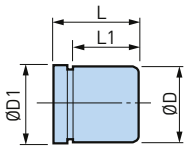
MEGA8S

| 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



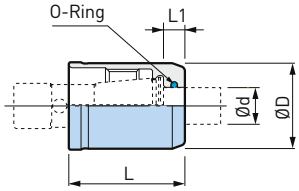



| Model | Article No. | ØD | ØD1 | L | L1 | Body |
|---|---|---|---|---|---|---|
| MGN3S | 969.480 | 10 | 10.3 | 13 | 11 | MEGA3S |
| MGN4S | 969.481 | 12 | 12.2 | 14.5 | 12 | MEGA4S |
| MGN6S | 969.482 | 14 | 14.2 | 17 | 14.5 | MEGA6S |
| MGN8S | 804.108 | 18 | 18.3 | 18.5 | 15.5 | MEGA8S |

## Micro Seal Nuts

For MEGA Micro Chuck
Sealed nut for coolant-through tools.

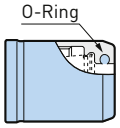





| Model | Article No. | Ød | ØD | L | L1 | Body |
|---|---|---|---|---|---|---|
| MGN3S-PS3 | - | 3 | 10 | 15.5 | 3.5 | MEGA3S |
| MGN4S-PS3 | 978.417 | 3 | 12 | 16.5 | 3.5 | MEGA4S |
| MGN4S-PS4 | - | 4 | 12 | 16.5 | 3.5 | MEGA4S |
| MGN6S-PS3 | 978.516 | 3 | 14 | 19 | 3.5 | MEGA6S |
| MGN6S-PS4 | 978.513 | 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



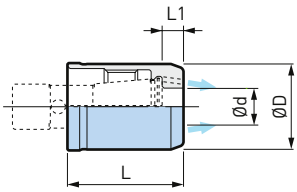

| Model | Article No. | Seal Nut |
|---|---|---|
| PS3-OR-5P | 806.799 | MGN6S-PS3 / MGN8S-PS3 |
| PS4-OR-5P | 807.151 | MGN6S-PS4 / MGN8S-PS4 |
| PS5-OR-5P | 807.152 | MGN6S-PS5 / MGN8S-PS5 |
| PS6-OR-5P | 807.153 | MGN6S-PS6 / MGN8S-PS6 |
| PS7-OR-5P | 807.154 | MGN8S-PS7 |
| PS8-OR-5P | 807.155 | MGN8S-PS8 |

1. Set includes 5 pieces.

# MEGA Micro Coolant Nut

For MEGA Micro Chuck
MEGA Micro Coolant Nut, only for MEGA Micro Chuck 6S for more efficient coolant supply for micro cutting tool.






| 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.



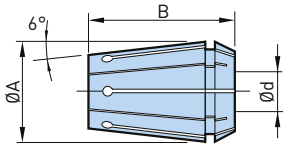
| Model | Article No. | Number of Holes | Size | Collet Model |
|---|---|---|---|---|
| NBB3S | 968.330 | 50 | 200 x 170 x 50 | NBC3S |
| NBB4S | 968.364 | 50 | 200 x 170 x 50 | NBC4S |
| NBB6S | 961.498 | 60 | 200 x 170 x 50 | NBC6S |
| NBB8S | 805.802 | 60 | 200 x 170 x 50 | NBC8S |

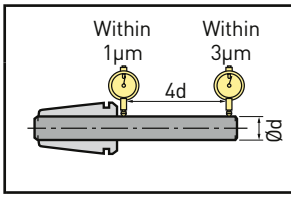
1. Micro collet is not included.

# 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 |

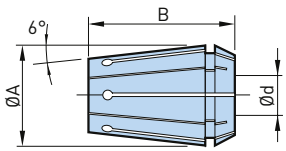


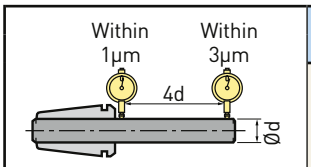
▫ Models are included in new baby collet set.

# 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

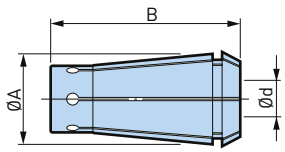
| Model | Article No. | Ød | ØA | B |
|---|---|---|---|---|
| NBC25-16AA | 806.390 ▫ | 15.5 - 16 | 35.5 | 52 |
| NBC25-16.5AA | 806.391 ▫ | 16 - 16.5 | 35.5 | 52 |
| NBC25-17AA | 806.392 ▫ | 16.5 - 17 | 35.5 | 52 |
| NBC25-17.5AA | 806.393 ▫ | 17 - 17.5 | 35.5 | 52 |
| NBC25-18AA | 806.394 ▫ | 17.5 - 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 |

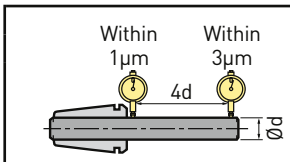
▫ Models are included in new baby collet set.

# 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

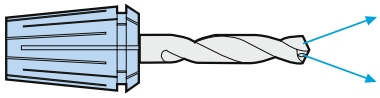
| Model | Article No. | Ød | ØA | B |
|---|---|---|---|---|
| NBC20-3EAA | 801.721 | 3 | 28 | 45 |
| NBC20-4EAA | 801.725 | 4 | 28 | 45 |
| NBC20-5EAA | 801.729 | 5 | 28 | 45 |
| NBC20-6EAA | 961.180 | 6 | 28 | 45 |
| NBC20-8EAA | 801.733 | 8 | 28 | 45 |
| NBC20-10EAA | 961.182 | 10 | 28 | 45 |
| NBC20-12EAA | 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 |

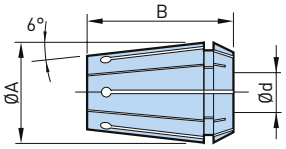
1. Use only a cutting tool shank with exactly the same diameter as the collet bore diameter.
2. Tolerance of the cutting tool shank must be within h7.

# 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

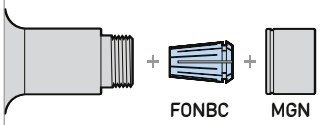
## MEGA13N / NBS13

| 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 |

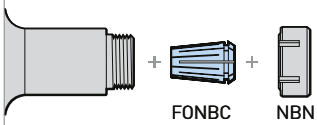
MEGA16N / NBS16

| 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 New Baby Chuck use the standard NBN nut.**




**For MEGA New Baby Chuck use the standard MGN 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.





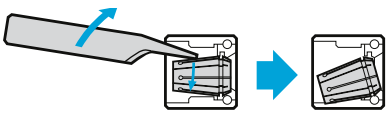
| Model | Article No. | Nut Model | Collet Model |
|---|---|---|---|
| NBC6-CE | 969.492 | MGN6 / NBN6 | NBC6 / FONBC6 |
| NBC6E-CE | 969.496 | MGN6 / NBN6 | NBC6E |
| NBC8-CE | 969.493 | MGN8 / NBN8 | NBC8 / FONBC8 |
| NBC8E-CE | 969.497 | MGN8 / NBN8 | NBC8E |
| NBC10-CE | 969.494 | MGN10 / NBN10 | 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.



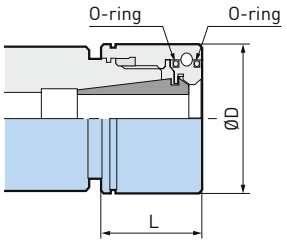
| Model | Article No. |
|---|---|
| NBJ | 969.491 |

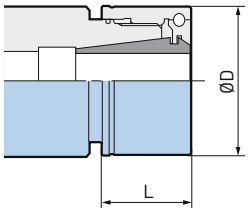


# MEGA Nuts

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 |

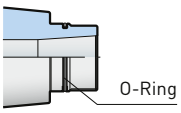
### Flat Type

| Model | Article No. | ØD | L | Body |
|---|---|---|---|---|
| MGN 6F | 805.668 | 20 | 18 | MEGA6N |
| MGN 8F | 805.669 | 25 | 20 | MEGA8N |
| MGN 10F | 805.670 | 30 | 21 | MEGA10N |
| MGN 13F | 805.671 | 35 | 24 | MEGA13N |
| MGN 16F | 805.672 | 42 | 24.5 | MEGA16N |
| MGN 20F | 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 |

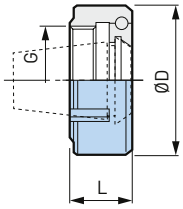
| Model | Article No. |
|---|---|
| MG16NOR-2P | 801.395 |
| MG20NOR-2P | 978.916 |
| MG25NOR-2P | 806.840 |

A.8

# New Baby Nuts

For New Baby Chuck



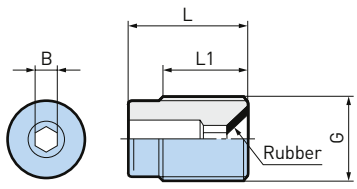



| Model | Article No. | ØD | L | G | Body |
|---|---|---|---|---|---|
| NBN6 | 961.526 | 20 | 9.5 | M12 P1 | NBS6 |
| NBN8 | 961.549 | 25 | 11 | M16 P1 | NBS8 |
| NBN10 | 961.571 | 30 | 12.5 | M21 P1 | NBS10 |
| NBN13 | 961.597 | 35 | 16 | M26 P1 | NBS13 |
| NBN16 | 961.631 | 42 | 16 | M32 P1 | NBS16 |
| 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



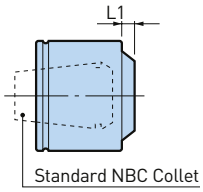



| Model | Article No. | G | L | L1 | B | Body |
|---|---|---|---|---|---|---|
| NBA6B | 961.527 | M7 | 12 | 10 | 2 | MEGA6N / MEGA6E / NBS6 / MEGA ER11 |
| NBA8B | 961.550 | M9 | 13 | 10 | 2.5 | MEGA8N / MEGA8E / NBS8 |
| NBA10B | 961.572 | M11 | 16 | 12 | 3 | MEGA10N / MEGA10E / NBS10 / MEGA ER16 |
| 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 |

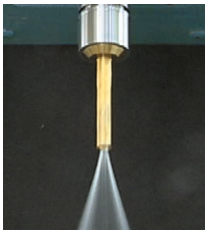
# MEGA Perfect Seals

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.





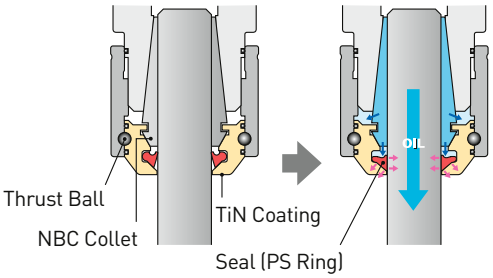

**2way coolant**



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.



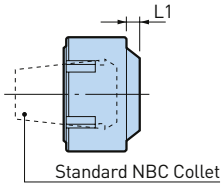
| Model | Article No. | Suitable for model |
|---|---|---|
| PS-0304 | 969.981 | MPS / BPS -03035, 0304 / EPS -03, 04 / MERPS -030035, 035040 / PSC20-3, 4 |
| PS-0405 | 969.982 | MPS / BPS -04045, 0405 / EPS -05 / MERPS -040045, 045050 / PSC20-5 |
| PS-0506 | 969.983 | MPS / BPS -05055, 0506 / EPS -06 / 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 | MPS -2021 / PSC32-21 |
| PS-2223 | 807.269 | MPS -2223 / PSC32-22, 23 |
| PS-2324 | 807.270 | MPS -2324 / PSC32-24 |
| PS-2526 | 807.271 | MPS -2526 / PSC32-25 |

1. 1 package contains 5 pcs. (1 size).

# Baby Perfect Seals

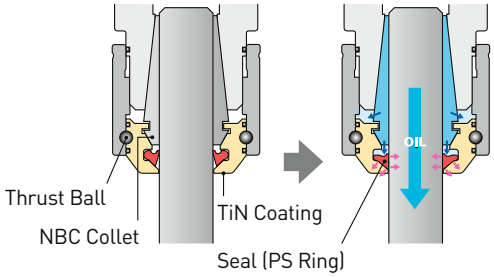
For New Baby Chuck.
Unique design increases sealing performance with higher coolant pressure to create a "perfect seal". Remove the PS Ring, to supply coolant to the cutting tool periphery.



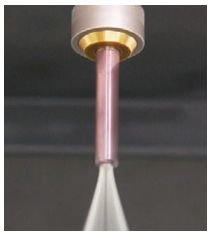




| Model | Article No. | Cutting shank ø | L1 | Collet Model |
|---|---|---|---|---|
| BPS6-03035 | 961.409 | 3 - 3.5 | 2.3 | NBC6 -3 -3.75 |
| BPS6-0304 | 969.921 | 3 - 4 | 2.3 | NBC6 -3 -4.25 |
| BPS6-04045 | 961.410 | 4 - 4.5 | 2.3 | NBC6 -4 -4.75 |
| BPS6-0405 | 969.922 | 4 - 5 | 2.3 | NBC6 -4 -5.25 |
| 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

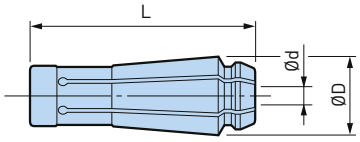


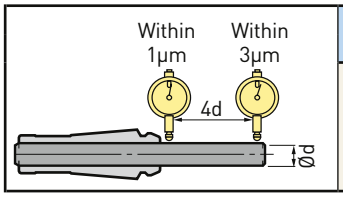
► 353

# 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 |

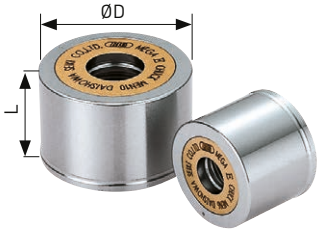
MEGA13E

| 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

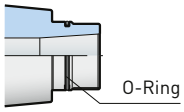



| Model | Article No. | ØD | L | Body |
|---|---|---|---|---|
| MEN6 | 968.461 | 25 | 20.5 | MEGA6E |
| MEN8 | 968.462 | 30 | 22 | MEGA8E |
| MEN10 | 968.463 | 35 | 22.5 | MEGA10E |
| MEN13 | 968.464 | 42 | 24.5 | MEGA13E |

# O-Ring Set

For MEGA E Chuck



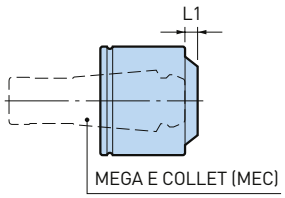



| Model | Article No. |
|---|---|
| MG6EOR-2P | 801.396 |
| MG8EOR-2P | 801.397 |
| MG10EOR-2P | 801.393 |
| MG13EOR-2P | 801.394 |

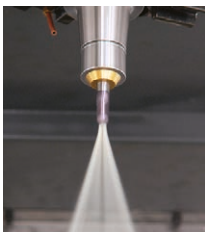
# MEGA E Perfect Seals

For MEGA E Chuck





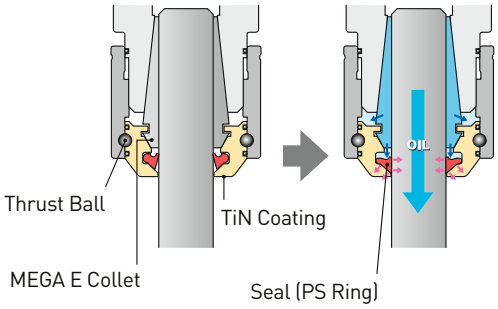

**2way coolant**



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

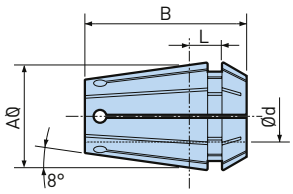


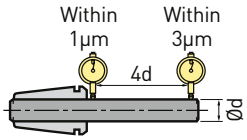
▶ 353

# 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 |

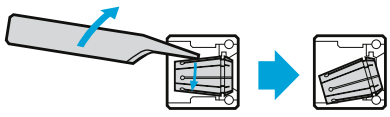


## Collet Removers

For MEGA New Baby Chuck, New Baby Chuck and MEGA ER Chuck.



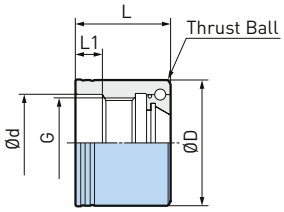
| Model | Article No. |
|---|---|
| NBJ | 969.491 |



## 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 |

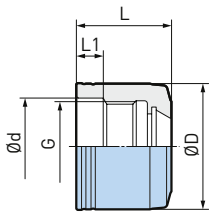
1. MEGA ER nut can not be used with some of conventional ER chuck. Please check dimensions carefully in that case.
2. To maximize the cutting performance, using with MEGA ER grip is recommended.

## MEGA ER Solid Nut

A.8

For MEGA ER Grip.
Free-notch design nut for high speed machining.





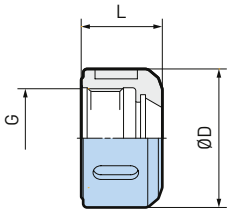

| Model | Article No. | Ød | ØD | L | L1 | G | Body | Wrench |
|---|---|---|---|---|---|---|---|---|
| MER16SN | 805.663 | 23 | 30 | 25 | 7.5 | M22 P1.5 | MEGA ER 16 | MGR30L |
| MER20SN | 805.664 | 27 | 35 | 26.5 | 7.5 | M25 P1.5 | MEGA ER 20 | MGR35L |
| MER25SN | 805.665 | 33.5 | 42 | 27.5 | 7.5 | 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.



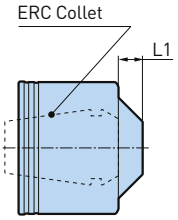



| Model | Article No. | ØD | L | G | Body | Wrench |
|---|---|---|---|---|---|---|
| ERN11 | 803.581 | 19 | 12.3 | M14 0.75 | MEGA ER 11 | NBK6 |
| ERN16 | 803.582 | 30 | 19 | M22 P1.5 | MEGA ER 16 | NBK10 |
| ERN20 | 803.583 | 35 | 20.5 | M25 P1.5 | MEGA ER 20 | NBK13 |
| ERN25 | 803.584 | 42 | 21.5 | M32 P1.5 | MEGA ER 25 | NBK16 |
| ERN32 | 803.585 | 50 | 24 | M40 P1.5 | MEGA ER 32 | FK45-50L |

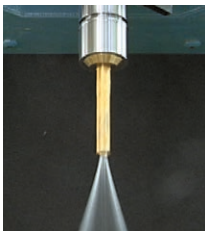
# MEGA ER Perfect Seal

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 |

A.8

continues on the next page

# 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

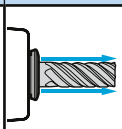
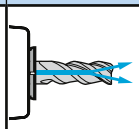
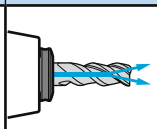
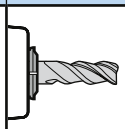
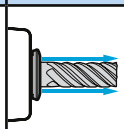


▶ 353

# 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<br>Anti Pullout Collet |
| MEGA-D<br>MEGA Double Power Chuck | ○ | ○ | ○ | ○ | ▲ |
| MEGA-DS<br>MEGA Double Power Chuck | ○ | | ○ | ○ | ▲ |
| HMC<br>New Hi-Power Milling Chuck | ○ | ○ | ○ | ○ | ▲ |
| HDC<br>Hydraulic Chuck | ○ | | ○ | | |

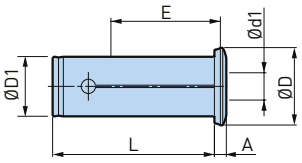
▲ CPG collet can only be used for MEGA20D, MEGA20DS and HMC20(S).

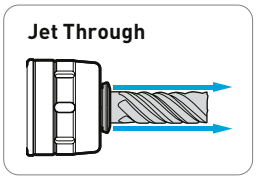


# PJC Collets

For MEGA-D/DS, HMC and HDC.
For coolant to cutting tool periphery.








| Model | Article No. | Ød1 | ØD | ØD1 | L | A | E |
|---|---|---|---|---|---|---|---|
| PJC12D-6 | 100441.001.0 | 6 | 20.4 | 12 | 40 | 4.6 | 35 |
| PJC12D-8 | 100441.002.0 | 8 | 20.4 | 12 | 40 | 4.6 | 37 |
| PJC12D-10 | 100441.003.0 | 10 | 20.4 | 12 | 40 | 4.8 | 39 |
| PJC16-6 | 962.468 | 6 | 23 | 16 | 54 | 6 | 39 |
| PJC16-8 | 962.469 | 8 | 23 | 16 | 54 | 6.3 | 40 |
| PJC16-10 | 962.470 | 10 | 23 | 16 | 54 | 6.3 | 45 |
| PJC16-12 | 962.471 | 12 | 23 | 16 | 54 | 6.3 | 48 |
| PJC20-3 | 962.472 | 3 | 27 | 20 | 61 | 5.2 | 31 |
| PJC20-4 | 962.473 | 4 | 27 | 20 | 61 | 5.2 | 31 |
| PJC20-5 | 962.474 | 5 | 27 | 20 | 61 | 5.2 | 31 |
| PJC20-6 | 962.475 | 6 | 27 | 20 | 61 | 5.2 | 39 |
| PJC20-7 | 962.476 | 7 | 27 | 20 | 61 | 5.7 | 40 |
| PJC20-8 | 962.477 | 8 | 27 | 20 | 61 | 5.7 | 40 |
| PJC20-9 | 962.478 | 9 | 27 | 20 | 61 | 5.7 | 40 |
| PJC20-10 | 962.479 | 10 | 27 | 20 | 61 | 5.7 | 45 |
| PJC20-11 | 962.480 | 11 | 27 | 20 | 61 | 6.4 | 45 |
| PJC20-12 | 962.481 | 12 | 27 | 20 | 61 | 6.4 | 50 |
| PJC20-13 | 804.834 | 13 | 27 | 20 | 61 | 6.8 | 50 |
| PJC20-14 | 962.488 | 14 | 27 | 20 | 61 | 7.3 | 50 |
| PJC20-15 | 804.835 | 15 | 27 | 20 | 61 | 7.3 | 50 |
| PJC20-16 | 962.483 | 16 | 27 | 20 | 61 | 7.3 | 50 |

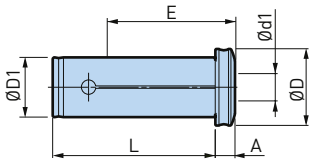
| Model | Article No. | Ød1 | ØD | ØD1 | L | A | E |
|---|---|---|---|---|---|---|---|
| PJC25-6 | 962.484 | 6 | 32.5 | 25 | 68 | 5 | 39 |
| PJC25-8 | 962.485 | 8 | 32.5 | 25 | 68 | 5 | 40 |
| PJC25-10 | 962.486 | 10 | 32.5 | 25 | 68 | 5 | 45 |
| PJC25-12 | 962.487 | 12 | 32.5 | 25 | 68 | 5 | 50 |
| PJC25-16 | 962.489 | 16 | 32.5 | 25 | 68 | 5.4 | 53 |
| PJC25-18 | 801.685 | 18 | 32.5 | 25 | 68 | 5.8 | 55 |
| PJC25-20 | 962.491 | 20 | 32.5 | 25 | 68 | 6.5 | 56 |
| PJC32-6 | 962.492 | 6 | 39 | 32 | 74 | 5 | 39 |
| PJC32-8 | 962.493 | 8 | 39 | 32 | 74 | 5 | 40 |
| PJC32-10 | 962.494 | 10 | 39 | 32 | 74 | 5 | 45 |
| PJC32-12 | 962.495 | 12 | 39 | 32 | 74 | 5 | 50 |
| PJC32-14 | 962.496 | 14 | 39 | 32 | 74 | 5 | 50 |
| PJC32-16 | 962.497 | 16 | 39 | 32 | 74 | 5 | 53 |
| PJC32-20 | 962.499 | 20 | 39 | 32 | 74 | 5 | 56 |
| PJC32-25 | 962.500 | 25 | 39 | 32 | 74 | 5.4 | 61 |
| PJC42-16 | 801.982 | 16 | 50.5 | 42 | 83 | 5 | 53 |
| PJC42-20 | 801.983 | 20 | 50.5 | 42 | 83 | 5 | 56 |
| PJC42-25 | 801.984 | 25 | 50.5 | 42 | 83 | 5 | 61 |
| PJC42-32 | 801.985 | 32 | 50.5 | 42 | 83 | 5 | 66 |

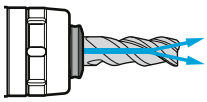
1. "E" is the min. clamping length.
2. Replacement O-ring for PJC and PSC collet are available (PJC_OR). Please contact us.
3. PJC 12 cannot be used for Hydraulic Chuck (HDC12).

# PSC Collets

For MEGA-D/DS, HMC and HDC.
For coolant-through tools.








| Model | Article No. | Ød1 | ØD | ØD1 | L | A | E |
|---|---|---|---|---|---|---|---|
| PSC20-3 | 962.437 | 3 | 27 | 20 | 61 | 7.7 | 31 |
| PSC20-4 | 962.438 | 4 | 27 | 20 | 61 | 7.5 | 31 |
| PSC20-5 | 962.439 | 5 | 27 | 20 | 61 | 7.5 | 31 |
| PSC20-6 | 962.440 | 6 | 27 | 20 | 61 | 7.5 | 39 |
| PSC20-7 | 962.441 | 7 | 27 | 20 | 61 | 8.2 | 40 |
| PSC20-8 | 962.442 | 8 | 27 | 20 | 61 | 8.2 | 40 |
| PSC20-9 | 962.443 | 9 | 27 | 20 | 61 | 8.2 | 40 |
| PSC20-10 | 962.444 | 10 | 27 | 20 | 61 | 8.2 | 45 |
| PSC20-11 | 962.445 | 11 | 27 | 20 | 61 | 8.7 | 45 |
| PSC20-12 | 962.446 | 12 | 27 | 20 | 61 | 8.7 | 50 |
| PSC20-13 | 804.827 | 13 | 27 | 20 | 61 | 8.7 | 50 |
| PSC20-14 | 962.447 | 14 | 28 | 20 | 61 | 8.7 | 50 |
| PSC20-15 | 804.828 | 15 | 28 | 20 | 61 | 8.7 | 50 |
| PSC20-16 | 962.448 | 16 | 28 | 20 | 61 | 8.7 | 50 |

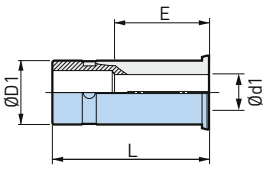
1. "E" is the min. clamping length.
2. Replacement O-ring for PJC and PSC collet are available (PJC_ OR). Please contact us.

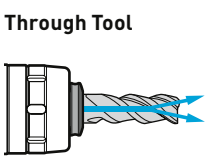
| Model | Article No. | Ød1 | ØD | ØD1 | L | A | E |
|---|---|---|---|---|---|---|---|
| PSC32-6 | 962.457 | 6 | 38 | 32 | 74 | 7.5 | 39 |
| PSC32-7 | 804.829 | 7 | 38 | 32 | 74 | 8.2 | 40 |
| PSC32-8 | 962.458 | 8 | 38 | 32 | 74 | 8.2 | 40 |
| PSC32-9 | 804.830 | 9 | 38 | 32 | 74 | 8.2 | 40 |
| PSC32-10 | 962.459 | 10 | 38 | 32 | 74 | 8.2 | 45 |
| PSC32-11 | 804.831 | 11 | 38 | 32 | 74 | 8.7 | 45 |
| PSC32-12 | 962.460 | 12 | 38 | 32 | 74 | 8.7 | 50 |
| PSC32-13 | 804.832 | 13 | 38 | 32 | 74 | 8.7 | 50 |
| PSC32-14 | 962.461 | 14 | 38 | 32 | 74 | 8.7 | 50 |
| PSC32-15 | 804.833 | 15 | 38 | 32 | 74 | 8.7 | 51 |
| PSC32-16 | 962.462 | 16 | 38 | 32 | 74 | 8.7 | 53 |
| PSC32-18 | 962.463 | 18 | 38 | 32 | 74 | 9.2 | 56 |
| PSC32-19 | 802.063 | 19 | 38 | 32 | 74 | 9.2 | 56 |
| PSC32-20 | 962.464 | 20 | 38 | 32 | 74 | 9.2 | 56 |
| PSC32-21 | 802.064 | 21 | 38 | 32 | 74 | 9.2 | 56 |
| PSC32-22 | 802.065 | 22 | 38 | 32 | 74 | 9.5 | 59 |
| PSC32-23 | 802.066 | 23 | 38 | 32 | 74 | 9.5 | 59 |
| PSC32-24 | 802.067 | 24 | 38 | 32 | 74 | 9.5 | 60 |
| PSC32-25 | 962.465 | 25 | 38 | 32 | 74 | 9.5 | 61 |

# OCA Collets

For MEGA-D and HMC






| Model | Article No. | Ød1 | ØD1 | L | E |
|---|---|---|---|---|---|
| OCA16-6 | 805.156 | 6 | 16 | 58 | 36 |
| OCA16-8 | 805.157 | 8 | 16 | 58 | 37 |
| OCA16-10 | 805.158 | 10 | 16 | 58 | 38 |
| OCA16-12 | 805.159 | 12 | 16 | 58 | 42 |
| OCA20-6 | 962.401 | 6 | 20 | 62 | 36 |
| OCA20-8 | 962.402 | 8 | 20 | 62 | 37 |
| OCA20-10 | 962.403 | 10 | 20 | 62 | 38 |
| OCA20-12 | 962.404 | 12 | 20 | 61 | 42 |
| OCA20-14 | 978.501 | 14 | 20 | 61 | 42 |
| OCA20-16 | 962.405 | 16 | 20 | 61 | 52 |
| OCA25-6 | 801.747 | 6 | 25 | 72.5 | 36 |
| OCA25-8 | 801.748 | 8 | 25 | 72.5 | 37 |
| OCA25-10 | 805.413 | 10 | 25 | 72.5 | 38 |
| OCA25-12 | 801.752 | 12 | 25 | 72.5 | 44 |
| OCA25-14 | 805.244 | 14 | 25 | 71.5 | 44 |
| OCA25-16 | 962.406 | 16 | 25 | 71.5 | 52 |
| OCA25-18 | 805.245 | 18 | 25 | 71.5 | 52 |
| OCA25-20 | 962.407 | 20 | 25 | 71.5 | 52 |

1. "E" is the min. clamping length.

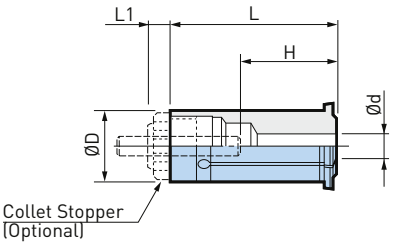
| Model | Article No. | Ød1 | ØD1 | L | E |
|---|---|---|---|---|---|
| OCA32-6 | 962.408 | 6 | 32 | 79.5 | 36 |
| OCA32-8 | 962.409 | 8 | 32 | 79.5 | 37 |
| OCA32-10 | 962.410 | 10 | 32 | 79.5 | 38 |
| OCA32-12 | 962.411 | 12 | 32 | 79.5 | 44 |
| OCA32-13 | 962.412 | 13 | 32 | 79.5 | 46 |
| OCA32-14 | 962.413 | 14 | 32 | 79.5 | 48 |
| OCA32-15 | 962.414 | 15 | 32 | 79.5 | 50 |
| OCA32-16 | 962.415 | 16 | 32 | 79.5 | 52 |
| OCA32-17 | 962.416 | 17 | 32 | 78.5 | 52 |
| OCA32-18 | 962.417 | 18 | 32 | 78.5 | 52 |
| OCA32-19 | 962.418 | 19 | 32 | 78.5 | 52 |
| OCA32-20 | 962.419 | 20 | 32 | 78.5 | 52 |
| OCA32-21 | 962.420 | 21 | 32 | 78.5 | 52 |
| OCA32-22 | 962.421 | 22 | 32 | 78.5 | 52 |
| OCA32-23 | 962.422 | 23 | 32 | 78.5 | 52 |
| OCA32-24 | 962.423 | 24 | 32 | 78.5 | 52 |
| OCA32-25 | 962.424 | 25 | 32 | 78.5 | 52 |
| OCA32-27 | 806.442 | 27 | 32 | 78.5 | 52 |
| OCA32-28 | 805.356 | 28 | 32 | 78.5 | 52 |
| OCA32-29 | 806.443 | 29 | 32 | 78.5 | 52 |

| Model | Article No. | Ød1 | ØD1 | L | E |
|---|---|---|---|---|---|
| OCA42-6 | 801.774 | 6 | 42 | 79.5 | 36 |
| OCA42-8 | 801.775 | 8 | 42 | 79.5 | 37 |
| OCA42-10 | 801.764 | 10 | 42 | 79.5 | 38 |
| OCA42-12 | 801.765 | 12 | 42 | 79.5 | 44 |
| OCA42-16 | 801.767 | 16 | 42 | 79.5 | 52 |
| OCA42-19 | 801.768 | 19 | 42 | 79.5 | 52 |
| OCA42-20 | 801.769 | 20 | 42 | 79.5 | 52 |
| OCA42-24 | 801.770 | 24 | 42 | 78.5 | 55 |
| OCA42-25 | 801.771 | 25 | 42 | 78.5 | 55 |
| OCA42-31 | 801.772 | 31 | 42 | 78.5 | 58 |
| OCA42-32 | 801.773 | 32 | 42 | 78.5 | 58 |

# C Collets

For MEGA-D/DS and HMC.
Tool projection adjustable straight collet.





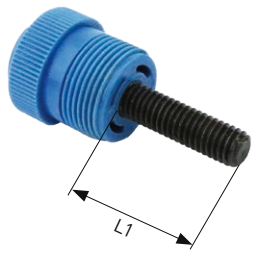

| Model | Article No. | Ød | ØD | L | L1 | H | E | Adjusting screw |
|---|---|---|---|---|---|---|---|---|
| C16-6 | 806.465 | 6 | 16 | 52 | 6 | 30 - 47 | 30 | AC16CS |
| C16-8 | 806.466 | 8 | 16 | 52 | 6 | 32 - 47 | 32 | AC16CS |
| C16-10 | 806.467 | 10 | 16 | 52 | 6 | 37 - 47 | 37 | AC16CS |
| C16-12 | 806.468 | 12 | 16 | 52 | 6 | 37 - 47 | 37 | AC16CS |
| C20-6 | 962.260 | 6 | 20 | 60 | 8 | 30 - 48 | 30 | AC20CS |
| C20-8 | 962.262 | 8 | 20 | 60 | 8 | 32 - 48 | 32 | AC20CS |
| C20-10 | 962.263 | 10 | 20 | 60 | 8 | 37 - 48 | 37 | AC20CS |
| C20-12 | 962.264 | 12 | 20 | 60 | 8 | 37 - 48 | 37 | AC20CS |
| C20-14 | 962.265 | 14 | 20 | 60 | 8 | 40 - 48 | 40 | AC20CS |
| AC20-16 | 962.205 | 16 | 20 | 60 | 8 | 46 - 48 | 46 | AC20CS |
| C20-16 * | 962.266 | 16 | 20 | 60 | 10 | 46 - - | 46 | AC20CS |
| C20-18 * | 800.664 | 18 | 20 | 60 | 10 | 50 - - | 50 | AC20CS |
| C25-6 | 962.271 | 6 | 25 | 68.5 | 8 | 30 - 58 | 30 | AC25CS |
| C25-8 | 962.272 | 8 | 25 | 68.5 | 8 | 32 - 58 | 32 | AC25CS |
| C25-10 | 962.273 | 10 | 25 | 68.5 | 8 | 37 - 58 | 37 | AC25CS |
| C25-12 | 962.274 | 12 | 25 | 68.5 | 8 | 37 - 58 | 37 | AC25CS |
| C25-14 | 806.478 | 14 | 25 | 68.5 | 8 | 45 - 58 | 45 | AC25CS |
| C25-16 | 962.276 | 16 | 25 | 68.5 | 8 | 46 - 58 | 46 | AC25CS |
| C25-18 | 806.477 | 18 | 25 | 68.5 | 8 | 48 - 58 | 48 | AC25CS |
| C25-20 | 962.278 | 20 | 25 | 68.5 | 8 | 52 - 58 | 52 | AC25CS |

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 | L | L1 | H | E | Adjusting screw |
|---|---|---|---|---|---|---|---|---|
| C32-6 | 962.281 | 6 | 32 | 74 | 10 | 30 - 62 | 30 | AC32CS |
| C32-8 | 962.282 | 8 | 32 | 74 | 10 | 32 - 62 | 32 | AC32CS |
| C32-10 | 962.283 | 10 | 32 | 74 | 10 | 37 - 62 | 37 | AC32CS |
| C32-12 | 962.284 | 12 | 32 | 74 | 10 | 37 - 62 | 37 | AC32CS |
| C32-14 | 962.285 | 14 | 32 | 74 | 10 | 40 - 62 | 40 | AC32CS |
| C32-16 | 962.286 | 16 | 32 | 74 | 10 | 46 - 62 | 46 | AC32CS |
| C32-17 | 807.578 | 17 | 32 | 74 | 10 | 50 - 62 | 52 | AC32CS |
| C32-18 | 962.287 | 18 | 32 | 74 | 10 | 50 - 62 | 50 | AC32CS |
| C32-19 | 962.248 | 19 | 32 | 74 | 10 | 50 - 62 | 50 | AC32CS |
| C32-20 | 962.288 | 20 | 32 | 74 | 10 | 52 - 62 | 52 | AC32CS |
| C32-22 | 962.249 | 22 | 32 | 74 | 10 | 52 - 62 | 52 | AC32CS |
| C32-23 | 807.579 | 23 | 32 | 74 | 10 | 52 - 62 | 52 | AC32CS |
| C32-24 | 962.250 | 24 | 32 | 74 | 10 | 55 - 62 | 55 | AC32CS |
| C32-25 | 962.289 | 25 | 32 | 74 | 10 | 55 - 62 | 55 | AC32CS |
| C32-30 * | 806.476 | 30 | 32 | 74 | 10 | 55 - 62 | 65 | AC32CS |
| C42-6 | 800.674 | 6 | 42 | 89 | 10 | 30 - 77 | 30 | AC42CS |
| C42-8 | 800.675 | 8 | 42 | 89 | 10 | 34 - 77 | 34 | AC42CS |
| C42-10 | 800.665 | 10 | 42 | 89 | 10 | 40 - 77 | 40 | AC42CS |
| C42-12 | 800.666 | 12 | 42 | 89 | 10 | 40 - 77 | 40 | AC42CS |
| C42-16 | 800.668 | 16 | 42 | 89 | 10 | 46 - 77 | 46 | AC42CS |
| C42-20 | 800.670 | 20 | 42 | 89 | 10 | 52 - 77 | 52 | AC42CS |
| C42-25 | 800.671 | 25 | 42 | 89 | 10 | 57 - 77 | 57 | AC42CS |
| C42-31 | 800.672 | 31 | 42 | 89 | 10 | 62 - 77 | 62 | AC42CS |
| C42-32 | 800.673 | 32 | 42 | 89 | 10 | 62 - 77 | 62 | AC42CS |
| C42-40 * | 806.198 | 40 | 42 | 89 | 10 | 62 - 77 | 79 | AC42CS |



# Collet Stoppers for C Collet

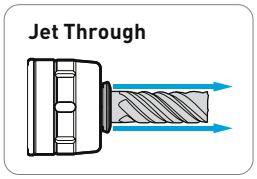



| Model | Article No. | Body | L1 |
|---|---|---|---|
| AC16CS | 806.197 | C16 | 6 |
| AC20CS | 972.321 | C20 | 8 |
| AC25CS | 804.772 | C25 | 8 |
| AC32CS | 972.322 | C32 | 10 |
| AC42CS | 804.773 | C42 | 10 |

# CPG Collet

For MEGA20D/20DS and HMC20/20S





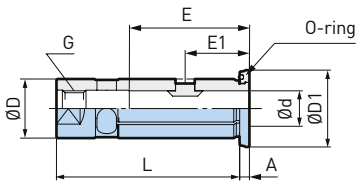




Fig. 1

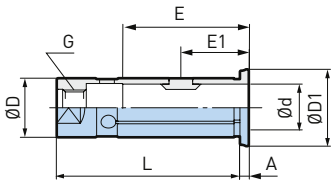



Fig. 2

| 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 |

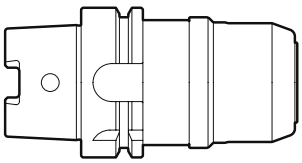
1. Joint screw and joint adapter (depending on the models) are required. Please refer to the table of the corresponding models.
2. 2 pieces of key grip and a spring are included
3. E1 is the distance between the centre of the key grip and the top of the PG collet.



**Assembling Overview**

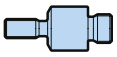


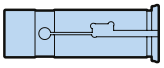
**Join Adaptor**
(Required for some HSK models)



**MEGA Double Power Chuck**
**HiPower Milling Chuck**

**Join Screw**



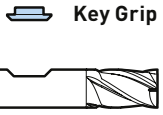


**CPG collet**

**Spring**



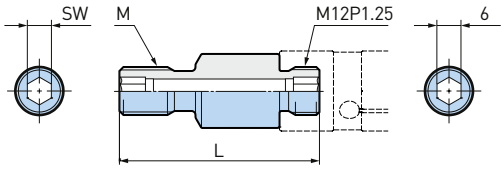
**Key Grip**



**Weldon cutting tool**

# Joint Screw / Joint Adaptor

## Joint Screw




## Joint Adaptor

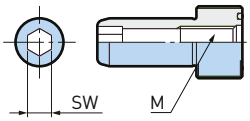



Fig. 1

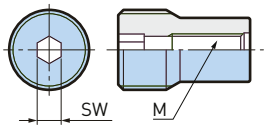
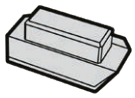



Fig. 2

| 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



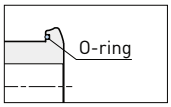
For MEGA Perfect Grip and PG Straight Collet.

| 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

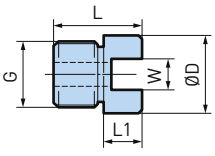
For removing all straight collets.



| 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<br>MEGA25D/DS<br>MEGA32D/DS (BBT30/40, BDV40) | HMC20S/HMC20<br>HMC25S/HMC25<br>HMC32S |
| HMA-M24 | 962.313 | 30 | 36 | 9.5 | M24P1.5 | 10 | MEGA32D/DS (BBT50, BDV50)<br>MEGA42D/DS (BBT50, BDV50)<br>MEGA50D/DS (BBT50) | HMC32<br>HMC42S<br>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 | HMC42S | |
| 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



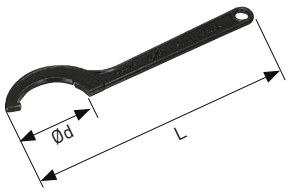
| Model | Article No. | Nut Model |
|---|---|---|
| **NBK6** | 961.525 | NBN6/BPS6/ERN11 |
| **NBK6TL** | 979.980 | NBN6/BPS6 |
| **NBK6TLS** | 805.970 | NBN6/BPS6 |
| **NBK8** | 961.548 | NBN8/BPS8 |
| **NBK8TL** | 801.758 | NBN8/BPS8 |
| **NBK8TLS** | 805.971 | NBN8/BPS8 |
| **NBK10** | 961.570 | NBN10/BPS10/ERN16 |
| **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

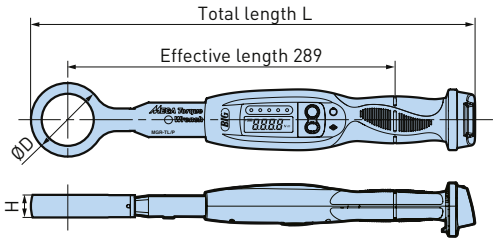



| Model | Article No. | Ød | L | Body |
|---|---|---|---|---|
| **FK31-33** | 806.462 | 31 - 33 | 153 | HMC12J |
| **FK45-50L** | 801.037 | 43 - 50 | 242 | HMC16S / HMC20S / ERN32 |
| **FK52-55** | 962.294 | 52 - 55 | 220 | HMC25S (BBT30) |
| **FK58-62** | 962.291 | 58 - 62 | 240 | HMC20 / HMC25 (BBT50 / 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. |
|---|---|
| MGR-TL/P. | 807.594 |

1. Weight does not include adapter and battery.

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<br>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.

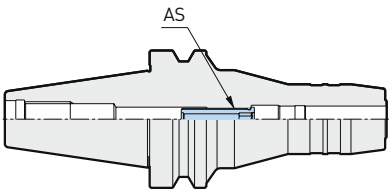
| Model | MGR-TL/P |
|---|---|
| Torque setting range | 5-50Nm |
| Minimum read | 0.01Nm |
| Display | 7 LCD segments -> 4 digits, numerical display<br>High precision LED indicator five-level display |
| Basic functions | Battery level display (three levels)<br>Peak hold function<br>Auto Power OFF (1 hour)<br>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. |
|---|---|
| HDA4-0515W | 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



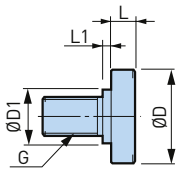



Fig. 1

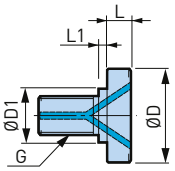



Fig. 2

| 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)

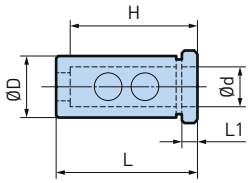


| Model | Article No. |
|---|---|
| FS6.5LC | 805.532 |
| FS13LC | 805.446 |

# 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

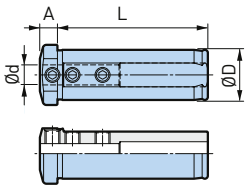



Fig. 1

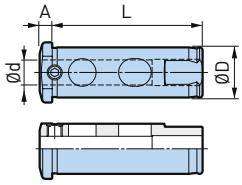



Fig. 2

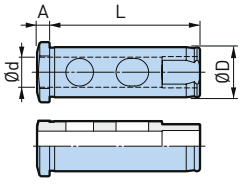



Fig. 3

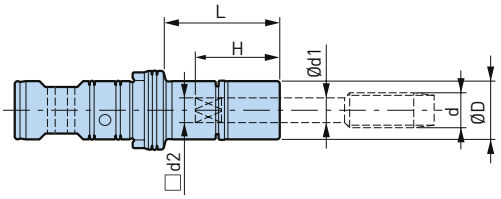
| Model | Article No. | Fig. | Ød | ØD | L | A |
|---|---|---|---|---|---|---|
| BSLA20-6 | 805.728 | 1 | 6 | 20 | 60 | 5 |
| BSLA20-8 | 805.733 | 1 | 8 | 20 | 60 | 7 |
| BSLA20-10 | 805.734 | 2 | 10 | 20 | 60 | 5 |
| BSLA20-12 | 805.735 | 3 | 12 | 20 | 60 | 5 |
| BSLA20-16 | 805.736 | 3 | 16 | 20 | 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

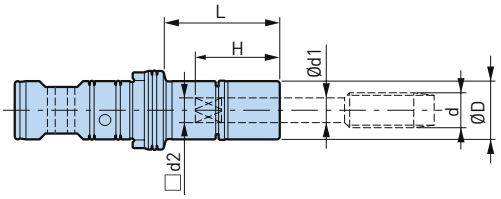
| MGT Nuts | MEGA Wrenches |
|---|---|
|  |  |
| ▶ 382 | ▶ 368 |

# 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

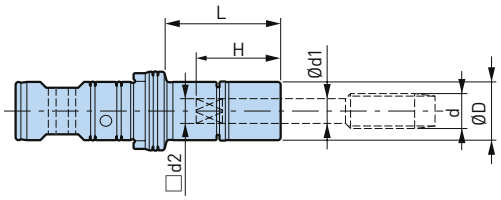
| MGT Nuts | MEGA Wrenches |
|---|---|
|  |  |
| ▶ 382 | ▶ 368 |

# 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

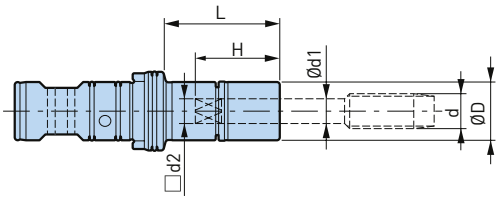
| MGT Nuts | MEGA Wrenches |
|---|---|
|  |  |
| ▶ 382 | ▶ 368 |

# 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**

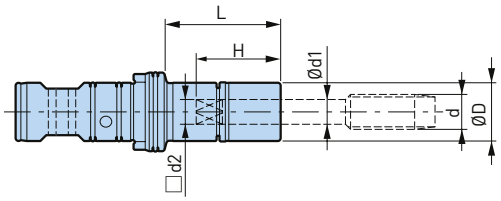
| MGT Nuts | MEGA Wrenches |
|---|---|
|  |  |
| ▶ 382 | ▶ 368 |

# 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 |

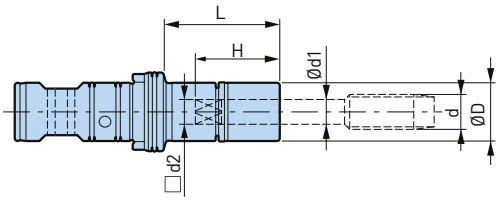
1. Nut is included.
2. MEGA wrench is to be ordered separately.

# 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 |

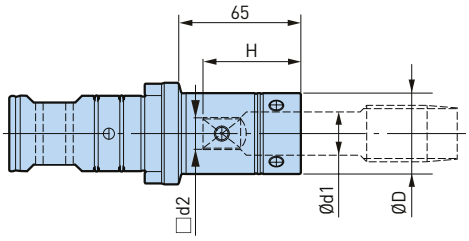
1. Nut is included.
2. MEGA wrench is to be ordered separately.

# 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**

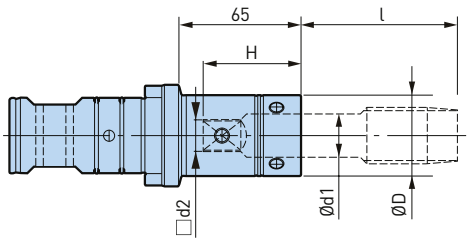
| Adjusting Screw for MGT36 | Side Lock Bolt Set for MGT36 | MGT Set Screw | Synchro Adjuster | O-Ring Set |
|---|---|---|---|---|
|  |  |  |  |  |
| ▶ 383 | ▶ 383 | ▶ 382 | ▶ 382 | ▶ 382 |

# 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

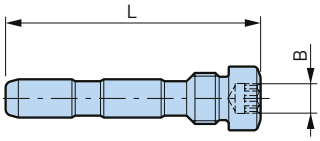
| Adjusting Screw for MGT36 | Side Lock Bolt Set for MGT36 | MGT Set Screw | Synchro Adjuster | O-Ring Set |
|---|---|---|---|---|
|  |  |  |  |  |
| ▶ 383 | ▶ 383 | ▶ 382 | ▶ 382 | ▶ 382 |

# 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.





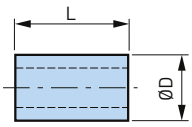



Fig. 1

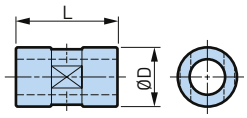



Fig. 2

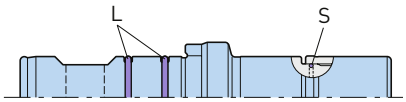
| Model | Article No. | Fig. | ØD | L | Tap Holder |
|---|---|---|---|---|---|
| MGT6SA-5P | 963.721 | 1 | 9 | 11 | MGT 6-d- |
| MGT12SA-5P | 963.722 | 1 | 10 | 15 | MGT 12-d- |
| MGT20SA-5P | 963.723 | 1 | 14 | 24 | MGT 20-d- |
| MGT36SA-5P | 801.474 | 1 | 20 | 32 | MGT 36-d- |
| MGT6SAH * | 807.197 | 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.



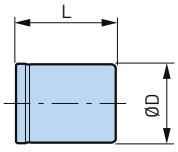



| Model | Article No. | Nut. Dia | Tap Holder |
|---|---|---|---|
| MGT6OR | 801.501 | Ø 16 | MGT 6-d- |
| MGT12OR | 801.420 | Ø 20 | MGT 12-d- |
| MGT20OR | 801.451 | Ø 30 | MGT 20-d- |
| MGT36OR | 801.470 | - | MGT 36-d- |

## MGT Nuts

For MGT6, MGT12, MGT20
Exclusive nut for MEGA synchro tapping holder.



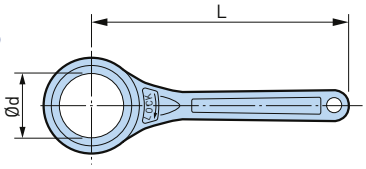



| Model | Article No. | ØD | L | Tap Holder |
|---|---|---|---|---|
| MGN6T | 963.700 | 16 | 19 | MGT 6-d- |
| MGN12T | 963.702 | 20 | 21 | MGT 12-d- |
| MGN20T | 963.703 | 30 | 24 | MGT 20-d- |

## MEGA Wrench

For MGT3, MGT6, MGT12, MGT20



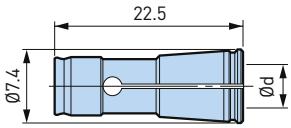



| Model | Article No. | Ød | L | Tap Holder |
|---|---|---|---|---|
| MGR12 | 969.450 | 12 | 90 | MGT 3 |
| MGR16 | 969.446 | 16 | 90 | MGT 6-d- |
| MGR20L | 969.447 | 20 | 160 | MGT12-06,-07,-08,-09 |
| MGR30L | 969.448 | 30 | 220 | MGT12-10 / MGT20-d |

## 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 |

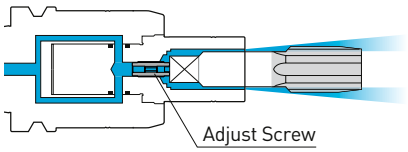
1. Other sizes available. Please refer to micro collet.



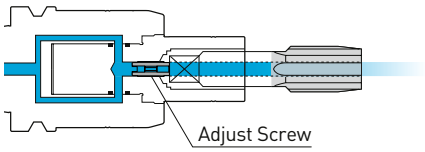
## Adjusting Screw for MGT36

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.

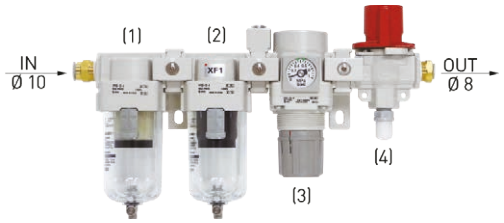


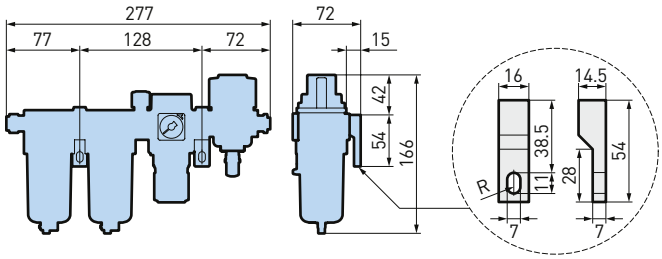
| | | Tap Holder Model | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Set Model | Article No. | DIN | | | JIS | | | Bolt size |
| MGT36SL6 | 801.476 | - | | | MGT36 | -M20 | -65 | M6 x 8L (x4) + M6 x 10L (x2) |
| | | - | | | | -M22 | -65 | |
| | | - | | | | -P1/2 | -65 | |
| MGT36SL8 | 801.477 | MGT36 | -180145-65 | | | -M24 | -65 | M8 x 10L (x4) + M8 x 12L (x2) |
| | | | -200160-65 | | | -M27 | -65 | |
| | | | -220180-65 | | | -M30 | -65 | |
| | | - | | | | -P3/4 | -65 | |
| MGT36SL10 | 801.475 | MGT36 | -250200-65 | | MGT36 | -M33 | -65 | M10 x 12L (x4) + M10 x 14L (x2) |
| | | | -280220-65 | | | -M36 | -65 | |
| | | - | | | | -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).



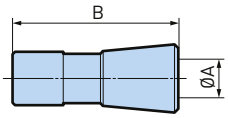




| Model | Article No. |
|---|---|
| XF1 | 962.661 |

## 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

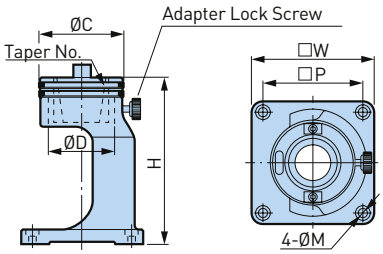


| Model | Article No. | Clamping Screw | Contents of Set | Body |
|---|---|---|---|---|
| H06FSA | 978.912 | M6 P0.75 | 4.5mm x 1P, 5mm x 1P | SSL6 |
| H06FSB | 802.330 | M6 P0.75 | 4.5mm x 1P, 6mm x 1P | SSL8, 10 |
| H08FSA | 979.976 | M8 P0.75 | 6mm x 2P, 8mm x 1P | SSL12 |
| H08FSB | 804.783 | M8 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 |

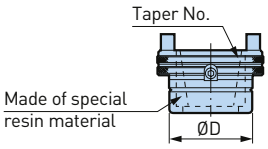
# Tooling Mate

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.



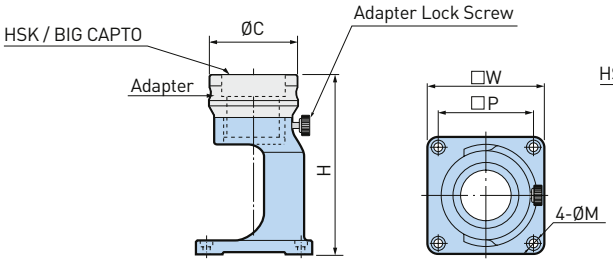



Fig. 1

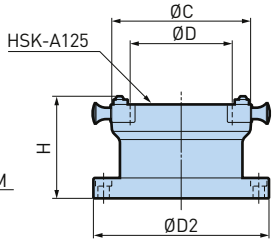
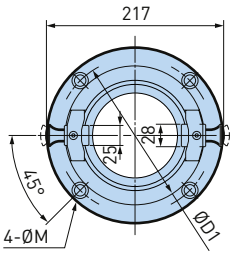



Fig. 2

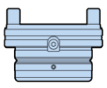



| Model | Article No. | Fig. | HSK No. | BIG CAPTO | ØD | ØD1 | ØD2 | ØC | ØM | H | W | P | Adapter | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TMS40-32R | 961.339 | 1 | 32 | C3 | - | - | - | 76 | 7 | 165 | 110 | 90 | TMA40-32R | 3.10 |
| TMS40-40R | 961.342 | 1 | 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

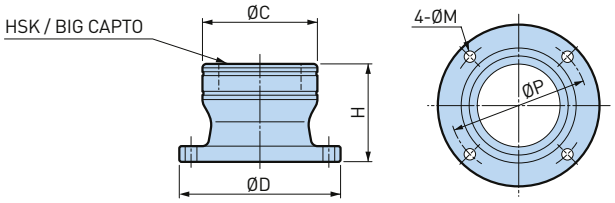


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## Kombi Grip

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 |

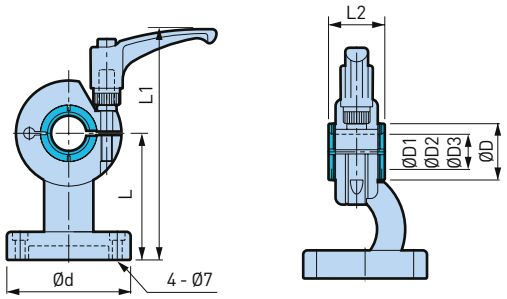
A.8

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.



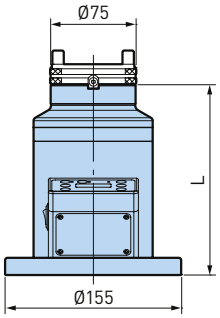



Fig. 1

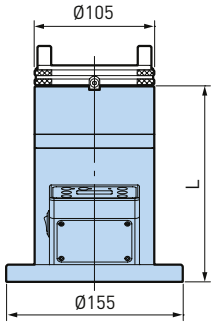
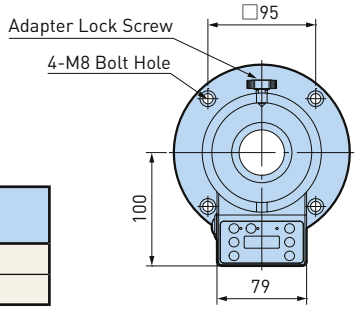



Fig. 2

- Torque values of all BIG collet chucks are presetted.
- Notification by buzzer near the correct torque.
- USER-Mode allows setting of desired torque value.

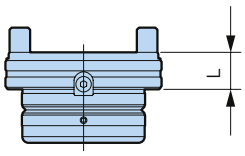



| Model | Article No. | Fig. | L | Adapter | Nm range | Input Voltage |
|---|---|---|---|---|---|---|
| TF-40 | 806.737 | 1 | 167 | TMA40 | 4 - 80 Nm | 100 - 240V |
| TF-50 | 806.738 | 2 | 172 | TMA50 | 4 - 80 Nm | 100 - 240V |

1. Adapter is to be ordered seperately.

## Tooling Mate / Torque Fit Adapter

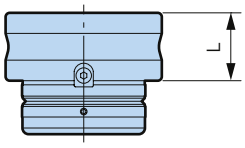
For BT/DV




| 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

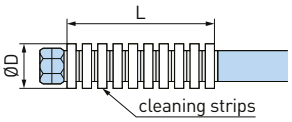


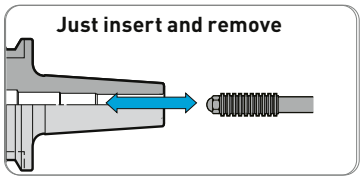

| Model | Article No. | HSK No. | BIG CAPTO | L |
|---|---|---|---|---|
| TMA40-32R | 802.948 | 32 | C3 | 33 |
| TMA40-40R | 802.949 | 40 | C4 | 33 |
| TMA40-50R | 802.950 | 50 | C5 | 33 |
| TMA40-63R | 972.331 | 63 | C6 | 40 |
| TMA50-63R | 100487.001.0 | 63 | C6 | 33 |
| TMA50-80R | 802.946 | 80 | 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 |

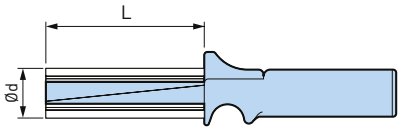
1. ØD is the inner bore of correspondent tool holders.

## 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 |

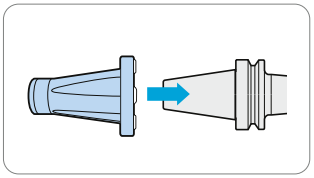
For ER Collet Chuck

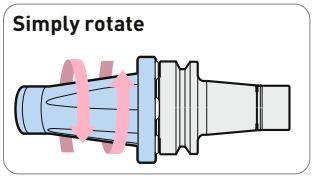
| Model | Article No. | Suitable for model |
|---|---|---|
| SC-MER11 | 967.810 | MEGA ER 11 |
| SC-MER16 | 967.811 | MEGA ER 16 |
| SC-MER20 | 967.812 | MEGA ER 20 |
| SC-MER25 | 967.813 | MEGA ER 25 |
| SC-MER32 | 967.814 | MEGA ER 32 |

# 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.







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

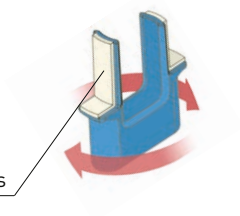
| Model | Article No. | Taper |
|---|---|---|
| SC-HSK25E | 979.995 | HSK-E25 |
| SC-HSK32E | 979.996 | HSK-E32 |
| SC-HSK40E | 979.998 | HSK-E40 |
| SC-HSK50E | 802.801 | HSK-E50 |

For HSK-F spindle

| Model | Article No. | Taper |
|---|---|---|
| SC-HSK63F | - | HSK-F63 |

# Spindle Cleaners





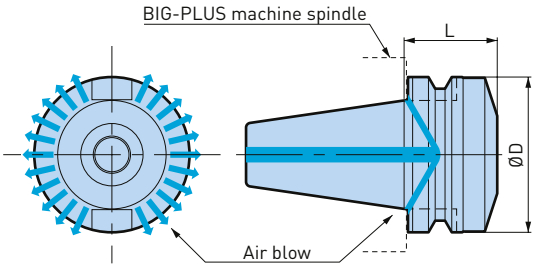

For BIG CAPTO

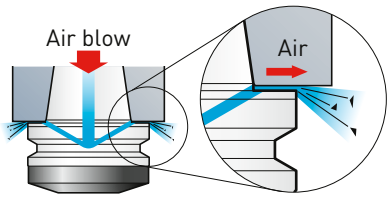
| Model | Article No. | BIG CAPTO |
|---|---|---|
| SC-C3 | 973.194 | C3 |
| SC-C4 | 973.195 | C4 |
| SC-C5 | 973.196 | C5 |
| SC-C6 | 973.197 | C6 |
| SC-C8 | 973.198 | C8 |

## Flange Face Cleaner (BBT)

Cleans the spindle flange face.





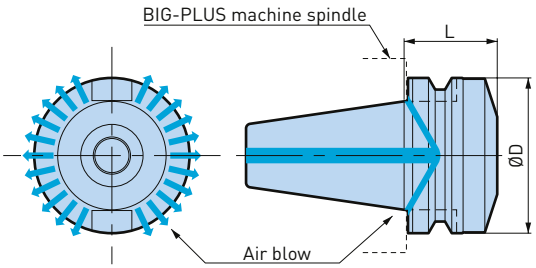



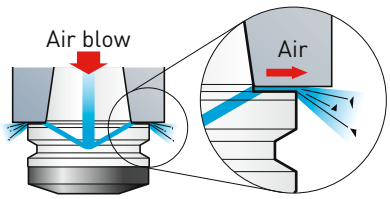

A.8

| 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)



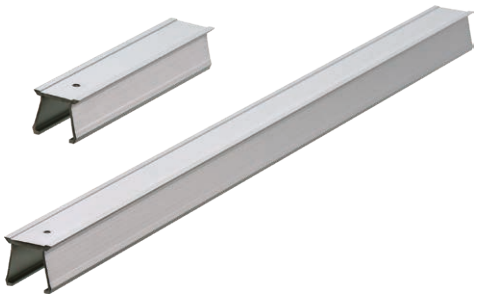



| Model | Article No. | ØD | L |
|---|---|---|---|
| SDV40-ASC-40T | 805.647 | 45 | 40 |
| SDV50-ASC-60T | 801.670 | 70 | 60 |

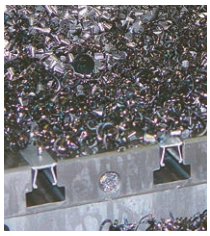
# T-Slot Clean

Improve efficiency of table cleaning. No T-slots packed with swarf anymore!

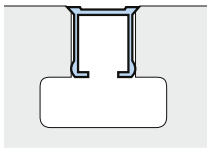




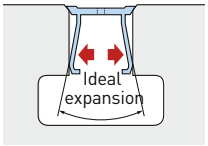
Before



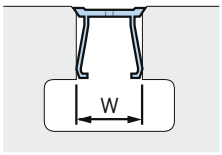
After

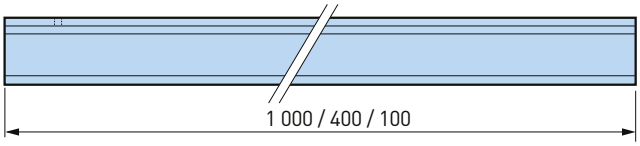


Other manufacturer




BIG DAISHOWA




Due to the uniquely angled shape of the table T-shot contact part, slipout is prevented and chips are completely shut out.

| 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 |

# 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.



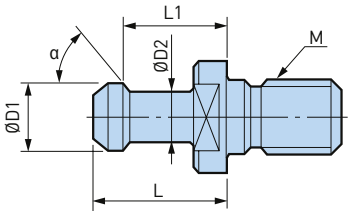


Fig. 1

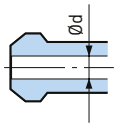


Fig. 2

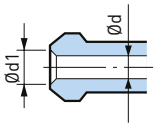


Fig. 3

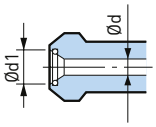


Fig. 4

| 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-1MGH11A | - | 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**

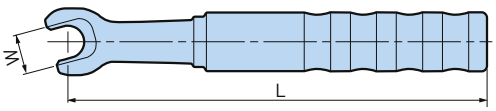
| Model | Article No. | Taper | Fig. | Ød | Ød1 | ØD1 | ØD2 | L | L1 | α | standard | Techn. data / special features |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50PH | 978.965 | ISO 50 | 2 | 10 | - | 28 | 21 | 34 | 25 | 75 | JIS | JIS 50 with bore |
| 50PH2 | 800.468 | ISO 50 | 2 | 10 | - | 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 | JIS | 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.



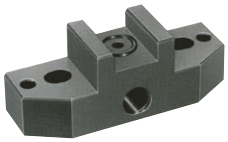
## Pullstud Wrenches






| 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

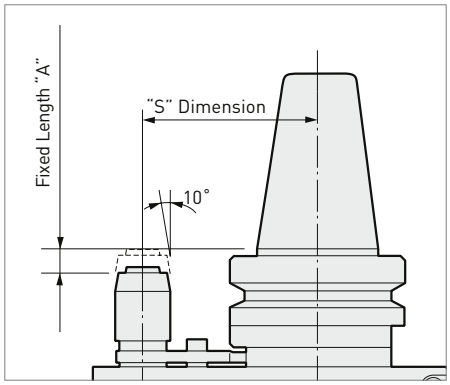



Fig. 1

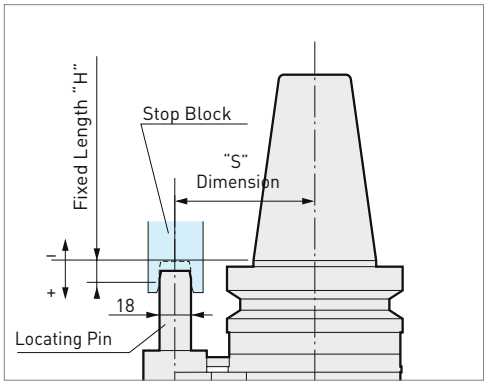



Fig. 2

| 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 | | |

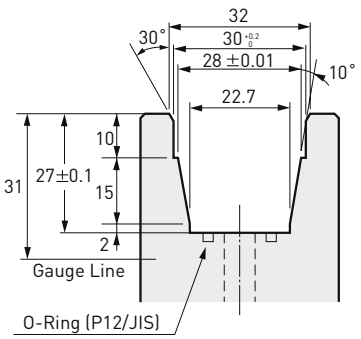
## 2. Stop Block Dimensions

Please order a Stop Block from the machine tool builder. Refer to the following diagrams for the proper Stop Block groove dimensions.

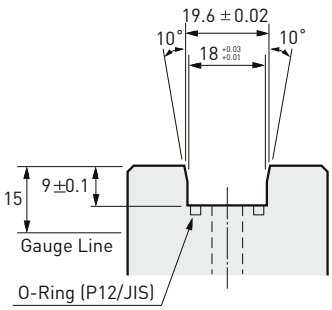


Stop Block

**For "S" = 110 Angle Head**

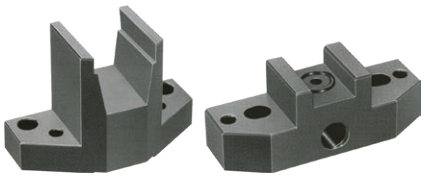



**Others**



# 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.



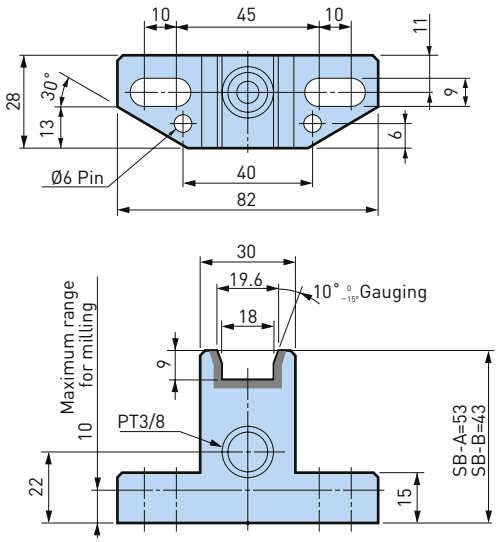



Fig. 1

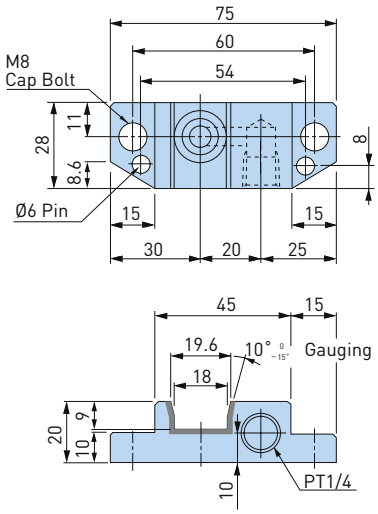



Fig. 2

| 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.

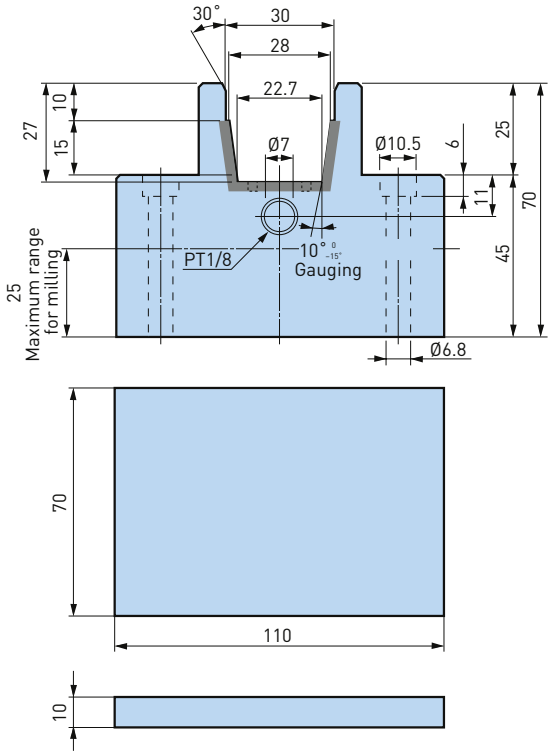



Fig. 3

# Rough Boring Heads


| | |
|---|---|
| MW Rough Boring Heads | 398 |
| SW Rough Boring Heads | 399 |
| SW Cartridge | 401 |
| SW Smart Damper Rough Boring Heads | 403 |
| Large Diameter Rough Boring Tools | 405 |
| Smart Damper Large Diameter Rough Boring Tools | 407 |

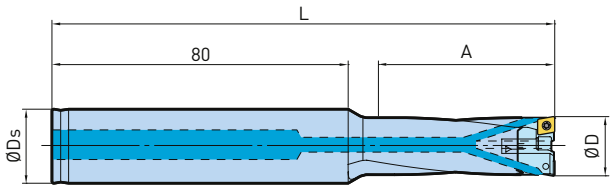


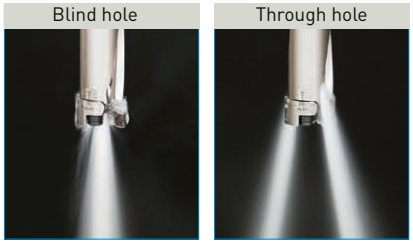

**Please use the model name for inquiries and orders.**
(e.g. BBT30-MEGA3S-45T)

# 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 ▶ 464

**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 |

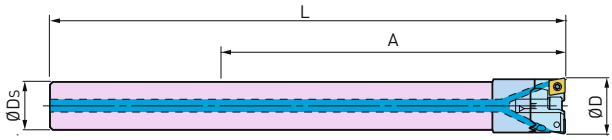
- Generally for use with center through coolant.
  Cutting speed must be lowered for external oil supply.
- Blind hole processing may damage inserts and tools, as cutting chips clog at the back of the hole.
- Remove cutting chips at the small bottom of the hole several times for processing.



# 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.

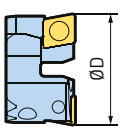
| ØD | Model | Cartridge | ØDs | L | A | Weight (kg) |
|---|---|---|---|---|---|---|
| 16 - 19 | ST14W-MW16-110 | MW1619E | 14 | 151 | 110 | 0.27 |
| 18 - 21 | ST16W-MW18-115 | MW1821E | 16 | 172 | 115 | 0.42 |

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 ▶ 464

## Cartridge MW






| ØD | Model | Insert | Weight (kg) |
|---|---|---|---|
| 16 - 19 | MW1619E | MW 04 | 0.01 |
| 18 - 21 | MW1821E | MW 04 | 0.01 |

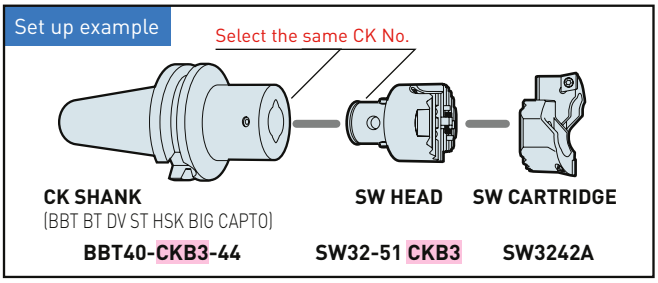
1. Consisting of two insert holders, clamping screws and wrench.
2. Inserts are to be ordered separately.

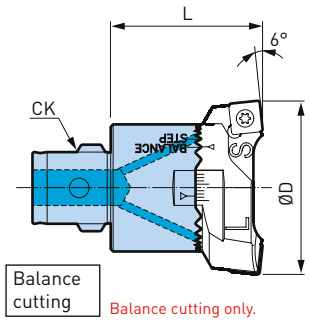
▶ 445 ▶ 449

# SW Rough Boring Heads, Ø 20 - 203







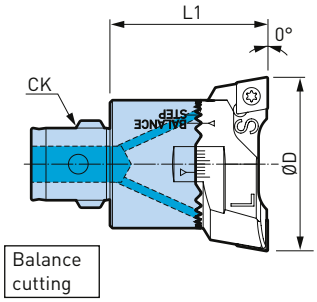



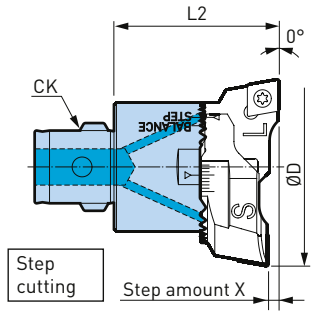

**For Type SC**

| 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 ▶ 464




**For Type CC**

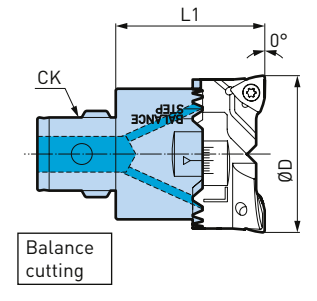
| ØD | Head Model | CK | Cartridge | L1 | L2 | X | Weight (kg) |
|---|---|---|---|---|---|---|---|
| 20 - 26 | SW20-31CKB1 | CK1 | SW2026E | 32.5 | 32.6 | 0.2 | 0.06 |
| 25 - 31 | | | SW2531E | | | | |
| 25 - 33 | SW25-40CKB2 | CK2 | SW2533E | 35.5 | 35.6 | | 0.10 |
| 32 - 40 | | | SW3240E | | | | |
| 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* | | | | |

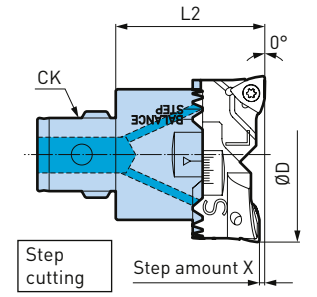
1. Cartridges and inserts are to be ordered separately.
2. The diameter range is the value when nose radius 0.4 is used for insert SC/CC06, and nose radius 0.8 for insert SC/CC09 and SC/CC12.

- 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 ▶ 464






**For Type ZN**

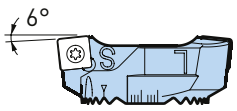
| ØD | Head Model | CK | Cartridge | L1 | L2 | X | Weight (kg) |
|---|---|---|---|---|---|---|---|
| 32 - 42 | SW32-51CKB3 | CK3 | SW3242N | 40 | 40.1 | 0.2 | 0.17 |
| 41 - 51 | | | SW4151N | | | | |
| 41 - 54 | SW41-66CKB4 | CK4 | SW4154N | 47 | 47.2 | 0.4 | 0.33 |
| 53 - 66 | | | SW5366N | | | | |
| 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 ▶ 464

## 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<br>SW98-153CKB7 | | |
| 125 - 153 | SW125153A | 1.06 | | | |
| 148 - 176 | SW148176A | 1.05 | SW148-203CKB6<br>SW148-203CKB7 | | |
| 175 - 203 | SW175203A | 1.28 | | | |

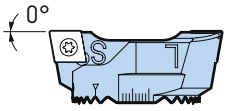
Each Cartridge model consists of a pair of cartridges and an insert clamping wrench.

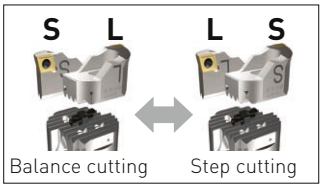
1. Insert is to be ordered separately.
2. Step cutting is not available.
3. The diameter range is the value when nose radius 0.4 is used for insert SC06, and nose radius 0.8 for insert SC09 and SC12.
4. The insert clamping screw set (optional) contains 10 screws and 1 wrench.

▶ 445 ▶ 449 Spare Parts ▶ 464

## 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<br>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<br>SW148-203CKB7 | CC_1204 | |
| | SW148176EL | 1.05 | | CC_1605 | |
| 175 - 203 | SW175203E | 1.25 | | CC_1204 | |
| | SW175203EL | 1.25 | | CC_1605 | |

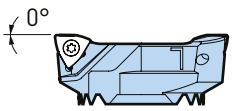
Each Cartridge model consists of a pair of cartridges and an insert clamping wrench.

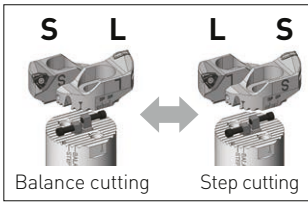
▶ 446 ▶ 449

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.

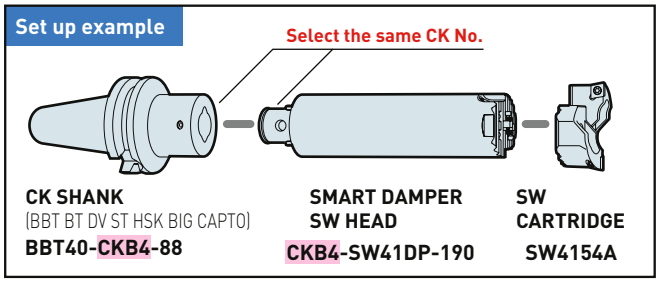
▶ 447 ▶ 449

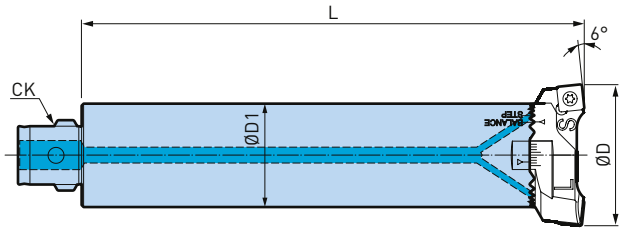
1. Insert is to be ordered separately.
2. The insert clamping screw set (optional) contains 10 screws and 1 wrench.

# SW Smart Damper Rough Boring Heads, Ø 20 - 203

SW rough boring head integrated with the Smart Damper.





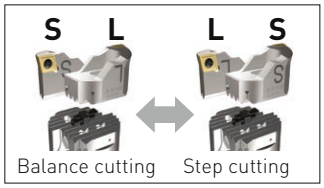

Balance cutting

**For Type SC**

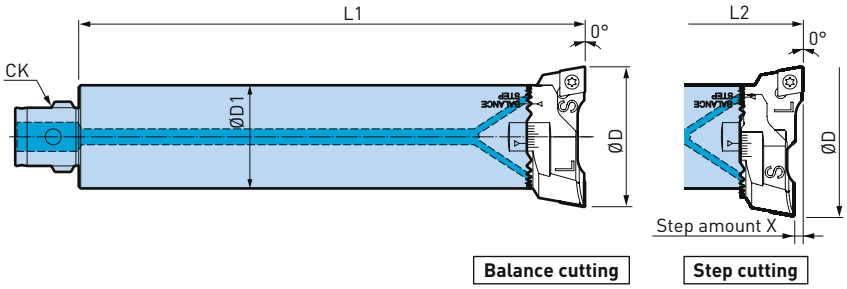
| ØD | Head Model | CK | Cartridge Model | Insert Model | ØD1 | L | Weight (kg) |
|---|---|---|---|---|---|---|---|
| 20 - 26 | CK1-SW20DP-105* | CK1 | SW2026A | SC06 | 19 | 105 | 0.30 |
| 25 - 31 | | | SW2531A | | | | |
| 25 - 33 | CK2-SW25DP-130* | CK2 | SW2533A | | 24 | 130 | 0.60 |
| 32 - 40 | | | 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 ▶ 464




**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.

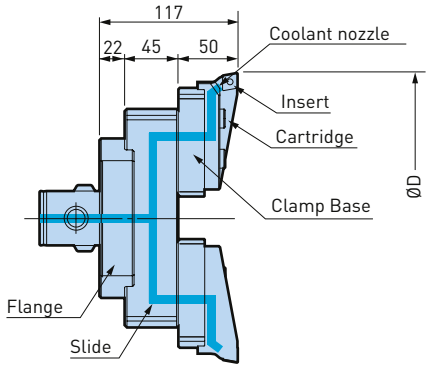
Spare Parts ▶ 464

# 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.)

▶ 445, 447
▶ 449
Spare Parts ▶ 467



## SQUARE TOOLHOLDER



· □25 square tool for lathe is clamped.

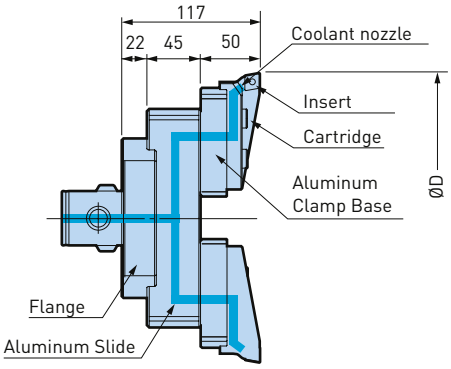
| Model | Diameter Ø | Slide model | Square size | Weight (kg) |
|---|---|---|---|---|
| BFN95 | 250 - 830 | SLN200-270(AL) or longer | □25 | 2.42 |

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.



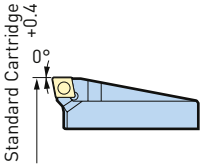



| ØD | Flange<br>C K7 | | Aluminum Slide | | Aluminum Clamp Base (2-piece set) | | Cartridge (2-piece set) | | Insert |
|---|---|---|---|---|---|---|---|---|---|
| | Model | Weight (kg) | Model | Weight (kg) | Model | Weight (kg) | Model | Weight (kg) | |
| 200 - 270 | FLN135 (FLN135/90) | 2.85 | SLN200-270AL | 1.50 | CB-TW200-AL | 0.80 | TW200A<br>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<br>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<br>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.)

▶ 445, 447
▶ 449
Spare Parts ▶ 467

## E Type Cartridge for Step Cutting




· 0.4mm higher cartridge enables larger depth of cut.

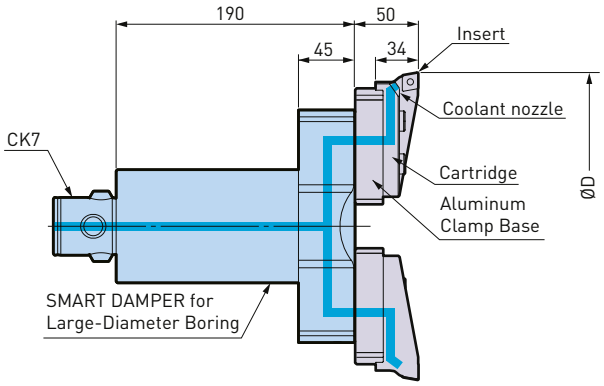
| Model | Insert |
|---|---|
| TW200E-SC | CC12 |
| TW200EL-SC | CC16 |

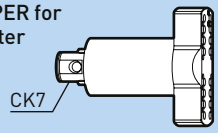
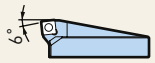
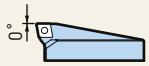
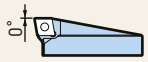
Offered by 1 pce.

# Smart Damper Large Diameter Rough Boring Tools, Ø 200 - 270

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 |
| | | | | | TW200E |   | 0.69 | CC12 |
| | | | | | TW200EL |   | 0.68 | CC16 |

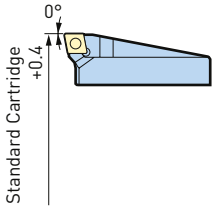
1. Clamp Bases and Cartridges are sold as a two-piece set. The weight in the table is that of 2 pieces.
2. Insert is to be ordered separately.
3. Cutting edge and drive keys are aligned in the same direction.

▶ 445, 447
▶ 449
Spare Parts ▶ 467

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** | **410** |
| **EWE Digital Fine Boring Heads** | **411** |
| **EWN Smart Damper Fine Boring Heads** | **412** |
| **Insert Holders for EWN/EWE** | **413** |
| **EWB Balanced Fine Boring Heads** | **414** |
| **Large Diameter Fine Boring Tools** | **415** |
| **EWN Smart Damper Large Diameter Fine Boring Tools** | **417** |



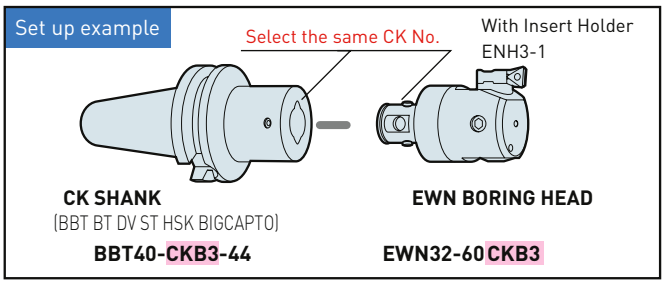

**Please use the model name for inquiries and orders.**
(e.g. BBT30-MEGA3S-45T)

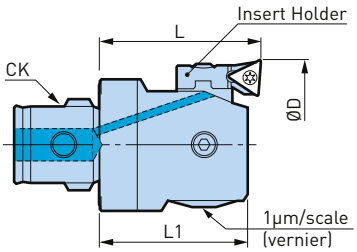
# EWN Fine Boring Heads, Ø 20 - 203

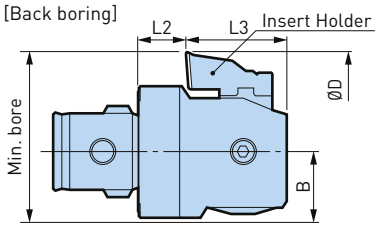
1μm vernier is added to the easy-to-read scale of 0.01mm/Ø increments.

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 | 32.5 | 29.5 | - | 10.5 | 19 | 10 | 0.07 | TP08 |
| | | ENH1-2 | 25 - 31 | | | 30 - 31 | | | | | |
| | | ENH1-3 | 30 - 36 | | | 30 - 36 | | | | | |
| EWN25-47CKB2 | CK2 | ENH2-1 | 25 - 33 | 35.5 | 32.5 | - | 11.5 | 21 | 12.5 | 0.12 | |
| | | ENH2-2 | 32 - 40 | | | 36 - 40 | | | | | |
| | | ENH2-3 | 39 - 47 | | | 39 - 47 | | | | | |
| EWN32-60CKB3 | CK3 | ENH3-1 | 32 - 42 | 40 | 35 | - | 10 | 25 | 16 | 0.21 | |
| | | ENH3-2 | 41 - 51 | | | 46 - 51 | | | | | |
| | | ENH3-3 | 50 - 60 | | | 50 - 60 | | | | | |
| EWN41-74CKB4 | CK4 | ENH4-1 | 41 - 54 | 47 | 43 | - | 14 | 29 | 20 | 0.40 | TC11 |
| | | ENH4-2 | 50 - 63 | | | 53 - 63 | | | | | |
| | | 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.

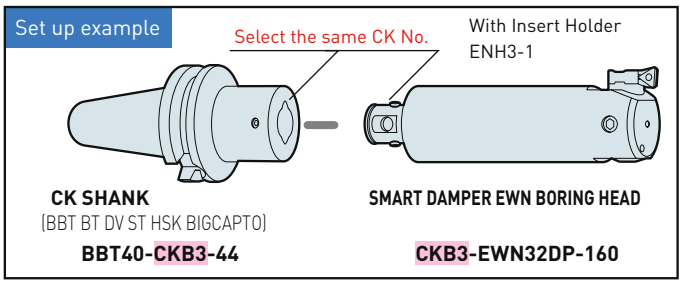
▶ 443, 444 ▶ 449 Spare Parts ▶ 465

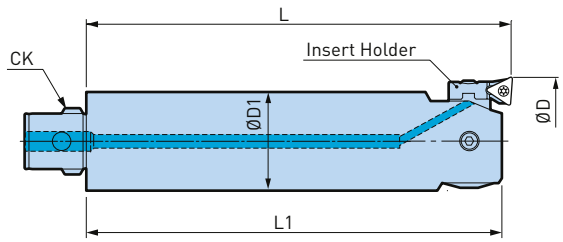
# EWN Smart Damper Fine Boring Head, Ø 20 - 203

Combination of the popular EWN boring head with the Smart Damper.

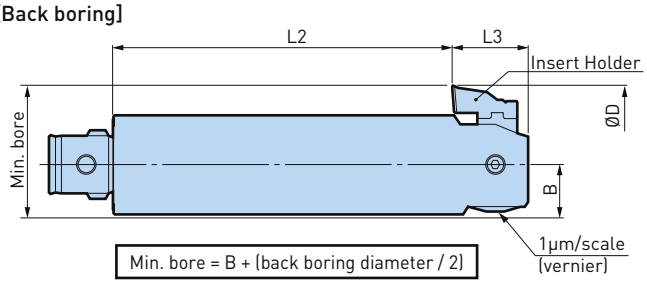
New EWN20DP/25DP (CK1/CK2) products with min. diameters starting from Ø20 are now available.
Capable of even deeper hole boring when combined with a low-deflection CK Carbide Cylindrical Shank.




[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 | 97 | - | 78 | 19 | 10 | 19 | 0.30 | TP08 |
| | | ENH1-2 | 25 - 31 | | | - | | | | | | |
| | | ENH1-3 | 30 - 36 | | | 36 | | | | | | |
| CK2-EWN25DP-125 * | CK2 | ENH2-1 | 25 - 33 | 125 | 122 | - | 101 | 21 | 12.5 | 24 | 0.60 | |
| | | ENH2-2 | 32 - 40 | | | - | | | | | | |
| | | ENH2-3 | 39 - 47 | | | 42 - 47 | | | | | | |
| CKB3-EWN32DP-160 | CK3 | ENH3-1 | 32 - 42 | 160 | 155 | - | 130 | 25 | 16 | 31 | 1.30 | |
| | | ENH3-2 | 41 - 51 | | | - | | | | | | |
| | | ENH3-3 | 50 - 60 | | | 57 - 60 | | | | | | |
| CKB4-EWN41DP-185 | CK4 | ENH4-1 | 41 - 54 | 185 | 181 | - | 152 | 29 | 20 | 39 | 2.30 | TC11 |
| | | ENH4-2 | 50 - 63 | | | 61 - 63 | | | | | | |
| | | ENH4-3 | 61 - 74 | | | 67 - 74 | | | | | | |
| CKB5-EWN53DP-210 | CK5 | ENH5-1 | 53 - 70 | 210 | 206 | - | 172 | 34 | 25.5 | 50 | 4.40 | |
| | | ENH5-2 | 65 - 82 | | | 74 - 82 | | | | | | |
| | | 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.

▶ 443, 444
▶ 449
Spare Parts ▶ 465

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 |

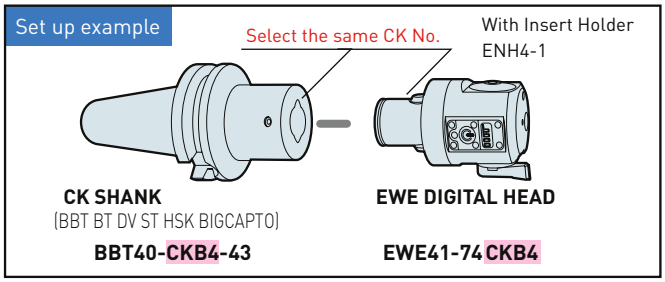
# EWE Digital Fine Boring Heads, Ø 41 - 203

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).

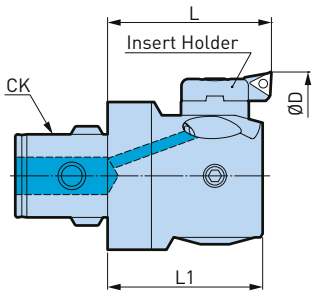


- Employs a system that directly measures the stroke of the adjustment tool career. Accurately displays the actual movement amount.
- Simple operation that allows ON and zero reset with a single button.

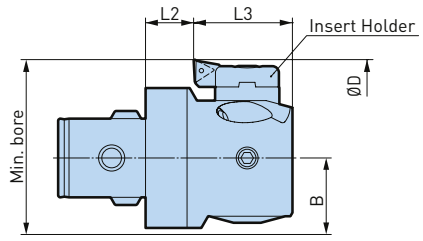





Display Resolution **0.001**mm/Ø




[Back boring]




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 | - | 14 | 29 | 20 | 0.40 | TC11 |
| | | ENH4-2 | 50 - 63 | | | 53 - 63 | | | | | |
| | | 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.

▶ 444
▶ 449
Spare Parts ▶ 466

Wide variety of Insert Holders offers versatility.

Example: For EWE41-74CKB4

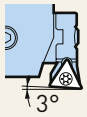
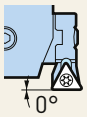
| Standard Accessory | Optional Accessory | |
|---|---|---|
| **ENH4-1**  Ø41 - Ø54 | **ENH4-2**  Ø50 - Ø63 | **ENH4-3**  Ø61 - Ø74 |

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



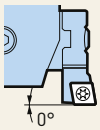
### Insert Holder Type TP/TC

| 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 |
| 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 | | |
| 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 | | |

▶ 449

1. Insert is to be ordered separately.

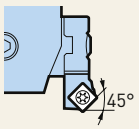
### Insert Holder Type CC

| 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.

▶ 449

### 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 | | | |

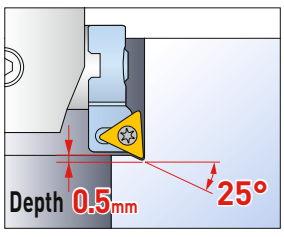
1. Insert is to be ordered separately.

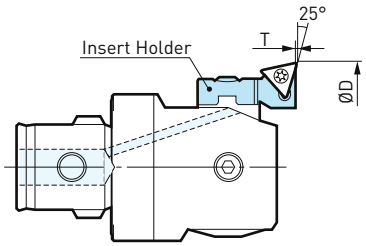
▶ 449

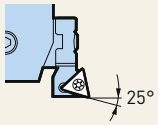
### Insert Holder to undercut corners



· 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 | | |

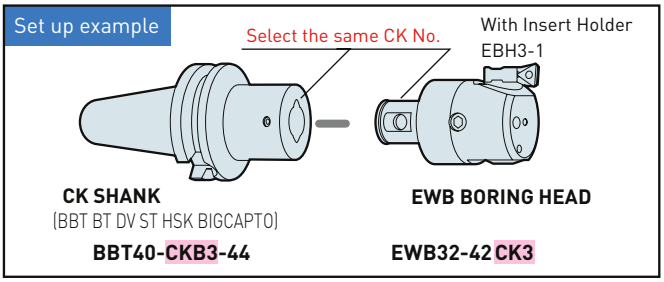
1. T Max. and L are the values when nose radius 0.2 is used for insert TP08, and nose radius 0.4 for insert TC11.
2. Insert is to be ordered separately.

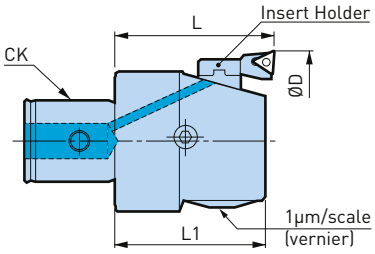
▶ 449

# 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.



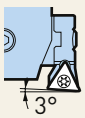




| ØD | Model | CK | L | L1 | Weight (kg) | Insert Holder | Insert |
|---|---|---|---|---|---|---|---|
| 32 - 42 | EWB32-42CK3 | CK3 | 40 | 37 | 0.21 | EBH3-1 | TP08 |
| 41 - 54 | EWB41-54CK4 | CK4 | 47 | 43 | 0.38 | EBH4-1 | TC11 |
| 53 - 70 | EWB53-70CK5 | CK5 | 57 | 53 | 0.77 | EBH5-1 | TC11 |
| 68 - 88 | EWB68-88CK6 | CK6 | 71 | 67 | 1.65 | EBH6-1 | TC11 |
| 85 - 105 | EWB85-105CK6 | CK6 | 71 | 67 | 1.69 | EBH6-1 | TC11 |

1. EWB boring heads will be delivered with assembled insert holder.
2. Inserts are not included.

▶ 443, 444 ▶ 449 Spare Parts ▶ 466

## 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<br>EWB85-105CK6 | | |

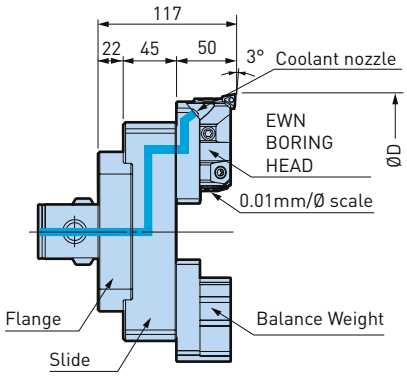


· EWB Boring Heads are provided with an Insert Holder.
For replacement, order using the above model numbers.

# 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.





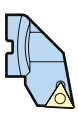
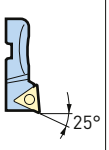
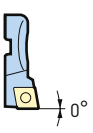
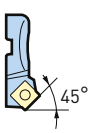

| ØD | Flange<br>CK7 | | Slide | | EWN BORING HEAD | | Balance Weight<br>Weights can be adjusted according to the diameter. | | Insert |
|---|---|---|---|---|---|---|---|---|---|
| | Model | Weight (kg) | Model | Weight (kg) | Model | Weight (kg) | Model | Weight (kg) | |
| 200 - 270 | FLN135 (FLN135/90) | 2.85 | SLN200-270 | 3.99 | EWN200<br>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.)

▶ 444
▶ 449
Spare Parts ▶ 467

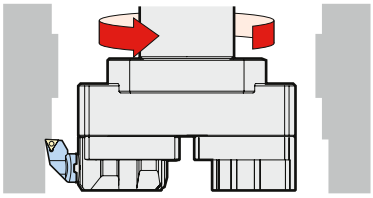
B.2

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

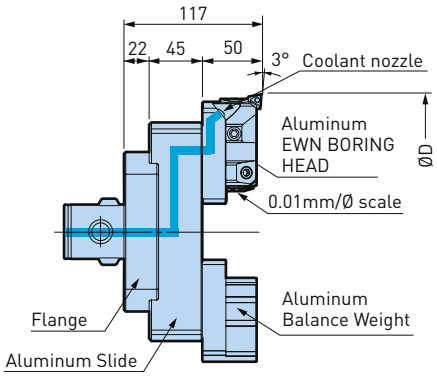


* ENH7-2, 7-3 only can be used.

# 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.



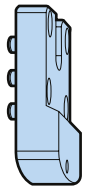



| ØD | Flange<br>C K7 | | Aluminum Slide | | Aluminum EWN BORING HEAD | | Aluminum Balance Weight<br>Weights can be adjusted according to the diameter. | | Insert |
|---|---|---|---|---|---|---|---|---|---|
| | Model | Weight (kg) | Model | Weight (kg) | Model | Weight (kg) | Model | Weight (kg) | |
| 200 - 270 | FLN135 (FLN135/90) | 2.85 | SLN200-270AL | 1.50 | EWN200AL<br>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.)

▶ 444
▶ 449
Spare Parts ▶ 467

## Simple Balance Weight



· Low-cost balance weights are also available.
Use under Vc=800m/min.

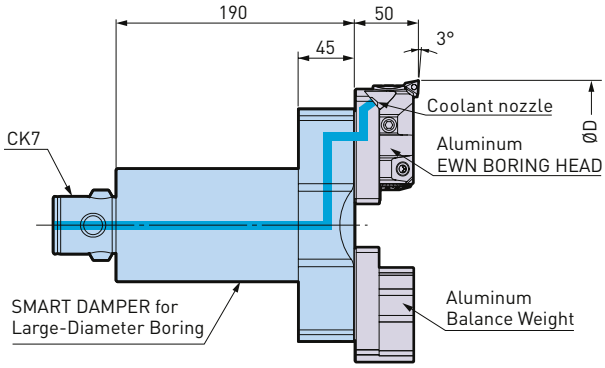
| Model | Weight (kg) | Head |
|---|---|---|
| BWN200PB | 1.44 | EWN200 (Standard type) |
| BWN200PB-AL | 0.80 | EWN200AL (High speed type) |

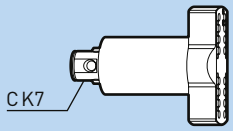
Weights cannot be adjusted.

# EWN Smart Damper Fine Boring Head, Ø 200 - 270

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<br>With ENH7-1 Insert Holder | 0.80 | BWN200FB-AL | 0.80 | TC11 |

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.

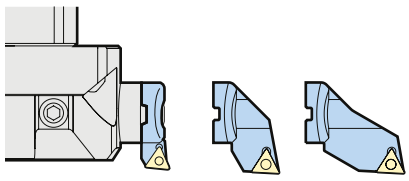
▶ 444 ▶ 449 Spare Parts ▶ 467



## 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**

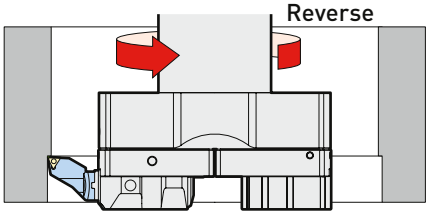


Included as standard ENH7-1

Optional Accessory ENH7-2 +25/Ø

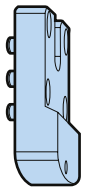
Optional Accessory ENH7-3 +50/Ø

**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 | 420 |
| EWN 2-22/2-32/2-54 Fine Boring Head | 422 |
| EWE 2-32/2-54 Digital Fine Boring Head | 423 |
| EWB Fine Boring Head | 424 |
| Fine Boring Heads, Accessories | 425 |
| EW Micro Head | 431 |
| CK Carbide Cylindrical Shank | 432 |




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

# EWN 04-7/EWN 04-15 Fine Boring Head, Ø 1 - 15

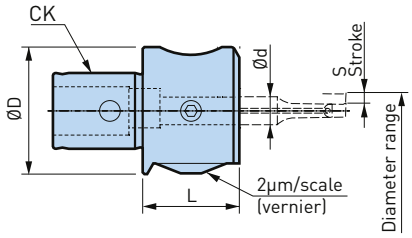
Micro-boring head with outer diameter of Ø18.5mm (EWN04-7).
0.01mm/scale/Ø2µm ultra-precision vernier.



EWN04-7CK1



EWN04-15CK3



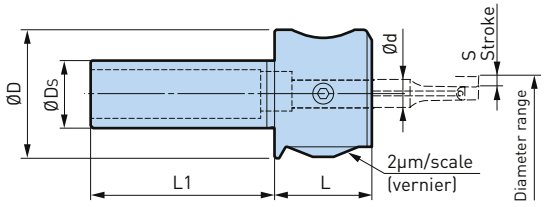

| Model | Diameter range | CK | ØD | Ød | L | S | max. min-1 | Weight (kg) |
|---|---|---|---|---|---|---|---|---|
| EWN04-7CK1 | 1.0 - 7 | CK1 | 18.5 | 4 | 14 | -0.1 - +1.05 | 30,000 | 0.03 |
| EWN04-15CK3 | 1.0 - 15 | CK3 | 30 | 7 | 22 | -0.2 - +2.0 | 20,000 | 0.12 |

1. Cylindrical tool must be ordered separately.

Spare Parts ▶ 465

## 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.

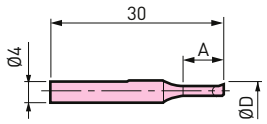
Spare Parts ▶ 465

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



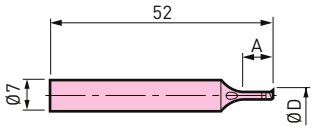



Fig. 1

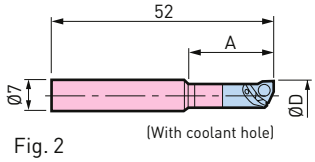



Fig. 2

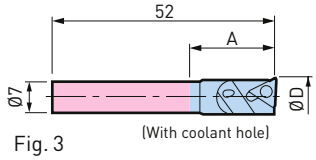


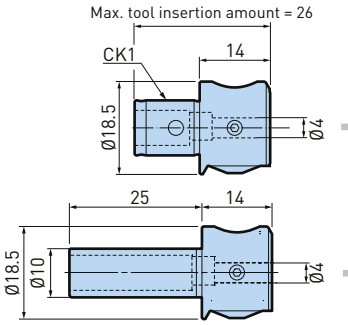

Fig. 3

| 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 |

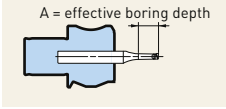
1. Inserts are to be ordered separately.

▶ 442 ▶ 449

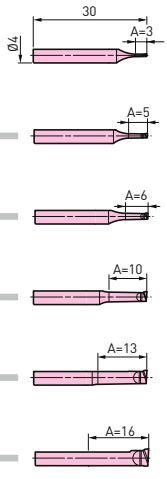
## EWN04-7 Ø1 - 7




Head **EWN04-7**
Stroke -0.1 - +1.05mm




Boring Cutters




**ST4W-EB 1-3**
Ø1.0 - Ø1.5

**ST4W-EB1.5-5**
Ø1.4 - Ø2.0

**ST4W-EB 2-6**
Ø1.9 - Ø3.0

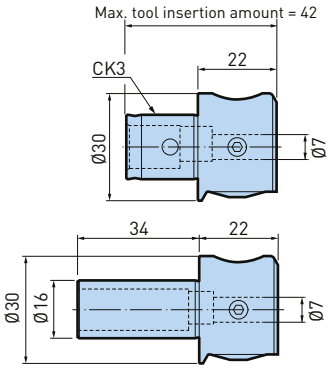
**ST4W-EB 3-10**
Ø2.9 - Ø4.0

**ST4W-EB 4-13**
Ø3.9 - Ø5.0

**ST4W-EB 5-16**
Ø4.9 - Ø7.0

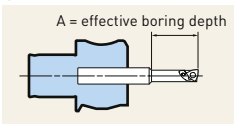
is made of carbide.

## EWN04-15 Ø1 - 15

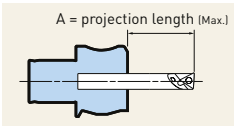



Head **EWN04-15**
Stroke -0.2 - +2.0mm

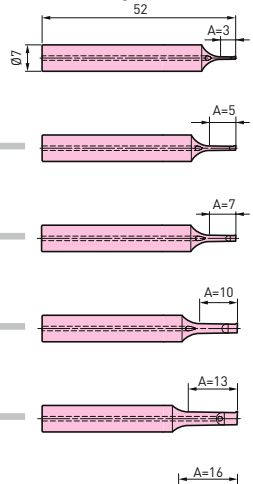
ST7W-EB 1 - EB 7
ST7-REB




ST7W-EB 8 - EB12




Boring Cutters




**ST7W-EB 1-3**
Ø1.0 - Ø1.5

**ST7W-EB1.5-5**
Ø1.4 - Ø2.0

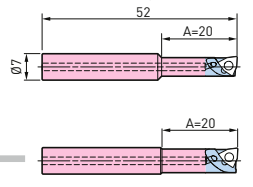
**ST7W-EB 2-7**
Ø1.9 - Ø3.0

**ST7W-EB 3-10**
Ø2.9 - Ø4.0

**ST7W-EB 4-13**
Ø3.9 - Ø5.0

**ST7W-EB 5-16**
Ø4.9 - Ø6.0

WC 02 insert type

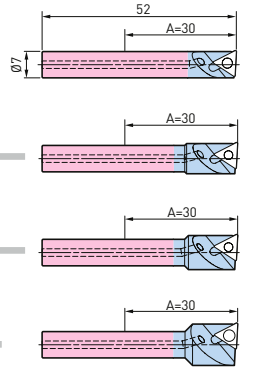



**ST7W-EB 6-20**
Ø5.8 - Ø7.0

**ST7W-EB 7-20**
Ø6.8 - Ø8.0

**WC02**

TP 07 insert type




**ST7W-EB 8-20**
Ø7.8 - Ø9.0

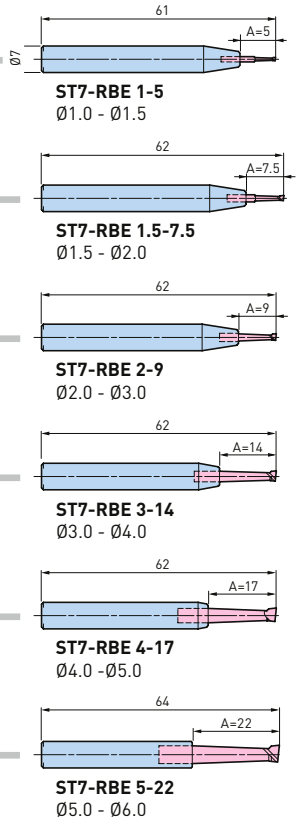
**TP07**

**ST7W-EB 9-20**
Ø8.8 - Ø10.0

**ST7W-EB10-20**
Ø9.8 - Ø12.0

**ST7W-EB12-30**
Ø11.8 - Ø15.0

JIG BORING BIT




**ST7-RBE 1-5**
Ø1.0 - Ø1.5

**ST7-RBE 1.5-7.5**
Ø1.5 - Ø2.0

**ST7-RBE 2-9**
Ø2.0 - Ø3.0

**ST7-RBE 3-14**
Ø3.0 - Ø4.0

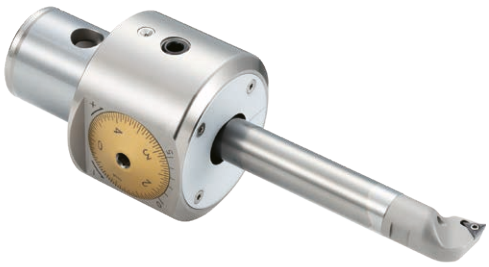
**ST7-RBE 4-17**
Ø4.0 -Ø5.0

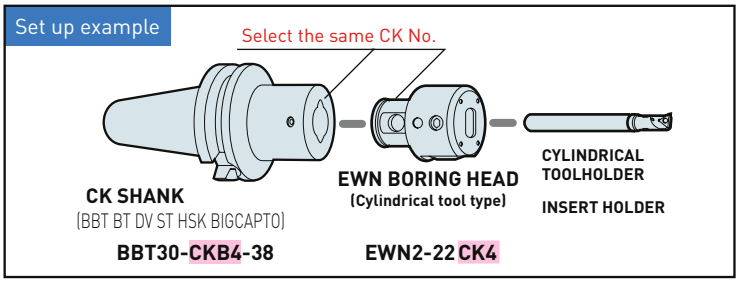
**ST7-RBE 5-22**
Ø5.0 - Ø6.0

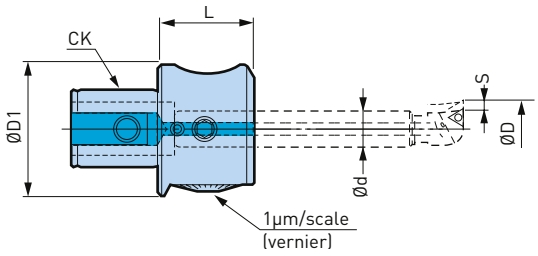
B.3

# 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) .

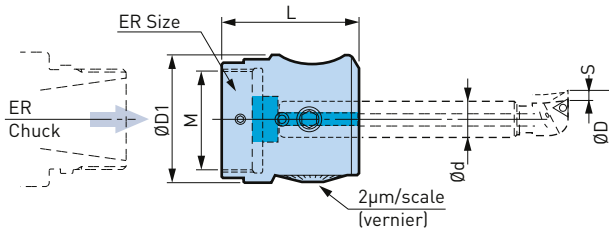
Spare Parts ▶ 465

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.

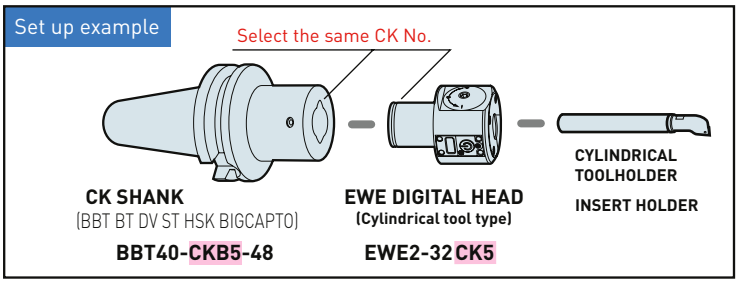
Spare Parts ▶ 465

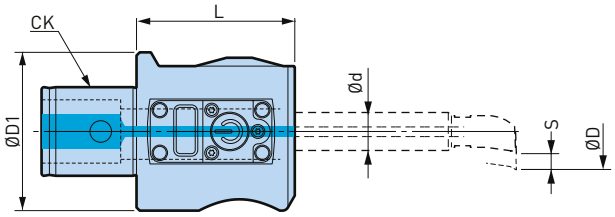
# EWE Digital Fine Boring Head, Ø 1 - 54

Advanced digital boring head. Digital display allows the adjustment to be read at a glance. Fully water and dustproof.



Display Resolution
0.001 mm/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)

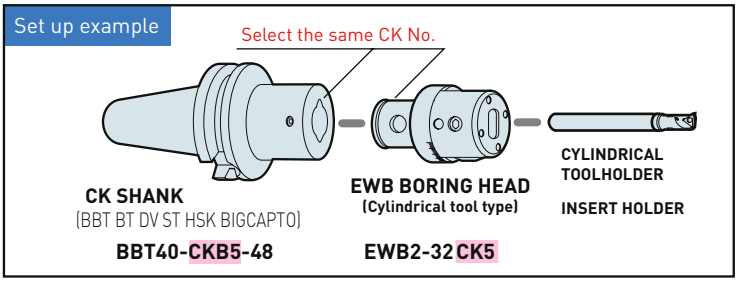
Spare Parts ▶ 466

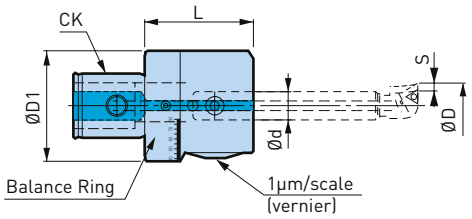
1. Center through coolant is available.
2. Inserts are not included.

# 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 ▶ 467

## Jig Boring Bit Diameter: Ø1 - Ø9

Ideal for ultra small diameter boring.



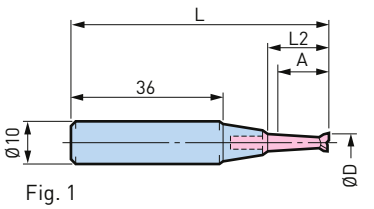



Fig. 1

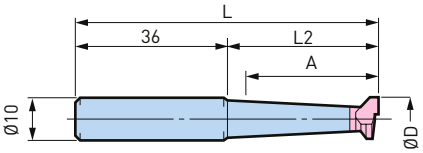
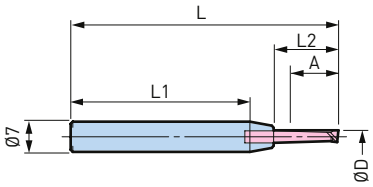



Fig. 2

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**

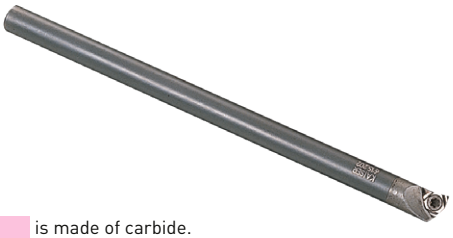
| Model | ØD | A | L | L1 | L2 | Weight (kg) |
|---|---|---|---|---|---|---|
| ST7-RBE1-5 | 1 | 4 | 61 | 42 | 5 | 0.02 |
| ST7-RBE1.5-7.5 | 1.5 | 6 | 62 | 42 | 7.5 | 0.02 |
| ST7-RBE2-9 | 2 | 8 | 62 | 42 | 9 | 0.02 |
| ST7-RBE3-14 | 3 | 12 | 62 | 41 | 14 | 0.02 |
| ST7-RBE4-17 | 4 | 16 | 62 | 41 | 17 | 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.

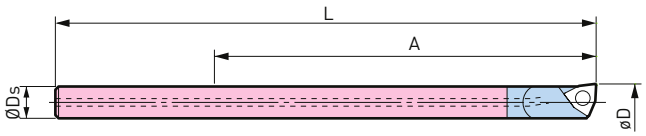



Fig. 1

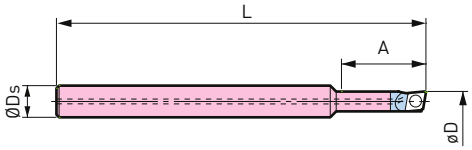



Fig. 2

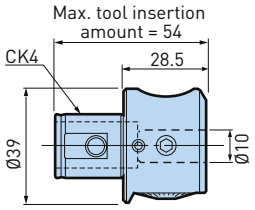
| Model | Fig. | ØDs | ØD | A | L | Insert | Weight (kg) |
|---|---|---|---|---|---|---|---|
| ST05W-EB6-60 | 1 | 5 | 6.0 - 7.5 | 60 | 85 | WC02 | 0.02 |
| ST06W-EB4-16 | 2 | 6 | 4.0 - 5.0 | 16 | 70 | EC03 | 0.02 |
| ST06W-EB5-20 | 2 | 6 | 5.0 - 6.0 | 20 | 75 | EC03 | 0.04 |
| ST06W-EB7.5-65 | 1 | 6 | 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.

▶ 442
▶ 449

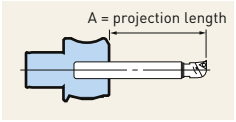
## EWN2-22 (cylindrical tool series for finishing)

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

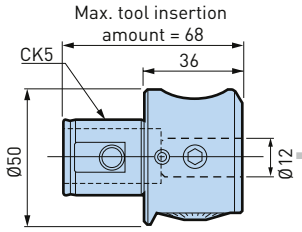
- EB09N Ø9 - Ø10.5 (18)
- EB10.5N Ø10.5 - Ø12
- EB12N Ø12 - Ø14 (23)
- EB14N Ø14 - Ø16
- EB16N Ø16 - Ø18
- EB18N Ø18 - Ø20 (27)
- EB20N Ø20 - Ø22

* Carbide Cylindrical Insert Holders and Cylindrical Toolholders with "W" in the model numbers are made of carbide.
A is the projection length.

▶ 442, 443 ▶ 449

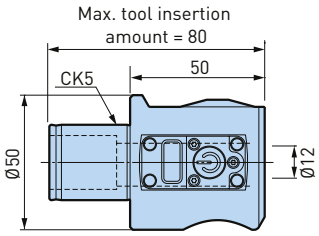
## EWN2-32/EWE2-32/EWB2-32 (cylindrical tool series for finishing)

Flexible tool layout with versatile CK5 type.

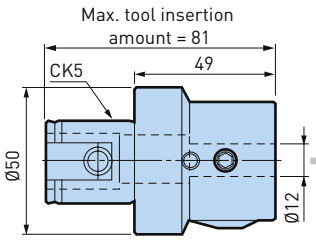



Head **EWN2-32CK5**
Stroke 0 - 3.5mm

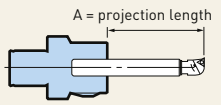
* EWN BORING HEAD for turning centers (ER type) is also available.




Head **EWE2-32CK5**
Stroke -0.5 - 2.0mm



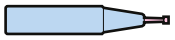

Head **EWB2-32CK5**
Stroke 0 - 3.5mm
For high speed



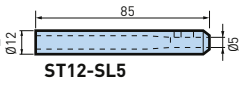

Always observe the projection length range and tool insertion limit. Use out of these ranges may result in damage to the boring head or slip of the bar shank.

### JIG BORING BIT, 8 models

Straight Collet EC1210

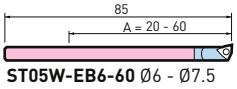



### SIDE LOCK CYLINDRICAL TOOLHOLDER

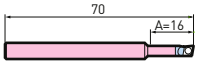



**ST12-SL5**

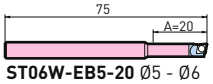
### CARBIDE CYLINDRICAL INSERT HOLDER



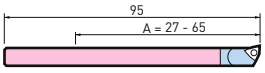

**ST05W-EB6-60** Ø6 - Ø7.5 — WC02




**ST06W-EB4-16** Ø4 - Ø5 — EC03




**ST06W-EB5-20** Ø5 - Ø6




**ST06W-EB7.5-65** Ø7.5 - Ø9 — WC02

### STRAIGHT COLLET

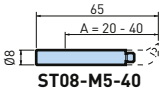



**EC1206**

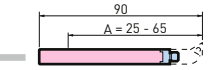
### CYLINDRICAL TOOLHOLDER



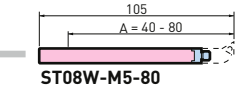

**EC1208**




**ST08-M5-40**



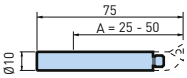

**ST08W-M5-65**



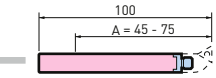

**ST08W-M5-80**



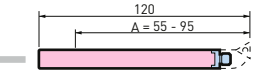

**EC1210**



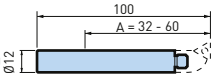

**ST10-M6-50**



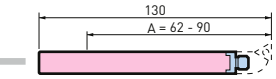

**ST10W-M6-75**



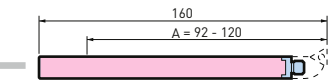

**ST10W-M6-95**



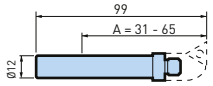

**ST12-M6-60**



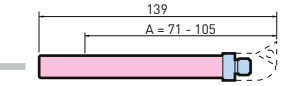

**ST12W-M6-90**



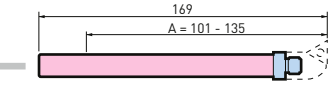

**ST12W-M6-120**




**ST12-M10-65** M10 P1.25




**ST12W-M10-105** M10 P1.25




**ST12W-M10-135** M10 P1.25

### INSERT HOLDER TP08




**EB09N** Ø9 - Ø10.5

**EB10.5N** Ø10.5 - Ø12




**EB12N** Ø12 - Ø14




**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

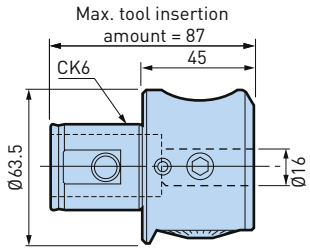
* Carbide Cylindrical Insert Holders and Cylindrical Toolholders with "W" in the model numbers are made of carbide. A is the projection length.

▶ 442, 443 ▶ 449

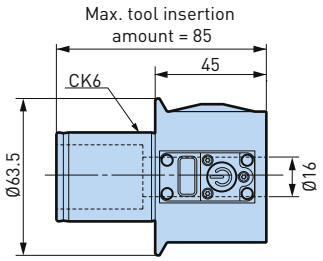
B.3

## EWN2-54/EWE2-54/EWB2-50 (cylindrical tool series for finishing)

Features abundant range of tools capable of small-diameter deep boring.

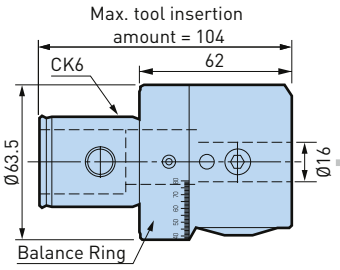



Head **EWN2-54CK6**
Stroke 0 - 4.5mm

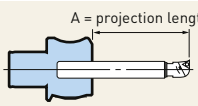



Head **EWE2-54CK6**
Stroke -0.5 - 2.5mm

* Center through coolant pressure should not exceed 40 Bars.

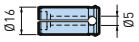



Head **EWB2-50CK6**
Stroke 0 - 4.5mm
For high speed



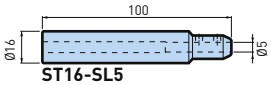

Always observe the projection length range and tool insertion limit. Use out of these ranges may result in damage to the boring head or slip of the bar shank.

### STRAIGHT COLLET

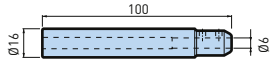



**EC1605**

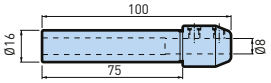
### SIDE LOCK CYLINDRICAL TOOLHOLDER



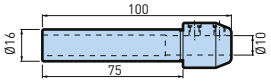

**ST16-SL5**




**ST16-SL6**

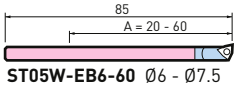



**ST16-SL8**

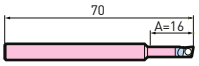



**ST16-SL10**

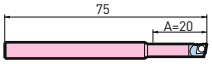
### CARBIDE CYLINDRICAL INSERT HOLDER



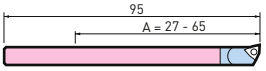

**ST05W-EB6-60** Ø6 - Ø7.5 — **WC02**




**ST06W-EB4-16** Ø4 - Ø5 — **EC03**




**ST06W-EB5-20** Ø5 - Ø6




**ST06W-EB7.5-65** Ø7.5 - Ø9 — **WC02**

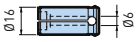
With a Side Lock Cylindrical Toolholder
With a Straight Collet

### JIG BORING BIT, 8 models

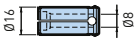



Ø1 - Ø9

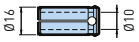
### STRAIGHT COLLET




**EC1606**

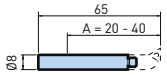



**EC1608**

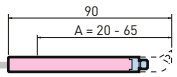



**EC1610**

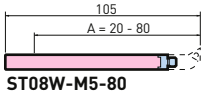
### CYLINDRICAL TOOLHOLDER



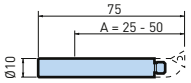

**ST08-M5-40**



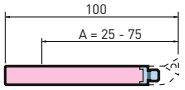

**ST08W-M5-65**



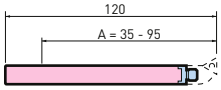

**ST08W-M5-80**




**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.

▶ 442, 443 ▶ 449

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

AJ Series is to be used with EWN / EWE heads.

ST16W-AJ1-130

ST16W-AJ1-160

ST16W-AJ2-110

ST16W-AJ2-160

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

TC11

EB17AJ
Ø16.8 - Ø22

EB22AJ
Ø21.8 - Ø27

EB27AJ
Ø26.8 - Ø33

EB32AJ
Ø31.8 - Ø40

EB40AJ
Ø39.8 - Ø54

B.3

* Carbide Cylindrical Insert Holders and Cylindrical Toolholders with "W" in the model numbers are made of carbide.

▶ 443, 444 ▶ 449

## Side Lock Cylindrical Tool Holder

for EWN/EWE/EWB Cylindrical Tool Boring Head



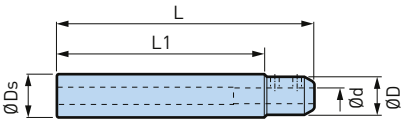



Fig. 1

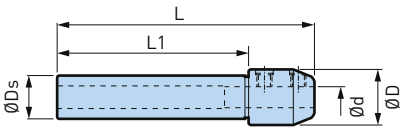



Fig. 2

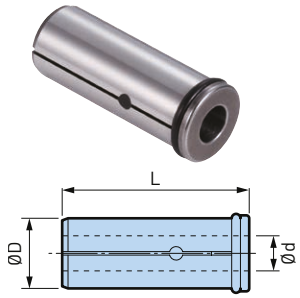
| Model | Fig. | ØDs | Ød | ØD | L | L1 | Weight (kg) |
|---|---|---|---|---|---|---|---|
| ST12-SL3.5 | 1 | 12 | 3.5 | 12 | 85 | 62 | 0.07 |
| ST12-SL4 | 1 | 12 | 4 | 12 | 85 | 62 | 0.07 |
| ST12-SL4.5 | 1 | 12 | 4.5 | 12 | 85 | 62 | 0.07 |
| ST12-SL5 | 1 | 12 | 5 | 12 | 85 | 62 | 0.06 |
| ST12-SL6 | 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 ▶ 464

## 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 |

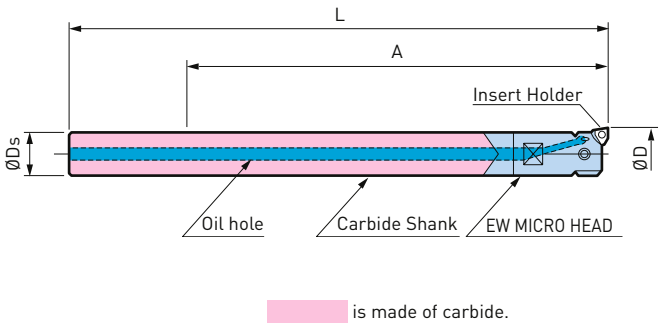
| Model | Ød | ØD | L | Weight (kg) |
|---|---|---|---|---|
| EC1604 | 4 | 16 | 38.5 | 0.05 |
| EC1605 | 5 | 16 | 38.5 | 0.05 |
| EC1606 | 6 | 16 | 38.5 | 0.05 |
| EC1607 | 7 | 16 | 38.5 | 0.05 |
| EC1608 | 8 | 16 | 38.5 | 0.05 |
| EC1609 | 9 | 16 | 38.5 | 0.04 |
| EC1610 | 10 | 16 | 38.5 | 0.04 |
| 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 ▶ 464

# 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.




| 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.

▶ 442
Spare Parts ▶ 465

# 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.



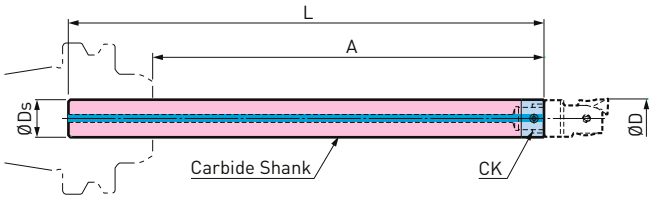




Fig. 1

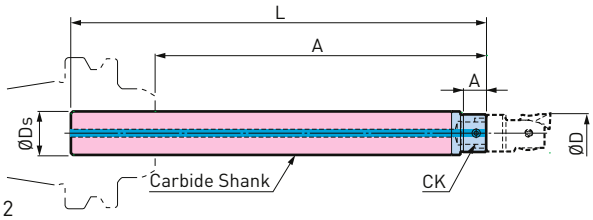



Fig. 2

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 ▶ 88 BDV Type ▶ 156 HSK-A Type ▶ 203

# OD Turning Holders


| | |
|---|---|
| **EWN Head Type S Ø0.5 - 27** | **434** |
| **EWN Head Type M Ø25 - 152** | **434** |
| **EWN Head Type L Ø49 - 686** | **435** |




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

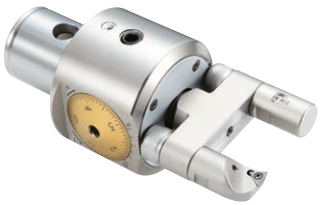
B.4

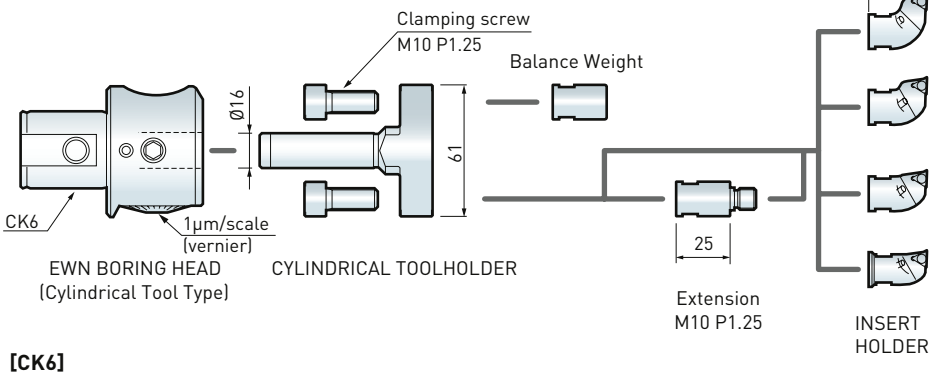
# OD Turning Holders

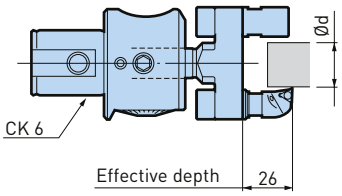
Solves all the issues in contouring operations, such as roundness, surface roughness and dimensional accuracy.



## For Diameter Ø 0.5 - 27






**[CK6]**

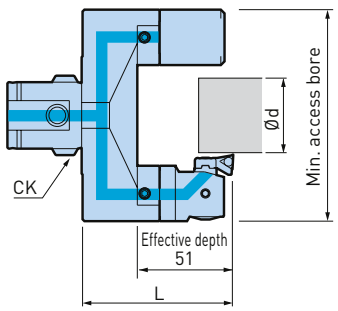
| Ød | EWN BORING HEAD | CYLINDRICAL TOOLHOLDER | Balance Weight | Extension | Insert Holder | Insert |
|---|---|---|---|---|---|---|
| 0.5 - 9 | EWN2-54CK6 (1.10kg) | ST16-SL27-55 (0.20kg) | BW-M10 (0.02kg) | M1010-25 (0.02kg) | EB36N | TP08 |
| 9 - 17 | | | | | EB28N | |
| 17 - 23 | | | | | EB22N | |
| 23 - 27 | | | | | EB18N | |

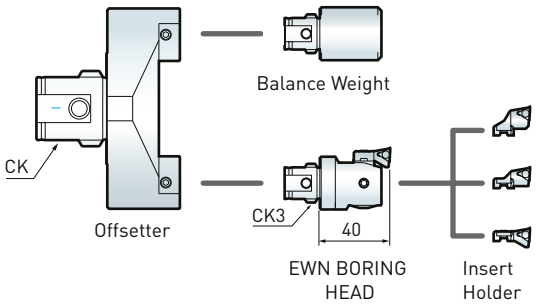
1. Max. and min. diameters are the values when an insert with nose radius 0.2 is used.
2. Insert is to be ordered separately.
3. **Rotation should be reverse.**
4. The min. access bore may differ depending on the offset amount.
5. Contact us regarding chamfering.

▶ 443
▶ 449

## For Diameter Ø 25 - 152






**[CK6/CK7]**

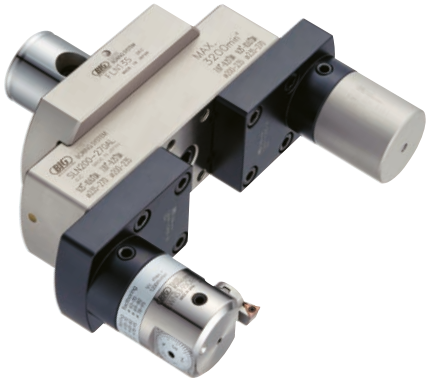
| Ød | Offsetter | CK | EWN BORING HEAD | Balance Weight | Insert Holder | Insert | L |
|---|---|---|---|---|---|---|---|
| 25 - 34 | CKB63-SL2552-42 (1.40kg) Min. access bore Ø117 | CK6 | EWN32-60CKB3 (0.21kg) | BW-CKB3-EWN (0.23kg) | ENH3-3 | TP08 | 82 |
| 34 - 43 | | | | | ENH3-2 | | |
| 43 - 52 | | | | | 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 | | |

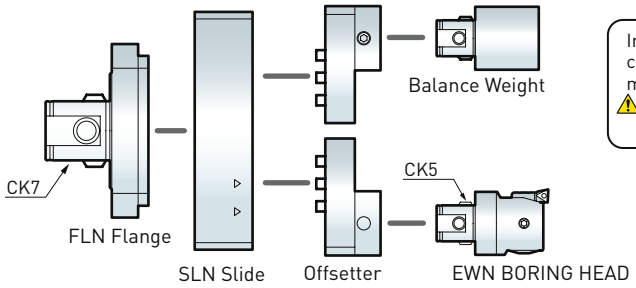
1. Max. and min. diameters are the values when an insert with nose radius 0.2 is used.
2. Insert is to be ordered separately.
3. Insert Holder **(ENH3-1)** is included with the EWN Boring Head.
4. **Rotation should be reverse.**
5. Contact us regarding chamfering.

▶ 443
▶ 449

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.

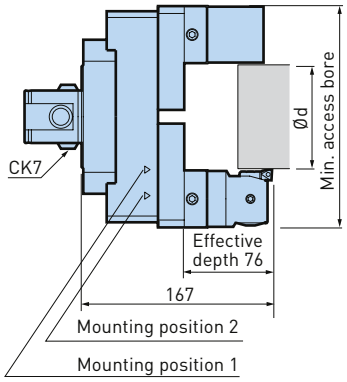
## For Diameter Ø 49 - 686






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]**

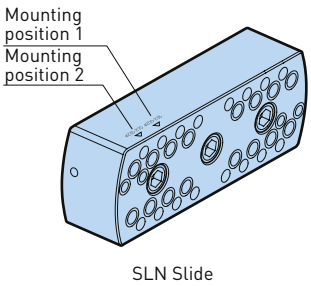
| Ød | FLN Flange * | SLN Slide Model | Weight (kg) | Min. access bore Mounting position 1 | Min. access bore Mounting position 2 | Offsetter (2 pcs./set) | EWN BORING HEAD | Balance Weight |
|---|---|---|---|---|---|---|---|---|
| 49 - 126 | FLN135/ FLN135/90 (2.85kg) | SLN200-270 | 3.90 | 196 | 231 | 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 | | 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/ FLN220/90 (4.74kg) | SLN550-620 | 12.30 | 546 | 581 | | | |
| 469 - 546 | | SLN620-690 | 14.00 | 616 | 651 | | | |
| 539 - 616 | | 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.)

▶ 444
▶ 449

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 | 438 |
|---|---|




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

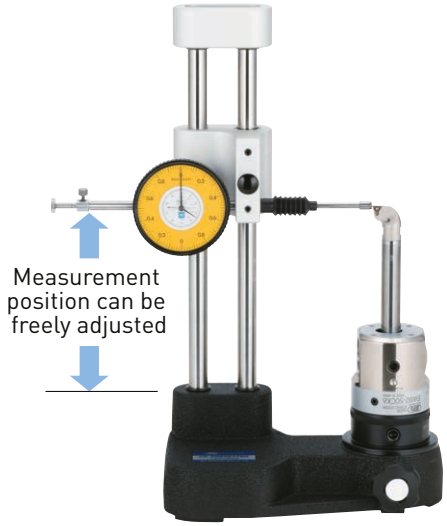
B.5

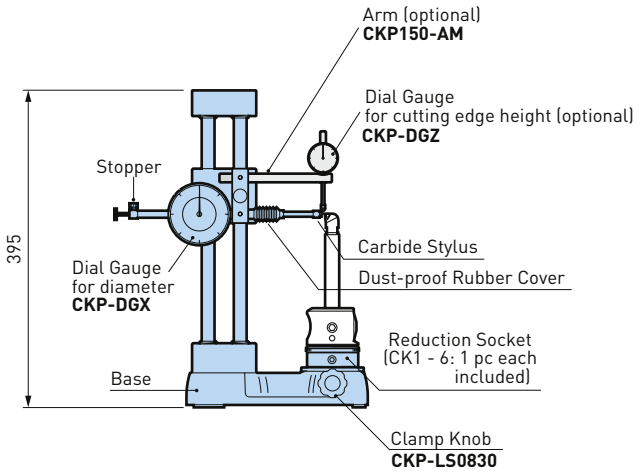
# CK Presetter

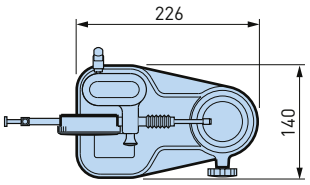
Fully utilizes the merits of a modular system.
Low-cost, exclusive presetter allows easy presetting of the boring head alone.
Compact design enables operations in the limited space beside the machine.

## **CKP150ZA** (for CK1-6)

One unit allows easy presetting of various lengths of insert holders as well as roughing and finishing heads.



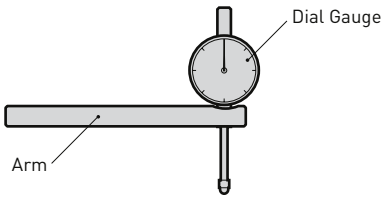



The optional "Dial Gauge for Edge Height" enables balance and step cutting setup for RW Boring Head.

| 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)

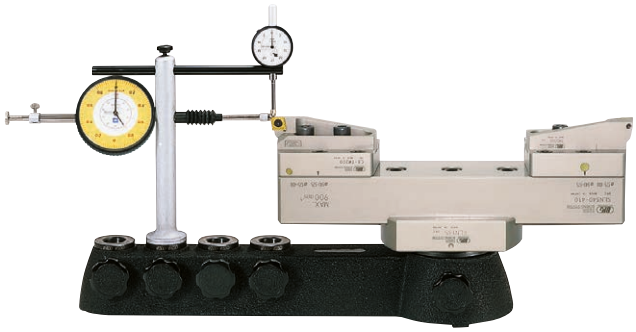


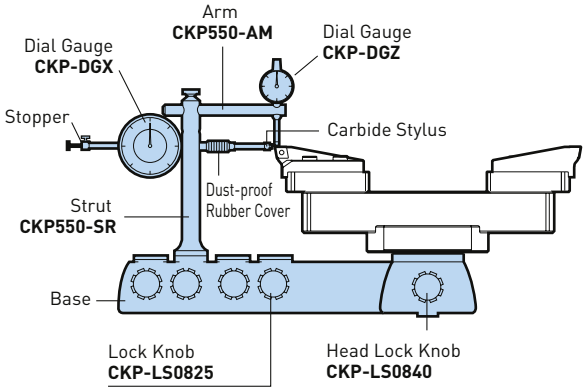

Min. scale: 0.01mm

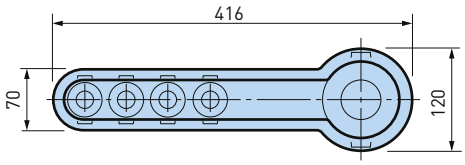
| Set Model | Set contents | |
|---|---|---|
| | Dial Gauge | Arm |
| CKP-DGZS | CKP-DGZ | CKP150-AM |

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.

# Indexable Inserts

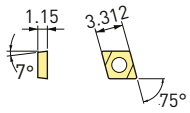

| | |
|---|---|
| EC03/WC02/TP07 | 442 |
| TP08 | 443 |
| TC11 | 444 |
| MW04/SC06/SC07/SC09/SC12 | 445 |
| CC06/CC07/CC09 | 446 |
| CC12/CC16/ZN05/ZN08 | 447 |
| Insert Selection Chart | 448 |
| Insert Clamping Screws Set | 449 |
| CK Set Screw | 450 |
| Cutting Conditions Table | 451 |




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

- BIG designs optimal inserts exclusive for boring. Select the suitable insert to the application.

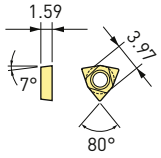
## EC03




for Boring Bar ST06W-EB04, EB05

| No. | Model | Nose R | Corner | 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 |

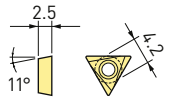
## WC02




for EW MICRO HEAD: EW15/18 Boring Bar ST05W-EB6, ST06W-EB7.5, ST7W-EB6/EB7

| No. | Model | Nose R | Corner | 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 | Aluminum | 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 | Nose R | Corner | Workpiece | Material / coating |
|---|---|---|---|---|---|
| 1 | TPMT070202EFM(T2000Z) | 0.2 | 3 | Alloy Steel / Carbon Steel | Coated Cermet (+3D Breaker) |
| 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 |
| 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 | TPGP070202FLA(H1) | 0.2 | 3 | Aluminum | Carbide (K10)(HRA*) |
| 13 | TPGP070204FLA(H1) | 0.4 | 3 | Aluminium | Carbide (K10)(HRA*) |
| 14 | TPGD070202FN(DA2200) | 0.2 | 1 | Aluminum | PKD |
| 15 | TPGD070204FLM(DA1000) | 0.4 | 1 | Aluminium | PKD (+ 3D Breaker) |

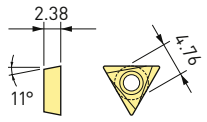
1. *HRA indicate High Rake Angle

[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 | Nose R | Corner | 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 | TPGP080202L(AC520U) | 0.2 | 3 | Inconel Titanium | Coated Carbide |
| 22 | TPGP080204L(AC520U) | 0.4 | 3 | Inconel Titanium | Coated Carbide |
| 23 | TPGD080202FN(H1) | 0.2 | 3 | Cast Iron GG | Carbide (K10) |
| 24 | TPGD080204FN(H1) | 0.4 | 3 | Cast Iron GG | Carbide (K10) |
| 25 | TPGD080202FN(H1ZX) | 0.2 | 3 | Cast Iron GG | Coated Carbide (K10) |
| 26 | TPGD080204FN(H1ZX) | 0.4 | 3 | Cast Iron GG | Coated Carbide (K10) |
| 27 | TPGD080202FN(BN7000) | 0.2 | 1 | Cast Iron GGG | CBN |
| 28 | TPGD080204FN(BN7000) | 0.4 | 1 | Cast Iron GGG | CBN |
| 29 | TPGD080202FN(BN500) | 0.2 | 1 | Cast Iron GGG | CBN |
| 30 | TPGD080204FN(BN500) | 0.4 | 1 | Cast Iron GGG | CBN |
| 31 | TPGD080202FN(BNC500) | 0.2 | 1 | Cast Iron GGG | Coated CBN |
| 32 | TPGD080204FN(BNC500) | 0.4 | 1 | Cast Iron GGG | Coated CBN |
| 33 | TPGD080204FN3(BNC500) | 0.4 | 3 | Cast Iron GGG | Coated CBN |
| 34 | TPGP080202FLA(H1) | 0.2 | 3 | Aluminum | Carbide (K10)(HRA*) |
| 35 | TPGP080204FLA(H1) | 0.4 | 3 | Aluminum | Carbide (K10)(HRA*) |
| 36 | TPGD080202FN(DA2200) | 0.2 | 1 | Aluminum | PKD |
| 37 | TPGD080204FN(DA2200) | 0.4 | 1 | Aluminium | PKD |
| 38 | TPGD080202FLM(DA1000) | 0.2 | 1 | Aluminium | PKD (+ 3D Breaker) |
| 39 | TPGD080204FLM(DA1000) | 0.4 | 1 | Aluminium | PKD (+ 3D Breaker) |
| 40 | TPGP080201FLA(A1) | 0.1 | 3 | Chatter Resistant | Micro-Grained Carbide |

1. *HRA indicate High Rake Angle

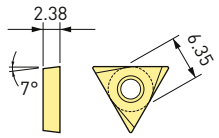
[Remarks (All Inserts)]

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 | Nose R | Corner | 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 | TCGT110202L(AC520U) | 0.2 | 3 | Inconel Titanium | Coated Carbide |
| 20 | TCGT110204L(AC520U) | 0.4 | 3 | Inconel Titanium | Coated Carbide |
| 21 | TCGT110202FN(H1) | 0.2 | 3 | Cast Iron GG | Carbide (K10) |
| 22 | TCGT110204FN(H1) | 0.4 | 3 | Cast Iron GG | Carbide (K10) |
| 23 | TCGT110208FN(H1) | 0.8 | 3 | Cast Iron GG | Carbide (K10) |
| 24 | TCGT110202FN(H1ZX) | 0.2 | 3 | Cast Iron GG | Coated Carbide (K10) |
| 25 | TCGT110204FN(H1ZX) | 0.4 | 3 | Cast Iron GG | Coated Carbide (K10) |
| 26 | TCGT110208FN(H1ZX) | 0.8 | 3 | Cast Iron GG | Coated Carbide (K10) |
| 27 | TCGT110202FN(BN7000) | 0.2 | 1 | Cast Iron GGG | CBN |
| 28 | TCGT110204FN(BN7000) | 0.4 | 1 | Cast Iron GGG | CBN |
| 29 | TCGT110208FN(BN7000) | 0.8 | 1 | Cast Iron GGG | CBN |
| 30 | TCGT110202FN(BN500) | 0.2 | 1 | Cast Iron GGG | CBN |
| 31 | TCGT110204FN(BN500) | 0.4 | 1 | Cast Iron GGG | CBN |
| 32 | TCGT110202FN(BNC500) | 0.2 | 1 | Cast Iron GGG | Coated CBN |
| 33 | TCGT110204FN(BNC500) | 0.4 | 1 | Cast Iron GGG | Coated CBN |
| 34 | TCGT110208FN(BNC500) | 0.8 | 1 | Cast Iron GGG | Coated CBN |
| 35 | TCGT110204FN3(BNC500) | 0.4 | 3 | Cast Iron GGG | Coated CBN |
| 36 | TCGT110208FN3(BNC500) | 0.8 | 3 | Cast Iron GGG | Coated CBN |
| 37 | TCGT110202FLA(H1) | 0.2 | 3 | Aluminum | Carbide (K10)(HRA*) |
| 38 | TCGT110204FLA(H1) | 0.4 | 3 | Aluminum | Carbide (K10)(HRA*) |
| 39 | TCGT110208FLA(H1) | 0.8 | 3 | Aluminum | Carbide (K10)(HRA*) |
| 40 | TCGT110202FN(DA2200) | 0.2 | 1 | Aluminum | PKD |
| 41 | TCGT110204FN(DA2200) | 0.4 | 1 | Aluminum | PKD |
| 42 | TCGT110208FN(DA2200) | 0.8 | 1 | Aluminum | PKD |
| 43 | TCGT110202FLM(DA1000) | 0.2 | 1 | Aluminum | PKD (+3D Breaker) |
| 44 | TCGT110204FLM(DA1000) | 0.4 | 1 | Aluminum | PKD (+3D Breaker) |
| 45 | TCGT110208FLM(DA1000) | 0.8 | 1 | Aluminum | PKD (+3D Breaker) |

1. *HRA indicate High Rake Angle

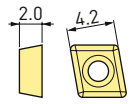
[Remarks (All Inserts)]

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

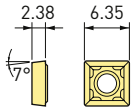
for MW16-18 ~ MW18-21




| No. | Model | Nose R | Corner | 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

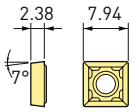
for ENH4-1S ~ ENH5-3S SW2026A, SW2531A, SW2533A, SW3240A




| No. | Model | Nose R | Corner | 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 | Aluminum | Carbide (HRA*) |

## SC_0702

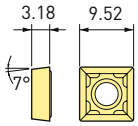
for ENH6-1S ~ ENH6-3S, ENH7-1S




| No. | Model | Nose R | Corner | 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 | Aluminum | Carbide (HRA*) |

## SC_0903

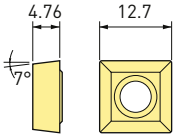
for SW3242A, SW4151A, SW4154A, SW5366A




| No. | Model | Nose R | Corner | 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 | Aluminum | Carbide (HRA*) |

## SC_1204

for SW5370A, SW6986A, SW6890A, SW88110A, SW98126A, SW125153A, SW148176A, SW175203A, TW200A



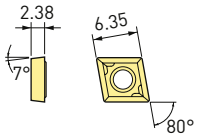

| No. | Model | Nose R | Corner | Workpiece | Material / coating |
|---|---|---|---|---|---|
| 1 | SCGM120404EFM(T1500A) | 0.4 | 4 | Alloy Steel / Carbon Steel | Cermet (P10) |
| 2 | SCGM120408EFM(T1500A) | 0.8 | 4 | Alloy Steel / Carbon Steel | Cermet (P10) |
| 3 | SCMM120404EFM(AC820P) | 0.4 | 4 | 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 | Aluminum | 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
   (SCMP060204EFM: Insert Model; (T1500A): Grade)

- BIG designs optimal inserts exclusive for boring. Select the suitable insert to the application.

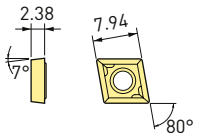
## CC_0602




for ENH4-1F ~ ENH5-3F SW2026E, SW2531E, SW2533E, SW3240E

| No. | Model | Nose R | Corner | 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 | Aluminum | Carbide (HRA*) |

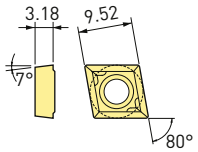
## CC_0702




for ENH6-1F ~ ENH6-3F, ENH7-1F

| No. | Model | Nose R | Corner | 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 | Aluminum | Carbide (HRA*) |

## CC_0903




for SW3242E, SW4151E, SW4154E, SW5366E

| No. | Model | Nose R | Corner | 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 | Aluminum | Carbide (HRA*) |

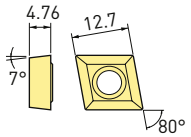
1. *HRA indicate High Rake Angle

[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

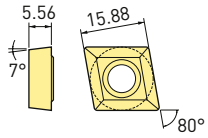



for SW5370E, SW6986E, SW6890E, SW88110E, SW98126E, SW125153E, SW148176E, SW175203E
TW200E, TW200E-SC

| No. | Model | Nose R | Corner | 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 | Aluminum | Carbide (HRA*) |

1. *HRA indicate High Rake Angle

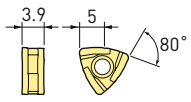
## CC_1605




for SW6890EL, SW88110EL, SW98126EL, SW125153EL, SW148176EL, SW175203EL
TW200EL, TW200EL-SC

| No. | Model | Nose R | Corner | 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) |

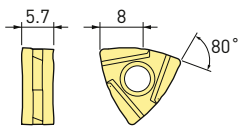
## ZN05




for SW3242N, SW4151N, SW4154N, SW5366N

| No. | Model | Nose R | Corner | 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

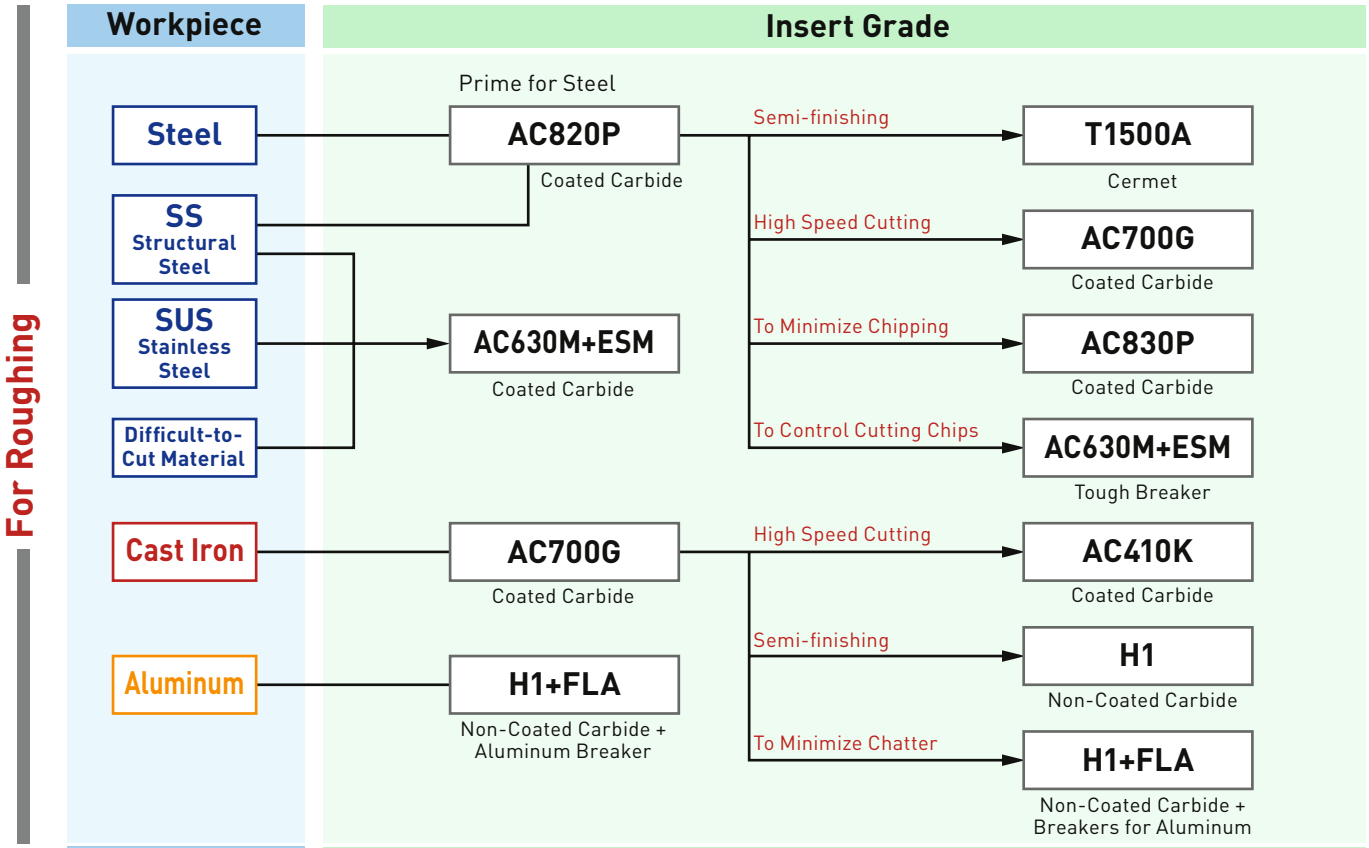
| No. | Model | Nose R | Corner | Workpiece | Material / coating |
|---|---|---|---|---|---|
| 1 | ZNMU080508EM(CW20PA) | 0.8 | 6 | Alloy Steel / Carbon Steel | Coated Carbide (P20) |
| 2 | ZNMU080508EM(CW15KA) | 0.8 | 6 | Cast Iron GG | Coated Carbide (K15) |

[Remarks]

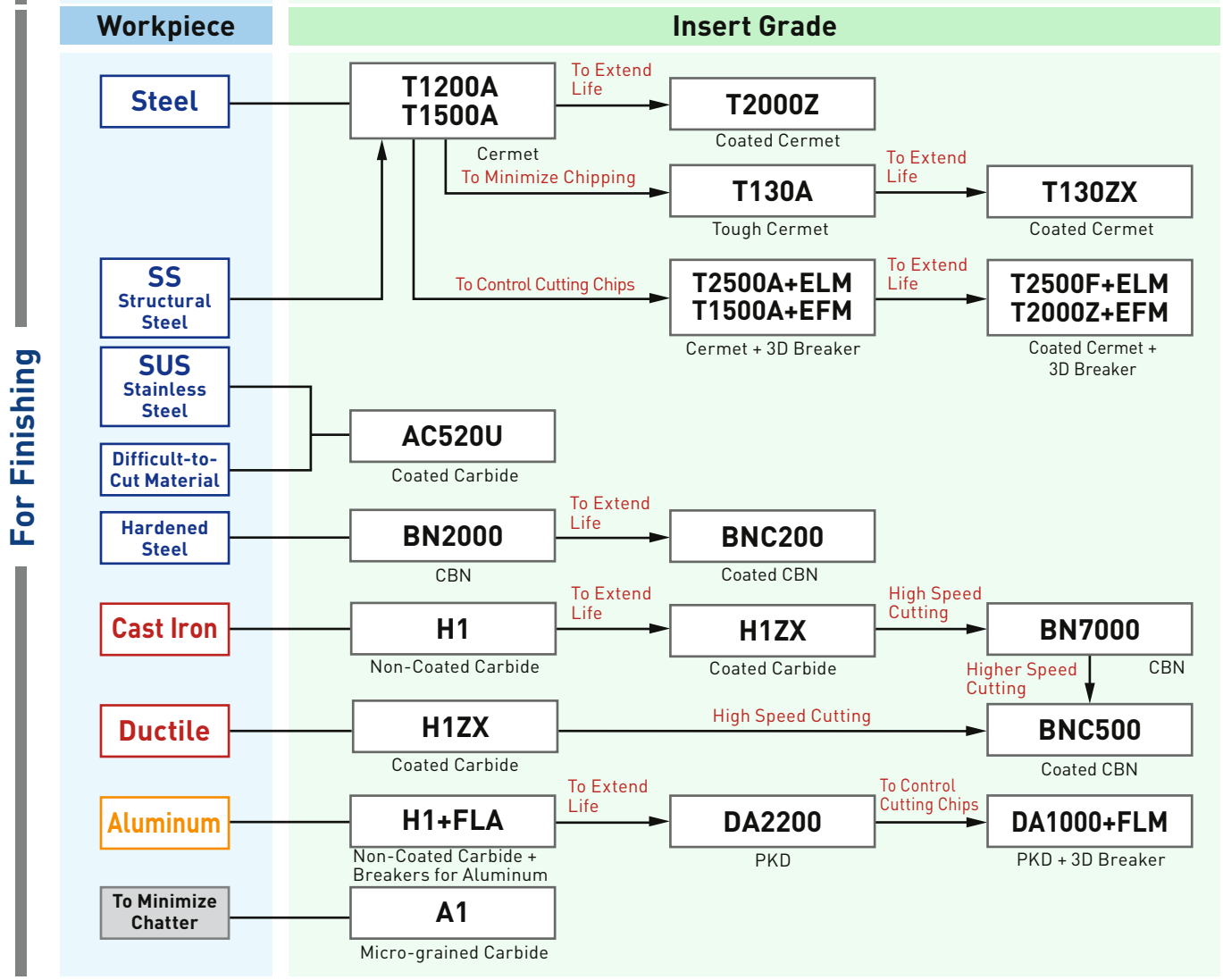
1. Inserts are available in packets of 10 pcs.
2. Please specify the insert model number and grade when ordering.
   Example: **CCGM120404EFM** (Insert Model) **(T1500A)** (Grade)... 10 pcs

# CK BORING SYSTEM Insert Selection Chart

## For Roughing

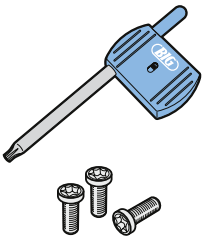



## For Finishing



# 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 ENH-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 |

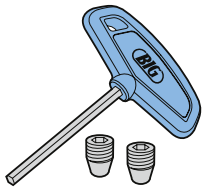
· Wrenches are also sold individually. Please order the wrench model.
· * marked models consist of 2 screws. Wrench is not included.

# 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 | - |

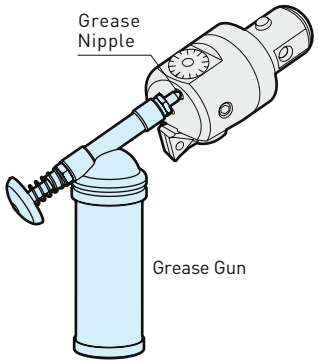
1. The set contains 2 screws and 1 wrench. * Wrenches are also available separately.
"T" in the wrench model indicates T-shape of the wrench. This has nothing to do with Torx.

* An L wrench is included with CK7S.

## Grease Gun

| Model | GRG-02 |
|---|---|

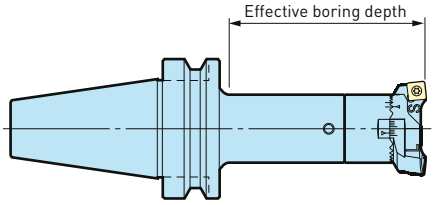
Essential for maintenance!
Can be used with all types of finishing heads.
(Grease not included.)



# 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<br>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<br>SW98<br>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 |

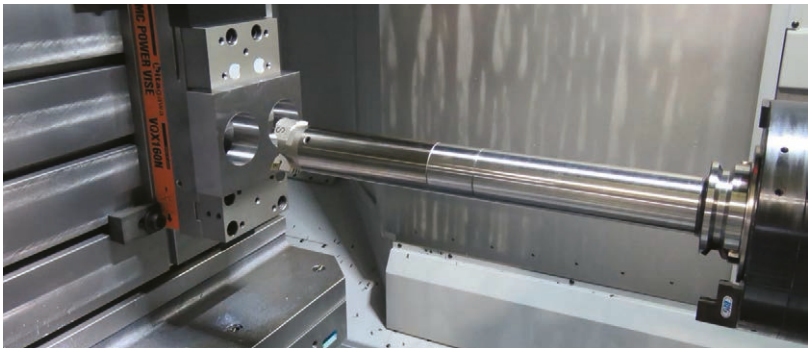
**Type ZN**

| Head Mode | 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<br>SW98<br>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) |

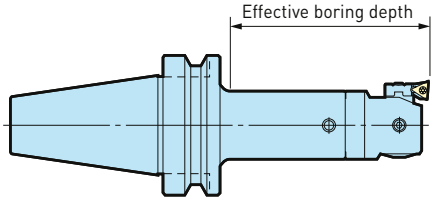



| Head | Holder | Extension | Effective boring depth (mm) | Cartridge | |
|---|---|---|---|---|---|
| | | | | Type CC | Type SC |
| CKB5-SW53DP-220 | BBT50-CKB5-228 | None | 405 | Good | Good |
| | BBT50-CKB5-263 | None | 440 | Good | Chatter |
| | | CKB55-60 | 500 | Good | Chatter |

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<br>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<br>EWE41<br>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<br>EWN68<br>EWN100<br>EWE53<br>EWE68<br>EWE100<br>EWB53<br>EWB68<br>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 |

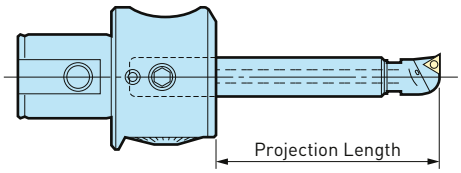
[BBT50]

| 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<br>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<br>EWE41<br>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<br>EWE53<br>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<br>EWN100<br>EWE68<br>EWE100<br>EWB68<br>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<br>(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.

**Feed Rate Selection**

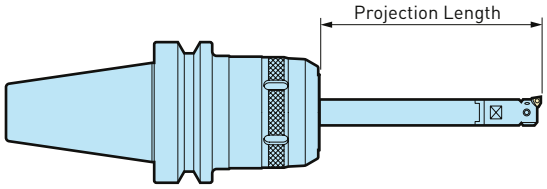
Suitable feed rate varies depending on the desired accuracy.
Refer to the following formula and determine the best parameters.

- 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.

$$\text{Theoretical surface roughness Rz [μm]} = \frac{(\text{Feed rate})^2}{8 \times \text{Nose radius}} \times 1{,}000$$

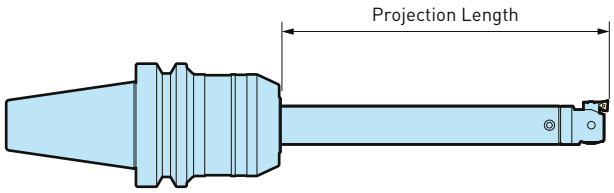
## EW MICRO HEAD




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

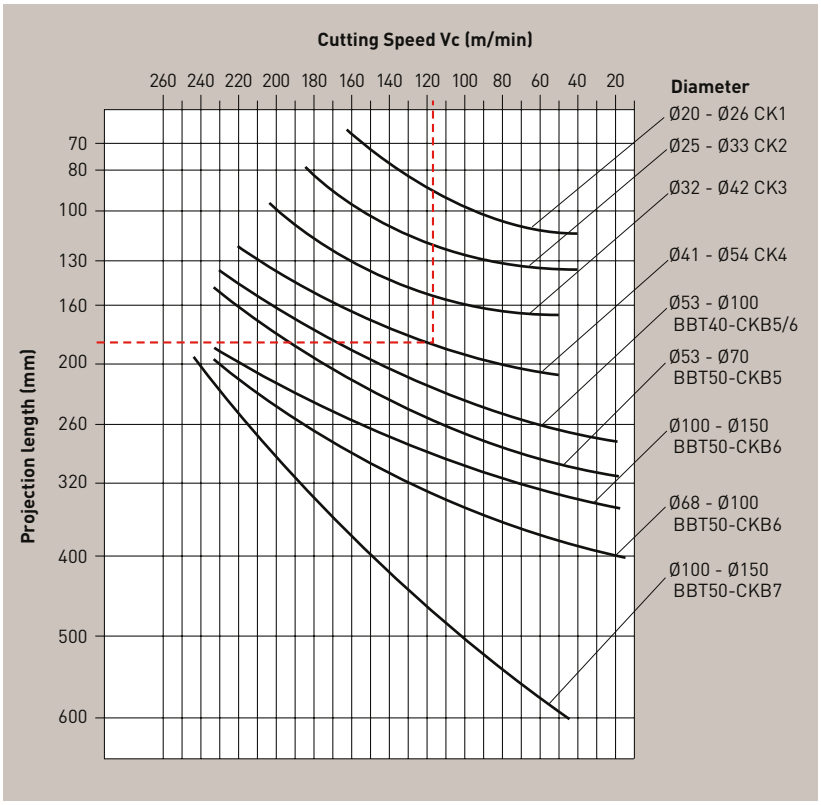



1. This table is a guideline for selecting cutting parameters.
   Adjust them as needed according to the machine and workpiece conditions.
2. Internal high pressure coolant may cause deflection of the holder.
   Lower the pressure when close tolerance is required.
3. Coated cermet T2000Z or T2500F is 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<br>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 |

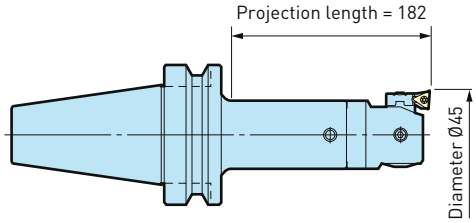
## Cutting Speed Selection Graph for Cutting Steel

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.



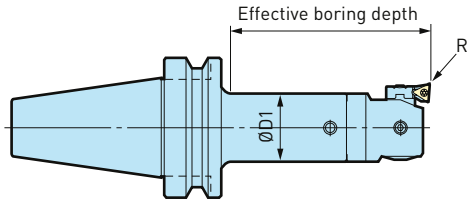

**[Reference Example]**
Indicated by - - - - - - in the graph at right

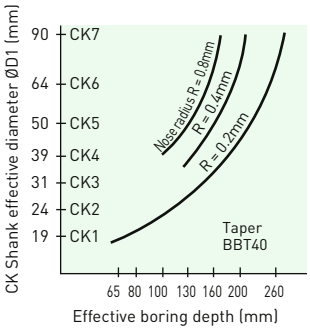
Example below shows the projection length of 182mm; and the diameter of Ø45mm (Ø41 - Ø54 CK4).
The recommended cutting speed is 118m/min.
Select an appropriate cutting speed based on this reference example.

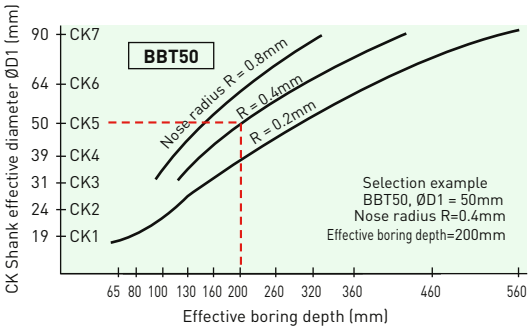



## Relationship between Nose Radius and Effective Boring Depth

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** | **464** |
| **EWN Boring Head** | **464** |
| **EWE Digital Boring Head** | **466** |
| **EWB Boring Head** | **466** |
| **Large Diameter Boring Tools** | **467** |

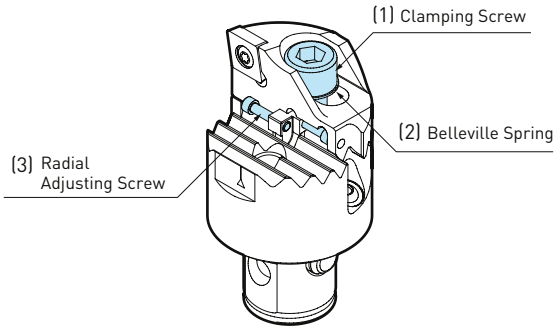



**Please use the model name for inquiries and orders.**
(e.g. BBT30-MEGA3S-45T)

B.7

# SW BORING HEAD

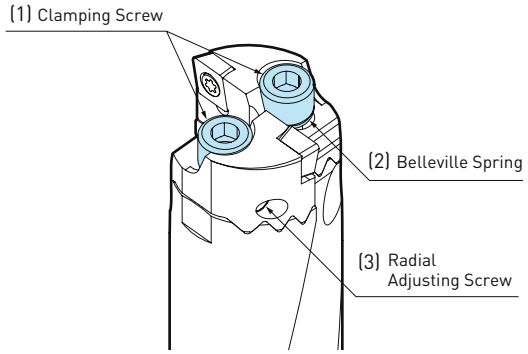
### Common for A/E/N Types




| 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 | |

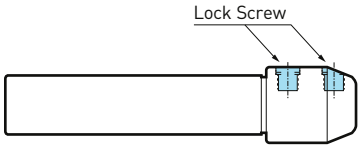
(1) Clamping Screw x 2p, Belleville Spring x 2p
(2) Belleville Spring x 4p
(3) Radial Adjusting Screw x 5p

# EWN/EWE/EWB BORING HEAD (Cylindrical Tool Type)

### SIDE LOCK HOLDER

B.7

**Lock Screw**



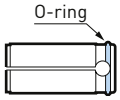

| Model | (1) | ⬡SW |
|---|---|---|
| ST-SL3.5/4/5 | H0403-5P | 2 |
| ST-SL6 | H0404-5P | |
| ST-SL7/8/9/10 | H0606-5P | 2.5 |

(1) Side Lock Screw x 5p

# EWN/EWE/EWB BORING HEAD (Cylindrical Tool Type)

### STRAIGHT COLLET

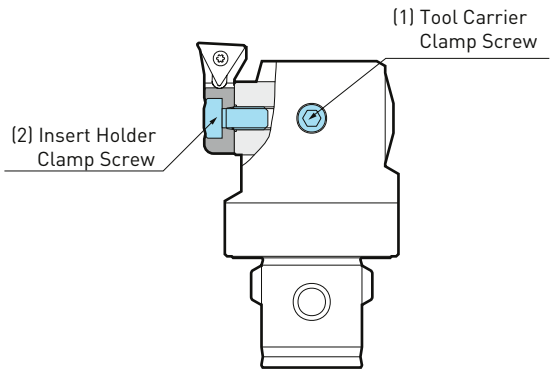
**O-ring**




| 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 | | | | | | |

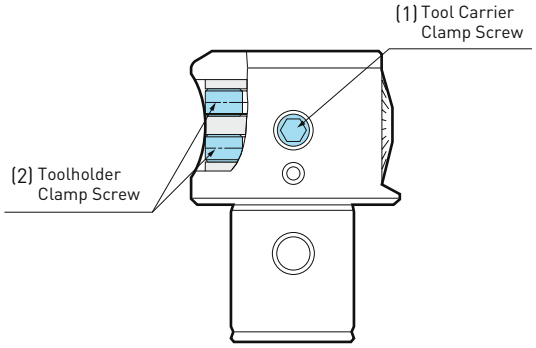
(1) Tool Carrier Clamp Screw x 1p
(2) Insert Holder Clamp Screw x 1p

| 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

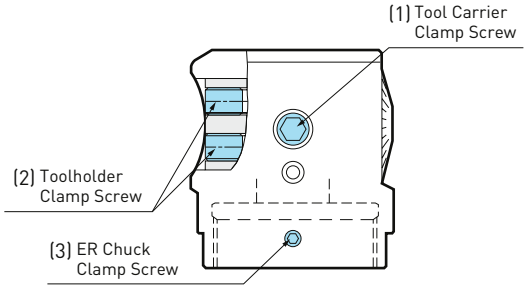
## Centric Cutting Edge Type




| 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

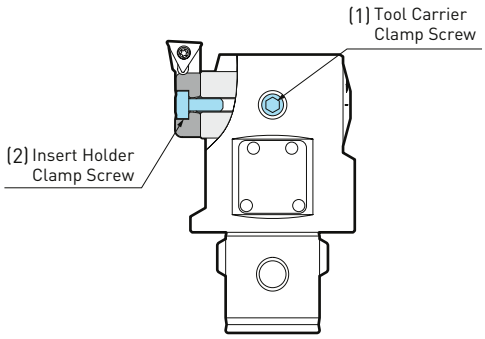
## ER Chuck Type




| 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

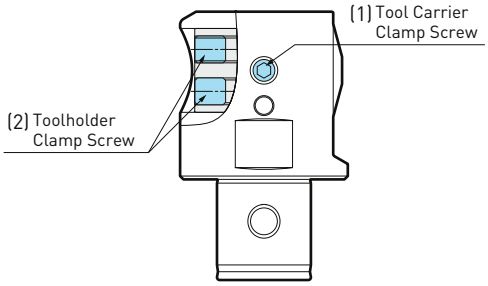



| Head Model | (1) | ⬡SW | N·m | (2) | ⬡SW | N·m |
|---|---|---|---|---|---|---|
| EWE41-74CKB4 | K0608 | 3 | 3 | B0510-3 | 3 | 3 |
| EWE53-93CKB5 | K0809 | 4 | 6 | B0510-4 | 4 | 6 |
| EWE68-105CKB6 | K1013 | 5 | 10 | B0816-5 | 5 | 12 |
| EWE100-203CKB□ | K1016 | | | | | |

(1) Tool Carrier Clamp Screw x 1p
(2) Insert Holder Clamp Screw x 1p

## EWE DIGITAL BORING HEAD

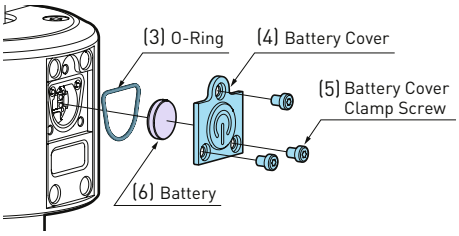
### Centric Cutting Edge Type




| 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

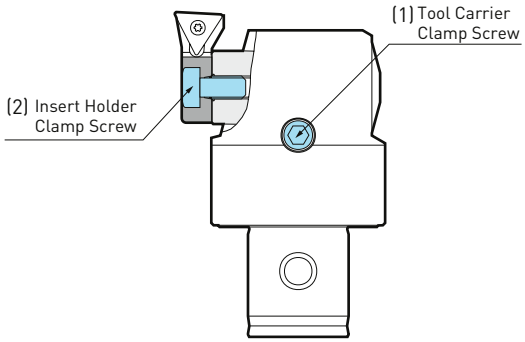
EWE Insert Holder Type/Cylindrical Tool Holder Type Common Parts




| 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

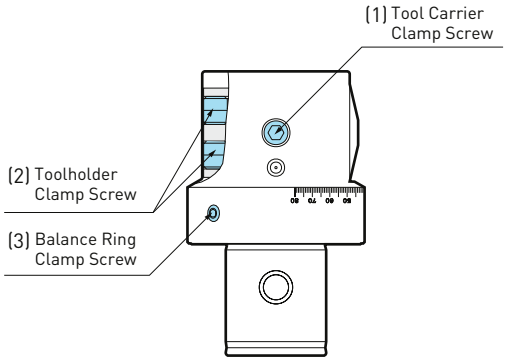



| Head Model | (1) | ⬡SW | N·m | (2) | ⬡SW | N·m |
|---|---|---|---|---|---|---|
| EWB32-42CK3 | S0705 | 2.5 | 2.5 | B0408-2 | 2.5 | 2.5 |
| EWB41-54CK4 | S0706 | 3 | 3 | B0510-3 | 3 | 3 |
| EWB53-70CK5 | S0808 | 4 | 6 | B0510-4 | 4 | 6 |
| EWB68-88CK6 | S1012 | 6 | 10 | B0612-5 | 6 | 12 |
| EWB85-105CK6 | | | | | | |

(1) Tool Carrier Clamp Screw x 1p
(2) Insert Holder Clamp Screw x 1p

# EWB BORING HEAD

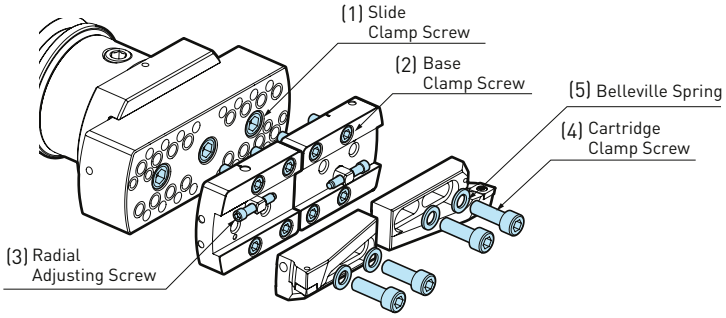
## Centric Cutting Edge Type




| 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

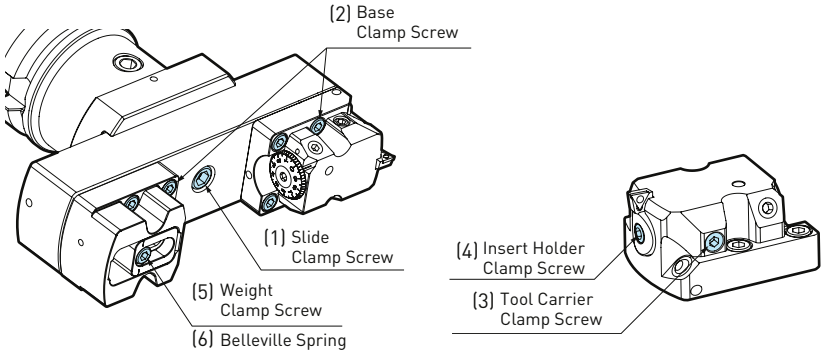
# CK7 LARGE DIAMETER Type




| Clamp Base Model | (1) | ⬡SW | N·m | (2) | ⬡SW | N·m | (3) | ⬡SW | (4) | ⬡SW | N·m | (5) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CB-TW200<br>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

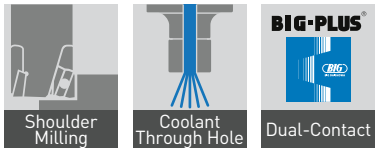

| | |
|---|---|
| **Fullcut Mill FCM** | **470** |
| **Fullcut Mill FCM Arbor Type** | **479** |
| **Indexable Inserts for Fullcut Mill FCM** | **480** |
| **Fullcut Mill FCR** | **484** |
| **Indexable Inserts for Fullcut Mill FCR** | **490** |
| **Spare Parts** | **493** |
| **Surface Mill** | **494** |
| **Speed Finisher** | **495** |




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

# Fullcut Mill FCM - For Standard Type with BBT

The indexable endmill that combines sharpness and rigidity for best results.





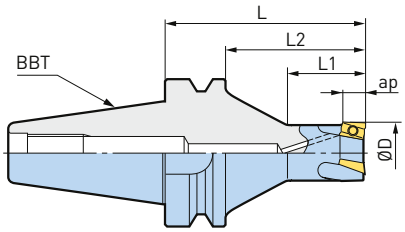




Fig. 1

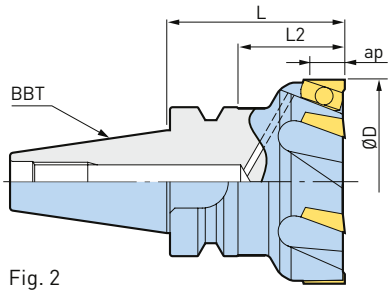
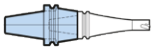



Fig. 2

| 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 | 100644.003.0 | 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 |

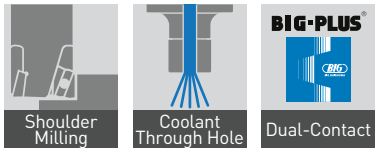
1. BIG-PLUS® tools can be used in machining centers with non BIG-PLUS® spindles.
2. Wrench is included.
3. Inserts are to be ordered separately.

**Accessories & Spare Parts**

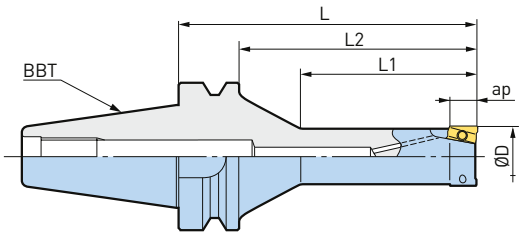
| Adapter for BBT50 taper shank | Indexable Inserts for Fullcut Mill FCM | Wrench | Insert Clamping Screw Set |
|---|---|---|---|
|  |  |  |  |
| ▶ 471 | ▶ 480 | ▶ 493 | ▶ 493 |

# Fullcut Mill FCM - For Long Nose Type with BBT

The indexable endmill that combines sharpness and rigidity.



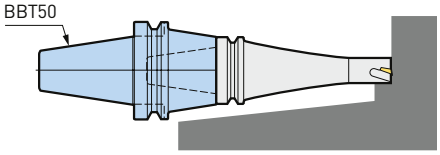


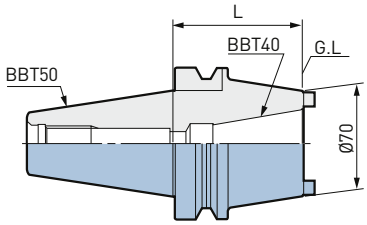




| Model | Article No. | ØD | L | L1 | L2 | ap | Number of Inserts | Insert size | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| BBT30-FCM16092L-85 | 966.081 | 16 | 85 | 45 | 63 | 9 | 2 | ARG16 | 0.50 |
| BBT30-FCM20092L-85 | 966.082 | 20 | 85 | 50 | 63 | 9 | 2 | ARG20 | 0.60 |
| BBT30-FCM25092L-85 | 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

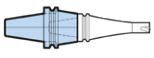



| Model | Article No. | L | Weight (kg) |
|---|---|---|---|
| BBT50-BBT40-50 | 803.730 | 50 | 3.60 |
| BBT50-BBT40-90 | 803.731 | 90 | 5.00 |

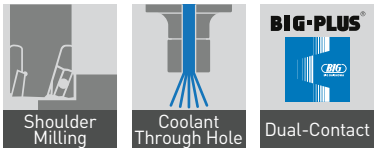
C.1

### Accessories & Spare Parts

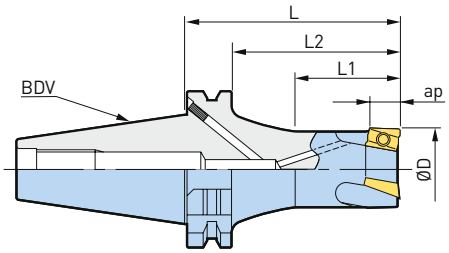
| Adapter for BBT50 taper shank | Indexable Inserts for Fullcut Mill FCM | Wrench | Insert Clamping Screw Set |
|---|---|---|---|
|  |  |  |  |
| ▶ 471 | ▶ 480 | ▶ 493 | ▶ 493 |

# 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.

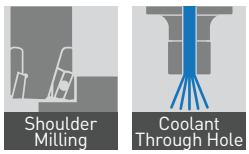
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**Accessories & Spare Parts**

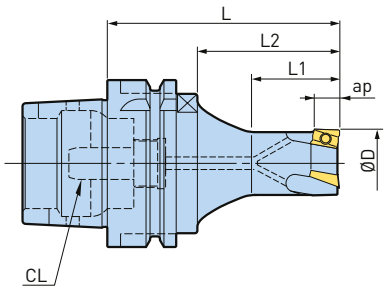
| Indexable Inserts for Fullcut Mill FCM | Wrench | Insert Clamping Screw Set |
|---|---|---|
|  |  |  |
| ▶ 480 | ▶ 493 | ▶ 493 |

# Fullcut Mill FCM - For Standard Type with HSK-A

The indexable endmill that combines sharpness and rigidity.



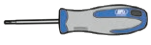



| Model | Article No. | ØD | L | L1 | L2 | ap | Number of Inserts | Insert size | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| HSK-A40-FCM16092-65 | 966.101 | 16 | 65 | 23 | 37 | 9 | 2 | ARG16 | 0.28 |
| HSK-A40-FCM20093-65 | 966.102 | 20 | 65 | 28 | 37 | 9 | 3 | ARG20 | 0.30 |
| HSK-A40-FCM25093-65 | 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.

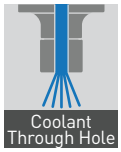
**Accessories & Spare Parts**

| Indexable Inserts for Fullcut Mill FCM | Coolant Pipes | Wrench | Insert Clamping Screw Set |
|---|---|---|---|
|  |  |  |  |
| ▶ 480 | ▶ 250 | ▶ 493 | ▶ 493 |

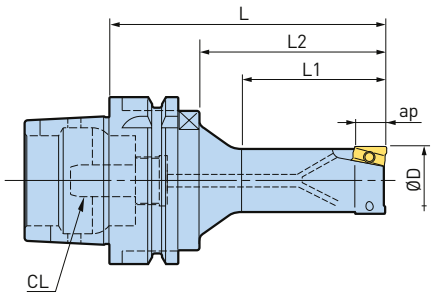
# Fullcut Mill FCM - For Long Nose Type with HSK-A

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

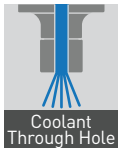
**Accessories & Spare Parts**

| Indexable Inserts for Fullcut Mill FCM | Coolant Pipes | Wrench | Insert Clamping Screw Set |
|---|---|---|---|
|  |  |  |  |
| ▶ 480 | ▶ 250 | ▶ 493 | ▶ 493 |

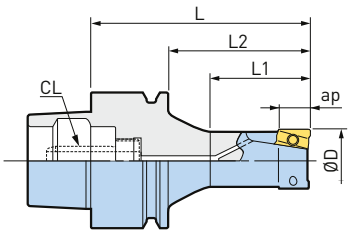
# Fullcut Mill FCM - For Standard Type with HSK-E

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

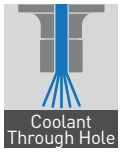
**Accessories & Spare Parts**

| Indexable Inserts for Fullcut Mill FCM | Coolant Pipes | Wrench | Insert Clamping Screw Set |
|---|---|---|---|
|  |  |  |  |
| ▶ 480 | ▶ 250 | ▶ 493 | ▶ 493 |

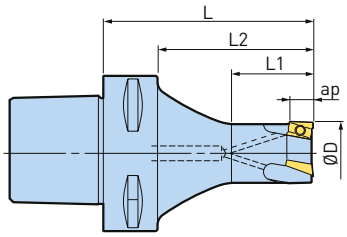
# Fullcut Mill FCM - For Standard Type with BIG CAPTO

The indexable endmill that combines sharpness and rigidity.





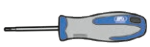




| Model | Article No. | ØD | L | L1 | L2 | ap | Number of Inserts | Insert size | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| C5-FCM16092-65 | 805.858 | 16 | 65 | 23 | 45 | 9 | 2 | ARG16 | 0.52 |
| C5-FCM16092-90 | 805.859 | 16 | 90 | 30 | 70 | 9 | 2 | ARG16 | 0.60 |
| C5-FCM20093-65 | 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.

C.1

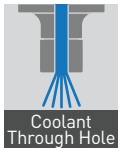
**Accessories & Spare Parts**

| Indexable Inserts for Fullcut Mill FCM | Wrench | Insert Clamping Screw Set |
|---|---|---|
|  |  |  |
| ▶ 480 | ▶ 493 | ▶ 493 |

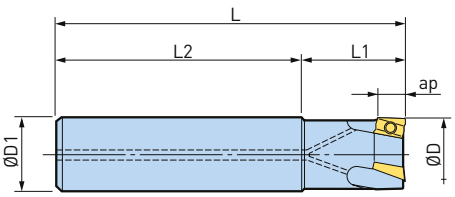
# Fullcut Mill FCM -For Standard Type

The indexable endmill that combines sharpness and rigidity.





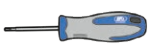




| Model | Article No. | ØD | ØD1 | L | L1 | L2 | ap | Number of Inserts | Insert size | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| ST16-FCM12091-90 | 966.237 | 12 | 16 | 90 | 15 | 70 | 9 | 1 | ARG16 | 0.12 |
| ST16-FCM14091-90 | 966.238 | 14 | 16 | 90 | 17 | 70 | 9 | 1 | ARG16 | 0.12 |
| 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.

C.1

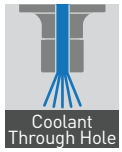
**Accessories & Spare Parts**

| Indexable Inserts for Fullcut Mill FCM | Wrench | Insert Clamping Screw Set |
|---|---|---|
|  |  |  |
| ▶ 480 | ▶ 493 | ▶ 493 |

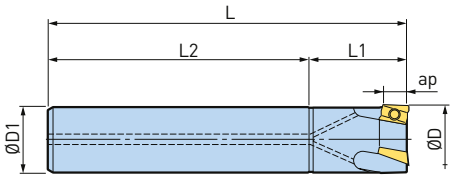
# Fullcut Mill FCM - For Oversize Type

"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 |

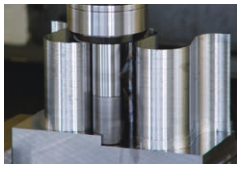
1. Wrench is included.
2. Inserts are to be ordered separately.
3. For medium-heavy or heavy slot milling with projection longer than 2.5 times of diameter, 2-flutes models are recommended.

### 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.



C.1

### Accessories & Spare Parts

| Indexable Inserts for Fullcut Mill FCM | Wrench | Insert Clamping Screw Set |
|---|---|---|
|  |  |  |
| ▶ 480 | ▶ 493 | ▶ 493 |

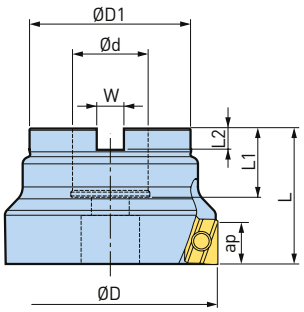
# Fullcut Mill FCM - Arbor Type

Corresponding to Form FMH of new standard face milling adapter.







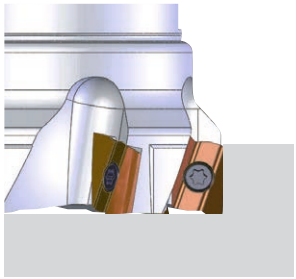

| Model | Article No. | ØD | Ød | ØD1 | L | L1 | L2 | ap | W | Number of Inserts | Insert size | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FMH22-FCM50115-40 | 966.212 | 50 | 22 | 47 | 40 | 20 | 6 | 11 | 10.4 | 5 | ARG40 | 0.40 |
| FMH22-FCM63116-40 | 966.213 | 63 | 22 | 47 | 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 |

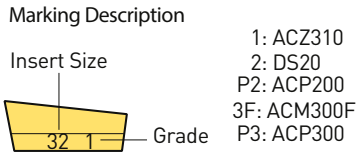
C.1

**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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 102 | ▶ 161 | ▶ 211 | ▶ 480 | ▶ 493 | ▶ 493 |

# Indexable Inserts for Fullcut Mill FCM






| Model | Article No. | ØD | ap | Nose 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 |

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**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.

| Model | Article No. | ØD | ap | Nose 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.

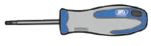
**Insert classifications**

| 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 |

C.1

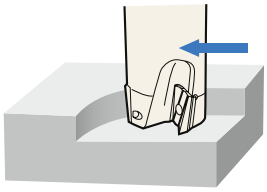
**Note**
It is recommended to regularly replace clamping screws and wrench to ensure the correct clamping force is maintained.

**Accessories & Spare Parts**

| Wrench | Insert Clamping Screw Set |
|---|---|
|  |  |
| ► 493 | ► 493 |

# 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.

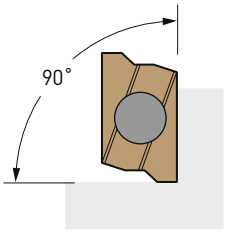


### Shoulder milling



| | |
|---|---|
| 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



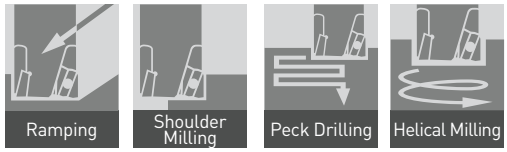
| | |
|---|---|
| Fullcut Mill | ST25-FCM25093-120 |
| Holder | BBT50-MEGA25D-105 |
| Insert | ARG250904 (ACM300F) |
| Work Material | SUS304 Stainless steel |
| Cutting Speed Vc (m/min.) | 150 |
| Feed Rate fz (mm/tooth) | 0.2 |
| Axial DOC ap (mm) | 9 |
| Radial DOC ae (mm) | 3 |

High efficiency and stable milling (Vf = 1 140 mm/min.) is achieved.

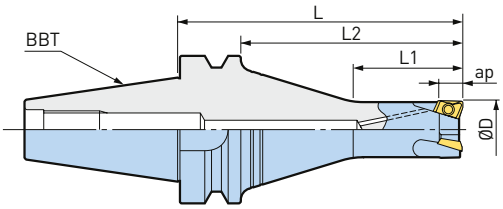


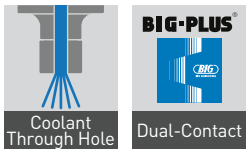
# Fullcut Mill FCR - For Standard Type with BBT

Designed for multi-functional cutting.





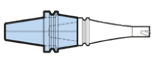




| Model | Article No. | ØD | L | L1 | L2 | ap | Number of Inserts | Insert size | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| BBT30-FCR16082-65 | 966.683 | 16 | 65 | 28 | 43 | 8 | 2 | BRG16 | 0.47 |
| BBT30-FCR20083-65 | 966.685 | 20 | 65 | 28 | 43 | 8 | 3 | BRG20 | 0.49 |
| BBT30-FCR25083-65 | 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 |
|---|---|---|---|
|  |  |  |  |
| ▶ 471 | ▶ 490 | ▶ 493 | ▶ 493 |

# Fullcut Mill FCR - For Long Nose Type with BBT

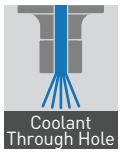






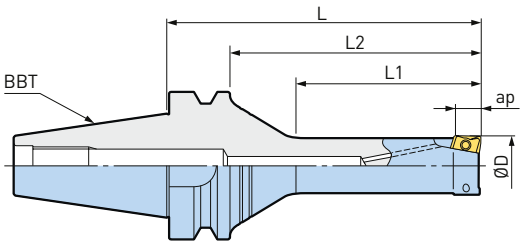



Unique inserts designed for ramping make multi-functional cutting possible.







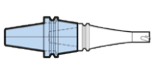




| Model | Article No. | ØD | L | L1 | L2 | ap | Number of Inserts | Insert size | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| BBT30-FCR16082L-85 | 966.684 | 16 | 85 | 45 | 63 | 8 | 2 | BRG16 | 0.50 |
| BBT30-FCR20082L-85 | 966.686 | 20 | 85 | 50 | 63 | 8 | 2 | BRG20 | 0.53 |
| BBT30-FCR25082L-85 | 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.

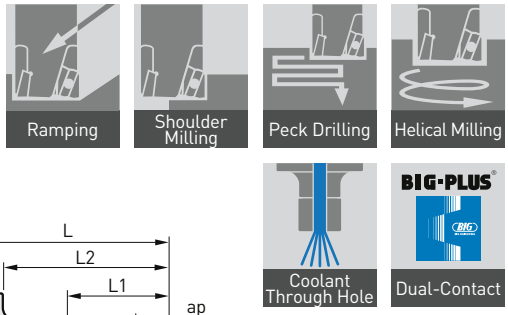
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**Accessories & Spare Parts**

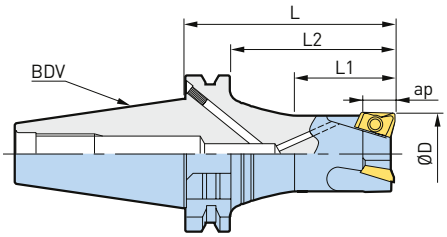
| Adapter for BBT50 taper shank | Indexable Inserts for Fullcut Mill FCR | Wrench | Insert Clamping Screw Set |
|---|---|---|---|
|  |  |  |  |
| ▶ 471 | ▶ 490 | ▶ 493 | ▶ 493 |

# 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 |
|---|---|---|
|  |  |  |
| ▶ 490 | ▶ 493 | ▶ 493 |

# Fullcut Mill FCR - For Standard Type with HSK-A

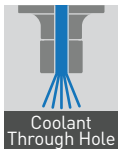




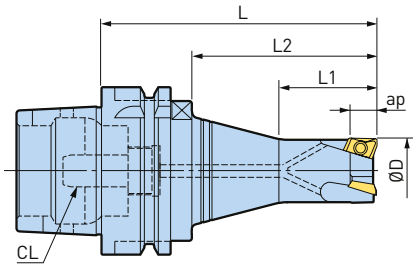





Unique inserts designed for ramping make multi-functional cutting possible.






| 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 |
|---|---|---|---|
|  |  |  |  |
| ▶ 490 | ▶ 250 | ▶ 493 | ▶ 493 |

# Fullcut Mill FCR - For Long Nose Type with HSK-A

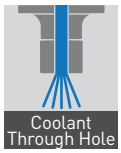




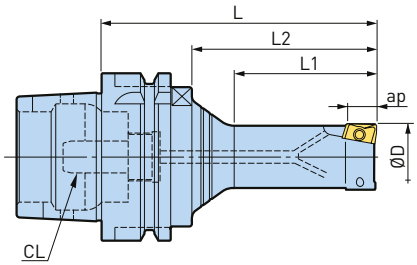





Unique inserts designed for ramping make multi-functional cutting possible.






| 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.

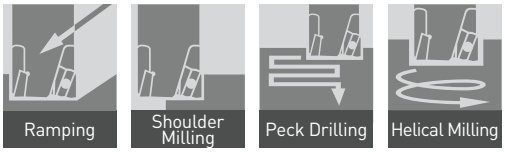
C.1

**Accessories & Spare Parts**

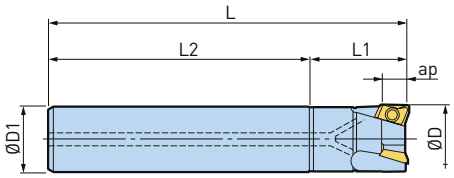
| Indexable Inserts for Fullcut Mill FCR | Coolant Pipes | Wrench | Insert Clamping Screw Set |
|---|---|---|---|
|  |  |  |  |
| ▶ 490 | ▶ 250 | ▶ 493 | ▶ 493 |

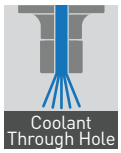
# Fullcut Mill FCR - For Oversize Type

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

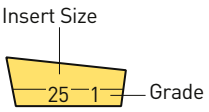
**Accessories & Spare Parts**

| Indexable Inserts for Fullcut Mill FCR | Wrench | Insert Clamping Screw Set |
|---|---|---|
|  |  |  |
| ▶ 490 | ▶ 493 | ▶ 493 |

# Indexable Inserts for Fullcut Mill FCR



**Marking Description**




1: ACZ310
2: DS20
P3: ACP300
3F: ACM300F

| Model | Article No. | ØD | ap | Nose 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 |

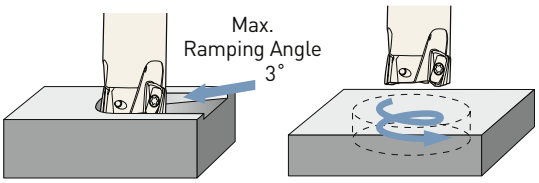
C.1

**Accessories & Spare Parts**

| Wrench | Insert Clamping Screw Set |
|---|---|
|  |  |
| ▶ 493 | ▶ 493 |

# Fullcut Mill FCR

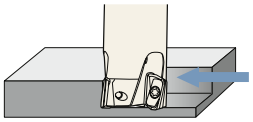
## Recommended Cutting Condition




| 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 |

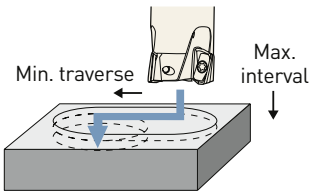
**Ramping and helical interpolation**

| 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**

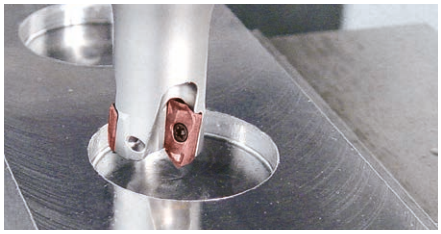
- The table is just a reference to determine cutting conditions. It should be adjusted according to a condition of a machine tool or workpiece.
- Since chips may scatter, utilize safety enclosures.

# Fullcut Mill FCR

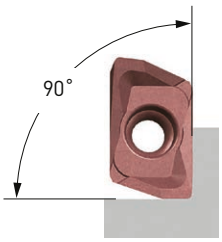
## Application Examples

### Bore

Dia. 38 with Helical milling



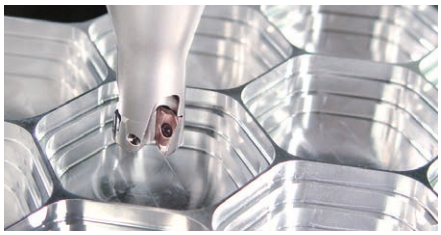
| | |
|---|---|
| Fullcut Mill | BBT40-FCR20083-120 |
| Insert | BRG200808 (ACP300) |
| Work Material | C50 (S50C) / Air blow |
| Cutting Speed Vc (m/min.) | 150 |
| Feed Rate Vf (mm/min.) | 1 100 |
| Axial DOC ap (mm) | 2 mm x 3 times |
| Hole dia. | Ø 38 |



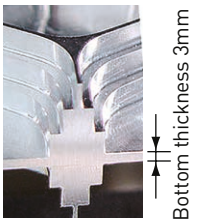

For carbon steel of C50, very smooth cutting with feed rate of Vf=1100 mm/min and excellent squareness are achieved.

### Honeycombed

Pocket with Ramping

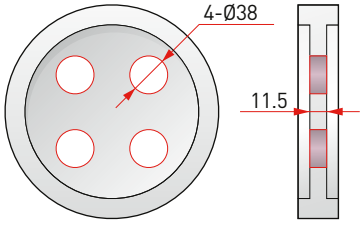


| | |
|---|---|
| Fullcut Mill | BBT40-FCR20083-85 |
| Insert | BRG200808 (DS20) |
| Work Material | A2017 Duralumin / Air blow |
| Cutting Speed Vc (m/min.) | 750 |
| Feed Rate Vf (mm/min.) | 4 300 |
| Axial DOC ap (mm) | 6 mm x 3 times |
| Radial DOC ae (mm) | max. 20 |




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



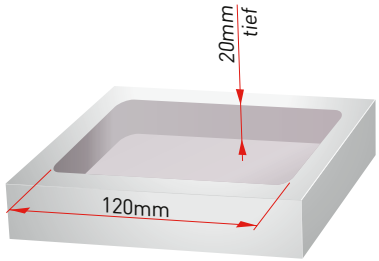

| | |
|---|---|
| Fullcut Mill | BBT40-FCR20083-120 |
| Insert | BRG200808 (ACP300) |
| Work Material | 15CrMo5 (SCM415) |
| Cutting Speed Vc (m/min.) | 150 |
| Feed Rate Vf (mm/min.) | 480 |
| Axial DOC ap (mm) | 4 mm x 3 times |
| Hole dia. | Ø 38 |

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<br>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 |

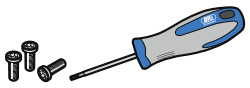
Compared to another manufacturer

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

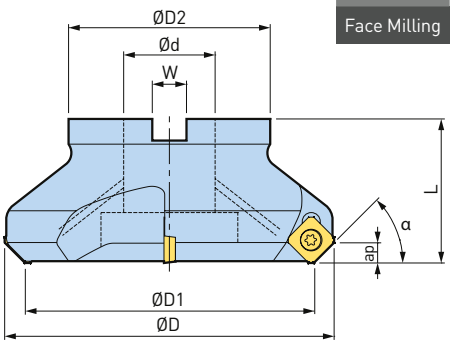
| | | | | Insert Clamping Screw Set | | Wrench | | |
|---|---|---|---|---|---|---|---|---|
| | | | |  | |  | | |
| FCM | | FCR | | Model | Article No. | Model | Article No. | Torx Size |
| Cutter Dia. Ø | Insert | Cutter Dia. Ø | Insert | | | | | |
| 12 | ARG1609 | - | - | S2505DS | 966.271 | DA-T8 | 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

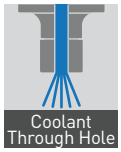
For superior surface finishing.







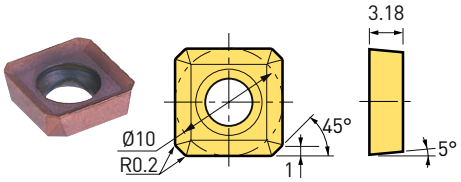





| Model | Article No. | ØD | ØD1 | ØD2 | Ød | L | W | ap | α | Number of Inserts | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FM22-SFM503-35 | - | 61.6 | 50 | 47 | 22 | 35 | 10.4 | 5 | 45° | 3 | 0.40 |
| FM22-SFM634-35 | - | 74.6 | 63 | 47 | 22 | 35 | 10.4 | 5 | 45° | 4 | 0.50 |
| 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



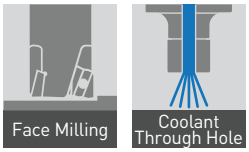
| Model | Article No. | Model | Article No. |
|---|---|---|---|
| S4S-T15DS | 805.897 | DA-T15 | 966.275 |

### Accessories & Spare Parts

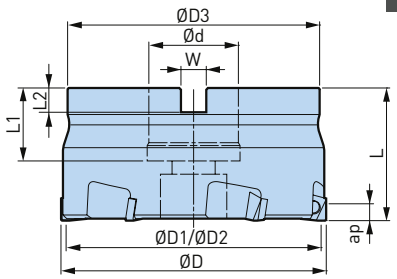
| Face Mill Arbors Type FMH BBT | Face Mill Arbors Type FMH BDV | Face Mill Arbors Type FMH HSK-A | Indexable Inserts for Surface Mill | Insert Clamping Screw Set |
|---|---|---|---|---|
|  |  |  |  |  |
| ▶ 102 | ▶ 161 | ▶ 211 | ▶ 494 | ▶ 494 |

# Speed Finisher

Amazing improvement of surface finish at high speed cutting.



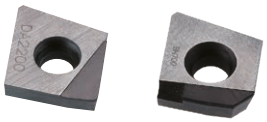



| Model | Article No. | Ød | ØD | ØD1 | ØD2 | ØD3 | L | L1 | L2 | W | Number of Inserts | max. min-1 | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FM22-PLS505-35 | 978.276 | 22 | 50 | 46.9 | 44.9 | 47 | 35 | 19 | 6 | 10.4 | 5 | 20,000 | 0.34 |
| FM22-PLS636-35 | 978.313 | 27 | 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



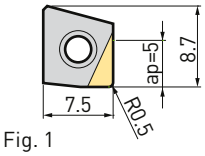


Fig. 1

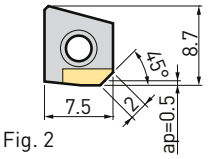


Fig. 2

| 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 |

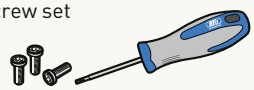
The table is a reference to determine cutting conditions. It should be adjusted according to cutting width, conditions of the machine tool and workpiece.

### 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 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| ▶ 102 | ▶ 161 | ▶ 211 | ▶ 496 | ▶ 496 | ▶ 496 |

C.1

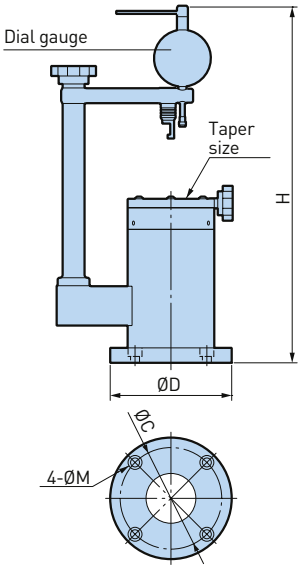
### Accessories for Speed Finisher

| Spare Parts | | | | | |
|---|---|---|---|---|---|
| Lifting screw set<br>(1) lifting screw &<br>(1) lifting nut  | | Insert clamping screw set<br>(10) screws &<br>(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



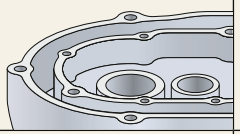
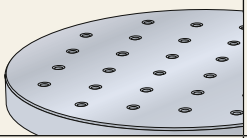
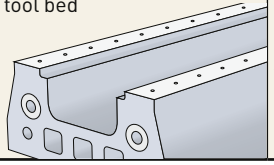



| Model | Article No. | ØD | ØC | ØM | H | Weight (kg) |
|---|---|---|---|---|---|---|
| **PLP-BBT30** | 804.644 | 122 | 102 | 9 (M8) | 417 | 7.50 |
| **PLP-BBT40** | 804.645 | 122 | 102 | 9 (M8) | 417 | 7.60 |
| **PLP-BBT50** | 804.646 | 172 | 149 | 11 (M10) | 502 | 17.50 |
| **PLP-HSK63** | 978.275 | 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<br>ADC12  | Cutting speed: 4 000 m/min<br>Spindle speed: 15 900 min$^{-1}$<br>Feed rate: 9 550 mm/min<br>Depth of cut: 2.5 mm | Ra = 0.08 µm<br>Rz = 0.55 µm | Within 1 µm | 24 000 | Rough and finish processes are combined in a single operation. |
| Parts of semiconductor manufacturing equipment<br>A5052  | Cutting speed: 4 000 m/min<br>Spindle speed: 15 900 min$^{-1}$<br>Feed rate: 9 550 mm/min<br>Depth of cut: 2.0 mm | Ra = 0.07 µm<br>Rz = 0.32 µm | Within 1 µm | 320 | Mirror finish is achieved. |
| Machine tool bed<br>FC250  | Cutting speed: 1 500 m/min<br>Spindle speed: 6 000 min$^{-1}$<br>Feed rate: 3 600 mm/min<br>Depth of cut: 0.5 mm | Ra = 0.12 µm<br>Rz = 0.67 µm | Within 2 µm | 20 | 1 to 2 µm flatness is obtained. |

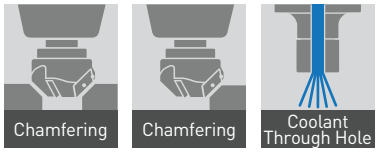
# Chamfer Mills


| | |
|---|---|
| C-Cutter Standard / CKB Type | 498 |
| C-Cutter Mini | 502 |
| R-Cutter | 510 |
| C-Centering Cutter | 514 |
| Center Boy | 515 |
| C-Cutter Boy | 516 |
| BF-Cutter | 517 |
| Chamfer Rings for Boring Heads | 519 |

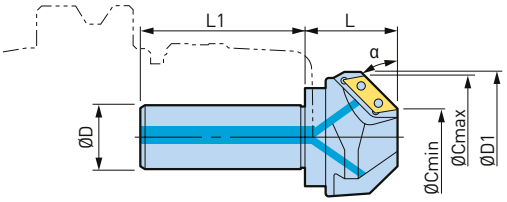

**Please use the model name for inquiries and orders.**
(e.g. BBT30-MEGA3S-45T)

## 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





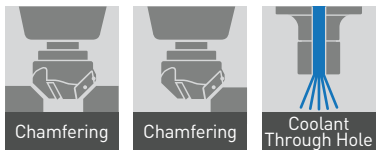




| Model | Article No. | ØD | ØD1 | L | L1 | α | ØC min. | ØC max. | Number of Inserts | Insert Type | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ST20-C0525C | 966.401 | 20 | 33 | 25 | 60 | 45° | 5 | 25 | 1 | CW12 | 0.22 |
| ST25-C1040C | 966.406 | 25 | 45 | 35 | 70 | 45° | 10 | 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.



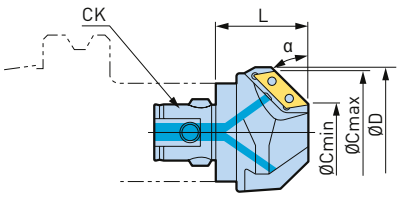

**Accessories & Spare Parts**

Inserts for C-Cutter



▶ 500



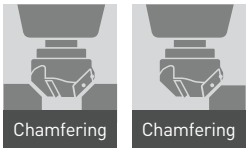



| Model | Article No. | CK | ØD | L | α | ØC min. | ØC max. | Number of Inserts | Insert Type | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| CKB2-C0525C | 335.021 | CKB2 | 28.5 | 25 | 45° | 5 | 25 | 1 | CW12 | 0.08 |
| CKB4-C1040C | 335.022 | CKB4 | 45 | 35 | 45° | 10 | 40 | 2 | CW19 | 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 |

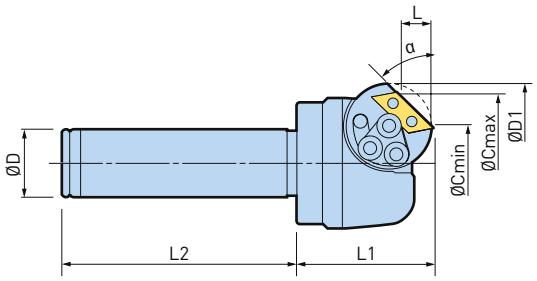
1. Wrench and screws are included.
2. Inserts are to be ordered separately.

# 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 |

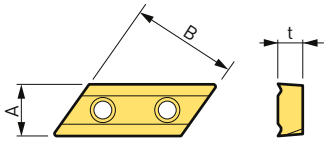
1. Values in the table are reference only. Measure accurate values with a presetter.

**Accessories & Spare Parts**

| Inserts for C-Cutter | Insert Clamping Screw Set |
|---|---|
|  |  |
| ▶ 500 | ▶ 500 |

# Inserts for C-Cutter



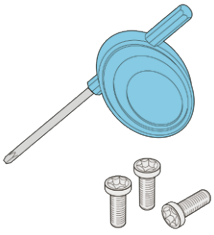



| Model | Article No. | A | B | t | Insert Grade | Material | Insert Type |
|---|---|---|---|---|---|---|---|
| CW1206A | 978.283 | 6.35 | 12.7 | 2.7 | Non-coating | General Steel & Aluminium | CW12 |
| CW1206A(DLC) | 801.753 | 6.35 | 12.7 | 2.7 | DLC | Aluminium | CW12 |
| CW1206A(ZX) | 800.951 | 6.35 | 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

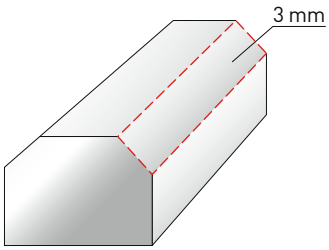
| Cutter Type | Max. Chamfer | Chamfering | General Steel Alloy Steel | | Stainless Steel | | Cast Iron | | Aluminium | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Vc (m/min) | f (mm/rev) | Vc (m/min) | f (mm/rev) | Vc (m/min) | f (mm/rev) | Vc (m/min) | f (mm/rev) |
| ST20-C5/85A-40 | 2 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<br>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<br>C4565C-60<br>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**

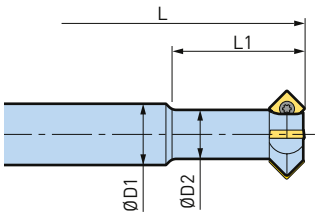
| | |
|---|---|
| C-Cutter | ST25-C1040 |
| Insert Model | CW1909A |
| Spindle speed | 3 000 $min^{-1}$ |
| Feed | 1 800 mm/min |

# C-Cutter Mini, Multi Insert Type

Front & Back Chamfering





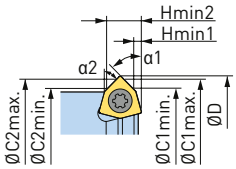




Fig. 1

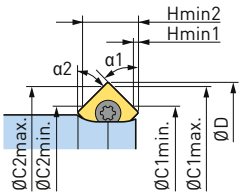



Fig. 2

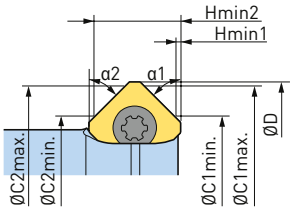



Fig. 3

| 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 |

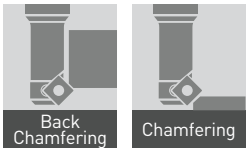
1. Wrench and screws are included.
2. Inserts are to be ordered separately.
3. In case of chamfering with 4 insert type, chatter may occur due to increased cutting resistance when plunge cutting. Please try the different types with less inserts, 1 or 2.

C.2

**Accessories & Spare Parts**

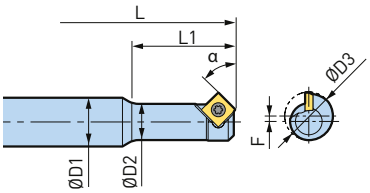
| Indexable Inserts for C-Cutter Mini | Insert Clamping Screw Set |
|---|---|
|  |  |
| ▶ 508 | ▶ 508 |

# C-Cutter Mini, Single Insert Type




Front & Back Chamfering





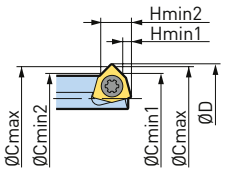




Fig. 1

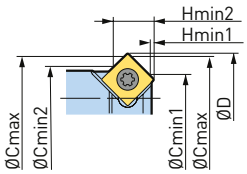



Fig. 2

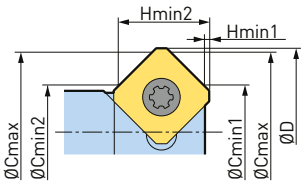



Fig. 3

| 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.

C.2

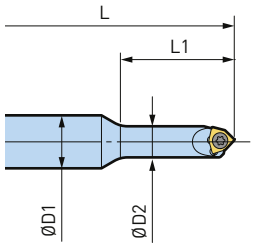
**Accessories & Spare Parts**

| Indexable Inserts for C-Cutter Mini | Insert Clamping Screw Set |
|---|---|
|  |  |
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# C-Cutter Mini, Single Insert Type

Front Chamfering





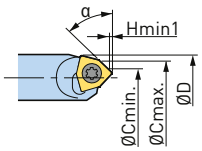




Fig. 1

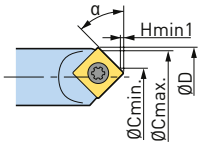



Fig. 2

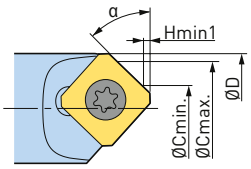



Fig. 3

| 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.

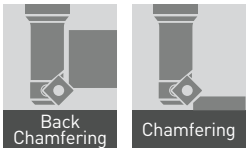
C.2

**Accessories & Spare Parts**

| Indexable Inserts for C-Cutter Mini | Insert Clamping Screw Set |
|---|---|
|  |  |
| ▶ 508 | ▶ 508 |

# C-Cutter Mini, Single Insert Type

Bolt Hole & Tap Starting Hole -Front & Back Chamfer



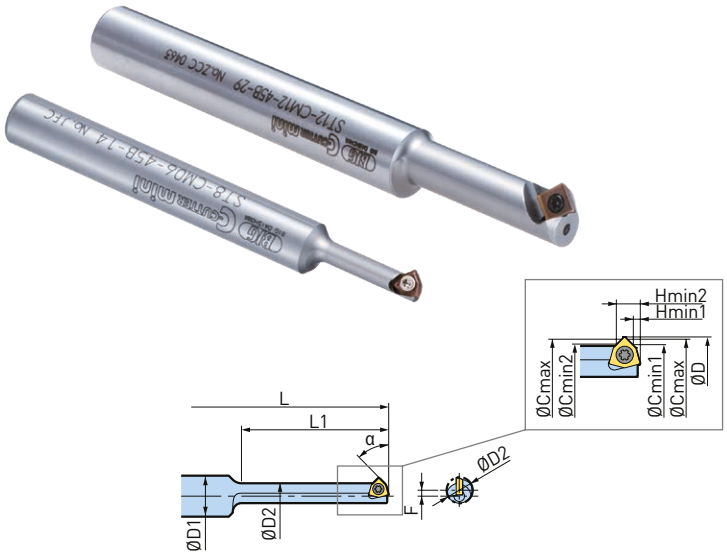




Fig. 1

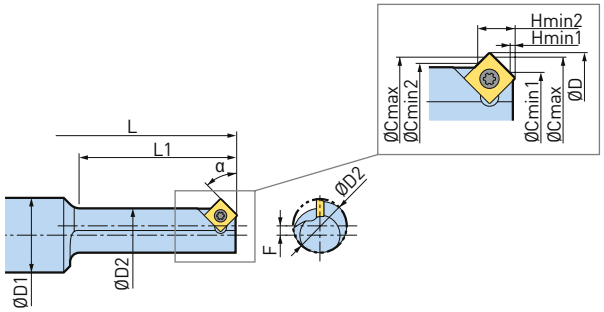



Fig. 2

| 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.

C.2

**Accessories & Spare Parts**

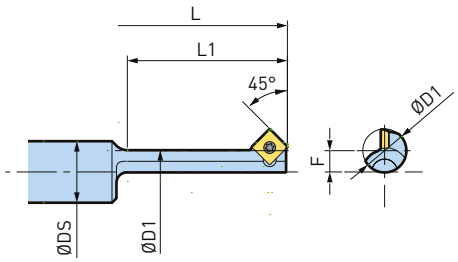
| Indexable Inserts for C-Cutter Mini | Insert Clamping Screw Set |
|---|---|
|  |  |
| ▶ 508 | ▶ 508 |

# C-Cutter Mini, Single Insert Type

Back Chamfering





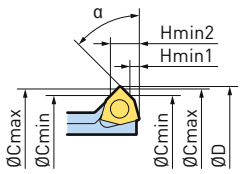




Fig. 1

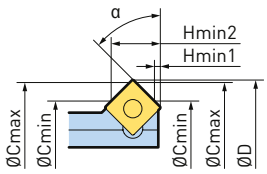



Fig. 2

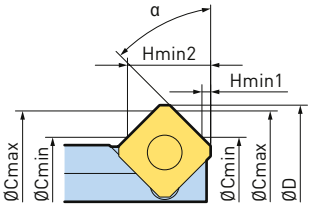



Fig. 3

| 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 |

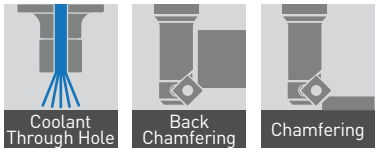
1. Wrench and screws are included.
2. Inserts are to be ordered separately.

C.2

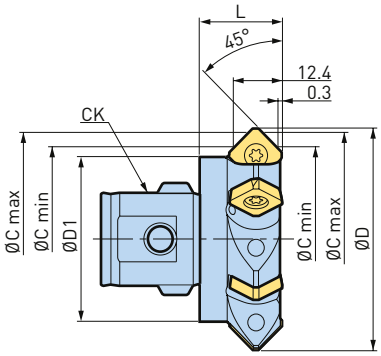
**Accessories & Spare Parts**

| Indexable Inserts for C-Cutter Mini | Insert Clamping Screw Set |
|---|---|
|  |  |
| ▶ 508 | ▶ 508 |

## 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 |

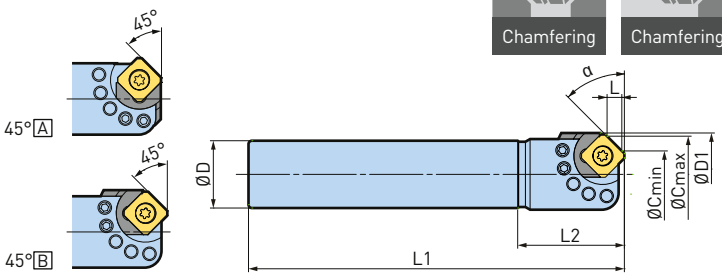
1. Wrench and screws are included.
2. Inserts are to be ordered separately.

## 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.

**Application examples**

47.5° chamfer
Plunging



5° chamfer
Traverse



**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 |

| 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

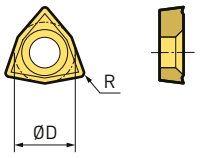



Fig. 2

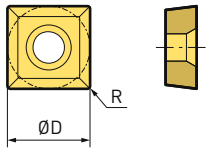
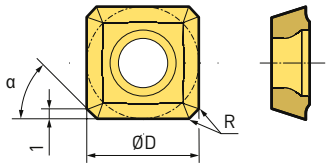



Fig. 3




| Model | Article No. | Fig. | ØD | α | Nose 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 |

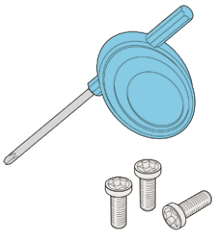
1. The suffix SE designates a sharp cutting edge version.
2. Inserts are available in a packet of 10 pcs.
3. It is recommended to regularly replace clamping screws and wrench to ensure the correct clamping force is maintained.



**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")**

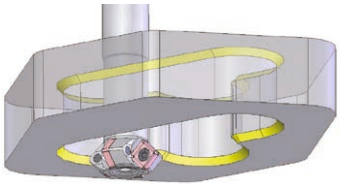
| Work Material | Insert Grade | Cutting Speed Vc (m/min) | Feed Rate fz (mm/tooth) | Coolant |
|---|---|---|---|---|
| General Steel, Alloy Steel, High-Alloy Steel | ACP200, ACP300 | 20 - 100 | 0.03 - 0.12 | Wet |
| Cast Iron | NF15KA | 50 - 160 | 0.05 - 0.20 | Dry |
| Aluminium, Non-Ferrous | ACP200, 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**

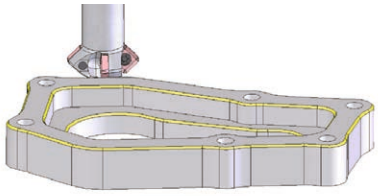
| | Competitor's Tool (with TiAlN Coated Carbide Insert) | C-Cutter Mini (ST20-C2232-45B-50) |
|---|---|---|
| Chamfering Dia. | Ø 30 | Ø 28 |
| Number of Teeth | 1 | 4 |
| Cutting Speed (m/min) | 140 | 180 |
| Spindle Speed ($min^{-1}$) | 1 490 | 2 050 |
| Feed (mm/min) | 149 | 819 |
| Result | 5 times 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

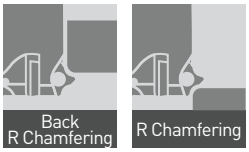
**Front & Back chamfering of starting holes for M8 tapping**

| | 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

# R-Cutter - Front & Back R Chamfering




Front & back R-chamfering are available. 4 inserts multiply feed rate.

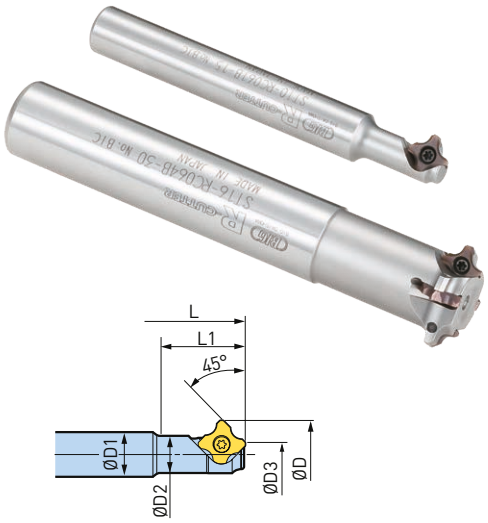



Fig. 1

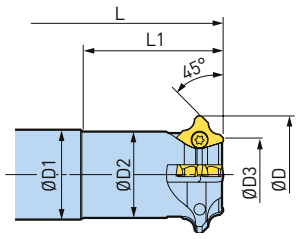
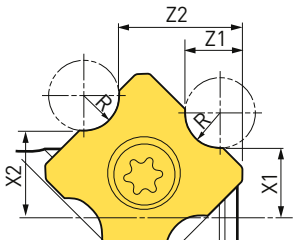



Fig. 2




| 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 |
|---|---|
|  |  |
| ▶ 513 | ▶ 513 |

# R-Cutter - Front Chamfering

R Chamfering



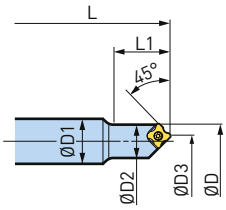



Fig. 1

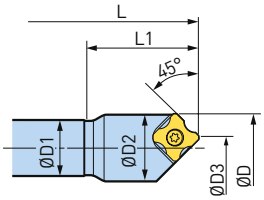
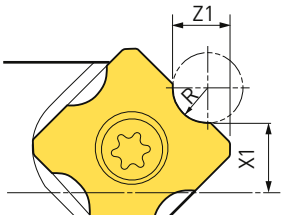



Fig. 2




| 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.

C.2

**Accessories & Spare Parts**

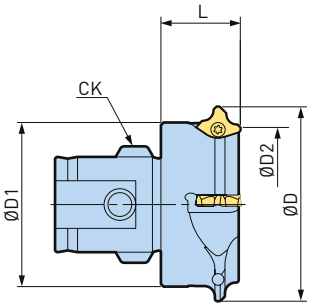
| Indexable Inserts for R-Cutter | Insert Clamping Screw Set |
|---|---|
|  |  |
| ▶ 513 | ▶ 513 |

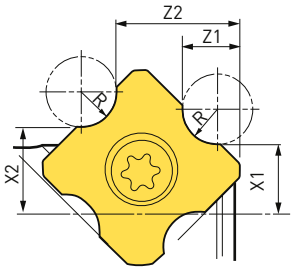
# R-Cutter CKB Type

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**

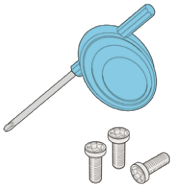
| Indexable Inserts for R-Cutter | Insert Clamping Screw Set |
|---|---|
|  |  |
| ► 513 | ► 513 |

# 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.

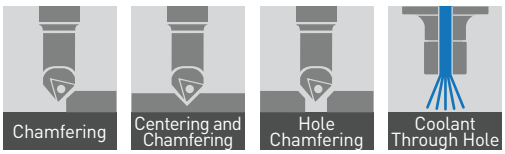
## Recommended Cutting Condition

| 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 |

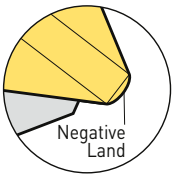
1. The table is a reference to determine cutting conditions. It should be adjusted according to the condition of the machine tool and workpiece.
2. Wet cutting is generally recommended to obtain good surface quality.
3. In case of built-up edge occurs when cutting aluminum and stainless steel, use soluble oil.

# C-Centering Cutter

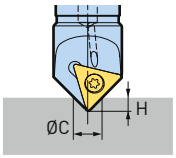
A multifunction cutter capable of both spot drilling and chamfering.






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

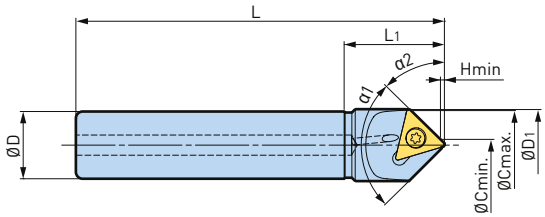



Fig. 1

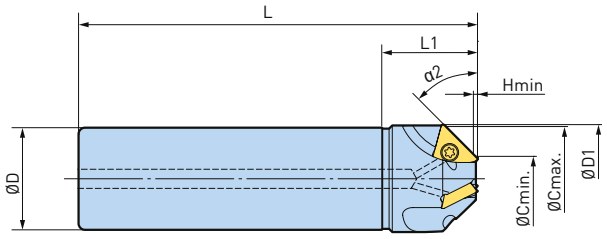


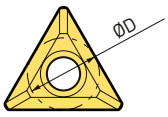

Fig. 2

| 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.



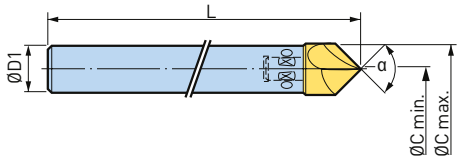



Fig. 1

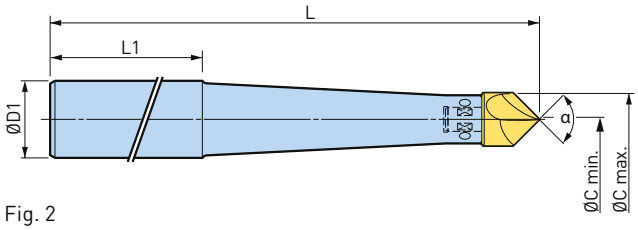



Fig. 2

| 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

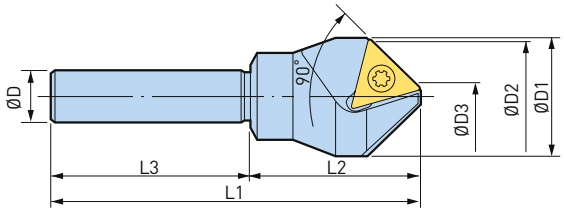
| Workpiece Material | Cutter Type | Chamfering | | Centering | |
|---|---|---|---|---|---|
| | | Vc (m/min) | f (mm/rev) | Vc (m/min) | f (mm/rev) |
| General Steel Alloy Steel | Standard | 20 - 35 | 0.10 | 25 - 50 | 0.08 |
| | long | 20 - 35 | 0.08 | 20 - 50 | 0.08 |
| Stainless Steel | Standard | 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.



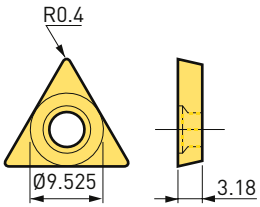



| Model | Article No. | ØD | ØD1 | ØD2 | ØD3 | L1 | L2 | L3 | Insert Type | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| ST12B-C0525 | 966.408 | 12 | 27 | 25 | 5 | 83 | 38 | 45 | C1603B | 0.14 |

1. Including 1 pce. of insert.
2. ØD2 and ØD3 indicate the min. and max. bore diameter.

## Indexable Insert for C-Cutter Boy

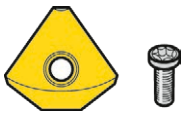





| Model | Article No. |
|---|---|
| C1603B | 966.409 |

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 |

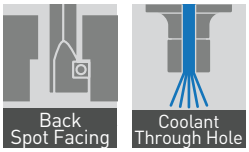
1. 10 pce. of clamping screw and 1 pce. of wrench are included.

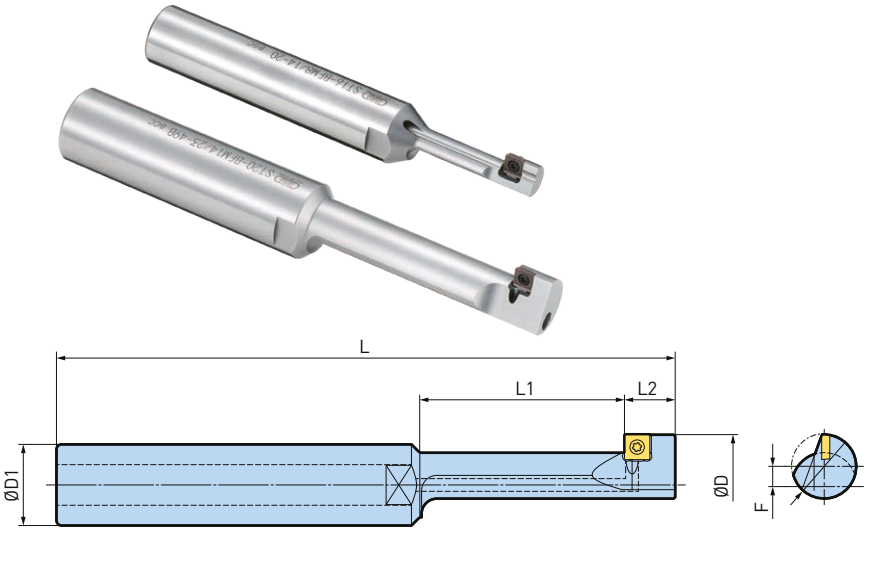
## Recommended Cutting Condition

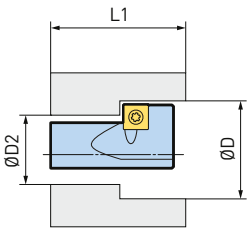
| Hole Dia. Ø | Spindle Speed ($min^{-1}$) | | |
|---|---|---|---|
| | Steel | Cast Iron | Aluminium |
| 5 | 600 | 800 | 1 000 |
| 10 | 500 | 600 | 800 |
| 15 | 400 | 500 | 600 |
| 20 | 300 | 400 | 500 |

# 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



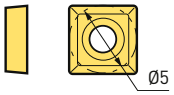


Fig. 1

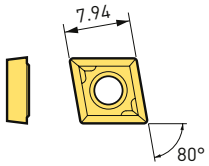


Fig. 2

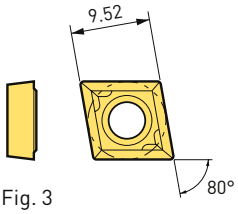


Fig. 3

| Model | Article No. | Fig. | Nose 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 | Cast Iron / Aluminum / Non-Ferrous |
| CCMP070204EFM(AC410K) | - | 2 | 0.4 | AC410K | Cast Iron / Aluminum / Non-Ferrous |
| CCMP070204ESM(AC630M) | - | 2 | 0.4 | AC630M | Stainless Steel |
| CCMP070204EFM(AC700G) | - | 2 | 0.4 | AC700G | Cast Iron |
| CCMP070204EFM(AC820P) | - | 2 | 0.4 | AC820P | General Steel |
| CCMP070204EFM(AC830P) | - | 2 | 0.4 | AC830P | General Steel |
| CCGP070204EFM(T1500A) | - | 2 | 0.4 | T1500A | General Steel |
| CCMM090308EFM(AC410K) | - | 3 | 0.8 | AC410K | Cast Iron / Aluminum / Non-Ferrous |
| CCMM090308ESM(AC630M) | - | 3 | 0.8 | AC630M | Stainless Steel |
| CCMM090308EFM(AC700G) | - | 3 | 0.8 | AC700G | Cast Iron |
| CCMM090308EFM(AC820P) | - | 3 | 0.8 | AC820P | General Steel |
| CCMM090308EFM(AC830P) | - | 3 | 0.8 | AC830P | General Steel |
| CCGM090308EFM(T1500A) | - | 3 | 0.8 | T1500A | General Steel |

## 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.

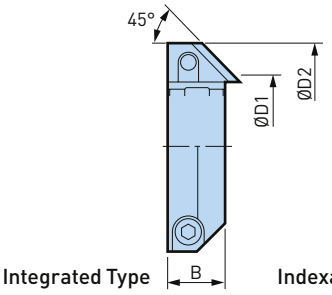
## Recommended Cutting Condition

| 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 |

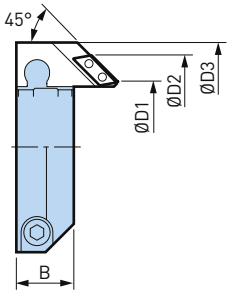
# CK Chamfering Tool for Boring Tools

Mount to the CK Shank body for easy composite chamfering and boring.

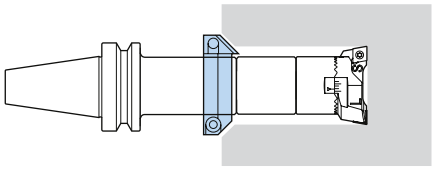





Integrated Type




Indexable Type

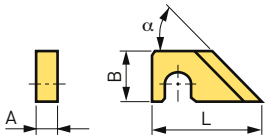


| Model | Article No. | Body | ØD1 | ØD2 | ØD3 | B | Insert Type | Weight (kg) |
|---|---|---|---|---|---|---|---|---|
| CR1-35 | - | CK1 | 20 | 35 | - | 13 | CB1-30, CB1-45 | 0.05 |
| CR2-42 | - | CK2 | 25 | 42 | - | 15 | CB1-30, CB1-45 | 0.08 |
| CR3-49 | - | CK3 | 32 | 49 | - | 15 | CB1-30, CB1-45 | 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.

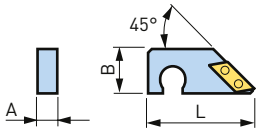



Fig. 1

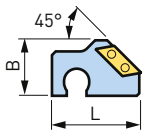
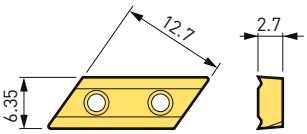



Fig. 2

| 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.

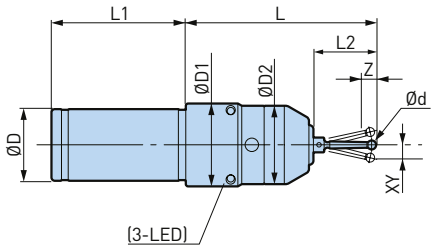
# Measuring Instruments


| | |
|---|---|
| **Point Master Series** | **522** |
| **Base Master Series** | **525** |
| **Tool Master / Accu Center** | **527** |
| **Alignment Tool for ATC Arm** | **528** |
| **Dyna Force** | **529** |
| **Dyna Test** | **530** |
| **Dyna Contact** | **532** |
| **Level Master** | **533** |
| **Centering Tool for Lathes** | **534** |


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

D.1






| | 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 |

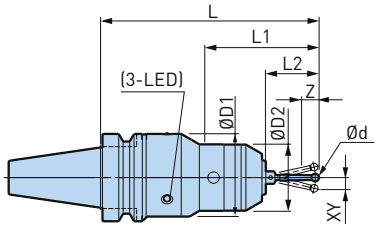



Fig. 1



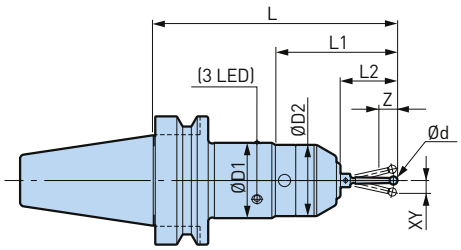
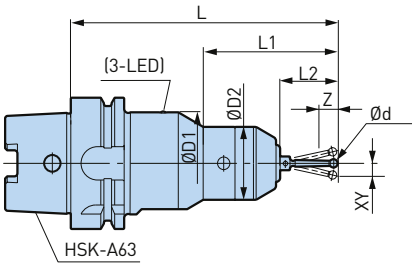
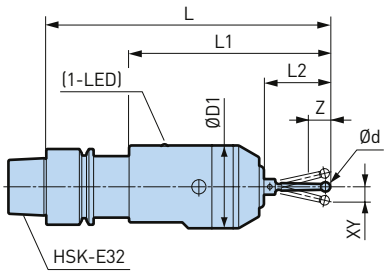



Fig. 2

| | 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 |

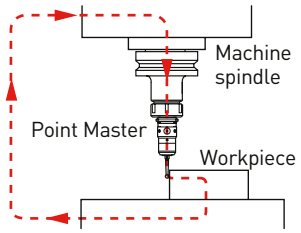





| | Article No. | Ød | ØD1 | ØD2 | L | L1 | L2 | Over-Travel XY | Over-Travel Z | Measuring Pressure (N) XY | Measuring Pressure (N) Z | Battery | Stylus (included) | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HSK-A63-PMP-130 | 804.656 | 4 | 49 | 35 | 130 | 65 | 28 | ±12 | 5 | 0.4 | 1.5 | CR2 x 1 | ST28-4R | 1.30 |

| | 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 |





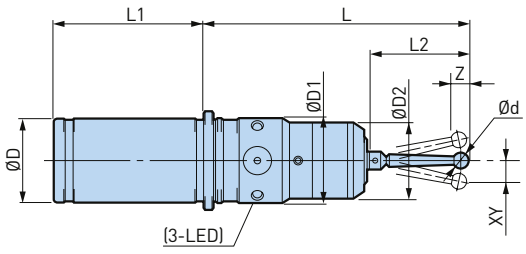




Fig. 1

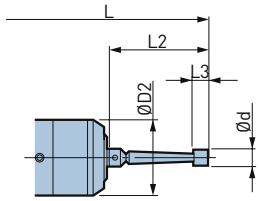
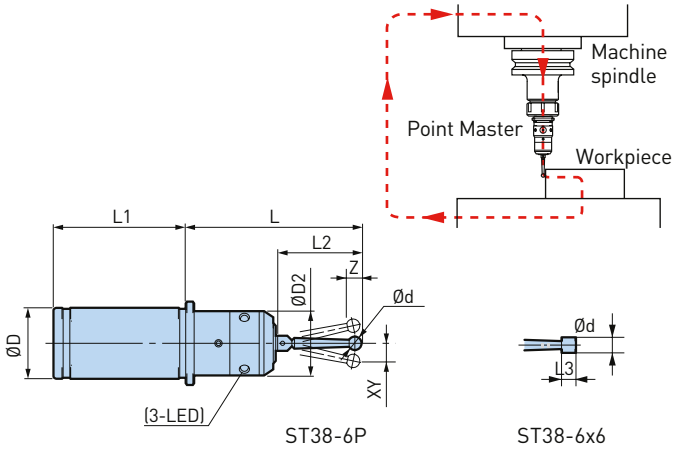



Fig. 2

| | 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 |






| | 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 |



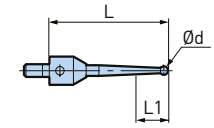


Fig. 1

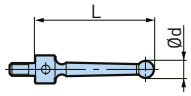


Fig. 2

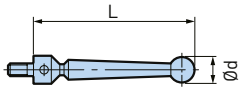


Fig. 3

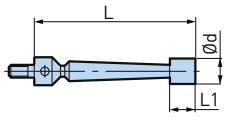
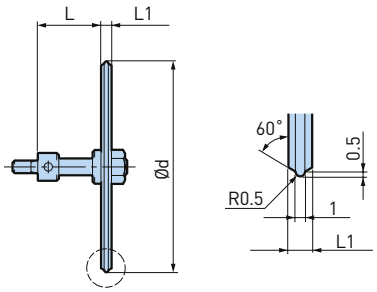


Fig. 4

| | 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 | - | 3 | Carbide | PMC·PMP·PMG |
| ST28-4P | 972.311 | 2 | 28 | - | 4 | Carbide | PMC·PMP·PMG |
| ST28-4R | 972.310 | 2 | 28 | - | 4 | Ruby | PMP |
| ST38-6P | 972.304 | 3 | 38 | - | 6 | Steel (SUS) | PMC·PMG |
| ST38-6X6 | 972.306 | 4 | 38 | 6 | 6 | Steel (SUS) | PMC·PMG |




| | Article No. | L | L1 | Ød | Material | Point Master Serie |
|---|---|---|---|---|---|---|
| ST15-50K | 804.842 | 15 | 2.5 | 50 | Steel (SUS) | PMC·PMG |




CE

| | |
|---|---|
| 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 |

| | Article No. | Weight (kg) |
|---|---|---|
| **BM-50H** | 807.713 | 0.25 |




CE

| | |
|---|---|
| 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 |

| | Article No. | Weight (kg) |
|---|---|---|
| **BM-50GH** | 807.714 | 0.25 |




CE

| | |
|---|---|
| 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 |

| | Article No. | Weight (kg) |
|---|---|---|
| **BM-50MH** | 807.715 | 0.25 |

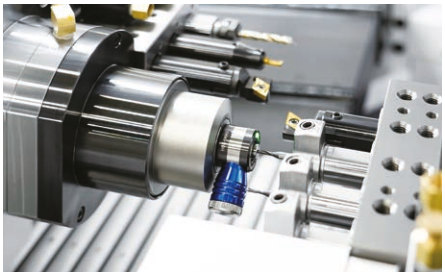


| | |
|---|---|
| Height accuracy | 40 $^{+0.005}_{0}$ mm |
| Repeatability | ±1µm (2σ) |
| Min. tool diameter | ø0.1mm |
| Measuring pressure | 1.8N |
| Stroke | 2mm |
| Touch signal | LED illuminates (blue) |
| Battery life | 40 continuous hours |

| Model | Article No. | Battery | Weight (kg) |
|---|---|---|---|
| BMM-20D | 807.718 | LR43 x 2 | 0.06 |







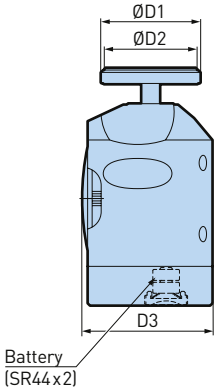
| | |
|---|---|
| Height accuracy | 20 $^{+0.005}_{0}$ mm |
| Repeatability | ±1µm (2σ) |
| Min. tool diameter | ø0.1mm |
| Measuring pressure | 1N |
| Stroke | 2mm |
| Touch signal | LED illuminates (green) |
| Battery lifeBatterie | 10 continuous hours |

| | Article No. | Battery | Weight (kg) |
|---|---|---|---|
| BMM-20H | 807.711 | SR44 x 2 | 0.07 |

# Tool Master

Tool Master is a precision touch sensor with a large dial gauge.



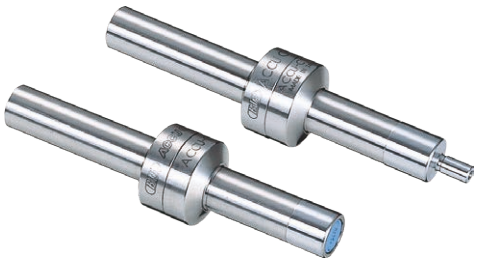



| Model | Article No. | ØD | ØD1 | ØD2 | ØD3 | L | Battery | Weight (kg) |
|---|---|---|---|---|---|---|---|---|
| TM-100N | 961.347N | 63 | 42 | 39 | 54.8 | 92 - 102 | SR44 x 2 | 0.83 |

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.





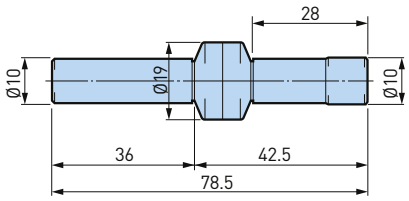



Fig. 1

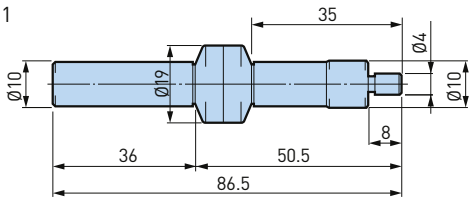



Fig. 2

| 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 | 961.207 | Point Master Series |
| ETLBAT-CR2 | 805.543 | Point Master Series |
| ETLBAT-LR43 | 961.214 | Base Master Series |
| ETLBAT-435 | 961.210 | Point Master Series |
| ETLBAT-SR44-1.55V | 961.202 | Point Master Series, Base Master Series |
| ETLBAT-BR425-3V | 807.165 | 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.



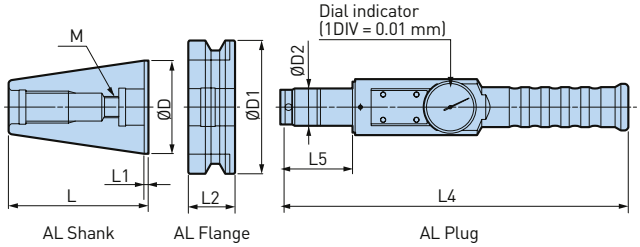



Fig. 1

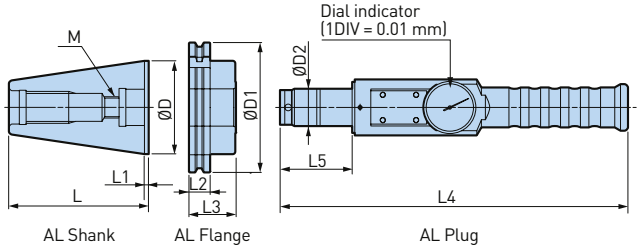


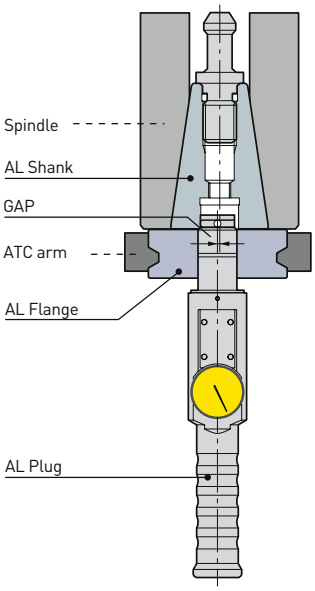

Fig. 2

| 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**

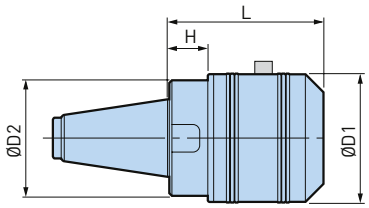



Fig. 1

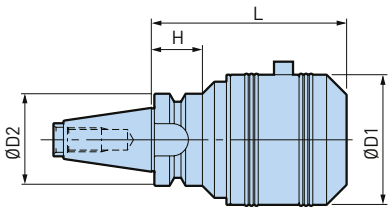
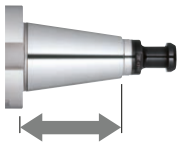
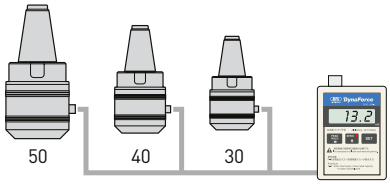


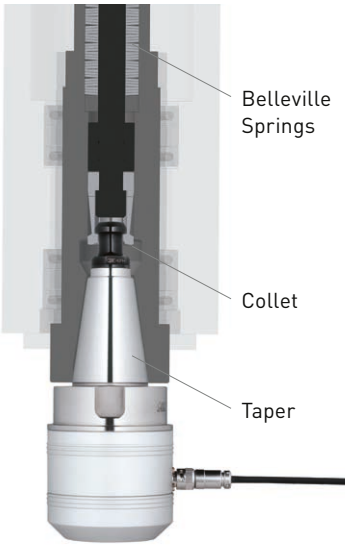

Fig. 2

**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

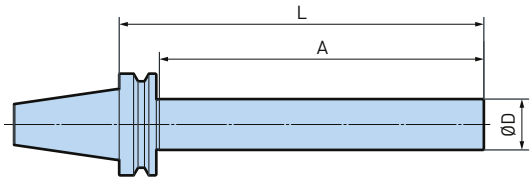
An exclusive pullstud bolt is needed for a machine spindle in DIN, ANSI or CAT standard. Pullstud bolts in MAS and JIS standards can be used. These pullstud bolts are not suitable for the SBT30-DF10.

| 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.



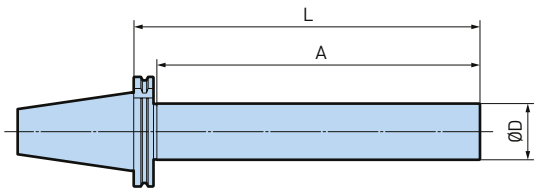



| Model | Article No. | ØD | L | A | Weight (kg) |
|---|---|---|---|---|---|
| BBT30-32-L150 | 800.054 | 32 | 150 | 125 | 1.04 |
| BBT30-32-L235 | 961.264 | 32 | 235 | 210 | 1.50 |
| BBT40-50-L200 | 800.065 | 50 | 200 | 170 | 2.80 |
| BBT40-50-L350 | 978.119 | 50 | 350 | 320 | 4.40 |
| BBT50-50-L200 | 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 aluminium case.

## Dyna Test BIG-PLUS DV Type



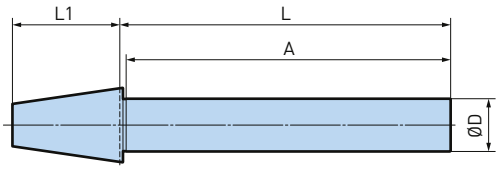



| Model | Article No. | ØD | L | A | Weight (kg) |
|---|---|---|---|---|---|
| BDV40-50-L200SD | 802.835 | 50 | 200 | 170 | 2.70 |
| BDV40-50-L340SD | 802.834 | 50 | 340 | 310 | 4.20 |
| BDV50-50-L200SD | 802.833 | 50 | 200 | 178 | 5.20 |
| BDV50-50-L340SD | 961.269 | 50 | 340 | 318 | 5.90 |

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 aluminium case.

## Dyna Test Basic Type



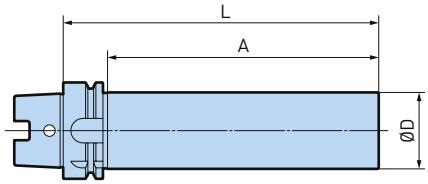



| Model | Article No. | ØD | L | L1 | A | Weight (kg) |
|---|---|---|---|---|---|---|
| NT30-32-L150 | 801.759 | 32 | 150 | 48.4 | 142 | 0.93 |
| NT30-32-L225 | 978.253 | 32 | 225 | 48.4 | 217 | 1.35 |
| NT40-50-L200 | 801.760 | 50 | 200 | 65.4 | 184 | 2.60 |
| NT40-50-L335 | 801.761 | 50 | 335 | 65.4 | 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 aluminium case.

# Dyna Test HSK

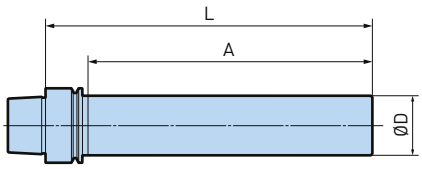





## Dyna Test HSK-A Type

| 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 |

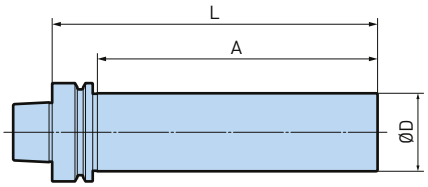
1. The drive key slots are symmetrical to allow the HSK form A dyna test bar to be indexed 180 degrees.
2. DIN 69893-1 & ISO 12164-1
3. Supplied in aluminium case.




## 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 aluminium case.



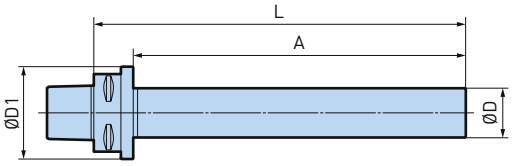

## Dyna Test HSK-F Type

| 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 aluminium case.

# Dyna Test BIG CAPTO Type





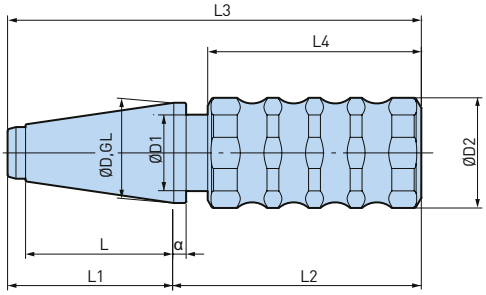

| Model | Article No. | ØD | ØD1 | L | A | Weight (kg) |
|---|---|---|---|---|---|---|
| C4-25-L160 | - | 25 | 52 | 190 | 157 | 1.01 |
| C5-32-L150 | 800.690 | 32 | 63 | 180 | 148 | 1.41 |
| C5-32-215 | 800.044 | 32 | 63 | 245 | 213 | 1.74 |
| C5-40-L250 | 800.045 | 40 | 63 | 280 | 250 | 2.90 |
| C6-40-L150 | 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 aluminium 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



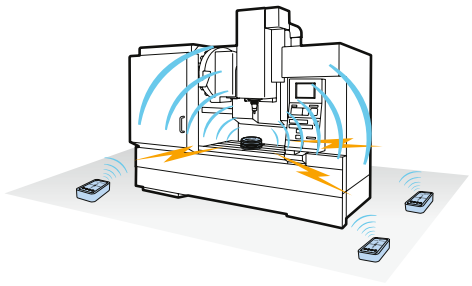
| Model | Article No. | Weight (kg) |
|---|---|---|
| LVM-01 | 801.673 | 1.05 |

| 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**

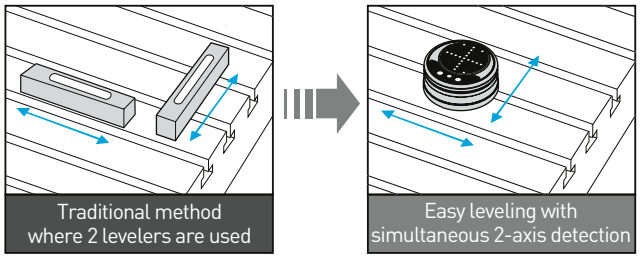
Easy and quick leveling with a single operator.



**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

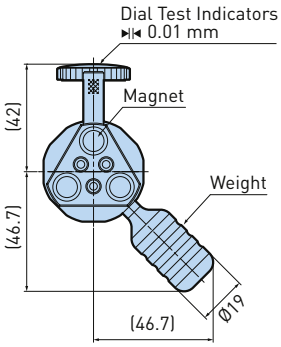
D.1

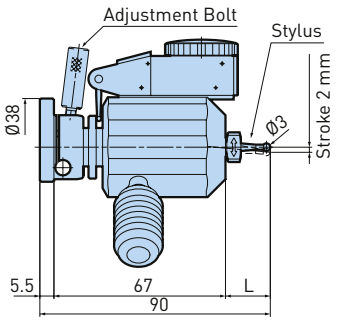
# Centering Tool for Lathes

Easy Centering with Static Dial Gauge





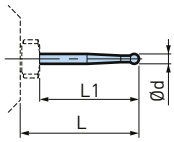




| Model | Article No. | Min. Scale | max. min-1 | Stylus (included) | Weight (kg) |
|---|---|---|---|---|---|
| CTL-90 | 806.436 | 0.01 mm | 50 | ST3-CT90 | 0.40 |

1. Stylus ST3-CT90 is included.

### Stylus for CTL-90



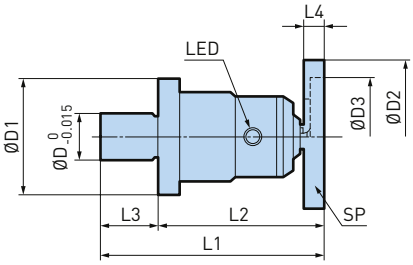


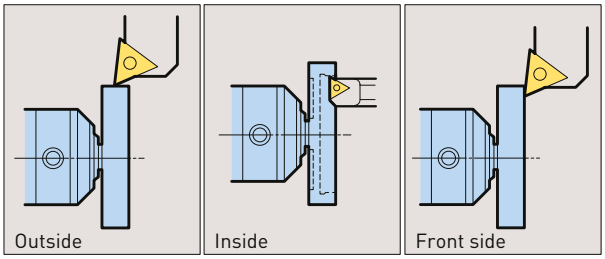

| Model | Article No. | Ød | L | L1 | Material |
|---|---|---|---|---|---|
| ST3-CT90 | 806.437 | 3 | 17.5 | 11.5 | Ruby |
| ST3-CT90L | 806.912 | 3 | 37.5 | 31.5 | Ruby |

# 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 | CR425 x 1 | 0.05 |
| LM-30 | 805.397 | 30 | 40 | 50 | 40 | 65 | 45 | 20 ±0.02 | 8 | ±2µ | SR44 x 2 | 0.05 |

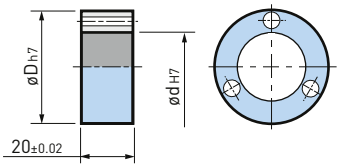
1. Machines and tools must be electrically conductive.
2. Clamp the shank (ØD) of the Lathe Master in the collet chuck of the lathe. The LED lights up as soon as the tip of the tool touches the sensor plate.
3. Battery is not included.



Special pen type CR-425 for LM-15

2 x SR-44 Battery for LM-30

### 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) |

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CATALOG-No.V5-0125-EN
Subject to technical changes by further developments.