

Premium Tool Holding Systems





Since 1974, Pioneer has delivered world class tool and work holding products, earning a reputation built on unsurpassed service, custom solutions, and innovation.

We understand the engineering intricacies that vary by industry. That's why Pioneer actively invests in research and development to enhance our already superior line of products and allow for development of individualized solutions. We are continuously working to expand our available product lines by listening to our customers while staying on top of market trends and new technology.



We believe that a quality tool requires quality balance and are uncompromising in our pursuit to provide the most cost effective tool holding in the market, going above and beyond the industry standard. Why? Because we know that higher accuracy results in superior outcomes, while also reducing wear and tear, and ultimately saving our customers money by extending their tool life.



Whatever your need, we have your business covered with our Premium and Standard product lines. We are passionate about providing our customers the latest, most sophisticated technology to guarantee a competitive advantage. We guarantee better performance through increased consistency and accuracy and invite you to explore the Pioneer difference. **Call us today!**

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BC - Bearingless Mill Chuck

Ultimate Precision | Milling | Precision Drilling | Indexable Threading & Milling



Premium Performance

Ultimate Precision

0.0002" TIR Guaranteed @ 50mm (2")

Bearingless Design

Eliminating wear components & easy to clean

Over Tightening Eliminated

Solid Shoulder Design prevents over tightening

Low Profile

Smaller OD than Traditional Mill Chucks

Coolant Thru

Sealed bore design for high pressure applications

Powerful

Over 400 ft/lbs of radial torque on 1.25" Carbide Shanks

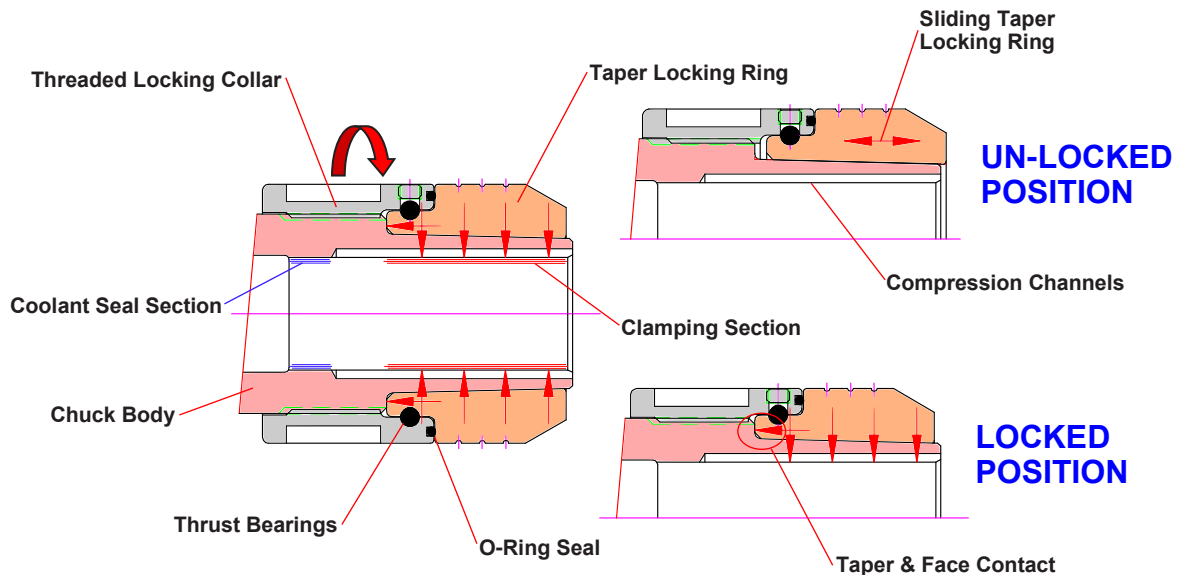
Vibration Dampening

Unlike materials & mass dampen cutting harmonics

Performance Milling

Designed for Performance Milling with Neutral to 30° flute geometry, not designed for hi-helix applications

Bearingless Mill Chuck Design Features



Bearingless Mill Chucks

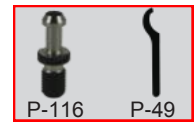
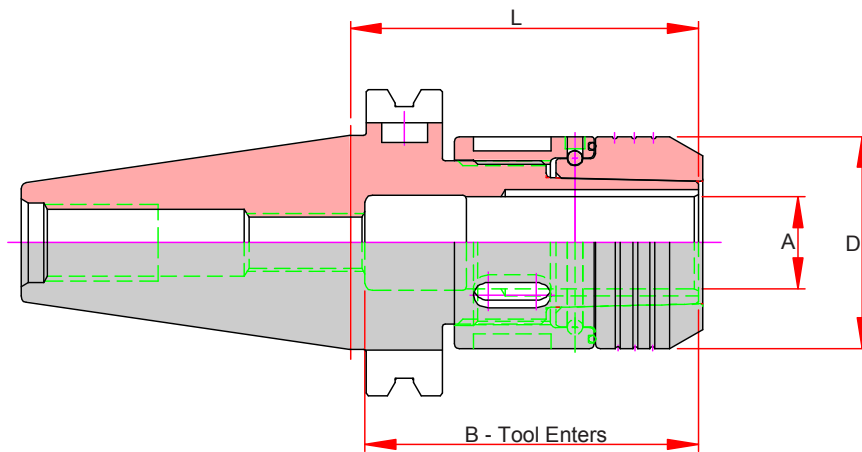
Features

- **5 μ m - 0.0002" Runout @ 2" out**
- Designed for Tool Shanks w/ ISO h6 Class Tolerance
- Sealed by Design for High Pressure Coolant
- Dynamically Balanced G6.3 @ 20,000 RPM
except CAT50 Balanced to G6.3 @ 15,000 RPM's



Optional (Order Separately):

- Wrench
- Coolant Thru w/ Nylon Screw Seal for short tool shanks
- DIN-B Flange Coolant
- Jet-Blast Coolant Ports for Solid Tooling
- Finer Balance
(Sample cutter required for balance compensation)



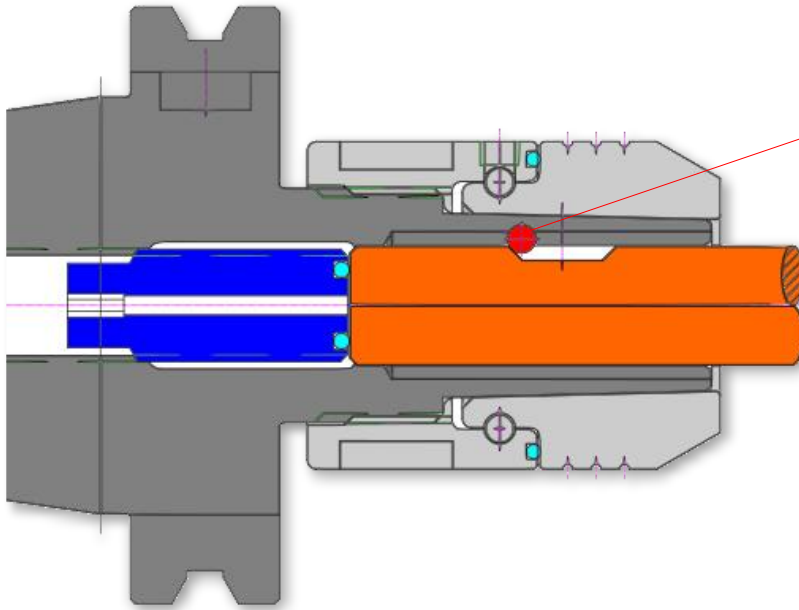
| Part Number | A Bore | B Max. Tool Enters | D | L Projection | Coolant Seal Depth (Min. Shank Length) | Optional Preset Screw (Order Separately) | Wrench (Order Separately) |
|-------------------|--------|--------------------|------|--------------|--|--|---------------------------|
| BT30-BC075-0295 | 0.7500 | 2.72 | 1.73 | 2.95 | 1.62 | ASC-12-30 | BCW-075 |
| BT40-BC075-0315 | 0.7500 | 2.72 | 1.73 | 3.15 | 1.62 | ASC-12-30 | BCW-075 |
| BT40-BC100-0331 | 1.0000 | 3.00 | 2.12 | 3.31 | 1.65 | ASC-12-30 | BCW-100 |
| BT40-BC125-0403 | 1.2500 | 3.00 | 2.56 | 4.03 | 2.05 | ASC-12-30 | BCW-125 |
| CAT40-BC050-0256 | 0.5000 | 2.36 | 1.38 | 2.56 | 1.38 | ASC-12-30 | BCW-050 |
| CAT40-BC062-0256 | 0.6250 | 2.36 | 1.50 | 2.56 | 1.38 | ASC-12-30 | BCW-050 |
| CAT40-BC075-0283 | 0.7500 | 2.72 | 1.73 | 2.83 | 1.62 | ASC-12-30 | BCW-075 |
| CAT40-BC100-0300 | 1.0000 | 3.00 | 2.12 | 3.00 | 1.65 | ASC-12-30 | BCW-100 |
| CAT40-BC125-0350* | 1.2500 | 3.00 | 2.56 | 3.50 | 2.05 | ASC-12-30 | BCW-125 |
| CAT40-BCM20-0283 | 20mm | 2.72 | 1.73 | 2.83 | 1.62 | ASC-12-30 | BCW-075 |
| CAT40-BCM25-0300 | 25mm | 3.00 | 2.12 | 3.00 | 1.65 | ASC-12-30 | BCW-100 |
| CAT40-BCM32-0350* | 32mm | 3.00 | 2.56 | 3.50 | 2.05 | ASC-12-30 | BCW-125 |
| CAT50-BC075-0283 | 0.7500 | 2.72 | 1.73 | 2.83 | 1.62 | ASC-12-30 | BCW-075 |
| CAT50-BC100-0300 | 1.0000 | 3.00 | 2.12 | 3.00 | 1.65 | ASC-12-30 | BCW-100 |
| CAT50-BC125-0350 | 1.2500 | 3.00 | 2.56 | 3.50 | 2.05 | ASC-12-30 | BCW-125 |
| HSK63A-BC075-0311 | 0.7500 | 2.16 | 1.73 | 3.11 | 1.62 | - | BCW-075 |
| HSK63A-BC100-0394 | 1.0000 | 2.96 | 2.12 | 3.94 | 1.65 | - | BCW-100 |
| HSK63A-BC125-0394 | 1.2500 | 3.00 | 2.56 | 3.94 | 2.05 | - | BCW-125 |

* No ANSI Safety Area - will not function in umbrella style tool changers

BC
SX
MX
VX
MC
SD
ER
TG
DA
EM
SM
MISC.
QC TAP
ACC.

PIONEER Non-Pull Out BC Chuck

The NP Milling System provides a cost effective solution to prevent cutter pull out. Designed to work with any standard Weldon flat the system can be adapted to other flat styles and radial grooves.



Pioneer modifies a standard BC Mill Chuck by EDM, allowing for quick delivery and special configurations in under a week.

The result is a 100% Non-Pull out holder with all the vibration dampening of a Mill Chuck for improved cutter performance. Combined with the BC Chucks vibration dampening and you have a cost effective performance combination.

How it works...



Insert the End mill, orientate the flat to the cross hole



Insert the Hardened Dowel Pin



Assemble the Lock Nut Hand Tight

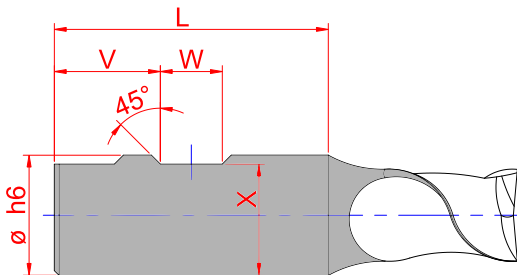


Adjust and Tighten the Preset Screw until tight against the Dowel Pin



Tighten the Lock Nut in a Locking Fixture

Weldon Flat Information...



| Shank | | L | V | W | | X | |
|--------|----------------|-------|-------|-------|-------|-------|-------|
| Max Ø | Min Ø (ISO h6) | | | Min | Max | Max | Min |
| 0.3750 | 0.3746 | 1.563 | 0.641 | 0.125 | 0.282 | 0.333 | 0.325 |
| 0.5000 | 0.4996 | 1.781 | 0.616 | 0.125 | 0.332 | 0.458 | 0.440 |
| 0.6250 | 0.6246 | 1.906 | 0.581 | 0.125 | 0.402 | 0.583 | 0.560 |
| 0.7500 | 0.7495 | 2.031 | 0.554 | 0.125 | 0.457 | 0.695 | 0.675 |
| 0.8750 | 0.8745 | 2.031 | 0.554 | 0.125 | 0.457 | 0.820 | 0.810 |
| 1.0000 | 0.9995 | 2.281 | 0.524 | 0.125 | 0.517 | 0.945 | 0.925 |
| 1.2500 | 1.2494 | 2.281 | 0.524 | 0.125 | 0.517 | 1.176 | 1.156 |
| 1.5000 | 1.4994 | 2.688 | 0.524 | 0.125 | 0.517 | 1.426 | 1.406 |
| 2.0000 | 1.9993 | 3.250 | 0.431 | 0.125 | 0.702 | 1.920 | 1.900 |

New SX-P 3 Micron Chuck

Clamping Range : 0.031" - 1.000"
Collet Range : 0.020" (0.5mm)



Ultimate Precision Collet Chuck
Designed for Drilling & Finish Milling
For the best tool life and superior finish.

Smaller Nose for Tight Applications

SX holders are designed to provide additional clearance for close wall applications. The SX25M has been re-designed to provide additional clearance. SX25M provides the same clearance as ER32 but with a tool capacity up to 1".



T.I.R. - 3µm @ 4D, Second to None!

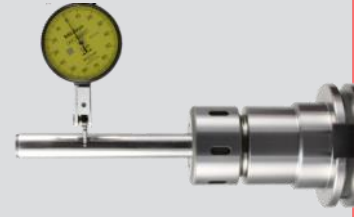
- ◆ All SX-P Collets are hand inspected and checked 3 times for guaranteed performance
- ◆ Standard 5µm Grade Available
- ◆ Fraction & Inch Sizes



| Holder | Max. Cutting Tool | Nose Ø |
|--------|-------------------|--------|
| SX06 | 0.250" (6mm) | 0.77" |
| SX06M | 0.250" (6mm) | 0.63" |
| SX10 | 0.375" (10mm) | 1.08" |
| SX10M | 0.375" (10mm) | 0.87" |
| SX16 | 0.625" (16mm) | 1.58" |
| SX25M | 1.000" (25mm) | 1.97" |

Collet TIR

| Collet Class | Max. TIR |
|--------------|---------------|
| SX | 0.00020" @ 4D |
| SX-P | 0.00012" @ 4D |



Reduced Harmonic Design

When gage-lines are aligned, SX16 sits deeper in the chuck with less overhang and more shank support than ER32.

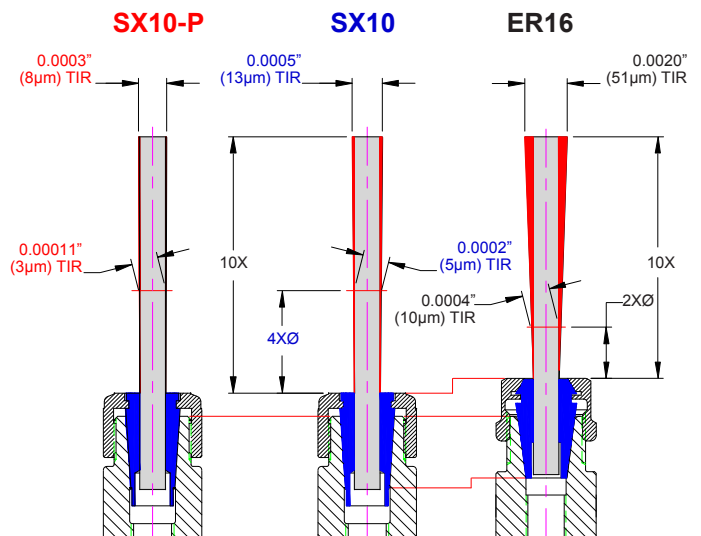
The Flat Locking Surface eliminates any influence from the locking nut for consistency on every tool change.



3 Micron Provides Results

Shown below a 1/4" at 10X.

Worst Case Runout Shown with each collet at maximum TIR.



High Pressure Coolant Caps

SX Coolant Caps supply up to 1,000 psi coolant seal. The threaded cap design when properly tightened has no effect on the TIR of the assembly, even at 30D! **Jet-Blast** also available for solid cutting tools.



New SX25M Mini-Max Nut Mini Clearance Maximum Capacity & Performance

Introducing the next step in performance Collet Chucks. Designed to fit existing ER32 applications and provide superior TIR, Driving Torque and 25% greater tool capacity. The Stub projection model provides superior rigidity in some of the most demanding applications.

- Nut Diameter of 1.97", 50mm, same as ER32 for optimal clearance
- 1" Capacity (ER32 is 3/4") for extended range
- 1.75" Stub Designed for Maximum Rigidity
- Performance Nut for High Radial Slip Torque of 150 ft/lbs on 1" Carbide Shanks
- 0.0002" TIR at 4" from the Collet Face (1" Tooling)
- 8° Collet, 4X Better TIR than ER
- Interchangeable with existing SX25 holders, collets & wrenches



New SX25MB Mini-Max Bearing Nut

Advancing the SX25M further, SX25MB increases locking torque and holding power. MB (Mini Bearing) is a true ball bearing design which increases holding power an additional 25% to 200 ft/lbs of Radial Slip Torque over non-bearing SX designs and 40% higher than ER40. SX25MB fit all existing SX25 collet chucks.



SXN-25MB Mini Bearing Nut



ERN32 E Style Nut

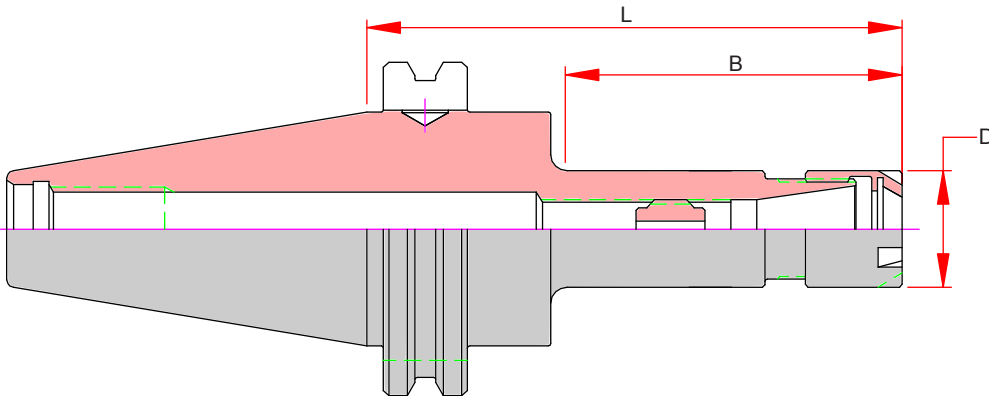


SXN-25M Mini Nut

CAT40 SX Mini Collet Chucks

Features

- **3 µm - 0.0001" Runout Taper to Taper**
- Coolant Thru the Center
- DIN B Flange Coolant Optional, see chart
- Dynamically Balanced G2.5 @ 25,000 RPM
- Order Collets, Preset Screw & Wrench Separately



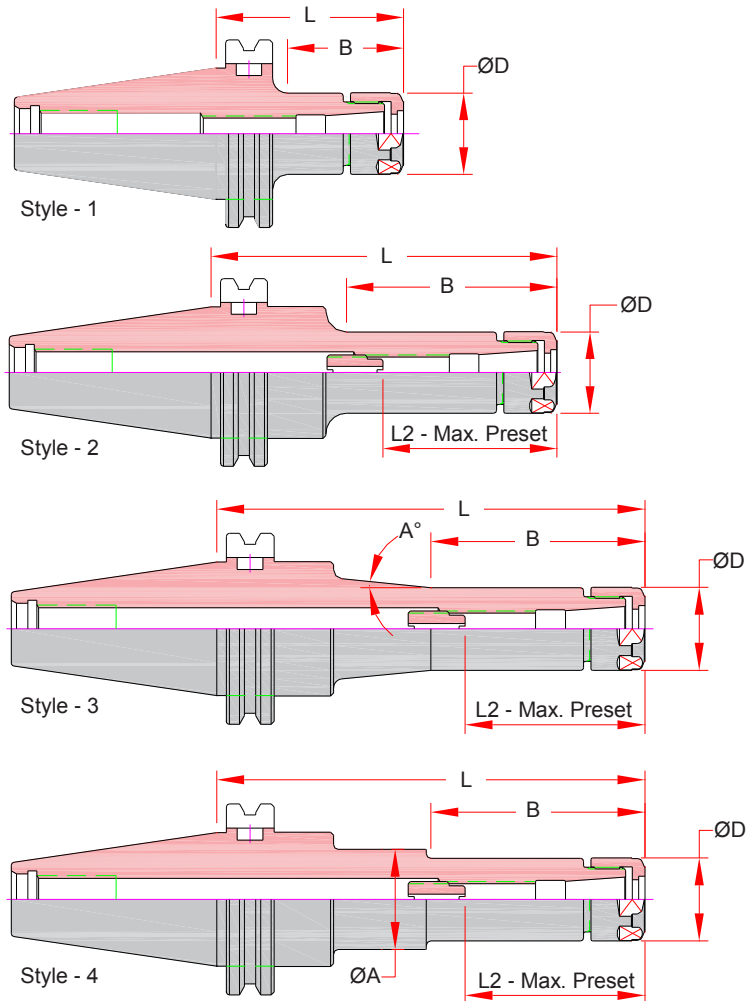
| Capacity | Part Number | Flange Coolant | B | D | L Projection | Max. Preset | Collet | Nut | Wrench |
|----------|----------------------|-----------------|------|------|--------------|-------------|--------|---------|---------|
| 0.250 | CAT40-SX06M-0250-D | Included | 1.56 | 0.63 | 2.50 | 2.12 | SX06 | SXN-06M | ERW-11M |
| | CAT40-SX06M-0400-D | | 2.42 | | 4.00 | | | | |
| 0.394 | CAT40-SX10M-0250-D | Included | 1.56 | 0.87 | 2.50 | 2.70 | SX10 | SXN-10M | ERW-16M |
| | CAT40-SX10M-0400-D | | 2.42 | | 4.00 | | | | |
| 1.000 | CAT40-SX25M-0175-D** | Included | 1.00 | 1.97 | 1.75 | 3.25 | SX25 | SXN-25M | MCW-20 |
| | CAT40-SX25M-0250-D | | 1.75 | | 2.50 | 2.18 | | | |
| | CAT40-SX25M-0354 | Optional Add -D | 2.79 | 3.54 | 3.20 | | | | |
| | CAT40-SX25M-0472 | | 3.97 | 4.72 | 3.68 | | | | |
| | CAT40-SX25M-0591 | | 5.15 | 5.91 | 3.68 | | | | |

SX - Super Chucks

CAT40 SX Collet Chucks w/ DIN B

Features

- 3 μm - 0.0001" Runout Taper to Taper
- DIN AD/B Flange Coolant Included
- Dynamically Balanced G2.5 @ 25,000 RPM
- Order Collets, Preset Screw & Wrench Separately



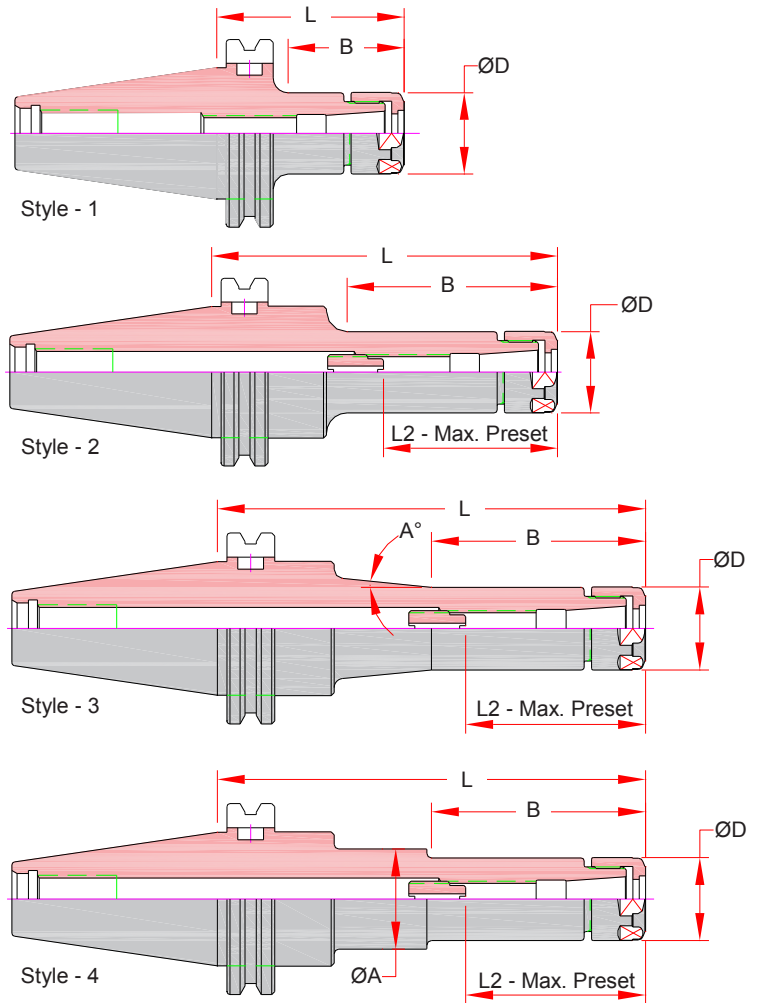
| Capacity | Part Number | Style | Flange Coolant | A | B | ØD | L Projection | L2 Max. Preset | Collet | Nut | Wrench |
|----------|---------------------------|-------|-----------------|-------|------|------|--------------|----------------|--------|---------|--------|
| 0.250 | CAT40-SX06-0250-D | 1 | Included | - | 1.63 | | 2.50 | | | | |
| | CAT40-SX06-0354-D | 2 | | - | 1.97 | | 3.54 | | | | |
| | CAT40-SX06-0472-D | 4 | Optional Add -D | Ø32 | 2.36 | 0.77 | 4.72 | 2.16 | SX06 | SXN-06 | SXW-06 |
| | CAT40-SX06-0591-D | 4 | | Ø32 | 2.36 | | 5.91 | | | | |
| 0.394 | CAT40-SX10-0250-D | 1 | Included | - | 1.63 | | 2.50 | | | | |
| | CAT40-SX10-0354 | 2 | | - | 1.97 | | 3.54 | | | | |
| | CAT40-SX10-0472 | 4 | Optional Add -D | Ø32 | 2.76 | 1.08 | 4.72 | 2.81 | SX10 | SXN-10 | SXW-10 |
| | CAT40-SX10-0591 | 4 | | Ø32 | 2.76 | | 5.91 | | | | |
| | CAT40-SX10-0709 | 3 | | 2.67° | 2.76 | | 7.09 | | | | |
| 0.630 | CAT40-SX16-0250-D | 1 | Included | - | 1.63 | | 2.50 | 3.12 | | | |
| | CAT40-SX16-0354 | 2 | | - | 2.12 | | 3.54 | 3.03 | | | |
| | CAT40-SX16-0472 | 2 | Optional Add -D | - | 3.30 | 1.58 | 4.72 | 2.95 | SX16 | SXN-16 | SXW-16 |
| | CAT40-SX16-0591 | 2 | | - | 4.48 | | 5.91 | 2.95 | | | |
| | CAT40-SX16-0709 | 2 | | - | 5.66 | | 7.09 | 2.63 | | | |
| 1.000 | CAT40-SX25M-0175-D** | 1 | Included | - | 1.00 | | 1.75 | 3.25 | | | |
| | CAT40-SX25M-0250-D | 1 | | - | 1.75 | | 2.50 | 2.62 | | | |
| | CAT40-SX25M-0354 | 2 | | - | 2.79 | 1.97 | 3.54 | 3.20 | SX25 | SXN-25M | MCW-20 |
| | CAT40-SX25M-0472 | 2 | Optional Add -D | - | 3.97 | | 4.72 | 3.68 | | | |
| | CAT40-SX25M-0591 | 2 | | - | 5.15 | | 5.91 | 3.68 | | | |

** Nut Diameter is larger than ANSI B5.50 Safety Area, may not function in Umbrella Style Tool Changers

CAT50 SX Collet Chucks

Features

- 3 μm - 0.0001" Runout Taper to Taper
- DIN B Flange Coolant Optional
- Dynamically Balanced G2.5 @ 25,000 RPM
- Order Collets, Preset Screws & Wrench Separately



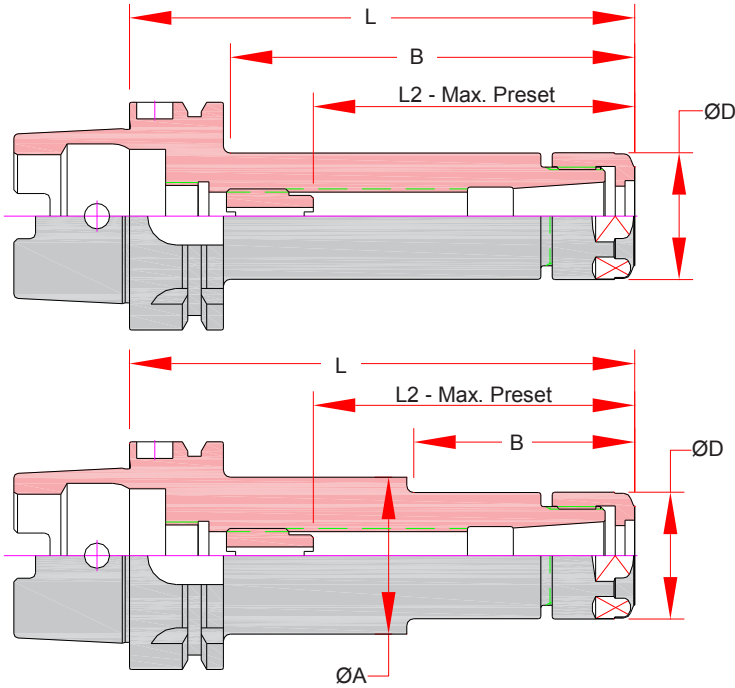
| Capacity | Part Number | Style | Flange Coolant | A | B | D | L Projection | L2 Max. Preset | Collet | Nut | Wrench |
|----------|-----------------|-------|-----------------|---------------------------|------|------|--------------|----------------|--------|--------|--------|
| 0.250 | CAT50-SX06-0413 | 1 | | - | | | 4.13 | 2.11 | | | |
| | CAT50-SX06-0531 | 4 | Optional Add -D | $\varnothing 32\text{mm}$ | | | 5.31 | 2.11 | SX06 | SXN-06 | SXW-06 |
| | CAT50-SX06-0650 | 4 | | $\varnothing 32\text{mm}$ | 2.36 | 0.77 | 6.50 | 2.11 | | | |
| | CAT50-SX06-0768 | 4 | | $\varnothing 30\text{mm}$ | | | 7.68 | 1.37 | | | |
| 0.394 | CAT50-SX10-0413 | 1 | | - | 2.36 | | 4.13 | 3.05 | | | |
| | CAT50-SX10-0531 | 4 | Optional Add -D | $\varnothing 32\text{mm}$ | 2.95 | 1.08 | 5.31 | 3.05 | SX10 | SXN-10 | SXW-10 |
| | CAT50-SX10-0650 | 4 | | $\varnothing 32\text{mm}$ | 2.95 | | 6.50 | 2.71 | | | |
| | CAT50-SX10-0768 | 4 | | $\varnothing 40\text{mm}$ | 2.95 | | 7.68 | 2.71 | | | |
| 0.630 | CAT50-SX16-0413 | 1 | | - | 2.56 | | 4.13 | | | | |
| | CAT50-SX16-0531 | 1 | Optional Add -D | - | 3.54 | 1.58 | 5.31 | | SX16 | SXN-16 | SXW-16 |
| | CAT50-SX16-0650 | 3 | | 8.27° | 3.54 | | 6.50 | 3.15 | | | |
| | CAT50-SX16-0768 | 3 | | 3.88° | 3.54 | | 7.68 | | | | |
| 1.000 | CAT50-SX25-0413 | 1 | | - | 2.56 | | 4.13 | 3.87 | | | |
| | CAT50-SX25-0531 | 1 | Optional Add -D | - | 3.74 | 2.17 | 5.31 | 3.87 | SX25 | SXN-25 | MCW-20 |
| | CAT50-SX25-0650 | 1 | | - | 4.92 | | 6.50 | 3.80 | | | |
| | CAT50-SX25-0768 | 1 | | - | 6.10 | | 7.68 | 3.87 | | | |

SX - Super Chucks

HSK63A SX Collet Chucks

Features

- 3 μm - 0.0001" Runout Taper to Taper
- Balanced G2.5 @ 25,000 RPM
- Order Collets, Coolant Tube & Wrench Separately

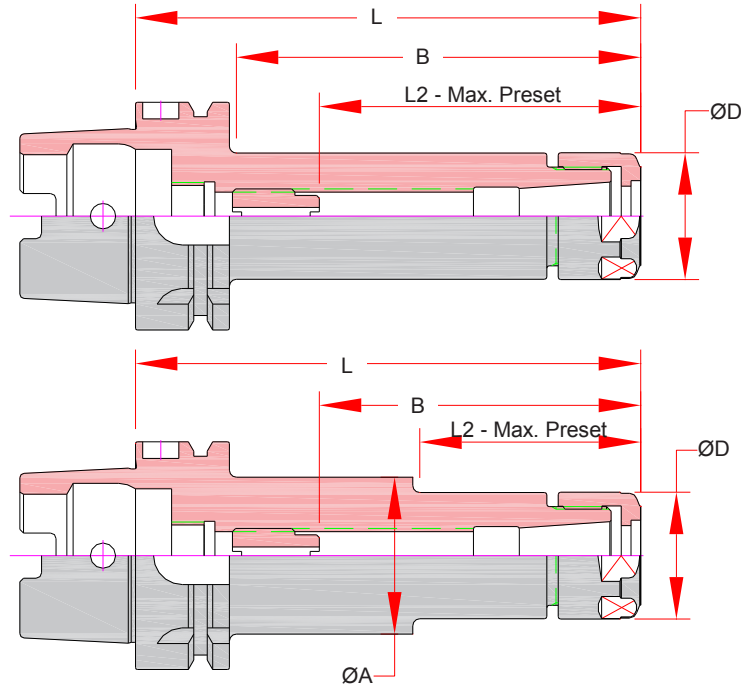


| Capacity | Part Number | Style | A | B | D | L Projection | L2 Max. Preset | Collet | Nut | Wrench |
|----------|------------------|-------|-----|------|------|--------------|----------------|--------|---------|--------|
| 0.250 | HSK63A-SX06-100 | 1 | - | 1.97 | 0.77 | 3.94 | 1.73 | SX06 | SXN-06 | SXW-06 |
| | HSK63A-SX06-150 | 2 | Ø32 | 2.36 | | 5.91 | | | | |
| 0.394 | HSK63A-SX10-105 | 1 | - | 2.91 | 1.08 | 4.13 | 1.65 | SX10 | SXN-10 | SXW-10 |
| | HSK63A-SX10-150 | 2 | Ø32 | 2.76 | | 5.91 | | | | |
| 0.630 | HSK63A-SX16-120 | 1 | - | 3.50 | 1.58 | 4.72 | 2.44 | SX16 | SXN-16 | SXW-16 |
| | HSK63A-SX16-150 | 1 | - | 4.68 | | 5.91 | | | | |
| 1.000 | HSK63A-SX25M-090 | 1 | - | 2.52 | 1.97 | 3.54 | 2.44 | SX25 | SXN-25M | MCW-20 |
| | HSK63A-SX25M-135 | 1 | - | 4.29 | | 5.31 | | | | |

HSK100A SX Collet Chucks

Features

- 3 μm - 0.0001" Runout Taper to Taper
- Balanced G2.5 @ 25,000 RPM
- Order Collets, Coolant Tube & Wrench Separately



Build on Request

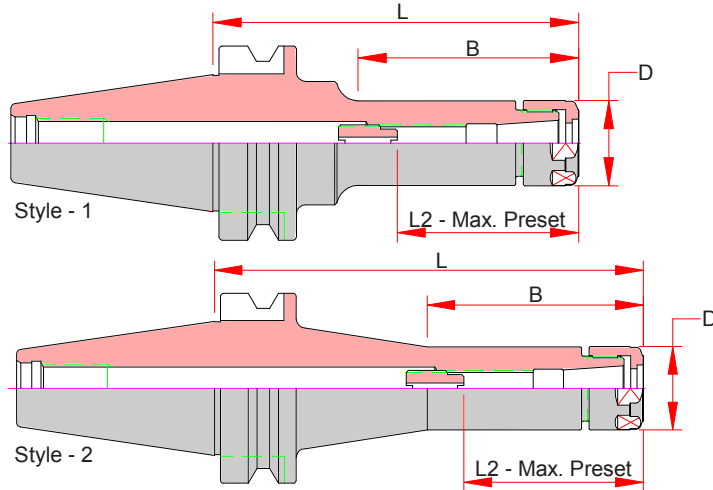
| Capacity | Part Number | Style | A | B | D | L Projection | L2 Max. Preset | Collet | Nut | Wrench |
|----------|-------------------|-------|----|------|------|--------------|----------------|--------|---------|--------|
| 0.394 | HSK100A-SX10-105 | 1 | - | 2.83 | 1.08 | 4.13 | 1.65 | SX10 | SXN-10 | SXW-10 |
| | HSK100A-SX10-150 | 2 | 5° | 4.50 | | 5.91 | | | | |
| 0.630 | HSK100A-SX16-120 | 1 | - | 3.54 | 1.58 | 4.72 | 2.44 | SX16 | SXN-16 | SXW-16 |
| | HSK100A-SX16-150 | 1 | - | 4.68 | | 5.91 | | | | |
| 1.000 | HSK100A-SX25M-095 | 1 | - | 2.60 | | 3.74 | 2.44 | | | |
| | HSK100A-SX25M-135 | 1 | - | 4.17 | 1.97 | 5.31 | 2.89 | SX25 | SXN-25M | MCW-20 |
| | HSK100A-SX25M-200 | 1 | - | 6.73 | | 7.87 | 2.89 | | | |

BC
SX
MX
VX
MC
SD
ER
TG
DA
EM
SM
MISC.
QC TAP
ACC.

BT30 SX Collet Chucks

Features

- 3 μm - 0.0001" Runout Taper to Taper
- DIN B Flange Coolant Optional in BT40
- Dynamically Balanced G2.5 @ 20,000 RPM
- Order Collets, Preset Screws & Wrench Separately



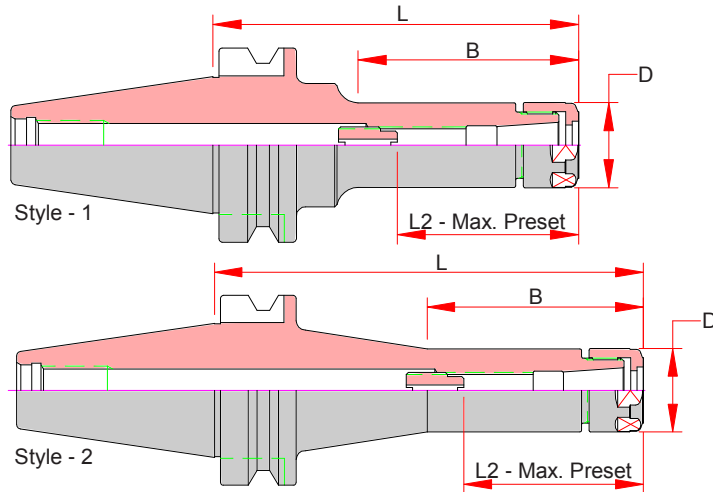
| Capacity | Part Number | Range | B | D | L Projection | L2 Max. Preset | Collet | Nut | Wrench | Style |
|----------|----------------|---------------|------|------|-----------------|-------------------|--------|--------|--------|-------|
| 1/4 | BT30-SX06-060 | 0.030 - 0.236 | 1.30 | 0.77 | 2.36 | 2.15 | SX06 | SXN-06 | SXW-06 | 1 |
| | BT30-SX06-090 | | 2.20 | | 3.54 | 2.15 | | | | |
| 3/8 | BT30-SX10-045 | 0.069 - 0.394 | 0.87 | 1.08 | 1.77 | 1.70 | SX10 | SXN-10 | SXW-10 | 1 |
| | BT30-SX10-060 | | 1.38 | | 2.36 | 2.30 | | | | |
| | BT30-SX10-090 | | 2.56 | | 3.54 | 2.40 | | | | |
| 5/8 | BT30-SX16-060 | 0.108 - 0.630 | 1.46 | 1.58 | 2.36 | 2.30 | SX16 | SXN-16 | SXW-16 | 1 |
| | BT30-SX16-090 | | 2.64 | | 3.54 | 3.03** | | | | |
| 1" | BT30-SX25M-070 | 0.125 - 1.000 | 2.68 | 1.97 | 2.76 | 2.42 | SX25 | SXN-25 | MCW-20 | 1 |

** 10MM Tool Shanks & Smaller

BT40 SX Collet Chucks

Features

- 3 μm - 0.0001" Runout Taper to Taper
- DIN B Flange Coolant Optional in BT40
- Dynamically Balanced G2.5 @ 20,000 RPM
- Order Collets, Preset Screws & Wrench Separately

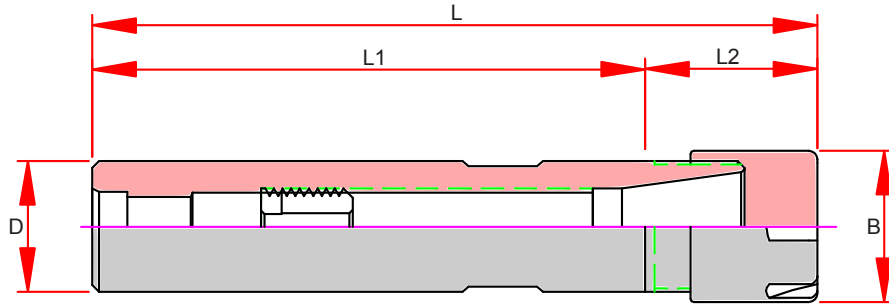


| Capacity | Part Number | Range | B | D | L Projection | L2 Max. Preset | Collet | Nut | Wrench | Style |
|----------|----------------|---------------|------|------|-----------------|-------------------|--------|---------|--------|-------|
| 1/4 | BT40-SX06-090 | | 2.36 | | 3.54 | 2.16 | | | | 1 |
| | BT40-SX06-120 | 0.030 - 0.236 | 2.36 | 0.77 | 4.72 | 2.00 | SX06 | SXN-06 | SXW-06 | 2 |
| | BT40-SX06-150 | | 2.36 | | 5.91 | 2.00 | | | | 2 |
| 3/8 | BT40-SX10-060 | | 1.18 | | 2.36 | 2.20 | | | | 1 |
| | BT40-SX10-090 | 0.069 - 0.394 | 2.36 | 1.08 | 3.54 | 2.76 | SX10 | SXN-10 | SXW-10 | 1 |
| | BT40-SX10-120 | | 2.76 | | 4.72 | 2.56 | | | | 2 |
| | BT40-SX10-150 | | 2.87 | | 5.91 | 2.76 | | | | 2 |
| 5/8 | BT40-SX16-090 | | 2.28 | | 3.54 | 2.92 | | | | 1 |
| | BT40-SX16-120 | 0.108 - 0.630 | 3.46 | 1.58 | 4.72 | 3.00 | SX16 | SXN-16 | SXW-16 | 1 |
| | BT40-SX16-150 | | 4.64 | | 5.91 | 3.00 | | | | 1 |
| | BT40-SX16-180 | | 5.82 | | 7.09 | 3.00 | | | | 1 |
| 1" | BT40-SX25M-090 | 0.125 - 1.000 | 2.40 | 1.97 | 3.54 | 3.16 | SX25 | SXN-25M | MCW-20 | 1 |
| | BT40-SX25M-120 | | 2.40 | | 4.72 | 3.16 | | | | |

SX Mini Collet Chuck Extensions

Features

- 3 μm - 0.0001" Runout Taper to Taper
- Optional Coolant Thru
- DIN B Flange Coolant Optional
- Balanced G2.5 @ 20,000 RPM
- Order Collets & Wrench Separately



| Part Number | Collet Type | B | D | L | L1 | L2 | Set Screw | Wrench | Nut Type |
|-----------------|-------------|------|-------|------|------|------|-------------|---------|----------|
| S050-SX06M-0552 | SX06 | 0.63 | 0.500 | 6.58 | 5.52 | 1.07 | ASC-SX06-SS | ERW-11M | SX-Mini |
| S075-SX10M-0640 | SX10 | 0.87 | 0.750 | 7.87 | 6.40 | 1.47 | ASC-ER16-SS | ERW-16M | SX-Mini |

SX Collet Nuts



| Nut Part Number | Description | Wrench Part Number | O.D. | Thread | Max. Torque |
|-----------------|-------------------------------|--------------------|------|-------------|-------------|
| SXN-06M | SX06 Mini Nut | ERW-11M | 0.63 | M13 x 0.75 | 9 ft/lbs |
| SXN-10M | SX10 Mini Nut | ERW-106M | 0.87 | M19 x 1.0 | 13 ft/lbs |
| SXN-06H | SX06 Hex Nut | SXW-06H | 0.77 | M15.5 x 1.0 | 22 ft/lbs |
| SXN-10H | SX10 Hex Nut | SXW-10H | 1.08 | M21.5 x 1.0 | 41 ft/lbs |
| SXN-16S | SX16 Spanner Nut | SXW-16S | 1.58 | M32 x 1.5 | 55 ft/lbs |
| SXN-25S | SX25 Spanner Nut | MCW20 | 2.17 | M45 x 1.5 | 85 ft/lbs |
| SXN-25M | SX25 Mini Spanner Nut | MCW20 | 1.97 | M45 x 1.5 | 85 ft/lbs |
| SXN-25MB | SX25 Mini Bearing Spanner Nut | MCW20 | 1.97 | M45 x 1.5 | 120 ft/lbs |

SX Collet Assembly Instructions



Insert Collet into Assembly Tool until collet collapse's enough to clears the nut ID.



Assemble Collet into the nut, move off center and pull back on the assembly tool.



The collet should lock into the counter bore in the nut and the collet spins freely.

SX Collet Assembly Tool

- Tool is required for assembly and removal of the SX collets from the nut.

| NUT SERIES | PART NUMBER |
|-------------|-------------|
| SXN-06H & M | SXR-06 |
| SXN-10H | SXR-10 |
| SXN-10M | SXR-10M |
| SXN-16S | SXR-16 |
| SXN-25S | SXR-25 |



Preset Screws

- Solid Standard Screw
- Nylon Coolant Screw w/ O-Ring Optional



| Screw Part Number | Description | Coolant Hole | O-Ring | Thread | Length mm | Wrench |
|-------------------|---------------------------------|--------------|-----------------|------------|-----------|-------------------|
| ASC-8-24 | SX06 Nylon Coolant Preset Screw | 1.5 | 6mm OD x 1.0mm | M8 x 1.25 | 24 | 2.0mm Hex |
| ASC-12-30 | SX10 Nylon Coolant Preset Screw | 2.5 | 10mm OD x 1.5mm | M12 x 1.75 | 30 | 2.5mm & 5.0mm Hex |
| ASC-18-33 | SX16 Nylon Coolant Preset Screw | 3.0 | 14mm OD x 2.0mm | M18 x 1.5 | 33 | 5.0mm Hex |
| ASC-25-30 | SX25 Nylon Coolant Preset Screw | 4.0 | 17mm OD x 2.0mm | M25 x 2.0 | 30 | 4.0mm & 8.0mm Hex |
| ASC-28-25 | SX25 Nylon Coolant Preset Screw | 4.0 | 17mm OD x 2.0mm | M28 x 2.0 | 25 | 4.0mm & 8.0mm Hex |

SX - Coolant Cap System

SX Coolant Cap System

Seals Collet Chucks for Air/Coolant Thru applications and prevents dirt, chips & swarf from entering the slots of the collet.

What do you need?

- 1 SX Collet Chuck
- 1 SX Collet
- 1 SX Coolant Cap Nut
- 1 SX Coolant Cap



Thread Coolant Cap into SX nut, do not tighten, assemble the collet.

Insert cutting tool with the seal engaged on the round part of the shank, tighten cap.

SX Coolant Cap Nuts

| Coolant Nut Part Number | Description | Type | Nut Wrench Part Number | Thread | Coolant Cap Wrench | Tightening Torque |
|-------------------------|----------------------|---------|------------------------|-------------|--------------------|-------------------|
| SXCN-06 | SX06 Coolant Cap Nut | Hex | SXW-06 | M15.5 X 1.0 | SXW-CC | 22 ft/lbs |
| SXCN-10 | SX10 Coolant Cap Nut | Hex | SXW-10 | M21.5 X 1.0 | | 41 ft/lbs |
| SXCN-16 | SX16 Coolant Cap Nut | Spanner | SXW-16 | M32 X 1.5 | | 55 ft/lbs |
| SXCN-25 | SX25 Coolant Cap Nut | Spanner | MCW20 | M45 X 1.5 | | 85 ft/lbs |



SX Coolant Caps - Inch

Features

- O-ring seal for pressures up to 1500 PSI
- Prevents chips, dust & swarf from entering the holder
- Requires Coolant Cap Nut (See Above)
- Jet Blast for Non-Coolant Cutting Tools Available
 - Order by adding a "J" to the end of the part number



| Inch Shank | MM | SX06 | SX10 | SX16 | SX25 | |
|------------|--------|--------|------------|------------|------------|------------|
| 1/8 | 0.1250 | 3.175 | SXC06-0125 | SXC10-0125 | SXC16-0125 | |
| 3/16 | 0.1875 | 4.763 | SXC06-0187 | SXC10-0187 | SXC16-0187 | SXC25-0187 |
| 1/4 | 0.2500 | 6.350 | SXC06-0250 | SXC10-0250 | SXC16-0250 | SXC25-0250 |
| 5/16 | 0.3125 | 7.938 | | SXC10-0312 | SXC16-0312 | SXC25-0312 |
| 3/8 | 0.3750 | 9.525 | | SXC10-0375 | SXC16-0375 | SXC25-0375 |
| 7/16 | 0.4375 | 11.113 | | | SXC16-0437 | SXC25-0437 |
| 1/2 | 0.5000 | 12.700 | | | SXC16-0500 | SXC25-0500 |
| 9/16 | 0.5625 | 14.288 | | | SXC16-0562 | SXC25-0562 |
| 5/8 | 0.6250 | 15.875 | | | SXC16-0625 | SXC25-0625 |
| 3/4 | 0.7500 | 19.050 | | | | SXC25-0750 |
| 7/8 | 0.8750 | 22.225 | | | | SXC25-0875 |
| 1 | 1.0000 | 25.400 | | | | SXC25-1000 |

SX Coolant Caps - Metric

Features

- O-ring seal for pressures up to 1500 PSI
- Prevents chips, dust & swarf from entering the holder
- Requires Coolant Cap Nut (Page 18)
- Jet Blast for Non-Coolant Cutting Tools Available
 - Order by adding a "J" to the end of the part number



| MM | Inch | SX06 | SX10 | SX16 | SX25 |
|------|-------|------------|------------|------------|------------|
| 1.0 | 0.039 | SXC06-M010 | SXC10-M010 | | |
| 1.5 | 0.059 | SXC06-M015 | SXC10-M015 | | |
| 2.0 | 0.079 | SXC06-M020 | SXC10-M020 | | |
| 2.5 | 0.098 | SXC06-M025 | SXC10-M025 | | |
| 3.0 | 0.118 | SXC06-M030 | SXC10-M030 | SXC16-M030 | SXC25-M030 |
| 3.5 | 0.138 | SXC06-M035 | SXC10-M035 | SXC16-M035 | SXC25-M035 |
| 4.0 | 0.157 | SXC06-M040 | SXC10-M040 | SXC16-M040 | SXC25-M040 |
| 4.5 | 0.177 | SXC06-M045 | SXC10-M045 | SXC16-M045 | SXC25-M045 |
| 5.0 | 0.197 | SXC06-M050 | SXC10-M050 | SXC16-M050 | SXC25-M050 |
| 5.5 | 0.217 | SXC06-M055 | SXC10-M055 | SXC16-M055 | SXC25-M055 |
| 6.0 | 0.236 | SXC06-M060 | SXC10-M060 | SXC16-M060 | SXC25-M060 |
| 6.5 | 0.256 | | SXC10-M065 | SXC16-M065 | SXC25-M065 |
| 7.0 | 0.276 | | SXC10-M070 | SXC16-M070 | SXC25-M070 |
| 7.5 | 0.295 | | SXC10-M075 | SXC16-M075 | SXC25-M075 |
| 8.0 | 0.315 | | SXC10-M080 | SXC16-M080 | SXC25-M080 |
| 8.5 | 0.335 | | SXC10-M085 | SXC16-M085 | SXC25-M085 |
| 9.0 | 0.354 | | SXC10-M090 | SXC16-M090 | SXC25-M090 |
| 9.5 | 0.374 | | SXC10-M095 | SXC16-M095 | SXC25-M095 |
| 10.0 | 0.394 | | SXC10-M100 | SXC16-M100 | SXC25-M100 |
| 10.5 | 0.413 | | | SXC16-M105 | SXC25-M105 |
| 11.0 | 0.433 | | | SXC16-M110 | SXC25-M110 |
| 11.5 | 0.453 | | | SXC16-M115 | SXC25-M115 |
| 12.0 | 0.472 | | | SXC16-M120 | SXC25-M120 |
| 12.5 | 0.492 | | | SXC16-M125 | SXC25-M125 |
| 13.0 | 0.512 | | | SXC16-M130 | SXC25-M130 |
| 13.5 | 0.531 | | | SXC16-M135 | SXC25-M135 |
| 14.0 | 0.551 | | | SXC16-M140 | SXC25-M140 |
| 14.5 | 0.571 | | | SXC16-M145 | SXC25-M145 |
| 15.0 | 0.591 | | | SXC16-M150 | SXC25-M150 |
| 15.5 | 0.610 | | | SXC16-M155 | SXC25-M155 |
| 16.0 | 0.630 | | | SXC16-M160 | SXC25-M160 |
| 16.5 | 0.650 | | | | SXC25-M165 |
| 17.0 | 0.669 | | | | SXC25-M170 |
| 17.5 | 0.689 | | | | SXC25-M175 |
| 18.0 | 0.709 | | | | SXC25-M180 |
| 18.5 | 0.728 | | | | SXC25-M185 |
| 19.0 | 0.748 | | | | SXC25-M190 |
| 19.5 | 0.768 | | | | SXC25-M195 |
| 20.0 | 0.787 | | | | SXC25-M200 |
| 20.5 | 0.807 | | | | SXC25-M205 |
| 21.0 | 0.827 | | | | SXC25-M210 |
| 21.5 | 0.846 | | | | SXC25-M215 |
| 22.0 | 0.866 | | | | SXC25-M220 |
| 22.5 | 0.886 | | | | SXC25-M225 |
| 23.0 | 0.906 | | | | SXC25-M230 |
| 23.5 | 0.925 | | | | SXC25-M235 |
| 24.0 | 0.945 | | | | SXC25-M240 |
| 24.5 | 0.965 | | | | SXC25-M245 |
| 25.0 | 0.984 | | | | SXC25-M250 |

BC
SX
MX
VX
MC
SD
ER
TG
DA
EM
SM
MISC.
QC TAP
ACC.

SX Collet Sets

Features

- **5 µm - 0.0002" or Better**
- Includes Collet Tray
Note: Collet Tray includes positions for Inch and Metric collets, will not be filled unless all sizes are ordered



| Part Number | Chuck Size | Pieces | Range | Increments | Collapse | Includes Tray |
|---------------|------------|--------|-----------------|------------|----------|---------------|
| Metric | | | | | | |
| SX06-MSET-07 | SX06 | 7 | 3.0mm - 6.0mm | 0.5mm | 0.5mm | SX06 TRAY |
| SX10-MSET-15 | SX10 | 15 | 3.0mm - 10.0mm | 0.5mm | 0.5mm | SX10 TRAY |
| SX10-MSET-08 | SX10 | 8 | 3.0mm - 10.0mm | 1.0mm | 0.5mm | SX10 TRAY |
| SX16-MSET-27 | SX16 | 27 | 3.0mm - 16.0mm | 0.5mm | 0.5mm | SX16 TRAY |
| SX16-MSET-14 | SX25 | 14 | 3.0mm - 16.0mm | 1.0mm | 0.5mm | SX16 TRAY |
| SX25-MSET-19 | SX25 | 19 | 16.0mm - 25.0mm | 0.5mm | 0.5mm | SX25 TRAY |
| SX25-MSET-10 | SX25 | 10 | 16.0mm - 25.0mm | 1.0mm | 0.5mm | SX25 TRAY |
| SX25-MSET-45 | SX25 | 45 | 3.0mm - 25.0mm | 0.5mm | 0.5mm | SX25 TRAY |
| SX25-MSET-23 | SX25 | 23 | 3.0mm - 25.0mm | 1.0mm | 0.5mm | SX25 TRAY |
| Inch | | | | | | |
| SX06-iSET-05 | SX06 | 5 | 1/8 - 1/4" | 1/32 " | 0.02" | SX06 TRAY |
| SX10-iSET-09 | SX10 | 9 | 1/8 - 3/8" | 1/32 " | 0.02" | SX10 TRAY |
| SX10-iSET-05 | SX10 | 5 | 1/8 - 3/8" | 1/16 " | 0.02" | SX10 TRAY |
| SX16-iSET-17 | SX16 | 17 | 1/8 - 5/8" | 1/32 " | 0.02" | SX16 TRAY |
| SX16-iSET-09 | SX16 | 9 | 1/8 - 5/8" | 1/16 " | 0.02" | SX16 TRAY |
| SX25-iSET-29 | SX25 | 29 | 1/8 - 1" | 1/32 " | 0.02" | SX25 TRAY |
| SX25-iSET-15 | SX25 | 15 | 1/8 - 1" | 1/16 " | 0.02" | SX25 TRAY |
| SX25-iSET-08 | SX25 | 8 | 1/8 - 1" | 1/8 " | 0.02" | SX25 TRAY |

SX Collet Trays

Features

- Collet Tray includes positions for Inch and Metric collets.
- Steel Construction with Sizes Laser marked



| Part Number | Amount of Collets |
|-------------|-------------------|
| SX06 TRAY | 23 |
| SX10 TRAY | 30 |
| SX16 TRAY | 44 |
| SX25 TRAY | 76 |

SX Collets B - Type Ranging Collets Inch

Features

- Premium 5µm - 0.0002" T.I.R. @ 4X tool diameter
- Flat ground shoulder guarantees the collet to be seated correctly for optimal repeatability.
- Up to 0.020" (0.5mm) Collapse Range (see chart)



SX06 Inch Collets

| Size | Inch | Inch Min. | MM | MM Min. | SX06 |
|------|--------|-----------|-------|---------|-----------|
| 1/8 | 0.1250 | 0.1053 | 3.175 | 2.675 | SX06-0125 |
| 5/32 | 0.1563 | 0.1366 | 3.970 | 3.470 | SX06-0156 |
| 3/16 | 0.1875 | 0.1678 | 4.763 | 4.262 | SX06-0187 |
| 7/32 | 0.2188 | 0.1991 | 5.558 | 5.057 | SX06-0218 |
| 1/4 | 0.2500 | 0.2303 | 6.350 | 5.850 | SX06-0250 |

SX10 Inch Collets

| Size | Inch | Inch Min. | MM | MM Min. | SX10 |
|-------|--------|-----------|-------|---------|-----------|
| 1/8 | 0.1250 | 0.1053 | 3.175 | 2.675 | SX10-0125 |
| 5/32 | 0.1563 | 0.1366 | 3.970 | 3.470 | SX10-0156 |
| 3/16 | 0.1875 | 0.1678 | 4.763 | 4.262 | SX10-0187 |
| 7/32 | 0.2188 | 0.1991 | 5.558 | 5.057 | SX10-0218 |
| 1/4 | 0.2500 | 0.2303 | 6.350 | 5.850 | SX10-0250 |
| 9/32 | 0.2813 | 0.2616 | 7.145 | 6.645 | SX10-0281 |
| 5/16 | 0.3125 | 0.2928 | 7.938 | 7.437 | SX10-0312 |
| 11/32 | 0.3438 | 0.3241 | 8.733 | 8.232 | SX10-0343 |
| 3/8 | 0.3750 | 0.3553 | 9.525 | 9.025 | SX10-0375 |

SX16 Inch Collets

| Size | Inch | Inch Min. | MM | MM Min. | SX16 |
|-------|--------|-----------|--------|---------|-----------|
| 1/8 | 0.1250 | 0.1053 | 3.175 | 2.675 | SX16-0125 |
| 5/32 | 0.1563 | 0.1366 | 3.970 | 3.470 | SX16-0156 |
| 3/16 | 0.1875 | 0.1678 | 4.763 | 4.262 | SX16-0187 |
| 7/32 | 0.2188 | 0.1991 | 5.558 | 5.057 | SX16-0218 |
| 1/4 | 0.2500 | 0.2303 | 6.350 | 5.850 | SX16-0250 |
| 9/32 | 0.2813 | 0.2616 | 7.145 | 6.645 | SX16-0281 |
| 5/16 | 0.3125 | 0.2928 | 7.938 | 7.437 | SX16-0312 |
| 11/32 | 0.3438 | 0.3241 | 8.733 | 8.232 | SX16-0343 |
| 3/8 | 0.3750 | 0.3553 | 9.525 | 9.025 | SX16-0375 |
| 13/32 | 0.4063 | 0.3866 | 10.320 | 9.820 | SX16-0406 |
| 7/16 | 0.4375 | 0.4178 | 11.113 | 10.612 | SX16-0437 |
| 15/32 | 0.4688 | 0.4491 | 11.908 | 11.407 | SX16-0468 |
| 1/2 | 0.5000 | 0.4803 | 12.700 | 12.200 | SX16-0500 |
| 17/32 | 0.5313 | 0.5116 | 13.495 | 12.995 | SX16-0531 |
| 9/16 | 0.5625 | 0.5428 | 14.288 | 13.787 | SX16-0562 |
| 19/32 | 0.5938 | 0.5741 | 15.083 | 14.582 | SX16-0593 |
| 5/8 | 0.6250 | 0.6053 | 15.875 | 15.375 | SX16-0625 |

SX25 Inch Collets

| Size | Inch | Inch Min. | MM | MM Min. | SX25 |
|-------|--------|-----------|--------|---------|-----------|
| 1/8 | 0.1250 | 0.1053 | 3.175 | 2.675 | SX25-0125 |
| 5/32 | 0.1563 | 0.1366 | 3.970 | 3.470 | SX25-0156 |
| 3/16 | 0.1875 | 0.1678 | 4.763 | 4.262 | SX25-0187 |
| 7/32 | 0.2188 | 0.1991 | 5.558 | 5.057 | SX25-0218 |
| 1/4 | 0.2500 | 0.2303 | 6.350 | 5.850 | SX25-0250 |
| 9/32 | 0.2813 | 0.2616 | 7.145 | 6.645 | SX25-0281 |
| 5/16 | 0.3125 | 0.2928 | 7.938 | 7.437 | SX25-0312 |
| 11/32 | 0.3438 | 0.3241 | 8.733 | 8.232 | SX25-0343 |
| 3/8 | 0.3750 | 0.3553 | 9.525 | 9.025 | SX25-0375 |
| 13/32 | 0.4063 | 0.3866 | 10.320 | 9.820 | SX25-0406 |
| 7/16 | 0.4375 | 0.4178 | 11.113 | 10.612 | SX25-0437 |
| 15/32 | 0.4688 | 0.4491 | 11.908 | 11.407 | SX25-0469 |
| 1/2 | 0.5000 | 0.4803 | 12.700 | 12.200 | SX25-0500 |
| 17/32 | 0.5313 | 0.5116 | 13.495 | 12.995 | SX25-0531 |
| 9/16 | 0.5625 | 0.5428 | 14.288 | 13.787 | SX25-0562 |
| 19/32 | 0.5938 | 0.5741 | 15.083 | 14.582 | SX25-0593 |
| 5/8 | 0.6250 | 0.6053 | 15.875 | 15.375 | SX25-0625 |
| 21/32 | 0.6563 | 0.6366 | 16.670 | 16.170 | SX25-0656 |
| 11/16 | 0.6875 | 0.6678 | 17.463 | 16.962 | SX25-0687 |
| 23/32 | 0.7188 | 0.6991 | 18.258 | 17.757 | SX25-0718 |
| 3/4 | 0.7500 | 0.7303 | 19.050 | 18.550 | SX25-0750 |
| 25/32 | 0.7813 | 0.7616 | 19.845 | 19.345 | SX25-0781 |
| 13/16 | 0.8125 | 0.7928 | 20.638 | 20.137 | SX25-0812 |
| 27/32 | 0.8438 | 0.8241 | 21.433 | 20.932 | SX25-0843 |
| 7/8 | 0.8750 | 0.8553 | 22.225 | 21.725 | SX25-0875 |
| 29/32 | 0.9063 | 0.8866 | 23.020 | 22.520 | SX25-0906 |
| 15/16 | 0.9375 | 0.9178 | 23.813 | 23.312 | SX25-0937 |
| 31/32 | 0.9688 | 0.9491 | 24.608 | 24.107 | SX25-0968 |
| 1 | 1.0000 | 0.9803 | 25.400 | 24.900 | SX25-1000 |

SX Collets B - Type Ranging Collets

Metric

Features

- Premium 5µm - 0.0002" T.I.R. @ 4X tool diameter
- Flat ground shoulder guarantees the collet to be seated correctly for optimal repeatability.
- Up to 0.020" (0.5mm) Collapse Range (see chart)



SX06 Metric Collets

| MM | MM Min. | Inch | Inch Min | SX06 |
|------|---------|--------|----------|------------|
| 0.80 | 0.70 | 0.0315 | 0.0276 | SX06-M008 |
| 1.00 | 0.90 | 0.0394 | 0.0354 | SX06-M010 |
| 1.25 | 1.15 | 0.0492 | 0.0453 | SX06-M0125 |
| 1.50 | 1.30 | 0.0591 | 0.0512 | SX06-M015 |
| 1.75 | 1.55 | 0.0689 | 0.0610 | SX06-M0175 |
| 2.00 | 1.80 | 0.0787 | 0.0709 | SX06-M020 |
| 2.25 | 2.05 | 0.0886 | 0.0807 | SX06-M0225 |
| 2.50 | 2.30 | 0.0984 | 0.0906 | SX06-M025 |
| 2.75 | 2.55 | 0.1083 | 0.1004 | SX06-M0275 |
| 3.00 | 2.80 | 0.1181 | 0.1102 | SX06-M030 |
| 3.50 | 3.00 | 0.1378 | 0.1181 | SX06-M035 |
| 4.00 | 3.50 | 0.1575 | 0.1378 | SX06-M040 |
| 4.50 | 4.00 | 0.1772 | 0.1575 | SX06-M045 |
| 5.00 | 4.50 | 0.1969 | 0.1772 | SX06-M050 |
| 5.50 | 5.00 | 0.2165 | 0.1969 | SX06-M055 |
| 6.00 | 5.50 | 0.2362 | 0.2165 | SX06-M060 |

SX10 Metric Collets

| MM | MM Min. | Inch | Inch Min | SX10 |
|-------|---------|--------|----------|------------|
| 2.00 | 1.75 | 0.0787 | 0.0689 | SX10-M020 |
| 2.25 | 2.00 | 0.0886 | 0.0787 | SX10-M0225 |
| 2.50 | 2.25 | 0.0984 | 0.0886 | SX10-M025 |
| 2.75 | 2.50 | 0.1083 | 0.0984 | SX10-M0275 |
| 3.00 | 2.75 | 0.1181 | 0.1083 | SX10-M030 |
| 3.50 | 3.00 | 0.1378 | 0.1181 | SX10-M035 |
| 4.00 | 3.50 | 0.1575 | 0.1378 | SX10-M040 |
| 4.50 | 4.00 | 0.1772 | 0.1575 | SX10-M045 |
| 5.00 | 4.50 | 0.1969 | 0.1772 | SX10-M050 |
| 5.50 | 5.00 | 0.2165 | 0.1969 | SX10-M055 |
| 6.00 | 5.50 | 0.2362 | 0.2165 | SX10-M060 |
| 6.50 | 6.00 | 0.2559 | 0.2362 | SX10-M065 |
| 7.00 | 6.50 | 0.2756 | 0.2559 | SX10-M070 |
| 7.50 | 7.00 | 0.2953 | 0.2756 | SX10-M075 |
| 8.00 | 7.50 | 0.3150 | 0.2953 | SX10-M080 |
| 8.50 | 8.00 | 0.3346 | 0.3150 | SX10-M085 |
| 9.00 | 8.50 | 0.3543 | 0.3346 | SX10-M090 |
| 9.50 | 9.00 | 0.3740 | 0.3543 | SX10-M095 |
| 10.00 | 9.50 | 0.3937 | 0.3740 | SX10-M100 |

SX Collets B - Type Ranging Collets Metric

Features

- Premium 5µm - 0.0002" T.I.R. @ 4X tool diameter
- Flat ground shoulder guarantees the collet to be seated correctly for optimal repeatability.
- Up to 0.020" (0.5mm) Collapse Range (see chart)



SX16 Metric Collets

| MM | MM Min. | Inch | Inch Min | SX16 |
|-------|---------|--------|----------|-----------|
| 3.00 | 2.75 | 0.1181 | 0.1083 | SX16-M030 |
| 3.50 | 3.00 | 0.1378 | 0.1181 | SX16-M035 |
| 4.00 | 3.50 | 0.1575 | 0.1378 | SX16-M040 |
| 4.50 | 4.00 | 0.1772 | 0.1575 | SX16-M045 |
| 5.00 | 4.50 | 0.1969 | 0.1772 | SX16-M050 |
| 5.50 | 5.00 | 0.2165 | 0.1969 | SX16-M055 |
| 6.00 | 5.50 | 0.2362 | 0.2165 | SX16-M060 |
| 6.50 | 6.00 | 0.2559 | 0.2362 | SX16-M065 |
| 7.00 | 6.50 | 0.2756 | 0.2559 | SX16-M070 |
| 7.50 | 7.00 | 0.2953 | 0.2756 | SX16-M075 |
| 8.00 | 7.50 | 0.3150 | 0.2953 | SX16-M080 |
| 8.50 | 8.00 | 0.3346 | 0.3150 | SX16-M085 |
| 9.00 | 8.50 | 0.3543 | 0.3346 | SX16-M090 |
| 9.50 | 9.00 | 0.3740 | 0.3543 | SX16-M095 |
| 10.00 | 9.50 | 0.3937 | 0.3740 | SX16-M100 |
| 10.50 | 10.00 | 0.4134 | 0.3937 | SX16-M105 |
| 11.00 | 10.50 | 0.4331 | 0.4134 | SX16-M110 |
| 11.50 | 11.00 | 0.4528 | 0.4331 | SX16-M115 |
| 12.00 | 11.50 | 0.4724 | 0.4528 | SX16-M120 |
| 12.50 | 12.00 | 0.4921 | 0.4724 | SX16-M125 |
| 13.00 | 12.50 | 0.5118 | 0.4921 | SX16-M130 |
| 13.50 | 13.00 | 0.5315 | 0.5118 | SX16-M135 |
| 14.00 | 13.50 | 0.5512 | 0.5315 | SX16-M140 |
| 14.50 | 14.00 | 0.5709 | 0.5512 | SX16-M145 |
| 15.00 | 14.50 | 0.5906 | 0.5709 | SX16-M150 |
| 15.50 | 15.00 | 0.6102 | 0.5906 | SX16-M155 |
| 16.00 | 15.50 | 0.6299 | 0.6102 | SX16-M160 |

SX25 Metric Collets

| MM | MM Min. | Inch | Inch Min | SX25 |
|------|---------|--------|----------|-----------|
| 3.0 | 2.8 | 0.1181 | 0.1102 | SX25-M030 |
| 3.5 | 3.0 | 0.1378 | 0.1185 | SX25-M035 |
| 4.0 | 3.5 | 0.1575 | 0.1382 | SX25-M040 |
| 4.5 | 4.0 | 0.1772 | 0.1579 | SX25-M045 |
| 5.0 | 4.5 | 0.1969 | 0.1776 | SX25-M050 |
| 5.5 | 5.0 | 0.2165 | 0.1972 | SX25-M055 |
| 6.0 | 5.5 | 0.2362 | 0.2169 | SX25-M060 |
| 6.5 | 6.0 | 0.2559 | 0.2366 | SX25-M065 |
| 7.0 | 6.5 | 0.2756 | 0.2563 | SX25-M070 |
| 7.5 | 7.0 | 0.2953 | 0.2760 | SX25-M075 |
| 8.0 | 7.5 | 0.3150 | 0.2957 | SX25-M080 |
| 8.5 | 8.0 | 0.3346 | 0.3154 | SX25-M085 |
| 9.0 | 8.5 | 0.3543 | 0.3350 | SX25-M090 |
| 9.5 | 9.0 | 0.3740 | 0.3547 | SX25-M095 |
| 10.0 | 9.5 | 0.3937 | 0.3744 | SX25-M100 |
| 10.5 | 10.0 | 0.4134 | 0.3941 | SX25-M105 |
| 11.0 | 10.5 | 0.4331 | 0.4138 | SX25-M110 |
| 11.5 | 11.0 | 0.4528 | 0.4335 | SX25-M115 |
| 12.0 | 11.5 | 0.4724 | 0.4531 | SX25-M120 |
| 12.5 | 12.0 | 0.4921 | 0.4728 | SX25-M125 |
| 13.0 | 12.5 | 0.5118 | 0.4925 | SX25-M130 |
| 13.5 | 13.0 | 0.5315 | 0.5122 | SX25-M135 |
| 14.0 | 13.5 | 0.5512 | 0.5319 | SX25-M140 |
| 14.5 | 14.0 | 0.5709 | 0.5516 | SX25-M145 |
| 15.0 | 14.5 | 0.5906 | 0.5713 | SX25-M150 |
| 15.5 | 15.0 | 0.6102 | 0.5909 | SX25-M155 |
| 16.0 | 15.5 | 0.6299 | 0.6106 | SX25-M160 |
| 16.5 | 16.0 | 0.6496 | 0.6303 | SX25-M165 |
| 17.0 | 16.5 | 0.6693 | 0.6500 | SX25-M170 |
| 17.5 | 17.0 | 0.6890 | 0.6697 | SX25-M175 |
| 18.0 | 17.5 | 0.7087 | 0.6894 | SX25-M180 |
| 18.5 | 18.0 | 0.7283 | 0.7091 | SX25-M185 |
| 19.0 | 18.5 | 0.7480 | 0.7287 | SX25-M190 |
| 19.5 | 19.0 | 0.7677 | 0.7484 | SX25-M195 |
| 20.0 | 19.5 | 0.7874 | 0.7681 | SX25-M200 |
| 20.5 | 20.0 | 0.8071 | 0.7878 | SX25-M205 |
| 21.0 | 20.5 | 0.8268 | 0.8075 | SX25-M210 |
| 21.5 | 21.0 | 0.8465 | 0.8272 | SX25-M215 |
| 22.0 | 21.5 | 0.8661 | 0.8469 | SX25-M220 |
| 22.5 | 22.0 | 0.8858 | 0.8665 | SX25-M225 |
| 23.0 | 22.5 | 0.9055 | 0.8862 | SX25-M230 |
| 23.5 | 23.0 | 0.9252 | 0.9059 | SX25-M235 |
| 24.0 | 23.5 | 0.9449 | 0.9256 | SX25-M240 |
| 24.5 | 24.0 | 0.9646 | 0.9453 | SX25-M245 |
| 25.0 | 24.5 | 0.9843 | 0.9650 | SX25-M250 |

SSX Coolant Collets Inch & Metric

Features

- Premium 5µm - 0.0002" T.I.R. @ 4X tool diameter
- Sealed for up to 2,000 PSI
- Flat ground shoulder guarantees the collet to be seated correctly for optimal repeatability.
- On Size Collets—h6 Tool Shank Required

A - Type Collets

- On Size Collets
- h6 Shank Size



SSX06 Collets

| Cutter Size | Tool Size" | SSX06 |
|-------------|------------|------------|
| 1/8 | 0.1250 | SSX06-0125 |
| 3/16 | 0.1875 | SSX06-0187 |
| 1/4 | 0.2500 | SSX06-0250 |
| 3mm | 0.1181 | SSX06-M030 |
| 4mm | 0.1575 | SSX06-M040 |
| 5mm | 0.1969 | SSX06-M050 |
| 6mm | 0.2362 | SSX06-M060 |

SSX16 Collets

| Cutter Size | Tool Size" | SSX16 |
|-------------|------------|------------|
| 1/4 | 0.2500 | SSX16-0250 |
| 5/16 | 0.3125 | SSX16-0312 |
| 3/8 | 0.3750 | SSX16-0375 |
| 7/16 | 0.4375 | SSX16-0437 |
| 1/2 | 0.5000 | SSX16-0500 |
| 9/16 | 0.5625 | SSX16-0562 |
| 5/8 | 0.6250 | SSX16-0625 |
| 6mm | 0.2362 | SSX16-M060 |
| 8mm | 0.3150 | SSX16-M080 |
| 10mm | 0.3937 | SSX16-M100 |
| 12mm | 0.4724 | SSX16-M120 |
| 16mm | 0.6300 | SSX16-M160 |

SSX10 Collets

| Cutter Size | Tool Size" | SSX10 |
|-------------|------------|------------|
| 3/16 | 0.1875 | SSX10-0187 |
| 1/4 | 0.2500 | SSX10-0250 |
| 5/16 | 0.3125 | SSX10-0312 |
| 3/8 | 0.3750 | SSX10-0375 |
| 4mm | 0.1575 | SSX10-M040 |
| 5mm | 0.1969 | SSX10-M050 |
| 6mm | 0.2362 | SSX10-M060 |
| 8mm | 0.3150 | SSX10-M080 |
| 10mm | 0.3937 | SSX10-M100 |

SSX25 Collets

| Cutter Size | Tool Size" | SSX25 |
|-------------|------------|------------|
| 3/4 | 0.7500 | SSX25-0750 |
| 7/8 | 0.8750 | SSX25-0875 |
| 1 | 1.0000 | SSX25-1000 |
| 16mm | 0.6300 | SSX25-M160 |
| 20mm | 0.7874 | SSX25-M200 |
| 25mm | 0.9843 | SSX25-M250 |

Jet-Blast SX Coolant Collets with Coolant Ports

Features

- Premium 5µm - 0.0002" T.I.R. @ 4X tool diameter
- Flat ground shoulder guarantees the collet to be seated correctly for optimal repeatability.
- On Size Collets—h6 Tool Shank Required
- Add -J to the SSX Part Number (shown below)

Flood coolant thru standard collet slots create a loss in pressure and flow control, allowing coolant to fly everywhere. The **Jet-Blast** option for SSX forces the coolant into the **Jet-Blast Ports** maintaining pressure and directing the coolant down the flutes of the cutting tool.

A - Type Collets

- On Size Collets
- h6 Shank Size



SSX06 Collets

| Cutter Size | Tool Size" | SSX06 | Port Type |
|-------------|------------|--------------|-----------|
| 1/8 | 0.1250 | SSX06-0125-J | Full |
| 3/16 | 0.1875 | SSX06-0187-J | Half |
| 1/4 | 0.2500 | SSX06-0250-J | Half |
| 3mm | 0.1181 | SSX06-M030-J | Full |
| 4mm | 0.1575 | SSX06-M040-J | Full |
| 5mm | 0.1969 | SSX06-M050-J | Half |
| 6mm | 0.2362 | SSX06-M060-J | Half |

SSX16 Collets

| Cutter Size | Tool Size" | SSX16 | Port Type |
|-------------|------------|--------------|-----------|
| 1/4 | 0.2500 | SSX16-0250-J | Full |
| 5/16 | 0.3125 | SSX16-0312-J | Full |
| 3/8 | 0.3750 | SSX16-0375-J | Full |
| 7/16 | 0.4375 | SSX16-0437-J | Full |
| 1/2 | 0.5000 | SSX16-0500-J | Full |
| 9/16 | 0.5625 | SSX16-0562-J | Full |
| 5/8 | 0.6250 | SSX16-0625-J | Half |
| 6mm | 0.2362 | SSX16-M060-J | Full |
| 8mm | 0.3150 | SSX16-M080-J | Full |
| 10mm | 0.3937 | SSX16-M100-J | Full |
| 12mm | 0.4724 | SSX16-M120-J | Full |
| 16mm | 0.6300 | SSX16-M160-J | Half |

SSX10 Collets

| Cutter Size | Tool Size" | SSX10 | Port Type |
|-------------|------------|--------------|-----------|
| 3/16 | 0.1875 | SSX10-0187-J | Full |
| 1/4 | 0.2500 | SSX10-0250-J | Full |
| 5/16 | 0.3125 | SSX10-0312-J | Full |
| 3/8 | 0.3750 | SSX10-0375-J | Half |
| 4mm | 0.1575 | SSX10-M040-J | Full |
| 5mm | 0.1969 | SSX10-M050-J | Full |
| 6mm | 0.2362 | SSX10-M060-J | Full |
| 8mm | 0.3150 | SSX10-M080-J | Full |
| 10mm | 0.3937 | SSX10-M100-J | Half |

SSX25 Collets

| Cutter Size | Tool Size" | SSX25 | Port Type |
|-------------|------------|--------------|-----------|
| 3/4 | 0.7500 | SSX25-0750-J | Full |
| 7/8 | 0.8750 | SSX25-0875-J | Half |
| 1 | 1.0000 | SSX25-1000-J | Half |
| 16mm | 0.6300 | SSX25-M160-J | Full |
| 20mm | 0.7874 | SSX25-M200-J | Full |
| 25mm | 0.9843 | SSX25-M250-J | Half |

Wrenches



Hex



Hook Spanner

| Wrench Part Number | Description | Wrench Type | Max. Torque |
|--------------------|-----------------------------|--------------|-------------|
| ERW-11M | SX06 Mini Nut | Mini E | 9 ft/lbs |
| ERW-16M | SX10 Mini Nut | Mini E | 13 ft/lbs |
| SXW-06H | SX06 Hex Nut | Hex | 22 ft/lbs |
| SXW-10H | SX10 Hex Nut | Hex | 41 ft/lbs |
| SXW-16S | SX16 Spanner Nut | Spanner | 55 ft/lbs |
| MCW20 | SX25 Spanner Nut | Spanner | 85 ft/lbs |
| MCW20 | SX25 Mini Spanner Nut | Spanner | 85 ft/lbs |
| SXW-CC | SX Coolant Cap Face Spanner | Face Spanner | 10 ft/lbs |

Torque Wrenches



Professional Torque Wrench with ISO-9001 Certifications

The proper torque is a necessity in machining:

- Quality: Proper torque assures maximum cutting accuracy.
- Cost Savings: Proper torque extends the life of collets, tools, and holders.
- Safety: Proper torque reduces the possibility of tools loosening up and coming out of the holder.

| Part Number | Description | Torque Range | | Length | | Weight | Spigot |
|-------------|---------------|---------------|-----------|--------|-------|---------|------------|
| TW-060 | Torque Wrench | 5-45 ft/lbs | 8-60 Nm | 11.9" | 301mm | 0.55 Kg | 16mm round |
| TW-100 | | 15-80 ft/lbs | 20-100 Nm | 13.4" | 340mm | 0.60 Kg | |
| TW-200 | | 30-150 ft/lbs | 40-200 Nm | 16.5" | 423mm | 0.78 Kg | |
| TW-300 | | 45-228 ft/lbs | 60-300 Nm | 21.5" | 548mm | 1.13 Kg | |

Torque Wrench Heads

- Use Recommended Wrench with Torque Heads
Using the incorrect wrench can cause over tightening, deflection and damage to the tool holder and collet.
- Do not exceed maximum torque or damage may occur



| Wrench Head Part Number | Collet Nut | Description | Wrench Type | Max. Torque | Recommended Wrench |
|-------------------------|------------|--------------------------|-------------|-------------|--------------------|
| TWH-ER11M | SXN-06M | SX06 Mini Nut Adapter | Mini E | 9 ft/lbs | TW-060 |
| TWH-ER16M | SXN-10M | SX10 Mini Nut Adapter | Mini E | 13 ft/lbs | TW-060 |
| TWH-SX06 | SXN-06H | SX06 Hex Nut Adapter | Hex | 22 ft/lbs | TW-060 |
| TWH-SX10 | SXN-10H | SX10 Hex Nut Adapter | Hex | 41 ft/lbs | TW-100 |
| TWH-SX16 | SXN-16S | SX16 Spanner Nut Adapter | Spanner | 55 ft/lbs | TW-200 |
| TWH-SX25 | SXN-25S | SX25 Spanner Nut Adapter | Spanner | 85 ft/lbs | TW-200 |

MX & VX 3 Micron Chuck

Clamping Range : 0.125" - 0.500"
ISO h6 Tool Shanks Required

Simply the Best Finish & Tool Life in a Cost Effective Milling System

Hands Down Winner in any Milling Application!

Designed for Finish Milling

Once you pre-load the collet into the VX holder, repeatability is less than 0.0001" Tool to Tool due to the cross pin design which prevents twisting on the collet while tightening.

Reduced Harmonic Design

Unlike materials, taper nose and draw bar design provide superior vibration dampening over Slim Nose Shrink holders and extensions.

Compact Design

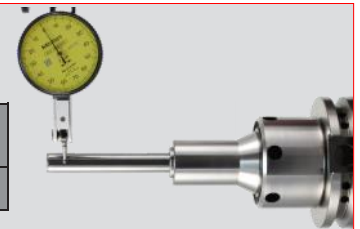
The MX and VX system are compact to provide maximum nose clearance for hard to reach applications. We have redesigned the nose ends for additional clearance:

VX06 = 0.500 (Previously 0.625)
VX08 = 0.787 (Previously 0.870)
VX12 = 1.000 (Previously 1.180)

Unbeatable T.I.R. - 3µm @ 4D or better!

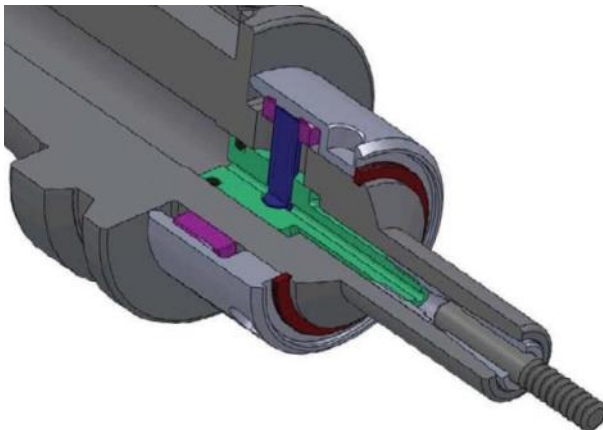
Collet TIR

| Collet Class | Max. TIR |
|--------------|---------------|
| MX | 0.00012" @ 4D |



Coolant Thru for High Pressure or Jet-Blast

Collets are sealed by design for high pressure coolant or air. Jet-Blast is available for coolant around solid tools.



When you "have to" use Extensions

No one wants to use extensions but when you have to, use an extension that has the Best TIR in the industry.

Guaranteed 3µm @ 4D, no extension runs better.

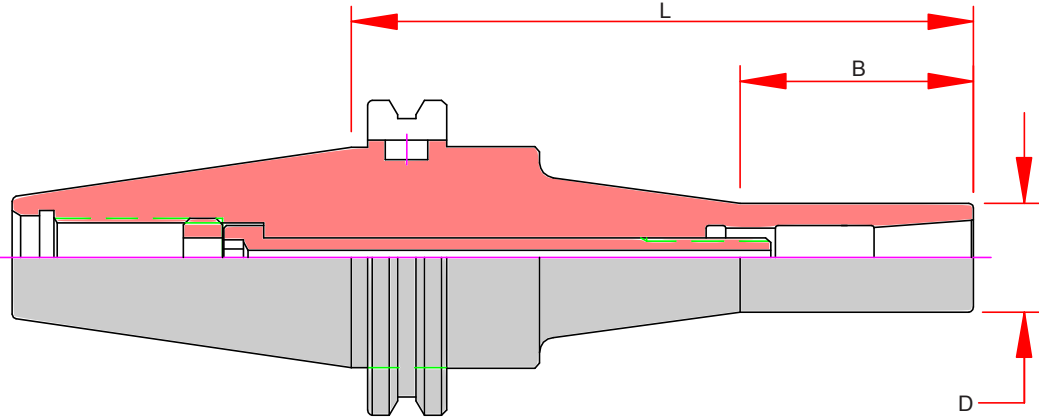
Coolant Thru for High Pressure with a Jet-Blast option for solid tools.



MX - Mini Chuck

Features

- 3 µm - 0.0001" Runout @ 4X Diameter
- Rear Draw Bolt System
- Coolant Thru the Center
- DIN B Flange Coolant Optional (add -D)
- Dynamically Balanced
 - 30, 40 & 63A - G2.5 @ 25,000 RPM
 - CAT50 - G2.5 @ 15,000 RPM
- Order Collets & Wrench Separately



| | Capacity | Part Number | Collet Range | B | D | L Projection | Collet | Wrench |
|--------|---------------|------------------|---------------|------|-------|--------------|--------|--------|
| CAT40 | 1/4 | CAT40-MX06-085 | 0.079 - 0.250 | 1.42 | 0.50 | 3.35 | MX06 | MXW05 |
| | | CAT40-MX06-150 | | | | 5.91 | | |
| | 3/8 | CAT40-MX08-085 | 0.125 - 0.394 | 1.42 | 0.787 | 3.35 | MX08 | MXW05 |
| | | CAT40-MX08-120 | | | | 4.72 | | |
| | 1/2 | CAT40-MX08-150 | 0.157 - 0.500 | 1.38 | 1.00 | 5.91 | MX12 | MXW05 |
| | | CAT40-MX12-090 | | | | 3.54 | | |
| CAT50 | 3/8 | CAT40-MX12-120 | 0.125 - 0.394 | 1.42 | 0.787 | 4.72 | MX08 | MXW05 |
| | | CAT50-MX08-110 | | | | 4.33 | | |
| | 1/2 | CAT50-MX08-165 | 0.157 - 0.500 | 1.38 | 1.00 | 6.50 | MX12 | MXW05 |
| | | CAT50-MX12-105 | | | | 4.13 | | |
| BT30 | 1/4 | CAT50-MX12-165 | 0.079 - 0.250 | 1.42 | 0.50 | 6.50 | MX06 | MXW05 |
| | 3/8 | BT30-MX06-090 | | | | 3.54 | | |
| | 1/2 | BT30-MX08-090 | | | | 3.54 | | |
| BT40 | 1/4 | BT30-MX12-105 | 0.125 - 0.394 | 1.42 | 0.787 | 4.13 | MX08 | MXW05 |
| | | BT40-MX06-085 | | | | 3.35 | | |
| | 3/8 | BT40-MX06-150 | 0.157 - 0.500 | 1.38 | 1.00 | 5.91 | MX12 | MXW05 |
| 1/2 | BT40-MX08-085 | 3.35 | | | | | | |
| | BT40-MX08-120 | 4.72 | | | | | | |
| HSK63A | 1/4 | BT40-MX12-090 | 0.079 - 0.250 | 1.42 | 0.50 | 3.54 | MX06 | MXW05 |
| | 3/8 | HSK 63A-MX06-100 | | | | 3.94 | | |
| | 1/2 | HSK 63A-MX08-100 | | | | 3.94 | | |
| | | HSK 63A-MX12-110 | 0.125 - 0.394 | 1.42 | 0.787 | 3.94 | MX08 | MXW05 |
| | | | 0.157 - 0.500 | 1.54 | 1.00 | 4.33 | MX12 | MXW05 |



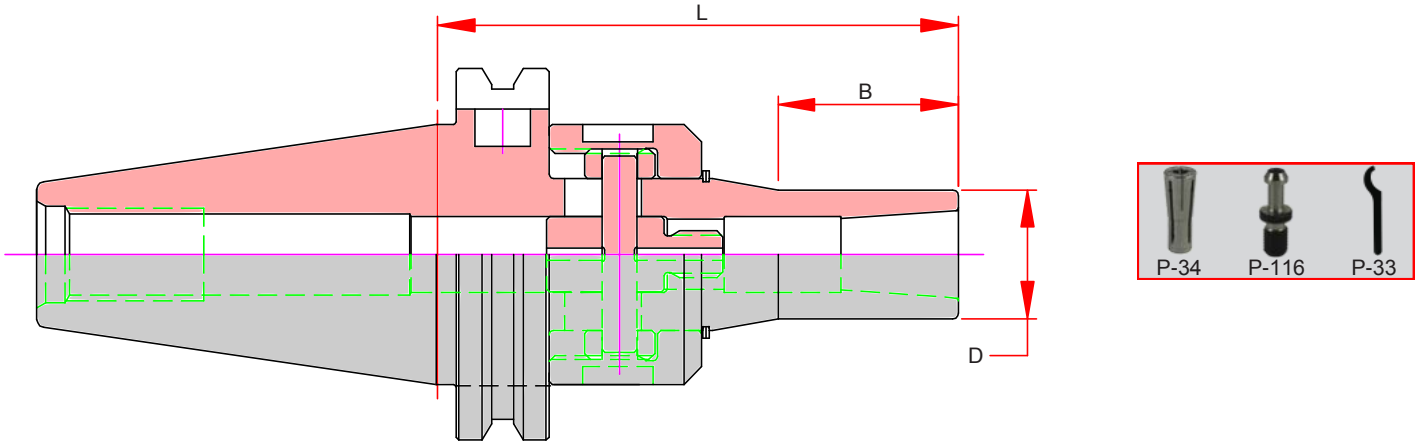
VX Mini Chuck+

Features

- 3 μm - 0.0001" Runout @ 4X Diameter
- Front Locking System
- Coolant Thru
- Dynamically Balanced
 - 30, 40 & 63A - G2.5 @ 25,000 RPM
 - CAT50 - G2.5 @ 15,000 RPM
- DIN-B Flange Coolant upon request (add -D)
- Order Collets & Wrench Separately



See Page 32 for Operation Instructions



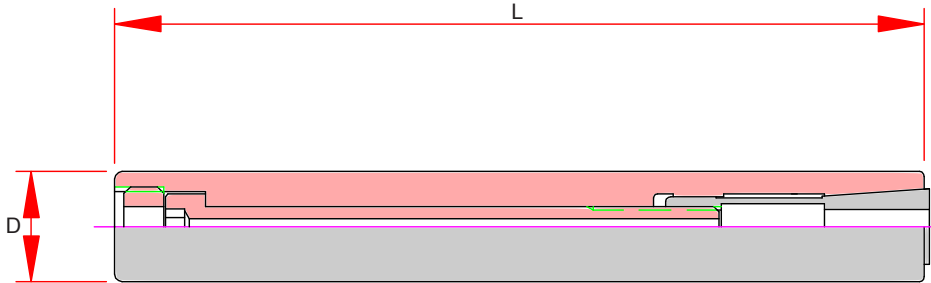
| Capacity | Part Number | Collet Range | B | D | L Projection | Collet | Wrench |
|-----------------|-------------|------------------|---------------|------|--------------|--------|--------|
| CAT40 | 1/4 | CAT40-VX06-0394 | 0.079 - 0.250 | 1.48 | 0.50 | 3.94 | MX06 |
| | | CAT40-VX06-0591 | | | | 5.91 | |
| | 3/8 | CAT40-VX08-0350 | 0.125 - 0.394 | 1.21 | 0.787 | 3.50 | MX08 |
| | | CAT40-VX08-0591 | | | | 5.91 | |
| | 1/2 | CAT40-VX12-0380 | 0.157 - 0.500 | 2.03 | 1.00 | 3.80 | MX12 |
| | | CAT40-VX12-0394 | | | | 3.94 | |
| CAT40-VX12-0591 | | 5.91 | | | | | |
| CAT50 | 3/8 | CAT50-VX08-0413 | 0.125 - 0.394 | 1.21 | 0.787 | 4.13 | MX08 |
| | | CAT50-VX08-0654 | | | | 6.54 | |
| | 1/2 | CAT50-VX12-0457 | 0.157 - 0.500 | 2.03 | 1.00 | 4.57 | MX12 |
| | | CAT50-VX12-0654 | | | | 6.54 | |
| BT30 | 1/4 | BT30-VX06-090 | 0.079 - 0.250 | 1.37 | 0.50 | 3.54 | MX06 |
| | 3/8 | BT30-VX08-092 | 0.125 - 0.394 | 1.21 | 0.787 | 3.62 | MX08 |
| BT40 | 1/4 | BT40-VX06-100 | 0.079 - 0.250 | 1.48 | 0.50 | 3.94 | MX06 |
| | | BT40-VX06-150 | | | | 5.91 | |
| | 3/8 | BT40-VX08-100 | 0.125 - 0.394 | 1.21 | 0.787 | 3.94 | MX08 |
| | | BT40-VX08-150 | | | | 5.91 | |
| | 1/2 | BT40-VX12-110 | 0.157 - 0.500 | 2.03 | 1.00 | 4.33 | MX12 |
| | | BT40-VX12-150 | | | | 5.91 | |
| HSK63A | 1/4 | HSK 63A-VX06-105 | 0.079 - 0.250 | 1.48 | 0.50 | 4.13 | MX06 |
| | | HSK 63A-VX06-150 | | | | 5.91 | |
| | 3/8 | HSK 63A-VX08-105 | 0.125 - 0.394 | 1.21 | 0.787 | 4.13 | MX08 |
| | | HSK 63A-VX08-150 | | | | 5.91 | |
| | 1/2 | HSK 63A-VX12-115 | 0.157 - 0.500 | 2.03 | 1.00 | 4.53 | MX12 |
| | | HSK 63A-VX12-150 | | | | 5.91 | |

VXW12

Straight Shank

Features

- 3µm - 0.0001" Runout @ 4X Diameter
- Coolant Thru



| Part Number | Collet Range | D | L | Collet | Wrench |
|----------------|---------------|--------|-------|--------|--------|
| S050-MX06-0400 | 0.079 - 0.250 | 0.5000 | 4.00 | MX06 | MXW05 |
| S050-MX06-0600 | | | 6.00 | | |
| S075-MX08-0600 | 0.125 - 0.394 | 0.7500 | 6.00 | MX08 | |
| S075-MX08-0800 | | | 8.00 | | |
| S075-MX08-1000 | | | 10.00 | | |
| S100-MX12-0600 | 0.157 - 0.500 | 1.0000 | 6.00 | MX12 | |
| S100-MX12-0800 | | | 8.00 | | |

VX Assembly Instructions

The instructions below are a basic procedure. Always use proper safety equipment when working with any machine tool component. Contact your safety officer for your facilities recommended safety equipment and procedures.



Turn locking collar counter-clockwise until it stops.



Insert collet and turn clockwise. Use Flat Screw Driver if required.



Turn collet until it stops or reaches 1/8" from the face of the chuck. Assemble loose, **Do not tighten!** Thread gap is required for proper function.



Insert cutter, while holding the cutter hand tighten the locking collar clockwise until the collet holds the tool.

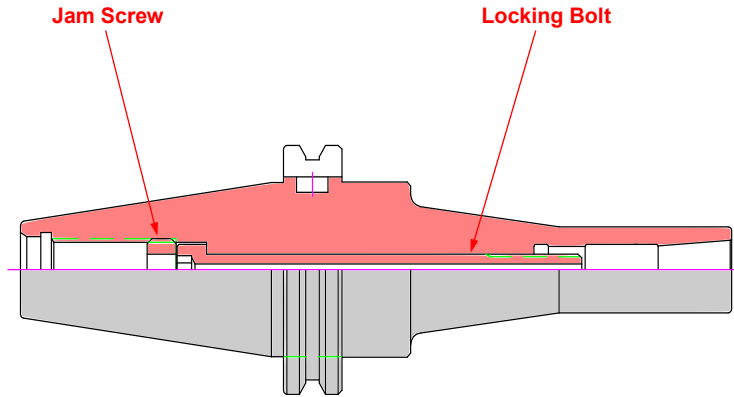


Tighten locking collar to 70 ft/lbs Maximum. Do not over tighten!

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MX - Mini Chuck Replacement Parts

- Select replacement Locking Bolt by Holder #
- Replacement Locking Bolts are coolant thru
- -FM series is front mounting, requires special assembly tool



| Holder # | Locking Bolt # | Bolt Hex | Jam Screw # |
|------------------|---------------------------|----------|------------------|
| BT30-MX06-090 | MX/MXCS M06X056C HEX5 | 5mm | JAM-NUT BT30 |
| BT30-MX08-090 | MX/MXCS M08X060-10.0 HEX5 | 5mm | JAM-NUT BT30 |
| BT30-MX12-105 | MX/MXCS M10X025-13.0 HEX5 | 5mm | JAM-NUT BT30-FM |
| BT40-MX06-085 | MX/MXCS M06X056C HEX5 | 5mm | JAM-NUT BT40 |
| BT40-MX06-150 | MX/MXCS M06X091C HEX5 | 5mm | JAM-NUT BT40X60 |
| BT40-MX08-085 | MX/MXCS M08X060-13.0 HEX5 | 5mm | JAM-NUT BT40 |
| BT40-MX08-120 | MX/MXCS M08X090-13.0 HEX5 | 5mm | JAM-NUT BT40 |
| BT40-MX08-150 | MX/MXCS M08X120-13.0 HEX5 | 5mm | JAM-NUT BT40 |
| BT40-MX12-090 | MX/MXCS M10X060-13.0 HEX5 | 5mm | JAM-NUT BT40 |
| BT40-MX12-120 | MX/MXCS M10X090-13.0 HEX5 | 5mm | JAM-NUT BT40 |
| CAT40-MX06-085 | MX/MXCS M06X056C HEX5 | 5mm | JAM-NUT CAT40 |
| CAT40-MX06-120 | MX/MXCS M06X091C HEX5 | 5mm | JAM-NUT CAT40X30 |
| CAT40-MX06-150 | MX/MXCS M06X091C HEX5 | 5mm | JAM-NUT CAT40X60 |
| CAT40-MX08-085 | MX/MXCS M08X060-13.0 HEX5 | 5mm | JAM-NUT CAT40 |
| CAT40-MX08-120 | MX/MXCS M08X090-13.0 HEX5 | 5mm | JAM-NUT CAT40 |
| CAT40-MX08-150 N | MX/MXCS M08X124-13.0 HEX5 | 5mm | JAM-NUT CAT40 |
| CAT40-MX08-150 P | MX/MXCS M08X124-13.0 HEX5 | 5mm | JAM-NUT CAT40 |
| CAT40-MX12-090 | MX/MXCS M10X060-13.0 HEX5 | 5mm | JAM-NUT CAT40 |
| CAT40-MX12-120 | MX/MXCS M10X090-13.0 HEX5 | 5mm | JAM-NUT CAT40 |
| CAT50-MX08-110 | MX/MXCS M08X090-13.0 HEX5 | 5mm | JAM-NUT CAT50 |
| CAT50-MX08-165 | MX/MXCS M08X120-13.0 HEX5 | 5mm | JAM-NUT CAT50 |
| CAT50-MX08-225 D | MX/MXCS M08X120-13.0 HEX5 | 5mm | JAM-NUT CAT50 |
| CAT50-MX08-225 P | MX/MXCS M08X190-13.0 HEX5 | 5mm | JAM-NUT CAT50 |
| CAT50-MX12-105 | MX/MXCS M10X090-13.0 HEX5 | 5mm | JAM-NUT CAT50 |
| CAT50-MX12-120 | MX/MXCS M10X120-13.0 HEX5 | 5mm | JAM-NUT CAT50 |
| CAT50-MX12-165 D | MX/MXCS M10X120-13.0 HEX5 | 5mm | JAM-NUT CAT50 |
| CAT50-MX12-165 P | MX/MXCS M10X090-13.0 HEX5 | 5mm | JAM-NUT CAT50 |
| HSK63A-MX06-100 | MX/MXCS M06X035C HEX5 | 5mm | JAM-NUT BT40 |
| HSK63A-MX08-100 | MX/MXCS M08X020-13.0 HEX5 | 5mm | JAM-NUT BT40 |
| HSK63A-MX12-110 | MX/MXCS M10X025-13.0 HEX5 | 5mm | JAM-NUT BT40 |
| S050-MX06-0400 | MX/MXCS M06X064C HEX5 | 5mm | JAM-NUT S050 |
| S050-MX06-0600 | MX/MXCS M06X115C HEX5 | 5mm | JAM-NUT S050 |
| S075-MX08-0600 | MX/MXCS M08X090-10.0 HEX5 | 5mm | JAM-NUT BT30 |
| S075-MX08-0800 | MX/MXCS M08X120-10.0 HEX5 | 5mm | JAM-NUT BT30 |
| S075-MX08-1000 | MX/MXCS M08X171-10.0 HEX5 | 5mm | JAM-NUT BT30 |
| S100-MX12-0600 | MX/MXCS M10X090-13.0 HEX5 | 5mm | JAM-NUT BT40 |
| S100-MX12-0800 | MX/MXCS M10X120-13.0 HEX5 | 5mm | JAM-NUT BT40 |

Wrenches

Notes:

- Verify holder number prior to ordering.



Spanner



T Handle

| Wrench Part Number | Description | Wrench Type | Max. Torque |
|--------------------|------------------------------|-------------|-------------|
| VXW12 | VX Pin Spanner Wrench | Pin Spanner | 70 ft/lbs |
| MXW05 | MX T-Handle Wrench | T Handle | 30 ft/lbs |
| HSK63A COOLNT TUBE | HSK 63A Coolant Tube Wrench | T Handle | 10 ft/lbs |
| HSK100 COOLNT TUBE | HSK 100A Coolant Tube Wrench | T Handle | 10 ft/lbs |

Torque Wrenches



Professional Torque Wrench with ISO-9001 Certifications

The proper torque is a necessity in machining:

- Quality: Proper torque assures maximum cutting accuracy.
- Cost Savings: Proper torque extends the life of collets, tools, and holders.
- Safety: Proper torque reduces the possibility of tools loosening up and coming out of the holder.

| Part Number | Description | Torque Range | Length | Weight | Spigot |
|-------------|---------------|----------------------------|----------------|---------|------------|
| TW-200 | Torque Wrench | 30-150 ft/lbs 40-200 Nm | 16.5" 423mm | 0.78 Kg | 16mm round |

Torque Wrench Heads

- Use Recommended Wrench with Torque Heads
Using the incorrect wrench can cause over tightening, deflection and damage to the tool holder and collet.
- Do not exceed maximum torque or damage may occur



| Wrench Head Part Number | For Series | Description | Wrench Type | Max. Torque | Recommended Wrench |
|-------------------------|------------------|--------------------|-------------|-------------|--------------------|
| TWH-VX12 | VX06, VX08, VX12 | VX Spanner Adapter | Pin Spanner | 70 ft/lbs | TW-200 |

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MX Coolant Collets

Features

- 3µm - 0.0001" Runout @ 4X Diameter
- Seals up to 1,500 PSI Coolant
- Fits MX & VX Collet Chucks
- On-Size Type "A" Collets for h6 tolerance cutting tools
- Cutting tools must be fully inserted for sealed applications
- Jet-Blast Available - Add -J to the part number (see next page for details)



MX06 Collets

| Tool Shank h6 | | MX06 |
|------------------|--------|-----------|
| 1/8 | 0.1250 | MX06-0125 |
| 5/32 | 0.1563 | MX06-0156 |
| 3/16 | 0.1875 | MX06-0187 |
| 7/32 | 0.2188 | MX06-0218 |
| 1/4 | 0.2500 | MX06-0250 |
| 2.0 | 0.0787 | MX06-M020 |
| 2.5 | 0.0984 | MX06-M025 |
| 3.0 | 0.1181 | MX06-M030 |
| 3.5 | 0.1378 | MX06-M035 |
| 4.0 | 0.1575 | MX06-M040 |
| 4.5 | 0.1772 | MX06-M045 |
| 5.0 | 0.1969 | MX06-M050 |
| 5.5 | 0.2165 | MX06-M055 |
| 6.0 | 0.2362 | MX06-M060 |

MX08 Collets

| Tool Shank h6 | | MX08 |
|------------------|--------|-----------|
| 1/8 | 0.1250 | MX08-0125 |
| 5/32 | 0.1563 | MX08-0156 |
| 3/16 | 0.1875 | MX08-0187 |
| 1/4 | 0.2500 | MX08-0250 |
| 5/16 | 0.3125 | MX08-0312 |
| 3/8 | 0.3750 | MX08-0375 |
| 3.0 | 0.1181 | MX08-M030 |
| 4.0 | 0.1575 | MX08-M040 |
| 5.0 | 0.1969 | MX08-M050 |
| 6.0 | 0.2362 | MX08-M060 |
| 7.0 | 0.2756 | MX08-M070 |
| 8.0 | 0.3150 | MX08-M080 |
| 9.0 | 0.3543 | MX08-M090 |
| 10.0 | 0.3937 | MX08-M100 |

MX12 Collets

| Tool Shank h6 | | MX12 |
|------------------|--------|-----------|
| 1/8 | 0.1250 | MX12-0125 |
| 3/16 | 0.1875 | MX12-0187 |
| 1/4 | 0.2500 | MX12-0250 |
| 5/16 | 0.3125 | MX12-0312 |
| 3/8 | 0.3750 | MX12-0375 |
| 7/16 | 0.4375 | MX12-0437 |
| 1/2 | 0.5000 | MX12-0500 |
| 3.0 | 0.1181 | MX12-M030 |
| 4.0 | 0.1575 | MX12-M040 |
| 5.0 | 0.1969 | MX12-M050 |
| 6.0 | 0.2362 | MX12-M060 |
| 8.0 | 0.3150 | MX12-M080 |
| 10.0 | 0.3937 | MX12-M100 |
| 12.0 | 0.4724 | MX12-M120 |

MX Jet-Blast Collets

Features

- **3µm - 0.0001" Runout @ 4X Diameter**
- **Jet-Blast for Coolant Around Solid Tools**
- **MX08 & MX12 Collets Only**
- Fits MX & VX Collet Chucks
- Designed for h6 tolerance cutting tools
- Coolant ports are 2 ports
Additional holes can be added as an up charge
- **To Order, add -C to the end of the MX Collet numbers on the previous page**



Jet-Blast
Optional 4 Port shown

MX Coolant Collet Sets

Features

- **3 µm - 0.0001" or Better**
- Includes Collet Tray
Note: Collet Tray includes positions for Inch and Metric collets, will not be filled unless all sizes are ordered



| Part Number | Collet Size | Pieces | Includes |
|-------------|-------------|--------|---|
| MX06-MSET-7 | MX06 | 7 | 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0 |
| MX06-ISET-5 | MX06 | 5 | 1/8, 5/32, 3/16, 7/32, 1/4 |
| MX08-MSET-8 | MX08 | 8 | 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0 |
| MX08-ISET-6 | MX08 | 6 | 1/8, 5/32, 3/16, 1/4, 5/16, 3/8 |
| MX12-MSET-7 | MX12 | 7 | 3.0, 4.0, 5.0, 6.0, 8.0, 10.0, 12.0 |
| MX12-ISET-7 | MX12 | 7 | 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2 |

MX Collet Trays

Features

- Collet Tray includes positions for Inch and Metric collets.
- Steel Construction with Sizes Laser marked



| Part Number | Amount of Collets |
|-------------|-------------------|
| MX06 TRAY | 14 |
| MX08 TRAY | 14 |
| MX12 TRAY | 14 |

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MC - Mill Chucks

Ultimate Precision | Milling | Precision Drilling | Indexable Threading & Milling



Premium Performance

Ultimate Precision

0.0002" TIR Guaranteed @ 100mm (4") with MC125

Accurate

4X more accurate than End Mill Holder

Powerful

5X the driving torque than ER on nominal sizes, over 600 ft/lbs of radial torque on 1.25" Carbide Shanks

Vibration Dampening

Unlike materials & mass dampen cutting harmonics

Performance Milling

Designed for Performance Milling with Neutral flute geometry, not designed for hi-helix applications

Flexible Range

Reducing sleeves down to 1/8"

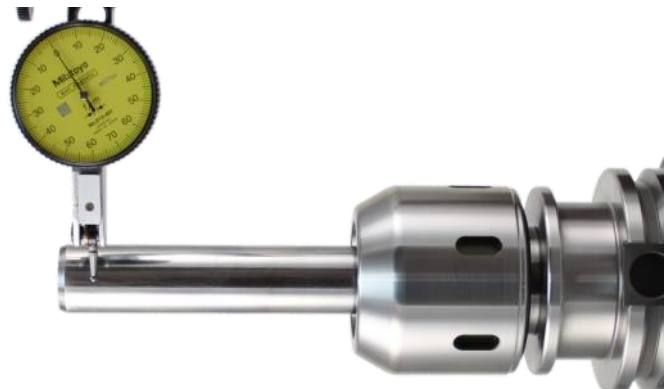
Ultra-low Temperature Treatment

Sub-zero temperature treatment at -100°C to remove the residual austenite from the holder which provides increased durability and long lasting performance.



Ultimate Precision 0.0002" @ 100mm

Runout at the end of the 1-1/4" tool 4" from the chuck face is within 0.0002" TIR, that is 8" from the spindle!



Coolant Cap Sealing System for MC Collets

Pioneer Coolant Cap Seals create a positive seal against the face of the Mill Chuck body and the shank of the cutting tool. The system utilizes a standard MC collet, a coolant cap that matches the collet ID, and a coolant cap nut.

- **Low Cost** - Uses standard MC collets
- **Replaceable Seals** - Utilizes standard O-rings for easy low cost replacement
- **Universal** - Works with any standard Mill Chuck



MC Coolant Cap

- Works with all MC Collets
- Requires (1) MCN Nut and (1) MCC Cap
- Order Cap to match MC Collet ID Size
 - Example: MCC075-0250 for Collet MC075-0250

| Nut Part Number | Collet Size | Cap Part Number | Available Sizes |
|-----------------|-------------|-----------------|---|
| MCN075 | MC075 | MCC075- | 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8 |
| MCN100 | MC100 | MCC100- | 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8 |
| MCN125 | MC125 | MCC125- | 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8, 1" |
| MCN075 | MC075 | MCC075- | 6, 8, 10, 12, 14, 16 |
| MCN100 | MC100 | MCC100- | 6, 8, 10, 12, 14, 16, 18, 20 |
| MCN125 | MC125 | MCC125- | 6, 8, 10, 12, 14, 16, 18, 20, 22, 25 |



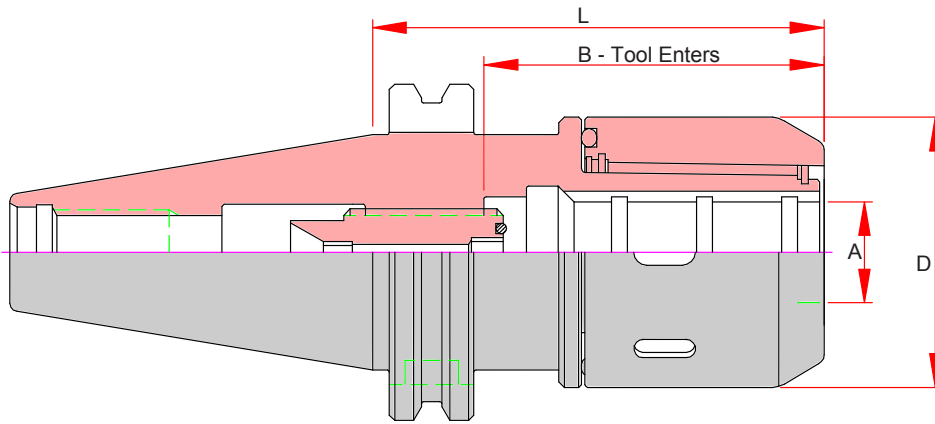
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MC - Mill Chucks

CAT40 Mill Chucks

Features

- 5 μm - 0.0002" Runout @ 4" out
- Designed for tool shanks w/ h6 tolerance
- Coolant Thru w/ Nylon Screw Seal
- Dynamically Balanced G6.3 @ 20,000 RPM
- Radial Slip Torque 4X ER Chucks
- Order Collets & Wrench Separately



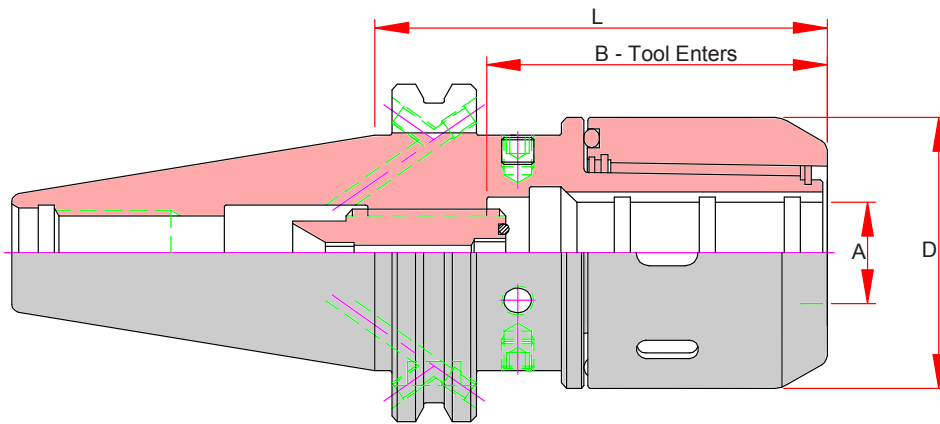
| Capacity | Part Number | A Bore | B Max. Tool Enters | D | L Projection | Preset Screw | Collet | Wrench |
|----------|-------------------|--------|--------------------|------|--------------|--------------|--------|--------|
| 3/4 | CAT40-MC075-0335 | 0.7500 | 2.76 | 2.09 | 3.35 | ASC-16-40 | MC075 | MCW20 |
| | CAT40-MC075-0472 | | | | 4.72 | | | |
| 1" | CAT40-MC100-0335 | 1.0000 | 2.91 | 2.44 | 3.35 | ASC-16-40 | MC100 | MCW25 |
| | CAT40-MC100-0413 | | | | 4.13 | | | |
| 1-1/4 | CAT40-MC125-0354* | 1.2500 | 3.07 | 2.76 | 3.54 | ASC-16-40 | MC125 | MCW32 |
| | CAT40-MC125-0413 | | | | 4.13 | | | |
| | CAT40-MC125-0472 | | | | 4.72 | | | |
| 20mm | CAT40-MC20-085 | 20.000 | 2.76 | 2.09 | 3.35 | ASC-16-40 | MC20 | MCW20 |
| 32mm | CAT40-MC32-105 | 32.000 | 3.07 | 2.76 | 4.13 | ASC-16-40 | MC32 | MCW32 |

* No ANSI Safety Area - will not function in umbrella style tool changers

CAT40 Mill Chucks w/ DIN AD+B

Features

- 5 μm - 0.0002" Runout @ 4" out
- Designed for tool shanks w/ h6 tolerance
- Coolant Thru w/ Nylon Screw Seal
- Dynamically Balanced G6.3 @ 20,000 RPM
- Radial Slip Torque 4X ER Chucks
- DIN AD+B & Balanceable
- Order Collets & Wrench Separately



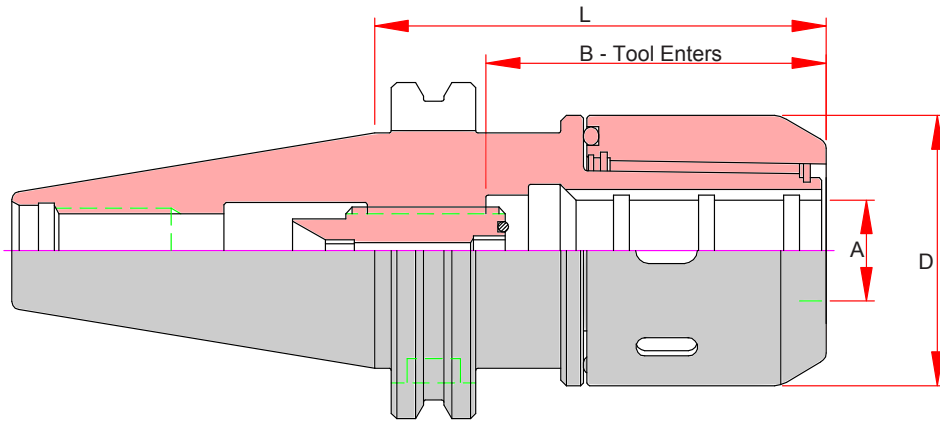
| Capacity | Part Number | A Bore | B Max. Tool Enters | D | L Projection | Preset Screw | Collet | Wrench |
|----------|--------------------|--------|--------------------|------|--------------|--------------|--------|--------|
| 3/4" | CAT40-MC075-0335-S | 0.7500 | 2.76 | 2.09 | 3.35 | ASC-16-40 | MC075 | MCW20 |
| | CAT40-MC075-0591-S | | | | 5.91 | | | |
| 1" | CAT40-MC100-0374-S | 1.0000 | 2.91 | 2.44 | 3.74 | ASC-16-40 | MC100 | MCW25 |
| | CAT40-MC100-0591-S | | | | 5.91 | | | |
| 1-1/4" | CAT40-MC125-0472-S | 1.2500 | 3.07 | 2.76 | 4.72 | ASC-16-40 | MC125 | MCW32 |
| | CAT40-MC125-0591-S | | | | 5.91 | | | |

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CAT50 Mill Chucks

Features

- 5 μm - 0.0002" Runout @ 4" out
- Designed for tool shanks w/ h6 tolerance
- Coolant Thru w/ Nylon Screw Seal
- Dynamically Balanced G6.3 @ 15,000 RPM
- Radial Slip Torque 4X ER Chucks
- Order Collets & Wrench Separately

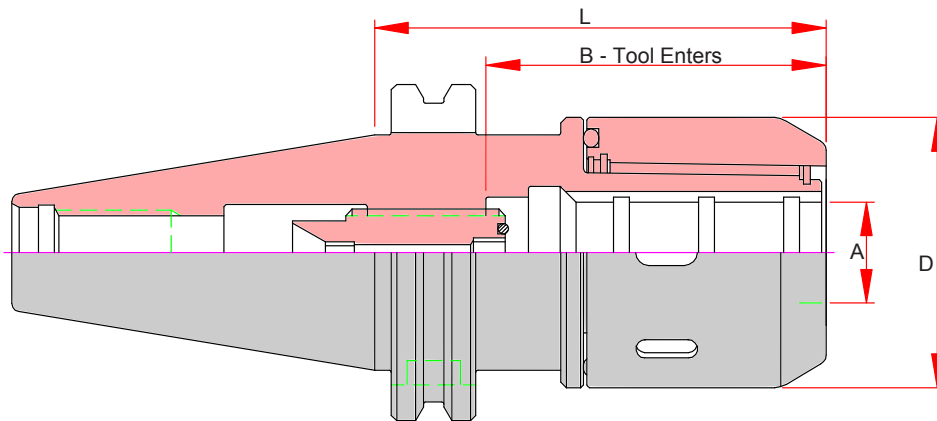


| | Part Number | A Bore | B Max. Tool Enters | D | L Projection | Preset Screw | Collet | Wrench |
|-------|------------------|--------|--------------------|------|--------------|--------------|--------|--------|
| 3/4 | CAT50-MC075-0413 | | | | 4.13 | | | |
| | CAT50-MC075-0531 | 0.7500 | 2.76 | 2.09 | 5.31 | ASC-16-40 | MC075 | MCW20 |
| | CAT50-MC075-0650 | | | | 6.50 | | | |
| 1" | CAT50-MC100-0315 | | | | 3.15 | | | |
| | CAT50-MC100-0413 | 1.0000 | 2.95 | 2.44 | 4.13 | ASC-16-40 | MC100 | MCW25 |
| | CAT50-MC100-0531 | | | | 5.31 | | | |
| 1-1/4 | CAT50-MC125-0354 | | | | 3.54 | | | |
| | CAT50-MC125-0413 | 1.2500 | 3.23 | 2.76 | 4.13 | ASC-16-40 | MC125 | MCW32 |
| | CAT50-MC125-0531 | | | | 5.31 | | | |
| | CAT50-MC125-0650 | | | | 6.50 | | | |

CAT50 Mill Chucks w/ DIN AD+B

Features

- 5 μm - 0.0002" Runout @ 4" out
- Designed for tool shanks w/ h6 tolerance
- Coolant Thru w/ Nylon Screw Seal
- Dynamically Balanced G6.3 @ 15,000 RPM
- DIN AD+B & Balanceable
- Order Collets & Wrench Separately



| | Part Number | A Bore | B Max. Tool Enters | D | L Projection | Preset Screw | Collet | Wrench |
|-------|--------------------|--------|--------------------|------|--------------|--------------|--------|--------|
| 3/4 | CAT50-MC075-0354-S | 0.7500 | 2.76 | 2.09 | 3.54 | ASC-16-40 | MC075 | MCW20 |
| | CAT50-MC075-0650-S | | | | 6.50 | | | |
| 1" | CAT50-MC100-0354-S | 1.0000 | 2.95 | 2.44 | 3.54 | ASC-16-40 | MC100 | MCW25 |
| | CAT50-MC100-0531-S | | | | 5.31 | | | |
| | CAT50-MC100-0650-S | | | | 6.50 | | | |
| 1-1/4 | CAT50-MC125-0354-S | 1.2500 | 3.23 | 2.76 | 3.54 | ASC-16-40 | MC125 | MCW32 |
| | CAT50-MC125-0531-S | | | | 5.31 | | | |
| | CAT50-MC125-0650-S | | | | 6.50 | | | |

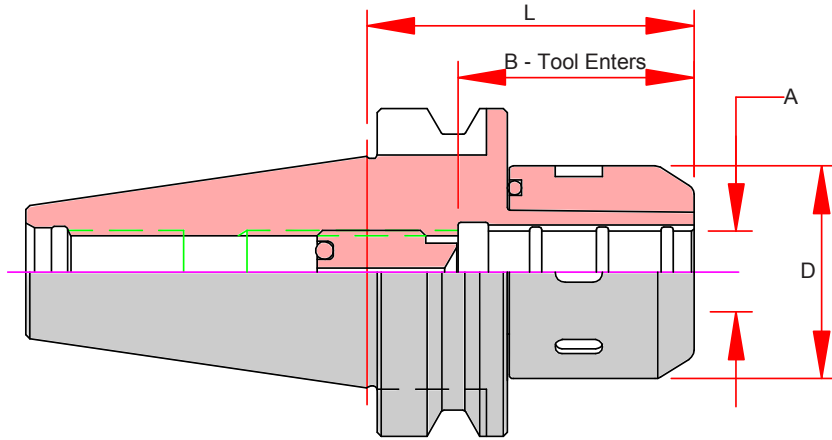
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MC - Mill Chucks

BT30 Mill Chucks

Features

- 5 μm - 0.0002" Runout @ 4" out
- Designed for tool shanks w/ h6 tolerance
- Coolant Thru w/ Nylon Screw Seal
- Dynamically Balanced G6.3 @ 20,000 RPM
- -S = DIN AD+B & Balanceable Available (See Chart)
- Order Collets & Wrench Separately

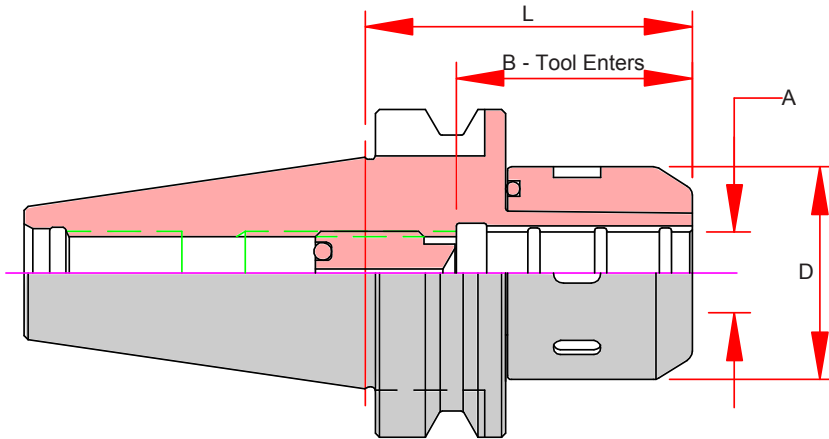


| | Part Number | A Bore | B Max. Tool Enters | D | L Projection | Preset Screw | Collet | Wrench |
|------|-------------------|--------|--------------------|------|--------------|--------------|--------|--------|
| 3/4 | BT30-MC075-0315 | 0.7500 | 2.76 | 2.09 | 3.15 | ASC-12-30 | MC075 | MCW20 |
| | BT30-MC075-0335-S | | | | 3.35 | | | |
| 20mm | BT30-MC20-080 | 20mm | 2.76 | 2.09 | 3.15 | ASC-12-30 | MC20 | MCW20 |

BT40 Mill Chucks

Features

- 5 μm - 0.0002" Runout @ 4" out
- Designed for tool shanks w/ h6 tolerance
- Coolant Thru w/ Nylon Screw Seal
- Dynamically Balanced G6.3 @ 20,000 RPM
- Order Collets & Wrench Separately



| | Part Number | A Bore | B Max. Tool Enters | D | L Projection | Preset Screw | Collet | Wrench |
|-------|-----------------|--------|--------------------|------|--------------|--------------|--------|--------|
| 3/4 | BT40-MC075-0295 | 0.7500 | 2.76 | 2.09 | 2.95 | ASC-16-40 | MC075 | MCW20 |
| | BT40-MC075-0472 | | | | 4.72 | | | |
| 1" | BT40-MC100-0315 | 1.0000 | 2.91 | 2.44 | 3.15 | ASC-16-40 | MC100 | MCW25 |
| | BT40-MC100-0413 | | | | 4.13 | | | |
| 1-1/4 | BT40-MC125-0335 | 1.2500 | 3.07 | 2.76 | 3.35 | ASC-16-40 | MC125 | MCW32 |
| | BT40-MC125-0472 | | | | 4.72 | | | |

BT40 Mill Chucks w/ DIN AD+B

Features

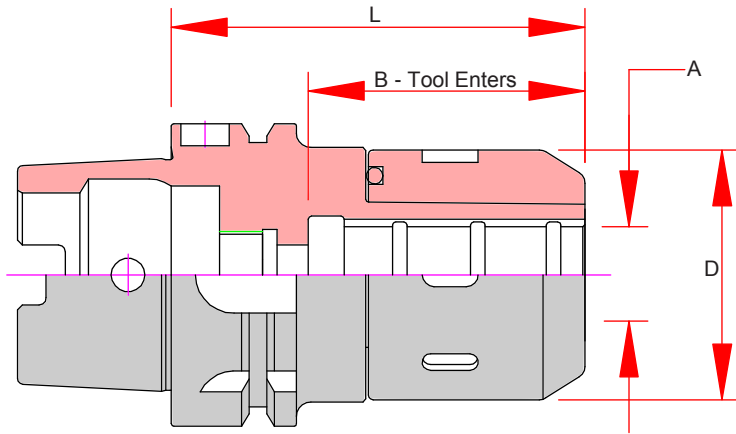
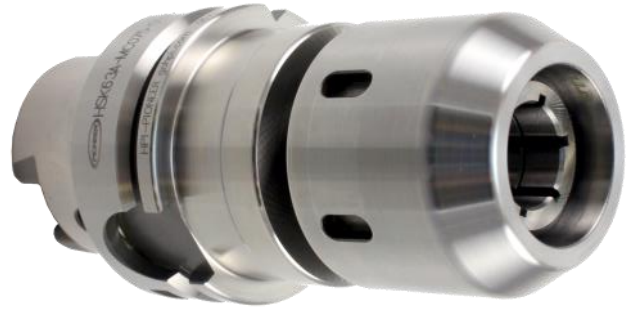
- 5 μm - 0.0002" Runout @ 4" out
- Designed for tool shanks w/ h6 tolerance
- Coolant Thru w/ Nylon Screw Seal
- Dynamically Balanced G6.3 @ 20,000 RPM
- DIN AD+B Flange Coolant & Balanceable Included
- Order Collets & Wrench Separately

| | Part Number | A Bore | B Max. Tool Enters | D | L Projection | Preset Screw | Collet | Wrench |
|-------|-------------------|--------|--------------------|------|--------------|--------------|--------|--------|
| 3/4 | BT40-MC075-0295-S | 0.7500 | 2.76 | 2.09 | 2.95 | ASC-16-40 | MC075 | MCW20 |
| | BT40-MC075-0472-S | | | | 4.72 | | | |
| 1" | BT40-MC100-0335-S | 1.0000 | 2.91 | 2.44 | 3.35 | ASC-16-40 | MC100 | MCW25 |
| | BT40-MC100-0472-S | | | | 4.72 | | | |
| 1-1/4 | BT40-MC125-0354-S | 1.2500 | 3.07 | 2.76 | 3.54 | ASC-16-40 | MC125 | MCW32 |
| | BT40-MC125-0472-S | | | | 4.72 | | | |

HSK63A Mill Chuck

Features

- 5 μm - 0.0002" Runout @ 4" out
- Designed for tool shanks w/ h6 tolerance
- Coolant Thru w/ Nylon Screw Seal
- Dynamically Balanced HSK 63A G6.3 @ 20,000 RPM
- Radial Slip Torque 4X ER Chucks
- Order Collets & Wrench Separately

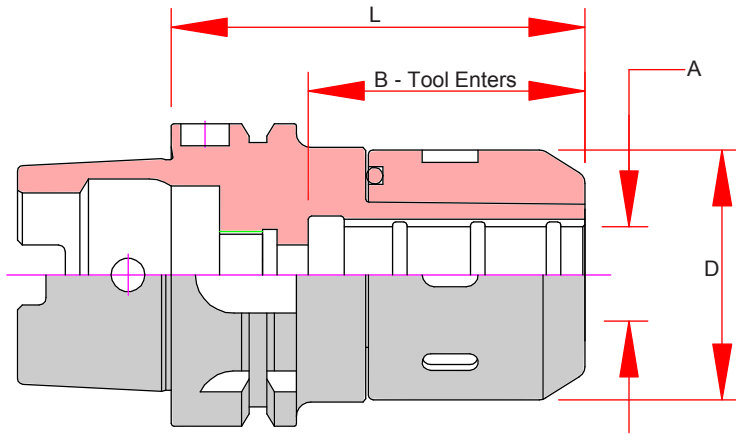
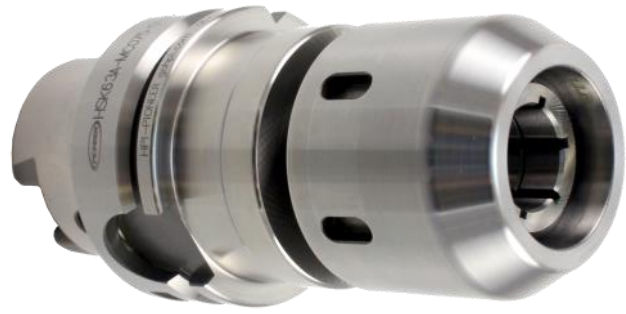


| Capacity | Part Number | A Bore | B Max. Tool Enters | D | L Projection | Preset Screw | Collet | Wrench | Balanceable |
|----------|---------------------|--------|--------------------|------|--------------|--------------|--------|--------|-------------|
| 3/4 | HSK63A-MC075-0374 | 0.7500 | 2.36 | 2.09 | 3.74 | - | MC075 | MCW20 | N |
| 3/4 | HSK63A-MC075-0433-S | 0.7500 | 2.36 | 2.09 | 4.33 | ASC-16-18 | MC075 | MCW20 | Y |
| 1" | HSK63A-MC100-0394 | 1.0000 | 2.40 | 2.44 | 3.94 | - | MC100 | MCW25 | N |
| 1" | HSK63A-MC100-0472-S | 1.0000 | 2.40 | 2.44 | 4.72 | ASC-16-18 | MC100 | MCW25 | Y |
| 1-1/4 | HSK63A-MC125-0394 | 1.2500 | 2.99 | 2.76 | 3.94 | - | MC125 | MCW32 | N |
| 1-1/4 | HSK63A-MC125-0472-S | 1.2500 | 2.99 | 2.76 | 4.72 | ASC-16-18 | MC125 | MCW32 | Y |
| 20mm | HSK63A-MC20-110-S | 20.000 | 2.36 | 2.09 | 4.33 | ASC-16-18 | MC20 | MCW20 | Y |
| 32mm | HSK63A-MC32-120-S | 32.000 | 2.99 | 2.76 | 4.72 | ASC-16-18 | MC32 | MCW32 | Y |

HSK100A Mill Chuck

Features

- 5 μm - 0.0002" Runout @ 4" out
- Designed for tool shanks w/ h6 tolerance
- Coolant Thru w/ Nylon Screw Seal
- Dynamically Balanced HSK100A G6.3 @ 15,000 RPM
- Radial Slip Torque 4X ER Chucks
- Order Collets & Wrench Separately



| Capacity | Part Number | A Bore | B Max. Tool Enters | D | L Projection | Preset Screw | Collet | Wrench | Balanceable |
|----------|----------------------|--------|--------------------|------|--------------|--------------|--------|--------|-------------|
| 3/4 | HSK100A-MC075-0453-S | 0.7500 | 2.52 | 2.09 | 4.53 | ASC-16-18 | MC075 | MCW20 | Y |
| 1" | HSK100A-MC100-0512-S | 1.0000 | 2.40 | 2.44 | 5.12 | ASC-16-18 | MC100 | MCW25 | Y |
| 1-1/4 | HSK100A-MC125-0531-S | 1.2500 | 3.07 | 2.76 | 5.31 | ASC-16-18 | MC125 | MCW32 | Y |
| 20mm | HSK100A-MC20-115-S | 20.000 | 2.52 | 2.09 | 4.53 | ASC-16-18 | MC20 | MCW20 | Y |
| 32mm | HSK100A-MC32-135-S | 32.000 | 3.07 | 2.76 | 5.31 | ASC-16-18 | MC32 | MCW32 | Y |

BC
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MC - Milling Chuck Collets - Inch

MC Collets are Straight Sleeves that allow you to expand the capabilities of your Mill Chuck.

- Collets Ground $3\mu\text{m} - 0.0001''$ Runout OD to ID
- Interchangeable with most competitive models
- Designed for h6 tolerance cutting tool shanks



| Cutter Shank Size | | | MC075 | Cutter Shank Size | | | MC100 | Cutter Shank Size | | | MC125 |
|-------------------|--------|--|------------|-------------------|--------|--|------------|-------------------|--------|--|------------|
| 1/8 | 0.1250 | | MC075-0125 | 1/8 | 0.1250 | | MC100-0125 | 1/8 | 0.1250 | | MC125-0125 |
| 3/16 | 0.1875 | | MC075-0187 | 3/16 | 0.1875 | | MC100-0187 | 3/16 | 0.1875 | | MC125-0187 |
| 1/4 | 0.2500 | | MC075-0250 | 1/4 | 0.2500 | | MC100-0250 | 1/4 | 0.2500 | | MC125-0250 |
| 5/16 | 0.3125 | | MC075-0312 | 5/16 | 0.3125 | | MC100-0312 | 5/16 | 0.3125 | | MC125-0312 |
| 3/8 | 0.3750 | | MC075-0375 | 3/8 | 0.3750 | | MC100-0375 | 3/8 | 0.3750 | | MC125-0375 |
| 7/16 | 0.4375 | | MC075-0437 | 7/16 | 0.4375 | | MC100-0437 | 7/16 | 0.4375 | | MC125-0437 |
| 1/2 | 0.5000 | | MC075-0500 | 1/2 | 0.5000 | | MC100-0500 | 1/2 | 0.5000 | | MC125-0500 |
| 9/16 | 0.5625 | | MC075-0562 | 9/16 | 0.5625 | | MC100-0562 | 9/16 | 0.5625 | | MC125-0562 |
| 5/8 | 0.6250 | | MC075-0625 | 5/8 | 0.6250 | | MC100-0625 | 5/8 | 0.6250 | | MC125-0625 |
| 6mm | 0.2362 | | MC075-M060 | 3/4 | 0.7500 | | MC100-0750 | 11/16 | 0.6875 | | MC125-0687 |
| 8mm | 0.3150 | | MC075-M080 | 7/8 | 0.8750 | | MC100-0875 | 3/4 | 0.7500 | | MC125-0750 |
| 10mm | 0.3937 | | MC075-M100 | 6mm | 0.2362 | | MC100-M060 | 13/16 | 0.8125 | | MC125-0812 |
| 12mm | 0.4724 | | MC075-M120 | 8mm | 0.3150 | | MC100-M080 | 7/8 | 0.8750 | | MC125-0875 |
| 14mm | 0.5512 | | MC075-M140 | 10mm | 0.3937 | | MC100-M100 | 15/16 | 0.9375 | | MC125-0937 |
| 16mm | 0.6299 | | MC075-M160 | 12mm | 0.4724 | | MC100-M120 | 1 | 1.0000 | | MC125-1000 |
| | | | | 14mm | 0.5512 | | MC100-M140 | 3mm | 0.1181 | | MC125-M030 |
| | | | | 16mm | 0.6299 | | MC100-M160 | 4mm | 0.1575 | | MC125-M040 |
| | | | | 18mm | 0.7087 | | MC100-M180 | 5mm | 0.1969 | | MC125-M050 |
| | | | | 20mm | 0.7874 | | MC100-M200 | 6mm | 0.2362 | | MC125-M060 |
| | | | | | | | | 8mm | 0.3150 | | MC125-M080 |
| | | | | | | | | 10mm | 0.3937 | | MC125-M100 |
| | | | | | | | | 12mm | 0.4724 | | MC125-M120 |
| | | | | | | | | 14mm | 0.5512 | | MC125-M140 |
| | | | | | | | | 16mm | 0.6299 | | MC125-M160 |
| | | | | | | | | 18mm | 0.7087 | | MC125-M180 |
| | | | | | | | | 20mm | 0.7874 | | MC125-M200 |
| | | | | | | | | 22mm | 0.8661 | | MC125-M220 |
| | | | | | | | | 25mm | 0.9843 | | MC125-M250 |

MC - Milling Chuck Collets - Metric

MC Collets are Straight Sleeves that allow you to expand the capabilities of your Mill Chuck.

- Collets Ground 3µm - 0.0001" Runout OD to ID
- Interchangeable with most competitive models
- Designed for h6 tolerance cutting tool shanks



| Cutter Shank Size | | MC20 |
|-------------------|--------|-----------|
| 1/8 | 0.1250 | MC20-0125 |
| 3/16 | 0.1875 | MC20-0187 |
| 1/4 | 0.2500 | MC20-0250 |
| 5/16 | 0.3125 | MC20-0312 |
| 3/8 | 0.3750 | MC20-0375 |
| 7/16 | 0.4375 | MC20-0437 |
| 1/2 | 0.5000 | MC20-0500 |
| 9/16 | 0.5625 | MC20-0562 |
| 5/8 | 0.6250 | MC20-0625 |
| 2mm | 0.0787 | MC20-M020 |
| 4mm | 0.1575 | MC20-M040 |
| 5mm | 0.1969 | MC20-M050 |
| 6mm | 0.2362 | MC20-M060 |
| 8mm | 0.3150 | MC20-M080 |
| 10mm | 0.3937 | MC20-M100 |
| 12mm | 0.4724 | MC20-M120 |
| 14mm | 0.5512 | MC20-M140 |
| 16mm | 0.6299 | MC20-M160 |
| 18mm | 0.7087 | MC20-M180 |

| Cutter Shank Size | | MC32 |
|-------------------|--------|-----------|
| 1/8 | 0.1250 | MC32-0125 |
| 3/16 | 0.1875 | MC32-0187 |
| 1/4 | 0.2500 | MC32-0250 |
| 9/32 | 0.2813 | MC32-0281 |
| 5/16 | 0.3125 | MC32-0312 |
| 11/32 | 0.3438 | MC32-0343 |
| 3/8 | 0.3750 | MC32-0375 |
| 13/32 | 0.4063 | MC32-0406 |
| 7/16 | 0.4375 | MC32-0437 |
| 1/2 | 0.5000 | MC32-0500 |
| 9/16 | 0.5625 | MC32-0562 |
| 5/8 | 0.6250 | MC32-0625 |
| 11/16 | 0.6875 | MC32-0687 |
| 3/4 | 0.7500 | MC32-0750 |
| 13/16 | 0.8125 | MC32-0812 |
| 7/8 | 0.8750 | MC32-0875 |
| 15/16 | 0.9375 | MC32-0937 |
| 1" | 1.0000 | MC32-1000 |
| 6mm | 0.2362 | MC32-M060 |
| 8mm | 0.3150 | MC32-M080 |
| 10mm | 0.3937 | MC32-M100 |
| 12mm | 0.4724 | MC32-M120 |
| 14mm | 0.5512 | MC32-M140 |
| 16mm | 0.6299 | MC32-M160 |
| 18mm | 0.7087 | MC32-M180 |
| 20mm | 0.7874 | MC32-M200 |
| 22mm | 0.8661 | MC32-M220 |
| 24mm | 0.9449 | MC32-M240 |
| 25mm | 0.9843 | MC32-M250 |

ACC. | QC TAP | MISC. | SM | EM | DA | TG | ER | SD | MC | VX | MX | SX | BC

Collet Sets

MC Collets are Straight Sleeves that allow you to expand the capabilities of your Mill Chuck.

- Interchangeable with most competitive models
- Designed for h6 tolerance cutting tool shanks
- Collet Tray Included



| Part Number | Collet Size | Pieces | Includes |
|-------------|-------------|--------|---|
| MC075-ISET | MC075 | 9 | 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8 |
| MC100-ISET | MC100 | 11 | 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8 |
| MC125-ISET | MC125 | 12 | 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8, 1" |
| MC075-MSET | MC075 | 6 | 6, 8, 10, 12, 14, 16 |
| MC100-MSET | MC100 | 8 | 6, 8, 10, 12, 14, 16, 18, 20 |
| MC125-MSET | MC125 | 10 | 6, 8, 10, 12, 14, 16, 18, 20, 22, 25 |

Mill Chuck Kits

Includes:

- (1) Mill Chuck
- (1) Set of Collets (see sizes in chart)
- (1) Wrench
- Wooden Case



| Part Number | Collets Included |
|----------------------|--|
| CAT40-MC075-0335-KIT | (8) Collets - 5/8, 1/2, 7/16, 3/8, 5/16, 1/4, 3/16, 1/8 |
| CAT40-MC100-0335-KIT | (9) Collets - 7/8, 3/4, 5/8, 1/2, 3/8, 5/16, 1/4, 3/16, 1/8 |
| CAT40-MC125-0354-KIT | (10) Collets - 1", 7/8, 3/4, 5/8, 1/2, 3/8, 5/16, 1/4, 3/16, 1/8 |

Wrenches



| Part Number | Chuck Sizes |
|-------------|--------------|
| MCW20 | 3/4" & 20MM |
| MCW25 | 1" & 25MM |
| MCW32 | 1-1/4 & 32MM |

Preset Screws

- Nylon Coolant Screw w/ O-Ring Standard



| Screw Part Number | Description | Coolant Hole | O-Ring | Thread | Length | Wrench |
|-------------------|--|--------------|-----------------|------------|--------|-------------------|
| ASC-16-40 | MC20, 25, 32, 075, 100 & 125 Nylon Coolant | 2.50 | 11mm OD x 2.0mm | M16 x 2.00 | 40 | 2.5mm & 5.0mm Hex |
| ASC-12-30 | BT30 - MC20 & MC075 Nylon Coolant | 2.50 | 10mm OD x 1.5mm | M12 x 1.75 | 30 | 2.5mm & 5.0mm Hex |
| ASC-16-18 | HSK - MC20, 25, 32, 075, 100 & 125 Nylon Coolant | 2.50 | 11mm OD x 2.0mm | M16 x 2.00 | 18 | 2.5mm & 5.0mm Hex |

SD - Shrink Fit

Milling | Precision Drilling



Premium Performance

Ultimate Precision

0.0001" TIR Guaranteed @ Bore

Long Lasting

Manufactured from ISO-40CrMoV5 Material, Heat Treated for Optimum Elasticity and Tool Life

Powerful

Toleranced and Ground for 10,000 lbs of pull out force

Performance Milling

Designed for Performance Milling with Neutral flute geometry, not designed for hi-helix applications



Highest Quality - Designed to Last

PIONEER Shrink Fit is manufactured from ISO-40CrMoV5 Tool Steel, Double Tempered at 1050°F to withstand up to 10,000 tool changes.

All holders are 100% inspected on Air/Electronic gaging and the ID is ground for a maximum of 3 microns (0.0001") Runout (TIR) in the Bore.

Dynamically Balanced

PIONEER Tapered Shrink Fit Holders are Dynamically Balanced for G2.5 @ 25,000 RPM's

Jet-Blast Options to fit YOUR Application

We at Pioneer have invested in an EDM Drilling machine which allow us to customize Jet-Blast coolant holes to your application.

It comes down to coolant volume.

Every Jet-Blast Holder or collet comes with 2 ports standard. Depending on style and type we have the ability of adding as many holes as your coolant volume can support without losing pressure.

The goal is to create a reducing effect to the volume of coolant to maintain or increase pressure. This allows for increased chip evacuation and free cutting.



BC

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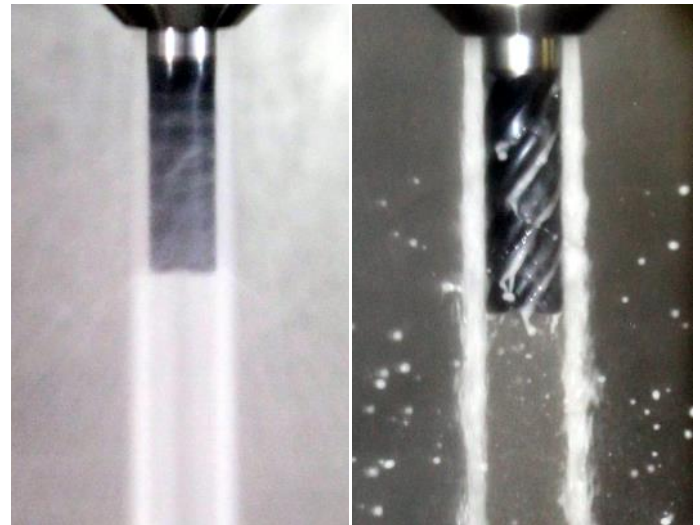
EM

SM

MISC.

QC TAP

ACC.



2 - Port Jet-Blast

Same tool shot with a High Speed Shutter

Any standard Shrink can be modified from stock. Adding a "J" to the end of the part number will provide you with 2 coolant ports.

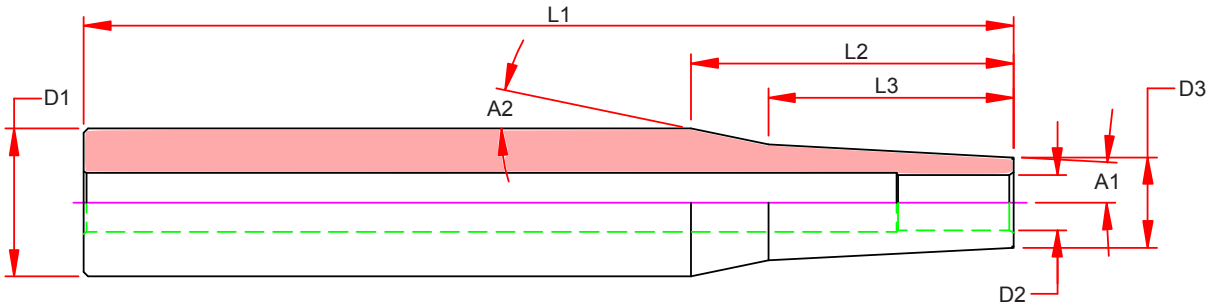
Need additional ports? Add "J 4-Port" to the part number for additional ports (additional fees will apply).

Contact our customer service department for details and pricing.

SD - Shrink Fit Extensions

Features:

- **3 μm - 0.0001" Runout**
- Designed to work in standard Milling Chucks
- Designed for Cutting Tools with h6 shank tolerance
- Close Center to clear fixtures or part walls



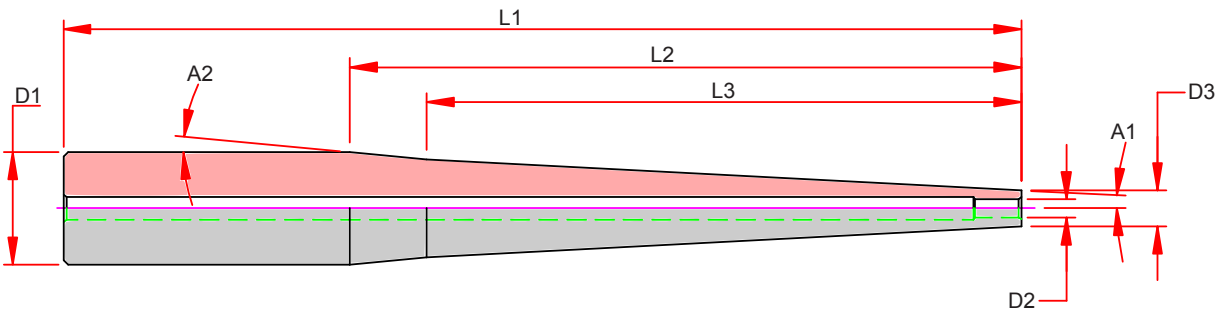
| Part Number | D1 | D2 | D3 | L1 | L2 | L3 | A1 | A2 |
|-----------------|--------|--------|------|------|------|------|-----|------|
| S100-SD025-0800 | 1.0000 | 0.2500 | 0.49 | 8.00 | 2.17 | 1.65 | 3.0 | 17.9 |
| S100-SD031-0800 | 1.0000 | 0.3125 | 0.55 | 8.00 | 2.17 | 1.65 | 3.0 | 14.9 |
| S100-SD037-0800 | 1.0000 | 0.3750 | 0.61 | 8.00 | 2.17 | 1.65 | 3.0 | 11.8 |
| S100-SD050-0800 | 1.0000 | 0.5000 | 0.81 | 8.00 | 1.71 | 1.43 | 2.5 | 6.5 |



SN - Shrink Fit Slim Nose Extensions - Inch

Features:

- **3 μm - 0.0001" Runout**
- Designed to work in standard Milling Chucks
- Designed for Cutting Tools with h6 shank tolerance
- Close Center to clear fixtures or part walls



| Part Number | D1 | D2 | D3 | L1 | L2 | L3 | A1 | A2 | |
|-----------------|--------|--------|------|------|------|----|------|-----|-----|
| S037-SN012-0315 | 0.3750 | 0.1250 | 0.24 | 3.15 | 1.40 | - | 2.8 | - | |
| S037-SN018-0315 | | 0.1875 | 0.31 | | | | 1.5 | - | |
| S050-SN025-0315 | 0.5000 | 0.2500 | 0.37 | 8.00 | 4.46 | - | 2.8 | - | |
| S075-SN012-0800 | 0.7500 | 0.1250 | 0.24 | | | | 3.95 | 3.0 | 5.4 |
| S075-SN018-0800 | | 0.1875 | 0.31 | | | | - | 2.9 | - |
| S075-SN025-0800 | 1.0000 | 0.2500 | 0.37 | 4.33 | 3.82 | - | 2.5 | - | |
| S100-SN037-0800 | | 0.3750 | 0.49 | | | | 3.0 | 6.0 | |
| S100-SN050-0800 | | 0.5000 | 0.62 | | | | 2.0 | | |

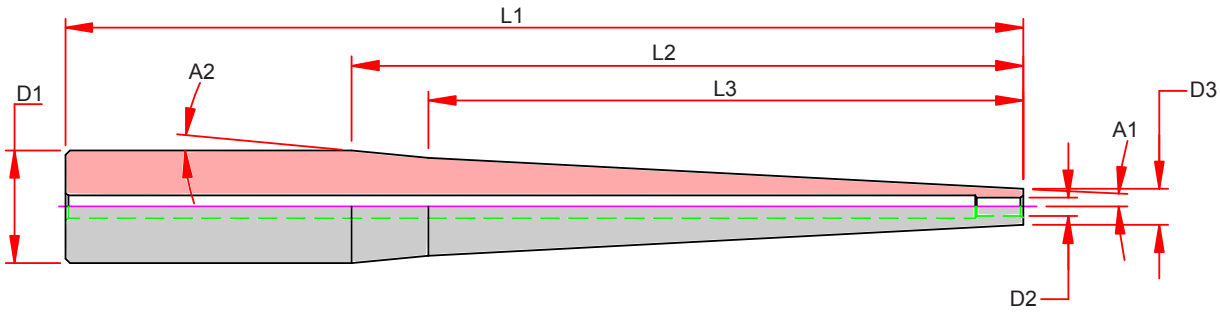


SN - Shrink Fit Slim Nose Extensions - Metric

- Build on Demand Items

Features:

- 3 μm - 0.0001" Runout
- Designed to work in standard Milling Chucks
- Designed for Cutting Tools with h6 shank tolerance
- Close Center to clear fixtures or part walls



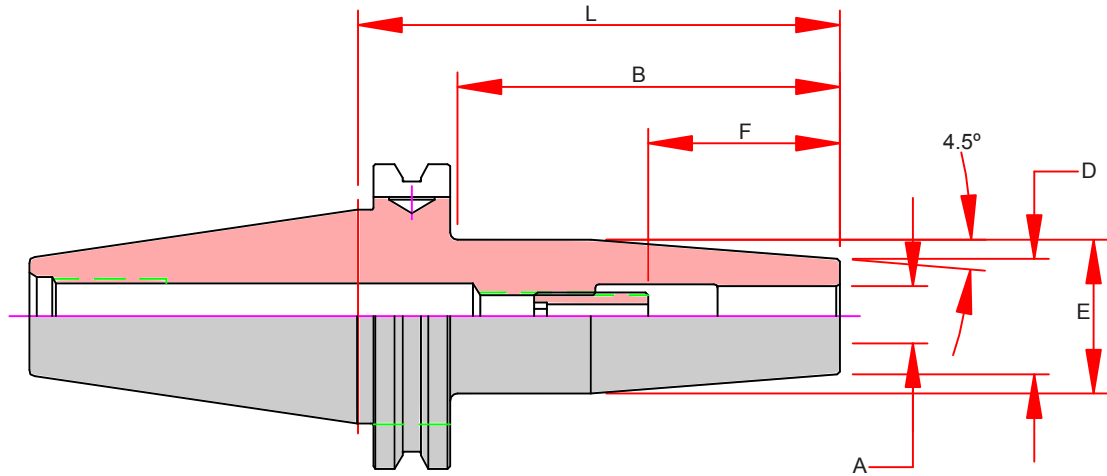
| Part Number | D1 | D2 | D3 | L1 | L2 | L3 | A1 | A2 | |
|--------------|----|----|----|-----|-----|----|-----|-----|-----|
| S10-SN03-080 | 10 | 3 | 6 | 80 | 35 | - | 2.8 | - | |
| S10-SN04-080 | | 4 | 8 | | | | 1.5 | | |
| S16-SN03-140 | 16 | 3 | 6 | 140 | 67 | - | 3 | - | |
| S16-SN04-140 | | 4 | 8 | | | | | | |
| S16-SN06-140 | | 6 | 10 | | | | | | |
| S16-SN08-140 | | 8 | 12 | | | | | | |
| S20-SN03-200 | 20 | 3 | 6 | 200 | 113 | - | 3 | - | |
| S20-SN04-200 | | 4 | 8 | | | | 100 | 2.9 | 5.4 |
| S20-SN06-200 | | 6 | 10 | | | | - | 2.5 | - |
| S20-SN08-200 | | 8 | 12 | | | | - | 2.5 | - |
| S25-SN10-200 | 25 | 10 | 12 | 200 | 110 | 97 | 3 | - | |
| S25-SN12-200 | | 12 | 15 | | | | - | 2 | 6 |

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QC TAP
ACC.

CAT40 Shrink Fit Inch

Features

- 3 μm - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (USA-H13)
- Coolant Thru the Center & DIN AD+B Flange Coolant
- Dynamically Balanced for G2.5 @ 25,000 RPM
- Tapers are ground better than AT3 for optimal T.I.R.
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Cutting Tools with h6 shank tolerance
- Add "-J" for Jet-Blast Coolant Ports

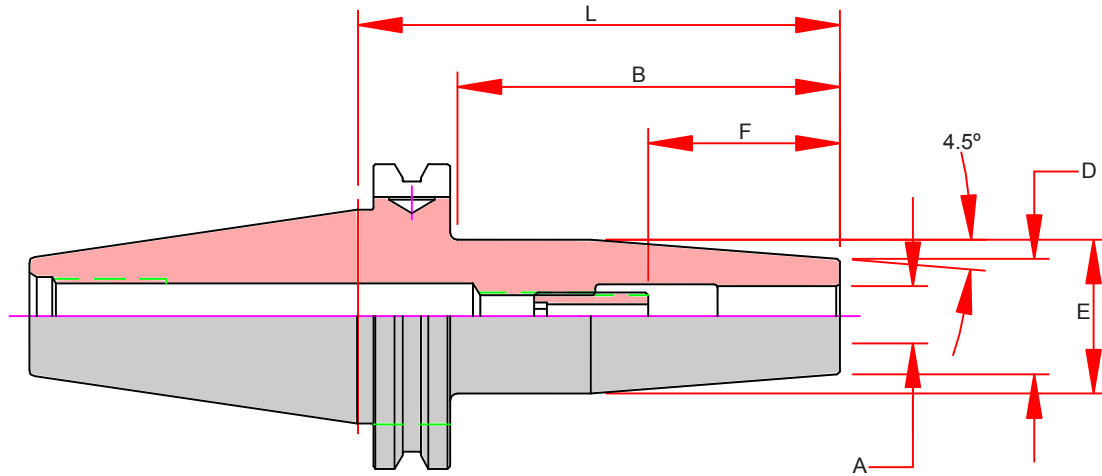


| Part Number | A Bore | B | D | E | F Max Tool Enters | L Projection |
|-----------------|-----------|------|------|------|-------------------------|-----------------|
| CAT40-SD012-080 | 0.1250 | 2.28 | 0.39 | 0.77 | 4.57 | 3.15 |
| CAT40-SD012-160 | 0.1250 | 5.43 | 0.39 | 0.77 | 7.73 | 6.30 |
| CAT40-SD018-080 | 0.1875 | 2.28 | 0.39 | 0.77 | 4.57 | 3.15 |
| CAT40-SD018-160 | 0.1875 | 5.43 | 0.39 | 0.77 | 7.73 | 6.30 |
| CAT40-SD025-080 | 0.2500 | 2.28 | 0.83 | 1.06 | 1.54 | 3.15 |
| CAT40-SD025-160 | 0.2500 | 5.43 | 0.83 | 1.06 | 1.54 | 6.30 |
| CAT40-SD031-080 | 0.3125 | 2.28 | 0.83 | 1.06 | 1.54 | 3.15 |
| CAT40-SD031-160 | 0.3125 | 5.43 | 0.83 | 1.06 | 1.54 | 6.30 |
| CAT40-SD037-080 | 0.3750 | 2.28 | 0.94 | 1.26 | 1.73 | 3.15 |
| CAT40-SD037-160 | 0.3750 | 5.43 | 0.94 | 1.26 | 1.73 | 6.30 |
| CAT40-SD043-080 | 0.4375 | 2.28 | 0.94 | 1.26 | 1.73 | 3.15 |
| CAT40-SD043-160 | 0.4375 | 5.43 | 0.94 | 1.26 | 1.73 | 6.30 |
| CAT40-SD050-080 | 0.5000 | 2.28 | 0.94 | 1.26 | 1.97 | 3.15 |
| CAT40-SD050-160 | 0.5000 | 5.43 | 0.94 | 1.26 | 1.97 | 6.30 |
| CAT40-SD062-080 | 0.6250 | 2.28 | 1.06 | 1.34 | 2.09 | 3.15 |
| CAT40-SD062-160 | 0.6250 | 5.43 | 1.06 | 1.34 | 2.09 | 6.30 |
| CAT40-SD075-080 | 0.7500 | 2.28 | 1.30 | 1.65 | 2.09 | 3.15 |
| CAT40-SD075-160 | 0.7500 | 5.43 | 1.30 | 1.65 | 2.09 | 6.30 |
| CAT40-SD100-100 | 1.0000 | 3.07 | 1.73 | 2.09 | 2.28 | 3.94 |
| CAT40-SD100-160 | 1.0000 | 5.43 | 1.73 | 2.09 | 2.28 | 6.30 |
| CAT40-SD125-100 | 1.2500 | 3.07 | 1.73 | 2.09 | 2.28 | 3.94 |
| CAT40-SD125-160 | 1.2500 | 5.43 | 1.73 | 2.09 | 2.28 | 6.30 |

CAT40 Shrink Fit Metric

Features

- 3 μm - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (USA-H13)
- Coolant Thru the Center & DIN AD+B Flange Coolant
- Dynamically Balanced for G2.5 @ 25,000 RPM
- Tapers are ground better than AT3 for optimal T.I.R.
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Cutting Tools with h6 shank tolerance
- Add "-J" for Jet-Blast Coolant Ports



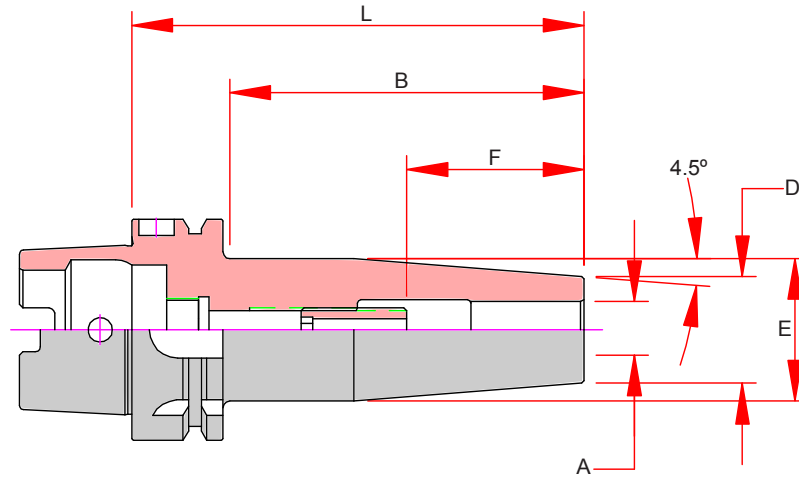
| Part Number | A Bore | B | D | E | F Max Tool Enters | L Projection |
|-----------------|--------|------|------|------|-------------------|--------------|
| CAT40-SDM03-080 | 3.000 | 2.28 | 0.39 | 0.75 | 4.57 | 3.15 |
| CAT40-SDM04-080 | 4.000 | 2.28 | 0.39 | 0.75 | 4.57 | 3.15 |
| CAT40-SDM06-080 | 6.000 | 2.28 | 0.83 | 1.06 | 1.54 | 3.15 |
| CAT40-SDM08-080 | 8.000 | 2.28 | 0.83 | 1.06 | 1.54 | 3.15 |
| CAT40-SDM10-080 | 10.000 | 2.28 | 0.94 | 1.26 | 1.73 | 3.15 |
| CAT40-SDM12-080 | 12.000 | 2.28 | 0.94 | 1.26 | 1.97 | 3.15 |
| CAT40-SDM16-080 | 16.000 | 2.28 | 1.06 | 1.34 | 1.97 | 3.15 |
| CAT40-SDM20-080 | 20.000 | 2.28 | 1.30 | 1.65 | 2.17 | 3.15 |
| CAT40-SDM25-100 | 25.000 | 3.07 | 1.73 | 2.09 | 2.28 | 3.94 |
| CAT40-SDM32-100 | 32.000 | 3.07 | 1.73 | 2.09 | 2.28 | 3.94 |

BC
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HSK63A

Features

- 3 μm - 0.0001" Runout
- Manufactured from ISO-40CrMoV5 (USA-H13)
- Coolant Thru the Center
- Dynamically Balanced for G2.5 @ 25,000 RPM
- Tapers are ground better than AT3 for optimal T.I.R.
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Cutting Tools with h6 shank tolerance
- Add "-J" for Jet-Blast Coolant Ports

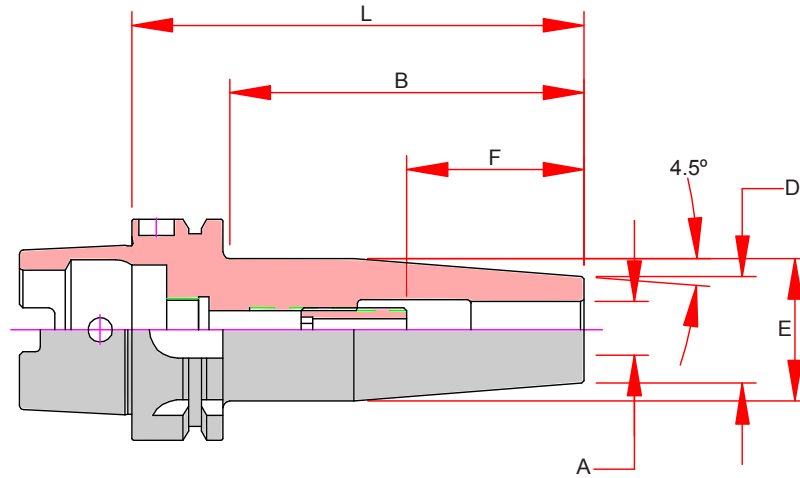


| Part Number | A Bore | B | D | E | F Max Tool Enters | L Projection |
|-------------------|--------|------|------|------|-------------------|--------------|
| HSK 63A-SD012-080 | 0.1250 | 2.02 | 0.39 | 0.71 | 2.28 | 3.15 |
| HSK 63A-SD012-160 | 0.1250 | 5.16 | 0.39 | 0.75 | 5.43 | 6.30 |
| HSK 63A-SD018-080 | 0.1875 | 2.02 | 0.39 | 0.71 | 2.28 | 3.15 |
| HSK 63A-SD018-160 | 0.1875 | 5.16 | 0.39 | 0.75 | 5.43 | 6.30 |
| HSK 63A-SD025-080 | 0.2500 | 2.02 | 0.83 | 1.06 | 1.54 | 3.15 |
| HSK 63A-SD025-160 | 0.2500 | 5.16 | 0.83 | 1.06 | 1.54 | 6.30 |
| HSK 63A-SD037-085 | 0.3750 | 2.21 | 0.94 | 1.06 | 1.73 | 3.35 |
| HSK 63A-SD037-160 | 0.3750 | 5.16 | 0.94 | 1.06 | 1.73 | 6.30 |
| HSK 63A-SD050-090 | 0.5000 | 2.41 | 0.94 | 1.26 | 1.97 | 3.54 |
| HSK 63A-SD050-160 | 0.5000 | 5.16 | 0.94 | 1.26 | 1.97 | 6.30 |
| HSK 63A-SD062-095 | 0.6250 | 2.61 | 1.06 | 1.34 | 1.97 | 3.74 |
| HSK 63A-SD062-160 | 0.6250 | 5.16 | 1.06 | 1.34 | 1.97 | 6.30 |
| HSK 63A-SD075-100 | 0.7500 | 2.80 | 1.30 | 1.65 | 2.05 | 3.94 |
| HSK 63A-SD075-160 | 0.7500 | 5.16 | 1.30 | 1.65 | 2.05 | 6.30 |
| HSK 63A-SD100-115 | 1.0000 | 3.50 | 1.73 | 2.09 | 2.28 | 4.53 |
| HSK 63A-SD100-160 | 1.0000 | 5.16 | 1.73 | 2.09 | 2.28 | 6.30 |
| HSK 63A-SD125-120 | 1.2500 | 3.70 | 1.73 | 2.09 | 2.40 | 4.72 |
| HSK 63A-SD125-160 | 1.2500 | 5.16 | 1.73 | 2.09 | 2.40 | 6.30 |

HSK63A

Features

- 3 μm - 0.0001" Runout
- Manufactured from ISO-40CrMoV5 (USA-H13)
- Coolant Thru the Center
- Dynamically Balanced for G2.5 @ 25,000 RPM
- Tapers are ground better than AT3 for optimal T.I.R.
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Cutting Tools with h6 shank tolerance
- Add "-J" for Jet-Blast Coolant Ports



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| Part Number | A Bore | B | D | E | F Max Tool Enters | L Projection |
|-------------------|-----------|------|------|------|-------------------------|-----------------|
| HSK 63A-SDM03-080 | 3.000 | 2.02 | 0.39 | 0.71 | 2.28 | 3.15 |
| HSK 63A-SDM03-160 | 3.000 | 5.16 | 0.39 | 0.75 | 5.43 | 6.30 |
| HSK 63A-SDM04-080 | 4.000 | 2.02 | 0.39 | 0.71 | 2.28 | 3.15 |
| HSK 63A-SDM04-160 | 4.000 | 5.16 | 0.39 | 0.75 | 5.43 | 6.30 |
| HSK 63A-SDM06-080 | 6.000 | 2.02 | 0.83 | 1.06 | 1.54 | 3.15 |
| HSK 63A-SDM06-160 | 6.000 | 5.16 | 0.83 | 1.06 | 1.54 | 6.30 |
| HSK 63A-SDM08-080 | 8.000 | 2.02 | 0.83 | 1.06 | 1.54 | 3.15 |
| HSK 63A-SDM08-160 | 8.000 | 5.16 | 0.83 | 1.06 | 1.54 | 6.30 |
| HSK 63A-SDM10-085 | 10.000 | 2.21 | 0.94 | 1.26 | 1.73 | 3.35 |
| HSK 63A-SDM10-160 | 10.000 | 5.16 | 0.94 | 1.26 | 1.73 | 6.30 |
| HSK 63A-SDM12-090 | 12.000 | 2.41 | 0.94 | 1.26 | 1.97 | 3.54 |
| HSK 63A-SDM12-160 | 12.000 | 5.16 | 0.94 | 1.26 | 1.97 | 6.30 |
| HSK 63A-SDM16-095 | 16.000 | 2.61 | 1.06 | 1.34 | 1.97 | 3.74 |
| HSK 63A-SDM16-160 | 16.000 | 5.16 | 1.06 | 1.34 | 1.97 | 6.30 |
| HSK 63A-SDM20-100 | 20.000 | 2.80 | 1.30 | 1.65 | 2.17 | 3.94 |
| HSK 63A-SDM20-160 | 20.000 | 5.16 | 1.30 | 1.65 | 2.17 | 6.30 |
| HSK 63A-SDM25-115 | 25.000 | 3.50 | 1.73 | 2.09 | 2.40 | 4.53 |
| HSK 63A-SDM25-160 | 25.000 | 5.16 | 1.73 | 2.09 | 2.40 | 6.30 |

ER - Collet Chucks

Drilling | Reaming | Threading | Lite Milling



Premium Performance

Premium Precision

0.0001" TIR OD Taper to ID Taper Guaranteed

Dynamic Balance

Dynamically Balanced Body for G6.3 @ 20,000 RPM's (CAT50 @ 15,000) and the Nuts are also Dynamically Balanced Separately

Best in Class Performance

Pioneer ER exceeds DIN 6499 to provide optimum performance and interchangeability

True Dynamic Balance

PIONEER ER holder bodies and collet nuts are individually dynamically balanced, not in sets, for maximum flexibility and balance compensation.

Dynamic Balance Compensation



Sealed or Jet-Blast Coolant Cap

Seal Collets or ER Coolant Caps provide a coolant seal up to 1,500 PSI.

Coolant Caps preventing chips & debris from enter the collet and chuck.

Available in a Jet-Blast model for directional coolant into the cutter flutes.



Standard Features

Dynamic Balance Compensation

ID Chip Hole

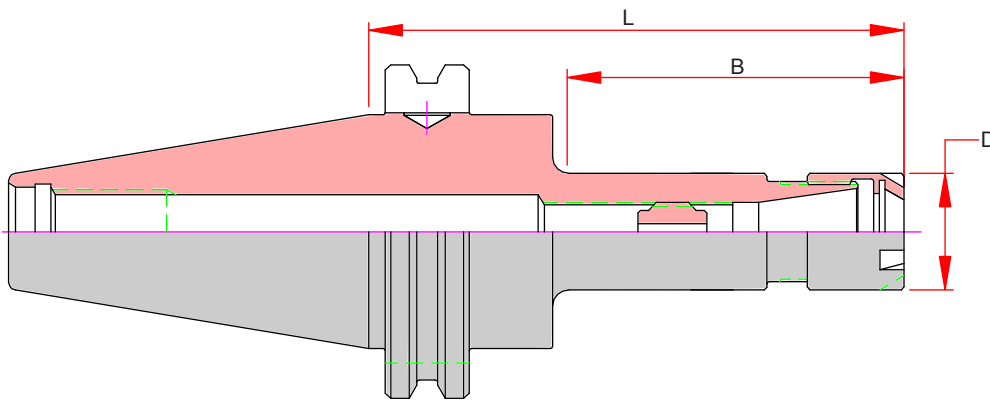


DIN AD+B Flange Coolant

CAT40 ER Mini Collet Chucks

Features

- 3 μm - 0.0001" Runout Taper to Taper
- Coolant Thru Center
- DIN AD+B Flange Coolant Standard
- Dynamically Balanced G6.3 @ 20,000 RPM
- Order Collets & Wrench Separately



| Capacity | Part Number | Range | B | D | L Projection | Screw | Nut | Wrench |
|----------|------------------|-----------|------|------|--------------|----------|---------|---------|
| 1/4 | CAT40-ER11M-0250 | .019-.276 | 1.56 | 0.63 | 2.50 | ASC-ER11 | ERN-11M | ERW-11M |
| | CAT40-ER11M-0400 | | 2.42 | | 4.00 | | | |
| | CAT40-ER11M-0600 | | 4.42 | | 6.00 | | | |
| | CAT40-ER11M-0800 | | 6.42 | | 8.00 | | | |
| 3/8 | CAT40-ER16M-0250 | .019-.394 | 1.56 | 0.87 | 2.50 | ASC-ER16 | ERN-16M | ERW-16M |
| | CAT40-ER16M-0400 | | 2.42 | | 4.00 | | | |
| | CAT40-ER16M-0600 | | 4.42 | | 6.00 | | | |
| | CAT40-ER16M-0800 | | 6.42 | | 8.00 | | | |

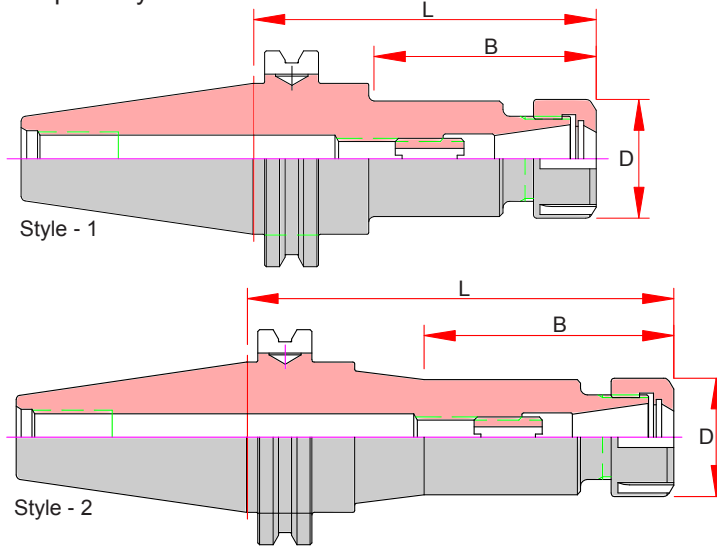
Note: Mini Nuts use compression to insert and remove the collet. Due to the size of the nut collet removal can be difficult.

BC
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SM
MISC.
QC TAP
ACC.

CAT40 ER Collet Chucks

Features

- 3 μm - 0.0001" Runout Taper to Taper
- Coolant Thru Center
- DIN AD+B Flange Coolant Standard
- Dynamically Balanced G6.3 @ 20,000 RPM
- Order Collets & Wrench Separately

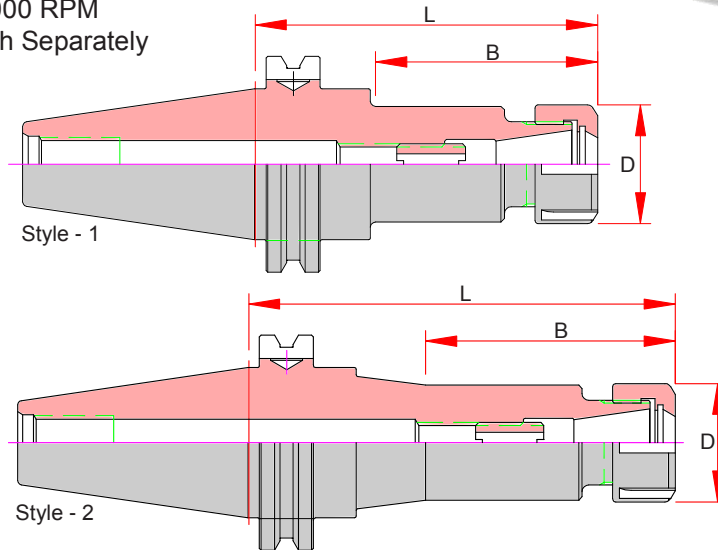


| Capacity | Part Number | Range | B | D | L Projection | Screw | Nut | Wrench | Style |
|----------|------------------|------------|------|------|--------------|----------|---------|---------|-------|
| | CAT40-ER11H-0250 | | 0.92 | | 2.50 | | | | 1 |
| 1/4 | CAT40-ER11H-0400 | .019-.276 | 2.50 | 0.79 | 4.00 | ASC-ER11 | ERN-11H | ERW-11H | 1 |
| | CAT40-ER11H-0600 | | 1.83 | | 6.00 | | | | 2 |
| | CAT40-ER16H-0250 | | 1.55 | | 2.50 | | | | 1 |
| 3/8 | CAT40-ER16H-0400 | .019-.394 | 2.42 | 1.10 | 4.00 | ASC-ER16 | ERN-16H | ERW-16H | 1 |
| | CAT40-ER16H-0600 | | 4.42 | | 6.00 | | | | 1 |
| | CAT40-ER16H-0800 | | 6.42 | | 8.00 | | | | 1 |
| | CAT40-ER20H-0250 | | 1.63 | | 2.50 | | | | 1 |
| 1/2 | CAT40-ER20H-0400 | .019-.512 | 2.50 | 1.33 | 4.00 | ASC-ER20 | ERN-20H | ERW-20H | 1 |
| | CAT40-ER20H-0600 | | 4.60 | | 6.00 | | | | 1 |
| | CAT40-ER20H-0800 | | 6.60 | | 8.00 | | | | 1 |
| | CAT40-ER25-0250 | | 1.73 | | 2.50 | | | | 1 |
| 5/8 | CAT40-ER25-0400 | .019-.630 | 2.58 | 1.65 | 4.00 | ASC-ER25 | ERN-25 | ERW-25E | 1 |
| | CAT40-ER25-0600 | | 4.60 | | 6.00 | | | | 1 |
| | CAT40-ER25-0800 | | 6.60 | | 8.00 | | | | 1 |
| | CAT40-ER32-0250 | | 1.73 | | 2.50 | | | | 1 |
| 3/4 | CAT40-ER32-0400 | .039-.787 | 3.23 | 1.96 | 4.00 | ASC-ER32 | ERN-32 | ERW-32E | 1 |
| | CAT40-ER32-0600 | | 5.23 | | 6.00 | | | | 1 |
| | CAT40-ER32-0800 | | 7.25 | | 8.00 | | | | 1 |
| | CAT40-ER40-0250 | | 1.75 | | 2.50 | | | | 1 |
| 1" | CAT40-ER40-0400 | .079-1.024 | 3.25 | 2.48 | 4.00 | ASC-ER40 | ERN-40 | ERW-40E | 1 |
| | CAT40-ER40-0600 | | 5.25 | | 6.00 | | | | 1 |

CAT50 ER Collet Chucks

Features

- **3 μm - 0.0001" Runout Taper to Taper**
- Coolant Thru Center
- DIN AD+B Flange Coolant Standard
(* 15" Projection Holders additional fee)
- Balanced G6.3 @ 15,000 RPM
- Order Collets & Wrench Separately



| Capacity | Part Number | Range | B | D | L Projection | Screw | Nut | Wrench | Style |
|----------|------------------|------------|------|------|--------------|----------|---------|---------|-------|
| 3/8 | CAT50-ER16H-0250 | | 1.55 | | 2.50 | | | | 1 |
| | CAT50-ER16H-0400 | | 2.42 | | 4.00 | | | | 1 |
| | CAT50-ER16H-0600 | | 2.39 | | 6.00 | | | | 2 |
| | CAT50-ER16H-0800 | .019-.394 | 2.39 | 1.10 | 8.00 | ASC-ER16 | ERN-16H | ERW-16H | 2 |
| | CAT50-ER16H-1000 | | 2.39 | | 10.00 | | | | 2 |
| | CAT50-ER16H-1200 | | 2.39 | | 12.00 | | | | 2 |
| | CAT50-ER16H-1500 | | 2.39 | | 15.00 | | | | 2 |
| 1/2 | CAT50-ER20H-0250 | | 1.55 | | 2.50 | | | | 1 |
| | CAT50-ER20H-0400 | | 2.42 | | 4.00 | | | | 1 |
| | CAT50-ER20H-0600 | .019-.512 | 2.42 | 1.33 | 6.00 | ASC-ER20 | ERN-20H | ERW-20H | 2 |
| | CAT50-ER20H-0800 | | 2.42 | | 8.00 | | | | 2 |
| | CAT50-ER20H-1500 | | 3.40 | | 15.00 | | | | 2 |
| 5/8 | CAT50-ER25-0250 | | 1.55 | | 2.50 | | | | 1 |
| | CAT50-ER25-0400 | | 2.42 | | 4.00 | | | | 1 |
| | CAT50-ER25-0600 | .019-.630 | 4.42 | 1.65 | 6.00 | ASC-ER25 | ERN-25 | ERW-25E | 1 |
| | CAT50-ER25-0800 | | 2.44 | | 8.00 | | | | 2 |
| | CAT50-ER25-1500 | | 3.42 | | 15.00 | | | | 2 |
| 3/4 | CAT50-ER32-0250 | | 1.71 | | 2.50 | | | | 1 |
| | CAT50-ER32-0400 | | 2.50 | | 4.00 | | | | 1 |
| | CAT50-ER32-0500 | | 3.50 | | 5.00 | | | | 1 |
| | CAT50-ER32-0600 | .039-.787 | 4.50 | 1.96 | 6.00 | ASC-ER32 | ERN-32 | ERW-32E | 1 |
| | CAT50-ER32-0800 | | 6.50 | | 8.00 | | | | 1 |
| | CAT50-ER32-1000 | | 4.45 | | 10.00 | | | | 2 |
| | CAT50-ER32-1200 | | 4.45 | | 12.00 | | | | 2 |
| | CAT50-ER32-1500 | | 4.45 | | 15.00 | | | | 2 |
| 1" | CAT50-ER40-0400 | | 2.54 | | 4.00 | | | | 1 |
| | CAT50-ER40-0500 | .079-1.024 | 3.54 | 2.48 | 5.00 | ASC-ER40 | ERN-40 | ERW-40E | 1 |
| | CAT50-ER40-0600 | | 4.54 | | 6.00 | | | | 1 |
| | CAT50-ER40-0800 | | 6.54 | | 8.00 | | | | 1 |

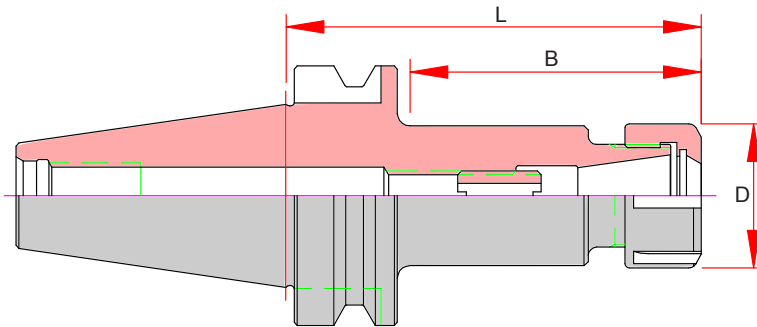


ER - Collet Chucks

BT30 ER Collet Chucks

Features

- 3 μm - 0.0001" Runout Taper to Taper
- Coolant Thru Center
- Balanced G6.3 @ 20,000 RPM
- Order Collets & Wrench Separately

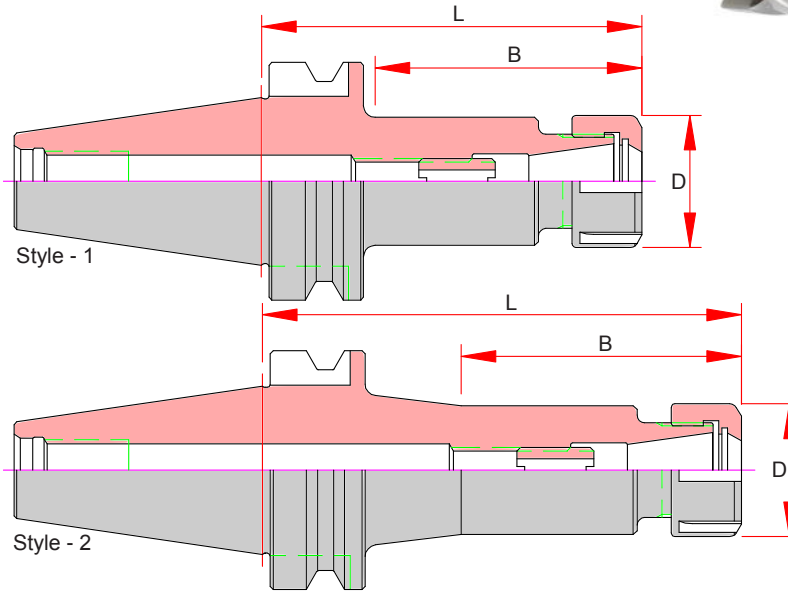


| Capacity | Part Number | Range | B | D | L Projection | Screw | Nut | Wrench |
|----------|----------------|-----------|------|------|--------------|----------|---------|---------|
| 1/4 | BT30-ER11H-060 | .019-.276 | 1.45 | 0.74 | 2.36 | ASC-ER11 | ERN-11H | ERW-11H |
| | BT30-ER11H-100 | | 2.95 | | 3.94 | | | |
| 3/8 | BT30-ER16H-070 | .019-.394 | 1.85 | 1.10 | 2.76 | ASC-ER16 | ERN-16H | ERW-16H |
| | BT30-ER16H-100 | | 3.03 | | 3.94 | | | |
| 1/2 | BT30-ER20H-070 | .019-.512 | 1.85 | 1.33 | 2.76 | ASC-ER20 | ERN-20H | ERW-20H |
| | BT30-ER20H-100 | | 3.03 | | 3.94 | | | |
| 5/8 | BT30-ER25-070 | .019-.630 | 1.93 | 1.65 | 2.76 | ASC-ER25 | ERN-25 | ERW-25E |
| | BT30-ER25-100 | | 3.11 | | 3.94 | | | |
| 3/4 | BT30-ER32-070 | .039-.787 | 1.93 | 1.96 | 2.76 | ASC-ER32 | ERN-32 | ERW-32E |

BT40 ER Collet Chucks

Features

- 3 µm - 0.0001" Runout Taper to Taper
- Coolant Thru Center
- DIN AD+B Flange Coolant Standard
- Balanced G6.3 @ 20,000 RPM
- Order Collets & Wrench Separately



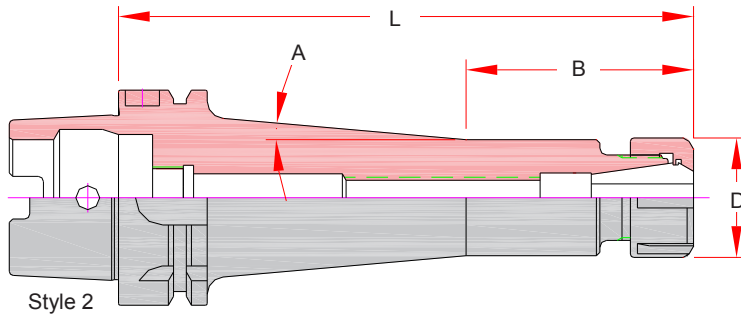
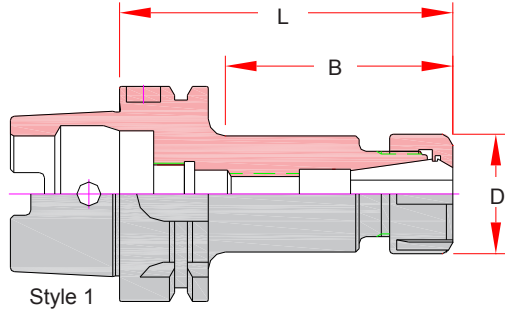
| Capacity | Part Number | Range | B | D | L Projection | Screw | Nut | Wrench | Style |
|----------|----------------|------------|------|------|--------------|----------|---------|---------|-------|
| 1/4 | BT40-ER11H-060 | | 1.18 | | 2.36 | | | | 1 |
| | BT40-ER11H-100 | .019-.276 | 2.75 | 0.74 | 3.94 | ASC-ER11 | ERN-11H | ERW-11H | 1 |
| | BT40-ER11H-150 | | 1.57 | | 5.91 | | | | 1 |
| 3/8 | BT40-ER16H-060 | | 1.18 | | 2.36 | | | | 1 |
| | BT40-ER16H-100 | .019-.394 | 2.75 | 1.10 | 3.94 | ASC-ER16 | ERN-16H | ERW-16H | 1 |
| | BT40-ER16H-160 | | 5.11 | | 6.30 | | | | 2 |
| 1/2 | BT40-ER20H-070 | | 1.57 | | 2.76 | | | | 1 |
| | BT40-ER20H-100 | .019-.512 | 2.75 | 1.33 | 3.94 | ASC-ER20 | ERN-20H | ERW-20H | 1 |
| | BT40-ER20H-160 | | 5.11 | | 6.30 | | | | 1 |
| 5/8 | BT40-ER25-060 | | 1.26 | | 2.36 | | | | 1 |
| | BT40-ER25-100 | .019-.630 | 2.83 | 1.65 | 3.94 | ASC-ER25 | ERN-25 | ERW-25E | 1 |
| | BT40-ER25-160 | | 5.19 | | 6.30 | | | | 1 |
| 3/4 | BT40-ER32-075 | | 1.88 | | 2.95 | | | | 1 |
| | BT40-ER32-100 | .039-.787 | 2.87 | 1.96 | 3.94 | ASC-ER32 | ERN-32 | ERW-32E | 1 |
| | BT40-ER32-160 | | 5.23 | | 6.30 | | | | 1 |
| 1" | BT40-ER40-080 | .079-1.024 | 2.04 | 2.48 | 3.15 | ASC-ER40 | ERN-40 | ERW-40E | 1 |
| | BT40-ER40-160 | | 4.40 | | 6.30 | | | | 1 |

ER - Collet Chucks

HSK

Features

- 3 µm - 0.0001" Runout Taper to Taper
- Coolant Thru Center
- Balanced G6.3 @ 20,000 RPM
- Order Collets & Wrench Separately



| Capacity | Part Number | Style | A | B | D | Max. Preset | L Projection | Screw | Nut | Wrench |
|----------|------------------|-------|----|------|------|-------------|--------------|----------|---------|---------|
| 0.394 | HSK63A-ER16H-100 | 1 | - | 2.79 | 1.10 | 2.00 | 3.94 | ASC-ER16 | ERN-16H | ERW-16H |
| | HSK63A-ER16H-160 | 2 | 5° | 2.36 | | 3.05 | 6.30 | | | |
| 0.512 | HSK63A-ER20H-100 | 1 | - | 2.65 | 1.33 | 1.87 | 3.94 | ASC-ER20 | ERN-20H | ERW-20H |
| | HSK63A-ER20H-160 | 1 | - | 5.08 | | 2.89 | 6.30 | | | |
| 0.630 | HSK63A-ER25-100 | 1 | - | 2.72 | 1.65 | 2.20 | 3.94 | ASC-ER25 | ERN-25 | ERW-25E |
| | HSK63A-ER25-160 | 1 | - | 5.08 | | 3.90 | 6.30 | | | |
| 0.787 | HSK63A-ER32-100 | 1 | - | 2.83 | 1.96 | 2.17 | 3.94 | ASC-ER32 | ERN-32 | ERW-32E |
| | HSK63A-ER32-160 | 1 | - | 5.20 | | 4.33 | 6.30 | | | |
| 1.024 | HSK63A-ER40-120 | 1 | - | 3.70 | 2.48 | 2.83 | 4.72 | ASC-ER40 | ERN-40 | ERW-40E |
| | HSK63A-ER40-150 | 1 | - | 4.88 | | 4.02 | 5.91 | | | |

HSK Coolant Tubes

- Fits HSK Form A Shanks
- Double Seal Design
Replacement O-Rings listed, CS= Cross Section



| Part Number | Description | Inner O-Ring | Outer O-Ring | Wrench |
|-------------|-----------------------|------------------|----------------------|---------------------------|
| TUBE-063A | HSK 63A Coolant Tube | 10mm ID x 2mm CS | 10.8mm ID x 2.4mm CS | WRENCH HSK63A COOLNT TUBE |
| TUBE-100A | HSK 100A Coolant Tube | 15mm ID x 3mm CS | 15mm ID x 3mm CS | WRENCH HSK100 COOLNT TUBE |

Collet Nuts

Pioneer replacement ER nuts exceed industry standard for fit, finish and balance.

ER nuts are in 4 styles, Mini, Hex, E Type & RD Type.

- **Hex Nuts** are standard for ER11, ER16 & ER20. Smaller diameter than E-Type with standard chuck threads. Hex nuts are machined with an eccentric for easy collet installation and removal.
- **E-Type** or castle type use the 4 prong wrench or spanner wrench, standard on ER25, ER32 & ER40. E-Type nuts are machined with an eccentric for easy collet installation and removal.
- **RD** are E Type but with reduced diameters, they are designed to use the E-type wrench, optional on ER16 and ER20. RD nuts are machined with an eccentric for easy collet installation and removal.
- **Mini nuts** are designed for reduced threaded Mini Chucks. Mini nuts use a special E type wrench. Mini's are not interchangeable with Hex or E-Type. Mini nuts are a compression type nut, must be pressed onto the collet for the nut to extract the collet from the chuck.

Note: Mini Nuts do not function well with some sealed and tap collets due to the limited space to tip the collet for removal. Some small ID, tap and sealed collets are difficult to compress causing issues in installation and removal.



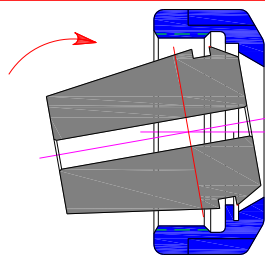
Mini Type

Hex Style

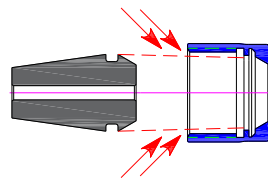


E Type

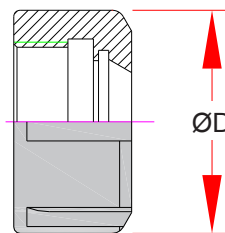
Collet Retainer Type



Hex, E-Type & RD Eccentric Design



Mini Compression Design



RD Nut Comparison



E Type

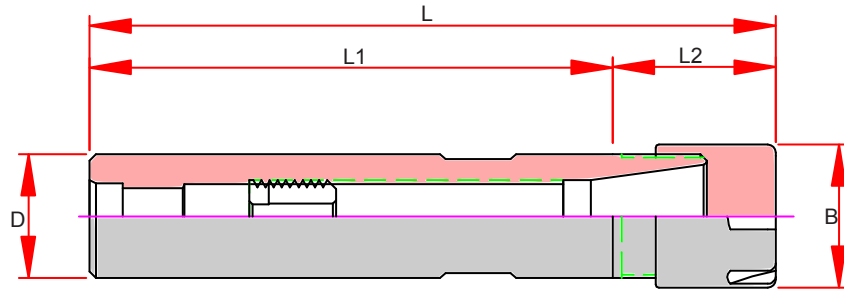
RD- E Type

| Nut Part Number | Description | Wrench Part Number | Collet Retainer | Ø D | Thread | Max. Torque |
|-----------------|--------------------|--------------------|-----------------|----------------|------------|-------------|
| ERN-08M | ER 8 Mini Nut | ERW-8M | Compression | 0.472 / 12mm | M10 x 0.75 | 6 ft/lbs |
| ERN-11H | ER 11 Nut -Hex | ERW-11H | Eccentric | 0.787 / 20mm | M14 x 0.75 | 18 ft/lbs |
| ERN-11M | ER 11 Mini Nut | ERW-11M | Compression | 0.630 / 16mm | M13 x 0.75 | 9 ft/lbs |
| ERN-16H | ER 16 Nut -Hex | ERW-16H | Eccentric | 1.102 / 28mm | M22 x 1.5 | 40 ft/lbs |
| ERN-16E | ER 16 Nut - E Type | ERW-16E | Eccentric | 1.260 / 32mm | M22 x 1.5 | 40 ft/lbs |
| ERN-16E-RD | ER 16 Nut - E Type | ERW-16E | Eccentric | 1.085 / 27.5mm | M22 x 1.5 | 40 ft/lbs |
| ERN-16M | ER 16 Mini Nut | ERW-16M | Compression | 0.866 / 22mm | M19 x 1.0 | 13 ft/lbs |
| ERN-20H | ER 20 Nut -Hex | ERW-20H | Eccentric | 1.338 / 34mm | M25 x 1.5 | 60 ft/lbs |
| ERN-20E | ER 20 Nut - E Type | ERW-20E | Eccentric | 1.380 / 35mm | M25 x 1.5 | 60 ft/lbs |
| ERN-20E-RD | ER 20 Nut - E Type | ERW-20E | Eccentric | 1.260 / 32mm | M25 x 1.5 | 60 ft/lbs |
| ERN-20M | ER 20 Mini Nut | ERW-20M | Compression | 1.102 / 28mm | M24 x 1.0 | 17 ft/lbs |
| ERN-25E | ER 25 Nut - E Type | ERW-25E | Eccentric | 1.654 / 42mm | M32 x 1.5 | 75 ft/lbs |
| ERN-32E | ER 32 Nut - E Type | ERW-32E | Eccentric | 1.969 / 50mm | M40 x 1.5 | 100 ft/lbs |
| ERN-40E | ER 40 Nut - E Type | ERW-40E | Eccentric | 2.480 / 63mm | M50 x 1.5 | 125 ft/lbs |

Mini-Nut ER Straight Shank

Features

- 3µm 0.0001" Runout Shank to Taper
- Coolant Thru Center
- Mini-Nut for Close Center Work

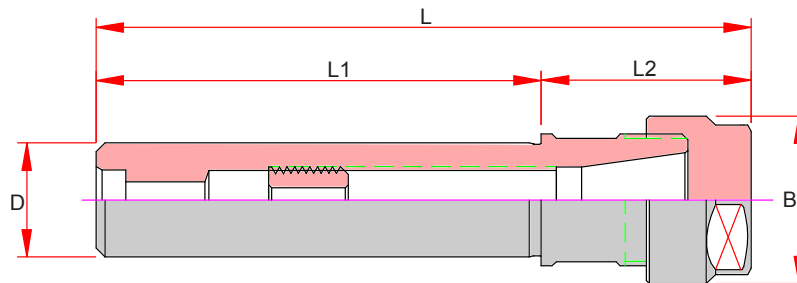


| Part Number | Collet Type | B | D | L | L1 | L2 | Preset Screw | Max Tool Dia. | Wrench | Nut Type | Coolant Thru | Optional 1/8 Hole |
|-----------------|-------------|------|-------|------|------|------|--------------|---------------|---------|----------|--------------|-------------------|
| S037-ER08M-0394 | ER8 | 0.47 | 0.375 | 4.88 | 3.94 | 0.94 | N/A | 0.19 | ERW-08M | Mini | N | -C |
| S050-ER11M-0552 | ER11 | 0.63 | 0.500 | 6.56 | 5.51 | 1.04 | N/A | 0.29 | ERW-11M | Mini | N | -C |
| S050-ER16M-0552 | ER16 | 0.87 | 0.500 | 6.97 | 5.51 | 1.46 | N/A | 0.26 | ERW-16M | Mini | N | -C |
| S062-ER11M-0552 | ER11 | 0.63 | 0.625 | 6.24 | 5.51 | 0.73 | N/A | 0.29 | ERW-11M | Mini | N | -C |
| S075-ER16M-0552 | ER16 | 0.87 | 0.750 | 6.50 | 5.51 | 0.98 | ASC-ER16 | 0.38 | ERW-16M | Mini | Y | - |
| S100-ER20M-0552 | ER20 | 1.10 | 1.000 | 6.61 | 5.51 | 1.10 | ASC-ER20 | 0.50 | ERW-20M | Mini | Y | - |

ER Straight Shank

Features

- 3µm 0.0001" Runout Shank to Taper
- Coolant Thru Center

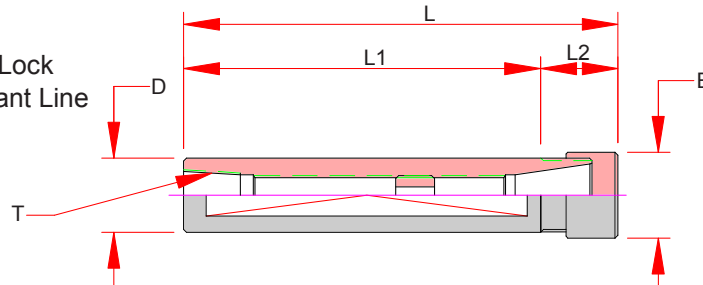


| Part Number | Collet Type | B | D | L | L1 | L2 | Preset Screw | Max Tool Dia. | Wrench | Nut Type | Coolant Thru | Optional 1/8 Hole |
|-----------------|-------------|------|-------|------|------|------|--------------|---------------|---------|----------|--------------|-------------------|
| S050-ER11H-0552 | ER11 | 0.75 | 0.500 | 6.87 | 5.51 | 0.85 | N/A | 0.28 | ERW-11H | Hex | N | -C |
| S062-ER11H-0552 | ER11 | 0.75 | 0.625 | 6.87 | 5.51 | 0.85 | N/A | 0.28 | ERW-11H | Hex | N | -C |
| S062-ER16H-0236 | ER16 | 1.10 | 0.625 | 3.74 | 2.36 | 1.38 | N/A | 0.28 | ERW-16H | Hex | N | -C |
| S075-ER16H-0197 | ER16 | 1.10 | 0.750 | 3.35 | 1.97 | 1.38 | ASC-ER16 | 0.38 | ERW-16H | Hex | Y | - |
| S075-ER16H-0394 | ER16 | 1.10 | 0.750 | 5.32 | 3.94 | 1.38 | ASC-ER16 | 0.38 | ERW-16H | Hex | Y | - |
| S075-ER16H-0552 | ER16 | 1.10 | 0.750 | 6.89 | 5.51 | 1.38 | ASC-ER16 | 0.38 | ERW-16H | Hex | Y | - |
| S075-ER20H-0250 | ER20 | 1.34 | 0.750 | 3.94 | 2.50 | 1.50 | ASC-ER16 | 0.38 | ERW-20H | Hex | Y | - |
| S100-ER20H-0552 | ER20 | 1.34 | 1.000 | 7.11 | 5.51 | 1.59 | ASC-ER20 | 0.50 | ERW-20H | Hex | Y | - |
| S100-ER25-0197 | ER25 | 1.65 | 1.000 | 3.98 | 1.97 | 2.01 | ASC-ER25 | 0.63 | ERW-25E | Spanner | Y | - |
| S100-ER32-0197 | ER32 | 1.97 | 1.000 | 4.00 | 1.97 | 2.03 | ASC-ER25 | 0.63 | ERW-32E | Spanner | Y | - |
| S125-ER32-0236 | ER32 | 1.97 | 1.250 | 4.39 | 2.36 | 2.03 | ASC-ER32 | 0.75 | ERW-32E | Spanner | Y | - |
| S125-ER32-0552 | ER32 | 1.97 | 1.250 | 7.54 | 5.51 | 2.03 | ASC-ER32 | 0.75 | ERW-32E | Spanner | Y | - |
| S100-ER40-0197 | ER40 | 2.48 | 1.000 | 4.53 | 1.97 | 2.56 | ASC-ER16 | 0.38 | ERW-40E | Spanner | Y | - |

Coolant Thru Straight Shank

Features

- 3µm 0.0001" Runout Shank to Taper
- Coolant Thru Center
- Seals up to 1,500 PSI
- Flat on the Shank for Positive Lock
- Includes Pipe Thread for Coolant Line

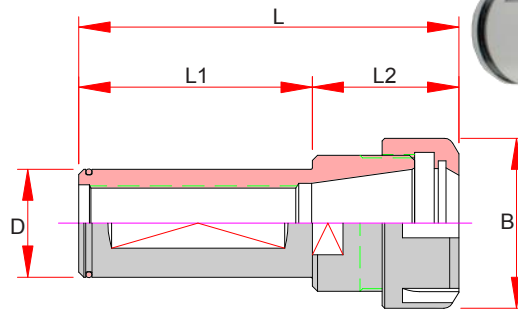


| Part Number | Collet Type | B | D | L | L1 | L2 | T- Thread | Set Screw | Max Tool Dia. | Wrench | Nut Type |
|------------------|-------------|------|--------|------|------|------|-----------|-----------|---------------|---------|------------|
| S075-ER16M-0342C | ER16 | 0.87 | 3/4" | 4.34 | 3.42 | 0.92 | | ASC-ER16 | 0.38 | ERW-16M | Mini |
| S100-ER20M-0331C | ER20 | 1.10 | 1" | 4.38 | 3.31 | 1.07 | 1/4" NPT | ASC-ER20 | 0.50 | ERW-20M | Mini |
| S125-ER32-0236C | ER32 | 1.97 | 1 1/4" | 4.52 | 2.36 | 2.16 | | ASC-ER32 | 0.75 | ERW-32E | E -Spanner |

CNC Lathe ER Straight Shank

Features

- 3µm 0.0001" Runout Shank to Taper
- Coolant Thru Center
- Seals up to 1,500 PSI
- Flat on the Shank for Positive Lock
- O-ring on the end of the shank for bore seal

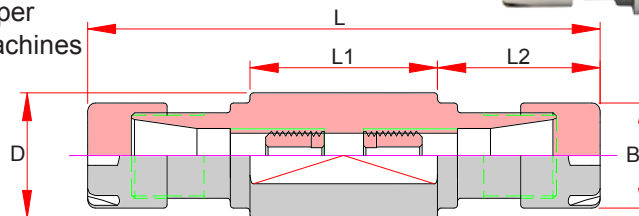


| Part Number | Collet Type | B | D | L | L1 | L2 | ID Thread | Wrench | Nut Type | O-Ring Shank Seal |
|------------------|-------------|------|--------|------|------|------|-----------|---------|------------|-------------------|
| S125-ER25-0236NC | ER25 | 1.65 | 1-1/4" | 3.82 | 2.36 | 1.46 | 11/16-16 | ERW-25E | E -Spanner | AS-024 |
| S125-ER32-0236NC | ER32 | 1.97 | 1-1/4" | 4.06 | 2.36 | 1.69 | 15/16-16 | ERW-32E | E -Spanner | AS-024 |
| S125-ER40-0236NC | ER40 | 2.48 | 1-1/4" | 4.72 | 2.36 | 2.36 | 15/16-16 | ERW-40E | E -Spanner | AS-024 |
| S150-ER32-0315NC | ER32 | 1.97 | 1-1/2" | 4.65 | 3.15 | 1.50 | 15/16-16 | ERW-32E | E -Spanner | AS-028 |
| S150-ER40-0295NC | ER40 | 2.48 | 1-1/2" | 5.31 | 2.95 | 2.36 | 1 1/8-16 | ERW-40E | E -Spanner | AS-028 |

Swiss Double Ended Collet Holder

Features

- 3µm 0.0001" Runout Shank to Taper
- Designed for CNC Swiss Style Machines



| Part Number | Collet Type | B | D | L | L1 | L2 | Wrench | Nut Type |
|-------------------|-------------|------|------|------|------|------|---------|----------|
| S075-ER11M-0173DE | ER11 | 0.63 | 3/4" | 2.68 | 1.73 | 0.47 | ERW-11M | Mini |
| S075-ER11M-0256DE | ER11 | 0.63 | 3/4" | 3.50 | 2.56 | 0.47 | ERW-11M | Mini |
| S075-ER11M-0303DE | ER11 | 0.63 | 3/4" | 3.98 | 3.03 | 0.47 | ERW-11M | Mini |
| S075-ER11M-0392DE | ER11 | 0.63 | 3/4" | 4.86 | 3.92 | 0.47 | ERW-11M | Mini |

ER Precision Inch Collets

Features

- Standard .0004" T.I.R.
- Ultra Precision .0002" T.I.R.
- Collapse Range: 1mm (.039)

Note:

For Ultra Precision place "P" at the end of the part number.

Example: ER32-0375P



ER11 Inch Collets

| Drill Shank | Tool Max | Tool Min | ER 11 |
|-------------|----------|----------|-----------|
| 1/16 | 0.0625 | 0.0425 | ER11-0062 |
| 3/32 | 0.0938 | 0.0544 | ER11-0093 |
| 1/8 | 0.1250 | 0.0856 | ER11-0125 |
| 5/32 | 0.1563 | 0.1169 | ER11-0156 |
| 3/16 | 0.1875 | 0.1481 | ER11-0187 |
| 7/32 | 0.2188 | 0.1794 | ER11-0218 |
| 1/4 | 0.2500 | 0.2106 | ER11-0250 |

ER16 Inch Collets

| Drill Shank | Tool Max | Tool Min | ER 16 |
|-------------|----------|----------|-----------|
| 1/16 | 0.0625 | 0.0231 | ER16-0062 |
| 3/32 | 0.0938 | 0.0544 | ER16-0093 |
| 1/8 | 0.1250 | 0.0856 | ER16-0125 |
| 5/32 | 0.1563 | 0.1169 | ER16-0156 |
| 3/16 | 0.1875 | 0.1481 | ER16-0187 |
| 7/32 | 0.2188 | 0.1794 | ER16-0218 |
| 1/4 | 0.2500 | 0.2106 | ER16-0250 |
| 9/32 | 0.2813 | 0.2419 | ER16-0281 |
| 5/16 | 0.3125 | 0.2731 | ER16-0312 |
| 11/32 | 0.3438 | 0.3044 | ER16-0344 |
| 3/8 | 0.3750 | 0.3356 | ER16-0375 |
| 13/32 | 0.4063 | 0.3669 | ER16-0406 |

ER20 Inch Collets

| Drill Shank | Tool Max | Tool Min | ER 20 |
|-------------|----------|----------|-----------|
| 3/32 | 0.0938 | 0.0544 | ER20-0093 |
| 1/8 | 0.1250 | 0.0856 | ER20-0125 |
| 5/32 | 0.1563 | 0.1169 | ER20-0156 |
| 3/16 | 0.1875 | 0.1481 | ER20-0187 |
| 7/32 | 0.2188 | 0.1794 | ER20-0218 |
| 1/4 | 0.2500 | 0.2106 | ER20-0250 |
| 9/32 | 0.2813 | 0.2419 | ER20-0281 |
| 5/16 | 0.3125 | 0.2731 | ER20-0312 |
| 11/32 | 0.3438 | 0.3044 | ER20-0344 |
| 3/8 | 0.3750 | 0.3356 | ER20-0375 |
| 13/32 | 0.4063 | 0.3669 | ER20-0406 |
| 7/16 | 0.4375 | 0.3981 | ER20-0438 |
| 15/32 | 0.4688 | 0.4294 | ER20-0469 |
| 1/2 | 0.5000 | 0.4606 | ER20-0500 |



Collet Sets

| Part Number | Collet Size | Pieces | Includes |
|-------------|-------------|--------|-------------------------------|
| ER11-ISET07 | ER11 | 7 | 1/16 - 1/4" by 1/32" |
| ER16-ISET10 | ER16 | 10 | 3/32 - 3/8" by 1/32" |
| ER20-ISET12 | ER20 | 12 | 5/32 - 1/2" by 1/32" |
| ER25-ISET15 | ER25 | 15 | 3/16 - 5/8" by 1/32" |
| ER32-ISET18 | ER32 | 18 | 7/32 - 3/4" by 1/32" |
| ER40-ISET13 | ER40 | 13 | 1/8 - 3/4 by 1/16" + 7/8 & 1" |
| ER40-ISET15 | ER40 | 15 | 1/8 - 1" by 1/16" |
| ER40-ISET29 | ER40 | 29 | 1/8 - 1" by 1/32" |

ER Precision Inch Collets

Features

- Standard .0004" T.I.R.
- Ultra Precision .0002" T.I.R.
- Collapse Range: 1mm (.039)

Note:

For Ultra Precision place "P" at the end of the part number.

Example: ER32-0375P



ER25 Inch Collets

| Drill Shank | Tool Max | Tool Min | ER 25 |
|-------------|----------|----------|-----------|
| 3/32 | 0.0938 | 0.0544 | ER25-0093 |
| 1/8 | 0.1250 | 0.0856 | ER25-0125 |
| 5/32 | 0.1563 | 0.1169 | ER25-0156 |
| 3/16 | 0.1875 | 0.1481 | ER25-0187 |
| 7/32 | 0.2188 | 0.1794 | ER25-0218 |
| 1/4 | 0.2500 | 0.2106 | ER25-0250 |
| 9/32 | 0.2813 | 0.2419 | ER25-0281 |
| 5/16 | 0.3125 | 0.2731 | ER25-0312 |
| 11/32 | 0.3438 | 0.3044 | ER25-0344 |
| 3/8 | 0.3750 | 0.3356 | ER25-0375 |
| 13/32 | 0.4063 | 0.3669 | ER25-0406 |
| 7/16 | 0.4375 | 0.3981 | ER25-0438 |
| 15/32 | 0.4688 | 0.4294 | ER25-0469 |
| 1/2 | 0.5000 | 0.4606 | ER25-0500 |
| 17/32 | 0.5313 | 0.4919 | ER25-0531 |
| 9/16 | 0.5625 | 0.5231 | ER25-0563 |
| 19/32 | 0.5938 | 0.5544 | ER25-0594 |
| 5/8 | 0.6250 | 0.5856 | ER25-0625 |

ER32 Inch Collets

| Drill Shank | Tool Max | Tool Min | ER 32 |
|-------------|----------|----------|-----------|
| 3/32 | 0.0938 | 0.0544 | ER32-0093 |
| 1/8 | 0.1250 | 0.0856 | ER32-0125 |
| 5/32 | 0.1563 | 0.1169 | ER32-0156 |
| 3/16 | 0.1875 | 0.1481 | ER32-0187 |
| 7/32 | 0.2188 | 0.1794 | ER32-0218 |
| 1/4 | 0.2500 | 0.2106 | ER32-0250 |
| 9/32 | 0.2813 | 0.2419 | ER32-0281 |
| 5/16 | 0.3125 | 0.2731 | ER32-0312 |
| 11/32 | 0.3438 | 0.3044 | ER32-0344 |
| 3/8 | 0.3750 | 0.3356 | ER32-0375 |
| 13/32 | 0.4063 | 0.3669 | ER32-0406 |
| 7/16 | 0.4375 | 0.3981 | ER32-0438 |
| 15/32 | 0.4688 | 0.4294 | ER32-0469 |
| 1/2 | 0.5000 | 0.4606 | ER32-0500 |
| 17/32 | 0.5313 | 0.4919 | ER32-0531 |
| 9/16 | 0.5625 | 0.5231 | ER32-0563 |
| 19/32 | 0.5938 | 0.5544 | ER32-0594 |
| 5/8 | 0.6250 | 0.5856 | ER32-0625 |
| 21/32 | 0.6563 | 0.6169 | ER32-0656 |
| 11/16 | 0.6875 | 0.6481 | ER32-0688 |
| 23/32 | 0.7188 | 0.6794 | ER32-0719 |
| 3/4 | 0.7500 | 0.7106 | ER32-0750 |

ER40 Inch Collets

| Drill Shank | Tool Max | Tool Min | ER 40 |
|-------------|----------|----------|-----------|
| 1/8 | 0.1250 | 0.0856 | ER40-0125 |
| 5/32 | 0.1563 | 0.1169 | ER40-0156 |
| 3/16 | 0.1875 | 0.1481 | ER40-0187 |
| 7/32 | 0.2188 | 0.1794 | ER40-0218 |
| 1/4 | 0.2500 | 0.2106 | ER40-0250 |
| 9/32 | 0.2813 | 0.2419 | ER40-0281 |
| 5/16 | 0.3125 | 0.2731 | ER40-0312 |
| 11/32 | 0.3438 | 0.3044 | ER40-0344 |
| 3/8 | 0.3750 | 0.3356 | ER40-0375 |
| 13/32 | 0.4063 | 0.3669 | ER40-0406 |
| 7/16 | 0.4375 | 0.3981 | ER40-0438 |
| 15/32 | 0.4688 | 0.4294 | ER40-0469 |
| 1/2 | 0.5000 | 0.4606 | ER40-0500 |
| 17/32 | 0.5313 | 0.4919 | ER40-0531 |
| 9/16 | 0.5625 | 0.5231 | ER40-0563 |
| 19/32 | 0.5938 | 0.5544 | ER40-0594 |
| 5/8 | 0.6250 | 0.5856 | ER40-0625 |
| 21/32 | 0.6563 | 0.6169 | ER40-0656 |
| 11/16 | 0.6875 | 0.6481 | ER40-0688 |
| 23/32 | 0.7188 | 0.6794 | ER40-0719 |
| 3/4 | 0.7500 | 0.7106 | ER40-0750 |
| 25/32 | 0.7813 | 0.7419 | ER40-0781 |
| 13/16 | 0.8125 | 0.7731 | ER40-0813 |
| 27/32 | 0.8438 | 0.8044 | ER40-0844 |
| 7/8 | 0.8750 | 0.8356 | ER40-0875 |
| 29/32 | 0.9063 | 0.8669 | ER40-0906 |
| 15/16 | 0.9375 | 0.8981 | ER40-0938 |
| 31/32 | 0.9688 | 0.9294 | ER40-0969 |
| 1 | 1.0000 | 0.9606 | ER40-1000 |

ER Precision Metric Collets

Features

- Standard .0004" T.I.R.
- Ultra Precision .0002" T.I.R.
- Collapse Range: .039

Note:

For Ultra Precision place "P" at the end of the part number.

Example: ER32-M100P



ER8 Metric Collets

| Tool Max | Tool Min | Tool Max" | Tool Min" | ER 8 |
|----------|----------|-----------|-----------|-----------|
| 1.0 | 0.5 | 0.0394 | 0.0197 | ER08-M010 |
| 1.5 | 1.0 | 0.0591 | 0.0394 | ER08-M015 |
| 2.0 | 1.5 | 0.0787 | 0.0591 | ER08-M020 |
| 2.5 | 2.0 | 0.0984 | 0.0787 | ER08-M025 |
| 3.0 | 2.5 | 0.1181 | 0.0984 | ER08-M030 |
| 3.5 | 3.0 | 0.1378 | 0.1181 | ER08-M035 |
| 4.0 | 3.5 | 0.1575 | 0.1378 | ER08-M040 |
| 4.5 | 4.0 | 0.1772 | 0.1575 | ER08-M045 |
| 5.0 | 4.5 | 0.1969 | 0.1772 | ER08-M050 |

ER11 Metric Collets

| Tool Max | Tool Min | Tool Max" | Tool Min" | ER 11 |
|----------|----------|-----------|-----------|-----------|
| 1.0 | 0.5 | 0.0394 | 0.0197 | ER11-M010 |
| 1.5 | 1.0 | 0.0591 | 0.0394 | ER11-M015 |
| 2.0 | 1.5 | 0.0787 | 0.0591 | ER11-M020 |
| 2.5 | 2.0 | 0.0984 | 0.0787 | ER11-M025 |
| 3.0 | 2.5 | 0.1181 | 0.0984 | ER11-M030 |
| 3.5 | 3.0 | 0.1378 | 0.1181 | ER11-M035 |
| 4.0 | 3.5 | 0.1575 | 0.1378 | ER11-M040 |
| 4.5 | 4.0 | 0.1772 | 0.1575 | ER11-M045 |
| 5.0 | 4.5 | 0.1969 | 0.1772 | ER11-M050 |
| 5.5 | 5.0 | 0.2165 | 0.1969 | ER11-M055 |
| 6.0 | 5.5 | 0.2362 | 0.2165 | ER11-M060 |
| 6.5 | 6.0 | 0.2559 | 0.2362 | ER11-M065 |
| 7.0 | 6.5 | 0.2756 | 0.2559 | ER11-M070 |

ER16 Metric Collets

| Tool Max | Tool Min | Tool Max" | Tool Min" | ER 16 |
|----------|----------|-----------|-----------|-----------|
| 1.0 | 0.5 | 0.0394 | 0.0197 | ER16-M010 |
| 1.5 | 1.0 | 0.0591 | 0.0394 | ER16-M015 |
| 2.0 | 1.0 | 0.0787 | 0.0394 | ER16-M020 |
| 2.5 | 2.0 | 0.0984 | 0.0787 | ER16-M025 |
| 3.0 | 2.0 | 0.1181 | 0.0787 | ER16-M030 |
| 3.5 | 3.0 | 0.1378 | 0.1181 | ER16-M035 |
| 4.0 | 3.0 | 0.1575 | 0.1181 | ER16-M040 |
| 5.0 | 4.0 | 0.1969 | 0.1575 | ER16-M050 |
| 6.0 | 5.0 | 0.2362 | 0.1969 | ER16-M060 |
| 7.0 | 6.0 | 0.2756 | 0.2362 | ER16-M070 |
| 8.0 | 7.0 | 0.3150 | 0.2756 | ER16-M080 |
| 9.0 | 8.0 | 0.3543 | 0.3150 | ER16-M090 |
| 10.0 | 9.0 | 0.3937 | 0.3543 | ER16-M100 |



Collet Sets

| Part Number | Collet Size | Pieces | Includes |
|-------------|-------------|--------|-------------------|
| ER08-MSET | ER8 | 9 | 1 - 5mm by 0.5mm |
| ER11-MSET | ER11 | 13 | 1 - 7mm by 0.5mm |
| ER16-MSET | ER16 | 10 | 1 - 10mm by 1.0mm |
| ER20-MSET | ER20 | 12 | 2 - 13mm by 1.0mm |
| ER25-MSET | ER25 | 15 | 2 - 16mm by 1.0mm |
| ER32-MSET | ER32 | 18 | 3 - 20mm by 1.0mm |
| ER40-MSET | ER40 | 23 | 4 - 26mm by 1.0mm |

ER Precision Metric Collets

Features

- Standard .0004" T.I.R.
- Ultra Precision .0002" T.I.R.
- Collapse Range: .039

Note:

For Ultra Precision place "P" at the end of the part number. Example: ER32-M100P



ER20 Metric Collets

| Tool Max | Tool Min | Tool Max" | Tool Min" | ER 20 |
|----------|----------|-----------|-----------|-----------|
| 1.0 | 0.5 | 0.0394 | 0.0197 | ER20-M010 |
| 1.5 | 1.0 | 0.0591 | 0.0394 | ER20-M015 |
| 2.0 | 1.0 | 0.0787 | 0.0394 | ER20-M020 |
| 2.5 | 1.5 | 0.0984 | 0.0591 | ER20-M025 |
| 3.0 | 2.0 | 0.1181 | 0.0787 | ER20-M030 |
| 3.5 | 2.5 | 0.1378 | 0.0984 | ER20-M035 |
| 4.0 | 3.0 | 0.1575 | 0.1181 | ER20-M040 |
| 5.0 | 4.0 | 0.1969 | 0.1575 | ER20-M050 |
| 6.0 | 5.0 | 0.2362 | 0.1969 | ER20-M060 |
| 7.0 | 6.0 | 0.2756 | 0.2362 | ER20-M070 |
| 8.0 | 7.0 | 0.3150 | 0.2756 | ER20-M080 |
| 9.0 | 8.0 | 0.3543 | 0.3150 | ER20-M090 |
| 10.0 | 9.0 | 0.3937 | 0.3543 | ER20-M100 |
| 11.0 | 10.0 | 0.4331 | 0.3937 | ER20-M110 |
| 12.0 | 11.0 | 0.4724 | 0.4331 | ER20-M120 |
| 13.0 | 12.0 | 0.5118 | 0.4724 | ER20-M130 |

ER25 Metric Collets

| Tool Max | Tool Min | Tool Max" | Tool Min" | ER 25 |
|----------|----------|-----------|-----------|-----------|
| 1.5 | 0.5 | 0.0591 | 0.0197 | ER25-M015 |
| 2.0 | 1.0 | 0.0787 | 0.0394 | ER25-M020 |
| 2.5 | 1.5 | 0.0984 | 0.0591 | ER25-M025 |
| 3.0 | 2.0 | 0.1181 | 0.0787 | ER25-M030 |
| 3.5 | 2.5 | 0.1378 | 0.0984 | ER25-M035 |
| 4.0 | 3.0 | 0.1575 | 0.1181 | ER25-M040 |
| 5.0 | 4.0 | 0.1969 | 0.1575 | ER25-M050 |
| 6.0 | 5.0 | 0.2362 | 0.1969 | ER25-M060 |
| 7.0 | 6.0 | 0.2756 | 0.2362 | ER25-M070 |
| 8.0 | 7.0 | 0.3150 | 0.2756 | ER25-M080 |
| 9.0 | 8.0 | 0.3543 | 0.3150 | ER25-M090 |
| 10.0 | 9.0 | 0.3937 | 0.3543 | ER25-M100 |
| 11.0 | 10.0 | 0.4331 | 0.3937 | ER25-M110 |
| 12.0 | 11.0 | 0.4724 | 0.4331 | ER25-M120 |
| 13.0 | 12.0 | 0.5118 | 0.4724 | ER25-M130 |
| 14.0 | 13.0 | 0.5512 | 0.5118 | ER25-M140 |
| 15.0 | 14.0 | 0.5906 | 0.5512 | ER25-M150 |
| 16.0 | 15.0 | 0.6299 | 0.5906 | ER25-M160 |

ER32 Metric Collets

| Tool Max | Tool Min | Tool Max" | Tool Min" | ER 32 |
|----------|----------|-----------|-----------|-----------|
| 2.0 | 1.5 | 0.0787 | 0.0591 | ER32-M020 |
| 2.5 | 2.0 | 0.0984 | 0.0787 | ER32-M025 |
| 3.0 | 2.0 | 0.1181 | 0.0787 | ER32-M030 |
| 3.5 | 3.0 | 0.1378 | 0.1181 | ER32-M035 |
| 4.0 | 3.0 | 0.1575 | 0.1181 | ER32-M040 |
| 5.0 | 4.0 | 0.1969 | 0.1575 | ER32-M050 |
| 6.0 | 5.0 | 0.2362 | 0.1969 | ER32-M060 |
| 7.0 | 6.0 | 0.2756 | 0.2362 | ER32-M070 |
| 8.0 | 7.0 | 0.3150 | 0.2756 | ER32-M080 |
| 9.0 | 8.0 | 0.3543 | 0.3150 | ER32-M090 |
| 10.0 | 9.0 | 0.3937 | 0.3543 | ER32-M100 |
| 11.0 | 10.0 | 0.4331 | 0.3937 | ER32-M110 |
| 12.0 | 11.0 | 0.4724 | 0.4331 | ER32-M120 |
| 13.0 | 12.0 | 0.5118 | 0.4724 | ER32-M130 |
| 14.0 | 13.0 | 0.5512 | 0.5118 | ER32-M140 |
| 15.0 | 14.0 | 0.5906 | 0.5512 | ER32-M150 |
| 16.0 | 15.0 | 0.6299 | 0.5906 | ER32-M160 |
| 17.0 | 16.0 | 0.6693 | 0.6299 | ER32-M170 |
| 18.0 | 17.0 | 0.7087 | 0.6693 | ER32-M180 |
| 19.0 | 18.0 | 0.7480 | 0.7087 | ER32-M190 |
| 20.0 | 19.0 | 0.7874 | 0.7480 | ER32-M200 |

ER40 Metric Collets

| Tool Max | Tool Min | Tool Max" | Tool Min" | ER 40 |
|----------|----------|-----------|-----------|-----------|
| 3.0 | 2.5 | 0.1181 | 0.0984 | ER40-M030 |
| 3.5 | 3.0 | 0.1378 | 0.1181 | ER40-M035 |
| 4.0 | 3.0 | 0.1575 | 0.1181 | ER40-M040 |
| 5.0 | 4.0 | 0.1969 | 0.1575 | ER40-M050 |
| 6.0 | 5.0 | 0.2362 | 0.1969 | ER40-M060 |
| 7.0 | 6.0 | 0.2756 | 0.2362 | ER40-M070 |
| 8.0 | 7.0 | 0.3150 | 0.2756 | ER40-M080 |
| 9.0 | 8.0 | 0.3543 | 0.3150 | ER40-M090 |
| 10.0 | 9.0 | 0.3937 | 0.3543 | ER40-M100 |
| 11.0 | 10.0 | 0.4331 | 0.3937 | ER40-M110 |
| 12.0 | 11.0 | 0.4724 | 0.4331 | ER40-M120 |
| 13.0 | 12.0 | 0.5118 | 0.4724 | ER40-M130 |
| 14.0 | 13.0 | 0.5512 | 0.5118 | ER40-M140 |
| 15.0 | 14.0 | 0.5906 | 0.5512 | ER40-M150 |
| 16.0 | 15.0 | 0.6299 | 0.5906 | ER40-M160 |
| 17.0 | 16.0 | 0.6693 | 0.6299 | ER40-M170 |
| 18.0 | 17.0 | 0.7087 | 0.6693 | ER40-M180 |
| 19.0 | 18.0 | 0.7480 | 0.7087 | ER40-M190 |
| 20.0 | 19.0 | 0.7874 | 0.7480 | ER40-M200 |
| 21.0 | 20.0 | 0.8268 | 0.7874 | ER40-M210 |
| 22.0 | 21.0 | 0.8661 | 0.8268 | ER40-M220 |
| 23.0 | 22.0 | 0.9055 | 0.8661 | ER40-M230 |
| 24.0 | 23.0 | 0.9449 | 0.9055 | ER40-M240 |
| 25.0 | 24.0 | 0.9843 | 0.9449 | ER40-M250 |
| 26.0 | 25.0 | 1.0236 | 0.9843 | ER40-M260 |

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SSER Coolant Collets - Inch

Features

- High Pressure Coolant - 1,500 PSI
- Standard .0004" T.I.R.
- On Size Collets - Will Not Collapse
- Designed for h6 Tool Shanks



| Cutter Shank | Inch | Metric | SSER 16 | SSER 20 | SSER 25 | SSER 32 | SSER 40 |
|--------------|--------|--------|-------------|-------------|-------------|-------------|-------------|
| 3/32 | 0.0938 | 2.383 | SSER16-0093 | | | | |
| 1/8 | 0.1250 | 3.175 | SSER16-0125 | | | | |
| 5/32 | 0.1563 | 3.969 | SSER16-0156 | SSER20-0156 | SSER25-0156 | SSER32-0156 | SSER40-0156 |
| 3/16 | 0.1880 | 4.775 | SSER16-0187 | SSER20-0187 | SSER25-0187 | SSER32-0187 | SSER40-0187 |
| 7/32 | 0.2188 | 5.558 | SSER16-0218 | SSER20-0218 | SSER25-0218 | SSER32-0219 | SSER40-0218 |
| 1/4 | 0.2500 | 6.350 | SSER16-0250 | SSER20-0250 | SSER25-0250 | SSER32-0250 | SSER40-0250 |
| 9/32 | 0.2813 | 7.145 | SSER16-0281 | SSER20-0281 | SSER25-0281 | SSER32-0281 | SSER40-0281 |
| 5/16 | 0.3125 | 7.938 | SSER16-0312 | SSER20-0312 | SSER25-0312 | SSER32-0312 | SSER40-0312 |
| 11/32 | 0.3437 | 8.730 | SSER16-0344 | SSER20-0344 | SSER25-0344 | SSER32-0344 | SSER40-0344 |
| 3/8 | 0.3750 | 9.525 | SSER16-0375 | SSER20-0375 | SSER25-0375 | SSER32-0375 | SSER40-0375 |
| 13/32 | 0.4063 | 10.320 | SSER16-0406 | SSER20-0406 | SSER25-0406 | SSER32-0406 | SSER40-0406 |
| 7/16 | 0.4375 | 11.113 | | SSER20-0438 | SSER25-0438 | SSER32-0438 | SSER40-0438 |
| 15/32 | 0.4688 | 11.908 | | SSER20-0469 | SSER25-0469 | SSER32-0469 | SSER40-0469 |
| 1/2 | 0.5000 | 12.700 | | SSER20-0500 | SSER25-0500 | SSER32-0500 | SSER40-0500 |
| 17/32 | 0.5313 | 13.495 | | | SSER25-0531 | SSER32-0531 | SSER40-0531 |
| 9/16 | 0.5625 | 14.288 | | | SSER25-0563 | SSER32-0563 | SSER40-0563 |
| 19/32 | 0.5938 | 15.083 | | | SSER25-0594 | SSER32-0594 | SSER40-0594 |
| 5/8 | 0.6250 | 15.875 | | | SSER25-0625 | SSER32-0625 | SSER40-0625 |
| 21/32 | 0.6563 | 16.670 | | | | SSER32-0656 | SSER40-0656 |
| 11/16 | 0.6875 | 17.463 | | | | SSER32-0688 | SSER40-0688 |
| 23/32 | 0.7188 | 18.258 | | | | SSER32-0719 | SSER40-0719 |
| 3/4 | 0.7500 | 19.050 | | | | SSER32-0750 | SSER40-0750 |
| 25/32 | 0.7813 | 19.845 | | | | | SSER40-0781 |
| 13/16 | 0.8125 | 20.638 | | | | | SSER40-0812 |
| 27/32 | 0.8438 | 21.433 | | | | | SSER40-0844 |
| 7/8 | 0.8750 | 22.225 | | | | | SSER40-0875 |
| 29/32 | 0.9063 | 23.020 | | | | | SSER40-0906 |
| 15/16 | 0.9375 | 23.813 | | | | | SSER40-0937 |
| 31/32 | 0.9688 | 24.608 | | | | | SSER40-0969 |
| 1 | 1.0000 | 25.400 | | | | | SSER40-1000 |

SSER Coolant Collets - Metric

Features

- High Pressure Coolant - 1,500 PSI
- Standard .0004" T.I.R.
- On Size Collets - Will Not Collapse
- Designed for h6 Tool Shanks



| Cutter Shank | Tool Size Inch | SSER 16 | SSER 20 | SSER 25 | SSER 32 | SSER 40 |
|--------------|----------------|-------------|-------------|-------------|-------------|-------------|
| 4.0 | 0.1575 | SSER16-M040 | SSER20-M040 | SSER25-M040 | SSER32-M040 | |
| 5.0 | 0.1969 | SSER16-M050 | SSER20-M050 | SSER25-M050 | SSER32-M050 | |
| 6.0 | 0.2362 | SSER16-M060 | SSER20-M060 | SSER25-M060 | SSER32-M060 | SSER40-M060 |
| 7.0 | 0.2756 | SSER16-M070 | SSER20-M070 | SSER25-M070 | SSER32-M070 | SSER40-M070 |
| 8.0 | 0.3150 | SSER16-M080 | SSER20-M080 | SSER25-M080 | SSER32-M080 | SSER40-M080 |
| 9.0 | 0.3543 | SSER16-M090 | SSER20-M090 | SSER25-M090 | SSER32-M090 | SSER40-M090 |
| 10.0 | 0.3937 | SSER16-M100 | SSER20-M100 | SSER25-M100 | SSER32-M100 | SSER40-M100 |
| 11.0 | 0.4331 | | SSER20-M110 | SSER25-M110 | SSER32-M110 | SSER40-M110 |
| 12.0 | 0.4724 | | SSER20-M120 | SSER25-M120 | SSER32-M120 | SSER40-M120 |
| 13.0 | 0.5118 | | SSER20-M130 | SSER25-M130 | SSER32-M130 | SSER40-M130 |
| 14.0 | 0.5512 | | | SSER25-M140 | SSER32-M140 | SSER40-M140 |
| 15.0 | 0.5906 | | | SSER25-M150 | SSER32-M150 | SSER40-M150 |
| 16.0 | 0.6299 | | | SSER25-M160 | SSER32-M160 | SSER40-M160 |
| 17.0 | 0.6693 | | | | SSER32-M170 | SSER40-M170 |
| 18.0 | 0.7087 | | | | SSER32-M180 | SSER40-M180 |
| 19.0 | 0.7480 | | | | SSER32-M190 | SSER40-M190 |
| 20.0 | 0.7874 | | | | SSER32-M200 | SSER40-M200 |
| 21.0 | 0.8268 | | | | | SSER40-M210 |
| 22.0 | 0.8661 | | | | | SSER40-M220 |
| 23.0 | 0.9055 | | | | | SSER40-M230 |
| 24.0 | 0.9449 | | | | | SSER40-M240 |
| 25.0 | 0.9843 | | | | | SSER40-M250 |
| 26.0 | 1.0236 | | | | | SSER40-M260 |

Jet-Blast SSER Coolant ER Collets

Features:

- High Pressure Coolant - 1,500 PSI
- Standard .0004" T.I.R.
- Designed for h6 Tool Shanks
- Add -C to any SSER collet part number

Flood coolant thru standard collet slots create a loss in pressure and flow control, allowing coolant to fly everywhere. The **Jet-Blast** option for SSER forces the coolant into the **Jet-Blast Ports** maintaining pressure and directing the coolant down the flutes of the cutting tool.



ER Rigid Tap Collets - ANSI

Features

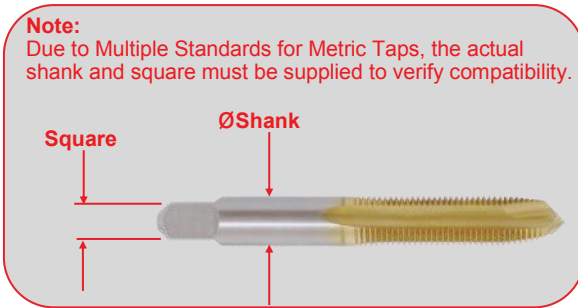
Special design locks tap flats into the collet slots preventing the tap from spinning inside the collet.

- ANSI Shank and Square Standard



Note:

Due to Multiple Standards for Metric Taps, the actual shank and square must be supplied to verify compatibility.



| ØShank | Metric | Square | Metric | Tap Size | TER16 | TER20 | TER25 | TER32 | TER40 |
|--------|--------|--------|--------|----------|-----------|-----------|-----------|-----------|-----------|
| 0.141 | 3.58 | 0.110 | 2.79 | #6 | TER16-141 | TER20-141 | TER25-141 | TER32-141 | TER40-141 |
| 0.168 | 4.27 | 0.131 | 3.33 | #8 | TER16-168 | TER20-168 | TER25-168 | TER32-168 | TER40-168 |
| 0.194 | 4.93 | 0.152 | 3.86 | #10 | TER16-194 | TER20-194 | TER25-194 | TER32-194 | TER40-194 |
| 0.220 | 5.59 | 0.165 | 4.19 | #12 | TER16-220 | TER20-220 | TER25-220 | TER32-220 | TER40-220 |
| 0.255 | 6.48 | 0.191 | 4.85 | 1/4" | TER16-255 | TER20-255 | TER25-255 | TER32-255 | TER40-255 |
| 0.318 | 8.08 | 0.238 | 6.05 | 5/16" | | TER20-318 | TER25-318 | TER32-318 | TER40-318 |
| 0.323 | 8.20 | 0.242 | 6.15 | 7/16" | | TER20-323 | TER25-323 | TER32-323 | TER40-323 |
| 0.367 | 9.32 | 0.275 | 6.99 | 1/2" | | TER20-367 | TER25-367 | TER32-367 | TER40-367 |
| 0.381 | 9.68 | 0.286 | 7.26 | 3/8" | | TER20-381 | TER25-381 | TER32-381 | TER40-381 |
| 0.429 | 10.90 | 0.322 | 8.18 | 9/16" | | | TER25-429 | TER32-429 | TER40-429 |
| 0.437 | 11.10 | 0.328 | 8.33 | 1/8" NPT | | | TER25-437 | TER32-437 | TER40-437 |
| 0.480 | 12.19 | 0.360 | 9.14 | 5/8" | | | TER25-480 | TER32-480 | TER40-480 |
| 0.542 | 13.77 | 0.406 | 10.31 | 11/16" | | | | TER32-542 | TER40-542 |
| 0.562 | 14.27 | 0.421 | 10.69 | 1/4" NPT | | | | TER32-562 | TER40-562 |
| 0.590 | 14.99 | 0.442 | 11.23 | 3/4" | | | | TER32-590 | TER40-590 |
| 0.652 | 16.56 | 0.489 | 12.42 | 13/16" | | | | TER32-652 | TER40-652 |
| 0.687 | 17.45 | 0.515 | 13.08 | 1/2" NPT | | | | | TER40-687 |
| 0.697 | 17.70 | 0.523 | 13.28 | 7/8" | | | | | TER40-697 |
| 0.700 | 17.78 | 0.531 | 13.49 | 3/8" NPT | | | | | TER40-700 |
| 0.760 | 19.30 | 0.570 | 14.48 | 15/16" | | | | | TER40-760 |
| 0.800 | 20.32 | 0.600 | 15.24 | 1" | | | | | TER40-800 |

ER Rigid Tap Collets - DIN

Features

Special design locks tap flats into the collet slots preventing the tap from spinning inside the collet.

- DIN Shank and Square Standard



| ØShank | Inch | Square | Inch | TER16 | TER20 | TER25 | TER32 | TER40 |
|--------|-------|--------|-------|------------|------------|------------|------------|------------|
| 3.5 | 0.138 | 2.7 | 0.106 | TER16D-035 | | TER25D-035 | | |
| 4.0 | 0.157 | 3.0 | 0.118 | TER16D-040 | TER20D-040 | TER25D-040 | | |
| 4.5 | 0.177 | 3.4 | 0.134 | TER16D-045 | TER20D-045 | TER25D-045 | TER32D-045 | |
| 5.5 | 0.217 | 4.3 | 0.169 | TER16D-055 | TER20D-055 | TER25D-055 | TER32D-055 | |
| 6.0 | 0.236 | 4.9 | 0.193 | TER16D-060 | TER20D-060 | TER25D-060 | TER32D-060 | TER40D-060 |
| 7.0 | 0.276 | 5.5 | 0.217 | TER16D-070 | TER20D-070 | TER25D-070 | TER32D-070 | TER40D-070 |
| 8.0 | 0.315 | 6.2 | 0.244 | TER16D-080 | TER20D-080 | TER25D-080 | TER32D-080 | TER40D-080 |
| 9.0 | 0.354 | 7.0 | 0.276 | TER16D-090 | TER20D-090 | TER25D-090 | TER32D-090 | TER40D-090 |
| 10.0 | 0.394 | 8.0 | 0.315 | TER16D-100 | TER20D-100 | TER25D-100 | TER32D-100 | TER40D-100 |
| 11.0 | 0.433 | 9.0 | 0.354 | | | TER25D-110 | TER32D-110 | TER40D-110 |
| 12.0 | 0.472 | 9.0 | 0.354 | | | TER25D-120 | TER32D-120 | TER40D-120 |
| 14.0 | 0.551 | 11.0 | 0.433 | | | TER25D-140 | TER32D-140 | TER40D-140 |
| 16.0 | 0.630 | 12.0 | 0.472 | | | TER25D-160 | TER32D-160 | TER40D-160 |
| 18.0 | 0.709 | 14.5 | 0.571 | | | | TER32D-180 | TER40D-180 |
| 20.0 | 0.787 | 16.0 | 0.630 | | | | TER32D-200 | TER40D-200 |
| 22.0 | 0.866 | 18.0 | 0.709 | | | | | TER40D-220 |

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ER Coolant Cap Collet Nuts

Features

- For coolant pressures up to 1,500 PSI.
- Fits standard ER collet chucks.
- Jet-Blast Caps Available Upon Request
- Uses SX Coolant Caps below and on the following page.
- Designed for use with standard ER collets



| Nut Part Number | Description | Nut Diameter | Coolant Cap | Wrench Part Number | Thread | Max. Torque |
|-----------------|--------------------|--------------|-------------|--------------------|------------|----------------|
| ERN11-CC | ER 11 Nut - Hex | 0.787 / 20mm | SXC06 | ERW-11H | M14 x 0.75 | 18 ft/lbs Max |
| ERN16-CC | ER 16 Nut - Hex | 1.102 / 28mm | SXC10 | ERW-16H | M22 x 1.50 | 40 ft/lbs Max |
| ERN20-CC | ER 20 Nut - Hex | 1.338 / 34mm | SXC16 | ERW-20H | M25 x 1.50 | 60 ft/lbs Max |
| ERN25-CC | ER 25 Nut - E Type | 1.654 / 42mm | SXC16 | ERW-25 | M32 x 1.50 | 75 ft/lbs Max |
| ERN32-CC | ER 32 Nut - E Type | 1.969 / 50mm | SXC25 | ERW-32 | M40 x 1.50 | 100 ft/lbs Max |
| ERN40-CC | ER 40 Nut - E Type | 2.480 / 63mm | SXC25 | ERW-40 | M50 x 1.50 | 125 ft/lbs Max |

ER Coolant Caps - Inch

Features

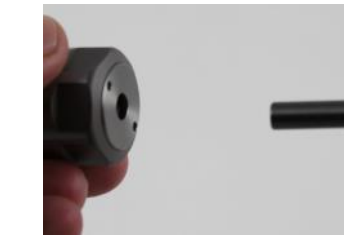
- O-ring seal for pressures up to 1500 PSI
- Prevents chips, dust, & swarf from entering the holder
- Seal range +0 / -.50mm (+0 / -.020")
- Requires Coolant Cap Nut (See Above)
- Jet Slot for Non-Coolant Cutting Tools Available
 - Order by adding a "J" to the end of the Cap part number



| Inch Shank | ER11 | ER 16 | ER 20 | ER 25 | ER 32 | ER 40 | |
|------------|--------|------------|------------|------------|------------|------------|------------|
| 1/8 | 0.1250 | SXC06-0125 | SXC10-0125 | SXC16-0125 | SXC16-0125 | SXC25-0125 | SXC25-0125 |
| 3/16 | 0.1875 | SXC06-0187 | SXC10-0187 | SXC16-0187 | SXC16-0187 | SXC25-0187 | SXC25-0187 |
| 1/4 | 0.2500 | SXC06-0250 | SXC10-0250 | SXC16-0250 | SXC16-0250 | SXC25-0250 | SXC25-0250 |
| 5/16 | 0.3125 | | SXC10-0312 | SXC16-0312 | SXC16-0312 | SXC25-0312 | SXC25-0312 |
| 3/8 | 0.3750 | | SXC10-0375 | SXC16-0375 | SXC16-0375 | SXC25-0375 | SXC25-0375 |
| 7/16 | 0.4375 | | | SXC16-0437 | SXC16-0437 | SXC25-0437 | SXC25-0437 |
| 1/2 | 0.5000 | | | SXC16-0500 | SXC16-0500 | SXC25-0500 | SXC25-0500 |
| 9/16 | 0.5625 | | | | SXC16-0562 | SXC25-0562 | SXC25-0562 |
| 5/8 | 0.6250 | | | | SXC16-0625 | SXC25-0625 | SXC25-0625 |
| 3/4 | 0.7500 | | | | | SXC25-0750 | SXC25-0750 |
| 7/8 | 0.8750 | | | | | | SXC25-0875 |
| 1" | 1.0000 | | | | | | SXC25-M254 |



Thread Coolant Cap into ER nut, snug with wrench after the collet has been assembled.



Insert cutting tool with the seal engaged on the round part of the shank

ER Coolant Caps - Metric

Features

- O-ring seal for pressures up to 1500 PSI
- Prevents chips, dust & swarf from entering the holder
- Seal range +0 / -.50mm (+0 / -.020")
- Requires Coolant Cap Nut (See Previous Page)
- Jet Slot for Non-Coolant Cutting Tools Available
 - Order by adding a "J" to the end of the Cap part number
- Blanks available for custom applications



| Range | Inch Shank | ER11 | ER 16 | ER 20 | ER 25 | ER 32 | ER 40 |
|---------------|------------|------------|------------|------------|------------|------------|------------|
| 1.0 - 0.7mm | 1/32 | SXC06-M010 | SXC10-M010 | | | | |
| 1.5 - 1.2mm | 3/64 | SXC06-M015 | SXC10-M015 | | | | |
| 2.0 - 1.5mm | 1/16 | SXC06-M020 | SXC10-M020 | | | | |
| 2.5 - 2.0mm | 3/32 | SXC06-M025 | SXC10-M025 | | | | |
| 3.0 - 2.5mm | 7/64 | SXC06-M030 | SXC10-M030 | SXC16-M030 | SXC16-M030 | SXC25-M030 | SXC25-M030 |
| 3.5 - 3.0mm | 1/8" | SXC06-M035 | SXC10-M035 | SXC16-M035 | SXC16-M035 | SXC25-M035 | SXC25-M035 |
| 4.0 - 3.5mm | 5/32" | SXC06-M040 | SXC10-M040 | SXC16-M040 | SXC16-M040 | SXC25-M040 | SXC25-M040 |
| 4.5 - 4.0mm | 11/64" | SXC06-M045 | SXC10-M045 | SXC16-M045 | SXC16-M045 | SXC25-M045 | SXC25-M045 |
| 5.0 - 4.5mm | 3/16" | SXC06-M050 | SXC10-M050 | SXC16-M050 | SXC16-M050 | SXC25-M050 | SXC25-M050 |
| 5.5 - 5.0mm | 13/64" | SXC06-M055 | SXC10-M055 | SXC16-M055 | SXC16-M055 | SXC25-M055 | SXC25-M055 |
| 6.0 - 5.5mm | 7/32" | SXC06-M060 | SXC10-M060 | SXC16-M060 | SXC16-M060 | SXC25-M060 | SXC25-M060 |
| 6.5 - 6.0mm | 1/4" | | SXC10-M065 | SXC16-M065 | SXC16-M065 | SXC25-M065 | SXC25-M065 |
| 7.0 - 6.5mm | 17/64" | | SXC10-M070 | SXC16-M070 | SXC16-M070 | SXC25-M070 | SXC25-M070 |
| 7.5 - 7.0mm | 9/32" | | SXC10-M075 | SXC16-M075 | SXC16-M075 | SXC25-M075 | SXC25-M075 |
| 8.0 - 7.5mm | 5/16" | | SXC10-M080 | SXC16-M080 | SXC16-M080 | SXC25-M080 | SXC25-M080 |
| 8.5 - 8.0mm | 21/64" | | SXC10-M085 | SXC16-M085 | SXC16-M085 | SXC25-M085 | SXC25-M085 |
| 9.0 - 8.5mm | 11/32" | | SXC10-M090 | SXC16-M090 | SXC16-M090 | SXC25-M090 | SXC25-M090 |
| 9.5 - 9.0mm | 3/8" | | SXC10-M095 | SXC16-M095 | SXC16-M095 | SXC25-M095 | SXC25-M095 |
| 10.0 - 9.5mm | 25/64" | | SXC10-M100 | SXC16-M100 | SXC16-M100 | SXC25-M100 | SXC25-M100 |
| 10.5 - 10.0mm | 13/32" | | | SXC16-M105 | SXC16-M105 | SXC25-M105 | SXC25-M105 |
| 11.0 - 10.5mm | 27/64" | | | SXC16-M110 | SXC16-M110 | SXC25-M110 | SXC25-M110 |
| 11.5 - 11.0mm | 7/16" | | | SXC16-M115 | SXC16-M115 | SXC25-M115 | SXC25-M115 |
| 12.0 - 11.5mm | 15/32" | | | SXC16-M120 | SXC16-M120 | SXC25-M120 | SXC25-M120 |
| 12.5 - 12.0mm | 31/64" | | | SXC16-M125 | SXC16-M125 | SXC25-M125 | SXC25-M125 |
| 13.0 - 12.5mm | 1/2" | | | SXC16-M130 | SXC16-M130 | SXC25-M130 | SXC25-M130 |
| 13.5 - 13.0mm | 17/32" | | | | SXC16-M135 | SXC25-M135 | SXC25-M135 |
| 14.0 - 13.5mm | 35/64" | | | | SXC16-M140 | SXC25-M140 | SXC25-M140 |
| 14.5 - 14.0mm | 9/16" | | | | SXC16-M145 | SXC25-M145 | SXC25-M145 |
| 15.0 - 14.5mm | 37/64" | | | | SXC16-M150 | SXC25-M150 | SXC25-M150 |
| 15.5 - 15.0mm | 19/32" | | | | SXC16-M155 | SXC25-M155 | SXC25-M155 |
| 16.0 - 15.5mm | 5/8" | | | | SXC16-M160 | SXC25-M160 | SXC25-M160 |
| 16.5 - 16.0mm | 41/64" | | | | | SXC25-M165 | SXC25-M165 |
| 17.0 - 16.5mm | 21/32" | | | | | SXC25-M170 | SXC25-M170 |
| 17.5 - 17.0mm | 11/16" | | | | | SXC25-M175 | SXC25-M175 |
| 18.0 - 17.5mm | 45/64" | | | | | SXC25-M180 | SXC25-M180 |
| 18.5 - 18.0mm | 23/32" | | | | | SXC25-M185 | SXC25-M185 |
| 19.0 - 18.5mm | 3/4" | | | | | SXC25-M190 | SXC25-M190 |
| 19.5 - 19.0mm | 49/64" | | | | | SXC25-M195 | SXC25-M195 |
| 20.0 - 19.5mm | 25/32" | | | | | SXC25-M200 | SXC25-M200 |
| 20.5 - 20.0mm | 51/64" | | | | | | SXC25-M205 |
| 21.0 - 20.5mm | 13/16" | | | | | | SXC25-M210 |
| 21.5 - 21.0mm | 27/32" | | | | | | SXC25-M215 |
| 22.0 - 21.5mm | 55/64" | | | | | | SXC25-M220 |
| 22.5 - 22.0mm | 7/8" | | | | | | SXC25-M225 |
| 23.0 - 22.5mm | 29/32" | | | | | | SXC25-M230 |
| 23.5 - 23.0mm | 59/64" | | | | | | SXC25-M235 |
| 24.0 - 23.5mm | 15/16" | | | | | | SXC25-M240 |
| 24.5 - 24.0mm | 61/64" | | | | | | SXC25-M245 |
| 25.0 - 24.5mm | 31/32" | | | | | | SXC25-M250 |
| 25.4 - 25.0mm | 1" | | | | | | SXC25-M254 |

BC
SX
MX
VX
MC
SD
ER
TG
DA
EM
SM
MISC.
QC TAP
ACC.

Wrenches



Hex



E Type



Mini E Type

| Wrench Part Number | Description | Wrench Type | Max. Torque |
|--------------------|------------------------------|-------------|----------------|
| ERW-11H | ER 11 Nut -Hex | Hex | 18 ft/lbs Max |
| ERW-16H | ER 16 Nut -Hex | Hex | 40 ft/lbs Max |
| ERW-20H | ER 20 Nut -Hex | Hex | 60 ft/lbs Max |
| ERW-16E | ER 16 Nut - E Type | E Type | 40 ft/lbs Max |
| ERW-20E | ER 20 Nut - E Type | E Type | 60 ft/lbs Max |
| ERW-25E | ER 25 Nut - E Type | E Type | 75 ft/lbs Max |
| ERW-32E | ER 32 Nut - E Type | E Type | 100 ft/lbs Max |
| ERW-40E | ER 40 Nut - E Type | E Type | 125 ft/lbs Max |
| ERW-8M | ER 8 Mini Nut | Mini E Type | 6 ft/lbs Max |
| ERW-11M | ER 11 Mini Nut | Mini E Type | 9 ft/lbs Max |
| ERW-16M | ER 16 Mini Nut | Mini E Type | 13 ft/lbs Max |
| ERW-20M | ER 20 Mini Nut | Mini E Type | 17 ft/lbs Max |
| HSK- 63A | HSK 63A Coolant Tube Wrench | T Handle | 10 ft/lbs Max |
| HSK-100A | HSK 100A Coolant Tube Wrench | T Handle | 15 ft/lbs Max |

Torque Wrenches

Professional Torque Wrench with ISO-9001 Certifications



The proper torque is a necessity in machining:

- Quality: Proper torque assures maximum cutting accuracy.
- Cost Savings: Proper torque extends the life of collets, tools, and holders.
- Safety: Proper torque reduces the possibility of tools loosening up and coming out of the holder.

| Part Number | Description | Torque Range | | Length | | Weight | Spigot |
|-------------|---------------|---------------|-----------|--------|-------|---------|------------|
| TW-060 | Torque Wrench | 5-45 ft/lbs | 8-60 Nm | 11.9" | 301mm | 0.55 Kg | 16mm round |
| TW-100 | | 15-80 ft/lbs | 20-100 Nm | 13.4" | 340mm | 0.60 Kg | |
| TW-200 | | 30-150 ft/lbs | 40-200 Nm | 16.5" | 423mm | 0.78 Kg | |
| TW-300 | | 45-228 ft/lbs | 60-300 Nm | 21.5" | 548mm | 1.13 Kg | |

Torque Wrench Heads



| Wrench Head Part Number | Description | Wrench Type | Max. Torque |
|-------------------------|------------------------|-------------|----------------|
| TWH-ER08M | ER8 Mini Nut - Mini E | Mini E | 6 ft/lbs Max |
| TWH-ER11M | ER11 Mini Nut - Mini E | Mini E | 9 ft/lbs Max |
| TWH-ER16M | ER16 Mini Nut - Mini E | Mini E | 13 ft/lbs Max |
| TWH-ER20M | ER20 Mini Nut - Mini E | Mini E | 17 ft/lbs Max |
| TWH-ER11H | ER11 Hex Nut | Hex | 16 ft/lbs Max |
| TWH-ER16H | ER 16 Hex Nut | Hex | 40 ft/lbs Max |
| TWH-ER20H | ER 20 Hex Nut | Hex | 60 ft/lbs Max |
| TWH-ER16E | ER 16 Nut - E Type | E Type | 40 ft/lbs Max |
| TWH-ER20E | ER 20 Nut - E Type | E Type | 60 ft/lbs Max |
| TWH-ER25E | ER 25 Nut - E Type | E Type | 75 ft/lbs Max |
| TWH-ER32E | ER 32 Nut - E Type | E Type | 100 ft/lbs Max |
| TWH-ER40E | ER 40 Nut - E Type | E Type | 125 ft/lbs Max |

BC
SX
MX
VX
MC
SD
ER
TG
DA
EM
SM
MISC.
QC TAP
ACC.

TG - Collet Chucks

Drilling | Reaming | Threading | Lite Milling



Premium Performance

Premium Precision

0.0001" TIR OD Taper to ID Taper Guaranteed

Dynamic Balance

Dynamically Balanced Body for
G6.3 @ 20,000 RPM's (CAT50 @ 15,000)

Best in Class Performance

Pioneer TG exceeds industry standards to provide optimum performance and interchangeability

Standard Features

Optional Coolant Cap System for TG075 & TG100 Collet Chucks sealed up to 1,500 PSI.

Jet-Blast Caps available for directional Coolant flow to the cutter flutes.



Standard Features

Dynamic Balance Compensation

ID Chip Hole

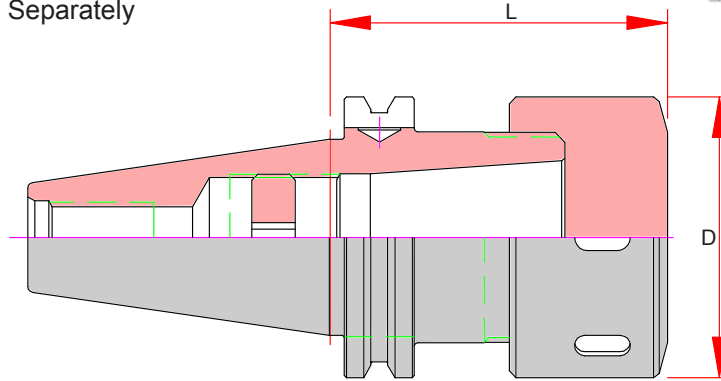


DIN AD+B Flange Coolant

TG - Collet Chuck

Features

- 3 µm - 0.0001" Runout Taper to Taper
- Coolant Thru Center
- DIN AD+B Flange Coolant Standard
- Balanced G6.3 @ 20,000 RPM
- Order Collets & Wrench Separately



| | Capacity | Part Number | Range | D | L Projection | Collet | Screw | Nut | Wrench |
|-------|----------|------------------|-------------|------|--------------|--------|-----------|--------|--------|
| CAT40 | 3/4" | CAT40-TG075-0300 | .094 - .750 | 1.97 | 3.00 | TG075 | ASC-TG075 | TGN075 | MCW-20 |
| | | CAT40-TG075-0500 | | | 5.00 | | | | |
| | 1" | CAT40-TG100-0300 | .094 - 1.00 | 2.48 | 3.00 | TG100 | ASC-ER40 | TGN100 | MCW-25 |
| | | CAT40-TG100-0550 | | | 5.50 | | | | |
| CAT50 | 1" | CAT50-TG100-0350 | .094 - 1.00 | 2.48 | 3.50 | TG100 | ASC-ER40 | TGN100 | MCW-25 |
| | | CAT50-TG100-0550 | | | 5.50 | | | | |
| | | CAT50-TG100-0750 | | | 7.50 | | | | |
| | 1-1/2" | CAT50-TG150-0350 | .500 - 1.50 | 3.23 | 3.50 | TG150 | ASC-TG150 | TGN150 | TGW150 |
| | | CAT50-TG150-0550 | | | 5.50 | | | | |
| BT40 | 1" | BT40-TG100-0300 | .094 - 1.00 | 2.48 | 3.00 | TG100 | ASC-ER40 | TGN100 | MCW-25 |
| | | BT40-TG100-0550 | | | 5.50 | | | | |

Wrenches



Hook Spanner

| Wrench Part Number | Description | Wrench Type | Max. Torque |
|--------------------|---------------------------|--------------|----------------|
| MCW-20 | TG75 Spanner Bearing Nut | Hook Spanner | 55 ft/lbs Max |
| MCW-25 | TG100 Spanner Bearing Nut | Hook Spanner | 75 ft/lbs Max |
| TGW-150 | TG150 Spanner Bearing Nut | Hook Spanner | 100 ft/lbs Max |

Collet Nuts

| Nut Part Number | Description | Nut Diameter | Wrench Part Number | Coolant Cap | Thread | Max. Torque |
|-----------------|-----------------------|--------------|--------------------|-------------|---------------|----------------|
| TGN-075 | TG75 Spanner Nut | 1.97 / 50mm | MCW-20 | - | 1 1/2-12 Acme | 55 ft/lbs Max |
| TGN-100 | TG100 Spanner Nut | 2.48 / 63mm | MCW-25 | - | 1 7/8-12 Acme | 75 ft/lbs Max |
| TGN-150 | TG150 Spanner Nut | 3.23 / 82mm | TGW-150 | - | 2 5/8-12 Acme | 100 ft/lbs Max |
| TGN-075-CC | TG75 Coolant Cap Nut | 1.97 / 50mm | MCW-20 | SXC25 | 1 1/2-12 Acme | 55 ft/lbs Max |
| TGN-100-CC | TG100 Coolant Cap Nut | 2.48 / 63mm | MCW-25 | SXC25 | 1 7/8-12 Acme | 75 ft/lbs Max |



TG Precision Inch Collets

Features:

- Standard .0004" T.I.R.
- Collapse Range: .020

We use only the best material and a Swiss grinding technique that ensures accuracy on each grind.



TG075 Inch Collets

| Nominal Tool | Tool Max | Tool Min | TG075 |
|--------------|----------|----------|------------|
| 3/32 | 0.0938 | 0.0781 | TG075-0094 |
| 7/64 | 0.1094 | 0.0938 | TG075-0109 |
| 1/8 | 0.1250 | 0.1094 | TG075-0125 |
| 9/64 | 0.1406 | 0.1250 | TG075-0141 |
| 5/32 | 0.1563 | 0.1406 | TG075-0156 |
| 11/64 | 0.1719 | 0.1563 | TG075-0172 |
| 3/16 | 0.1875 | 0.1719 | TG075-0188 |
| 13/64 | 0.2031 | 0.1875 | TG075-0203 |
| 7/32 | 0.2188 | 0.2031 | TG075-0219 |
| 15/64 | 0.2344 | 0.2188 | TG075-0234 |
| 1/4 | 0.2500 | 0.2344 | TG075-0250 |
| 17/64 | 0.2656 | 0.2500 | TG075-0266 |
| 9/32 | 0.2813 | 0.2656 | TG075-0281 |
| 19/64 | 0.2969 | 0.2813 | TG075-0297 |
| 5/16 | 0.3125 | 0.2969 | TG075-0313 |

| Nominal Tool | Tool Max | Tool Min | TG075 |
|--------------|----------|----------|------------|
| 21/64 | 0.3281 | 0.3125 | TG075-0328 |
| 11/32 | 0.3438 | 0.3281 | TG075-0344 |
| 23/64 | 0.3594 | 0.3438 | TG075-0359 |
| 3/8 | 0.3750 | 0.3594 | TG075-0375 |
| 25/64 | 0.3906 | 0.3750 | TG075-0391 |
| 13/32 | 0.4063 | 0.3906 | TG075-0406 |
| 27/64 | 0.4219 | 0.4063 | TG075-0422 |
| 7/16 | 0.4375 | 0.4219 | TG075-0438 |
| 29/64 | 0.4531 | 0.4375 | TG075-0453 |
| 15/32 | 0.4688 | 0.4531 | TG075-0469 |
| 31/64 | 0.4844 | 0.4688 | TG075-0484 |
| 1/2 | 0.5000 | 0.4844 | TG075-0500 |
| 33/64 | 0.5156 | 0.5000 | TG075-0516 |
| 17/32 | 0.5313 | 0.5156 | TG075-0531 |
| 35/64 | 0.5469 | 0.5313 | TG075-0547 |

| Nominal Tool | Tool Max | Tool Min | TG075 |
|--------------|----------|----------|------------|
| 9/16 | 0.5625 | 0.5469 | TG075-0563 |
| 37/64 | 0.5781 | 0.5625 | TG075-0578 |
| 19/32 | 0.5938 | 0.5781 | TG075-0594 |
| 39/64 | 0.6094 | 0.5938 | TG075-0609 |
| 5/8 | 0.6250 | 0.6094 | TG075-0625 |
| 41/64 | 0.6406 | 0.6250 | TG075-0641 |
| 21/32 | 0.6563 | 0.6406 | TG075-0656 |
| 43/64 | 0.6719 | 0.6563 | TG075-0672 |
| 11/16 | 0.6875 | 0.6719 | TG075-0688 |
| 45/64 | 0.7031 | 0.6875 | TG075-0703 |
| 23/32 | 0.7188 | 0.7031 | TG075-0719 |
| 47/64 | 0.7344 | 0.7188 | TG075-0734 |
| 3/4 | 0.7500 | 0.7344 | TG075-0750 |

Collet Sets

| Part Number | Collet Size | Pieces | Range | Increments |
|-------------|-------------|--------|-----------|------------|
| TG075-SET11 | TG75 | 11 | 3/32-3/4 | 1/16 |
| TG075-SET22 | TG75 | 22 | 3/32-3/4 | 1/32 |
| TG075-SET43 | TG75 | 43 | 3/32-3/4 | 1/64 |
| TG100-SET15 | TG100 | 15 | 1/8-1" | 1/16 |
| TG100-SET21 | TG100 | 21 | 3/8-1" | 1/32 |
| TG100-SET30 | TG100 | 30 | 3/32-1" | 1/32 |
| TG100-SET41 | TG100 | 41 | 3/8-1" | 1/64 |
| TG100-SET59 | TG100 | 59 | 3/32-1" | 1/64 |
| TG150-SET17 | TG150 | 17 | 1/2-1-1/2 | 1/16 |
| TG150-SET33 | TG150 | 33 | 1/2-1-1/2 | 1/32 |
| TG150-SET65 | TG150 | 65 | 1/2-1-1/2 | 1/64 |



TG100 Inch Collets

| Nominal Tool | Tool Max | Tool Min | TG100 | Nominal Tool | Tool Max | Tool Min | TG100 | Nominal Tool | Tool Max | Tool Min | TG100 |
|--------------|----------|----------|------------|--------------|----------|----------|------------|--------------|----------|----------|------------|
| 3/32 | 0.0938 | 0.0781 | TG100-0094 | 13/32 | 0.4063 | 0.3906 | TG100-0406 | 23/32 | 0.7188 | 0.7031 | TG100-0719 |
| 7/64 | 0.1094 | 0.0938 | TG100-0109 | 27/64 | 0.4219 | 0.4063 | TG100-0422 | 47/64 | 0.7344 | 0.7188 | TG100-0734 |
| 1/8 | 0.1250 | 0.1094 | TG100-0125 | 7/16 | 0.4375 | 0.4219 | TG100-0438 | 3/4 | 0.7500 | 0.7344 | TG100-0750 |
| 9/64 | 0.1406 | 0.1250 | TG100-0141 | 29/64 | 0.4531 | 0.4375 | TG100-0453 | 49/64 | 0.7656 | 0.7500 | TG100-0766 |
| 5/32 | 0.1563 | 0.1406 | TG100-0156 | 15/32 | 0.4688 | 0.4531 | TG100-0469 | 25/32 | 0.7813 | 0.7656 | TG100-0781 |
| 11/64 | 0.1719 | 0.1563 | TG100-0172 | 31/64 | 0.4844 | 0.4688 | TG100-0484 | 51/64 | 0.7969 | 0.7813 | TG100-0797 |
| 3/16 | 0.1875 | 0.1719 | TG100-0188 | 1/2 | 0.5000 | 0.4844 | TG100-0500 | 13/16 | 0.8125 | 0.7969 | TG100-0813 |
| 13/64 | 0.2031 | 0.1875 | TG100-0203 | 33/64 | 0.5156 | 0.5000 | TG100-0516 | 53/64 | 0.8281 | 0.8125 | TG100-0828 |
| 7/32 | 0.2188 | 0.2031 | TG100-0219 | 17/32 | 0.5313 | 0.5156 | TG100-0531 | 27/32 | 0.8438 | 0.8281 | TG100-0844 |
| 15/64 | 0.2344 | 0.2188 | TG100-0234 | 35/64 | 0.5469 | 0.5313 | TG100-0547 | 55/64 | 0.8594 | 0.8438 | TG100-0859 |
| 1/4 | 0.2500 | 0.2344 | TG100-0250 | 9/16 | 0.5625 | 0.5469 | TG100-0563 | 7/8 | 0.8750 | 0.8594 | TG100-0875 |
| 17/64 | 0.2656 | 0.2500 | TG100-0266 | 37/64 | 0.5781 | 0.5625 | TG100-0578 | 57/64 | 0.8906 | 0.8750 | TG100-0891 |
| 9/32 | 0.2813 | 0.2656 | TG100-0281 | 19/32 | 0.5938 | 0.5781 | TG100-0594 | 29/32 | 0.9063 | 0.8906 | TG100-0906 |
| 19/64 | 0.2969 | 0.2813 | TG100-0297 | 39/64 | 0.6094 | 0.5938 | TG100-0609 | 59/64 | 0.9219 | 0.9063 | TG100-0922 |
| 5/16 | 0.3125 | 0.2969 | TG100-0313 | 5/8 | 0.6250 | 0.6094 | TG100-0625 | 15/16 | 0.9375 | 0.9219 | TG100-0938 |
| 21/64 | 0.3281 | 0.3125 | TG100-0328 | 41/64 | 0.6406 | 0.6250 | TG100-0641 | 61/64 | 0.9531 | 0.9375 | TG100-0953 |
| 11/32 | 0.3438 | 0.3281 | TG100-0344 | 21/32 | 0.6563 | 0.6406 | TG100-0656 | 31/32 | 0.9688 | 0.9531 | TG100-0969 |
| 23/64 | 0.3594 | 0.3438 | TG100-0359 | 43/64 | 0.6719 | 0.6563 | TG100-0672 | 63/64 | 0.9844 | 0.9688 | TG100-0984 |
| 3/8 | 0.3750 | 0.3594 | TG100-0375 | 11/16 | 0.6875 | 0.6719 | TG100-0688 | 1 | 1.0000 | 0.9844 | TG100-1000 |
| 25/64 | 0.3906 | 0.3750 | TG100-0391 | 45/64 | 0.7031 | 0.6875 | TG100-0703 | | | | |

TG150 Inch Collets

| Nominal Tool | Tool Max | Tool Min | TG150 | Nominal Tool | Tool Max | Tool Min | TG150 | Nominal Tool | Tool Max | Tool Min | TG150 |
|--------------|----------|----------|------------|--------------|----------|----------|------------|--------------|----------|----------|------------|
| 1/2 | 0.5000 | 0.4844 | TG150-0500 | 27/32 | 0.8438 | 0.8281 | TG150-0844 | 1 3/16 | 1.1875 | 1.1719 | TG150-1188 |
| 33/64 | 0.5156 | 0.5000 | TG150-0516 | 55/64 | 0.8594 | 0.8438 | TG150-0859 | 1 13/64 | 1.2031 | 1.1875 | TG150-1203 |
| 17/32 | 0.5313 | 0.5156 | TG150-0531 | 7/8 | 0.8750 | 0.8594 | TG150-0875 | 1 7/32 | 1.2188 | 1.2031 | TG150-1219 |
| 35/64 | 0.5469 | 0.5313 | TG150-0547 | 57/64 | 0.8906 | 0.8750 | TG150-0891 | 1 15/64 | 1.2344 | 1.2188 | TG150-1234 |
| 9/16 | 0.5625 | 0.5469 | TG150-0563 | 29/32 | 0.9063 | 0.8906 | TG150-0906 | 1 1/4 | 1.2500 | 1.2344 | TG150-1250 |
| 37/64 | 0.5781 | 0.5625 | TG150-0578 | 59/64 | 0.9219 | 0.9063 | TG150-0922 | 1 17/64 | 1.2656 | 1.2500 | TG150-1266 |
| 19/32 | 0.5938 | 0.5781 | TG150-0594 | 15/16 | 0.9375 | 0.9219 | TG150-0938 | 1 9/32 | 1.2813 | 1.2656 | TG150-1281 |
| 39/64 | 0.6094 | 0.5938 | TG150-0609 | 61/64 | 0.9531 | 0.9375 | TG150-0953 | 1 19/64 | 1.2969 | 1.2813 | TG150-1297 |
| 5/8 | 0.6250 | 0.6094 | TG150-0625 | 31/32 | 0.9688 | 0.9531 | TG150-0969 | 1 5/16 | 1.3125 | 1.2969 | TG150-1313 |
| 41/64 | 0.6406 | 0.6250 | TG150-0641 | 63/64 | 0.9844 | 0.9688 | TG150-0984 | 1 21/64 | 1.3281 | 1.3125 | TG150-1328 |
| 21/32 | 0.6563 | 0.6406 | TG150-0656 | 1 | 1.0000 | 0.9844 | TG150-1000 | 1 11/32 | 1.3438 | 1.3281 | TG150-1344 |
| 43/64 | 0.6719 | 0.6563 | TG150-0672 | 1 1/64 | 1.0156 | 1.0000 | TG150-1016 | 1 23/64 | 1.3594 | 1.3438 | TG150-1359 |
| 11/16 | 0.6875 | 0.6719 | TG150-0688 | 1 1/32 | 1.0313 | 1.0156 | TG150-1031 | 1 3/8 | 1.3750 | 1.3594 | TG150-1375 |
| 45/64 | 0.7031 | 0.6875 | TG150-0703 | 1 3/64 | 1.0469 | 1.0313 | TG150-1047 | 1 25/64 | 1.3906 | 1.3750 | TG150-1391 |
| 23/32 | 0.7188 | 0.7031 | TG150-0719 | 1 1/16 | 1.0625 | 1.0469 | TG150-1063 | 1 13/32 | 1.4063 | 1.3906 | TG150-1406 |
| 47/64 | 0.7344 | 0.7188 | TG150-0734 | 1 5/64 | 1.0781 | 1.0625 | TG150-1078 | 1 27/64 | 1.4219 | 1.4063 | TG150-1422 |
| 3/4 | 0.7500 | 0.7344 | TG150-0750 | 1 3/32 | 1.0938 | 1.0781 | TG150-1094 | 1 7/16 | 1.4375 | 1.4219 | TG150-1438 |
| 49/64 | 0.7656 | 0.7500 | TG150-0766 | 1 7/64 | 1.1094 | 1.0938 | TG150-1109 | 1 29/64 | 1.4531 | 1.4375 | TG150-1453 |
| 25/32 | 0.7813 | 0.7656 | TG150-0781 | 1 1/8 | 1.1250 | 1.1094 | TG150-1125 | 1 15/32 | 1.4688 | 1.4531 | TG150-1469 |
| 51/64 | 0.7969 | 0.7813 | TG150-0797 | 1 9/64 | 1.1406 | 1.1250 | TG150-1141 | 1 31/64 | 1.4844 | 1.4688 | TG150-1484 |
| 13/16 | 0.8125 | 0.7969 | TG150-0813 | 1 5/32 | 1.1563 | 1.1406 | TG150-1156 | 1 1/2 | 1.5000 | 1.4844 | TG150-1500 |
| 53/64 | 0.8281 | 0.8125 | TG150-0828 | 1 11/64 | 1.1719 | 1.1563 | TG150-1172 | | | | |

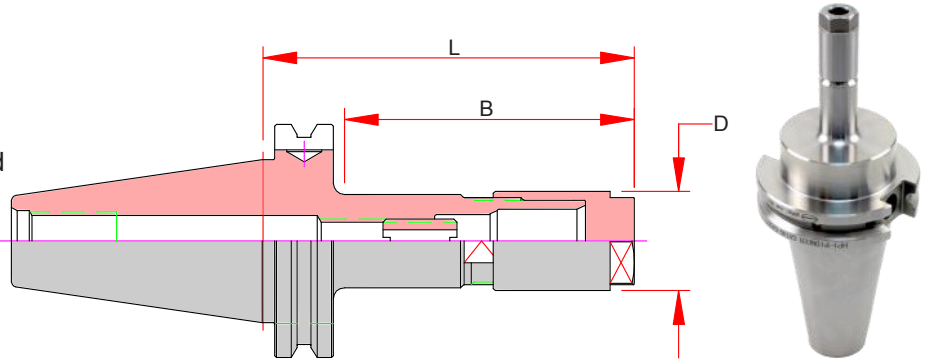


DA - Collet Chucks

DA - Collet Chuck

Features

- Coolant Thru Center
- DIN AD+B Flange Coolant Standard
- Balanced G6.3 @ 20,000 RPM
- Order Collets & Wrench Separately

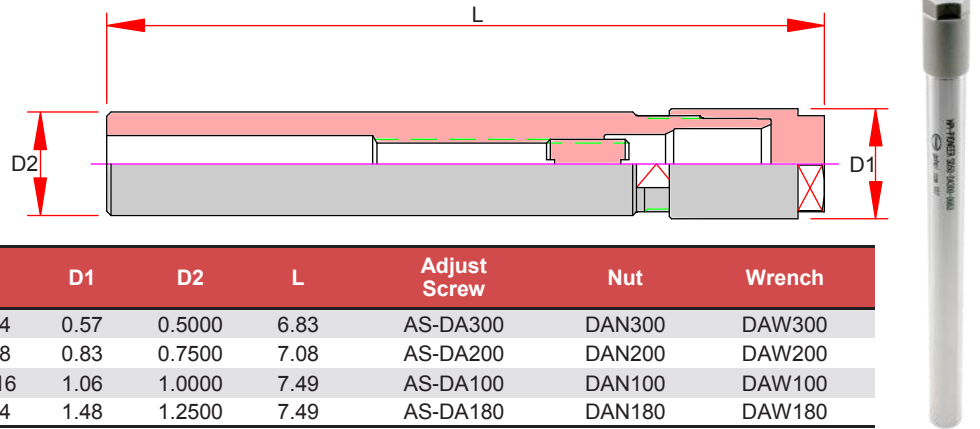


| Capacity | Part Number | Range | B | D | L Projection | Collet | Screw | Nut | Wrench | |
|------------------|-------------|------------------|------------------|------------|--------------|--------|-------|-----------|-----------|--------|
| CAT40 | 1/4 | CAT40-DA300-0338 | 3/64 - 1/4 | 1.88 | 0.57 | 3.38 | DA300 | ASC-DA300 | DAN300 | DAW300 |
| | 3/8 | CAT40-DA200-0300 | 1/16 - 3/8 | 1.58 | 0.83 | 3.00 | DA200 | ASC-DA200 | DAN200 | DAW200 |
| | | CAT40-DA200-0500 | | 1.93 | | 5.00 | | | | |
| | 9/16 | CAT40-DA100-0350 | 1/16 - 9/16 | 2.00 | 1.06 | 3.50 | DA100 | ASC-DA100 | DAN100 | DAW100 |
| | | CAT40-DA100-0600 | | 4.50 | | 6.00 | | | | |
| | CAT50 | 3/4 | CAT40-DA180-0295 | 1/16 - 3/4 | 2.15 | 1.48 | 2.95 | DA180 | ASC-DA180 | DAN180 |
| CAT40-DA180-0515 | | | 3.73 | | 5.15 | | | | | |
| CAT50-DA180-0338 | | | 1.88 | | 3.38 | | | | | |
| | | CAT50-DA180-0600 | | 4.42 | | 6.00 | | | | |

DA Collet Extensions

Features

- Mini-Nut for Close Center Work



| Part Number | Collet Range | D1 | D2 | L | Adjust Screw | Nut | Wrench |
|-----------------|--------------|------|--------|------|--------------|--------|--------|
| S050-DA300-0683 | 3/64 - 1/4 | 0.57 | 0.5000 | 6.83 | AS-DA300 | DAN300 | DAW300 |
| S075-DA200-0709 | 1/16 - 3/8 | 0.83 | 0.7500 | 7.08 | AS-DA200 | DAN200 | DAW200 |
| S100-DA100-0749 | 1/16 - 9/16 | 1.06 | 1.0000 | 7.49 | AS-DA100 | DAN100 | DAW100 |
| S125-DA180-0749 | 1/16 - 3/4 | 1.48 | 1.2500 | 7.49 | AS-DA180 | DAN180 | DAW180 |

Wrenches

| Wrench Part Number | Description | Wrench Type | Max. Torque |
|--------------------|------------------------|-------------|-------------|
| DAW-300 | DA300 Close Center Nut | Hex | 20 ft/lbs |
| DAW-200 | DA200 Close Center Nut | Hex | 25 ft/lbs |
| DAW-100 | DA100 Close Center Nut | Hex | 30 ft/lbs |
| DAW-180 | DA180 Close Center Nut | Hex | 40 ft/lbs |



Nuts

| Nut Part Number | Description | Nut Diameter | Wrench Part Number | Thread | Max. Torque |
|-----------------|------------------------|--------------|--------------------|------------|-------------|
| DAN-300 | DA300 Close Center Nut | 0.57 | DAW-300 | 7/16 - 32 | 20 ft/lbs |
| DAN-200 | DA200 Close Center Nut | 0.83 | DAW-200 | 3/4 - 16 | 25 ft/lbs |
| DAN-100 | DA100 Close Center Nut | 1.06 | DAW-100 | 15/16 - 20 | 30 ft/lbs |
| DAN-180 | DA180 Close Center Nut | 1.48 | DAW-180 | 1 1/4 - 12 | 40 ft/lbs |



DA Inch Collets

Features:

- Collapse Range: .020
- Fits all standard DA collet chucks.



Collet Sets

| Part Number | Collet Size | Pieces | Range | Incr. |
|-------------|-------------|--------|-----------|-------|
| DA180-SET9 | DA180 | 9 | 1/4-3/4 | 1/16 |
| DA180-SET17 | DA180 | 17 | 1/4-3/4 | 1/32 |
| DA180-SET21 | DA180 | 21 | 1/8-3/4 | 1/32 |
| DA180-SET33 | DA180 | 33 | 1/4-3/4 | 1/64 |
| DA180-SET41 | DA180 | 41 | 1/8-3/4 | 1/64 |
| DA100-SET8 | DA100 | 8 | 1/8-9/16 | 1/16 |
| DA100-SET15 | DA100 | 15 | 1/8-9/16 | 1/32 |
| DA100-SET21 | DA100 | 21 | 1/4-9/16 | 1/64 |
| DA100-SET29 | DA100 | 29 | 1/8-9/16 | 1/64 |
| DA100-SET33 | DA100 | 33 | 1/16-9/16 | 1/64 |
| DA200-SET9 | DA200 | 9 | 1/8-3/8 | 1/32 |
| DA200-SET17 | DA200 | 17 | 1/8-3/8 | 1/64 |
| DA200-SET21 | DA200 | 21 | 1/16-3/8 | 1/64 |
| DA300-SET7 | DA300 | 7 | 1/16-1/4 | 1/32 |
| DA300-SET14 | DA300 | 14 | 3/64-1/4 | 1/64 |

| Size | DA 180 | DA 100 | DA 200 | DA 300 |
|--------|------------|------------|------------|------------|
| 3/64" | | | DA200-0047 | DA300-0047 |
| 1/16" | DA180-0063 | DA100-0063 | DA200-0063 | DA300-0063 |
| 5/64" | DA180-0078 | DA100-0078 | DA200-0078 | DA300-0078 |
| 3/32" | DA180-0094 | DA100-0094 | DA200-0094 | DA300-0094 |
| 7/64" | DA180-0109 | DA100-0109 | DA200-0109 | DA300-0109 |
| 1/8" | DA180-0125 | DA100-0125 | DA200-0125 | DA300-0125 |
| 9/64" | DA180-0141 | DA100-0141 | DA200-0141 | DA300-0141 |
| 5/32" | DA180-0156 | DA100-0156 | DA200-0156 | DA300-0156 |
| 11/64" | DA180-0172 | DA100-0172 | DA200-0172 | DA300-0172 |
| 3/16" | DA180-0188 | DA100-0188 | DA200-0188 | DA300-0188 |
| 13/64" | DA180-0203 | DA100-0203 | DA200-0203 | DA300-0203 |
| 7/32" | DA180-0219 | DA100-0219 | DA200-0219 | DA300-0219 |
| 15/64" | DA180-0234 | DA100-0234 | DA200-0234 | DA300-0234 |
| 1/4" | DA180-0250 | DA100-0250 | DA200-0250 | DA300-0250 |
| 17/64" | DA180-0266 | DA100-0266 | DA200-0266 | |
| 9/32" | DA180-0281 | DA100-0281 | DA200-0281 | |
| 19/64" | DA180-0297 | DA100-0297 | DA200-0297 | |
| 5/16" | DA180-0313 | DA100-0313 | DA200-0313 | |
| 21/64" | DA180-0328 | DA100-0328 | DA200-0328 | |
| 11/32" | DA180-0344 | DA100-0344 | DA200-0344 | |
| 23/64" | DA180-0359 | DA100-0359 | DA200-0359 | |
| 3/8" | DA180-0375 | DA100-0375 | DA200-0375 | |
| 25/64" | DA180-0391 | DA100-0391 | | |
| 13/32" | DA180-0406 | DA100-0406 | | |
| 27/64" | DA180-0422 | DA100-0422 | | |
| 7/16" | DA180-0438 | DA100-0438 | | |
| 29/64" | DA180-0453 | DA100-0453 | | |
| 15/32" | DA180-0469 | DA100-0469 | | |
| 31/64" | DA180-0484 | DA100-0484 | | |
| 1/2" | DA180-0500 | DA100-0500 | | |
| 33/64" | DA180-0516 | DA100-0516 | | |
| 17/32" | DA180-0531 | DA100-0531 | | |
| 35/64" | DA180-0547 | DA100-0547 | | |
| 9/16" | DA180-0563 | DA100-0563 | | |
| 37/64" | DA180-0578 | | | |
| 19/32" | DA180-0594 | | | |
| 39/64" | DA180-0609 | | | |
| 5/8" | DA180-0625 | | | |
| 41/64" | DA180-0641 | | | |
| 21/32" | DA180-0656 | | | |
| 43/64" | DA180-0672 | | | |
| 11/16" | DA180-0688 | | | |
| 45/64" | DA180-0703 | | | |
| 23/32" | DA180-0719 | | | |
| 47/64" | DA180-0734 | | | |
| 3/4" | DA180-0750 | | | |



Premium Performance

Premium Precision

0.0001" TIR OD Taper to ID Bore Guaranteed

Dynamic Balance

Dynamically Balanced Body for
G6.3 @ 20,000 RPM's (CAT50 @ 15,000)

Best in Class Performance

Pioneer EM exceeds industry standards to provide optimum performance and interchangeability

Building the Best in the Industry!

- 3 μ m - 0.0001" Bore Runout Standard
- H5 Bore Tolerance Standard
- Coolant Thru Center Standard
- DIN AD+B Flange Coolant Standard
- Dynamic Balance Standard
- ID Chip Hole Standard
- Jet-Blast available on all projections (10" and shorter altered in Chicago)

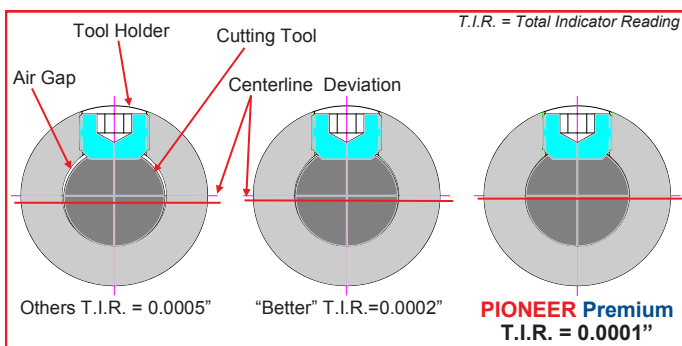
Standard Features

Dynamic Balance Compensation

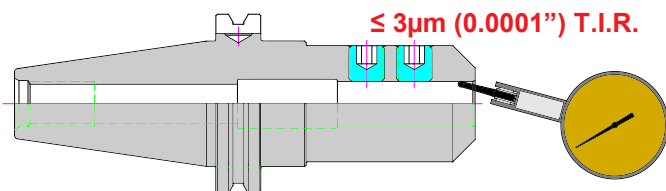
ID Chip Hole



DIN AD+B Flange Coolant



You lose 10% of cutter life for every 0.0001" of T.I.R.

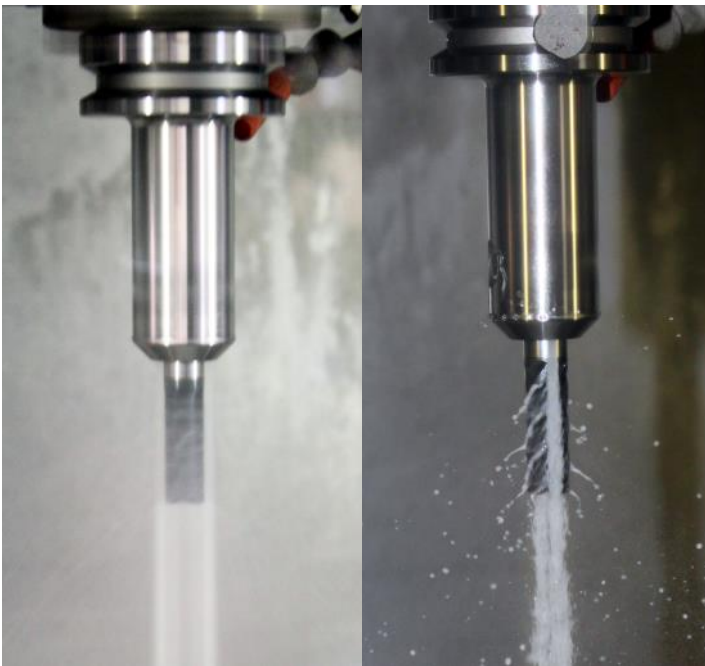


Jet-Blast Coolant Option

Jet-Blast Coolant Ports allow coolant to go around solid cuttings tools and delivery coolant at the top of the cutting flutes.

The coolant ports are EDM beside the bore of the end mill holder intersecting the relief behind the ground bore. Coolant is fed from the center or from DIN-B Flange Coolant into the relief and around the cutting tool.

Jet-Blast is available in all holders with a 10" projection or shorter. Longer projections are a factory build and available upon request.



BC

SX

MX

VX

MC

SD

ER

TG

DA

EM

SM

MISC.

QC TAP

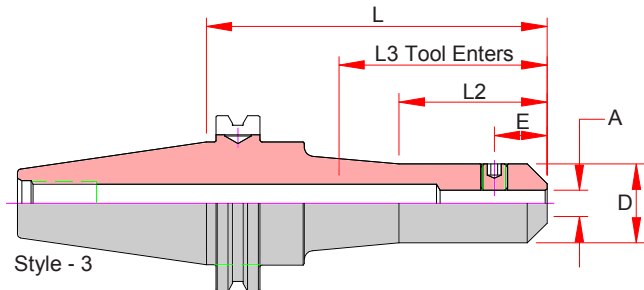
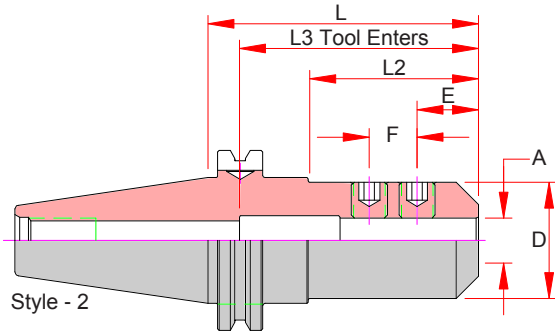
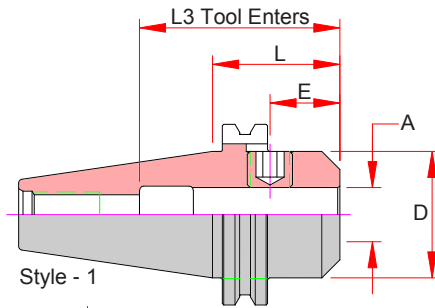
ACC.

EM - End Mill Adapters

CAT40 End Mill Adapters

Features

- 3 μm - 0.0001" Bore Runout
- H5 Bore Tolerance
- Coolant Thru Center
- DIN AD+B Flange Coolant Standard
- Balanced G6.3 @ 20,000 RPM
- Add "-J" for Jet-Blast Coolant Ports

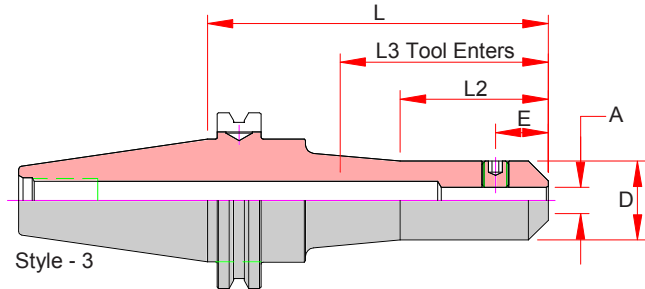
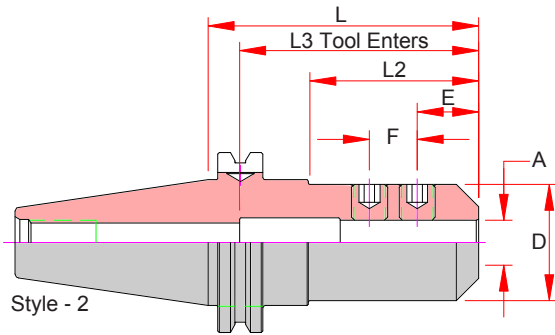
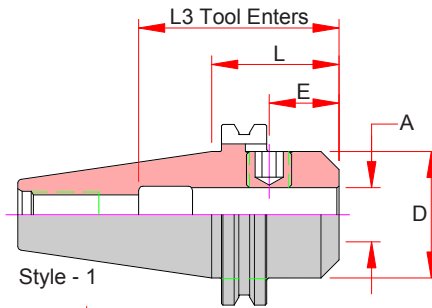


| | Part Number | A Bore | D | E | L Projection | L2 | L3 Max. Tool Enters | Screw Number | Style |
|------|------------------|--------|------|------|--------------|------|---------------------|--------------|-------|
| 1/8 | CAT40-EM012-0175 | | | | 1.75 | 0.80 | 3.32 | | 1 |
| | CAT40-EM012-0250 | | | | 2.50 | 0.92 | 4.07 | | 2 |
| | CAT40-EM012-0400 | 0.1250 | 0.69 | 0.19 | 4.00 | 2.42 | 5.57 | 3 | 2 |
| | CAT40-EM012-0500 | | | | 5.00 | 1.57 | 6.57 | | 3 |
| | CAT40-EM012-0600 | | | | 6.00 | 1.57 | 7.57 | | 3 |
| 3/16 | CAT40-EM018-0175 | | | | 1.75 | 0.88 | 3.32 | | 1 |
| | CAT40-EM018-0250 | 0.1875 | 0.69 | 0.44 | 2.50 | 0.92 | 4.07 | 3 | 2 |
| | CAT40-EM018-0400 | | | | 4.00 | 2.42 | 5.57 | | 2 |
| | CAT40-EM018-0600 | | | | 6.00 | 2.50 | 7.57 | | 3 |
| 1/4 | CAT40-EM025-0175 | | | | 1.75 | 0.80 | 3.32 | | 1 |
| | CAT40-EM025-0250 | | | | 2.50 | 0.92 | 4.07 | | 2 |
| | CAT40-EM025-0400 | 0.2500 | 0.78 | 0.44 | 4.00 | 2.42 | 5.57 | 4 | 2 |
| | CAT40-EM025-0500 | | | | 5.00 | 2.50 | 6.57 | | 3 |
| 5/16 | CAT40-EM031-0175 | | | | 1.75 | 0.88 | 3.32 | | 1 |
| | CAT40-EM031-0250 | 0.3125 | 0.88 | 0.44 | 2.50 | 0.92 | 4.07 | 4 | 2 |
| | CAT40-EM031-0400 | | | | 4.00 | 2.42 | 5.57 | | 2 |
| | CAT40-EM031-0600 | | | | 6.00 | 3.00 | 7.57 | | 3 |
| 3/8 | CAT40-EM037-0175 | | | | 1.75 | 0.88 | 4.07 | | 1 |
| | CAT40-EM037-0250 | | | | 2.50 | 1.00 | 4.07 | | 2 |
| | CAT40-EM037-0400 | 0.3750 | 1.00 | 0.75 | 4.00 | 2.50 | 5.57 | 5 | 2 |
| | CAT40-EM037-0450 | | | | 4.50 | 1.00 | 6.07 | | 3 |
| | CAT40-EM037-0500 | | | | 5.00 | 1.00 | 6.57 | | 3 |
| | CAT40-EM037-0600 | | | | 6.00 | 2.50 | 7.57 | | 3 |
| 7/16 | CAT40-EM043-0250 | 0.4375 | 1.25 | 0.75 | 2.50 | 1.00 | 4.07 | 5 | 2 |
| 1/2 | CAT40-EM050-0175 | | 1.75 | | 1.75 | 0.96 | 3.32 | | 1 |
| | CAT40-EM050-0250 | | 1.25 | | 2.50 | 1.00 | 4.07 | | 2 |
| | CAT40-EM050-0262 | | 1.25 | | 2.62 | 1.12 | 4.19 | | 2 |
| | CAT40-EM050-0400 | 0.5000 | 1.25 | 0.88 | 4.00 | 2.58 | 5.57 | 6 | 2 |
| | CAT40-EM050-0462 | | 1.25 | | 4.62 | 3.20 | 6.19 | | 2 |
| | CAT40-EM050-0500 | | 1.25 | | 5.00 | 3.50 | 6.57 | | 2 |
| | CAT40-EM050-0600 | | 1.25 | | 6.00 | 3.00 | 7.57 | | 3 |

CAT40 End Mill Adapters

Features

- 3 µm - 0.0001" Bore Runout
- H5 Bore Tolerance
- Coolant Thru Center
- DIN AD+B Flange Coolant Standard
- Balanced G6.3 @ 20,000 RPM
- Add "-J" for Jet-Blast Coolant Ports



| Part Number | A Bore | D | E | F | L Projection | L2 | L3 Max. Tool Enters | Screw Number | Style |
|--------------------------|--------|--------|------|------|--------------|------|---------------------|--------------|-------|
| CAT40-EM062-0175 | | 1.75 | | | 1.75 | 0.95 | 3.25 | | 1 |
| CAT40-EM062-0250 | | 1.50 | | | 2.50 | 1.70 | 3.62 | | 2 |
| 5/8 CAT40-EM062-0300 | 0.6250 | 1.50 | 0.94 | - | 3.00 | 1.50 | 3.50 | 7 | 2 |
| CAT40-EM062-0400 | | 1.50 | | | 4.00 | 2.50 | 3.50 | | 2 |
| CAT40-EM062-0500 | | 1.50 | | | 5.00 | 3.50 | 3.50 | | 2 |
| CAT40-EM062-0600 | | 1.50 | | | 6.00 | 4.50 | 3.50 | | 2 |
| CAT40-EM075-0175 | | | | | 1.75 | 0.95 | 3.23 | | 1 |
| CAT40-EM075-0250 | | | | | 2.50 | 1.70 | 3.94 | | 2 |
| 3/4 CAT40-EM075-0300 | 0.7500 | 1.75 | 1.00 | - | 3.00 | 2.20 | 3.94 | 8 | 2 |
| CAT40-EM075-0350 | | | | | 3.50 | 2.70 | 3.94 | | 2 |
| CAT40-EM075-0400 | | | | | 4.00 | 3.20 | 3.94 | | 2 |
| CAT40-EM075-0500 | | | | | 5.00 | 4.20 | 3.94 | | 2 |
| CAT40-EM075-0600 | | | | | 6.00 | 5.20 | 3.94 | | 2 |
| 7/8 CAT40-EM087-0175 | | 1.75 | | - | 1.75 | 0.95 | 2.38 | | 1 |
| CAT40-EM087-0350 | 0.8750 | 1.75 | 1.00 | 0.81 | 3.50 | 2.70 | 4.25 | 8 | 2 |
| CAT40-EM087-0600 | | 1.88 | | 0.81 | 6.00 | 5.24 | 4.25 | | 2 |
| CAT40-EM100-0175 | | 1.75 | | - | 1.75 | 0.95 | 2.38 | 9 | 1 |
| CAT40-EM100-0300 | | 2.00 | | 1.00 | 3.00 | 2.24 | 3.15 | 9 & 10 | 2 |
| 1 CAT40-EM100-0400 | 1.0000 | 2.00 | 1.12 | 1.00 | 4.00 | 3.24 | 4.50 | (2) 10 | 2 |
| CAT40-EM100-0500 | | 2.00 | | 1.00 | 5.00 | 4.24 | 4.50 | (2) 10 | 2 |
| CAT40-EM100-0600 | | 2.00 | | 1.00 | 6.00 | 5.24 | 4.50 | (2) 10 | 2 |
| 1 1/4 CAT40-EM125-0200** | | 2.25** | | - | 2.00 | 1.20 | 2.38 | 9 | 1 |
| CAT40-EM125-0400 | 1.2500 | 2.50 | 1.12 | 1.00 | 4.00 | 3.24 | 3.54 | (2) 11 | 2 |
| CAT40-EM125-0425 | | 2.50 | | 1.00 | 4.25 | 3.49 | 3.54 | (2) 11 | 2 |
| CAT40-EM125-0600 | | 2.50 | | 1.00 | 6.00 | 5.24 | 3.54 | (2) 11 | 2 |
| 1 1/2 CAT40-EM150-0400 | | | | 1.00 | 4.00 | 3.24 | 2.52 | (2) 11 | 2 |
| CAT40-EM150-0462 | 1.5000 | 2.62 | 1.12 | 1.00 | 4.62 | 3.86 | 2.52 | (2) 11 | 2 |
| CAT40-EM150-0600 | | | | 1.00 | 6.00 | 5.24 | 3.15 | (2) 11 | 2 |

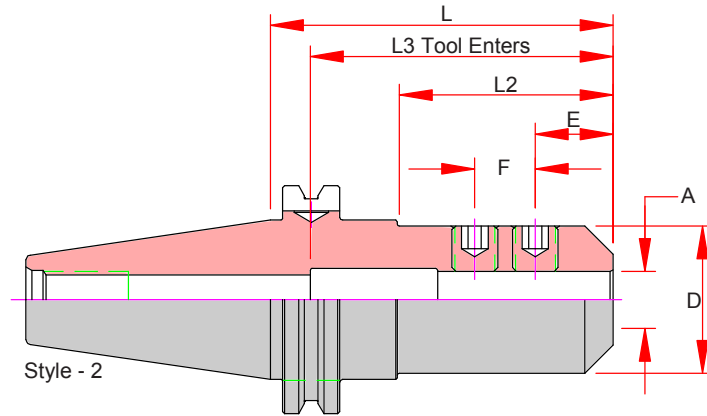
** No DIN AD+B Option Available - No ANSI Safety Area due to bore size - Will not tool change in Umbrella style tool changers & Alarm

EM - End Mill Adapters

CAT40 Metric End Mill Adapters

Features

- 3 μm - 0.0001" Bore Runout
- H5 Bore Tolerance
- Coolant Thru Center
- DIN AD+B Flange Coolant Standard
- Balanced G6.3 @ 20,000 RPM
- Add "-J" for Jet-Blast Coolant Ports

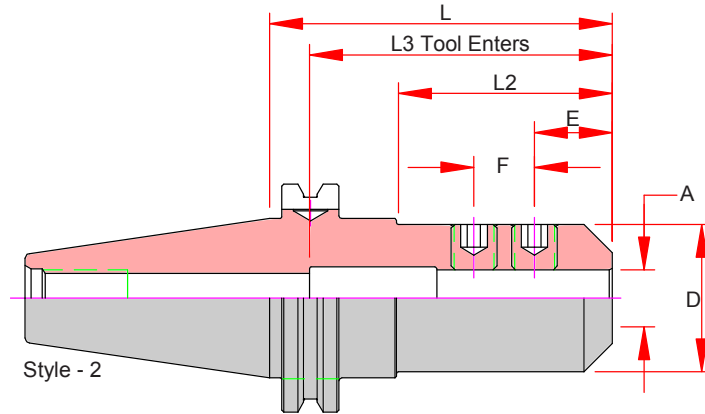


| Part Number | A Bore | D | E | F | L Projection | L2 | L3 Max. Tool Enters | Screw # | Style |
|------------------|--------|------|------|------|--------------|------|---------------------|---------|-------|
| CAT40-EMM06-0250 | 6mm | 0.78 | 0.38 | - | 2.50 | 0.93 | 4.06 | 4 | 2 |
| CAT40-EMM08-0250 | 8mm | 0.88 | 0.44 | - | 2.50 | 1.00 | 4.06 | 4 | 2 |
| CAT40-EMM10-0250 | 10mm | 1.00 | 0.75 | - | 2.50 | 1.00 | 4.06 | 5 | 2 |
| CAT40-EMM12-0250 | 12mm | 1.25 | 0.87 | - | 2.50 | 1.00 | 4.06 | 6 | 2 |
| CAT40-EMM14-0250 | 14mm | 1.50 | 0.87 | - | 2.50 | 1.73 | 3.50 | 6 | 2 |
| CAT40-EMM16-0250 | 16mm | 1.50 | 0.94 | - | 2.50 | 1.73 | 3.94 | 7 | 2 |
| CAT40-EMM18-0250 | 18mm | 1.75 | 0.94 | - | 2.50 | 1.73 | 3.94 | 8 | 2 |
| CAT40-EMM20-0250 | 20mm | 1.75 | 1.00 | - | 2.50 | 1.73 | 3.94 | 8 | 2 |
| CAT40-EMM25-0300 | 25mm | 2.00 | 0.94 | 0.98 | 3.00 | 2.25 | 3.15 | (2) 10 | 2 |
| CAT40-EMM32-0400 | 32mm | 2.50 | 0.94 | 1.10 | 4.00 | 2.25 | 3.54 | (2) 11 | 2 |

CAT50 Metric End Mill Adapters

Features

- 3 μm - 0.0001" Bore Runout
- H5 Bore Tolerance
- Coolant Thru Center
- DIN AD+B Flange Coolant Standard
- Balanced G6.3 @ 20,000 RPM
- Add "-J" for Jet-Blast Coolant Ports



| Part Number | A Bore | D | E | F | L Projection | L2 | L3 Max. Tool Enters | Screw # | Style |
|------------------|--------|------|------|------|--------------|------|---------------------|---------|-------|
| CAT50-EMM06-0400 | 6mm | 0.78 | 0.38 | - | 4.00 | 2.43 | 6.25 | 4 | 2 |
| CAT50-EMM08-0400 | 8mm | 0.88 | 0.44 | - | 4.00 | 2.43 | 6.25 | 4 | 2 |
| CAT50-EMM10-0400 | 10mm | 1.00 | 0.75 | - | 4.00 | 2.43 | 6.25 | 5 | 2 |
| CAT50-EMM12-0400 | 12mm | 1.25 | 0.87 | - | 4.00 | 2.43 | 6.25 | 6 | 2 |
| CAT50-EMM14-0400 | 14mm | 1.50 | 0.87 | - | 4.00 | 2.50 | 6.25 | 6 | 2 |
| CAT50-EMM16-0400 | 16mm | 1.50 | 0.94 | - | 4.00 | 2.50 | 6.25 | 7 | 2 |
| CAT50-EMM18-0400 | 18mm | 1.75 | 0.94 | - | 4.00 | 2.50 | 6.25 | 8 | 2 |
| CAT50-EMM20-0400 | 20mm | 1.75 | 1 | - | 4.00 | 2.5 | 6.25 | 8 | 2 |
| CAT50-EMM25-0400 | 25mm | 2.00 | 0.94 | 0.98 | 4.00 | 2.50 | 4.45 | (2) 10 | 2 |
| CAT50-EMM32-0400 | 32mm | 2.50 | 0.94 | 1.10 | 4.00 | 2.50 | 3.35 | (2) 11 | 2 |

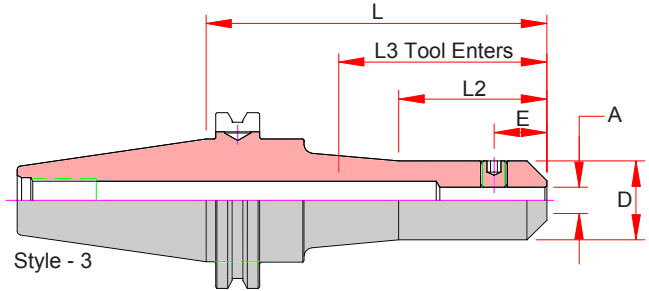
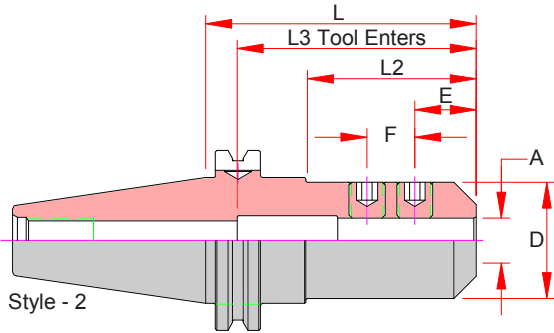
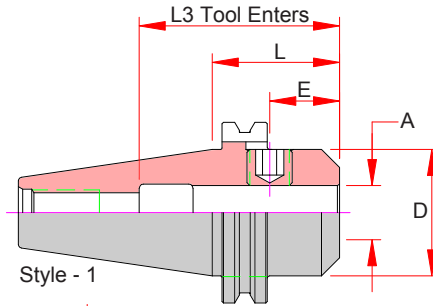
BC
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EM - End Mill Adapters

CAT50 End Mill Adapters

Features

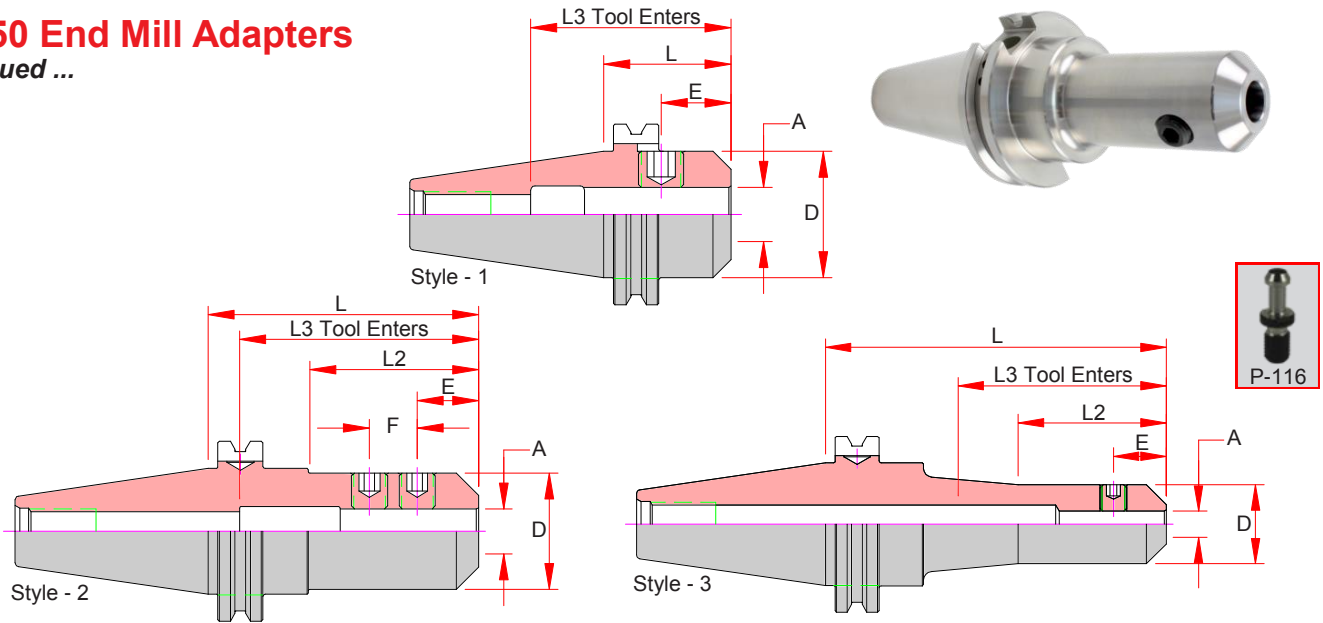
- 3 μm - 0.0001" Bore Runout
- H5 Bore Tolerance
- Coolant Thru Center
- DIN AD+B Flange Coolant Standard
- Balanced G6.3 @ 15,000 RPM
- Add "-J" for Jet-Blast Coolant Ports



| | Part Number | A Bore | D | E | F | L Projection | L2 | L3 Max. Tool Enters | Screw Number | Style |
|------|--------------------|--------|------|------|---|--------------|------|---------------------|--------------|-------|
| 1/8 | CAT50-EM012-0250 | 0.1250 | 0.69 | 0.19 | - | 2.50 | 0.92 | 4.75 | 3 | 2 |
| | CAT50-EM012-0531 | | | | | 5.31 | 1.57 | 7.56 | | 3 |
| 3/16 | CAT50-EM018-0250 | 0.1875 | 0.69 | 0.44 | - | 2.50 | 0.92 | 4.75 | 3 | 2 |
| | CAT50-EM018-0531 | | | | | 5.31 | 1.57 | 7.56 | | 3 |
| 1/4 | CAT50-EM025-0250 | 0.2500 | 0.79 | 0.44 | - | 2.50 | 0.92 | 4.75 | 4 | 2 |
| | CAT50-EM025-0400 | | | | | 4.00 | 2.42 | 6.25 | | 3 |
| | CAT50-EM025-0531 | | | | | 5.31 | 1.57 | 7.56 | | 3 |
| | CAT50-EM025-0600 | | | | | 6.00 | 1.57 | 8.25 | | 3 |
| 5/16 | CAT50-EM031-0250 | 0.3125 | 0.88 | 0.44 | - | 2.50 | 1.00 | 4.75 | 4 | 2 |
| | CAT50-EM031-0400 | | | | | 4.00 | 2.42 | 6.25 | | 2 |
| | CAT50-EM031-0531 | | | | | 5.31 | 1.57 | 7.56 | | 3 |
| | CAT50-EM031-0600 | | | | | 6.00 | 1.57 | 8.25 | | 3 |
| 3/8 | CAT50-EM037-0250 | 0.3750 | 1.00 | 0.75 | - | 2.50 | 1.00 | 4.75 | 5 | 2 |
| | CAT50-EM037-0300 | | | | | 3.00 | 1.42 | 5.25 | | 2 |
| | CAT50-EM037-0400 | | | | | 4.00 | 2.42 | 6.25 | | 2 |
| | CAT50-EM037-0450 | | | | | 4.50 | 2.92 | 6.75 | | 2 |
| | CAT50-EM037-0600 | | | | | 6.00 | 3.00 | 8.25 | | 3 |
| | CAT50-EM037-0650 | | | | | 6.50 | 3.00 | 8.75 | | 3 |
| | CAT50-EM037-0800 | | | | | 8.00 | 3.00 | 10.25 | | 3 |
| | CAT50-EM037-1000 | | | | | 10.00 | 3.00 | 12.25 | | 3 |
| | CAT50-EM037-1200 | | | | | 12.00 | 3.00 | 14.25 | | 3 |
| | CAT50-EM037-1500 † | | | | | 15.00 | 3.00 | 17.25 | | 3 |
| 7/16 | CAT50-EM043-0262 | 0.4375 | 1.25 | 0.88 | - | 2.62 | 1.12 | 4.87 | 5 | 2 |
| | CAT50-EM043-0400 | | | | | 4.00 | 2.42 | 6.25 | | 2 |
| | CAT50-EM043-0600 | | | | | 6.00 | 1.96 | 8.25 | | 3 |
| 1/2 | CAT50-EM050-0262 | 0.5000 | 1.25 | 0.88 | - | 2.62 | 1.20 | 4.87 | 6 | 2 |
| | CAT50-EM050-0300 | | | | | 3.00 | 1.42 | 5.25 | | 2 |
| | CAT50-EM050-0400 | | | | | 4.00 | 2.42 | 6.25 | | 2 |
| | CAT50-EM050-0462 | | | | | 4.62 | 3.04 | 6.87 | | 2 |
| | CAT50-EM050-0600 | | | | | 6.00 | 3.13 | 8.25 | | 3 |
| | CAT50-EM050-0662 | | | | | 6.62 | 3.13 | 8.87 | | 3 |
| | CAT50-EM050-0800 | | | | | 8.00 | 3.13 | 10.25 | | 3 |
| | CAT50-EM050-1000 | | | | | 10.00 | 3.13 | 12.25 | | 3 |
| | CAT50-EM050-1200 | | | | | 12.00 | 3.13 | 14.25 | | 3 |
| | CAT50-EM050-1500 | | | | | 15.00 | 3.13 | 17.25 | | 3 |

CAT50 End Mill Adapters

Continued ...



| | Part Number | A Bore | D | E | F | L Projection | L2 | L3 Max. Tool Enters | Screw Number | Style | | |
|------------------|---------------------|--------|------|--------|------|--------------|--------|---------------------|--------------|-------|--------|---|
| 9/16 | CAT50-EM056-0262 | 0.5625 | 1.50 | 0.88 | - | 2.62 | 1.12 | 4.87 | 6 | 2 | | |
| | CAT50-EM062-0300 | | | | | 3.00 | 1.50 | 5.25 | | 2 | | |
| | CAT50-EM062-0375 | | | | | 3.75 | 2.25 | 6.00 | | 2 | | |
| | CAT50-EM062-0400 | | | | | 4.00 | 2.50 | 6.25 | | 2 | | |
| 5/8 | CAT50-EM062-0600 | 0.6250 | 1.50 | 0.94 | - | 6.00 | 4.42 | 8.25 | 7 | 2 | | |
| | CAT50-EM062-0775 | | | | | 7.75 | 4.25 | 10.00 | | 3 | | |
| | CAT50-EM062-1000 | | | | | 10.00 | | | | 3 | | |
| | CAT50-EM062-1200 | | | | | 10.00 | | | | 3 | | |
| | CAT50-EM075-0175 | | | | | 1.75 | 0.25 | 2.76 | | 1 | | |
| | CAT50-EM075-0300 | | | | | 3.00 | 1.50 | 3.86 | | 2 | | |
| 3/4 | CAT50-EM075-0375 | 0.7500 | 1.75 | 1.00 | - | 3.75 | 2.25 | 4.00 | 8 | 2 | | |
| | CAT50-EM075-0400 | | | | | 4.00 | 2.50 | 3.94 | | 2 | | |
| | CAT50-EM075-0575 | | | | | 5.75 | 4.17 | 3.94 | | 2 | | |
| | CAT50-EM075-0600 | | | | | 6.00 | 1.96 | 3.94 | | 3 | | |
| | CAT50-EM075-0800 | | | | | 8.00 | 1.96 | 3.94 | | 3 | | |
| | CAT50-EM075-1000 | | | | | 10.00 | 1.96 | 3.94 | | 3 | | |
| | CAT50-EM075-1200 | | | | | 12.00 | 1.96 | 3.94 | | 3 | | |
| | CAT50-EM075-1500 | | | | | 15.00 | 1.96 | N/A | | 3 | | |
| | CAT50-EM087-0350 | | | | | 3.50 | 2.00 | 4.19 | | 2 | | |
| | CAT50-EM087-0600 | | | | | 6.00 | 4.42 | 4.06 | | 8 | 2 | |
| CAT50-EM087-0775 | 7.75 | 6.17 | 4.06 | 2 | | | | | | | | |
| 1 | CAT50-EM100-0162 | 1.0000 | 2.75 | 1.12 | - | 1.62 | 0.62 | 2.50 | 10 | 1 | | |
| | CAT50-EM100-0300 | | 2.00 | 1.12 | - | 3.00 | 1.50 | 4.44 | 10 | 1 | | |
| | CAT50-EM100-0400 | | 2.00 | 1.12 | 1.00 | 4.00 | 2.54 | 4.44 | (2) 10 | 2 | | |
| | CAT50-EM100-0600 | | 2.00 | 1.12 | 1.00 | 6.00 | 4.50 | 4.44 | (2) 10 | 2 | | |
| | CAT50-EM100-0800 | | 2.00 | 1.12 | 1.00 | 8.00 | 6.50 | 4.44 | (2) 10 | 2 | | |
| | CAT50-EM100-1000 | | 2.00 | 1.12 | 1.00 | 10.00 | 4.50 | 4.44 | (2) 10 | 3 | | |
| 1 1/4 | CAT50-EM125-0200 | 1.2500 | 2.75 | 1.50 | - | 2.00 | 1.20 | 3.50 | 11 | 1 | | |
| | CAT50-EM125-0300 | | | 1.12 | 1.00 | 3.00 | 2.20 | 3.50 | (2) 11 | 2 | | |
| | CAT50-EM125-0400 | | | 1.12 | 1.00 | 4.00 | 2.58 | 3.35 | (2) 11 | 2 | | |
| | CAT50-EM125-0600 | | | 1.12 | 1.00 | 6.00 | 4.58 | 3.35 | (2) 11 | 2 | | |
| | CAT50-EM125-0800 | | | 1.12 | 1.00 | 8.00 | 6.58 | 3.35 | (2) 11 | 2 | | |
| | CAT50-EM125-1000 | | | 1.12 | 1.00 | 10.00 | 8.58 | 3.35 | (2) 11 | 2 | | |
| 1 1/2 | CAT50-EM150-0225 | 1.5000 | 2.75 | 1.50 | - | 2.25 | 1.45 | 2.44 | 11 | 1 | | |
| | CAT50-EM150-0400 | | | 1.12 | 1.00 | 4.00 | 3.20 | 4.50 | (2) 11 | 2 | | |
| | CAT50-EM150-0600 | | | 1.12 | 1.00 | 6.00 | 5.20 | 4.50 | (2) 11 | 2 | | |
| | CAT50-EM150-0800 | | | 1.12 | 1.00 | 8.00 | 7.20 | 4.50 | (2) 11 | 2 | | |
| 2 | CAT50-EM150-1000 | 1.5000 | 2.75 | 1.12 | 1.00 | 10.00 | 9.20 | 4.50 | (2) 11 | 2 | | |
| | CAT50-EM200-0362 ** | | | | | 3.62 | 2.82 | 3.66 | 12 & 13 | 2 | | |
| | CAT50-EM200-0562 | | | 2.0000 | 3.75 | 1.41 | 1.50 | 5.62 | 4.86 | 4.13 | (2) 13 | 2 |
| | CAT50-EM200-0800 | | | 8.00 | 7.24 | 4.13 | (2) 13 | 2 | | | | |
| CAT50-EM200-1000 | 10.00 | 9.24 | 4.13 | (2) 13 | 2 | | | | | | | |
| 2 1/2 | CAT50-EM250-0650 | 2.5000 | 4.00 | 1.50 | 1.56 | 6.50 | 5.74 | 4.00 | (2) 13 | 2 | | |

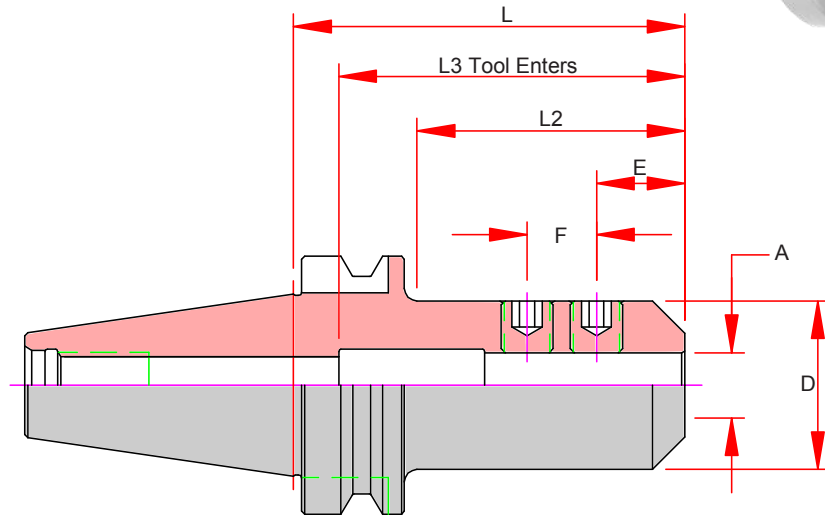
** No DIN AD+B Option Available - No ANSI Safety Area due to bore size. Check Tool Change Clearance prior to ordering.

EM - End Mill Adapters

BT30 End Mill Adapters

Features

- 3 μm - 0.0001" Bore Runout
- H5 Bore Tolerance
- Coolant Thru Center
- Balanced G6.3 @ 20,000 RPM
- Add "-J" for Jet-Blast Coolant Ports

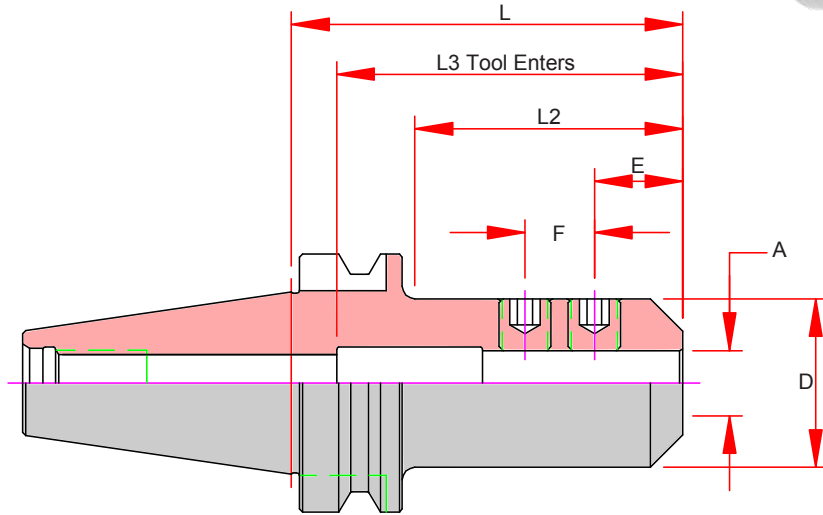


| | Part Number | A Bore | D | E | F | L Projection | L2 | L3 Max. Tool Enters | Screw Number |
|------|-----------------|--------|------|------|------|--------------|------|---------------------|--------------|
| 1/8 | BT30-EM012-0236 | 0.1250 | 0.69 | 0.38 | - | 2.36 | 1.37 | 3.32 | 3 |
| | BT30-EM012-0400 | | | | | 4.00 | 3.00 | 4.96 | |
| 3/16 | BT30-EM018-0236 | 0.1875 | 0.69 | 0.50 | - | 2.36 | 1.37 | 3.32 | 4 |
| | BT30-EM018-0400 | | | | | 4.00 | 3.00 | 4.96 | |
| 1/4 | BT30-EM025-0236 | 0.2500 | 0.78 | 0.38 | - | 2.36 | 1.37 | 3.32 | 4 |
| | BT30-EM025-0400 | | | | | 4.00 | 3.00 | 4.96 | |
| 5/16 | BT30-EM031-0236 | 0.3125 | 0.88 | 0.60 | - | 2.36 | 1.37 | 3.32 | 4 |
| | BT30-EM031-0400 | | | | | 4.00 | 3.00 | 2.96 | |
| 3/8 | BT30-EM037-0236 | 0.3750 | 1.00 | 0.75 | - | 2.36 | 1.37 | 2.36 | 5 |
| | BT30-EM037-0400 | | | | | 4.00 | 3.00 | 2.36 | |
| 1/2 | BT30-EM050-0236 | 0.5000 | 1.25 | 0.88 | - | 2.36 | 1.37 | 2.56 | 6 |
| | BT30-EM050-0400 | | | | | 4.00 | 3.00 | 2.56 | |
| 5/8 | BT30-EM062-0236 | 0.6250 | 1.50 | 0.94 | - | 2.36 | 1.37 | 2.25 | 7 |
| | BT30-EM062-0400 | | | | | 4.00 | 3.00 | 2.25 | |
| 3/4 | BT30-EM075-0236 | 0.7500 | 1.75 | 1.00 | - | 2.36 | 1.57 | 2.56 | 8 |
| | BT30-EM075-0400 | | | | | 4.00 | 3.21 | 2.56 | |
| 7/8 | BT30-EM087-0354 | 0.8750 | 1.75 | 1.00 | 0.81 | 3.54 | 2.75 | 3.15 | (2) 8 |
| 1 | BT30-EM100-0275 | 1.0000 | 2.00 | 1.12 | - | 2.75 | 1.96 | 2.50 | 10 |

BT40 End Mill Adapters

Features

- 3 µm - 0.0001" Bore Runout
- H5 Bore Tolerance
- Coolant Thru Center
- DIN AD+B Flange Coolant Standard
- Balanced G6.3 @ 20,000 RPM
- Add "-J" for Jet-Blast Coolant Ports

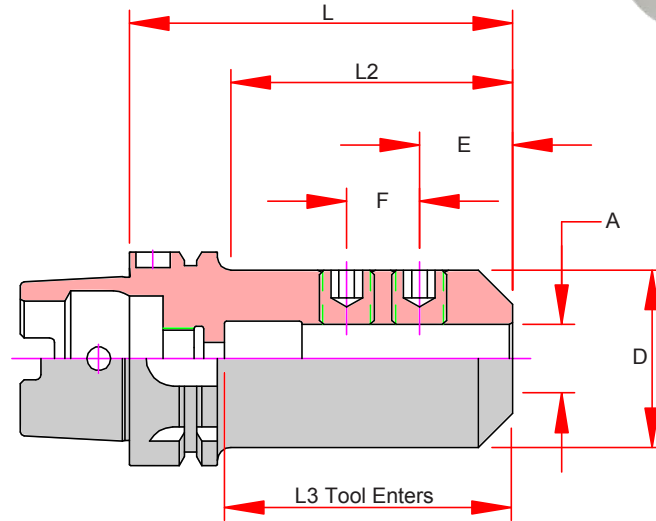


| | Part Number | A Bore | D | E | F | L Projection | L2 | L3 Max. Tool Enters | Screw Number | Style | | |
|-------|-----------------|--------|------|------|------|--------------|------|---------------------|--------------|--------|--------|---|
| 1/8 | BT40-EM012-0250 | 0.1250 | 0.69 | 0.19 | - | 2.50 | 1.31 | 3.89 | 3 | 1 | | |
| | BT40-EM012-0400 | | | | | 4.00 | 1.00 | 5.39 | | 2 | | |
| 3/16 | BT40-EM018-0250 | 0.1875 | 0.69 | 0.44 | - | 2.50 | 1.31 | 3.89 | 4 | 1 | | |
| | BT40-EM018-0400 | | | | | 4.00 | 2.81 | 5.39 | | 1 | | |
| 1/4 | BT40-EM025-0250 | 0.2500 | 0.78 | 0.44 | - | 2.50 | 1.31 | 3.89 | 4 | 1 | | |
| | BT40-EM025-0400 | | | | | 4.00 | 2.81 | 5.39 | | 1 | | |
| | BT40-EM025-0600 | | | | | 6.00 | 2.50 | 7.39 | | 2 | | |
| 5/16 | BT40-EM031-0250 | 0.3125 | 0.88 | 0.44 | - | 2.50 | 1.31 | 3.89 | 4 | 1 | | |
| | BT40-EM031-0400 | | | | | 4.00 | 2.81 | 5.41 | | 1 | | |
| 3/8 | BT40-EM037-0250 | 0.3750 | 1.00 | 0.75 | - | 2.50 | 1.31 | 3.89 | 5 | 1 | | |
| | BT40-EM037-0400 | | | | | 4.00 | 2.81 | 5.39 | | 1 | | |
| | BT40-EM037-0600 | | | | | 6.00 | 2.50 | 7.39 | | 2 | | |
| 1/2 | BT40-EM050-0250 | 0.5000 | 1.25 | 0.88 | - | 2.50 | 1.31 | 2.56 | 6 | 1 | | |
| | BT40-EM050-0400 | | | | | 4.00 | 2.81 | 2.56 | | 1 | | |
| | BT40-EM050-0600 | | | | | 6.00 | 2.50 | 2.56 | | 1 | | |
| 5/8 | BT40-EM062-0250 | 0.6250 | 1.50 | 0.94 | - | 2.50 | 1.31 | 3.50 | 7 | 1 | | |
| | BT40-EM062-0400 | | | | | 4.00 | 2.81 | 3.50 | | 1 | | |
| | BT40-EM062-0600 | | | | | 6.00 | 4.81 | 3.50 | | 1 | | |
| 3/4 | BT40-EM075-0175 | 0.7500 | 1.75 | 1.00 | - | 1.75 | 0.56 | 2.38 | 8 | 1 | | |
| | BT40-EM075-0250 | | | | | 2.50 | 1.31 | 2.38 | | 1 | | |
| | BT40-EM075-0400 | | | | | 4.00 | 2.81 | 4.00 | | 1 | | |
| | BT40-EM075-0600 | | | | | 6.00 | 4.81 | 4.00 | | 1 | | |
| 7/8 | BT40-EM087-0335 | 0.8750 | 1.88 | 1.00 | 0.81 | 3.35 | 2.28 | 4.18 | 8 | 1 | | |
| | BT40-EM087-0500 | | | | | 5.00 | 3.93 | 4.18 | | 1 | | |
| 1 | BT40-EM100-0200 | 1.0000 | 2.00 | 1.12 | - | 2.00 | 0.97 | 2.38 | 10 | 1 | | |
| | BT40-EM100-0300 | | | | | 3.00 | 1.97 | 3.15 | | 1 | | |
| | BT40-EM100-0400 | | | | | 1.00 | 4.00 | 2.97 | | 4.44 | (2) 10 | 1 |
| | BT40-EM100-0600 | | | | | 1.00 | 6.00 | 4.97 | | 4.44 | (2) 10 | 1 |
| | BT40-EM125-0200 | | | | | - | 2.00 | 0.97 | | 2.36 | 9 | 1 |
| 1 1/4 | BT40-EM125-0356 | 1.2500 | 2.25 | 1.12 | 1.00 | 3.56 | 2.57 | 3.54 | (2) 11 | 1 | | |
| | BT40-EM125-0600 | | | | 1.12 | 6.00 | 5.00 | 3.54 | | (2) 11 | 1 | |
| 1 1/2 | BT40-EM150-0433 | 1.5000 | 2.62 | 1.12 | 1.00 | 4.33 | 3.34 | 2.52 | (2) 11 | 1 | | |

HSK63A End Mill Adapters

Features

- 3 μm - 0.0001" Bore Runout
- H5 Bore Tolerance
- Coolant Thru Center
- Balanced G6.3 @ 20,000 RPM
- Order Wrench Separately
- Add "-J" for Jet-Blast Coolant Ports

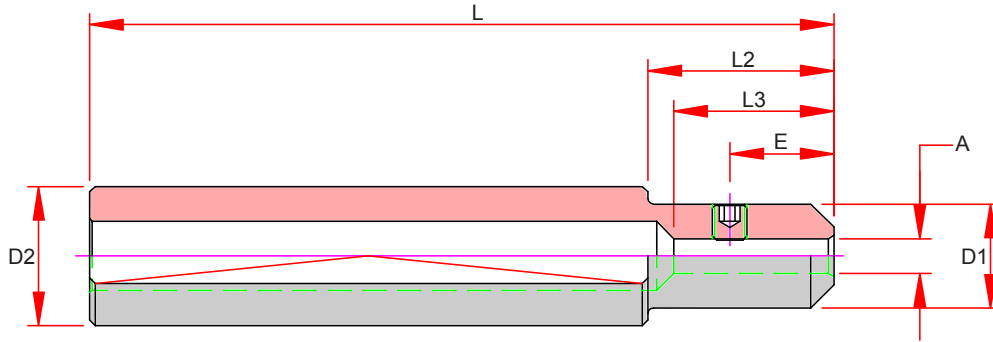


| | Part Number | A Bore | L Projection | D | E | F | L2 | L3 Max. Tool Enters | Screw Number |
|-------|-------------------|--------|--------------|------|------|------|------|---------------------|--------------|
| 1/8 | HSK63A-EM012-0250 | 0.1250 | 2.50 | 0.69 | 0.19 | - | 1.28 | 1.63 | 3 |
| 3/16 | HSK63A-EM018-0250 | 0.1875 | 2.50 | 0.69 | 0.44 | - | 1.28 | 1.63 | 3 |
| 1/4 | HSK63A-EM025-0250 | 0.2500 | 2.50 | 0.78 | 0.44 | - | 1.28 | 1.63 | 4 |
| 5/16 | HSK63A-EM031-0250 | 0.3125 | 2.50 | 0.88 | 0.44 | - | 1.28 | 1.63 | 4 |
| 3/8 | HSK63A-EM037-0250 | 0.3750 | 2.50 | 1.00 | 0.75 | - | 1.28 | 1.50 | 5 |
| 1/2 | HSK63A-EM050-0315 | 0.5000 | 3.15 | 1.25 | 0.88 | - | 1.93 | 2.10 | 6 |
| 5/8 | HSK63A-EM062-0315 | 0.6250 | 3.15 | 1.50 | 0.94 | - | 1.93 | 2.10 | 7 |
| 3/4 | HSK63A-EM075-0315 | 0.7500 | 3.15 | 1.75 | 1.00 | - | 2.08 | 1.97 | 8 |
| 1 | HSK63A-EM100-0400 | 1.0000 | 4.00 | 2.00 | 1.12 | 1.00 | 2.94 | 2.95 | (2) 10 |
| 1 1/4 | HSK63A-EM125-0435 | 1.2500 | 4.35 | 2.50 | 1.12 | 1.00 | 3.32 | 3.23 | (2) 11 |

Straight Shank End Mill Adapters

Features:

- Coolant Thru
- Flats for Lathe Applications
- Add "-J" for Jet-Blast Coolant Ports



| Part Number | A | D1 | D2 | E | L Length | L2 | L3 Max. Tool Enters | Screw Number |
|----------------------|--------|------|--------|-------------|----------|------|---------------------|--------------|
| 1/8 S075-EM012-0600 | 0.1250 | 0.50 | | 0.19 | | 2.00 | | 1 |
| 3/16 S075-EM018-0600 | 0.1875 | 0.56 | 0.7500 | 0.44 | | 2.00 | | 2 |
| 1/4 S075-EM025-0600 | 0.2500 | 0.75 | | 0.59 | 6.00 | - | 6.00 | 4 |
| 5/16 S075-EM031-0600 | 0.3125 | 0.75 | | 0.44 | | - | | 4 |
| 3/8 S100-EM037-0600 | 0.3750 | 1.00 | 1.0000 | 0.75 | | - | | 5 |
| 1/2 S100-EM050-0600 | 0.5000 | 1.00 | | 0.39 & 0.98 | | - | | (2) 4 |

Control Point End Mill Adapter Screws

- Ground control point for angular locking
- Use holder part number to verify screw size and length



| Screw Number | Part Number | End Mill Bore Size | Thread | OD Screw | Length | Hex | Max. Torque ft/lbs |
|--------------|-------------|---------------------------|---------|----------|--------|------|--------------------|
| 1 | SCW-EM01 | 1/8 | #6-32 | 0.14 | 0.19 | 1/16 | 1 |
| 2 | SCW-EM02 | 3/16 | #8-32 | 0.16 | 0.19 | 5/64 | 2 |
| 3 | SCW-EM03 | 1/8 | #10-32 | 0.19 | 0.25 | 3/32 | 3 |
| 4 | SCW-EM04 | 3/16, 1/4, 5/16, 6mm, 8mm | 1/4-28 | 0.25 | 0.25 | 1/8 | 4 |
| 5 | SCW-EM05 | 3/8, 7/16, 10mm | 3/8-24 | 0.38 | 0.31 | 3/16 | 12 |
| 6 | SCW-EM06 | 1/2, 12mm, 14mm | 7/16-20 | 0.44 | 0.37 | 7/32 | 17 |
| 7 | SCW-EM07 | 5/8, 16mm, 18mm | 9/16-18 | 0.56 | 0.50 | 9/32 | 31 |
| 8 | SCW-EM08 | 3/4, 7/8, 20mm | 5/8-18 | 0.63 | 0.50 | 5/16 | 48 |
| 9 | SCW-EM09 | 1", 1-1/4 STUB, 25mm | 3/4-16 | 0.75 | 0.37 | 3/8 | 69 |
| 10 | SCW-EM10 | 1", 1-1/4, 1-1/2, 25mm | 3/4-16 | 0.75 | 0.50 | 3/8 | 69 |
| 11 | SCW-EM11 | 1", 1-1/4, 1-1/2, 32mm | 3/4-16 | 0.75 | 0.62 | 3/8 | 69 |
| 12 | SCW-EM12 | 2", 2-1/2 | 1"-14 | 1.00 | 0.47 | 1/2 | 125 |
| 13 | SCW-EM13 | 2", 2-1/2 | 1"-14 | 1.00 | 0.87 | 1/2 | 125 |

SM - Shell Mill Adapters

Rough Milling



Shown body mounted with Shell Mill and Inserts not included.

Premium Performance

Dynamic Balance

Dynamically Balanced Body for
G6.3 @ 20,000 RPM's (CAT50 @ 15,000)

Best in Class Performance

Pioneer SM exceeds industry standards to provide optimum performance and interchangeability

More Standard Features!

- Body - Coolant Thru the Center
- DIN AD+B Flange Coolant in all Models
- Dynamic Balance Standard
- ID Chip Hole Standard
- Standard & Extended Lengths up to 15"
- Replaceable Keys

Optional

- FX High Volume Coolant System for Ported Cutter Bodies

Standard Features

Dynamic Balance Compensation



ID Chip Hole

DIN AD+B Flange Coolant

FX - High Volume Coolant System



Shown body mounted with Shell Mill and Inserts not included.

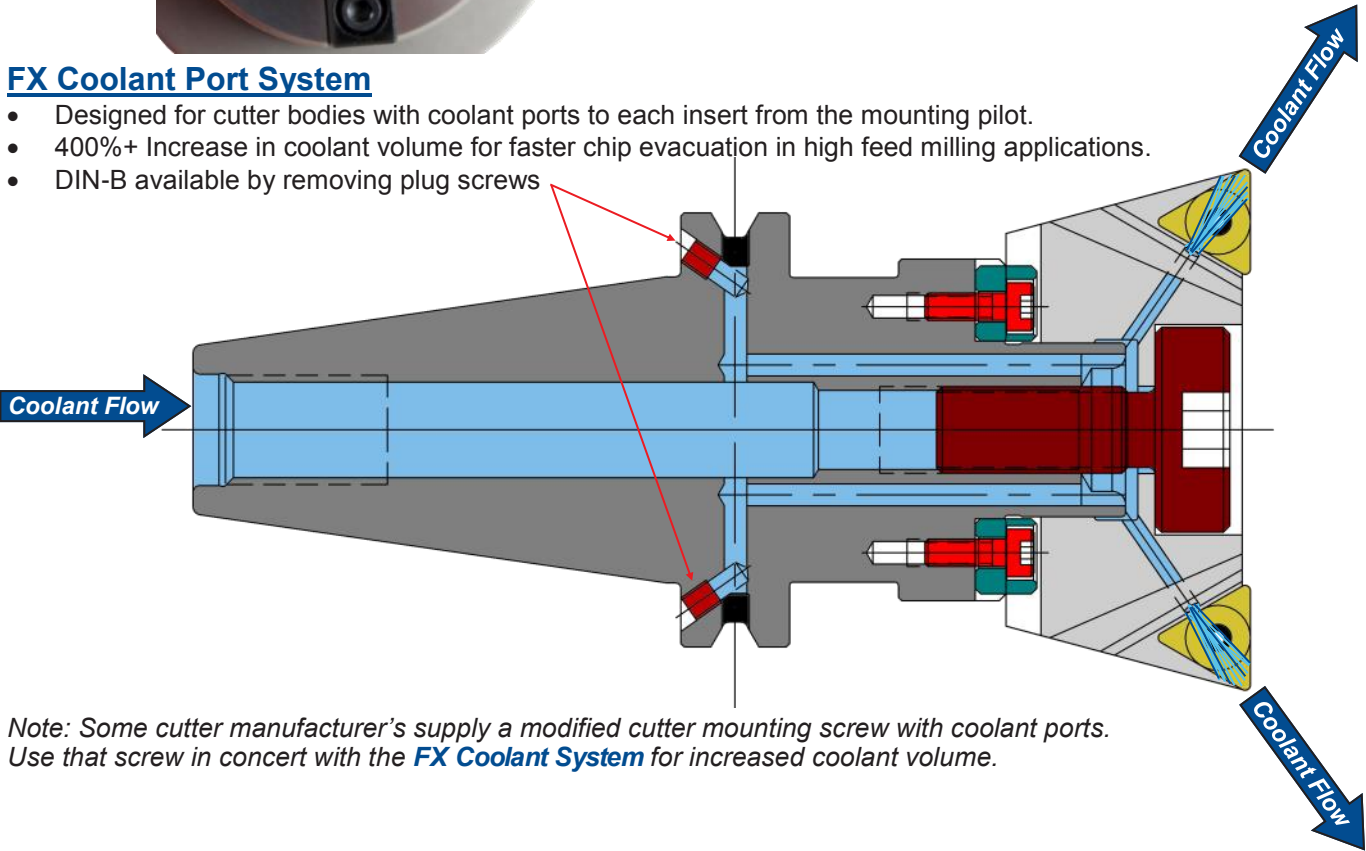


Did your cutter company supply a coolant screw?
 Use our standard holder for coolant through the modified screw - or - use our FX model for additional coolant flow!

The standard model is designed for non-coolant and coolant screw applications. For ported cutters, coolant holes to the insert from the pilot of the holder, the FX model is required.

FX Coolant Port System

- Designed for cutter bodies with coolant ports to each insert from the mounting pilot.
- 400%+ Increase in coolant volume for faster chip evacuation in high feed milling applications.
- DIN-B available by removing plug screws



Note: Some cutter manufacturer's supply a modified cutter mounting screw with coolant ports. Use that screw in concert with the **FX Coolant System** for increased coolant volume.

| | | | | | | | | | | | | | |
|------|--------|-------|----|----|----|----|----|----|----|----|----|----|----|
| ACC. | QC TAP | MISC. | SM | EM | DA | TG | ER | SD | MC | VX | MX | SX | BC |
|------|--------|-------|----|----|----|----|----|----|----|----|----|----|----|

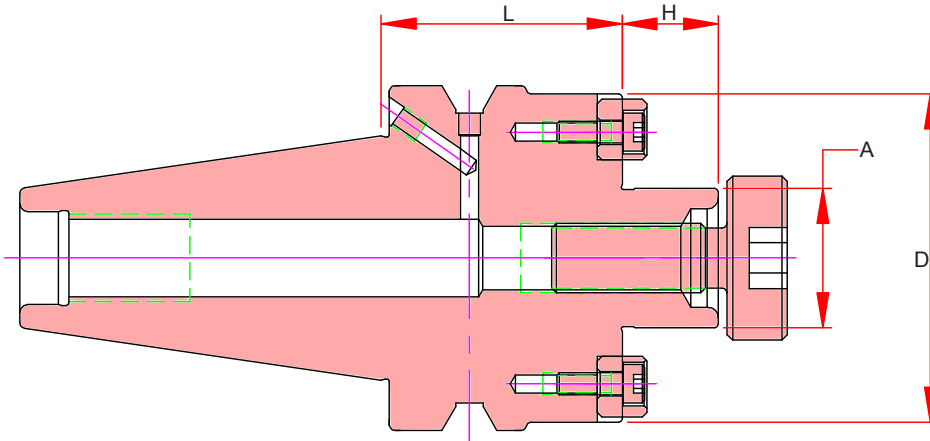


SM - Shell Mill Adapters

BT Shell Mill Adapters

Features

- Body - Coolant Thru Center for modified screws
- DIN AD+B Flange Coolant Standard on BT40
- Balanced G6.3 @ 20,000 RPM
- FX option available, see chart below

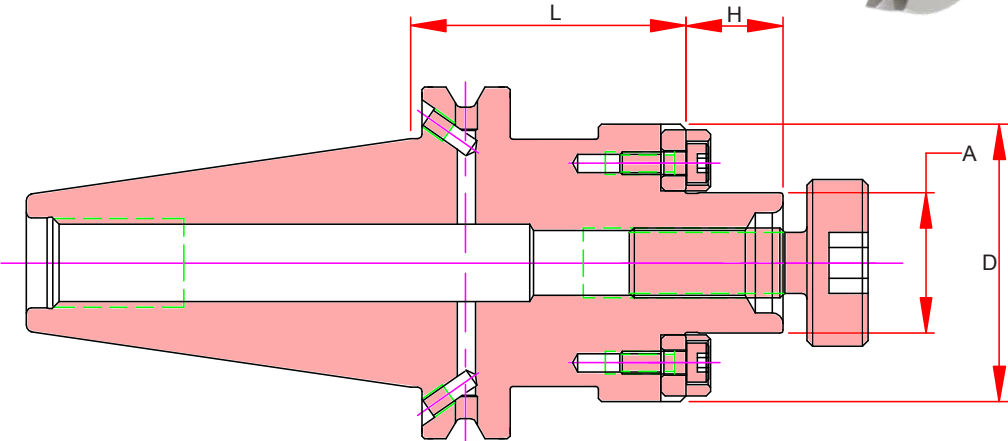


| | Part Number | FX Ported Coolant | A Pilot | D | H | L Projection | Drive Key Size | Drive Key Number | Mounting Screw Thread | Mounting Screw# |
|-------------|-----------------|-------------------|---------|------|------|--------------|----------------|------------------|-----------------------|-----------------|
| BT30 | BT30-SM050-0119 | | 0.50 | 1.38 | 0.57 | 1.19 | 0.250 | DK-SM050 | 1/4-28 | SCW-SM050 |
| | BT30-SM075-0119 | | 0.75 | 1.75 | 0.69 | 1.19 | 0.312 | DK-SM075 | 3/8-24 | SCW-SM075 |
| | BT30-SM100-0119 | | 1.00 | 1.97 | 0.69 | 1.19 | 0.375 | DK-SM100 | 1/2-20 | SCW-SM100 |
| BT40 | BT40-SM075-0175 | Optional Add -F | 0.75 | 1.75 | 0.69 | 1.75 | 0.312 | DK-SM075 | 3/8-24 | SCW-SM075 |
| | BT40-SM075-0400 | | | 4.00 | | | | | | |
| | BT40-SM100-0175 | | | 1.75 | | | | | | |
| | BT40-SM100-0400 | | | 4.00 | | | | | | |
| | BT40-SM125-0200 | | | 2.00 | | | | | | |
| | BT40-SM125-0400 | | | 4.00 | | | | | | |
| | BT40-SM150-0200 | | 2.00 | 3.82 | 0.94 | 2.00 | 0.625 | DK-SM150 | 3/4-16 | SCW-SM150 |

CAT40 Shell Mill Adapters

Features

- Body - Coolant Thru Center for modified screws
- DIN AD+B Flange Coolant Standard
- Balanced G6.3 @ 20,000 RPM
- FX Coolant option available, see chart below add -F to the Part Number



| Part Number | FX Ported Coolant | A Pilot | D | H | L Projection | Drive Key Size | Drive Key Number | Mounting Screw Thread | Mounting Screw# |
|------------------|-------------------|---------|------|------|--------------|----------------|------------------|-----------------------|-----------------|
| CAT40-SM050-0175 | | | | | 1.75 | | | | |
| CAT40-SM050-0400 | | 0.500 | 1.38 | 0.57 | 4.00 | 0.250 | DK-SM050 | 1/4-28 | SCW-SM050 |
| CAT40-SM050-0600 | | | | | 6.00 | | | | |
| CAT40-SM075-0175 | | | | | 1.75 | | | | |
| CAT40-SM075-0400 | | 0.750 | 1.75 | 0.69 | 4.00 | 0.312 | DK-SM075 | 3/8-24 | SCW-SM075 |
| CAT40-SM075-0600 | | | | | 6.00 | | | | |
| CAT40-SM075-0800 | | | | | 8.00 | | | | |
| CAT40-SM100-0200 | Optional Add -F | | | | 2.00 | | | | |
| CAT40-SM100-0400 | | 1.000 | 1.97 | 0.69 | 4.00 | 0.375 | DK-SM100 | 1/2-20 | SCW-SM100 |
| CAT40-SM100-0600 | | | | | 6.00 | | | | |
| CAT40-SM100-0800 | | | | | 8.00 | | | | |
| CAT40-SM125-0225 | | 1.250 | 2.87 | 0.69 | 2.25 | 0.500 | DK-SM125 | 5/8-18 | SCW-SM125 |
| CAT40-SM150-0240 | | 1.500 | 3.82 | 0.94 | 2.40 | 0.625 | DK-SM150 | 3/4-16 | SCW-SM150 |
| CAT40-SM200-0240 | | 2.000 | 4.37 | 0.94 | 2.40 | 0.750 | DK-SM200 | 1"-14 | SCW-SM200 |

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QC TAP

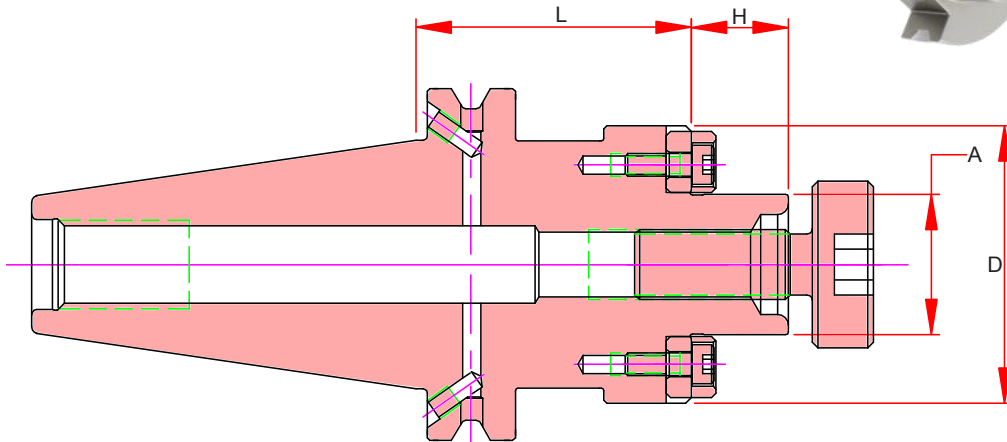
ACC.

SM - Shell Mill Adapters

CAT50 Shell Mill Adapters

Features

- Body - Coolant Thru Center for modified screws
- DIN AD+B Flange Coolant Standard
- Balanced G6.3 @ 15,000 RPM
- FX Option Available, see chart below



** Stocked in "FX" Coolant Style Only

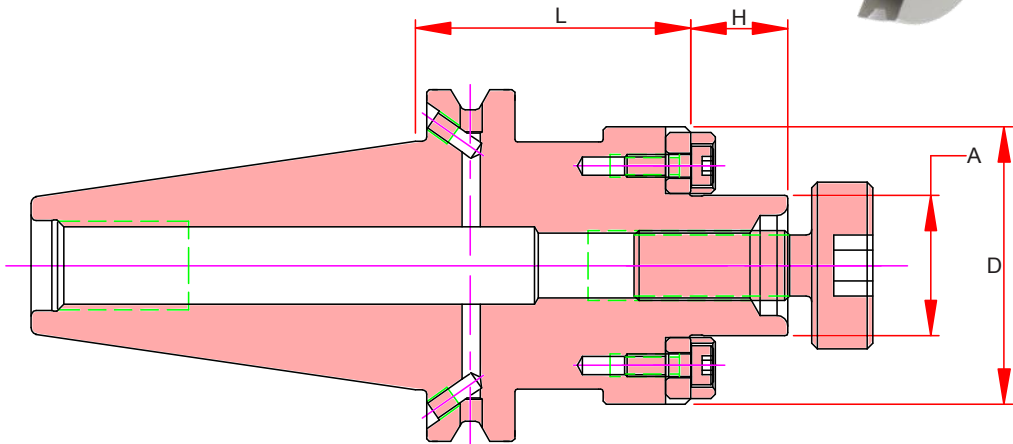
Standard Non-Coolant

| Part Number | A Pilot | D | H | L Projection | Drive Key Size | Drive Key Number | Mounting Screw Thread | Mounting Screw# |
|----------------------|---------|------|------|--------------|----------------|------------------|-----------------------|-----------------|
| CAT50-SM075-0150 | | | | 1.50 | | | | |
| CAT50-SM075-0350 | | | | 3.50 | | | | |
| CAT50-SM075-0550 | | | | 5.50 | | | | |
| CAT50-SM075-0800 | 0.75 | 1.75 | 0.69 | 8.00 | 0.312 | DK-SM075 | 3/8-24 | SCW-SM075 |
| CAT50-SM075-1000-F** | | | | 10.00 | | | | |
| CAT50-SM075-1200-F** | | | | 12.00 | | | | |
| CAT50-SM075-1500-F** | | | | 15.00 | | | | |
| CAT50-SM100-0200 | | | | 2.00 | | | | |
| CAT50-SM100-0400 | | | | 4.00 | | | | |
| CAT50-SM100-0600 | | | | 6.00 | | | | |
| CAT50-SM100-0800 | 1.00 | 1.97 | 0.69 | 8.00 | 0.375 | DK-SM100 | 1/2-20 | SCW-SM100 |
| CAT50-SM100-1000-F** | | | | 10.00 | | | | |
| CAT50-SM100-1200-F** | | | | 12.00 | | | | |
| CAT50-SM100-1500-F** | | | | 15.00 | | | | |
| CAT50-SM125-0150 | | | | 1.50 | | | | |
| CAT50-SM125-0350 | | | | 3.50 | | | | |
| CAT50-SM125-0550 | 1.25 | 2.75 | 0.69 | 5.50 | 0.500 | DK-SM125 | 5/8-18 | SCW-SM125 |
| CAT50-SM125-0800 | | | | 8.00 | | | | |
| CAT50-SM125-1200-F** | | | | 12.00 | | | | |
| CAT50-SM125-1500-F** | | | | 15.00 | | | | |
| CAT50-SM150-0240 | | | | 2.40 | | DK-SM150-C | | |
| CAT50-SM150-0400 | 1.50 | 3.82 | 0.94 | 4.00 | 0.625 | DK-SM150 | 3/4-16 | SCW-SM150 |
| CAT50-SM150-0600 | | | | 6.00 | | DK-SM150 | | |
| CAT50-SM150-0800 | | | | 8.00 | | DK-SM150 | | |
| CAT50-SM200-0240 | 2.00 | 4.37 | 0.94 | 2.40 | 0.750 | DK-SM200 | 1"-14 | SCW-SM200 |
| CAT50-SM200-0400 | | | | 4.00 | | | | |

CAT50 FX Shell Mill Adapters

Features

- FX Coolant Holes for Ported Cutters
- DIN AD+B Flange Coolant Standard
- Balanced G6.3 @ 15,000 RPM



FX - High Volume Coolant System

| Part Number | A Pilot | D | H | L Projection | Drive Key Size | Drive Key Number | Mounting Screw Thread | Mounting Screw# |
|--------------------|---------|------|------|--------------|----------------|------------------|-----------------------|-----------------|
| CAT50-SM075-0150-F | | | | 1.50 | | | | |
| CAT50-SM075-0350-F | | | | 3.50 | | | | |
| CAT50-SM075-0550-F | | | | 5.50 | | | | |
| CAT50-SM075-0800-F | 0.75 | 1.75 | 0.69 | 8.00 | 0.312 | DK-SM075 | 3/8-24 | SCW-SM075 |
| CAT50-SM075-1000-F | | | | 10.00 | | | | |
| CAT50-SM075-1200-F | | | | 12.00 | | | | |
| CAT50-SM075-1500-F | | | | | | | | |
| CAT50-SM100-0200-F | | | | 2.00 | | | | |
| CAT50-SM100-0400-F | | | | 4.00 | | | | |
| CAT50-SM100-0600-F | | | | 6.00 | | | | |
| CAT50-SM100-0800-F | 1.00 | 1.97 | 0.69 | 8.00 | 0.375 | DK-SM100 | 1/2-20 | SCW-SM100 |
| CAT50-SM100-1000-F | | | | 10.00 | | | | |
| CAT50-SM100-1200-F | | | | 12.00 | | | | |
| CAT50-SM100-1500-F | | | | 15.00 | | | | |
| CAT50-SM125-0150-F | | | | 1.50 | | | | |
| CAT50-SM125-0350-F | | | | 3.50 | | | | |
| CAT50-SM125-0550-F | 1.25 | 2.75 | 0.69 | 5.50 | 0.500 | DK-SM125 | 5/8-18 | SCW-SM125 |
| CAT50-SM125-0800-F | | | | 8.00 | | | | |
| CAT50-SM125-1200-F | | | | 12.00 | | | | |
| CAT50-SM125-1500-F | | | | 15.00 | | | | |
| CAT50-SM150-0240-F | | | | 2.40 | | DK-SM150-C | | |
| CAT50-SM150-0400-F | 1.50 | 3.82 | 0.94 | 4.00 | 0.625 | DK-SM150 | 3/4-16 | SCW-SM150 |
| CAT50-SM150-0600-F | | | | 6.00 | | DK-SM150 | | |
| CAT50-SM150-0800-F | | | | 8.00 | | DK-SM150 | | |
| CAT50-SM200-0240-F | 2.00 | 4.37 | 0.94 | 2.40 | | DK-SM200 | 1"-14 | SCW-SM200 |
| CAT50-SM200-0400-F | | | | 4.00 | | | | |



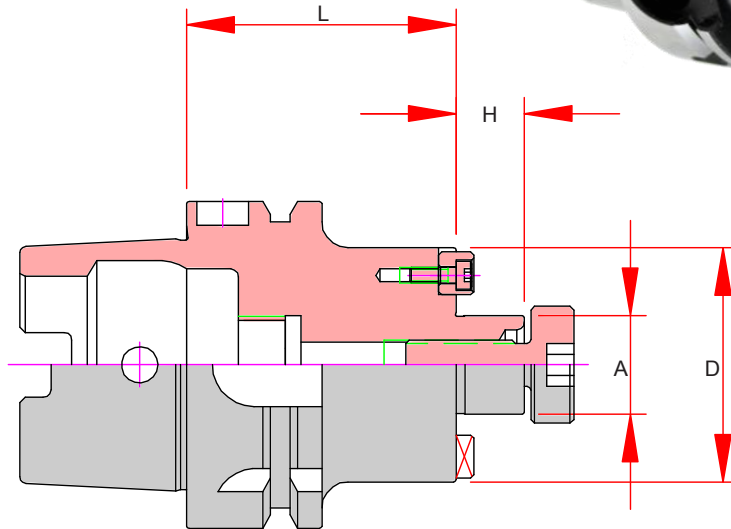
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SM - Shell Mill Adapters

HSK 63A Shell Mill Adapters

Features

- Body - Coolant Thru Center for modified screws
- Balanced G6.3 @ 20,000 RPM
- FX Option Available, See Chart Below



| Part Number | FX Ported Coolant | A Pilot | D | H | L Projection | Drive Key Size | Drive Key Number | Mounting Screw Thread | Mounting Screw# |
|-------------------|-------------------|---------|------|------|--------------|----------------|------------------|-----------------------|-----------------|
| HSK63A-SM075-0177 | | | | | 1.77 | | | | |
| HSK63A-SM075-0394 | | 0.75 | 1.71 | 0.69 | 3.94 | 0.312 | DK-SM075 | 3/8-24 | SCW-SM075 |
| HSK63A-SM075-0630 | | | | | 6.30 | | | | |
| HSK63A-SM100-0197 | | | | | 1.97 | | | | |
| HSK63A-SM100-0394 | Optional Add -F | 1.00 | 1.97 | 0.69 | 3.94 | 0.375 | DK-SM100 | 1/2-20 | SCW-SM100 |
| HSK63A-SM100-0630 | | | | | 6.30 | | | | |
| HSK63A-SM125-0236 | | | | | 2.36 | | | | |
| HSK63A-SM125-0394 | | 1.25 | 2.75 | 0.69 | 3.94 | 0.500 | DK-SM125 | 5/8-18 | SCW-SM125 |
| HSK63A-SM150-0236 | | | | | 2.36 | | | | |
| HSK63A-SM150-0394 | | 1.50 | 3.78 | 0.94 | 3.94 | 0.625 | DK-SM150 | 3/4-16 | SCW-SM150 |

Shell Mill Screws

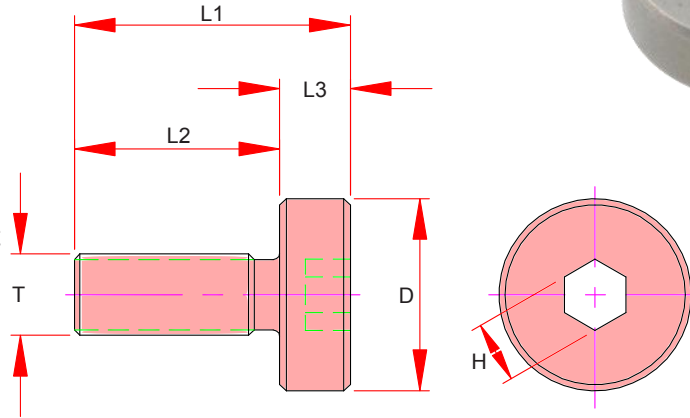
Replacement screw for catalog holders

Note:

Coolant Screws not available.

- Coolant flow from a modified screw does not feed full volume to the inserts
- Modifying the screw weakens the screw causing damage to the cutter and machine tool

FX Holders are available for coolant cutter applications



| Shell Mill Pilot | Mount Screw Number | T Thread (UNF) | D | H Hex | L1 | L2 | L3 |
|------------------|--------------------|----------------|------|-------|------|------|------|
| 1/2 | SCW-SM050 | 1/4-28 | 0.62 | 0.25 | 0.91 | 0.51 | 0.28 |
| 1/2 | SCW-SM050-SM | 1/4-28 | 0.38 | 0.25 | 1.00 | 0.75 | 0.25 |
| 3/4 | SCW-SM075 | 3/8-24 | 0.87 | 0.31 | 1.26 | 0.79 | 0.31 |
| 3/4 | SCW-SM075-SM | 3/8-24 | 0.56 | 0.31 | 1.38 | 1.00 | 0.38 |
| 1 | SCW-SM100 | 1/2-20 | 1.18 | 0.38 | 1.69 | 1.26 | 0.43 |
| 1 | SCW-SM100-SM | 1/2-20 | 0.75 | 0.38 | 2.00 | 1.50 | 0.50 |
| 1-1/4 | SCW-SM125 | 5/8-18 | 1.50 | 0.50 | 2.05 | 1.57 | 0.47 |
| 1-1/2 | SCW-SM150 | 3/4-16 | 1.89 | 0.63 | 2.36 | 1.81 | 0.55 |
| 2" | SCW-SM200 | 1"-14 | 2.48 | 0.83 | 2.52 | 1.97 | 0.55 |

Shell Mill Drive Keys

- Kit includes
 - (2) Drive Keys
 - (2) Mounting Screws



| Shell Mill Pilot | Drive Key Number | Drive Key Size | Specifications |
|------------------|------------------|----------------|-----------------------|
| 1/2 | DK-SM050 | 0.250 | |
| 3/4 | DK-SM075 | 0.312 | |
| 1" | DK-SM100 | 0.375 | |
| 1" | DK-SM100-B | 0.375 | Fits BT30-SM100-0119 |
| 1-1/4 | DK-SM125 | 0.500 | |
| 1-1/2 | DK-SM150 | 0.625 | |
| 1-1/2 | DK-SM150-C | 0.625 | Fits CAT50-SM150-0240 |
| 2" | DK-SM200 | 0.750 | |

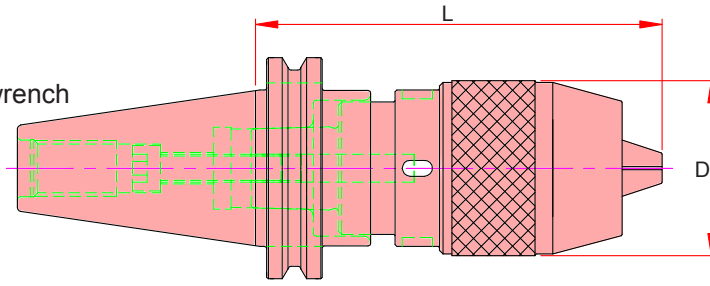
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Drill Chucks, Test Bars, Stub Arbors

DC - Drill Chuck

Features:

- Non Coolant
- Keyless w/ slots for spanner wrench (sold separately)



| Part Number | Range | D | L Projection | Wrench |
|------------------|-------------|------|--------------|--------|
| CAT40-DC050-0413 | | | 4.13 | DCW13 |
| CAT50-DC050-0394 | | | 3.94 | DCW13 |
| BT30-DC13-105 | 0.04 - 0.50 | 1.96 | 4.13 | DCW13 |
| BT40-DC13-110 | | | 4.33 | DCW13 |
| HSK 63A-DC13-155 | | | 6.10 | DCW13 |

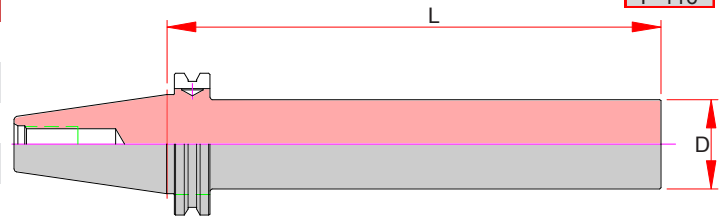
TB - Test Bar

Features

- Concentric to Taper within 3µm (0.0001") TIR
- Hardened & Normalized for consistency
- 100% Individually inspected with Certification Sheet included
- Wood Box Included
- Laser Marked with Actual Diameter and Length



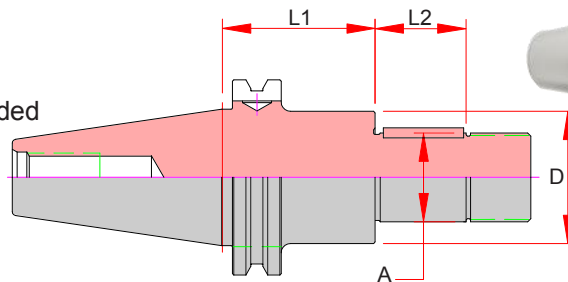
| Part Number | D | L Projection |
|-------------------|------|--------------|
| BT30-TB100-0600 | 1.00 | 6.00 |
| BT40-TB150-1000 | 1.50 | 10.00 |
| CAT40-TB150-1000 | 1.50 | 10.00 |
| CAT50-TB200-1200 | 2.00 | 12.00 |
| HSK63A-TB150-1000 | 1.50 | 10.00 |



SB - Stub Arbor

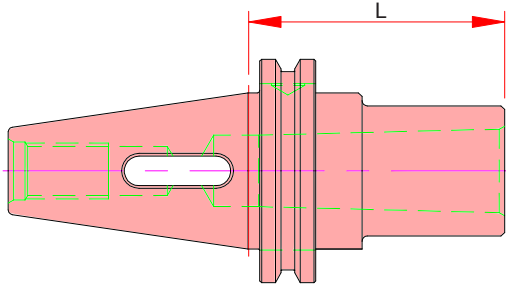
Features:

- Non Coolant
- Spacers & Locking Nut Included



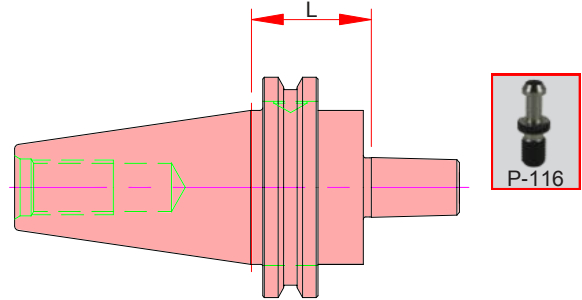
| Shank | Part Number | A | D | L1 | L2 | Key Size |
|-------|------------------|--------|------|------|------|----------|
| CAT40 | CAT40-SB100-0300 | 1.0000 | 1.50 | 3.00 | 1.24 | 0.25 |
| | CAT40-SB125-0300 | 1.2500 | 1.75 | 3.00 | | 0.31 |
| CAT50 | CAT50-SB100-0300 | 1.0000 | 1.50 | 3.00 | | 0.25 |
| | CAT50-SB125-0300 | 1.2500 | 1.75 | 3.00 | | 0.31 |
| BT30 | BT30-SB100-0300 | 1.0000 | 1.50 | 3.00 | | 0.25 |
| BT40 | BT40-SB100-0300 | 1.0000 | 1.50 | 3.00 | | 0.25 |

MA - Morse Taper Adapter



| Part Number | Morse Taper Number | L Projection | Coolant Thru |
|----------------|--------------------|--------------|--------------|
| CAT40-MA1-0177 | 1 | 1.77 | Y |
| CAT40-MA1-0472 | | 4.72 | |
| CAT40-MA2-0236 | 2 | 2.36 | Y |
| CAT40-MA2-0472 | | 4.72 | |
| CAT40-MA3-0295 | 3 | 2.95 | Y |
| CAT40-MA3-0531 | | 5.31 | |
| CAT40-MA4-0374 | 4 | 3.74 | Y |
| CAT40-MA4-0650 | | 6.50 | |
| CAT50-MA1-0177 | 1 | 1.77 | Y |
| CAT50-MA1-0472 | | 4.72 | |
| CAT50-MA1-0709 | | 7.09 | |
| CAT50-MA2-0177 | 2 | 1.77 | Y |
| CAT50-MA2-0531 | | 5.31 | |
| CAT50-MA2-0709 | | 7.09 | |
| CAT50-MA3-0177 | 3 | 1.77 | Y |
| CAT50-MA3-0591 | | 5.91 | |
| CAT50-MA3-0709 | | 7.09 | |
| CAT50-MA4-0295 | 4 | 2.95 | Y |
| CAT50-MA4-0709 | | 7.09 | |
| CAT50-MA5-0413 | 5 | 4.13 | |
| CAT50-MA5-0709 | | 7.09 | |
| BT40-MA1-045 | 1 | 1.77 | Y |
| BT40-MA1-120 | | 4.72 | |
| BT40-MA2-050 | 2 | 1.97 | Y |
| BT40-MA2-120 | | 4.72 | |
| BT40-MA3-070 | 3 | 2.76 | Y |

JT - Jacobs Taper Adapter



| Part Number | Jacobs Taper Number | L Projection |
|-----------------|---------------------|--------------|
| CAT40-JT02-0177 | 2 | 1.77 |
| CAT40-JT03-0177 | 3 | 1.77 |
| CAT40-JT06-0177 | 6 | 1.77 |
| CAT40-JT06-0354 | | 3.54 |
| CAT40-JT33-0177 | 33 | 1.77 |
| CAT40-JT33-0354 | | 3.54 |
| CAT50-JT01-0177 | 1 | 1.77 |
| CAT50-JT02-0177 | 2 | 1.77 |
| CAT50-JT03-0177 | 3 | 1.77 |
| CAT50-JT03-0413 | | 4.13 |
| CAT50-JT06-0177 | 6 | 1.77 |
| CAT50-JT33-0177 | 33 | 1.77 |
| CAT50-JT33-0413 | | 4.13 |
| BT40-JT01-045 | 1 | 1.77 |
| BT40-JT02-045 | 2 | 1.77 |
| BT40-JT02-090 | | 3.54 |
| BT40-JT03-045 | 3 | 1.77 |
| BT40-JT03-090 | | 3.54 |
| BT40-JT06-045 | 6 | 1.77 |
| BT40-JT06-090 | | 3.54 |
| BT40-JT33-045 | 33 | 1.77 |
| BT40-JT33-090 | | 3.54 |

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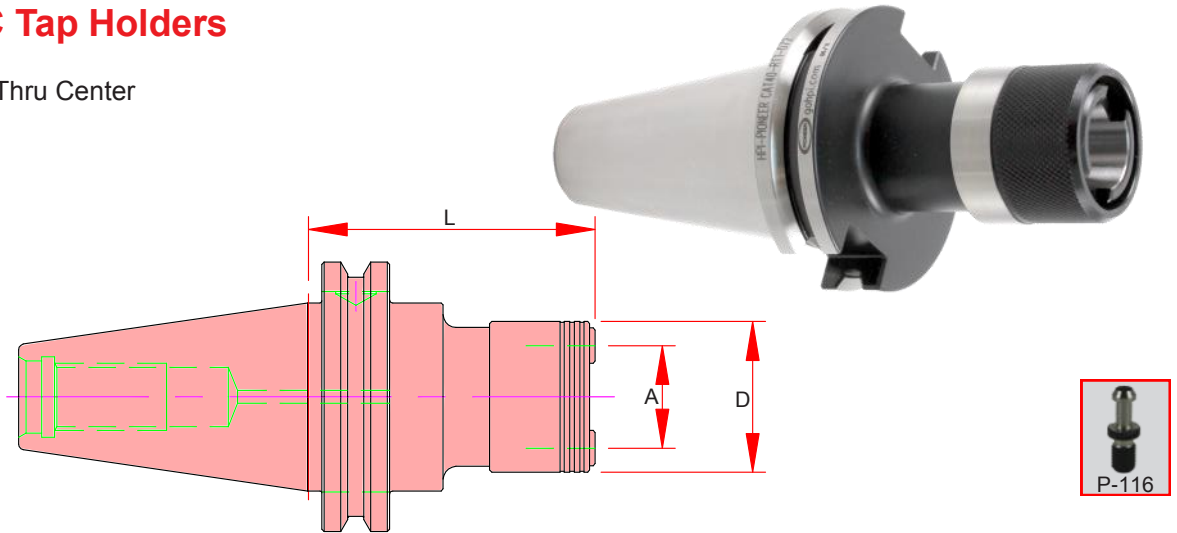
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Rigid QC Tap Holders

RT - Rigid QC Tap Holders

Features

- Body - Coolant Thru Center



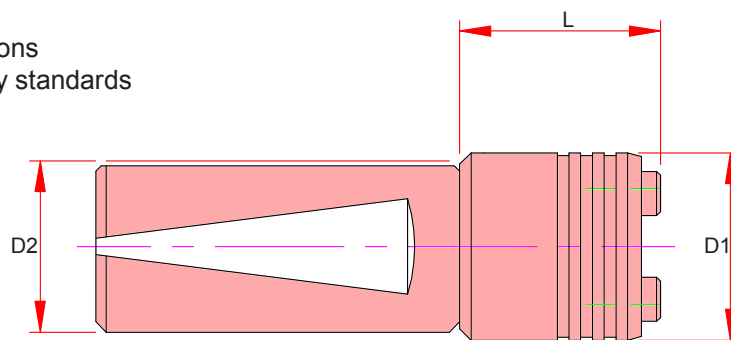
| Adapter Size | Part Number | Capacity | A | D | L Projection |
|--------------|-----------------|------------|------|------|--------------|
| 1 | CAT40-RT1-72 | #6-9/16 | 0.75 | 1.34 | 2.83 |
| 2 | CAT40-RT2-91 | 5/16-7/8 | 1.22 | 1.93 | 3.58 |
| 3 | CAT40-RT3-130 | 9/16-1-3/8 | 1.89 | 2.89 | 5.12 |
| 1 | CAT50-RT1-72 | #6-9/16 | 0.75 | 1.34 | 2.83 |
| 2 | CAT50-RT2-91 | 5/16-7/8 | 1.22 | 1.93 | 3.58 |
| 3 | CAT50-RT3-130 | 9/16-1-3/8 | 1.89 | 2.89 | 5.12 |
| 1 | BT30-RT1-0433** | #6-9/16 | 0.75 | 1.34 | 4.33 |
| 2 | BT30-RT2-0511** | 5/16-7/8 | 1.22 | 1.93 | 5.11 |
| 1 | BT40-RT1-72 | #6-9/16 | 0.75 | 1.34 | 2.83 |
| 2 | BT40-RT2-91 | 5/16-7/8 | 1.22 | 1.93 | 3.58 |
| 3 | BT40-RT3-0575** | 9/16-1-3/8 | 1.89 | 2.89 | 5.75 |
| 1 | HSK 63A-RT1-65 | #6-9/16 | 0.75 | 1.34 | 2.56 |
| 2 | HSK 63A-RT2-98 | 5/16-7/8 | 1.22 | 1.93 | 3.86 |

** 2 Piece Assembly w/ Straight Shank Below

RT - Straight Shank

Features:

- Flats for Lathe Applications
- Compatible with industry standards



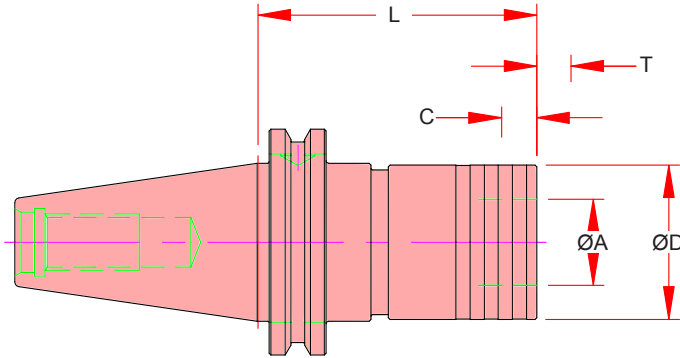
| Adapter Size | Part Number | Capacity | D1 | D2 | L Projection |
|--------------|---------------|--------------|------|--------|--------------|
| 1 | S100-RT1-0158 | #6 - 9/16 | 1.34 | 1" | 1.57 |
| 2 | S100-RT2-0237 | 5/16 - 7/8 | 1.93 | 1" | 2.36 |
| 3 | S125-RT3-0375 | 9/16 - 1-3/8 | 2.89 | 1-1/4" | 3.74 |



TC - Tension & Compression Holders

Features

- Tension and Compression Stroke for improved tap life
- Pressure Point Mechanism to increase the cutting pressure and ensure a positive start



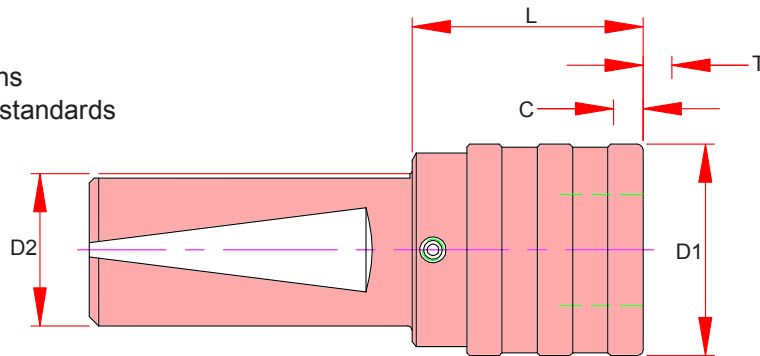
| Adapter Size | Part Number | Capacity | A | D | L Projection | T - Tension | C - Compression |
|--------------|-----------------|------------|------|------|--------------|-------------|-----------------|
| 1 | CAT40-TC1-59 | #6-9/16 | 0.75 | 1.42 | 2.32 | 0.30 | 0.30 |
| 2 | CAT40-TC2-97 | 5/16-7/8 | 1.22 | 2.09 | 3.82 | 0.49 | 0.49 |
| 3 | CAT40-TC3-149 | 9/16-1-3/8 | 1.89 | 3.07 | 5.87 | 0.79 | 0.79 |
| 1 | CAT50-TC1-59 | #6-9/16 | 0.75 | 1.42 | 2.32 | 0.30 | 0.30 |
| 2 | CAT50-TC2-97 | 5/16-7/8 | 1.22 | 2.09 | 3.82 | 0.49 | 0.49 |
| 3 | CAT50-TC3-141 | 9/16-1-3/8 | 1.89 | 3.07 | 5.55 | 0.79 | 0.79 |
| 1 | BT30-TC1-0433** | #6-9/16 | 0.75 | 1.42 | 4.33 | 0.30 | 0.30 |
| 2 | BT30-TC2-0531** | 5/16-7/8 | 1.22 | 2.09 | 5.31 | 0.49 | 0.49 |
| 1 | BT40-TC1-67 | #6-9/16 | 0.75 | 1.42 | 2.64 | 0.30 | 0.30 |
| 2 | BT40-TC2-94 | 5/16-7/8 | 1.22 | 2.09 | 3.70 | 0.49 | 0.49 |
| 3 | BT40-TC3-0704** | 9/16-1-3/8 | 1.89 | 3.07 | 7.04 | 0.79 | 0.79 |
| 1 | HSK 63A-TC1-102 | #6-9/16 | 0.75 | 1.42 | 4.02 | 0.30 | 0.30 |
| 2 | HSK 63A-TC2-137 | 5/16-7/8 | 1.22 | 2.09 | 5.39 | 0.49 | 0.49 |

** 2 Piece Assembly w/ Straight Shank Below

TC - Straight Shank

Features:

- Non Coolant
- Flats for Lathe Applications
- Compatible with industry standards



| Adapter Size | Part Number | Capacity | D1 | D2 | L Projection | T - TENSION | C - COMP. |
|--------------|---------------|--------------|------|--------|--------------|-------------|-----------|
| 1 | S100-TC1-0158 | #6 - 9/16 | 1.42 | 1" | 1.57 | 0.30 | 0.30 |
| 2 | S100-TC2-0256 | 5/16 - 7/8 | 2.09 | 1" | 2.36 | 0.49 | 0.49 |
| 3 | S125-TC3-0504 | 9/16 - 1-3/8 | 3.07 | 1-1/4" | 3.94 | 0.79 | 0.79 |



RA - Rigid QC Tap Adapters

RA - Rigid QC Tap Adapters

Features:

- Direct Drive for Rigid Tapping
- Bilz Quick Change Compatible
- Push to load / release system for quick tool change



Note:
Due to Multiple Standards for Metric Taps, the actual shank and square must be supplied to verify compatibility.



| ANSI Tap Size | Metric | Shank" | Shank MM | Square" | Square MM | SIZE 1 | SIZE 2 | SIZE 3 |
|-----------------|-------------|--------|----------|---------|-----------|---------------|---------------|-----------|
| #0 - #6 | M1.6 | 0.141 | 3.58 | 0.110 | 2.79 | RA1U-0141 | | |
| #8 | M4 | 0.168 | 4.27 | 0.131 | 3.33 | RA1U-0168 | | |
| #10 | M4.5, M5 | 0.194 | 4.93 | 0.152 | 3.86 | RA1U-0194 | | |
| #12 | | 0.220 | 5.59 | 0.165 | 4.19 | RA1U-0220 | | |
| | M6, M8 | | 6.00 | | 4.90 | RA1D-M060X049 | | |
| 1/4 | M6, M6.3 | 0.255 | 6.48 | 0.191 | 4.85 | RA1U-0255 | | |
| | M7, M9, M10 | | 7.00 | | 5.50 | RA1D-M070X055 | | |
| | M11 | | 8.00 | | 6.00 | RA1J-M080X060 | | |
| | M8, M11 | | 8.00 | | 6.20 | RA1D-M080X062 | | |
| 5/16 | M7, M8 | 0.318 | 8.08 | 0.238 | 6.05 | RA1U-0318 | RA2U-0318 | |
| 3/8 | M10 | 0.381 | 9.68 | 0.286 | 7.26 | RA1U-0381 | RA2U-0381 | |
| 7/16 | | 0.323 | 8.20 | 0.242 | 6.15 | RA1U-0323 | RA2U-0323 | |
| | M9, M12 | | 9.00 | | 7.00 | RA1D-M090X070 | | |
| 1/2 | M12, M12.5 | 0.367 | 9.32 | 0.275 | 6.99 | RA1U-0367 | RA2U-0367 | |
| 9/16 | M14 | 0.429 | 10.90 | 0.322 | 8.18 | RA1U-0429 | RA2U-0429 | RA3U-0429 |
| | M16 | | 12.00 | | 9.00 | | RA2D-M120X090 | |
| 5/8 | M16 | 0.480 | 12.19 | 0.360 | 9.14 | | RA2U-0480 | RA3U-0480 |
| 11/16 | M18 | 0.542 | 13.77 | 0.406 | 10.31 | | RA2U-0542 | RA3U-0542 |
| 3/4 | | 0.590 | 14.99 | 0.442 | 11.23 | | RA2U-0590 | RA3U-0590 |
| 13/16 | M20 | 0.652 | 16.56 | 0.489 | 12.42 | | RA2U-0652 | RA3U-0652 |
| 7/8 | M22 | 0.697 | 17.70 | 0.523 | 13.28 | | RA2U-0697 | RA3U-0697 |
| 15/16 | M24 | 0.760 | 19.30 | 0.570 | 14.48 | | | RA3U-0760 |
| 1" | M25 | 0.800 | 20.32 | 0.600 | 15.24 | | | RA3U-0800 |
| 1-1/16 - 1-1/8 | M27 | 0.896 | 22.76 | 0.672 | 17.07 | | | RA3U-0896 |
| 1-3/16 - 1-1/4 | M30 | 1.021 | 25.93 | 0.766 | 19.46 | | | RA3U-1021 |
| 1-5/16 - 1-3/8 | M33 | 1.108 | 28.14 | 0.831 | 21.11 | | | RA3U-1108 |
| PIPE TAP | | | | | | | | |
| 1/8 PIPE SS | | 0.313 | 7.95 | 0.234 | 5.94 | RA1U-0313 | | |
| 1/8 PIPE LS | | 0.438 | 11.13 | 0.328 | 8.33 | RA1U-0438 | RA2U-0438 | |
| 1/4 PIPE | | 0.563 | 14.30 | 0.421 | 10.69 | | RA2U-0563 | |
| 3/8 PIPE | | 0.700 | 17.78 | 0.531 | 13.49 | | RA2U-0700 | RA3U-0700 |
| 1/2 PIPE | | 0.688 | 17.48 | 0.515 | 13.08 | | RA2U-0688 | RA3U-0688 |
| 3/4 PIPE | | 0.906 | 23.01 | 0.679 | 17.25 | | | RA3U-0906 |
| 1" PIPE | | 1.125 | 28.58 | 0.843 | 21.41 | | | RA3U-1125 |

TC - Torque Control Adapters

Features:

- Direct Drive for Rigid Tapping
- Bilz Quick Change Compatible
- Push to load / release system for quick tool change

Recommended Usage: Tension and Compression Holders Only!



Note:
Due to Multiple Standards for Metric Taps, the actual shank and square must be supplied to verify compatibility.

| ANSI Tap Size | ANSI Metric | Shank" | Shank MM | Square" | Square MM | SIZE 1 | SIZE 2 | SIZE 3 | |
|-----------------|-------------|--------|----------|---------|-----------|-----------|-----------|-----------|--|
| #0 - #6 | M1.6 | 0.141 | 3.58 | 0.110 | 2.79 | TC1U-0141 | | | |
| #8 | M4 | 0.168 | 4.27 | 0.131 | 3.33 | TC1U-0168 | | | |
| #10 | M4.5, M5 | 0.194 | 4.93 | 0.152 | 3.86 | TC1U-0194 | | | |
| #12 | | 0.220 | 5.59 | 0.165 | 4.19 | TC1U-0220 | | | |
| 1/4 | M6, M6.3 | 0.255 | 6.48 | 0.191 | 4.85 | TC1U-0255 | | | |
| 5/16 | M7, M8 | 0.318 | 8.08 | 0.238 | 6.05 | TC1U-0318 | TC2U-0318 | | |
| 3/8 | M10 | 0.381 | 9.68 | 0.286 | 7.26 | TC1U-0381 | TC2U-0381 | | |
| 7/16 | | 0.323 | 8.20 | 0.242 | 6.15 | TC1U-0323 | TC2U-0323 | | |
| 1/2 | M12, M12.5 | 0.367 | 9.32 | 0.275 | 6.99 | TC1U-0367 | TC2U-0367 | | |
| 9/16 | M14 | 0.429 | 10.90 | 0.322 | 8.18 | TC1U-0429 | TC2U-0429 | TC3U-0429 | |
| 5/8 | M16 | 0.480 | 12.19 | 0.360 | 9.14 | | TC2U-0480 | TC3U-0480 | |
| 11/16 | M18 | 0.542 | 13.77 | 0.406 | 10.31 | | TC2U-0542 | TC3U-0542 | |
| 3/4 | | 0.590 | 14.99 | 0.442 | 11.23 | | TC2U-0590 | TC3U-0590 | |
| 13/16 | M20 | 0.652 | 16.56 | 0.489 | 12.42 | | TC2U-0652 | TC3U-0652 | |
| 7/8 | M22 | 0.697 | 17.70 | 0.523 | 13.28 | | TC2U-0697 | TC3U-0697 | |
| 15/16 | M24 | 0.760 | 19.30 | 0.570 | 14.48 | | | TC3U-0760 | |
| 1" | M25 | 0.800 | 20.32 | 0.600 | 15.24 | | | TC3U-0800 | |
| 1-1/16 - 1-1/8 | M27 | 0.896 | 22.76 | 0.672 | 17.07 | | | TC3U-0896 | |
| 1-3/16 - 1-1/4 | M30 | 1.021 | 25.93 | 0.766 | 19.46 | | | TC3U-1021 | |
| 1-5/16 - 1-3/8 | M33 | 1.108 | 28.14 | 0.831 | 21.11 | | | TC3U-1108 | |
| PIPE TAP | | | | | | | | | |
| 1/8 PIPE SS | | 0.313 | 7.95 | 0.234 | 5.94 | TC1U-0313 | | | |
| 1/8 PIPE LS | | 0.438 | 11.13 | 0.328 | 8.33 | TC1U-0438 | | | |
| 1/4 PIPE | | 0.563 | 14.30 | 0.421 | 10.69 | | TC2U-0563 | | |
| 3/8 PIPE | | 0.700 | 17.78 | 0.531 | 13.49 | | TC2U-0700 | TC3U-0700 | |
| 1/2 PIPE | | 0.688 | 17.48 | 0.515 | 13.08 | | TC2U-0688 | TC3U-0688 | |
| 3/4 PIPE | | 0.906 | 23.01 | 0.679 | 17.25 | | | TC3U-0906 | |
| 1" PIPE | | 1.125 | 28.58 | 0.843 | 21.41 | | | TC3U-1125 | |

BC
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SM
MISC.
ACC. QC TAP

Height Gage Fixtures

- Order Base & Legs (Pot not included)
- Order Pot Separately
- Bolts to Workbench
- 4" Legs for Retention Knob Clearance
- For use with standard Height Stand (Order Separately)

This low cost height stand uses any standard height stand, (20" Digital shown) analog or digital to provide simple accurate height preset. Legs provide height so the pull stud does not hit the table. The legs are equipped with bolt holes so the unit can be mounted to the table top.



| Part Number | Shank |
|----------------|-------------------|
| HG-BASE+LEGS | Base & Legs |
| HG-BT30-POT | BT30, SK30 |
| HG-CAT40-POT | BT40, CAT40, SK40 |
| HG-CAT50-POT | BT50, CAT50, SK50 |
| HG-HSK63A-POT | HSK63A, HSK80F |
| HG-HSK100A-POT | HSK100A |



Locking Fixtures

- Bolts to Workbench
- Easy Access to Retention Knob



| Part Number | Shank |
|-------------|-------|
| TLD-BT30 | BT30 |
| TLD-BT40 | BT40 |
| TLD-CAT40 | Cat40 |
| TLD-CAT50 | Cat50 |

Tool Block 3.0

PIONEER's Flexible, Indexable Tool Block with Interchangeable Heads!

The system is designed to prevent injury and allow the operator to move the holder into the best position for manipulation. 8 locking positions (45° apart) with auto lock provides the easiest and safest way of changing cutters and retention knobs. Interchangeable with heads from competitive systems, Tool Block is a must for all tool rooms.

Version 3 includes 1 piece body and 45° positions!

Order Tool Block Head and Base Separately!



Tool Block Head



Tool Block Base



| Part Number | Shank |
|-----------------|--------------------------------|
| TB-BT30 HEAD | BT30 JMTBA MAS403 |
| TB-BT40 HEAD | BT40 JMTBA MAS403 |
| TB-CAT40 HEAD | CAT40, ISO7388-40, DIN69871-40 |
| TB-CAT50 HEAD | CAT50, ISO7388-50, DIN69871-50 |
| TB-HSK32A HEAD | DIN69893 HSK32-A |
| TB-HSK40A HEAD | DIN69893 HSK40-A |
| TB-HSK50A HEAD | DIN69893 HSK50-A |
| TB-HSK63A HEAD | DIN69893 HSK63-A |
| TB-HSK100A HEAD | DIN69893 HSK100-A |

Available "Build on Demand"

TB-CAPTO-C4**

TB-CAPTO-C6**

TB-KM63**

** Special build on demand items, other sizes available upon request

| Part Number | |
|-------------|-------------------|
| TB-BASE | (1) Base Required |

Base includes Mounting Bolts & Hex Wrench

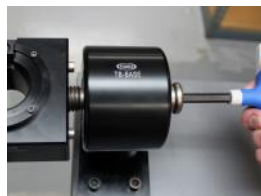
Note:

PIONEER Tool Block Base will accept competitor's Head Assemblies. Some versions of the competitor's bases will not accept PIONEER Tool Block Heads. An alteration or conversion bolt is required on the competitor's base.

Please contact PIONEER customer service for more information.



Assemble Tool Block Head to Base by rotating the Push Knob on the back of the Base



Optional: Assemble Tool Block Head to the Base by rotating the Push Knob on the back of the Base. Snug tighten with supplied 8mm Wrench



Push in on the Push Knob to unlock the head from the base



Rotate the knob to the desired location, the head will lock in 90 degree increments



The tool holder will snap in automatically.



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SM
MISC.
QC TAP
ACC

RW - Rotary Wiper

ROTARY WIPER makes it possible to view the production/machining process clearly within the machine enclosure. Window always get dirty because of oils, coolants and chips.



By installing ROTARY WIPER, even large amount of coolants, etc., will not prevent an operator from being able to observe set-ups and production runs of all sorts.

- Improved Visible Area
- Less Air Consumption & Lower Noise Level
- Easier Maintenance Work
- Improved Sealing Performance against Coolant (For Tape Fitting Type)
- Special chemically treated glass provides long life from chips and debris
- Low Profile for tight installation area's



Version 2 Refined Design

This air driven rotary window does not require special wiring like competitive models. Installation could not be more simple:

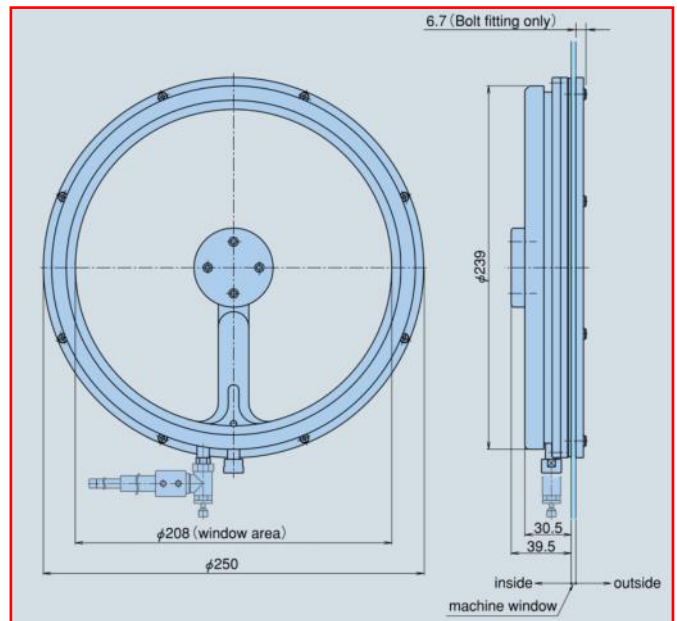
1. Choose your mount type (Bolt or Tape)
 2. Install in machine per provided instructions
 3. Run Air Cable to the machine control side air bank
 4. Attached Air Cable to your Rotary Wiper
- Done!

If RW window was to become damaged, easy removal of the 4 screws from the center hub makes window replacement easy.

Rotary Wiper is available in 2 different mountings, Bolt & Tape. Bolt mountings require 8 mounting screw holes in the windows. Tape on uses a high end adhesive with the only requirement is a clean window.



| Type | Mounting | Ø6mm Air Cable (Ø10mm Conduit) |
|-----------|-------------------|--------------------------------|
| RW-V2-25 | Bolt Fitting Type | Ø6mm x 8.2 ft (2.5M) |
| RW-V2-50 | Bolt Fitting Type | Ø6mm x 16.4 ft (5.0M) |
| RW-V2-T25 | Tape Fitting Type | Ø6mm x 8.2 ft (2.5M) |
| RW-V2-T50 | Tape Fitting Type | Ø6mm x 16.4 ft (5.0M) |



TWS - Retention Knobs Sockets

Features

- Fits HPS Retention Knobs on the following page
- May not fit other manufacturer's designs & styles
- Uses standard torque wrench fractional drive
- **Use Machine Tool Manufacturer's recommended tightening torque**

| Part Number | Retention Knob Flats | Torque Wrench Drive | Socket Length | Socket Diameter |
|-------------|----------------------|---------------------|---------------|-----------------|
| TWS-075 | 0.750 | 1/2 | 1.15 | 1.30 |
| TWS-125 | 1.250 | 1/2 | 1.56 | 1.93 |
| TWS-118 | 1.187 | 1/2 | 1.56 | 1.93 |
| TWS-M13 | 13mm | 3/8 | 1.40 | 0.98 |
| TWS-M17 | 17mm | 1/2 | 1.74 | 1.30 |
| TWS-M19 | 19mm | 1/2 | 1.74 | 1.30 |
| TWS-M30 | 30mm | 1/2 | 2.24 | 1.97 |

Retention Knob Tightening Torque

There are 2 different approaches to Retention Knob Tightening Torque. Traditional and Light Torque. **To avoid any warranty and safety issues always use the machine tool manufacturer's specifications.** Traditional locking torque for Retention Knobs are as follows:

- 30 Taper = 36-40 ft/lbs
- 40 Taper = 76-85 ft/lbs
- 50 Taper = 100-110 ft/lbs

Depending on the material, heat treat and wall thickness of the tool holder the above torque specifications can expand the tool holder taper at the small end causing uneven spindle wear and cutting tool runout. Many companies have started using a lighter torque number to reduce or eliminate the expansion. Many machine tool manufacturer's do not recommend this lighter system. Check with your machine tool manufacturer for recommending operational torque.

Low Torque Retention Knob Tightening

The information below is a guide.

To avoid any warranty and safety issues always use the machine tool manufacturer's specifications.

As described above, proper retention knob locking torque is critical to reduce spindle wear and maintain cutting tool life. Over tightening the retention knob will expand the small end of the tool holder shank. The expanded area will make contact in the spindle taper and cause uneven wear. **Thread locking material is required when cutting tool vibration is present or operating at high spindle RPM's. To reduce or eliminate tool holder expansion reducing the torque to the chart below with the combination of thread locking material.**

Note: High RPM applications also require thread locking material to compensate for centrifugal expansion.

| 30 Taper | | 40 Taper | | 50 Taper | |
|-------------------|--|-------------------|--|-------------------|--|
| Drawbar Force lbs | Locking Torque ft/lbs 1.00% of Drawbar Force w/ Thread Locker | Drawbar Force lbs | Locking Torque ft/lbs 1.25% of Drawbar Force w/ Thread Locker | Drawbar Force lbs | Locking Torque ft/lbs 2.00% of Drawbar Force w/ Thread Locker |
| 800 | 8 | 1500 | 19 | 3000 | 60 |
| 1000 | 10 | 2000 | 25 | 3500 | 70 |
| 1200 | 12 | 2500 | 31 | 4000 | 80 |
| 1500 | 15 | 3000 | 38 | 4500 | 90 |
| 1800 | 18 | 3500 | 44 | 5000 | 100 |
| 2000 | 20 | 4000 | 50 | 6000 | 120 |
| 2200 | 22 | 4500 | 56 | 7000 | 140 |



BC

SX

MX

VX

MC

SD

ER

TG

DA

EM

SM

MISC.

QC TAP

ACC

HPS - Retention Knobs

Features

- Manufactured to the Industry Standards or machine builders specifications.
- The cross reference chart is a guide only. Retention knobs are based on the spindle and coolant configuration.
The dimensions must be verified to avoid damage or warranty issues.



| Machine Builder | BT30 | BT40 | CAT40 | CAT50 |
|-----------------|-------------|-------------------|---------------|---------------|
| AKIRA SEIKI | | | HPS-806U-1 | |
| BRIDGEPORT | HPS-17 | HPS-1 | HPS-D72 | |
| BROTHER | HPS-17 | | | |
| DAEWOO | | | HPS-72 | |
| DOOSAN | | HPS-806-1 | HPS-806U-1 | |
| ENSHU | HPS-16 | HPS-1 / 2 | HPS-72 / 72C | HPS- 54 |
| FADAL | | | HPS-D72 | |
| FANUC | HPS-16 | | | |
| HAAS | HPS-16 /16C | HPS-1 | HPS-72 / 72C | HPS- 54 |
| HITACHI SEIKI | HPS-16 | HPS-H28 | HPS-H30 | HPS- 54 |
| HOWA | | HPS-1 | HPS-72 | |
| HURCO | | HPS-1 | HPS-D72 / D2 | HPS-D92 |
| JOHNFOR | | HPS-1 | | |
| KIA | | HPS-1 / O8 | HPS-72 / O14 | |
| KIRA | HPS-16 | HPS-1 / 2 | HPS-26 | |
| KITAMURA | | HPS-1 | HPS-72 | HPS- 54 |
| KIWA | HPS-17 | HPS-1 | | |
| KURAKI | | HPS-1 / 2 | HPS-72 | HPS- 54 |
| LEADWELL | | HPS-1 | HPS-72 | |
| MAKINO | | HPS-806-1 | HPS-806U-1 | HPS- 54 |
| MATSUURA | HPS-17 | HPS-806-1 | HPS-806U-1 | HPS-63 |
| MAZAK | | HPS-G51 | HPS-G53 | HPS-G43 |
| MIGHTY | | HPS-1 | HPS-72 | |
| MILLTRONICS | | HPS-2 | HPS-26 | |
| MITSUBISHI | | HPS-1 | HPS-72 | HPS-63 |
| MIYANO | HPS-17 | HPS-1 | HPS-72 | |
| MORI SEIKI | | HPS-O8 | HPS-O14 | HPS-O19 |
| NIIGATA | | HPS-2 | | HPS-63 |
| NTC | | HPS-1 | HPS-72 | |
| OKK | HPS-16 | HPS-1 / O8 | HPS-72 / O14 | HPS-54 / O19 |
| OKUMA & HOWA | | HPS-1 | HPS-72 | HPS-63 |
| OKUMA | HPS-17 | HPS-1 / 2 / B62-1 | HPS-B64 / G60 | HPS-B61 / 63B |
| PARPAS | | HPS-1 / 2 | | |
| ROKU-ROKU | HPS-16 | HPS-1 / 2 | HPS-72 | |
| SHIZUOKA | | HPS-O8 | HPS-72 | HPS-O19 |
| TAKISAWA | | HPS-1 | HPS-72 | HPS- 54 |
| TOSHIBA | HPS-16 | HPS-1 | HPS-72 | HPS- 54 |
| TOYODA | | HPS-1 | | |
| YASDA | | HPS-806-1 | HPS-72 | HPS- 54 |
| YCI | | HPS-1 | HPS-72 | HPS- 54 |

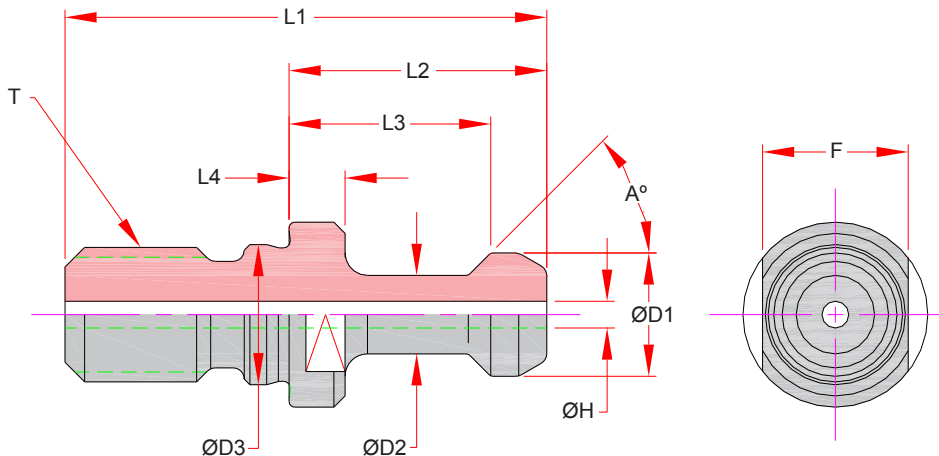
HPS - Retention Knobs

Features

- Manufactured to the Industry Standards or machine builders specifications.

Note:

It is critical that the correct retention knob is used with each machining center. Please verify all dimensions prior to ordering. Machine specifications will be located in your machine manual.



| | Part Number | A Angle | D1 Head | D2 Neck | D3 Pilot | L1 OAL | L2 Proj. | L3 Pull Loc. | L4 Shoulder | H Hole | F Flats | T Thread | Socket Wrench | Notes |
|-------|-------------|---------|---------|---------|----------|--------|----------|--------------|-------------|--------|---------|----------|---------------|-----------------------------|
| BT30 | HPS- 16 | | | 0.276 | | | | | | - | | | | MAS P30T-1 |
| | HPS- 16C-FA | 45 | | 0.315 | | | | | | 0.098 | | | | FANUC Spec. w/ O-Ring D3 |
| | HPS- 16C | | 0.433 | 0.276 | 0.492 | 1.693 | 0.906 | 0.709 | 0.197 | 0.078 | 13mm | M12 | TWS-M13 | MAS P30T-1 |
| | HPS- 17 | | | 0.276 | | | | | | - | | | | MAS P30T-2 |
| | HPS- 17C-BR | 60 | | 0.296 | | | | | | 0.098 | | | | Brother Spec. w/ O-Ring D3 |
| | HPS- 17C | | | 0.276 | | | | | | 0.078 | | | | MAS P30T-2 |
| BT40 | HPS- 1 | 45 | | | | | | | 0.236 | - | | | | MAS P40T-1 |
| | HPS- 1C | | 0.591 | 0.394 | | 2.362 | 1.378 | 1.102 | 0.236 | 0.120 | | | | MAS P40T-1 |
| | HPS- 2 | 60 | | | 0.669 | | | | 0.236 | - | | | | MAS P40T-2 |
| | HPS-806 -1 | 75 | 0.748 | 0.551 | | 2.126 | 1.142 | 0.906 | 0.276 | 0.236 | 19mm | M16 | TWS-M19 | JIS B6339 |
| | HPS-G51 | 45 | 0.740 | 0.490 | | 1.736 | 0.752 | 0.552 | 0.118 | 0.276 | | | | Coolant |
| | HPS-O8 | 90 | 0.591 | 0.394 | | 2.362 | 1.378 | 1.102 | 0.236 | - | | | | MAS P40T-3 |
| CAT40 | HPS- 72 | 45 | 0.591 | 0.394 | 0.641 | 2.250 | 1.266 | 0.990 | 0.236 | - | 19mm | | TWS-M19 | MAS P40T-1 |
| | HPS- 72C | 45 | 0.591 | 0.394 | 0.641 | 2.250 | 1.266 | 0.990 | 0.118 | 0.098 | 19mm | | TWS-M19 | MAS P40T-1 |
| | HPS- 26 | 60 | 0.591 | 0.394 | 0.630 | 2.252 | 1.268 | 0.992 | 0.236 | - | 19mm | | TWS-M19 | MAS P40T-2 |
| | HPS- 26C | 60 | 0.591 | 0.394 | 0.630 | 2.252 | 1.268 | 0.992 | 0.236 | 0.098 | 19mm | | TWS-M19 | MAS P40T-2 |
| | HPS-806U-1 | 75 | 0.748 | 0.551 | - | 1.882 | 1.024 | 0.787 | 0.276 | 0.236 | 19mm | | TWS-M19 | JIS B6339 |
| | HPS-B64-1 | 45 | 0.740 | 0.490 | 0.641 | 1.624 | 0.640 | 0.440 | 0.118 | 0.157 | 0.750 | 5/8-11 | TWS-075 | w/ O-Ring on OD D3 |
| | HPS-D72 | 45 | 0.740 | 0.490 | - | 1.500 | 0.640 | 0.440 | 0.118 | 0.283 | 0.750 | | TWS-075 | ANSI B5.50-1985 |
| | HPS-G53 | 45 | 0.740 | 0.490 | 0.641 | 1.624 | 0.640 | 0.440 | 0.118 | 0.276 | 0.750 | | TWS-075 | Mazak Spec. |
| | HPS-G60 | 45 | 0.740 | 0.490 | 0.641 | 1.624 | 0.640 | 0.440 | 0.118 | - | 0.750 | | TWS-075 | Okuma Spec. |
| | HPS-O14 | 90 | 0.591 | 0.394 | - | 2.244 | 1.260 | 0.984 | 0.236 | - | 17mm | | TWS-M17 | Mori-Seiki Spec. MAS P40T-3 |
| CAT50 | HPS-O14C | 90 | 0.591 | 0.394 | - | 2.244 | 1.260 | 0.984 | 0.236 | 0.098 | 17mm | | TWS-M17 | MAS P40T-3 |
| | HPS- 54 | 45 | 0.906 | 0.669 | 1.031 | 3.354 | 1.780 | 1.386 | 0.402 | 0.236 | 30mm | | TWS-M30 | MAS P50T-1 |
| | HPS- 63 | 60 | 0.906 | 0.669 | 1.024 | 3.248 | 1.772 | 1.378 | 0.394 | - | 30mm | | TWS-M30 | MAS P50T-2 |
| | HPS-B61 | 60 | 0.906 | 0.669 | 0.984 | 3.248 | 1.772 | 1.378 | 0.394 | 0.236 | 30mm | | TWS-M30 | w/ O-Ring on OD D3 |
| | HPS-D92 | 45 | 1.140 | 0.820 | - | 2.300 | 1.000 | 0.700 | 0.210 | 0.461 | 1.250 | | TWS-125 | ANSI B5.50-1985 |
| | HPS-G43 | 45 | 1.140 | 0.820 | 1.031 | 2.303 | 1.000 | 0.700 | 0.197 | 0.394 | 1.187 | 1"-8 | TWS-118 | Mazak Spec. |
| | HPS-O19 | 90 | 0.906 | 0.669 | - | 3.346 | 1.780 | 1.386 | 0.394 | - | 30mm | | TWS-M30 | Mori-Seiki Spec. MAS P50T-3 |
| | HPS-O19C | 90 | 0.906 | 0.669 | - | 3.346 | 1.780 | 1.386 | 0.394 | 0.236 | 30mm | | TWS-M30 | MAS P50T-3 |
| | HPS-711-45 | 75 | 1.101 | 0.845 | - | 2.640 | 1.338 | 0.984 | 0.468 | 0.468 | 30mm | | TWS-M30 | JIS B6339 |



BC
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QC TAP
ACC

A - CAT40-EM075-0300

| | | | | | | | | | |
|-------------------|-----|-----------------|-----|-------------------|-----|-------------------|-----|------------------|-----|
| ASC-12-30 | 17 | BT30-SX06-060 | 15 | BT40-ER11H-150 | 63 | BT40-RT2-91 | 108 | CAT40-DA100-0600 | 84 |
| ASC-12-30 | 49 | BT30-SX06-090 | 15 | BT40-ER16H-060 | 63 | BT40-RT3-130 | 108 | CAT40-DA180-0295 | 84 |
| ASC-16-18 | 49 | BT30-SX10-045 | 15 | BT40-ER16H-100 | 63 | BT40-SB100-0300 | 106 | CAT40-DA180-0515 | 84 |
| ASC-16-40 | 49 | BT30-SX10-060 | 15 | BT40-ER16H-160 | 63 | BT40-SM075-0175 | 100 | CAT40-DA200-0300 | 84 |
| ASC-18-33 | 17 | BT30-SX10-090 | 15 | BT40-ER20H-070 | 63 | BT40-SM075-0175-F | 100 | CAT40-DA200-0500 | 84 |
| ASC-25-30 | 17 | BT30-SX16-060 | 15 | BT40-ER20H-100 | 63 | BT40-SM075-0400 | 100 | CAT40-DA300-0338 | 84 |
| ASC-8-24 | 17 | BT30-SX16-090 | 15 | BT40-ER20H-160 | 63 | BT40-SM075-0400-F | 100 | CAT40-DC050-0413 | 106 |
| BT30-BC075-0295 | 5 | BT30-SX25M-090 | 15 | BT40-ER25-060 | 63 | BT40-SM100-0175 | 100 | CAT40-EM012-0175 | 88 |
| BT30-DC13-105 | 106 | BT30-VX06-090 | 31 | BT40-ER25-100 | 63 | BT40-SM100-0175-F | 100 | CAT40-EM012-0250 | 88 |
| BT30-EM012-0236 | 94 | BT30-VX08-092 | 31 | BT40-ER25-160 | 63 | BT40-SM100-0400 | 100 | CAT40-EM012-0400 | 88 |
| BT30-EM012-0400 | 94 | BT40-BC075-0315 | 5 | BT40-ER32-075 | 63 | BT40-SM100-0400-F | 100 | CAT40-EM012-0500 | 88 |
| BT30-EM018-0236 | 94 | BT40-BC100-0331 | 5 | BT40-ER32-100 | 63 | BT40-SM125-0200 | 100 | CAT40-EM012-0600 | 88 |
| BT30-EM018-0400 | 94 | BT40-BC125-0403 | 5 | BT40-ER32-160 | 63 | BT40-SM125-0200-F | 100 | CAT40-EM018-0175 | 88 |
| BT30-EM025-0236 | 94 | BT40-DC13-110 | 106 | BT40-ER40-080 | 63 | BT40-SM125-0400 | 100 | CAT40-EM018-0250 | 88 |
| BT30-EM025-0400 | 94 | BT40-EM012-0250 | 95 | BT40-ER40-160 | 63 | BT40-SM125-0400-F | 100 | CAT40-EM018-0400 | 88 |
| BT30-EM031-0236 | 94 | BT40-EM012-0400 | 95 | BT40-JT01-045 | 107 | BT40-SM150-0200 | 100 | CAT40-EM018-0600 | 88 |
| BT30-EM031-0400 | 94 | BT40-EM018-0250 | 95 | BT40-JT02-045 | 107 | BT40-SM150-0200-F | 100 | CAT40-EM025-0175 | 88 |
| BT30-EM037-0236 | 94 | BT40-EM018-0400 | 95 | BT40-JT02-090 | 107 | BT40-SX06-090 | 15 | CAT40-EM025-0250 | 88 |
| BT30-EM037-0400 | 94 | BT40-EM025-0250 | 95 | BT40-JT03-045 | 107 | BT40-SX06-120 | 15 | CAT40-EM025-0400 | 88 |
| BT30-EM050-0236 | 94 | BT40-EM025-0400 | 95 | BT40-JT03-090 | 107 | BT40-SX10-060 | 15 | CAT40-EM025-0500 | 88 |
| BT30-EM050-0400 | 94 | BT40-EM025-0600 | 95 | BT40-JT06-045 | 107 | BT40-SX10-090 | 15 | CAT40-EM025-0600 | 88 |
| BT30-EM062-0236 | 94 | BT40-EM031-0250 | 95 | BT40-JT06-090 | 107 | BT40-SX10-120 | 15 | CAT40-EM031-0175 | 88 |
| BT30-EM062-0400 | 94 | BT40-EM031-0400 | 95 | BT40-JT33-045 | 107 | BT40-SX10-150 | 15 | CAT40-EM031-0250 | 88 |
| BT30-EM075-0236 | 94 | BT40-EM037-0250 | 95 | BT40-JT33-090 | 107 | BT40-SX16-090 | 15 | CAT40-EM031-0400 | 88 |
| BT30-EM075-0400 | 94 | BT40-EM037-0400 | 95 | BT40-MA1-045 | 107 | BT40-SX16-120 | 15 | CAT40-EM031-0600 | 88 |
| BT30-EM087-0354 | 94 | BT40-EM037-0600 | 95 | BT40-MA1-120 | 107 | BT40-SX16-150 | 15 | CAT40-EM037-0175 | 88 |
| BT30-EM100-0275 | 94 | BT40-EM050-0250 | 95 | BT40-MA2-050 | 107 | BT40-SX16-180 | 15 | CAT40-EM037-0250 | 88 |
| BT30-ER11H-060 | 62 | BT40-EM050-0400 | 95 | BT40-MA2-120 | 107 | BT40-SX25M-090 | 15 | CAT40-EM037-0400 | 88 |
| BT30-ER11H-100 | 62 | BT40-EM050-0600 | 95 | BT40-MA3-070 | 107 | BT40-SX25M-120 | 15 | CAT40-EM037-0450 | 88 |
| BT30-ER16H-070 | 62 | BT40-EM062-0250 | 95 | BT40-MC075-0295 | 43 | BT40-TB150-1000 | 106 | CAT40-EM037-0500 | 88 |
| BT30-ER16H-100 | 62 | BT40-EM062-0400 | 95 | BT40-MC075-0295-S | 43 | BT40-TC1-67 | 109 | CAT40-EM037-0600 | 88 |
| BT30-ER20H-070 | 62 | BT40-EM062-0600 | 95 | BT40-MC075-0354 | 43 | BT40-TC2-94 | 109 | CAT40-EM043-0250 | 88 |
| BT30-ER20H-100 | 62 | BT40-EM075-0175 | 95 | BT40-MC075-0472 | 43 | BT40-TC3-167 | 109 | CAT40-EM050-0175 | 88 |
| BT30-ER25-070 | 62 | BT40-EM075-0250 | 95 | BT40-MC075-0472-S | 43 | BT40-TG100-0300 | 81 | CAT40-EM050-0250 | 88 |
| BT30-ER25-100 | 62 | BT40-EM075-0400 | 95 | BT40-MC100-0315 | 43 | BT40-TG100-0550 | 81 | CAT40-EM050-0262 | 88 |
| BT30-ER32-070 | 62 | BT40-EM075-0600 | 95 | BT40-MC100-0335-S | 43 | BT40-VX06-100 | 31 | CAT40-EM050-0400 | 88 |
| BT30-MC075-0315 | 42 | BT40-EM087-0335 | 95 | BT40-MC100-0413 | 43 | BT40-VX06-150 | 31 | CAT40-EM050-0462 | 88 |
| BT30-MC075-0335-S | 42 | BT40-EM087-0500 | 95 | BT40-MC100-0472-S | 43 | BT40-VX08-100 | 31 | CAT40-EM050-0500 | 88 |
| BT30-MX06-090 | 29 | BT40-EM100-0200 | 95 | BT40-MC125-0335 | 43 | BT40-VX08-150 | 31 | CAT40-EM050-0600 | 88 |
| BT30-MX08-090 | 29 | BT40-EM100-0300 | 95 | BT40-MC125-0354-S | 43 | BT40-VX12-110 | 31 | CAT40-EM062-0175 | 89 |
| BT30-MX12-105 | 29 | BT40-EM100-0400 | 95 | BT40-MC125-0472 | 43 | BT40-VX12-150 | 31 | CAT40-EM062-0250 | 89 |
| BT30-SB100-0300 | 106 | BT40-EM100-0600 | 95 | BT40-MC125-0472-S | 43 | CAT40-BC075-0283 | 5 | CAT40-EM062-0300 | 89 |
| BT30-SM050-0119 | 100 | BT40-EM125-0200 | 95 | BT40-MX06-085 | 29 | CAT40-BC100-0300 | 5 | CAT40-EM062-0400 | 89 |
| BT30-SM050-0119-F | 100 | BT40-EM125-0356 | 95 | BT40-MX06-150 | 29 | CAT40-BC125-0350 | 5 | CAT40-EM062-0500 | 89 |
| BT30-SM075-0119 | 100 | BT40-EM125-0600 | 95 | BT40-MX08-085 | 29 | CAT40-BCM20-0283 | 5 | CAT40-EM062-0600 | 89 |
| BT30-SM075-0119-F | 100 | BT40-EM150-0433 | 95 | BT40-MX08-120 | 29 | CAT40-BCM25-0300 | 5 | CAT40-EM075-0175 | 89 |
| BT30-SM100-0119 | 100 | BT40-ER11H-060 | 63 | BT40-MX12-090 | 29 | CAT40-BCM32-0350 | 5 | CAT40-EM075-0250 | 89 |
| BT30-SM100-0119-F | 100 | BT40-ER11H-100 | 63 | BT40-RT1-72 | 108 | CAT40-DA100-0350 | 84 | CAT40-EM075-0300 | 89 |

CAT40-EM075-0350 - CAT40-TG100-0550

| | | | | | | | | | |
|------------------|----|----------------------|-----|--------------------|-----|--------------------|-----|--------------------|-----|
| CAT40-EM075-0350 | 89 | CAT40-ER32-0250 | 60 | CAT40-SB125-0350 | 106 | CAT40-SM100-0800-F | 101 | CAT40-SM100-0800-F | 101 |
| CAT40-EM075-0400 | 89 | CAT40-ER32-0400 | 60 | CAT40-SD012-080 | 54 | CAT40-SM125-0225 | 101 | CAT40-SM125-0225 | 101 |
| CAT40-EM075-0500 | 89 | CAT40-ER32-0600 | 60 | CAT40-SD012-160 | 54 | CAT40-SM125-0225-F | 101 | CAT40-SM125-0225-F | 101 |
| CAT40-EM075-0600 | 89 | CAT40-ER32-0800 | 60 | CAT40-SD018-080 | 54 | CAT40-SM150-0240 | 101 | CAT40-SM150-0240 | 101 |
| CAT40-EM087-0175 | 89 | CAT40-ER40-0250 | 60 | CAT40-SD018-160 | 54 | CAT40-SM150-0240-F | 101 | CAT40-SM150-0240-F | 101 |
| CAT40-EM087-0350 | 89 | CAT40-ER40-0400 | 60 | CAT40-SD025-080 | 54 | CAT40-SM200-0240 | 101 | CAT40-SM200-0240 | 101 |
| CAT40-EM087-0600 | 89 | CAT40-ER40-0600 | 60 | CAT40-SD025-160 | 54 | CAT40-SM200-0240-F | 101 | CAT40-SM200-0240-F | 101 |
| CAT40-EM100-0175 | 89 | CAT40-JT02-0177 | 107 | CAT40-SD031-080 | 54 | CAT40-SX06-090 | 10 | CAT40-SX06-090 | 10 |
| CAT40-EM100-0300 | 89 | CAT40-JT03-0177 | 107 | CAT40-SD031-160 | 54 | CAT40-SX06-090-D | 11 | CAT40-SX06-090-D | 11 |
| CAT40-EM100-0400 | 89 | CAT40-JT06-0177 | 107 | CAT40-SD037-080 | 54 | CAT40-SX06-120 | 10 | CAT40-SX06-120 | 10 |
| CAT40-EM100-0500 | 89 | CAT40-JT06-0354 | 107 | CAT40-SD037-160 | 54 | CAT40-SX06-120-D | 11 | CAT40-SX06-120-D | 11 |
| CAT40-EM100-0600 | 89 | CAT40-JT33-0177 | 107 | CAT40-SD043-080 | 54 | CAT40-SX06-150 | 10 | CAT40-SX06-150 | 10 |
| CAT40-EM125-0200 | 89 | CAT40-JT33-0354 | 107 | CAT40-SD043-160 | 54 | CAT40-SX06-150-D | 11 | CAT40-SX06-150-D | 11 |
| CAT40-EM125-0400 | 89 | CAT40-MA1-0177 | 107 | CAT40-SD050-080 | 54 | CAT40-SX10-090 | 10 | CAT40-SX10-090 | 10 |
| CAT40-EM125-0425 | 89 | CAT40-MA1-0472 | 107 | CAT40-SD050-160 | 54 | CAT40-SX10-090-D | 11 | CAT40-SX10-090-D | 11 |
| CAT40-EM125-0600 | 89 | CAT40-MA2-0236 | 107 | CAT40-SD062-080 | 54 | CAT40-SX10-120 | 10 | CAT40-SX10-120 | 10 |
| CAT40-EM150-0400 | 89 | CAT40-MA2-0472 | 107 | CAT40-SD062-160 | 54 | CAT40-SX10-120-D | 11 | CAT40-SX10-120-D | 11 |
| CAT40-EM150-0462 | 89 | CAT40-MA3-0295 | 107 | CAT40-SD075-080 | 54 | CAT40-SX10-150 | 10 | CAT40-SX10-150 | 10 |
| CAT40-EM150-0600 | 89 | CAT40-MA3-0531 | 107 | CAT40-SD075-160 | 54 | CAT40-SX10-150-D | 11 | CAT40-SX10-150-D | 11 |
| CAT40-EMM06-0250 | 90 | CAT40-MA4-0374 | 107 | CAT40-SD100-100 | 54 | CAT40-SX10-180 | 10 | CAT40-SX10-180 | 10 |
| CAT40-EMM08-0250 | 90 | CAT40-MA4-0650 | 107 | CAT40-SD100-160 | 54 | CAT40-SX10-180-D | 11 | CAT40-SX10-180-D | 11 |
| CAT40-EMM10-0250 | 90 | CAT40-MC075-0335 | 38 | CAT40-SD125-100 | 54 | CAT40-SX16-090 | 10 | CAT40-SX16-090 | 10 |
| CAT40-EMM12-0250 | 90 | CAT40-MC075-0335-KIT | 48 | CAT40-SD125-160 | 54 | CAT40-SX16-090-D | 11 | CAT40-SX16-090-D | 11 |
| CAT40-EMM14-0250 | 90 | CAT40-MC075-0335-S | 39 | CAT40-SDM03-080 | 55 | CAT40-SX16-120 | 10 | CAT40-SX16-120 | 10 |
| CAT40-EMM16-0250 | 90 | CAT40-MC075-0472 | 38 | CAT40-SDM04-080 | 55 | CAT40-SX16-120-D | 11 | CAT40-SX16-120-D | 11 |
| CAT40-EMM18-0250 | 90 | CAT40-MC075-0591-S | 39 | CAT40-SDM06-080 | 55 | CAT40-SX16-150 | 10 | CAT40-SX16-150 | 10 |
| CAT40-EMM20-0250 | 90 | CAT40-MC100-0335 | 38 | CAT40-SDM08-080 | 55 | CAT40-SX16-150-D | 11 | CAT40-SX16-150-D | 11 |
| CAT40-EMM25-0300 | 90 | CAT40-MC100-0335-KIT | 48 | CAT40-SDM10-080 | 55 | CAT40-SX16-180 | 10 | CAT40-SX16-180 | 10 |
| CAT40-EMM32-0400 | 90 | CAT40-MC100-0374-S | 39 | CAT40-SDM12-080 | 55 | CAT40-SX16-180-D | 11 | CAT40-SX16-180-D | 11 |
| CAT40-ER11H-0250 | 60 | CAT40-MC100-0413 | 38 | CAT40-SDM16-080 | 55 | CAT40-SX25-090 | 10 | CAT40-SX25-090 | 10 |
| CAT40-ER11H-0400 | 60 | CAT40-MC100-0591-S | 39 | CAT40-SDM20-080 | 55 | CAT40-SX25-120 | 10 | CAT40-SX25-120 | 10 |
| CAT40-ER11H-0600 | 60 | CAT40-MC125-0354* | 38 | CAT40-SDM25-100 | 55 | CAT40-SX25-150 | 10 | CAT40-SX25-150 | 10 |
| CAT40-ER11M-0250 | 59 | CAT40-MC125-0354-KIT | 48 | CAT40-SDM32-100 | 55 | CAT40-SX25M-0175-D | 9 | CAT40-SX25M-0175-D | 9 |
| CAT40-ER11M-0400 | 59 | CAT40-MC125-0413 | 38 | CAT40-SM075-0175 | 101 | CAT40-SX25M-0175-D | 11 | CAT40-SX25M-0175-D | 11 |
| CAT40-ER16H-0250 | 60 | CAT40-MC125-0472 | 38 | CAT40-SM075-0175-F | 101 | CAT40-SX25M-090-D | 9 | CAT40-SX25M-090-D | 9 |
| CAT40-ER16H-0400 | 60 | CAT40-MC125-0472-S | 39 | CAT40-SM075-0400 | 101 | CAT40-SX25M-090-D | 11 | CAT40-SX25M-090-D | 11 |
| CAT40-ER16H-0600 | 60 | CAT40-MC125-0591-S | 39 | CAT40-SM075-0400-F | 101 | CAT40-SX25M-120-D | 9 | CAT40-SX25M-120-D | 9 |
| CAT40-ER16H-0800 | 60 | CAT40-MX06-085 | 29 | CAT40-SM075-0600 | 101 | CAT40-SX25M-120-D | 11 | CAT40-SX25M-120-D | 11 |
| CAT40-ER16M-0250 | 59 | CAT40-MX06-150 | 29 | CAT40-SM075-0600-F | 101 | CAT40-SX25M-150-D | 9 | CAT40-SX25M-150-D | 9 |
| CAT40-ER16M-0400 | 59 | CAT40-MX08-085 | 29 | CAT40-SM075-0800 | 101 | CAT40-SX25M-150-D | 11 | CAT40-SX25M-150-D | 11 |
| CAT40-ER20H-0250 | 60 | CAT40-MX08-120 | 29 | CAT40-SM075-0800-F | 101 | CAT40-TB150-1000 | 106 | CAT40-TB150-1000 | 106 |
| CAT40-ER20H-0400 | 60 | CAT40-MX08-150 | 29 | CAT40-SM100-0200 | 101 | CAT40-TC1-59 | 109 | CAT40-TC1-59 | 109 |
| CAT40-ER20H-0600 | 60 | CAT40-MX12-090 | 29 | CAT40-SM100-0200-F | 101 | CAT40-TC2-97 | 109 | CAT40-TC2-97 | 109 |
| CAT40-ER20H-0800 | 60 | CAT40-MX12-120 | 29 | CAT40-SM100-0400 | 101 | CAT40-TC3-149 | 109 | CAT40-TC3-149 | 109 |
| CAT40-ER25-0250 | 60 | CAT40-RT1-72 | 108 | CAT40-SM100-0400-F | 101 | CAT40-TG075-0300 | 81 | CAT40-TG075-0300 | 81 |
| CAT40-ER25-0400 | 60 | CAT40-RT2-91 | 108 | CAT40-SM100-0600 | 101 | CAT40-TG075-0500 | 81 | CAT40-TG075-0500 | 81 |
| CAT40-ER25-0600 | 60 | CAT40-RT3-130 | 108 | CAT40-SM100-0600-F | 101 | CAT40-TG100-0300 | 81 | CAT40-TG100-0300 | 81 |
| CAT40-ER25-0800 | 60 | CAT40-SB100-0300 | 106 | CAT40-SM100-0800 | 101 | CAT40-TG100-0550 | 81 | CAT40-TG100-0550 | 81 |

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| | | | | | | | | | |
|------------------|----|------------------|-----|--------------------|-----|--------------------|-----|-------------------|-----|
| CAT50-EM062-0300 | 93 | CAT50-EMM18-0400 | 91 | CAT50-MA3-0709 | 107 | CAT50-SM100-0400 | 102 | CAT50-SX10-165 | 12 |
| CAT50-EM062-0375 | 93 | CAT50-EMM20-0400 | 91 | CAT50-MA4-0295 | 107 | CAT50-SM100-0400-F | 103 | CAT50-SX10-165-D | 13 |
| CAT50-EM062-0400 | 93 | CAT50-EMM25-0400 | 91 | CAT50-MA4-0709 | 107 | CAT50-SM100-0600 | 102 | CAT50-SX10-195 | 12 |
| CAT50-EM062-0600 | 93 | CAT50-EMM32-0400 | 91 | CAT50-MA5-0413 | 107 | CAT50-SM100-0600-F | 103 | CAT50-SX10-195-D | 13 |
| CAT50-EM062-0775 | 93 | CAT50-ER16H-0250 | 61 | CAT50-MA5-0709 | 107 | CAT50-SM100-0800 | 102 | CAT50-SX16-105 | 12 |
| CAT50-EM062-1000 | 93 | CAT50-ER16H-0400 | 61 | CAT50-MC075-0354-S | 41 | CAT50-SM100-0800-F | 103 | CAT50-SX16-105-D | 13 |
| CAT50-EM062-1200 | 93 | CAT50-ER16H-0600 | 61 | CAT50-MC075-0413 | 40 | CAT50-SM100-1000-F | 103 | CAT50-SX16-135 | 12 |
| CAT50-EM075-0175 | 93 | CAT50-ER16H-0800 | 61 | CAT50-MC075-0531 | 40 | CAT50-SM100-1000-F | 102 | CAT50-SX16-135-D | 13 |
| CAT50-EM075-0300 | 93 | CAT50-ER16H-1000 | 61 | CAT50-MC075-0650 | 40 | CAT50-SM100-1200-F | 103 | CAT50-SX16-165 | 12 |
| CAT50-EM075-0375 | 93 | CAT50-ER16H-1200 | 61 | CAT50-MC075-0650-S | 41 | CAT50-SM100-1200-F | 102 | CAT50-SX16-165-D | 13 |
| CAT50-EM075-0400 | 93 | CAT50-ER16H-1500 | 61 | CAT50-MC100-0315 | 40 | CAT50-SM100-1500-F | 103 | CAT50-SX16-195 | 12 |
| CAT50-EM075-0575 | 93 | CAT50-ER20H-0250 | 61 | CAT50-MC100-0354-S | 41 | CAT50-SM100-1500-F | 102 | CAT50-SX16-195-D | 13 |
| CAT50-EM075-0600 | 93 | CAT50-ER20H-0400 | 61 | CAT50-MC100-0413 | 40 | CAT50-SM125-0150 | 102 | CAT50-SX25-105 | 12 |
| CAT50-EM075-0800 | 93 | CAT50-ER20H-0600 | 61 | CAT50-MC100-0531 | 40 | CAT50-SM125-0150-F | 103 | CAT50-SX25-135 | 12 |
| CAT50-EM075-1000 | 93 | CAT50-ER20H-0800 | 61 | CAT50-MC100-0531-S | 41 | CAT50-SM125-0350 | 102 | CAT50-SX25-165 | 12 |
| CAT50-EM075-1200 | 93 | CAT50-ER20H-1500 | 61 | CAT50-MC100-0650-S | 41 | CAT50-SM125-0350-F | 103 | CAT50-SX25-195 | 12 |
| CAT50-EM075-1500 | 93 | CAT50-ER25-0250 | 61 | CAT50-MC125-0354 | 40 | CAT50-SM125-0550 | 102 | CAT50-SX25M-105-D | 13 |
| CAT50-EM087-0350 | 93 | CAT50-ER25-0400 | 61 | CAT50-MC125-0354-S | 41 | CAT50-SM125-0550-F | 103 | CAT50-SX25M-135-D | 13 |
| CAT50-EM087-0600 | 93 | CAT50-ER25-0600 | 61 | CAT50-MC125-0413 | 40 | CAT50-SM125-0800 | 102 | CAT50-SX25M-165-D | 13 |
| CAT50-EM087-0775 | 93 | CAT50-ER25-0800 | 61 | CAT50-MC125-0531 | 40 | CAT50-SM125-0800-F | 103 | CAT50-SX25M-195-D | 13 |
| CAT50-EM100-0162 | 93 | CAT50-ER25-1500 | 61 | CAT50-MC125-0531-S | 41 | CAT50-SM125-1200-F | 103 | CAT50-TB200-1200 | 106 |
| CAT50-EM100-0300 | 93 | CAT50-ER32-0250 | 61 | CAT50-MC125-0650 | 40 | CAT50-SM125-1200-F | 102 | CAT50-TC1-59 | 109 |
| CAT50-EM100-0400 | 93 | CAT50-ER32-0400 | 61 | CAT50-MC125-0650-S | 41 | CAT50-SM125-1500-F | 103 | CAT50-TC2-97 | 109 |
| CAT50-EM100-0600 | 93 | CAT50-ER32-0500 | 61 | CAT50-MX08-110 | 29 | CAT50-SM125-1500-F | 102 | CAT50-TC3-141 | 109 |
| CAT50-EM100-0800 | 93 | CAT50-ER32-0600 | 61 | CAT50-MX08-165 | 29 | CAT50-SM150-0240 | 102 | CAT50-TG100-0350 | 81 |
| CAT50-EM100-1000 | 93 | CAT50-ER32-0800 | 61 | CAT50-MX12-105 | 29 | CAT50-SM150-0240-F | 103 | CAT50-TG100-0550 | 81 |
| CAT50-EM125-0200 | 93 | CAT50-ER32-1000 | 61 | CAT50-MX12-165 | 29 | CAT50-SM150-0400 | 102 | CAT50-TG100-0750 | 81 |
| CAT50-EM125-0300 | 93 | CAT50-ER32-1200 | 61 | CAT50-RT1-72 | 108 | CAT50-SM150-0400-F | 103 | CAT50-TG150-0350 | 81 |
| CAT50-EM125-0400 | 93 | CAT50-ER32-1500 | 61 | CAT50-RT2-91 | 108 | CAT50-SM150-0600 | 102 | CAT50-TG150-0550 | 81 |
| CAT50-EM125-0600 | 93 | CAT50-ER40-0400 | 61 | CAT50-RT3-130 | 108 | CAT50-SM150-0600-F | 103 | CAT50-VX08-0413 | 31 |
| CAT50-EM125-0800 | 93 | CAT50-ER40-0500 | 61 | CAT50-SB100-0300 | 106 | CAT50-SM150-0800 | 102 | CAT50-VX08-0654 | 31 |
| CAT50-EM125-1000 | 93 | CAT50-ER40-0600 | 61 | CAT50-SB125-0300 | 106 | CAT50-SM150-0800-F | 103 | CAT50-VX12-0457 | 31 |
| CAT50-EM150-0225 | 93 | CAT50-ER40-0800 | 61 | CAT50-SM075-0150 | 102 | CAT50-SM200-0240 | 102 | CAT50-VX12-0654 | 31 |
| CAT50-EM150-0400 | 93 | CAT50-JT01-0177 | 107 | CAT50-SM075-0150-F | 103 | CAT50-SM200-0240-F | 103 | DA100-0063 | 85 |
| CAT50-EM150-0600 | 93 | CAT50-JT02-0177 | 107 | CAT50-SM075-0350 | 102 | CAT50-SM200-0400 | 102 | DA100-0078 | 85 |
| CAT50-EM150-0800 | 93 | CAT50-JT03-0177 | 107 | CAT50-SM075-0350-F | 103 | CAT50-SM200-0400-F | 103 | DA100-0094 | 85 |
| CAT50-EM150-1000 | 93 | CAT50-JT03-0413 | 107 | CAT50-SM075-0550 | 102 | CAT50-SX06-105 | 12 | DA100-0109 | 85 |
| CAT50-EM200-0362 | 93 | CAT50-JT06-0177 | 107 | CAT50-SM075-0550-F | 103 | CAT50-SX06-105-D | 13 | DA100-0125 | 85 |
| CAT50-EM200-0562 | 93 | CAT50-JT33-0177 | 107 | CAT50-SM075-0800 | 102 | CAT50-SX06-135 | 12 | DA100-0141 | 85 |
| CAT50-EM200-0800 | 93 | CAT50-JT33-0413 | 107 | CAT50-SM075-0800-F | 103 | CAT50-SX06-135-D | 13 | DA100-0156 | 85 |
| CAT50-EM200-1000 | 93 | CAT50-MA1-0177 | 107 | CAT50-SM075-1000-F | 103 | CAT50-SX06-165 | 12 | DA100-0172 | 85 |
| CAT50-EM250-0650 | 93 | CAT50-MA1-0472 | 107 | CAT50-SM075-1000-F | 102 | CAT50-SX06-165-D | 13 | DA100-0188 | 85 |
| CAT50-EMM06-0400 | 91 | CAT50-MA1-0709 | 107 | CAT50-SM075-1200-F | 103 | CAT50-SX06-195 | 12 | DA100-0203 | 85 |
| CAT50-EMM08-0400 | 91 | CAT50-MA2-0177 | 107 | CAT50-SM075-1200-F | 102 | CAT50-SX06-195-D | 13 | DA100-0219 | 85 |
| CAT50-EMM10-0400 | 91 | CAT50-MA2-0531 | 107 | CAT50-SM075-1500-F | 103 | CAT50-SX10-105 | 12 | DA100-0234 | 85 |
| CAT50-EMM12-0400 | 91 | CAT50-MA2-0709 | 107 | CAT50-SM075-1500-F | 102 | CAT50-SX10-105-D | 13 | DA100-0250 | 85 |
| CAT50-EMM14-0400 | 91 | CAT50-MA3-0177 | 107 | CAT50-SM100-0200 | 102 | CAT50-SX10-135 | 12 | DA100-0266 | 85 |
| CAT50-EMM16-0400 | 91 | CAT50-MA3-0591 | 107 | CAT50-SM100-0200-F | 103 | CAT50-SX10-135-D | 13 | DA100-0281 | 85 |

DA100-0297 - ER25-ISET

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|-------------|----|-------------|----|-------------|-----|-----------|----|-----------|----|
| DA100-0297 | 85 | DA180-0453 | 85 | DA200-SET21 | 85 | ER11-0187 | 68 | ER20-0187 | 68 |
| DA100-0313 | 85 | DA180-0469 | 85 | DA200-SET9 | 85 | ER11-0218 | 68 | ER20-0218 | 68 |
| DA100-0328 | 85 | DA180-0484 | 85 | DA300-0047 | 85 | ER11-0250 | 68 | ER20-0250 | 68 |
| DA100-0344 | 85 | DA180-0500 | 85 | DA300-0063 | 85 | ER11-ISET | 68 | ER20-0281 | 68 |
| DA100-0359 | 85 | DA180-0516 | 85 | DA300-0078 | 85 | ER11-M010 | 70 | ER20-0312 | 68 |
| DA100-0375 | 85 | DA180-0531 | 85 | DA300-0094 | 85 | ER11-M015 | 70 | ER20-0344 | 68 |
| DA100-0391 | 85 | DA180-0547 | 85 | DA300-0109 | 85 | ER11-M020 | 70 | ER20-0375 | 68 |
| DA100-0406 | 85 | DA180-0563 | 85 | DA300-0125 | 85 | ER11-M025 | 70 | ER20-0406 | 68 |
| DA100-0422 | 85 | DA180-0578 | 85 | DA300-0141 | 85 | ER11-M030 | 70 | ER20-0438 | 68 |
| DA100-0438 | 85 | DA180-0594 | 85 | DA300-0156 | 85 | ER11-M035 | 70 | ER20-0469 | 68 |
| DA100-0453 | 85 | DA180-0609 | 85 | DA300-0172 | 85 | ER11-M040 | 70 | ER20-0500 | 68 |
| DA100-0469 | 85 | DA180-0625 | 85 | DA300-0188 | 85 | ER11-M045 | 70 | ER20-ISET | 68 |
| DA100-0484 | 85 | DA180-0641 | 85 | DA300-0203 | 85 | ER11-M050 | 70 | ER20-M010 | 71 |
| DA100-0500 | 85 | DA180-0656 | 85 | DA300-0219 | 85 | ER11-M055 | 70 | ER20-M015 | 71 |
| DA100-0516 | 85 | DA180-0672 | 85 | DA300-0234 | 85 | ER11-M060 | 70 | ER20-M020 | 71 |
| DA100-0531 | 85 | DA180-0688 | 85 | DA300-0250 | 85 | ER11-M065 | 70 | ER20-M025 | 71 |
| DA100-0547 | 85 | DA180-0703 | 85 | DA300-SET14 | 85 | ER11-M070 | 70 | ER20-M030 | 71 |
| DA100-0563 | 85 | DA180-0719 | 85 | DA300-SET7 | 85 | ER11-MSET | 70 | ER20-M035 | 71 |
| DA100-SET15 | 85 | DA180-0734 | 85 | DAN-100 | 84 | ER16-0062 | 68 | ER20-M040 | 71 |
| DA100-SET21 | 85 | DA180-0750 | 85 | DAN-180 | 84 | ER16-0093 | 68 | ER20-M050 | 71 |
| DA100-SET29 | 85 | DA180-SET17 | 85 | DAN-200 | 84 | ER16-0125 | 68 | ER20-M060 | 71 |
| DA100-SET33 | 85 | DA180-SET21 | 85 | DAN-300 | 84 | ER16-0156 | 68 | ER20-M070 | 71 |
| DA100-SET8 | 85 | DA180-SET33 | 85 | DAW-100 | 84 | ER16-0187 | 68 | ER20-M080 | 71 |
| DA180-0063 | 85 | DA180-SET41 | 85 | DAW-180 | 84 | ER16-0218 | 68 | ER20-M090 | 71 |
| DA180-0078 | 85 | DA180-SET9 | 85 | DAW-200 | 84 | ER16-0250 | 68 | ER20-M100 | 71 |
| DA180-0094 | 85 | DA200-0047 | 85 | DAW-300 | 84 | ER16-0281 | 68 | ER20-M110 | 71 |
| DA180-0109 | 85 | DA200-0063 | 85 | DK-SM050 | 105 | ER16-0312 | 68 | ER20-M120 | 71 |
| DA180-0125 | 85 | DA200-0078 | 85 | DK-SM075 | 105 | ER16-0344 | 68 | ER20-M130 | 71 |
| DA180-0141 | 85 | DA200-0094 | 85 | DK-SM100 | 105 | ER16-0375 | 68 | ER20-MSET | 70 |
| DA180-0156 | 85 | DA200-0109 | 85 | DK-SM100-B | 105 | ER16-0406 | 68 | ER25-0093 | 69 |
| DA180-0172 | 85 | DA200-0125 | 85 | DK-SM125 | 105 | ER16-ISET | 68 | ER25-0125 | 69 |
| DA180-0188 | 85 | DA200-0141 | 85 | DK-SM150 | 105 | ER16-M010 | 70 | ER25-0156 | 69 |
| DA180-0203 | 85 | DA200-0156 | 85 | DK-SM150-C | 105 | ER16-M015 | 70 | ER25-0187 | 69 |
| DA180-0219 | 85 | DA200-0172 | 85 | DK-SM200 | 105 | ER16-M020 | 70 | ER25-0218 | 69 |
| DA180-0234 | 85 | DA200-0188 | 85 | ER08-M010 | 70 | ER16-M025 | 70 | ER25-0250 | 69 |
| DA180-0250 | 85 | DA200-0203 | 85 | ER08-M015 | 70 | ER16-M030 | 70 | ER25-0281 | 69 |
| DA180-0266 | 85 | DA200-0219 | 85 | ER08-M020 | 70 | ER16-M035 | 70 | ER25-0312 | 69 |
| DA180-0281 | 85 | DA200-0234 | 85 | ER08-M025 | 70 | ER16-M040 | 70 | ER25-0344 | 69 |
| DA180-0297 | 85 | DA200-0250 | 85 | ER08-M030 | 70 | ER16-M050 | 70 | ER25-0375 | 69 |
| DA180-0313 | 85 | DA200-0266 | 85 | ER08-M035 | 70 | ER16-M060 | 70 | ER25-0406 | 69 |
| DA180-0328 | 85 | DA200-0281 | 85 | ER08-M040 | 70 | ER16-M070 | 70 | ER25-0438 | 69 |
| DA180-0344 | 85 | DA200-0297 | 85 | ER08-M045 | 70 | ER16-M080 | 70 | ER25-0469 | 69 |
| DA180-0359 | 85 | DA200-0313 | 85 | ER08-M050 | 70 | ER16-M090 | 70 | ER25-0500 | 69 |
| DA180-0375 | 85 | DA200-0328 | 85 | ER08-MSET | 70 | ER16-M100 | 70 | ER25-0531 | 69 |
| DA180-0391 | 85 | DA200-0344 | 85 | ER11-0062 | 68 | ER16-MSET | 70 | ER25-0563 | 69 |
| DA180-0406 | 85 | DA200-0359 | 85 | ER11-0093 | 68 | ER20-0093 | 68 | ER25-0594 | 69 |
| DA180-0422 | 85 | DA200-0375 | 85 | ER11-0125 | 68 | ER20-0125 | 68 | ER25-0625 | 69 |
| DA180-0438 | 85 | DA200-SET17 | 85 | ER11-0156 | 68 | ER20-0156 | 68 | ER25-ISET | 68 |

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|-----------|----|-----------|----|-----------|----|-----------------|-----|---------------------|-----|
| ER25-M015 | 71 | ER32-M060 | 71 | ER40-M040 | 71 | ERW-11M | 78 | HSK 63A-DC13-155 | 106 |
| ER25-M020 | 71 | ER32-M070 | 71 | ER40-M050 | 71 | ERW-16E | 78 | HSK63A COOLNT TUBE | 33 |
| ER25-M025 | 71 | ER32-M080 | 71 | ER40-M060 | 71 | ERW-16H | 78 | HSK63A-BC075-0311 | 5 |
| ER25-M030 | 71 | ER32-M090 | 71 | ER40-M070 | 71 | ERW-16M | 26 | HSK63A-BC100-0391 | 5 |
| ER25-M035 | 71 | ER32-M100 | 71 | ER40-M080 | 71 | ERW-16M | 78 | HSK63A-BC125-0433 | 5 |
| ER25-M040 | 71 | ER32-M110 | 71 | ER40-M090 | 71 | ERW-20E | 78 | HSK 63A-DC13-155 | 106 |
| ER25-M050 | 71 | ER32-M120 | 71 | ER40-M100 | 71 | ERW-20H | 78 | HSK63A-EM012-0250 | 96 |
| ER25-M060 | 71 | ER32-M130 | 71 | ER40-M110 | 71 | ERW-20M | 78 | HSK63A-EM018-0250 | 96 |
| ER25-M070 | 71 | ER32-M140 | 71 | ER40-M120 | 71 | ERW-25E | 78 | HSK63A-EM025-0250 | 96 |
| ER25-M080 | 71 | ER32-M150 | 71 | ER40-M130 | 71 | ERW-32E | 78 | HSK63A-EM031-0250 | 96 |
| ER25-M090 | 71 | ER32-M160 | 71 | ER40-M140 | 71 | ERW-40E | 78 | HSK63A-EM037-0250 | 96 |
| ER25-M100 | 71 | ER32-M170 | 71 | ER40-M150 | 71 | ERW-8M | 78 | HSK63A-EM050-0315 | 96 |
| ER25-M110 | 71 | ER32-M180 | 71 | ER40-M160 | 71 | HG-BASE+LEGS | 112 | HSK63A-EM062-0315 | 96 |
| ER25-M120 | 71 | ER32-M190 | 71 | ER40-M170 | 71 | HG-BT30-POT | 112 | HSK63A-EM075-0315 | 96 |
| ER25-M130 | 71 | ER32-M200 | 71 | ER40-M180 | 71 | HG-CAT40-POT | 112 | HSK63A-EM100-0400 | 96 |
| ER25-M140 | 71 | ER32-MSET | 70 | ER40-M190 | 71 | HG-CAT50-POT | 112 | HSK63A-EM125-0435 | 96 |
| ER25-M150 | 71 | ER40-0125 | 69 | ER40-M200 | 71 | HG-HSK100A-POT | 112 | HSK63A-ER16H-100 | 64 |
| ER25-M160 | 71 | ER40-0156 | 69 | ER40-M210 | 71 | HG-HSK63A-POT | 112 | HSK63A-ER16H-160 | 64 |
| ER25-MSET | 70 | ER40-0187 | 69 | ER40-M220 | 71 | HPS- 1 | 117 | HSK63A-ER20H-100 | 64 |
| ER32-0093 | 69 | ER40-0218 | 69 | ER40-M230 | 71 | HPS- 16 | 117 | HSK63A-ER20H-160 | 64 |
| ER32-0125 | 69 | ER40-0250 | 69 | ER40-M240 | 71 | HPS- 16C | 117 | HSK63A-ER25-100 | 64 |
| ER32-0156 | 69 | ER40-0281 | 69 | ER40-M250 | 71 | HPS- 17 | 117 | HSK63A-ER25-160 | 64 |
| ER32-0187 | 69 | ER40-0312 | 69 | ER40-M260 | 71 | HPS- 17C | 117 | HSK63A-ER32-100 | 64 |
| ER32-0218 | 69 | ER40-0344 | 69 | ER40-M270 | 71 | HPS- 1C | 117 | HSK63A-ER32-160 | 64 |
| ER32-0250 | 69 | ER40-0375 | 69 | ER40-M280 | 71 | HPS- 2 | 117 | HSK63A-ER40-120 | 64 |
| ER32-0281 | 69 | ER40-0406 | 69 | ER40-M290 | 71 | HPS- 26 | 117 | HSK63A-ER40-150 | 64 |
| ER32-0312 | 69 | ER40-0438 | 69 | ER40-M300 | 71 | HPS- 26C | 117 | HSK63A-MC075-0374 | 44 |
| ER32-0344 | 69 | ER40-0469 | 69 | ER40-MSET | 70 | HPS- 54 | 117 | HSK63A-MC075-0433-S | 44 |
| ER32-0375 | 69 | ER40-0500 | 69 | ERN11-CC | 76 | HPS- 63 | 117 | HSK63A-MC100-0394 | 44 |
| ER32-0406 | 69 | ER40-0531 | 69 | ERN-11H | 65 | HPS-711-45 | 117 | HSK63A-MC100-0472-S | 44 |
| ER32-0438 | 69 | ER40-0563 | 69 | ERN-11M | 65 | HPS- 72 | 117 | HSK63A-MC125-0394 | 44 |
| ER32-0469 | 69 | ER40-0594 | 69 | ERN16-CC | 76 | HPS- 72C | 117 | HSK63A-MC125-0472-S | 44 |
| ER32-0500 | 69 | ER40-0625 | 69 | ERN-16E | 65 | HPS-806 -1 | 117 | HSK 63A-MX06-100 | 29 |
| ER32-0531 | 69 | ER40-0656 | 69 | ERN-16H | 65 | HPS-806U-1 | 117 | HSK 63A-MX08-100 | 29 |
| ER32-0563 | 69 | ER40-0688 | 69 | ERN-16M | 65 | HPS-B61 | 117 | HSK 63A-MX12-110 | 29 |
| ER32-0594 | 69 | ER40-0719 | 69 | ERN20-CC | 76 | HPS-B64-1 | 117 | HSK 63A-RT1-65 | 108 |
| ER32-0625 | 69 | ER40-0750 | 69 | ERN-20E | 65 | HPS-D72 | 117 | HSK 63A-RT2-98 | 108 |
| ER32-0656 | 69 | ER40-0781 | 69 | ERN-20H | 65 | HPS-D92 | 117 | HSK 63A-SD012-080 | 56 |
| ER32-0688 | 69 | ER40-0813 | 69 | ERN-20M | 65 | HPS-G43 | 117 | HSK 63A-SD012-160 | 56 |
| ER32-0719 | 69 | ER40-0844 | 69 | ERN25-CC | 76 | HPS-G51 | 117 | HSK 63A-SD018-080 | 56 |
| ER32-0750 | 69 | ER40-0875 | 69 | ERN-25E | 65 | HPS-G53 | 117 | HSK 63A-SD018-160 | 56 |
| ER32-ISET | 68 | ER40-0906 | 69 | ERN32-CC | 76 | HPS-G60 | 117 | HSK 63A-SD025-080 | 56 |
| ER32-M020 | 71 | ER40-0938 | 69 | ERN-32E | 65 | HPS-H30 | 117 | HSK 63A-SD025-160 | 56 |
| ER32-M025 | 71 | ER40-0969 | 69 | ERN40-CC | 76 | HPS-O 8 | 117 | HSK 63A-SD037-085 | 56 |
| ER32-M030 | 71 | ER40-1000 | 69 | ERN-40E | 65 | HPS-O14 | 117 | HSK 63A-SD037-160 | 56 |
| ER32-M035 | 71 | ER40-ISET | 68 | ERN-8M | 65 | HPS-O19 | 117 | HSK 63A-SD050-090 | 56 |
| ER32-M040 | 71 | ER40-M030 | 71 | ERW-11H | 78 | HPS-P14 | 117 | HSK 63A-SD050-160 | 56 |
| ER32-M050 | 71 | ER40-M035 | 71 | ERW-11M | 26 | HSK- 63A WRENCH | 78 | HSK 63A-SD062-095 | 56 |

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| HSK 63A-SD062-160 | 56 | HSK63A-SX16-150 | 14 | MC100-0500 | 46 | MC20-0312 | 47 | MCC100- | 37 |
| HSK 63A-SD075-100 | 56 | HSK63A-SX25M-090 | 14 | MC100-0562 | 46 | MC20-0375 | 47 | MCC125- | 37 |
| HSK 63A-SD075-160 | 56 | HSK63A-SX25M-135 | 14 | MC100-0625 | 46 | MC20-0437 | 47 | MCC125- | 37 |
| HSK 63A-SD100-115 | 56 | HSK63A-TB150-1000 | 106 | MC100-0750 | 46 | MC20-0500 | 47 | MCN075 | 37 |
| HSK 63A-SD100-160 | 56 | HSK 63A-TC1-102 | 109 | MC100-0875 | 46 | MC20-0562 | 47 | MCN075 | 37 |
| HSK 63A-SD125-120 | 56 | HSK 63A-TC2-137 | 109 | MC100-ISET | 48 | MC20-0625 | 47 | MCN100 | 37 |
| HSK 63A-SD125-160 | 56 | HSK 63A-VX06-105 | 31 | MC100-M060 | 46 | MC20-M020 | 47 | MCN100 | 37 |
| HSK 63A-SDM03-080 | 57 | HSK 63A-VX06-150 | 31 | MC100-M080 | 46 | MC20-M040 | 47 | MCN125 | 37 |
| HSK 63A-SDM03-160 | 57 | HSK 63A-VX08-105 | 31 | MC100-M100 | 46 | MC20-M050 | 47 | MCN125 | 37 |
| HSK 63A-SDM04-080 | 57 | HSK 63A-VX08-150 | 31 | MC100-M120 | 46 | MC20-M060 | 47 | MCW20 | 26 |
| HSK 63A-SDM04-160 | 57 | HSK 63A-VX12-115 | 31 | MC100-M140 | 46 | MC20-M080 | 47 | MCW20 | 26 |
| HSK 63A-SDM06-080 | 57 | HSK 63A-VX12-150 | 31 | MC100-M160 | 46 | MC20-M100 | 47 | MCW20 | 49 |
| HSK 63A-SDM06-160 | 57 | HSK100 COOLNT TUBE | 33 | MC100-M180 | 46 | MC20-M120 | 47 | MCW-20 | 81 |
| HSK 63A-SDM08-080 | 57 | HSK100A-MC075-0453-S | 45 | MC100-M200 | 46 | MC20-M140 | 47 | MCW25 | 49 |
| HSK 63A-SDM08-160 | 57 | HSK100A-MC100-0512-S | 45 | MC100-MSET | 48 | MC20-M160 | 47 | MCW-25 | 81 |
| HSK 63A-SDM10-085 | 57 | HSK100A-MC125-0531-S | 45 | MC125-0125 | 46 | MC20-M180 | 47 | MCW32 | 49 |
| HSK 63A-SDM10-160 | 57 | HSK100A-MC20-115-S | 45 | MC125-0187 | 46 | MC32-0125 | 47 | MX06 TRAY | 35 |
| HSK 63A-SDM12-090 | 57 | HSK100A-MC32-135-S | 45 | MC125-0250 | 46 | MC32-0187 | 47 | MX06-0125 | 34 |
| HSK 63A-SDM12-160 | 57 | HSK100A-SX10-105 | 14 | MC125-0312 | 46 | MC32-0250 | 47 | MX06-0156 | 34 |
| HSK 63A-SDM16-095 | 57 | HSK100A-SX10-150 | 14 | MC125-0375 | 46 | MC32-0281 | 47 | MX06-0187 | 34 |
| HSK 63A-SDM16-160 | 57 | HSK100A-SX16-120 | 14 | MC125-0437 | 46 | MC32-0312 | 47 | MX06-0218 | 34 |
| HSK 63A-SDM20-100 | 57 | HSK100A-SX16-150 | 14 | MC125-0500 | 46 | MC32-0343 | 47 | MX06-0250 | 34 |
| HSK 63A-SDM20-160 | 57 | HSK100A-SX25M-095 | 14 | MC125-0562 | 46 | MC32-0375 | 47 | MX06-ISET-5 | 35 |
| HSK 63A-SDM25-115 | 57 | HSK100A-SX25M-135 | 14 | MC125-0625 | 46 | MC32-0406 | 47 | MX06-M020 | 34 |
| HSK 63A-SDM25-160 | 57 | HSK100A-SX25M-200 | 14 | MC125-0687 | 46 | MC32-0437 | 47 | MX06-M025 | 34 |
| HSK63A-SM075-0177 | 104 | MC075-0125 | 46 | MC125-0750 | 46 | MC32-0500 | 47 | MX06-M030 | 34 |
| HSK63A-SM075-0177-F | 104 | MC075-0187 | 46 | MC125-0812 | 46 | MC32-0562 | 47 | MX06-M035 | 34 |
| HSK63A-SM075-0394 | 104 | MC075-0250 | 46 | MC125-0875 | 46 | MC32-0625 | 47 | MX06-M040 | 34 |
| HSK63A-SM075-0394-F | 104 | MC075-0312 | 46 | MC125-0937 | 46 | MC32-0687 | 47 | MX06-M045 | 34 |
| HSK63A-SM075-0630 | 104 | MC075-0375 | 46 | MC125-1000 | 46 | MC32-0750 | 47 | MX06-M050 | 34 |
| HSK63A-SM075-0630-F | 104 | MC075-0437 | 46 | MC125-ISET | 48 | MC32-0812 | 47 | MX06-M055 | 34 |
| HSK63A-SM100-0197 | 104 | MC075-0500 | 46 | MC125-M030 | 46 | MC32-0875 | 47 | MX06-M060 | 34 |
| HSK63A-SM100-0197-F | 104 | MC075-0562 | 46 | MC125-M040 | 46 | MC32-0937 | 47 | MX06-MSET-7 | 35 |
| HSK63A-SM100-0394 | 104 | MC075-0625 | 46 | MC125-M050 | 46 | MC32-1000 | 47 | MX08 TRAY | 35 |
| HSK63A-SM100-0394-F | 104 | MC075-ISET | 48 | MC125-M060 | 46 | MC32-M060 | 47 | MX08-0125 | 34 |
| HSK63A-SM100-0630 | 104 | MC075-M060 | 46 | MC125-M080 | 46 | MC32-M080 | 47 | MX08-0156 | 34 |
| HSK63A-SM100-0630-F | 104 | MC075-M080 | 46 | MC125-M100 | 46 | MC32-M100 | 47 | MX08-0187 | 34 |
| HSK63A-SM125-0236 | 104 | MC075-M100 | 46 | MC125-M120 | 46 | MC32-M120 | 47 | MX08-0250 | 34 |
| HSK63A-SM125-0236-F | 104 | MC075-M120 | 46 | MC125-M140 | 46 | MC32-M140 | 47 | MX08-0312 | 34 |
| HSK63A-SM125-0394 | 104 | MC075-M140 | 46 | MC125-M160 | 46 | MC32-M160 | 47 | MX08-0375 | 34 |
| HSK63A-SM125-0394-F | 104 | MC075-M160 | 46 | MC125-M180 | 46 | MC32-M180 | 47 | MX08-ISET-6 | 35 |
| HSK63A-SM150-0236 | 104 | MC075-MSET | 48 | MC125-M200 | 46 | MC32-M200 | 47 | MX08-M030 | 34 |
| HSK63A-SM150-0236-F | 104 | MC100-0125 | 46 | MC125-M220 | 46 | MC32-M220 | 47 | MX08-M040 | 34 |
| HSK63A-SX06-100 | 14 | MC100-0187 | 46 | MC125-M250 | 46 | MC32-M240 | 47 | MX08-M050 | 34 |
| HSK63A-SX06-150 | 14 | MC100-0250 | 46 | MC125-MSET | 48 | MC32-M250 | 47 | MX08-M060 | 34 |
| HSK63A-SX10-105 | 14 | MC100-0312 | 46 | MC20-0125 | 47 | MCC075- | 37 | MX08-M070 | 34 |
| HSK63A-SX10-150 | 14 | MC100-0375 | 46 | MC20-0187 | 47 | MCC075- | 37 | MX08-M080 | 34 |
| HSK63A-SX16-120 | 14 | MC100-0437 | 46 | MC20-0250 | 47 | MCC100- | 37 | MX08-M090 | 34 |

MX08-M100 - SSER25-M140

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|---------------|-----|-------------------|-----|------------------|-----|--------------|-----|-------------|----|
| MX08-M100 | 34 | RA2U-0652 | 110 | S075-ER16H-0552 | 66 | S16-SN08-140 | 53 | SSER20-0187 | 72 |
| MX08-MSET-8 | 35 | RA2U-0688 | 110 | S075-ER16M-0342C | 67 | S20-SN03-200 | 53 | SSER20-0218 | 72 |
| MX12 TRAY | 35 | RA2U-0697 | 110 | S075-ER16M-0552 | 66 | S20-SN04-200 | 53 | SSER20-0250 | 72 |
| MX12-0125 | 34 | RA2U-0700 | 110 | S075-ER20H-0250 | 66 | S20-SN06-200 | 53 | SSER20-0281 | 72 |
| MX12-0187 | 34 | RA3U-0429 | 110 | S075-MX08-0600 | 32 | S20-SN08-200 | 53 | SSER20-0312 | 72 |
| MX12-0250 | 34 | RA3U-0480 | 110 | S075-MX08-0800 | 32 | S25-SN10-200 | 53 | SSER20-0344 | 72 |
| MX12-0312 | 34 | RA3U-0542 | 110 | S075-MX08-1000 | 32 | S25-SN12-200 | 53 | SSER20-0375 | 72 |
| MX12-0375 | 34 | RA3U-0590 | 110 | S075-SN012-0800 | 52 | SCW-EM01 | 97 | SSER20-0406 | 72 |
| MX12-0437 | 34 | RA3U-0652 | 110 | S075-SN018-0800 | 52 | SCW-EM02 | 97 | SSER20-0438 | 72 |
| MX12-0500 | 34 | RA3U-0688 | 110 | S075-SN025-0800 | 52 | SCW-EM03 | 97 | SSER20-0469 | 72 |
| MX12-ISET-7 | 35 | RA3U-0697 | 110 | S075-SX10M-0640 | 16 | SCW-EM04 | 97 | SSER20-0500 | 72 |
| MX12-M030 | 34 | RA3U-0700 | 110 | S100-DA100-0749 | 84 | SCW-EM05 | 97 | SSER20-M040 | 73 |
| MX12-M040 | 34 | RA3U-0760 | 110 | S100-EM037-0600 | 97 | SCW-EM06 | 97 | SSER20-M050 | 73 |
| MX12-M050 | 34 | RA3U-0800 | 110 | S100-EM050-0600 | 97 | SCW-EM07 | 97 | SSER20-M060 | 73 |
| MX12-M060 | 34 | RA3U-0896 | 110 | S100-ER20H-0552 | 66 | SCW-EM08 | 97 | SSER20-M070 | 73 |
| MX12-M080 | 34 | RA3U-0906 | 110 | S100-ER20M-0331C | 67 | SCW-EM09 | 97 | SSER20-M080 | 73 |
| MX12-M100 | 34 | RA3U-1021 | 110 | S100-ER20M-0552 | 66 | SCW-EM10 | 97 | SSER20-M090 | 73 |
| MX12-M120 | 34 | RA3U-1108 | 110 | S100-ER25-0197 | 66 | SCW-EM11 | 97 | SSER20-M100 | 73 |
| MX12-MSET-7 | 35 | RA3U-1125 | 110 | S100-ER32-0197 | 66 | SCW-EM12 | 97 | SSER20-M110 | 73 |
| MXW05 | 33 | RW-V2-25 | 114 | S100-ER40-0197 | 66 | SCW-EM13 | 97 | SSER20-M120 | 73 |
| RA1D-M060X049 | 110 | RW-V2-50 | 114 | S100-MX12-0600 | 32 | SCW-SM050 | 105 | SSER20-M130 | 73 |
| RA1D-M070X055 | 110 | RW-V2-T25 | 114 | S100-MX12-0800 | 32 | SCW-SM050-SM | 105 | SSER25-0156 | 72 |
| RA1D-M080X062 | 110 | RW-V2-T50 | 114 | S100-RT1-0158 | 108 | SCW-SM075 | 105 | SSER25-0187 | 72 |
| RA1D-M090X070 | 110 | S037-ER08M-0394 | 66 | S100-RT2-0237 | 108 | SCW-SM075-SM | 105 | SSER25-0218 | 72 |
| RA1J-M080X060 | 110 | S037-SN012-0315 | 52 | S100-SD025-0800 | 52 | SCW-SM100 | 105 | SSER25-0250 | 72 |
| RA1U-0141 | 110 | S037-SN018-0315 | 52 | S100-SD031-0800 | 52 | SCW-SM100-SM | 105 | SSER25-0281 | 72 |
| RA1U-0168 | 110 | S050-DA300-0683 | 84 | S100-SD037-0800 | 52 | SCW-SM125 | 105 | SSER25-0312 | 72 |
| RA1U-0194 | 110 | S050-ER11H-0552 | 66 | S100-SD050-0800 | 52 | SCW-SM150 | 105 | SSER25-0344 | 72 |
| RA1U-0220 | 110 | S050-ER11M-0552 | 66 | S100-SN037-0800 | 52 | SCW-SM200 | 105 | SSER25-0375 | 72 |
| RA1U-0255 | 110 | S050-ER16M-0552 | 66 | S100-SN050-0800 | 52 | SSER16-0093 | 72 | SSER25-0406 | 72 |
| RA1U-0313 | 110 | S050-MX06-0400 | 32 | S100-TC1-0158 | 109 | SSER16-0125 | 72 | SSER25-0438 | 72 |
| RA1U-0318 | 110 | S050-MX06-0600 | 32 | S100-TC2-0256 | 109 | SSER16-0156 | 72 | SSER25-0469 | 72 |
| RA1U-0323 | 110 | S050-SN025-0315 | 52 | S10-SN03-080 | 53 | SSER16-0187 | 72 | SSER25-0500 | 72 |
| RA1U-0367 | 110 | S050-SX06M-0552 | 16 | S10-SN04-080 | 53 | SSER16-0218 | 72 | SSER25-0531 | 72 |
| RA1U-0381 | 110 | S062-ER11H-0552 | 66 | S125-DA180-0749 | 84 | SSER16-0250 | 72 | SSER25-0563 | 72 |
| RA1U-0429 | 110 | S062-ER11M-0552 | 66 | S125-ER25-0236NC | 67 | SSER16-0281 | 72 | SSER25-0594 | 72 |
| RA1U-0438 | 110 | S062-ER16H-0236 | 66 | S125-ER32-0236 | 66 | SSER16-0312 | 72 | SSER25-0625 | 72 |
| RA2D-M120X090 | 110 | S075-DA200-0709 | 84 | S125-ER32-0236C | 67 | SSER16-0344 | 72 | SSER25-M040 | 73 |
| RA2U-0318 | 110 | S075-EM012-0600 | 97 | S125-ER32-0236NC | 67 | SSER16-0375 | 72 | SSER25-M050 | 73 |
| RA2U-0323 | 110 | S075-EM018-0600 | 97 | S125-ER32-0552 | 66 | SSER16-0406 | 72 | SSER25-M060 | 73 |
| RA2U-0367 | 110 | S075-EM025-0600 | 97 | S125-ER40-0236NC | 67 | SSER16-M040 | 73 | SSER25-M070 | 73 |
| RA2U-0381 | 110 | S075-EM031-0600 | 97 | S125-RT3-0375 | 108 | SSER16-M050 | 73 | SSER25-M080 | 73 |
| RA2U-0429 | 110 | S075-ER11M-0173DE | 67 | S125-TC3-0504 | 109 | SSER16-M060 | 73 | SSER25-M090 | 73 |
| RA2U-0438 | 110 | S075-ER11M-0256DE | 67 | S150-ER32-0315NC | 67 | SSER16-M070 | 73 | SSER25-M100 | 73 |
| RA2U-0480 | 110 | S075-ER11M-0303DE | 67 | S150-ER40-0295NC | 67 | SSER16-M080 | 73 | SSER25-M110 | 73 |
| RA2U-0542 | 110 | S075-ER11M-0392DE | 67 | S16-SN03-140 | 53 | SSER16-M090 | 73 | SSER25-M120 | 73 |
| RA2U-0563 | 110 | S075-ER16H-0197 | 66 | S16-SN04-140 | 53 | SSER16-M100 | 73 | SSER25-M130 | 73 |
| RA2U-0590 | 110 | S075-ER16H-0394 | 66 | S16-SN06-140 | 53 | SSER20-0156 | 72 | SSER25-M140 | 73 |

SSER25-M150 - SX16-M060

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|-------------|----|--------------|----|--------------|----|--------------|----|--------------|----|
| SSER25-M150 | 73 | SSER40-0438 | 72 | SSX06-M040 | 24 | SSX25-0750 | 24 | SX10-M020 | 22 |
| SSER25-M160 | 73 | SSER40-0469 | 72 | SSX06-M040-C | 25 | SSX25-0750-C | 25 | SX10-M0225 | 22 |
| SSER32-0156 | 72 | SSER40-0500 | 72 | SSX06-M050 | 24 | SSX25-0875 | 24 | SX10-M025 | 22 |
| SSER32-0187 | 72 | SSER40-0531 | 72 | SSX06-M050-C | 25 | SSX25-0875-C | 25 | SX10-M0275 | 22 |
| SSER32-0219 | 72 | SSER40-0563 | 72 | SSX06-M060 | 24 | SSX25-1000 | 24 | SX10-M030 | 22 |
| SSER32-0250 | 72 | SSER40-0594 | 72 | SSX06-M060-C | 25 | SSX25-1000-C | 25 | SX10-M035 | 22 |
| SSER32-0281 | 72 | SSER40-0625 | 72 | SSX10-0187 | 24 | SSX25-M160 | 24 | SX10-M040 | 22 |
| SSER32-0312 | 72 | SSER40-0656 | 72 | SSX10-0187-C | 25 | SSX25-M160-C | 25 | SX10-M045 | 22 |
| SSER32-0344 | 72 | SSER40-0688 | 72 | SSX10-0250 | 24 | SSX25-M200 | 24 | SX10-M050 | 22 |
| SSER32-0375 | 72 | SSER40-0719 | 72 | SSX10-0250-C | 25 | SSX25-M200-C | 25 | SX10-M055 | 22 |
| SSER32-0406 | 72 | SSER40-0750 | 72 | SSX10-0312 | 24 | SSX25-M250 | 24 | SX10-M060 | 22 |
| SSER32-0438 | 72 | SSER40-0781 | 72 | SSX10-0312-C | 25 | SSX25-M250-C | 25 | SX10-M065 | 22 |
| SSER32-0469 | 72 | SSER40-0812 | 72 | SSX10-0375 | 24 | SX06 TRAY | 20 | SX10-M070 | 22 |
| SSER32-0500 | 72 | SSER40-0844 | 72 | SSX10-0375-C | 25 | SX06-0125 | 21 | SX10-M075 | 22 |
| SSER32-0531 | 72 | SSER40-0875 | 72 | SSX10-M040 | 24 | SX06-0156 | 21 | SX10-M080 | 22 |
| SSER32-0563 | 72 | SSER40-0906 | 72 | SSX10-M040-C | 25 | SX06-0187 | 21 | SX10-M085 | 22 |
| SSER32-0594 | 72 | SSER40-0937 | 72 | SSX10-M050 | 24 | SX06-0218 | 21 | SX10-M090 | 22 |
| SSER32-0625 | 72 | SSER40-0969 | 72 | SSX10-M050-C | 25 | SX06-0250 | 21 | SX10-M095 | 22 |
| SSER32-0656 | 72 | SSER40-1000 | 72 | SSX10-M060 | 24 | SX06-iSET-05 | 20 | SX10-M100 | 22 |
| SSER32-0688 | 72 | SSER40-M060 | 73 | SSX10-M060-C | 25 | SX06-M008 | 22 | SX10-MSET-08 | 20 |
| SSER32-0719 | 72 | SSER40-M070 | 73 | SSX10-M080 | 24 | SX06-M010 | 22 | SX10-MSET-15 | 20 |
| SSER32-0750 | 72 | SSER40-M080 | 73 | SSX10-M080-C | 25 | SX06-M0125 | 22 | SX16 TRAY | 20 |
| SSER32-M040 | 73 | SSER40-M090 | 73 | SSX10-M100 | 24 | SX06-M015 | 22 | SX16-0125 | 21 |
| SSER32-M050 | 73 | SSER40-M100 | 73 | SSX10-M100-C | 25 | SX06-M0175 | 22 | SX16-0156 | 21 |
| SSER32-M060 | 73 | SSER40-M110 | 73 | SSX16-0250 | 24 | SX06-M020 | 22 | SX16-0187 | 21 |
| SSER32-M070 | 73 | SSER40-M120 | 73 | SSX16-0250-C | 25 | SX06-M0225 | 22 | SX16-0218 | 21 |
| SSER32-M080 | 73 | SSER40-M130 | 73 | SSX16-0312 | 24 | SX06-M025 | 22 | SX16-0250 | 21 |
| SSER32-M090 | 73 | SSER40-M140 | 73 | SSX16-0312-C | 25 | SX06-M0275 | 22 | SX16-0281 | 21 |
| SSER32-M100 | 73 | SSER40-M150 | 73 | SSX16-0375 | 24 | SX06-M030 | 22 | SX16-0312 | 21 |
| SSER32-M110 | 73 | SSER40-M160 | 73 | SSX16-0375-C | 25 | SX06-M035 | 22 | SX16-0343 | 21 |
| SSER32-M120 | 73 | SSER40-M170 | 73 | SSX16-0437 | 24 | SX06-M040 | 22 | SX16-0375 | 21 |
| SSER32-M130 | 73 | SSER40-M180 | 73 | SSX16-0437-C | 25 | SX06-M045 | 22 | SX16-0406 | 21 |
| SSER32-M140 | 73 | SSER40-M190 | 73 | SSX16-0500 | 24 | SX06-M050 | 22 | SX16-0437 | 21 |
| SSER32-M150 | 73 | SSER40-M200 | 73 | SSX16-0500-C | 25 | SX06-M055 | 22 | SX16-0468 | 21 |
| SSER32-M160 | 73 | SSER40-M210 | 73 | SSX16-0562 | 24 | SX06-M060 | 22 | SX16-0500 | 21 |
| SSER32-M170 | 73 | SSER40-M220 | 73 | SSX16-0562-C | 25 | SX06-MSET-07 | 20 | SX16-0531 | 21 |
| SSER32-M180 | 73 | SSER40-M230 | 73 | SSX16-0625 | 24 | SX10 TRAY | 20 | SX16-0562 | 21 |
| SSER32-M190 | 73 | SSER40-M240 | 73 | SSX16-0625-C | 25 | SX10-0125 | 21 | SX16-0593 | 21 |
| SSER32-M200 | 73 | SSER40-M250 | 73 | SSX16-M060 | 24 | SX10-0156 | 21 | SX16-0625 | 21 |
| SSER40-0156 | 72 | SSER40-M260 | 73 | SSX16-M060-C | 25 | SX10-0187 | 21 | SX16-iSET-09 | 20 |
| SSER40-0187 | 72 | SSX06-0125 | 24 | SSX16-M080 | 24 | SX10-0218 | 21 | SX16-iSET-17 | 20 |
| SSER40-0218 | 72 | SSX06-0125-C | 25 | SSX16-M080-C | 25 | SX10-0250 | 21 | SX16-M030 | 23 |
| SSER40-0250 | 72 | SSX06-0187 | 24 | SSX16-M100 | 24 | SX10-0281 | 21 | SX16-M035 | 23 |
| SSER40-0281 | 72 | SSX06-0187-C | 25 | SSX16-M100-C | 25 | SX10-0312 | 21 | SX16-M040 | 23 |
| SSER40-0312 | 72 | SSX06-0250 | 24 | SSX16-M120 | 24 | SX10-0343 | 21 | SX16-M045 | 23 |
| SSER40-0344 | 72 | SSX06-0250-C | 25 | SSX16-M120-C | 25 | SX10-0375 | 21 | SX16-M050 | 23 |
| SSER40-0375 | 72 | SSX06-M030 | 24 | SSX16-M160 | 24 | SX10-iSET-05 | 20 | SX16-M055 | 23 |
| SSER40-0406 | 72 | SSX06-M030-C | 25 | SSX16-M160-C | 25 | SX10-iSET-09 | 20 | SX16-M060 | 23 |

SX16-M065 - SXC16-M130

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| SX16-M065 | 23 | SX25-0906 | 21 | SX25-M235 | 23 | SXC10-M015 | 19 | SXC16-0500 | 18 |
| SX16-M070 | 23 | SX25-0937 | 21 | SX25-M240 | 23 | SXC10-M015 | 77 | SXC16-0500 | 76 |
| SX16-M075 | 23 | SX25-0968 | 21 | SX25-M245 | 23 | SXC10-M020 | 19 | SXC16-0562 | 18 |
| SX16-M080 | 23 | SX25-1000 | 21 | SX25-M250 | 23 | SXC10-M020 | 77 | SXC16-0562 | 76 |
| SX16-M085 | 23 | SX25-iSET-08 | 20 | SX25-MSET-10 | 20 | SXC10-M025 | 19 | SXC16-0625 | 18 |
| SX16-M090 | 23 | SX25-iSET-15 | 20 | SX25-MSET-19 | 20 | SXC10-M025 | 77 | SXC16-0625 | 76 |
| SX16-M095 | 23 | SX25-iSET-29 | 20 | SX25-MSET-23 | 20 | SXC10-M030 | 19 | SXC16-M030 | 19 |
| SX16-M100 | 23 | SX25-M030 | 23 | SX25-MSET-45 | 20 | SXC10-M030 | 77 | SXC16-M030 | 77 |
| SX16-M105 | 23 | SX25-M035 | 23 | SXC06-0125 | 18 | SXC10-M035 | 19 | SXC16-M035 | 19 |
| SX16-M110 | 23 | SX25-M040 | 23 | SXC06-0125 | 76 | SXC10-M035 | 77 | SXC16-M035 | 77 |
| SX16-M115 | 23 | SX25-M045 | 23 | SXC06-0187 | 18 | SXC10-M040 | 19 | SXC16-M040 | 19 |
| SX16-M120 | 23 | SX25-M050 | 23 | SXC06-0187 | 76 | SXC10-M040 | 77 | SXC16-M040 | 77 |
| SX16-M125 | 23 | SX25-M055 | 23 | SXC06-0250 | 18 | SXC10-M045 | 19 | SXC16-M045 | 19 |
| SX16-M130 | 23 | SX25-M060 | 23 | SXC06-0250 | 76 | SXC10-M045 | 77 | SXC16-M045 | 77 |
| SX16-M135 | 23 | SX25-M065 | 23 | SXC06-M010 | 19 | SXC10-M050 | 19 | SXC16-M050 | 19 |
| SX16-M140 | 23 | SX25-M070 | 23 | SXC06-M010 | 77 | SXC10-M050 | 77 | SXC16-M050 | 77 |
| SX16-M145 | 23 | SX25-M075 | 23 | SXC06-M015 | 19 | SXC10-M055 | 19 | SXC16-M055 | 19 |
| SX16-M150 | 23 | SX25-M080 | 23 | SXC06-M015 | 77 | SXC10-M055 | 77 | SXC16-M055 | 77 |
| SX16-M155 | 23 | SX25-M085 | 23 | SXC06-M020 | 19 | SXC10-M060 | 19 | SXC16-M060 | 19 |
| SX16-M160 | 23 | SX25-M090 | 23 | SXC06-M020 | 77 | SXC10-M060 | 77 | SXC16-M060 | 77 |
| SX16-MSET-14 | 20 | SX25-M095 | 23 | SXC06-M025 | 19 | SXC10-M065 | 19 | SXC16-M065 | 19 |
| SX16-MSET-27 | 20 | SX25-M100 | 23 | SXC06-M025 | 77 | SXC10-M065 | 77 | SXC16-M065 | 77 |
| SX25 TRAY | 20 | SX25-M105 | 23 | SXC06-M030 | 19 | SXC10-M070 | 19 | SXC16-M070 | 19 |
| SX25-0125 | 21 | SX25-M110 | 23 | SXC06-M030 | 77 | SXC10-M070 | 77 | SXC16-M070 | 77 |
| SX25-0156 | 21 | SX25-M115 | 23 | SXC06-M035 | 19 | SXC10-M075 | 19 | SXC16-M075 | 19 |
| SX25-0187 | 21 | SX25-M120 | 23 | SXC06-M035 | 77 | SXC10-M075 | 77 | SXC16-M075 | 77 |
| SX25-0218 | 21 | SX25-M125 | 23 | SXC06-M040 | 19 | SXC10-M080 | 19 | SXC16-M080 | 19 |
| SX25-0250 | 21 | SX25-M130 | 23 | SXC06-M040 | 77 | SXC10-M080 | 77 | SXC16-M080 | 77 |
| SX25-0281 | 21 | SX25-M135 | 23 | SXC06-M045 | 19 | SXC10-M085 | 19 | SXC16-M085 | 19 |
| SX25-0312 | 21 | SX25-M140 | 23 | SXC06-M045 | 77 | SXC10-M085 | 77 | SXC16-M085 | 77 |
| SX25-0343 | 21 | SX25-M145 | 23 | SXC06-M050 | 19 | SXC10-M090 | 19 | SXC16-M090 | 19 |
| SX25-0375 | 21 | SX25-M150 | 23 | SXC06-M050 | 77 | SXC10-M090 | 77 | SXC16-M090 | 77 |
| SX25-0406 | 21 | SX25-M155 | 23 | SXC06-M055 | 19 | SXC10-M095 | 19 | SXC16-M095 | 19 |
| SX25-0437 | 21 | SX25-M160 | 23 | SXC06-M055 | 77 | SXC10-M095 | 77 | SXC16-M095 | 77 |
| SX25-0468 | 21 | SX25-M165 | 23 | SXC06-M060 | 19 | SXC10-M100 | 19 | SXC16-M100 | 19 |
| SX25-0500 | 21 | SX25-M170 | 23 | SXC06-M060 | 77 | SXC10-M100 | 77 | SXC16-M100 | 77 |
| SX25-0531 | 21 | SX25-M175 | 23 | SXC10-0125 | 18 | SXC16-0125 | 18 | SXC16-M105 | 19 |
| SX25-0562 | 21 | SX25-M180 | 23 | SXC10-0125 | 76 | SXC16-0125 | 76 | SXC16-M105 | 77 |
| SX25-0593 | 21 | SX25-M185 | 23 | SXC10-0187 | 18 | SXC16-0187 | 18 | SXC16-M110 | 19 |
| SX25-0625 | 21 | SX25-M190 | 23 | SXC10-0187 | 76 | SXC16-0187 | 76 | SXC16-M110 | 77 |
| SX25-0656 | 21 | SX25-M195 | 23 | SXC10-0250 | 18 | SXC16-0250 | 18 | SXC16-M115 | 19 |
| SX25-0687 | 21 | SX25-M200 | 23 | SXC10-0250 | 76 | SXC16-0250 | 76 | SXC16-M115 | 77 |
| SX25-0718 | 21 | SX25-M205 | 23 | SXC10-0312 | 18 | SXC16-0312 | 18 | SXC16-M120 | 19 |
| SX25-0750 | 21 | SX25-M210 | 23 | SXC10-0312 | 76 | SXC16-0312 | 76 | SXC16-M120 | 77 |
| SX25-0781 | 21 | SX25-M215 | 23 | SXC10-0375 | 18 | SXC16-0375 | 18 | SXC16-M125 | 19 |
| SX25-0812 | 21 | SX25-M220 | 23 | SXC10-0375 | 76 | SXC16-0375 | 76 | SXC16-M125 | 77 |
| SX25-0843 | 21 | SX25-M225 | 23 | SXC10-M010 | 19 | SXC16-0437 | 18 | SXC16-M130 | 19 |
| SX25-0875 | 21 | SX25-M230 | 23 | SXC10-M010 | 77 | SXC16-0437 | 76 | SXC16-M130 | 77 |

SXC16-M135 - TER25-437

| | | | | | | | | | |
|------------|----|------------|----|------------|----|-----------------|-----|------------|-----|
| SXC16-M135 | 19 | SXC25-M065 | 19 | SXC25-M185 | 19 | SXR-25 | 17 | TC3U-0800 | 111 |
| SXC16-M135 | 77 | SXC25-M065 | 77 | SXC25-M185 | 77 | SXW-06H | 26 | TC3U-0896 | 111 |
| SXC16-M140 | 19 | SXC25-M070 | 19 | SXC25-M190 | 19 | SXW-10H | 26 | TC3U-0906 | 111 |
| SXC16-M140 | 77 | SXC25-M070 | 77 | SXC25-M190 | 77 | SXW-16S | 26 | TC3U-1021 | 111 |
| SXC16-M145 | 19 | SXC25-M075 | 19 | SXC25-M195 | 19 | SXW-CC | 26 | TC3U-1108 | 111 |
| SXC16-M145 | 77 | SXC25-M075 | 77 | SXC25-M195 | 77 | TB-BASE | 113 | TC3U-1125 | 111 |
| SXC16-M150 | 19 | SXC25-M080 | 19 | SXC25-M200 | 19 | TB-BT30 HEAD | 113 | TER16-141 | 74 |
| SXC16-M150 | 77 | SXC25-M080 | 77 | SXC25-M200 | 77 | TB-CAT40 HEAD | 113 | TER16-168 | 74 |
| SXC16-M155 | 19 | SXC25-M085 | 19 | SXC25-M205 | 19 | TB-CAT50 HEAD | 113 | TER16-194 | 74 |
| SXC16-M155 | 77 | SXC25-M085 | 77 | SXC25-M205 | 77 | TB-HSK100A HEAD | 113 | TER16-220 | 74 |
| SXC16-M160 | 19 | SXC25-M090 | 19 | SXC25-M210 | 19 | TB-HSK32A HEAD | 113 | TER16-255 | 74 |
| SXC16-M160 | 77 | SXC25-M090 | 77 | SXC25-M210 | 77 | TB-HSK40A HEAD | 113 | TER16D-035 | 75 |
| SXC25-0125 | 76 | SXC25-M095 | 19 | SXC25-M215 | 19 | TB-HSK50A HEAD | 113 | TER16D-040 | 75 |
| SXC25-0187 | 18 | SXC25-M095 | 77 | SXC25-M215 | 77 | TB-HSK63A HEAD | 113 | TER16D-045 | 75 |
| SXC25-0187 | 76 | SXC25-M100 | 19 | SXC25-M220 | 19 | TC1U-0141 | 111 | TER16D-055 | 75 |
| SXC25-0250 | 18 | SXC25-M100 | 77 | SXC25-M220 | 77 | TC1U-0168 | 111 | TER16D-060 | 75 |
| SXC25-0250 | 76 | SXC25-M105 | 19 | SXC25-M225 | 19 | TC1U-0194 | 111 | TER16D-070 | 75 |
| SXC25-0312 | 18 | SXC25-M105 | 77 | SXC25-M225 | 77 | TC1U-0220 | 111 | TER16D-080 | 75 |
| SXC25-0312 | 76 | SXC25-M110 | 19 | SXC25-M230 | 19 | TC1U-0255 | 111 | TER16D-090 | 75 |
| SXC25-0375 | 18 | SXC25-M110 | 77 | SXC25-M230 | 77 | TC1U-0313 | 111 | TER16D-100 | 75 |
| SXC25-0375 | 76 | SXC25-M115 | 19 | SXC25-M235 | 19 | TC1U-0318 | 111 | TER20-141 | 74 |
| SXC25-0437 | 18 | SXC25-M115 | 77 | SXC25-M235 | 77 | TC1U-0323 | 111 | TER20-168 | 74 |
| SXC25-0437 | 76 | SXC25-M120 | 19 | SXC25-M240 | 19 | TC1U-0367 | 111 | TER20-194 | 74 |
| SXC25-0500 | 18 | SXC25-M120 | 77 | SXC25-M240 | 77 | TC1U-0381 | 111 | TER20-220 | 74 |
| SXC25-0500 | 76 | SXC25-M125 | 19 | SXC25-M245 | 19 | TC1U-0429 | 111 | TER20-255 | 74 |
| SXC25-0562 | 18 | SXC25-M125 | 77 | SXC25-M245 | 77 | TC1U-0438 | 111 | TER20-318 | 74 |
| SXC25-0562 | 76 | SXC25-M130 | 19 | SXC25-M250 | 19 | TC2U-0318 | 111 | TER20-323 | 74 |
| SXC25-0625 | 18 | SXC25-M130 | 77 | SXC25-M250 | 77 | TC2U-0323 | 111 | TER20-367 | 74 |
| SXC25-0625 | 76 | SXC25-M135 | 19 | SXC25-M254 | 18 | TC2U-0367 | 111 | TER20-381 | 74 |
| SXC25-0750 | 18 | SXC25-M135 | 77 | SXCN-06 | 18 | TC2U-0381 | 111 | TER20D-040 | 75 |
| SXC25-0750 | 76 | SXC25-M140 | 19 | SXCN-10 | 18 | TC2U-0429 | 111 | TER20D-045 | 75 |
| SXC25-0875 | 18 | SXC25-M140 | 77 | SXCN-16 | 18 | TC2U-0480 | 111 | TER20D-055 | 75 |
| SXC25-0875 | 76 | SXC25-M145 | 19 | SXCN-25 | 18 | TC2U-0542 | 111 | TER20D-060 | 75 |
| SXC25-1000 | 76 | SXC25-M145 | 77 | SXN-06H | 16 | TC2U-0563 | 111 | TER20D-070 | 75 |
| SXC25-M030 | 19 | SXC25-M150 | 19 | SXN-06M | 16 | TC2U-0590 | 111 | TER20D-080 | 75 |
| SXC25-M030 | 77 | SXC25-M150 | 77 | SXN-10H | 16 | TC2U-0652 | 111 | TER20D-090 | 75 |
| SXC25-M035 | 19 | SXC25-M155 | 19 | SXN-10M | 16 | TC2U-0688 | 111 | TER20D-100 | 75 |
| SXC25-M035 | 77 | SXC25-M155 | 77 | SXN-16S | 16 | TC2U-0697 | 111 | TER25-141 | 74 |
| SXC25-M040 | 19 | SXC25-M160 | 19 | SXN-25M | 9 | TC2U-0700 | 111 | TER25-168 | 74 |
| SXC25-M040 | 77 | SXC25-M160 | 77 | SXN-25M | 16 | TC3U-0429 | 111 | TER25-194 | 74 |
| SXC25-M045 | 19 | SXC25-M165 | 19 | SXN-25MB | 9 | TC3U-0480 | 111 | TER25-220 | 74 |
| SXC25-M045 | 77 | SXC25-M165 | 77 | SXN-25MB | 16 | TC3U-0542 | 111 | TER25-255 | 74 |
| SXC25-M050 | 19 | SXC25-M170 | 19 | SXN-25S | 9 | TC3U-0590 | 111 | TER25-318 | 74 |
| SXC25-M050 | 77 | SXC25-M170 | 77 | SXN-25S | 16 | TC3U-0652 | 111 | TER25-323 | 74 |
| SXC25-M055 | 19 | SXC25-M175 | 19 | SXR-06 | 17 | TC3U-0688 | 111 | TER25-367 | 74 |
| SXC25-M055 | 77 | SXC25-M175 | 77 | SXR-06M | 17 | TC3U-0697 | 111 | TER25-381 | 74 |
| SXC25-M060 | 19 | SXC25-M180 | 19 | SXR-10 | 17 | TC3U-0700 | 111 | TER25-429 | 74 |
| SXC25-M060 | 77 | SXC25-M180 | 77 | SXR-16 | 17 | TC3U-0760 | 111 | TER25-437 | 74 |

TER25-480 - TG150-1328

| | | | | | | | | | |
|------------|----|------------|----|-------------|----|-------------|----|------------|----|
| TER25-480 | 74 | TER40-318 | 74 | TG075-0406 | 82 | TG100-0438 | 83 | TG150-0594 | 83 |
| TER25D-035 | 75 | TER40-323 | 74 | TG075-0422 | 82 | TG100-0453 | 83 | TG150-0609 | 83 |
| TER25D-040 | 75 | TER40-367 | 74 | TG075-0438 | 82 | TG100-0469 | 83 | TG150-0625 | 83 |
| TER25D-045 | 75 | TER40-381 | 74 | TG075-0453 | 82 | TG100-0484 | 83 | TG150-0641 | 83 |
| TER25D-055 | 75 | TER40-429 | 74 | TG075-0469 | 82 | TG100-0500 | 83 | TG150-0656 | 83 |
| TER25D-060 | 75 | TER40-437 | 74 | TG075-0484 | 82 | TG100-0516 | 83 | TG150-0672 | 83 |
| TER25D-070 | 75 | TER40-480 | 74 | TG075-0500 | 82 | TG100-0531 | 83 | TG150-0688 | 83 |
| TER25D-080 | 75 | TER40-542 | 74 | TG075-0516 | 82 | TG100-0547 | 83 | TG150-0703 | 83 |
| TER25D-090 | 75 | TER40-562 | 74 | TG075-0531 | 82 | TG100-0563 | 83 | TG150-0719 | 83 |
| TER25D-100 | 75 | TER40-590 | 74 | TG075-0547 | 82 | TG100-0578 | 83 | TG150-0734 | 83 |
| TER25D-110 | 75 | TER40-652 | 74 | TG075-0563 | 82 | TG100-0594 | 83 | TG150-0750 | 83 |
| TER25D-120 | 75 | TER40-687 | 74 | TG075-0578 | 82 | TG100-0609 | 83 | TG150-0766 | 83 |
| TER25D-140 | 75 | TER40-697 | 74 | TG075-0594 | 82 | TG100-0625 | 83 | TG150-0781 | 83 |
| TER25D-160 | 75 | TER40-700 | 74 | TG075-0609 | 82 | TG100-0641 | 83 | TG150-0797 | 83 |
| TER32-141 | 74 | TER40-760 | 74 | TG075-0625 | 82 | TG100-0656 | 83 | TG150-0813 | 83 |
| TER32-168 | 74 | TER40-800 | 74 | TG075-0641 | 82 | TG100-0672 | 83 | TG150-0828 | 83 |
| TER32-194 | 74 | TER40D-060 | 75 | TG075-0656 | 82 | TG100-0688 | 83 | TG150-0844 | 83 |
| TER32-220 | 74 | TER40D-070 | 75 | TG075-0672 | 82 | TG100-0703 | 83 | TG150-0859 | 83 |
| TER32-255 | 74 | TER40D-080 | 75 | TG075-0688 | 82 | TG100-0719 | 83 | TG150-0875 | 83 |
| TER32-318 | 74 | TER40D-090 | 75 | TG075-0703 | 82 | TG100-0734 | 83 | TG150-0891 | 83 |
| TER32-323 | 74 | TER40D-100 | 75 | TG075-0719 | 82 | TG100-0750 | 83 | TG150-0906 | 83 |
| TER32-367 | 74 | TER40D-110 | 75 | TG075-0734 | 82 | TG100-0766 | 83 | TG150-0922 | 83 |
| TER32-381 | 74 | TER40D-120 | 75 | TG075-0750 | 82 | TG100-0781 | 83 | TG150-0938 | 83 |
| TER32-429 | 74 | TER40D-140 | 75 | TG075-SET11 | 82 | TG100-0797 | 83 | TG150-0953 | 83 |
| TER32-437 | 74 | TER40D-160 | 75 | TG075-SET22 | 82 | TG100-0813 | 83 | TG150-0969 | 83 |
| TER32-480 | 74 | TER40D-180 | 75 | TG075-SET43 | 82 | TG100-0828 | 83 | TG150-0984 | 83 |
| TER32-542 | 74 | TER40D-200 | 75 | TG100-0094 | 83 | TG100-0844 | 83 | TG150-1000 | 83 |
| TER32-562 | 74 | TER40D-220 | 75 | TG100-0109 | 83 | TG100-0859 | 83 | TG150-1016 | 83 |
| TER32-590 | 74 | TG075-0094 | 82 | TG100-0125 | 83 | TG100-0875 | 83 | TG150-1031 | 83 |
| TER32-652 | 74 | TG075-0109 | 82 | TG100-0141 | 83 | TG100-0891 | 83 | TG150-1047 | 83 |
| TER32D-045 | 75 | TG075-0125 | 82 | TG100-0156 | 83 | TG100-0906 | 83 | TG150-1063 | 83 |
| TER32D-055 | 75 | TG075-0141 | 82 | TG100-0172 | 83 | TG100-0922 | 83 | TG150-1078 | 83 |
| TER32D-060 | 75 | TG075-0156 | 82 | TG100-0188 | 83 | TG100-0938 | 83 | TG150-1094 | 83 |
| TER32D-070 | 75 | TG075-0172 | 82 | TG100-0203 | 83 | TG100-0953 | 83 | TG150-1109 | 83 |
| TER32D-080 | 75 | TG075-0188 | 82 | TG100-0219 | 83 | TG100-0969 | 83 | TG150-1125 | 83 |
| TER32D-090 | 75 | TG075-0203 | 82 | TG100-0234 | 83 | TG100-0984 | 83 | TG150-1141 | 83 |
| TER32D-100 | 75 | TG075-0219 | 82 | TG100-0250 | 83 | TG100-1000 | 83 | TG150-1156 | 83 |
| TER32D-110 | 75 | TG075-0234 | 82 | TG100-0266 | 83 | TG100-SET15 | 82 | TG150-1172 | 83 |
| TER32D-120 | 75 | TG075-0250 | 82 | TG100-0281 | 83 | TG100-SET21 | 82 | TG150-1188 | 83 |
| TER32D-140 | 75 | TG075-0266 | 82 | TG100-0297 | 83 | TG100-SET30 | 82 | TG150-1203 | 83 |
| TER32D-160 | 75 | TG075-0281 | 82 | TG100-0313 | 83 | TG100-SET41 | 82 | TG150-1219 | 83 |
| TER32D-180 | 75 | TG075-0297 | 82 | TG100-0328 | 83 | TG100-SET59 | 82 | TG150-1234 | 83 |
| TER32D-200 | 75 | TG075-0313 | 82 | TG100-0344 | 83 | TG150-0500 | 83 | TG150-1250 | 83 |
| TER40-141 | 74 | TG075-0328 | 82 | TG100-0359 | 83 | TG150-0516 | 83 | TG150-1266 | 83 |
| TER40-168 | 74 | TG075-0344 | 82 | TG100-0375 | 83 | TG150-0531 | 83 | TG150-1281 | 83 |
| TER40-194 | 74 | TG075-0359 | 82 | TG100-0391 | 83 | TG150-0547 | 83 | TG150-1297 | 83 |
| TER40-220 | 74 | TG075-0375 | 82 | TG100-0406 | 83 | TG150-0563 | 83 | TG150-1313 | 83 |
| TER40-255 | 74 | TG075-0391 | 82 | TG100-0422 | 83 | TG150-0578 | 83 | TG150-1328 | 83 |

TG150-1344 - VXW12

| | | | |
|-------------|-----|-----------|-----|
| TG150-1344 | 83 | TWH-ER40E | 79 |
| TG150-1359 | 83 | TWH-SX06 | 27 |
| TG150-1375 | 83 | TWH-SX10 | 27 |
| TG150-1391 | 83 | TWH-SX16 | 27 |
| TG150-1406 | 83 | TWH-SX25 | 27 |
| TG150-1422 | 83 | TWH-VX12 | 33 |
| TG150-1438 | 83 | TWS-075 | 115 |
| TG150-1453 | 83 | TWS-118 | 115 |
| TG150-1469 | 83 | TWS-125 | 115 |
| TG150-1484 | 83 | TWS-M13 | 115 |
| TG150-1500 | 83 | TWS-M17 | 115 |
| TG150-SET17 | 82 | TWS-M19 | 115 |
| TG150-SET33 | 82 | TWS-M30 | 115 |
| TG150-SET65 | 82 | VXW12 | 33 |
| TGN-075 | 81 | | |
| TGN-075-CC | 81 | | |
| TGN-100 | 81 | | |
| TGN-100-CC | 81 | | |
| TGN-150 | 81 | | |
| TGW-150 | 81 | | |
| TLD-BT30 | 112 | | |
| TLD-BT40 | 112 | | |
| TLD-CAT40 | 112 | | |
| TLD-CAT50 | 112 | | |
| TUBE-063A | 64 | | |
| TUBE-100A | 64 | | |
| TW-060 | 27 | | |
| TW-060 | 79 | | |
| TW-100 | 27 | | |
| TW-100 | 79 | | |
| TW-200 | 27 | | |
| TW-200 | 33 | | |
| TW-200 | 79 | | |
| TW-300 | 27 | | |
| TW-300 | 79 | | |
| TWH-ER08M | 79 | | |
| TWH-ER11H | 79 | | |
| TWH-ER11M | 27 | | |
| TWH-ER11M | 79 | | |
| TWH-ER16E | 79 | | |
| TWH-ER16H | 79 | | |
| TWH-ER16M | 27 | | |
| TWH-ER16M | 79 | | |
| TWH-ER20E | 79 | | |
| TWH-ER20H | 79 | | |
| TWH-ER20M | 79 | | |
| TWH-ER25E | 79 | | |
| TWH-ER32E | 79 | | |

CAT40 Professional Pack

56 Piece Tooling Package | Dynamically Balanced for up to 20,000 RPM's | Optional Jet-Blast



ER Collet Chucks

| QTY | PART NUMBER | DESCRIPTION |
|-----|-----------------|--------------------------------|
| 2 | CAT40-ER16-0250 | CAT40 ER16 COLLET CHUCKS 2.50" |
| 3 | CAT40-ER32-0250 | CAT40 ER32 COLLET CHUCKS 2.50" |



ER Collets

| QTY | PART NUMBER | DESCRIPTION |
|-----|-------------|---|
| 1 | ER16-iSET | 10 COLLETS 3/32, 1/8, 5/32, 3/16, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8 |
| 1 | ER32-iSET | 18 COLLETS 7/32, 1/4, 9/32, 5/16, 11/32, 3/8, 13/32, 7/16, 15/32, 1/2, 17/32, 9/16, 19/32, 5/8, 21/32, 11/16, 23/32, 3/4 |



Retention Knobs

| QTY | PART NUMBER | DESCRIPTION |
|-----|-------------|----------------------------------|
| 12 | HPS-72C | MAS403 Type 1 (45°) Coolant Thru |



Wrench's

| QTY | PART NUMBER | DESCRIPTION |
|-----|-------------|--------------------------|
| 1 | ERW-16H | ER16 WRENCH |
| 1 | ERW-32E | ER32 WRENCH |
| 1 | BCW-20 | 3/4 BC MILL CHUCK WRENCH |



Locking Fixture

| QTY | PART NUMBER | DESCRIPTION |
|-----|-------------|-----------------------|
| 1 | TLD-CAT40 | CAT40 LOCKING FIXTURE |

End Mill Adapters

| QTY | PART NUMBER | DESCRIPTION |
|-----|------------------|----------------------------|
| 1 | CAT40-EM037-0250 | CAT40 3/8 END MILL X 2.50" |
| 1 | CAT40-EM050-0250 | CAT40 1/2 END MILL X 2.50" |
| 1 | CAT40-EM062-0250 | CAT40 5/8 END MILL X 2.50" |
| 1 | CAT40-EM075-0250 | CAT40 3/4 END MILL X 2.50" |
| 1 | CAT40-EM100-0300 | CAT40 1" END MILL X 3.00" |

What is Jet-Blast?

Coolant Ports for around solid cutters.



I want Jet-Blast on my End Mill Adapters

YES

NO



Shell Mill Adapter

| QTY | PART NUMBER | DESCRIPTION |
|-----|--------------------|--|
| 1 | CAT40-SM075-0175-F | CAT40 3/4 SHELL MILL 1.75" COOLANT THRU FOR PORTED CUTTERS |



BC Mill Chuck

| QTY | PART NUMBER | DESCRIPTION |
|-----|------------------|---|
| 1 | CAT40-BC075-0283 | CAT40 3/4 MILL CHUCK BEARINGLESS - COOLANT THRU |

Sorry no substitutions, additions or subtractions from the items in this package. Subject to change without notice.

CAT40 FlexPack-12

Pick **6 Collet Chucks**, **6 End Mill Adapters**,
your choice from the list below @ **Package Price**.
Receive **1 Collet Set** and **1 Locking Fixture FREE!**

- Add Optional *Jet-Blast* to the End Mill Holders
- Contact your local sales for current Package Pricing.

- ✓ **The Highest Quality**
All Holders Ground @ ≤ 0.0001 " Taper to Bore
Exceed AT3 Taper Tolerances
- ✓ **The Best Balance**
Dynamically Balanced to 20,000 RPM's
- ✓ **Coolant Thru the Center & DIN AD+B
Flange Coolant STANDARD!**



Choose 6 from the list below, mix or match:

| QTY | PART NUMBER | DESCRIPTION |
|-----|------------------|--------------------|
| | CAT40-ER11H-0250 | CAT40-ER11 X 2.50" |
| | CAT40-ER11H-0400 | CAT40-ER11 X 4.00" |
| | CAT40-ER16H-0250 | CAT40-ER16 X 2.50" |
| | CAT40-ER16H-0400 | CAT40-ER16 X 4.00" |
| | CAT40-ER20H-0250 | CAT40-ER20 X 2.50" |
| | CAT40-ER20H-0400 | CAT40-ER20 X 4.00" |
| | CAT40-ER25-0250 | CAT40-ER25 X 2.50" |
| | CAT40-ER25-0400 | CAT40-ER25 X 4.00" |
| | CAT40-ER32-0250 | CAT40-ER32 X 2.50" |
| | CAT40-ER32-0400 | CAT40-ER32 X 4.00" |
| | CAT40-ER40-0250 | CAT40-ER40 X 2.50" |

What is Jet-Blast?

Coolant Ports for around solid cutters.



I want Jet-Blast on
my End Mill Adapters

YES

NO



Choose 6 from the list below, mix or match:

| QTY | PART NUMBER | DESCRIPTION |
|-----|------------------|-----------------------------|
| | CAT40-EM012-0250 | CAT40 1/8 END MILL X 2.50" |
| | CAT40-EM018-0250 | CAT40 3/16 END MILL X 2.50" |
| | CAT40-EM025-0250 | CAT40 1/4 END MILL X 2.50" |
| | CAT40-EM025-0400 | CAT40 1/4 END MILL X 4.00" |
| | CAT40-EM031-0250 | CAT40 5/16 END MILL X 2.50" |
| | CAT40-EM031-0400 | CAT40 5/16 END MILL X 4.00" |
| | CAT40-EM037-0250 | CAT40 3/8 END MILL X 2.50" |
| | CAT40-EM037-0400 | CAT40 3/8 END MILL X 4.00" |
| | CAT40-EM050-0250 | CAT40 1/2 END MILL X 2.50" |
| | CAT40-EM050-0262 | CAT40 1/2 END MILL X 2.62" |
| | CAT40-EM050-0400 | CAT40 1/2 END MILL X 4.00" |
| | CAT40-EM062-0250 | CAT40 5/8 END MILL X 2.50" |
| | CAT40-EM062-0300 | CAT40 5/8 END MILL X 3.00" |
| | CAT40-EM062-0400 | CAT40 5/8 END MILL X 4.00" |
| | CAT40-EM075-0250 | CAT40 3/4 END MILL X 2.50" |
| | CAT40-EM075-0300 | CAT40 3/4 END MILL X 3.00" |
| | CAT40-EM075-0350 | CAT40 3/4 END MILL X 3.50" |
| | CAT40-EM075-0400 | CAT40 3/4 END MILL X 4.00" |
| | CAT40-EM087-0350 | CAT40 7/8 END MILL X 3.50" |
| | CAT40-EM100-0300 | CAT40 1" END MILL X 3.00" |
| | CAT40-EM100-0400 | CAT40 1" END MILL X 4.00" |



Choose 1 from the list below FREE:

| Select | PART NUMBER | DESCRIPTION |
|--------|-----------------|---------------------------|
| | ER11 ISET 7PCS | ER11 INCH SET 7 PIECES |
| | ER11 MSET 13PCS | ER11 METRIC SET 13 PIECES |
| | ER16 ISET 10PCS | ER16 INCH SET 10 PIECES |
| | ER16 MSET 10PCS | ER16 METRIC SET 10 PIECES |
| | ER20 ISET 12PCS | ER20 INCH SET 12 PIECES |
| | ER20 MSET 12PCS | ER20 METRIC SET 12 PIECES |
| | ER25 ISET 15PCS | ER25 INCH SET 15 PIECES |
| | ER25 MSET 15PCS | ER25 METRIC SET 15 PIECES |
| | ER32 ISET 18PCS | ER32 INCH SET 18 PIECES |
| | ER32 MSET 18PCS | ER32 METRIC SET 18 PIECES |
| | ER40 ISET 13PCS | ER40 INCH SET 13 PIECES |



Locking Fixture FREE:

| PART NUMBER | DESCRIPTION |
|-------------|-----------------------|
| TLD-CAT40 | CAT40 Locking Fixture |

Sorry no substitutions, additions or subtractions from the items
in this package. Subject to change without notice.



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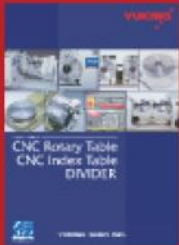
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