



PIONEER N.A., INC.

# PIONEER TOOL HOLDING SOLUTIONS 2023 CATALOG

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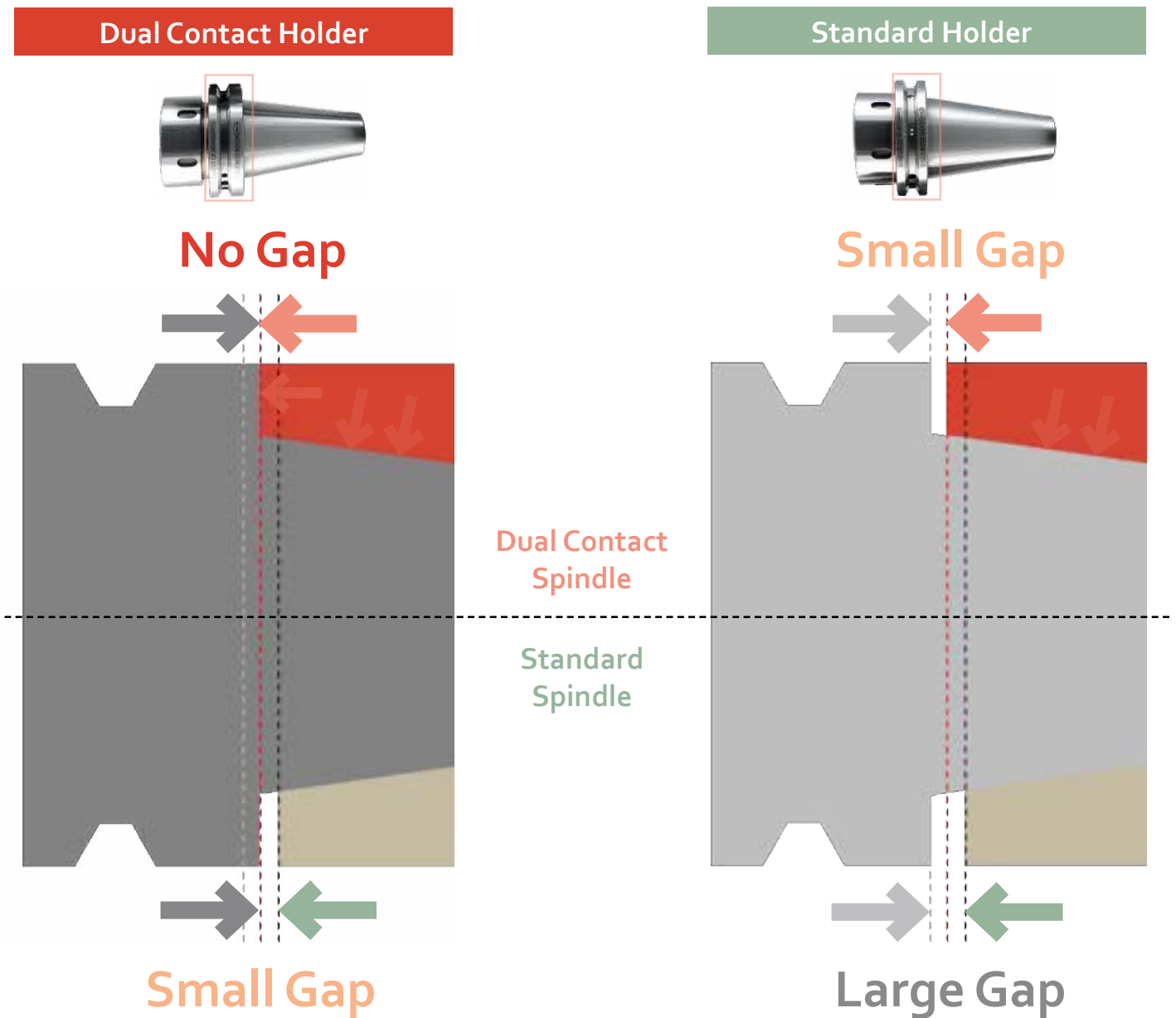
# PIONEER DUAL CONTACT

## What is Dual Contact

Dual Contact spindle gage line is ground to a controlled dimension to the taper of the spindle and tool holder. Standard spindles have a 0.078"/0.125" gap from the back of the tool holder flange to the spindle face. Dual contact reduces the gap to microns.

## How is Dual Contact Effective

If enough side pressure (radial load) is applied to a milling tool it will cause the tool taper to disengage from the spindle, causing the tool to dog tail, effecting assembly runout and rigidity. Dual Contact uses the face of the spindle for additional support creating a higher displacement pressure point allowing the machine to operate at a higher radial load. The amount of pressure is dependent on the draw bar system in the machine. Lower draw bar pressure machines will see a greater improvement in side load applications than higher machines.



Verify Machine Spindle warranty and Machine Tool manufacturers recommendation when using standard tooling in Dual Contact Spindles. Standard tooling can wear dual contact spindle tapers causing dual contact tooling to lock on the face before locking on the taper requiring a spindle repair to regain taper & face lockup. The reverse is also true, Dual Contact tooling used in standard spindles can wear the taper of the dual contact tool holder and cause lock up issues over time when used in dual contact spindles.

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# 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".



| Holder | Max. Cutting Tool | Nose $\phi$ |
|--------|-------------------|-------------|
| 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"       |

### T.I.R. - 3 $\mu$ m @ 4D, Second to None!

- All SX-P Collets are hand inspected and checked 3 times for guaranteed performance
- Standard 5 $\mu$ m Grade Available
- Inch & Metric Sizes



### 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.



### High Pressure Coolant Caps

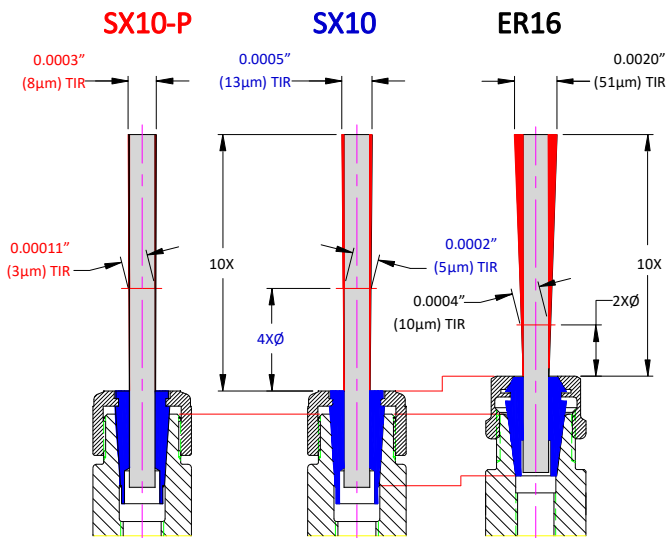
SX Coolant Caps supply up to 1,000 psi coolant seal. The threaded cap design when properly tightened has no effect on the TIR of the assembly, even at 30D!



**Jet-Blast** also available for solid cutting tools.

### 3 Micron Provides Results

Shown below a 1/4" at 10X. Worst Case Runout Shown with each collet at maximum TIR.



# SX25 Non-Pull Out Collets

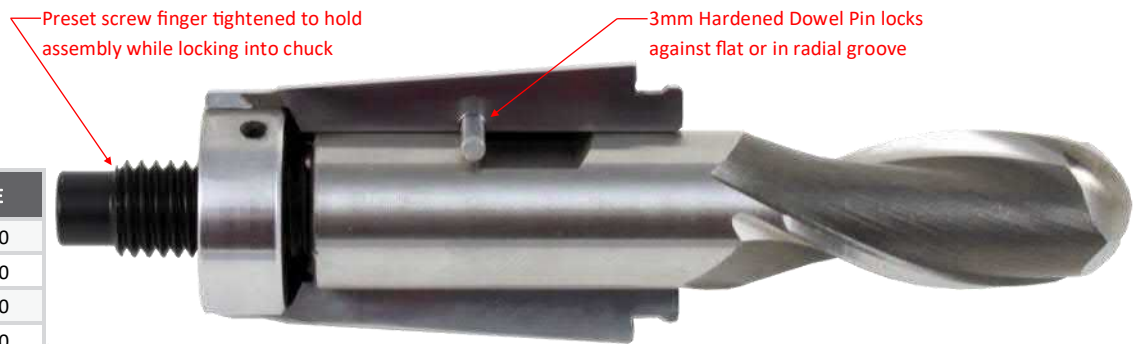
## For Hi-Feed Milling Applications

Non Pull out collets are developed for hi-feed titanium and aluminum applications with a cutter helix of 45° or greater to prevent cutter pull out.

The Pioneer design utilizes a standard hardened 62Rc 3mm dowel pin to provide contact across the flat and superior shear strength. The preset screw is used to hold the cutter in position, preventing any movement while being locked into the tool holder.



The modification is performed at our location in Chicago, the pin location can be adjusted to fit any flat or groove position within the collet bore behind the nut. Special configurations available upon request.



| PART NUMBER | BORE   |
|-------------|--------|
| SX25-0375NP | 0.3750 |
| SX25-0500NP | 0.5000 |
| SX25-0625NP | 0.6250 |
| SX25-0750NP | 0.7500 |
| SX25-0875NP | 0.8750 |
| SX25-M120NP | 12MM   |
| SX25-M160NP | 16MM   |
| SX25-M200NP | 20MM   |

## SX25 Non-Pull Out Assembly - How does it work!



Insert SX25-NP Collet into the SXN25M Nut



Insert cutting tool into the collet, cutter flat orientation to the pin hole as shown

Use safety gloves if required



Fully insert cutter into the collet



Insert Pin into the Pin Hole  
Note: if cutting tool flat is not in the correct orientation the pin will not insert, rotate cutter if needed to align the pin to the flat



Once the pin is fully inserted pull out on the cutting tool so the back of the flat is tight against the pin  
Use safety gloves if required



Insert the preset screw finger tight against the back of the cutting tool to hold the cutter in place and eliminate gap and movement

Assemble into the collet chuck, torque to 85 ft/lbs, you are ready to go!

# 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 Finish 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)

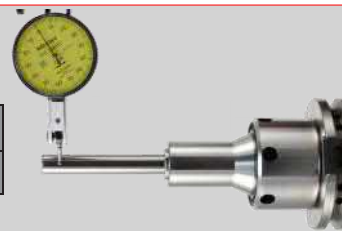
VX08 = 0.787 (Previously 0.870)

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.

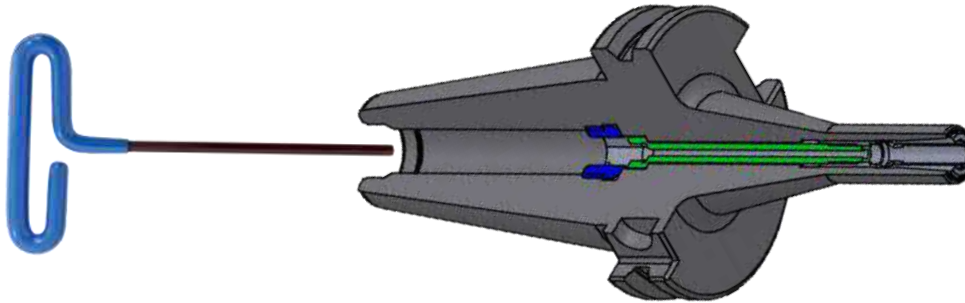
Guaranteed 3µm @ 4D, no extension runs better.

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

## How MX Works

Coolant thru center draw bolt accessed from the retention knob end of the holder draws the collet into the pocket and tightens the collet. Please note the retention knob must have a 6mm or larger coolant hole for the 5mm wrench to clear or the knob will have to be removed to change cutting tools.

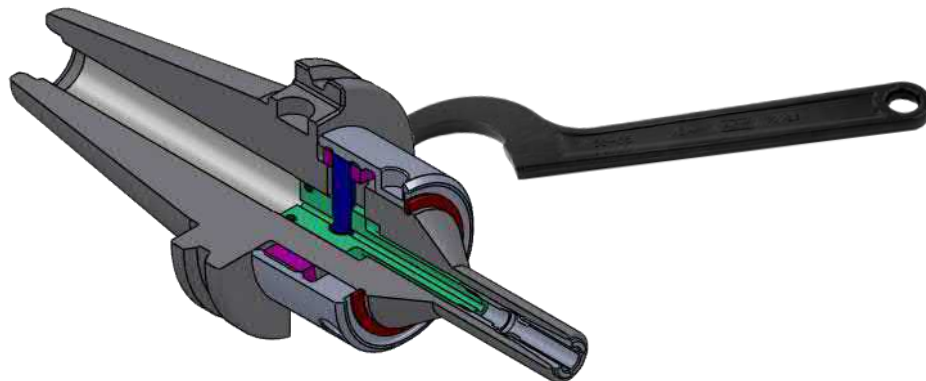
Design uses a T-Handle Hex wrench to tighten which limits the maximum gripping force, MX is designed for finishing only.



## How VX Works

VX is a front locking collar design utilizing a pin spanner wrench to tighten. This allows for increased locking pressure over MX up to 5X the holding power.

The front locking mechanism requires the collet to be threaded into the holder before the collar can be locked.



### VX Assembly & Tightening Instructions

The instructions below are a basic procedure. Always use proper safety equipment when working with any machine tool component.



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.

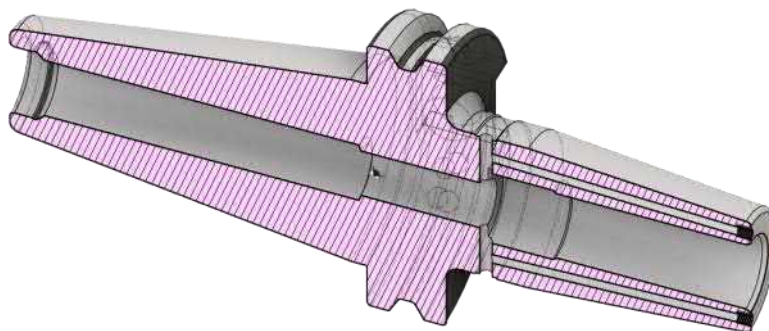


Tighten locking collar to 30 ft/lbs Maximum Do not over tighten or tool can jam or cause excessive TIR!



## Premium Shrink Fit Performance

- \* 0.0001" TIR Guaranteed @ Bore
- \* Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- \* Tolerance and Ground for as close to 10,000 lbs of pull out force or higher (cutter shank finish may effect results)
- \* Designed for Performance Milling with Neutral flute geometry, not designed for hi-helix applications For Carbide Cutting Tools with h6 shank tolerance
- \* Dynamically Balanced for G2.5 @ 25,000 RPM or < 1 gmm's
- \* Tapers are ground better than AT3 for optimal T.I.R.



### 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 or < 1 gmm's

### X Coolant Ports

- \* 2 Angled holes @ 2 degree's
- \* Pluggable design for coolant through or around the cutting tool
- \* Cross Slot at the bottom of the bore to allow coolant flow when the cutting tool is at full depth

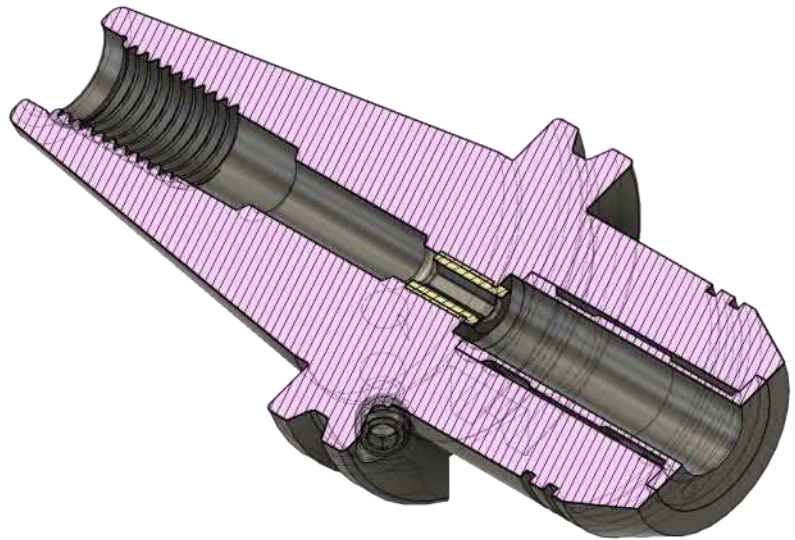




## Hydraulic Chucks



- \* 0.0001" or less run-out providing premium performance in drilling and reaming applications
- \* Positive Locking System
- \* Superior Vibration Dampening
- \* Designed for use with ISO h6 cutter shanks only
- \* Coolant Thru the Center
- \* Dynamically Balanced for G2.5 @ 25,000 RPM or < 1 gmm's
- \* Tapers are ground better than AT3 for optimal T.I.R.



## Sealed Hydraulic Collets

- 0.0001" TIR
- Sealed for Coolant Thru
- Interchangeable with industry standard collets



# MC Mill Chuck

## Best in Class

- 0.0002" TIR Guaranteed @ 4D or up to 100mm
  - 5X the driving torque than ER on nominal sizes, over 600 ft/lbs of radial torque on 1.25" Carbide shanks
  - 20% Higher grip force than competitive models
  - Unlike materials & bearings & mass dampen cutting harmonics
  - Designed for Performance Milling with Neutral flute geometry, not designed for hi-helix applications
  - Reducing sleeves down to 1/8"
- Note: Using reducing sleeves also reduces holding power by 6X*



### Ultra-low Temperature Treatment

Sub-zero temperature treatment at  $-100^{\circ}\text{C}$  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!

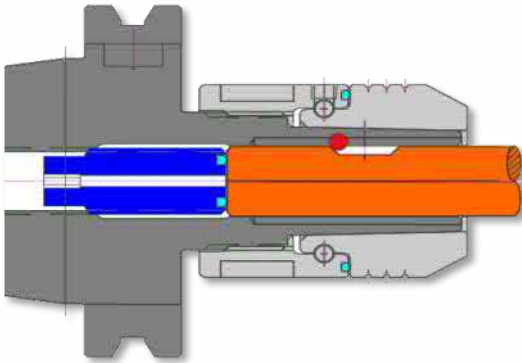




## BC Mill Chuck Premium Performance

- 0.0002" TIR Guaranteed @ 50mm (2")
- Eliminating wear components & easy to clean
- Solid Shoulder Design prevents over tightening
- Smaller OD than Traditional Mill Chucks
- Sealed bore design for high pressure applications
- Over 400 ft/lbs of radial torque on 1.25" Carbide Shanks
- Unlike materials & mass dampen cutting harmonics
- Designed for Performance Milling with Neutral to 30° flute geometry, not designed for hi-helix applications
- Tapers are ground better than AT3 for optimal T.I.R.

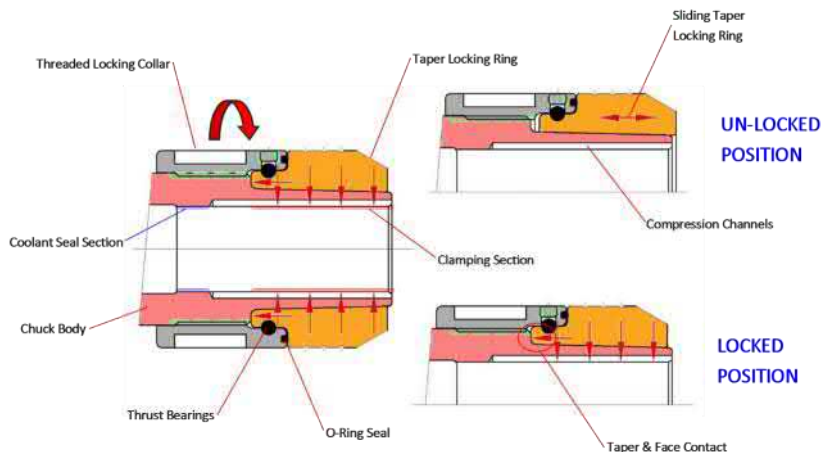
## Non Pull Out For Volume & High Feed Milling



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.

### Bearingless Mill Chuck Design Features



# Performance ER System

Clamping Range : 0.020" - 1.000"

- \* Holders Ground 0.0001" TIR or Less
- \* All Holders Dynamically Balanced, Nuts also Dynamically Balanced Individually, not Paired to the Holder
- \* Coolant Thru with Coolant Collets Available or Coolant Cap System
- \* Collet Options down to 2 Micron TIR Guaranteed!
- \* Holders Meet & Exceed all DIN Standards
- \* ID Chip Hole Standard



## Mini Holders for Tight Applications

ER Mini holders are designed to provide additional clearance for close wall applications.

Available in ER11M & ER16M in CAT40 & BT30. ER08M, ER11M, ER16M & ER20M in Straight Extensions.



## 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



## Standard Features

Dynamic Balance Compensation

ID Chip Hole



## Sealed or Jet-Blast Coolant Cap

Seal Collets or ER Coolant Caps provide a coolant seal up to 1,500 PSI. Coolant Caps prevent chips & debris from entering the collet and chuck. Available in a Jet-Blast model for directional coolant into the cutter flutes.



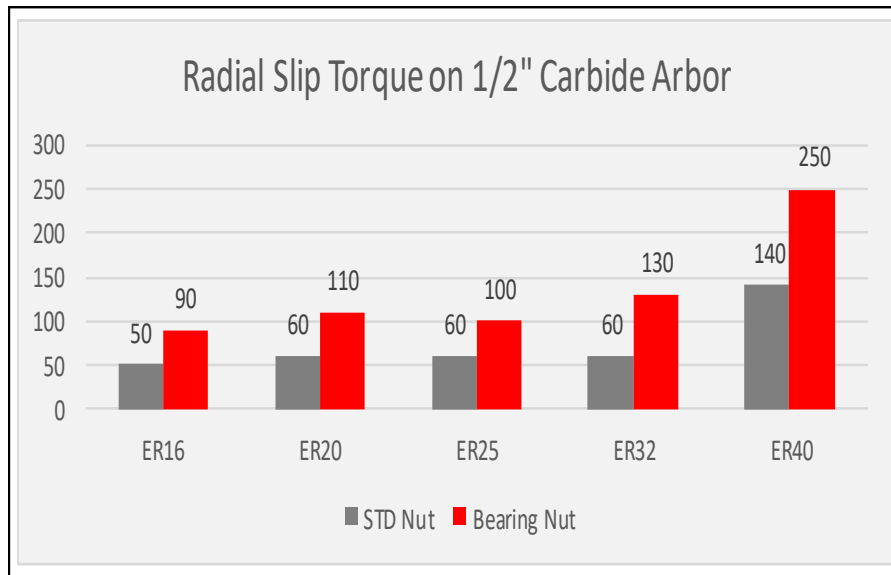


## High Performance Bearing Nuts

**Double your grip force  
without increasing your locking pressure.**

Bearing transfers torque more efficiently with ER collets allowing higher grip forces without increasing locking torque.

*For best performance use ER collets with our bearing nuts!*



ER32 standard nut locked at 100 ft/lbs using a 1/2" carbide test arbor, the arbor slips at 60 ft/lbs of radial torque, using a Pioneer Bearing Nut the arbor slipped at 130 ft/lbs of radial torque. The average improvement on ER16 thru ER40 was 75% to 125% increase in radial holding power.

Note: Cutter size, material and finish may effect results. Recommend on-size collets when available.

## ER Shrink Collets

- 3  $\mu$ m - 0.0001" Runout Taper to Bore
- ER16 - ER40 Inch and Metric
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- Optional Shrink Base with Preset Screw for easy height setting
- Designed for Carbide Cutting Tools with h6 shank tolerance

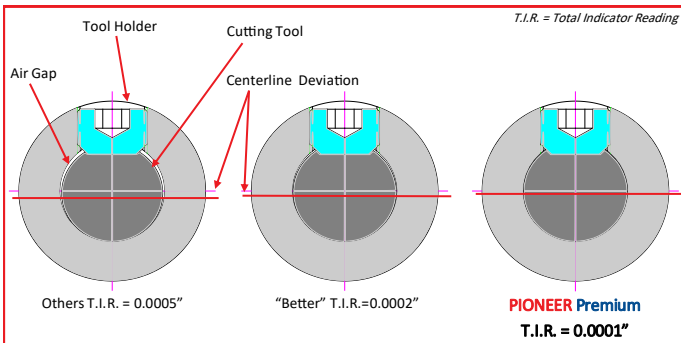




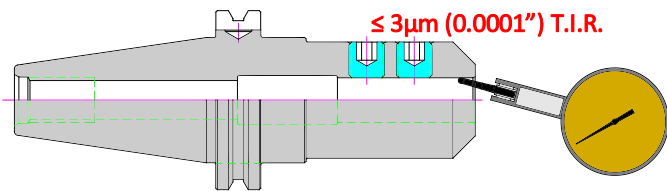
# End Mill Adapters

Building the Best EM in the Industry!

- 3  $\mu\text{m}$  - 0.0001" Bore Runout Standard
- H5 Bore Tolerance Standard
- Coolant Thru Center Standard
- Dynamically Balanced Body for use @ 20,000 RPM's (CAT50 @ 15,000)
- Tapers are ground better than AT3 for optimal T.I.R.
- ID Chip Hole Standard
- Jet-Blast available on all projections



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



## Standard Features

Dynamic Balance Compensation

ID Chip Hole



# Jet-Blast Coolant Option

**Jet-Blast** Coolant Ports allow coolant to go around solid cutting tools and deliver 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.



## Shell Mill Adapters

with more standard features!

- Body - Prepped for Coolant Thru, FX or Coolant Screw Req'd
- Body Dynamically Balanced
- ID Chip Hole Standard
- Standard & Extended Lengths up to 15"
- Replaceable Keys

### Optional

- FX High Volume Coolant System for Ported Cutter Bodies



Shown body mounted with Shell Mill and Inserts not included.

### Standard Features

Dynamic Balance Compensation

ID Chip Hole





# FX - High Volume Coolant System



Shown body mounted with Shell Mill and Inserts not included.



## Did your cutter company supply a coolant screw?

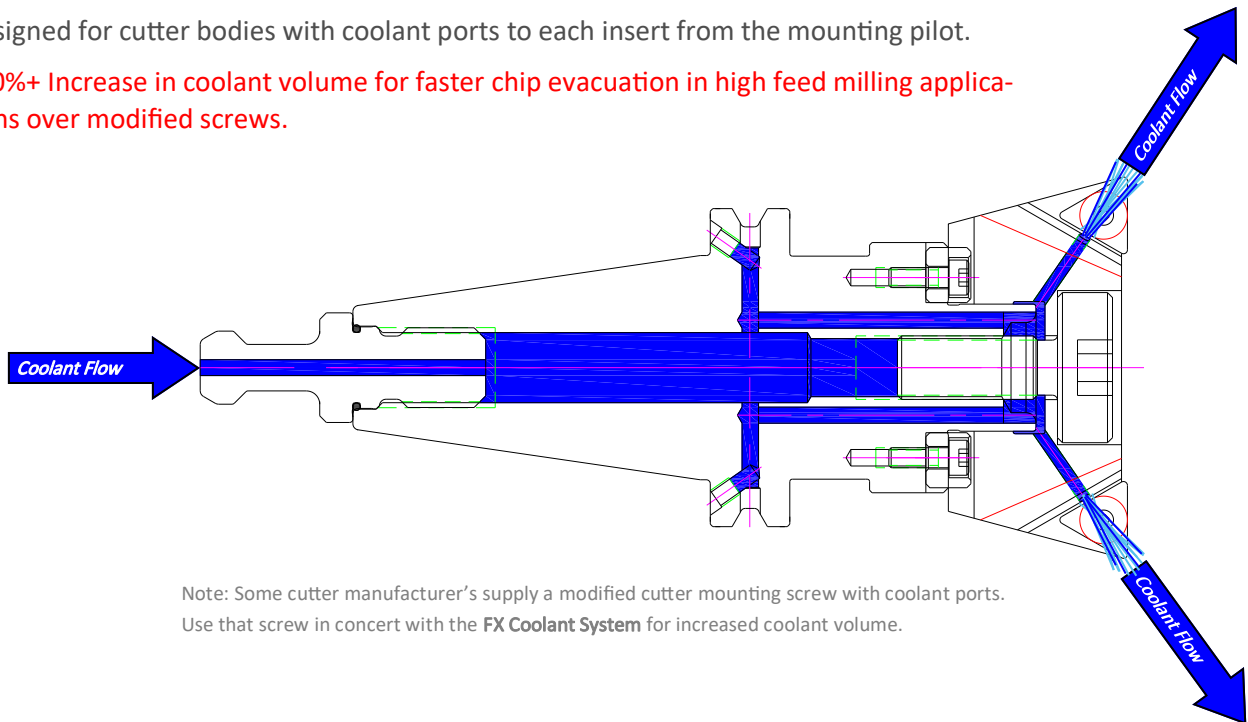
Use our standard holder for coolant through the modified screw - or - use our FX model for additional coolant flow!

4 Ports allow a little back pressure if your machine uses a High Volume Pull Stud.

**Note:** 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.
- 500%+ Increase in coolant volume for faster chip evacuation in high feed milling applications over modified 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.

# Pioneer Quick Change Tapping Options

Pioneer offers Rigid, Length Compensating and Tap ER for fully Synchronized tapping applications. Our adapters are manufactured by the company who invented the system so there is never a compatibility problem.

## What holder should I use?

In CNC applications where the hole is being drilled in the same setup, it comes down to the machine tool to determine which holder is best for you.

## Rigid Tapping

When rigid tapping in a fully synchronized system ER Tap collets provide zero movement with no axial play. While Quick Change RT & RA are called "rigid" they still have some movement in the Quick Change connection which can cause some issues.

RT holders do have a hole thru the center for coolant, it is not sealed but works well with the appropriate adapter. Most RA adapters allow coolant to the back of the tap, the exception is some of the pipe adapters have a stop plug that needs to be modified. This is not a sealed system but fluid dynamics apply, if the outlet coolant hole is larger than the inlet coolant hole there is no issue. Leakage occurs when the outlet coolant hole is smaller than the inlet causing back pressure. This back pressure will leak out of the mechanism.

## Roll Form

It is recommended to use ER Tap Collets for Roll Form Tapping. Quick change does not perform well with Roll Form applications.

## Length Compensating

In applications where there is backlash in the machine or timing to pitch issues, Tension and Compression holders will

compensate to allow the tap to cut freely without pressure from the machine tool.

Programming should be 95-98% of Pitch of in-feed, 100% of Pitch on reverse. This will allow the tap to pull out on the springs of the holder while tapping the hole and spring back when exiting the hole to prevent thread pulling and double cutting.

## Rigid Adapters vs Torque Control

Torque control adapters have a user adjustable clutch. The clutch is set for mild steel from the factory. Torque control adapters will clutch if there are hard spots in the material, the drilled hole is not deep enough or the tap has become dull and is not cutting properly. Due to the sensitivity of the clutch the adapter will clutch before the tap is fully dull.

In CNC machine tools we recommend RA Rigid Adapters with TC Tension and Compression holders due to the drilled hole being controlled by the same setup. However there is always a chance of tap breakage if the tap becomes too dull in a RA Adapter.



# Precision Sync ER Tapping System

## Reduce Tap Wear and Extend your Tap Life

- Compensates for synchronization errors in the tap cycle
- Minimal length compensation in both Tension and Compression compensates for small pitch differences between the spindle and tap reducing friction on the tap flanks
- Increases tap life at least 30%
- For tapping speeds up to 15,000 RPM's
- For use in Left or Right hand applications
- Coolant Thru, for use up to 1,500 PSI
- Compact Design with Modular Shank options to fit many machine spindles



## Coolant Thru Tapping with Precision Sync

The holder is designed for coolant thru the center. To see the tap shank use a coolant cap matching the tap shank size to create the seal.

Required (each sold separately)

- Holder
- Coolant Cap Nut (page 28)
- Coolant Cap (page 28-29)
- Tap Collet (page 26-27)

Please note the coolant tap shank must be long enough for the coolant deal to make contact on the full round diameter, tap flutes cannot enter the cap.



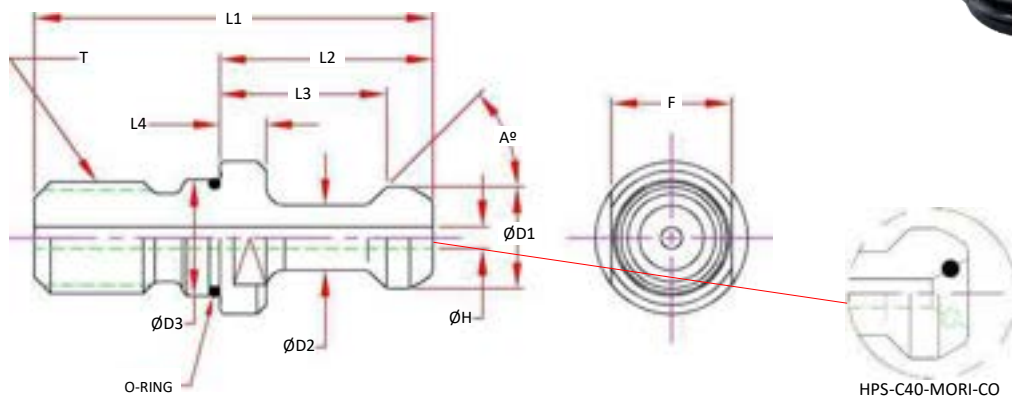
# CAT40

## CAT40 - High Performance Studs

### Features

- Manufactured to the Industry Standards or machine builders specifications.
- Grind Finish to adhere to machine builder recommendations
- Coolant Knobs include O-ring on the thread side pilot diameter to adhere to builder recommendations

**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 or contact the machine manufacturer.



HPS-C40-MORI-CO

| Part Number        | A Angle | D1 Head | D2 Neck | D3 Pilot | L1 OAL | L2 Proj. | L3 Pull Loc. | L4 Flange | H Hole | Pilot O-Ring | F Flats | T Thread | Socket Wrench | Notes                    |
|--------------------|---------|---------|---------|----------|--------|----------|--------------|-----------|--------|--------------|---------|----------|---------------|--------------------------|
| HPS-C40-MAS-45     | 45      | 0.591   | 0.394   | 0.641    | 2.250  | 1.266    | 0.990        | 0.236     | -      | -            | -       | -        | -             | MAS P40T-1               |
| HPS-C40-MAS-45-C   | 45      | 0.591   | 0.394   | 0.641    | 2.250  | 1.266    | 0.990        | 0.118     | 0.157  | Yes †        | -       | -        | -             | MAS P40T-1 w/ 3mm Flange |
| HPS-C40-MAS-60     | 60      | 0.591   | 0.394   | 0.630    | 2.252  | 1.268    | 0.992        | 0.236     | -      | -            | -       | -        | -             | MAS P40T-2               |
| HPS-C40-MAS-60-C   | 60      | 0.591   | 0.394   | 0.641    | 2.252  | 1.268    | 0.992        | 0.236     | 0.157  | Yes †        | -       | -        | -             | MAS P40T-2               |
| HPS-C40-JIS-C      | 75      | 0.748   | 0.551   | 0.641    | 2.000  | 1.024    | 0.787        | 0.276     | 0.236  | Yes †        | 19mm    | -        | TWS-M19       | JIS B6339                |
| HPS-C40-MATSUURA-C | 75      | 0.748   | 0.551   | 0.641    | 2.000  | 1.024    | 0.787        | 0.157     | 0.236  | Yes †        | -       | -        | -             | Matsura w/4mm Flange     |
| HPS-C40-DIN-C      | 75      | 0.748   | 0.551   | 0.641    | 2.010  | 1.024    | 0.787        | 0.157     | 0.276  | Yes †        | -       | -        | -             | DIN 69872                |
| HPS-C40-MAKINO-C   | 75      | 0.748   | 0.551   | 0.641    | 1.890  | 1.030    | 0.793        | 0.276     | 0.276  | Yes †        | -       | -        | -             | Makino Spec              |
| HPS-C40-MORI-CO    | 75      | 0.748   | 0.551   | 0.641    | 2.015  | 1.030    | 0.793        | 0.236     | 0.276  | Yes †        | -       | -        | -             | Mori O-Ring OD & ID      |
| HPS-C40-ANSI-C     | 45      | 0.740   | 0.490   | 0.641    | 1.624  | 0.640    | 0.440        | 0.118     | 0.291  | Yes †        | -       | -        | -             | ANSI B5.50               |
| HPS-C40-OKUMA-C    | 45      | 0.740   | 0.490   | 0.641    | 1.624  | 0.640    | 0.440        | 0.118     | 0.157  | Yes †        | 0.750   | -        | TWS-075       | Okuma Coolant Thru       |
| HPS-C40-ANSI       | 45      | 0.740   | 0.490   | 0.641    | 1.624  | 0.640    | 0.440        | 0.118     | -      | -            | -       | -        | -             | Non Coolant              |
| HPS-C40-MAS-90     | 90      | 0.591   | 0.394   | -        | 2.244  | 1.260    | 0.984        | 0.236     | -      | -            | -       | -        | -             | MAS P40T-3 Mori-Seiki    |
| HPS-C40-MAS-90-C   | 90      | 0.591   | 0.394   | 0.641    | 2.244  | 1.260    | 0.984        | 0.236     | 0.157  | Yes †        | -       | -        | TWS-M17       | MAS P40T-3 Coolant       |

† O-Ring added to Pilot, adheres to machine company changes, remove O-Ring if not required

# CAT40 Nose Index

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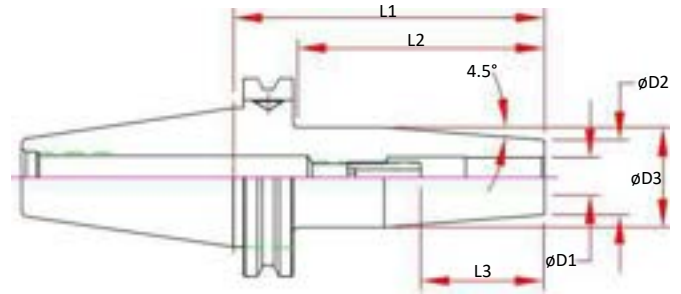
# CAT40 Shrink Fit - Inch

## Features

- 3 μm - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- X Jet-Blast Pluggable Coolant Ports
- Tapers are ground better than AT3 for optimal T.I.R.
- Dynamically Balanced for G2.5 @ 25,000 RPM or < 1 gmm
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Carbide Cutting Tools with h6 shank tolerance

## Optional (Order Separately):

- Fine Trim Balance (Sample cutter required for balance compensation)



| Dual Contact Spindle Part Number | Standard Spindle Part Number | D1 Bore | D2   | D3   | L1 Projection | L2   | L3 Max Tool Enters | Preset Screw  |
|----------------------------------|------------------------------|---------|------|------|---------------|------|--------------------|---------------|
| CAT40-SD012-080-B-X              | CAT40-SD012-080X             | 0.1250  | 0.39 | 0.77 | 3.15          | 2.28 | 4.57               | -             |
| CAT40-SD012-130-B-X              | CAT40-SD012-130X             | 0.1250  | 0.39 | 0.77 | 5.12          | 4.25 | 6.70               | -             |
| CAT40-SD012-160-B-X              | CAT40-SD012-160X             | 0.1250  | 0.39 | 0.77 | 6.30          | 5.43 | 7.73               | -             |
| CAT40-SD018-080-B-X              | CAT40-SD018-080X             | 0.1875  | 0.39 | 0.77 | 3.15          | 2.28 | 4.57               | -             |
| CAT40-SD018-130-B-X              | CAT40-SD018-130X             | 0.1875  | 0.39 | 0.77 | 5.12          | 4.25 | 6.70               | -             |
| CAT40-SD018-160-B-X              | CAT40-SD018-160X             | 0.1875  | 0.39 | 0.77 | 6.30          | 5.43 | 7.73               | -             |
| CAT40-SD025-080-B-X              | CAT40-SD025-080X             | 0.2500  | 0.83 | 1.06 | 3.15          | 2.28 | 1.54               | SCW-ASC-05-23 |
| CAT40-SD025-130-B-X              | CAT40-SD025-130X             | 0.2500  | 0.83 | 1.06 | 5.12          | 4.25 | 1.54               | SCW-ASC-05-23 |
| CAT40-SD025-160-B-X              | CAT40-SD025-160X             | 0.2500  | 0.83 | 1.06 | 6.30          | 5.43 | 1.54               | SCW-ASC-05-23 |
| CAT40-SD031-080-B-X              | CAT40-SD031-080X             | 0.3125  | 0.83 | 1.06 | 3.15          | 2.28 | 1.54               | SCW-ASC-06-23 |
| CAT40-SD031-130-B-X              | CAT40-SD031-130X             | 0.3125  | 0.83 | 1.06 | 5.12          | 4.25 | 1.54               | SCW-ASC-06-23 |
| CAT40-SD031-160-B-X              | CAT40-SD031-160X             | 0.3125  | 0.83 | 1.06 | 6.30          | 5.43 | 1.54               | SCW-ASC-06-23 |
| CAT40-SD037-080-B-X              | CAT40-SD037-080X             | 0.3750  | 0.94 | 1.26 | 3.15          | 2.28 | 1.73               | SCW-ASC-08-23 |
| CAT40-SD037-130-B-X              | CAT40-SD037-130X             | 0.3750  | 0.94 | 1.26 | 5.12          | 4.25 | 1.73               | SCW-ASC-08-23 |
| CAT40-SD037-160-B-X              | CAT40-SD037-160X             | 0.3750  | 0.94 | 1.26 | 6.30          | 5.43 | 1.73               | SCW-ASC-08-23 |
|                                  | CAT40-SD043-080X             | 0.4375  | 0.94 | 1.26 | 3.15          | 2.28 | 1.73               | SCW-ASC-08-23 |
| CAT40-SD050-080-B-X              | CAT40-SD050-080X             | 0.5000  | 0.94 | 1.26 | 3.15          | 2.28 | 1.97               | SCW-ASC-10-23 |
| CAT40-SD050-130-B-X              | CAT40-SD050-130X             | 0.5000  | 0.94 | 1.26 | 5.12          | 4.25 | 1.97               | SCW-ASC-10-23 |
| CAT40-SD050-160-B-X              | CAT40-SD050-160X             | 0.5000  | 0.94 | 1.26 | 6.30          | 5.43 | 1.97               | SCW-ASC-10-23 |
| CAT40-SD062-080-B-X              | CAT40-SD062-080X             | 0.6250  | 1.06 | 1.34 | 3.15          | 2.28 | 2.09               | SCW-ASC-12-23 |
| CAT40-SD062-130-B-X              | CAT40-SD062-130X             | 0.6250  | 1.06 | 1.34 | 5.12          | 4.25 | 2.09               | SCW-ASC-12-23 |
| CAT40-SD062-160-B-X              | CAT40-SD062-160X             | 0.6250  | 1.06 | 1.34 | 6.30          | 5.43 | 2.09               | SCW-ASC-12-23 |
| CAT40-SD075-080-B-X              | CAT40-SD075-080X             | 0.7500  | 1.30 | 1.65 | 3.15          | 2.28 | 2.09               | SCW-ASC-12-23 |
| CAT40-SD075-130-B-X              | CAT40-SD075-130X             | 0.7500  | 1.30 | 1.65 | 5.12          | 4.25 | 2.09               | SCW-ASC-12-23 |
| CAT40-SD075-160-B-X              | CAT40-SD075-160X             | 0.7500  | 1.30 | 1.65 | 6.30          | 5.43 | 2.09               | SCW-ASC-12-23 |
|                                  | CAT40-SD087-080X             | 0.8750  | 1.30 | 1.65 | 3.15          | 2.28 | 2.09               | SCW-ASC-12-23 |
| CAT40-SD100-100-B-X              | CAT40-SD100-100X             | 1.0000  | 1.73 | 2.09 | 3.94          | 3.07 | 2.28               | SCW-ASC-16-23 |
| CAT40-SD100-130-B-X              | CAT40-SD100-130X             | 1.0000  | 1.73 | 2.09 | 5.12          | 4.25 | 2.28               | SCW-ASC-16-23 |
| CAT40-SD100-160-B-X              | CAT40-SD100-160X             | 1.0000  | 1.73 | 2.09 | 6.30          | 5.43 | 2.28               | SCW-ASC-16-23 |
| CAT40-SD125-100-B-X              | CAT40-SD125-100X             | 1.2500  | 1.73 | 2.09 | 3.94          | 3.07 | 2.28               | SCW-ASC-16-23 |
| CAT40-SD125-130-B-X              | CAT40-SD125-130X             | 1.2500  | 1.73 | 2.09 | 5.12          | 4.25 | 2.28               | SCW-ASC-16-23 |
| CAT40-SD125-160-B-X              | CAT40-SD125-160X             | 1.2500  | 1.73 | 2.09 | 6.30          | 5.43 | 2.28               | SCW-ASC-16-23 |

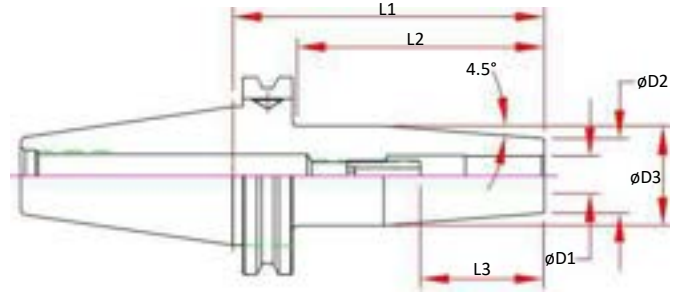
# CAT40 Shrink Fit - Metric

## Features

- 3 µm - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- X Jet-Blast Pluggable Coolant Ports
- Tapers are ground better than AT3 for optimal T.I.R.
- Dynamically Balanced for G2.5 @ 25,000 RPM or < 1 gmm
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Carbide Cutting Tools with h6 shank tolerance

## Optional (Order Separately):

- Fine Trim Balance (Sample cutter required for balance compensation)



| Part Number      | D1 Bore | D2   | D3   | L1 Projection | L2   | L3 Max Tool Enters | Preset Screw  |
|------------------|---------|------|------|---------------|------|--------------------|---------------|
| CAT40-SDM03-080X | 3.000   | 0.39 | 0.75 | 3.15          | 2.28 | 4.57               | -             |
| CAT40-SDM03-160X | 3.000   | 0.39 | 0.75 | 6.30          | 5.43 | 7.73               | -             |
| CAT40-SDM04-080X | 4.000   | 0.39 | 0.75 | 3.15          | 2.28 | 4.57               | -             |
| CAT40-SDM04-160X | 4.000   | 0.39 | 0.75 | 6.30          | 5.43 | 7.73               | -             |
| CAT40-SDM06-080X | 6.000   | 0.83 | 1.06 | 3.15          | 2.28 | 1.54               | SCW-ASC-05-23 |
| CAT40-SDM06-160X | 6.000   | 0.83 | 1.06 | 6.30          | 5.43 | 1.54               | SCW-ASC-05-23 |
| CAT40-SDM08-080X | 8.000   | 0.83 | 1.06 | 3.15          | 2.28 | 1.54               | SCW-ASC-06-23 |
| CAT40-SDM08-160X | 8.000   | 0.83 | 1.06 | 6.30          | 5.43 | 1.54               | SCW-ASC-06-23 |
| CAT40-SDM10-080X | 10.000  | 0.94 | 1.26 | 3.15          | 2.28 | 1.73               | SCW-ASC-08-23 |
| CAT40-SDM10-160X | 10.000  | 0.94 | 1.26 | 6.30          | 5.43 | 1.73               | SCW-ASC-08-23 |
| CAT40-SDM12-080X | 12.000  | 0.94 | 1.26 | 3.15          | 2.28 | 1.97               | SCW-ASC-10-23 |
| CAT40-SDM12-160X | 12.000  | 0.94 | 1.26 | 6.30          | 5.43 | 1.97               | SCW-ASC-10-23 |
| CAT40-SDM16-080X | 16.000  | 1.06 | 1.34 | 3.15          | 2.28 | 1.97               | SCW-ASC-12-23 |
| CAT40-SDM16-160X | 16.000  | 1.06 | 1.34 | 6.30          | 5.43 | 1.97               | SCW-ASC-12-23 |
| CAT40-SDM20-080X | 20.000  | 1.30 | 1.65 | 3.15          | 2.28 | 2.17               | SCW-ASC-12-23 |
| CAT40-SDM20-160X | 20.000  | 1.30 | 1.65 | 6.30          | 5.43 | 2.17               | SCW-ASC-12-23 |
| CAT40-SDM25-100X | 25.000  | 1.73 | 2.09 | 3.94          | 3.07 | 2.28               | SCW-ASC-16-23 |
| CAT40-SDM32-100X | 32.000  | 1.73 | 2.09 | 3.94          | 3.07 | 2.28               | SCW-ASC-16-23 |

CAT 40

CAT50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT SHANKS

COLLETS

PARTS & ACCESS.

SHRINK MACHINES

INDEXERS



# CAT40 Shrink Fit - Slim Nose

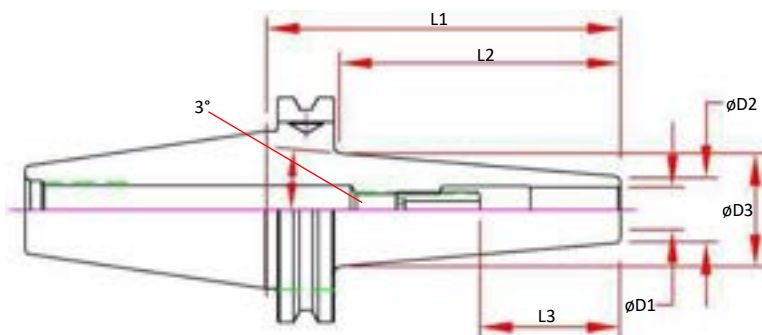
## Features

- 3 μm - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- Tapers are ground better than AT3 for optimal T.I.R.
- Dynamically Balanced for G2.5 @ 25,000 RPM or < 1 gmm
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Carbide Cutting Tools with h6 shank tolerance



## Optional (Order Separately):

- Fine Trim Balance (Sample cutter required for balance compensation)



## Inch

| Standard Spindle Part Number | D1 Bore | D2   | D3   | L1 Projection | L2   | L3 Max Tool Enters | Preset Screw  |
|------------------------------|---------|------|------|---------------|------|--------------------|---------------|
| CAT40-SD012-080-SN           | 0.1250  | 0.36 | 0.60 | 3.15          | 2.29 | 4.72               | -             |
| CAT40-SD012-120-SN           | 0.1250  | 0.36 | 0.76 | 4.72          | 3.86 | 6.28               | -             |
| CAT40-SD018-080-SN           | 0.1875  | 0.43 | 0.67 | 3.15          | 2.29 | 4.57               | -             |
| CAT40-SD018-120-SN           | 0.1875  | 0.43 | 0.84 | 4.72          | 3.86 | 6.28               | -             |
| CAT40-SD025-080-SN           | 0.2500  | 0.47 | 0.71 | 3.15          | 2.29 | 1.54               | SCW-ASC-SD025 |
| CAT40-SD025-120-SN           | 0.2500  | 0.47 | 0.88 | 4.72          | 3.86 | 1.54               | SCW-ASC-SD025 |
| CAT40-SD037-080-SN           | 0.3750  | 0.63 | 0.87 | 3.15          | 2.29 | 1.73               | SCW-ASC-SD037 |
| CAT40-SD037-120-SN           | 0.3750  | 0.63 | 1.04 | 4.72          | 3.86 | 1.73               | SCW-ASC-SD037 |
| CAT40-SD050-080-SN           | 0.5000  | 0.71 | 0.95 | 3.15          | 2.28 | 1.97               | SCW-ASC-SD050 |
| CAT40-SD050-120-SN           | 0.5000  | 0.71 | 1.11 | 4.72          | 3.86 | 1.97               | SCW-ASC-SD050 |

## Metric

| Standard Spindle Part Number | D1 Bore | D2   | D3   | L1 Projection | L2   | L3 Max Tool Enters | Preset Screw  |
|------------------------------|---------|------|------|---------------|------|--------------------|---------------|
| CAT40-SDM03-080-SN           | 3mm     | 0.40 | 0.75 | 3.15          | 2.29 | 4.72               | -             |
| CAT40-SDM03-120-SN           | 3mm     | 0.40 | 0.76 | 4.72          | 3.86 | 6.28               | -             |
| CAT40-SDM04-080-SN           | 4mm     | 0.40 | 0.59 | 3.15          | 2.29 | 4.57               | -             |
| CAT40-SDM04-120-SN           | 4mm     | 0.40 | 0.80 | 4.72          | 3.86 | 6.28               | -             |
| CAT40-SDM06-080-SN           | 6mm     | 0.47 | 0.71 | 3.15          | 2.29 | 1.54               | SCW-ASC-SD025 |
| CAT40-SDM06-120-SN           | 6mm     | 0.47 | 0.88 | 4.72          | 3.86 | 1.54               | SCW-ASC-SD025 |
| CAT40-SDM08-080-SN           | 8mm     | 0.55 | 0.79 | 3.15          | 2.28 | 1.54               | SCW-ASC-SD031 |
| CAT40-SDM08-120-SN           | 8mm     | 0.55 | 0.96 | 4.72          | 3.86 | 1.54               | SCW-ASC-SD031 |
| CAT40-SDM10-080-SN           | 10mm    | 0.63 | 0.87 | 3.15          | 2.29 | 1.73               | SCW-ASC-SD037 |
| CAT40-SDM10-120-SN           | 10mm    | 0.63 | 1.04 | 4.72          | 3.86 | 1.73               | SCW-ASC-SD037 |



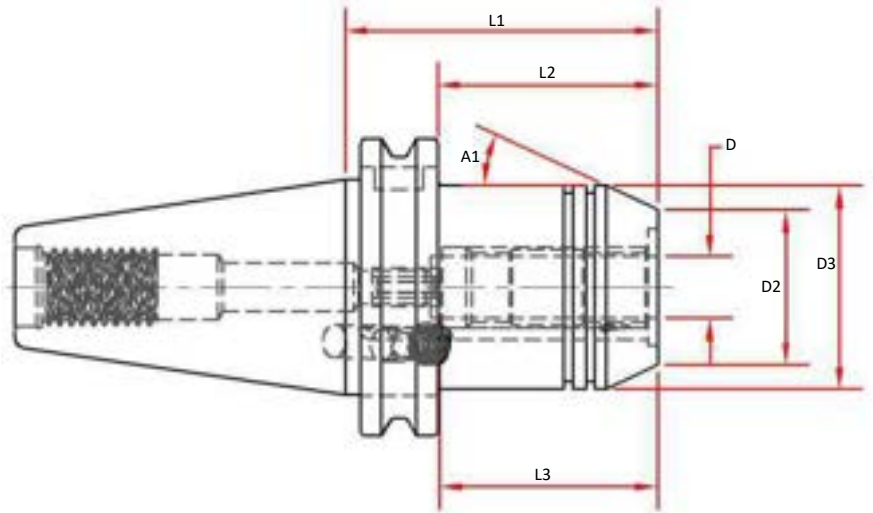
# CAT40 Hydraulic Chucks

## Features

- \* 3  $\mu\text{m}$  - 0.0001" or less run-out providing premium performance in drilling and reaming applications
- Positive Locking System
- Coolant Thru the Center
- Designed for Tool Shanks w/ ISO h6 Class Tolerance
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or < 1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Sealed Collets
- Mill Chuck Collets



| Dual Contact Spindle Part Number | Part Number      | D Bore | D2   | D3   | A1    | L1 Projection | L2   | L3 Max Tool Enters | Wrench |
|----------------------------------|------------------|--------|------|------|-------|---------------|------|--------------------|--------|
|                                  | CAT40-HC037-0250 | 0.3750 | 1.08 | 1.57 |       | 2.50          | 1.75 | 1.69               |        |
|                                  | CAT40-HC050-0254 | 0.5000 | 1.26 | 1.65 | 24.5° | 2.54          | 1.79 | 1.81               | MXW04  |
|                                  | CAT40-HC062-0250 | 0.6250 | 1.38 | 1.75 |       | 2.50          | 1.75 | 2.06               |        |
| CAT40-HC075-0254-B               | CAT40-HC075-0254 | 0.7500 | 1.50 | 1.94 | 25°   | 2.54          | 1.79 | 2.01               | MXW05  |
|                                  | CAT40-HC100-0250 | 1.0000 | 2.09 | 2.25 |       | 2.50          | 1.75 | 2.24               |        |
|                                  | CAT40-HC125-0400 | 1.2500 | 2.28 | 2.44 |       | 4.00          | 2.25 | 2.40               |        |

CAT 40  
CAT50  
BT30  
BT40  
HSK 40E  
HSK 63A  
HSK 100A  
STRAIGHT SHANKS  
COLLETS  
PARTS & ACCESS.  
SHRINK MACHINES  
INDEXERS



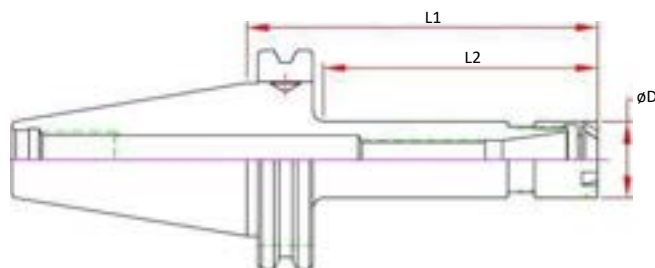
# CAT40 SX Mini Collet Chucks

## Features

- 3 µm - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or < 1gmm
- DIN AD/B Flange Coolant Included  
(remove plugs for thru flange coolant)

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.005mm (0.0002") Standard
  - 0.003mm (0.0001") Ultra Precision
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Dual Contact Spindle Part Number | Flange Coolant | D    | L1 Projection | L2   | Max. Preset | Collet | Nut     | Wrench  |
|----------------------------------|----------------|------|---------------|------|-------------|--------|---------|---------|
| CAT40-SX06M-0250-B-D             | Included       | 0.63 | 2.50          | 1.56 | 2.12        | SX06   | SXN-06M | ERW-11M |
| CAT40-SX06M-0400-B-D             |                |      | 4.00          | 2.42 |             |        |         |         |
| CAT40-SX10M-0250-B-D             | Included       | 0.87 | 2.50          | 1.56 | 2.70        | SX10   | SXN-10M | ERW-16M |
| CAT40-SX10M-0400-B-D             |                |      | 4.00          | 2.42 |             |        |         |         |

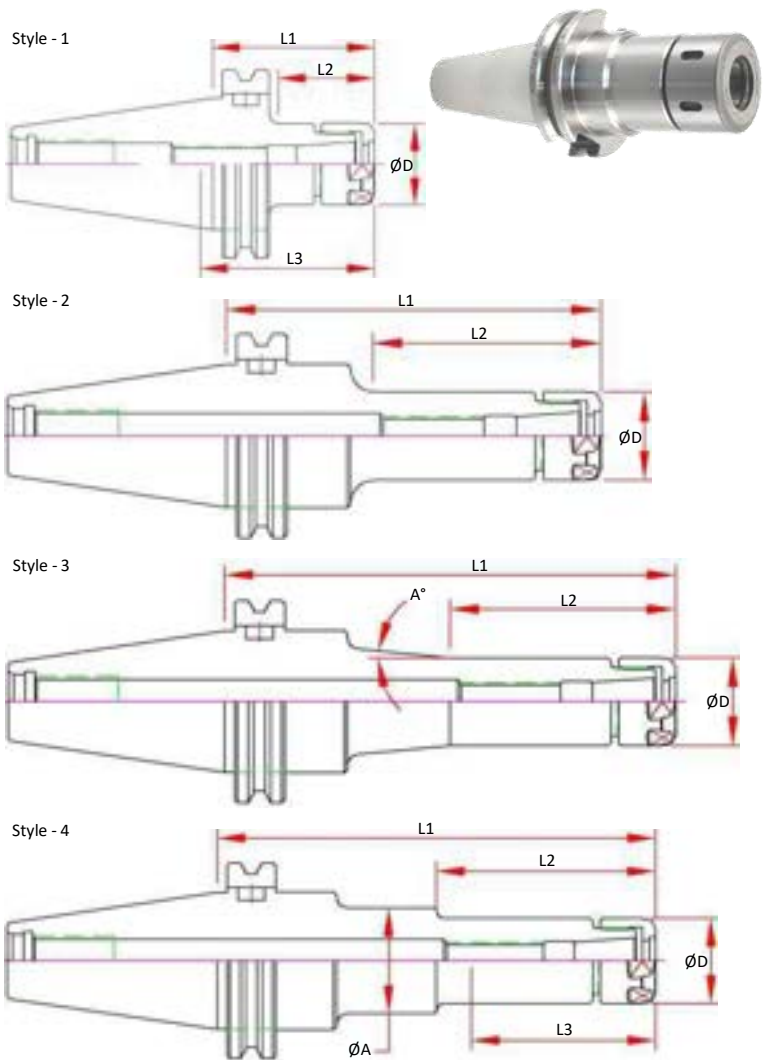
# CAT40 SX Collet Chucks

## Features

- **3 µm - 0.0001" Runout Taper to Taper**
- Coolant Thru Body
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or <1gmm
- DIN AD/B Flange Coolant Included (Select Models, remove plugs for thru flange coolant)

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.005mm (0.0002") Standard
  - 0.003mm (0.0001") Ultra Precision
- DIN-B Coolant (Select models)
- Fine Trim Balance (Sample cutter required for balance compensation)



| Max Capacity | Dual Contact Spindle Part Number | Standard Spindle Part Number | Style | Flange Coolant  | A     | B    | ØD   | L Projection | L2 Max. Preset | Collet | Nut     | Wrench     |
|--------------|----------------------------------|------------------------------|-------|-----------------|-------|------|------|--------------|----------------|--------|---------|------------|
| 0.250        | CAT40-SX06-0250-B-D              | CAT40-SX06-0250              | 1     | Included        | -     | 1.63 |      | 2.50         |                |        |         |            |
|              | CAT40-SX06-0354-B                | CAT40-SX06-0354              | 2     |                 | -     | 1.97 |      | 3.54         |                |        |         |            |
|              | CAT40-SX06-0472-B                | CAT40-SX06-0472              | 4     | Optional Add -D | Ø32   | 2.36 | 0.77 | 4.72         | 2.16           | SX06   | SXN-06  | SXW-06     |
|              | CAT40-SX06-0591-B                | CAT40-SX06-0591              | 4     |                 | Ø32   | 2.36 |      | 5.91         |                |        |         |            |
| 0.394        | CAT40-SX10-0250-B-D              | CAT40-SX10-0250              | 1     | Included        | -     | 1.63 |      | 2.50         |                |        |         |            |
|              | CAT40-SX10-0354-B                | CAT40-SX10-0354              | 2     |                 | -     | 1.97 |      | 3.54         |                |        |         |            |
|              | CAT40-SX10-0472-B                | CAT40-SX10-0472              | 4     | Optional Add -D | Ø32   | 2.76 | 1.08 | 4.72         | 2.81           | SX10   | SXN-10  | SXW-10     |
|              | CAT40-SX10-0591-B                | CAT40-SX10-0591              | 4     |                 | Ø32   | 2.76 |      | 5.91         |                |        |         |            |
|              | CAT40-SX10-0800-B                |                              | 3     |                 | 2.67° | 2.76 |      | 8.00         |                |        |         |            |
| 0.630        | CAT40-SX16-0250-B-D              | CAT40-SX16-0250              | 1     | Included        | -     | 1.63 |      | 2.50         | 3.12           |        |         |            |
|              | CAT40-SX16-0354-B                | CAT40-SX16-0354              | 2     |                 | -     | 2.12 |      | 3.54         | 3.03           |        |         |            |
|              | CAT40-SX16-0472-B                | CAT40-SX16-0472              | 2     | Optional Add -D | -     | 3.30 | 1.58 | 4.72         | 2.95           | SX16   | SXN-16  | SXW-16     |
|              | CAT40-SX16-0591-B                | CAT40-SX16-0591              | 2     |                 | -     | 4.48 |      | 5.91         | 2.95           |        |         |            |
|              | CAT40-SX16-0800-B                |                              | 2     |                 | -     | 5.66 |      | 8.00         | 2.63           |        |         |            |
| 1.000        | CAT40-SX25M-0175-B-D**           | CAT40-SX25M-0175-D**         | 1     | Included        | -     | 1.00 |      | 1.75         | 3.25           |        |         |            |
|              | CAT40-SX25M-0250-B-D             | CAT40-SX25-0250              | 1     |                 | -     | 1.75 |      | 2.50         | 2.62           |        |         |            |
|              | CAT40-SX25M-0354-B               | CAT40-SX25M-0354             | 2     |                 | -     | 2.79 |      | 3.54         | 3.20           |        |         |            |
|              | CAT40-SX25M-0472-B               | CAT40-SX25M-0472             | 2     | Optional Add -D | -     | 3.97 | 1.97 | 4.72         | 3.68           | SX25   | SXN-25M | 50-55 HOOK |
|              | CAT40-SX25M-0591-B               | CAT40-SX25M-0591             | 2     |                 | -     | 5.15 |      | 5.91         | 3.68           |        |         |            |
|              | CAT40-SX25M-0800-B               |                              | 2     |                 | -     | 7.25 |      | 8.00         | 3.68           |        |         |            |

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



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# CAT40 MX - Mini Chuck

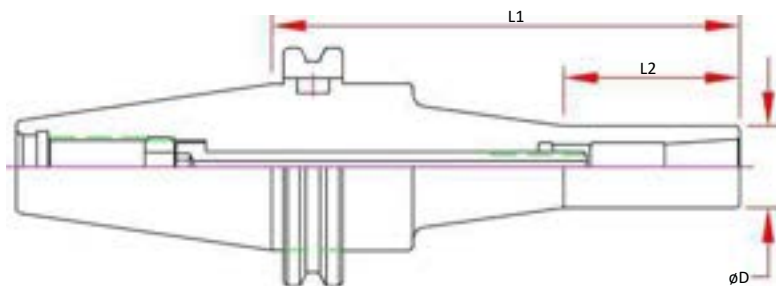


## Features

- 3 μm - 0.0001" Runout @ 4X Diameter
- Rear Draw Bolt Locking System
- Coolant Thru
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or < 1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets, STD and Jet-Blast
- DIN-B Flange Coolant
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Dual Contact Spindle Part Number | Standard Spindle Part Number | Collet Range  | D     | L1 Projection | L2   | Collet | Wrench | Locking Torque Max. |
|----------------------------------|------------------------------|---------------|-------|---------------|------|--------|--------|---------------------|
| CAT40-MX06-085-B                 | CAT40-MX06-085               | 0.079 - 0.250 | 0.50  | 3.35          | 1.42 | MX06   |        |                     |
| CAT40-MX06-150-B                 | CAT40-MX06-150               |               |       | 5.91          |      |        |        |                     |
| CAT40-MX08-085-B                 | CAT40-MX08-085               | 0.125 - 0.394 | 0.787 | 3.35          | 1.42 | MX08   | MXW05  | 20 ft/lbs           |
| CAT40-MX08-120-B                 | CAT40-MX08-120               |               |       | 4.72          |      |        |        |                     |
| CAT40-MX08-150-B                 | CAT40-MX08-150               |               |       | 5.91          |      |        |        |                     |
| CAT40-MX12-090-B                 | CAT40-MX12-090               | 0.157 - 0.500 | 1.00  | 3.54          | 1.38 | MX12   |        |                     |
| CAT40-MX12-120-B                 | CAT40-MX12-120               |               |       | 4.72          |      |        |        |                     |

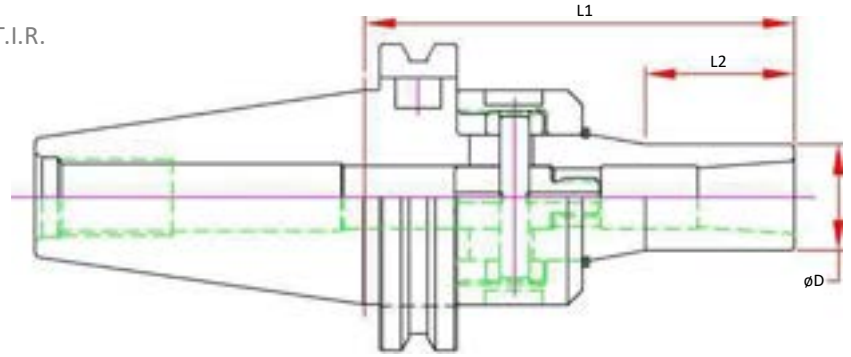
# CAT40 VX - Mini Chuck

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout @ 4X Diameter
- Front Locking System
- Coolant Thru
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or < 1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets, STD and Jet-Blast
- DIN-B Flange Coolant
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Dual Contact Spindle Part Number | Standard Spindle Part Number | Collet Range  | D     | L1 Projection | L2   | Collet | Wrench    | Locking Torque Max. |
|----------------------------------|------------------------------|---------------|-------|---------------|------|--------|-----------|---------------------|
| CAT40-VX06-0394-B                | CAT40-VX06-0394              | 0.079 - 0.250 | 0.50  | 3.94          | 1.48 | MX06   | 45-48 PIN | 30 ft/lbs           |
| CAT40-VX06-0591-B                | CAT40-VX06-0591              |               |       | 5.91          |      |        |           |                     |
| CAT40-VX08-0350-B                | CAT40-VX08-0350              | 0.125 - 0.394 | 0.787 | 3.50          | 1.21 | MX08   |           |                     |
| CAT40-VX08-0591-B                | CAT40-VX08-0591              |               |       | 5.91          |      |        |           |                     |
| CAT40-VX12-0394-B                | CAT40-VX12-0394              | 0.157 - 0.500 | 1.00  | 3.94          | 2.03 | MX12   |           |                     |
| CAT40-VX12-0591-B                | CAT40-VX12-0591              |               |       | 5.91          |      |        |           |                     |

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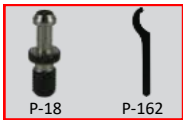
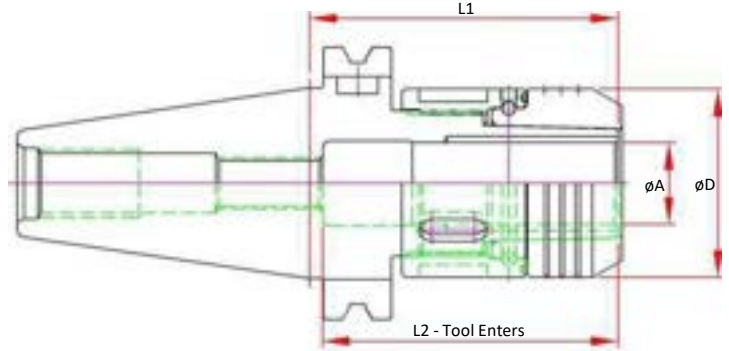
# CAT40 Bearing-less Mill Chucks

## Features

- 5 µm - 0.0002" Runout @ 2 x Cutter Shank Dia.
- Works in both Standard and Dual Contact Spindles
- Designed for Tool Shanks w/ ISO h6 Class Tolerance
- Tapers are ground better than AT3 for optimal T.I.R.
- Sealed by Design for High Pressure Coolant
- Balanced for use @ 20,000 RPM

## Optional (Order Separately):

- Torque Wrench
- Nylon Screw Seal for short tool shanks
- DIN-B Flange Coolant
- Jet-Blast Coolant Ports (for Solid Tooling)
- Fine Trim Balance  
(Sample cutter required for balance compensation)
- For Non-Pull Out add -NP to the part number



**Note:** BC Holders do "work in". Meaning the first couple of uses will require additional tightening torque.

| Dual Contact Spindle Part Number | Standard Spindle Part Number | A Bore | D    | L1 Projection | L2 Tool Enters | Coolant Seal Depth (Min. Shank Length) | Optional Preset Screw | Optional Torque Wrench Head | Grease & Torque |
|----------------------------------|------------------------------|--------|------|---------------|----------------|--|-----------------------|-----------------------------|-----------------|
| CAT40-BC037-0256-B               |                              | 0.3750 | 1.38 | 2.56          | 2.36           | 1.38                                   | ASC-12-30             | TWSQ050-S38                 | 100 ft/lbs      |
| CAT40-BC050-0256-B               | CAT40-BC050-0256             | 0.5000 | 1.38 | 2.56          | 2.36           | 1.38                                   | ASC-12-30             | TWSQ050-S38                 | 100 ft/lbs      |
|                                  | CAT40-BC050-0400             | 0.5000 | 1.38 | 4.00          | 2.36           | 1.38                                   | ASC-12-30             | TWSQ050-S38                 | 100 ft/lbs      |
| CAT40-BC062-0256-B               | CAT40-BC062-0256             | 0.6250 | 1.50 | 2.56          | 2.36           | 1.38                                   | ASC-12-30             | TWSQ050-S38                 | 120 ft/lbs      |
| CAT40-BC075-0283-B               | CAT40-BC075-0283             | 0.7500 | 1.73 | 2.83          | 2.72           | 1.62                                   | ASC-12-30             | TWSQ050-S45                 | 120 ft/lbs      |
| CAT40-BC100-0300-B               | CAT40-BC100-0300             | 1.0000 | 2.12 | 3.00          | 3.00           | 1.65                                   | ASC-12-30             | TWSQ050-S55                 | 140 ft/lbs      |
| CAT40-BC125-0350-B*              | CAT40-BC125-0350*            | 1.2500 | 2.56 | 3.50          | 3.00           | 2.05                                   | ASC-12-30             | TWSQ050-S65                 | 140 ft/lbs      |
| CAT40-BCM12-0256-B               |                              | 12mm   | 1.38 | 2.56          | 2.36           | 1.38                                   | ASC-12-30             | TWSQ050-S38                 | 100 ft/lbs      |
| CAT40-BCM16-0256-B               |                              | 16mm   | 1.50 | 2.56          | 2.36           | 1.38                                   | ASC-12-30             | TWSQ050-S38                 | 120 ft/lbs      |
| CAT40-BCM20-0283-B               |                              | 20mm   | 1.73 | 2.83          | 2.72           | 1.62                                   | ASC-12-30             | TWSQ050-S45                 | 120 ft/lbs      |

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

# CAT40 Mill Chucks

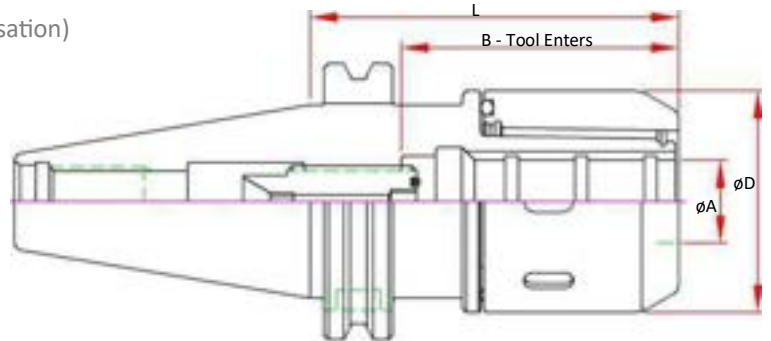


## Features

- 5  $\mu\text{m}$  - 0.0002" Runout @ 4 x Cutter Shank Dia.
- Designed for Tool Shanks w/ ISO h6 Class Tolerance
- Pre-Balanced for use @ 20,000 RPM
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Nylon Screw Seal for short tool shanks
- DIN-B Flange Coolant
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Part Number        | A Bore | B Max. Tool Enters | D    | L Projection | Preset Screw | Collet | Wrench     |
|--------------------|--------|--------------------|------|--------------|--------------|--------|------------|
| CAT40-MC075-0276   |        |                    |      | 2.76         |              |        |            |
| CAT40-MC075-0335   |        |                    |      | 3.35         |              |        |            |
| CAT40-MC075-0472   | 0.7500 | 2.76               | 2.09 | 4.72         | ASC-16-40    | MC075  | 50-55 HOOK |
| CAT40-MC075-0591   |        |                    |      | 5.91         |              |        |            |
| CAT40-MC100-0335   |        |                    |      | 3.35         |              |        |            |
| CAT40-MC100-0374   | 1.0000 | 2.91               | 2.44 | 3.74         | ASC-16-40    | MC100  | 58-65 HOOK |
| CAT40-MC100-0413   |        |                    |      | 4.13         |              |        |            |
| CAT40-MC100-0591   |        |                    |      | 5.91         |              |        |            |
| CAT40-MC125-0354 * |        |                    |      | 3.54         |              |        |            |
| CAT40-MC125-0413   | 1.2500 | 3.07               | 2.76 | 4.13         | ASC-16-40    | MC125  | 65-70 HOOK |
| CAT40-MC125-0472   |        |                    |      | 4.72         |              |        |            |
| CAT40-MC125-0591   |        |                    |      | 5.91         |              |        |            |

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

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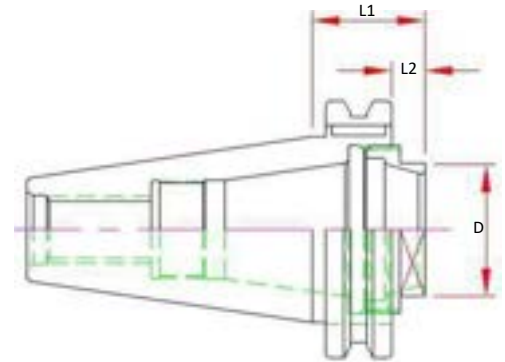
# CAT40 ER32 Stub Collet Chucks

## Features

- 3 μm - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced G6.3 @ 20,000 RPM or <1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.010mm (0.0004") Standard
  - 0.005mm (0.0002") Ultra Precision
  - Sealed
  - Jet-Blast
- Fine Trim Balance (Sample cutter required for balance compensation)



| Part Number     | Range     | D        | L1 Projection | L2   | Nut         | Wrench  |
|-----------------|-----------|----------|---------------|------|-------------|---------|
| CAT40-ER32-0106 | .039-.787 | 32mm Hex | 1.06          | 0.31 | ERN-32H-EXT | DAW-180 |



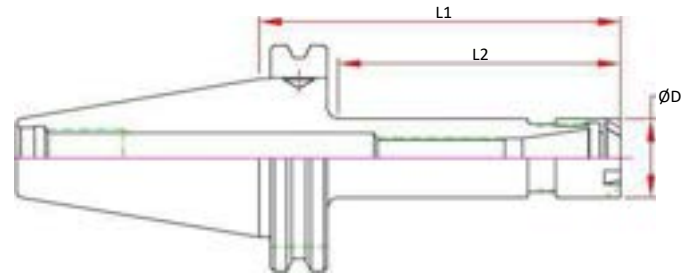
# CAT40 ER Mini Collet Chucks

## Features

- 3 μm - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced G6.3 @ 20,000 RPM or <1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.010mm (0.0004") Standard
  - 0.005mm (0.0002") Ultra Precision
  - Sealed
  - Jet-Blast
- Fine Trim Balance (Sample cutter required for balance compensation)



| Part Number      | Range     | D    | L1 Projection | L2   | Screw    | Nut     | Wrench  |
|------------------|-----------|------|---------------|------|----------|---------|---------|
| CAT40-ER11M-0250 |           |      | 2.50          | 1.56 |          |         |         |
| CAT40-ER11M-0400 | .019-.276 | 0.63 | 4.00          | 2.42 | ASC-ER11 | ERN-11M | ERW-11M |
| CAT40-ER11M-0600 |           |      | 6.00          | 4.42 |          |         |         |
| CAT40-ER16M-0250 |           |      | 2.50          | 1.56 |          |         |         |
| CAT40-ER16M-0400 | .019-.394 | 0.87 | 4.00          | 2.42 | ASC-ER16 | ERN-16M | ERW-16M |
| CAT40-ER16M-0600 |           |      | 6.00          | 4.42 |          |         |         |
| CAT40-ER16M-0800 |           |      | 8.00          | 6.42 |          |         |         |





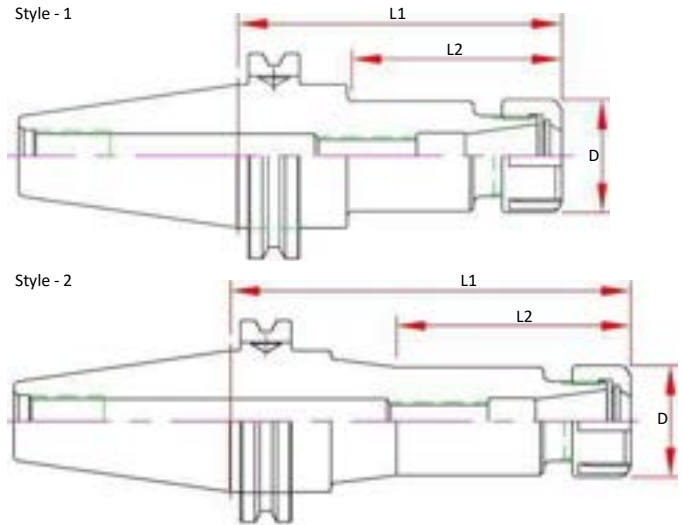
# CAT40 ER Collet Chucks

## Features

- 3 μm - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced G6.3 @ 20,000 RPM or <1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.010mm (0.0004") Standard
  - 0.005mm (0.0002") Ultra Precision
  - Sealed (Select Sizes)
  - Jet-Blast (Select Sizes)
- DIN-B Coolant (Select models)



| Dual Contact Spindle Part Number | Standard Spindle Part Number | Range      | D    | L1 Projection | L2   | Screw    | Nut     | Wrench  | Style |
|----------------------------------|------------------------------|------------|------|---------------|------|----------|---------|---------|-------|
|                                  | CAT40-ER11H-0250             |            |      | 2.50          | 1.75 |          |         |         | 1     |
|                                  | CAT40-ER11H-0400             | .019-.276  | 0.79 | 4.00          | 2.50 | ASC-ER11 | ERN-11H | ERW-11H | 1     |
|                                  | CAT40-ER11H-0600             |            |      | 6.00          | 1.83 |          |         |         | 2     |
| CAT40-ER16H-0250-B               | CAT40-ER16H-0250             |            |      | 2.50          | 1.55 |          |         |         | 1     |
| CAT40-ER16H-0400-B               | CAT40-ER16H-0400             | .019-.394  | 1.10 | 4.00          | 2.42 | ASC-ER16 | ERN-16H | ERW-16H | 1     |
| CAT40-ER16H-0600-B               | CAT40-ER16H-0600             |            |      | 6.00          | 4.42 |          |         |         | 1     |
|                                  | CAT40-ER16H-0800             |            |      | 8.00          | 6.42 |          |         |         | 1     |
| CAT40-ER20H-0250-B               | CAT40-ER20H-0250             |            |      | 2.50          | 1.63 |          |         |         | 1     |
| CAT40-ER20H-0400-B               | CAT40-ER20H-0400             | .019-.512  | 1.33 | 4.00          | 2.50 | ASC-ER20 | ERN-20H | ERW-20H | 1     |
| CAT40-ER20H-0600-B               | CAT40-ER20H-0600             |            |      | 6.00          | 4.60 |          |         |         | 1     |
| CAT40-ER20H-0800-B               | CAT40-ER20H-0800             |            |      | 8.00          | 6.60 |          |         |         | 1     |
| CAT40-ER25-0250-B                | CAT40-ER25-0250              |            |      | 2.50          | 1.73 |          |         |         | 1     |
| CAT40-ER25-0400-B                | CAT40-ER25-0400              | .019-.630  | 1.65 | 4.00          | 2.58 | ASC-ER25 | ERN-25  | ERW-25E | 1     |
| CAT40-ER25-0600-B                | CAT40-ER25-0600              |            |      | 6.00          | 4.60 |          |         |         | 1     |
|                                  | CAT40-ER25-0800              |            |      | 8.00          | 6.60 |          |         |         | 1     |
| CAT40-ER32-0250-B                | CAT40-ER32-0250              |            |      | 2.50          | 1.73 |          |         |         | 1     |
| CAT40-ER32-0400-B                | CAT40-ER32-0400              | .039-.787  | 1.96 | 4.00          | 3.23 | ASC-ER32 | ERN-32  | ERW-32E | 1     |
| CAT40-ER32-0600-B                | CAT40-ER32-0600              |            |      | 6.00          | 5.23 |          |         |         | 1     |
|                                  | CAT40-ER32-0800              |            |      | 8.00          | 7.25 |          |         |         | 1     |
| CAT40-ER40-0250-B                | CAT40-ER40-0250              |            |      | 2.50          | 1.75 |          |         |         | 1     |
| CAT40-ER40-0400-B                | CAT40-ER40-0400              | .079-1.024 | 2.48 | 4.00          | 3.25 | ASC-ER40 | ERN-40  | ERW-40E | 1     |
|                                  | CAT40-ER40-0600              |            |      | 6.00          | 5.25 |          |         |         | 1     |

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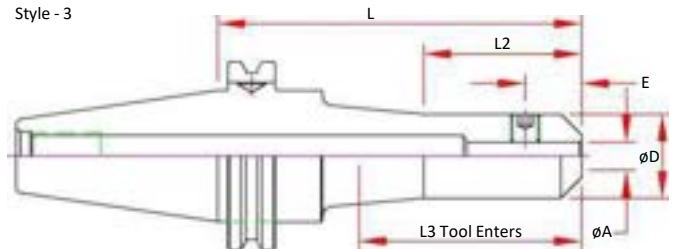
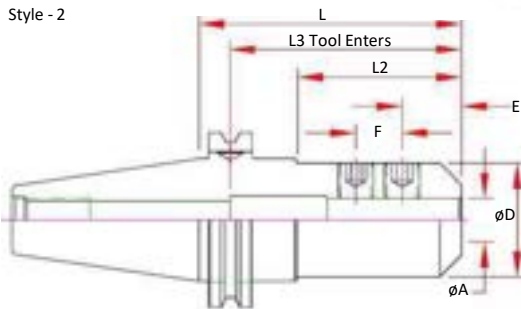
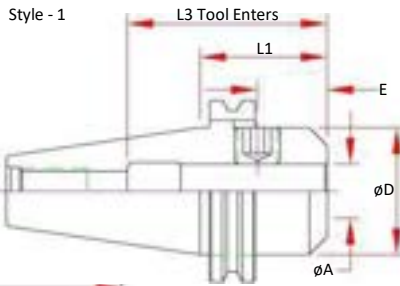
# CAT40 End Mill Adapters

## Features

- 3 µm - 0.0001" Bore Runout
- H5 Bore Tolerance or better
- Tapers are ground better than AT3 for optimal T.I.R.
- Coolant Thru
- Pre-Balanced for use @ 20,000 RPM

## Optional (Order Separately):

- Jet-Blast (add "J" to the part number)
- DIN-B Coolant (Select models)



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|      | Dual Contact Spindle Part Number | Standard Spindle Part Number | A Bore | D    | E    | L Projection     | L2   | L3 Max. Tool Enters | Screw Number | Style |   |
|------|----------------------------------|------------------------------|--------|------|------|------------------|------|---------------------|--------------|-------|---|
| 1/8  |                                  | CAT40-EM012-0175             | 0.1250 | 0.69 | 0.19 | 1.75             | 0.80 | 3.32                | 3            | 1     |   |
|      |                                  | CAT40-EM012-0250             |        |      |      | 2.50             | 0.92 | 4.07                |              | 2     |   |
|      |                                  | CAT40-EM012-0400             |        |      |      | 4.00             | 2.42 | 5.57                |              | 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             | 0.1875 | 0.69 | 0.44 | 1.75             | 0.88 | 3.32                | 3            | 1     |   |
|      |                                  | CAT40-EM018-0250             |        |      |      | 2.50             | 0.92 | 4.07                |              | 2     |   |
|      |                                  | CAT40-EM018-0400             |        |      |      | 4.00             | 2.42 | 5.57                |              | 2     |   |
| 1/4  |                                  | CAT40-EM025-0175             | 0.2500 | 0.78 | 0.44 | 1.75             | 0.80 | 3.32                | 4            | 1     |   |
|      |                                  | CAT40-EM025-0250             |        |      |      | 2.50             | 0.92 | 4.07                |              | 2     |   |
|      |                                  | CAT40-EM025-0400             |        |      |      | 4.00             | 2.42 | 5.57                |              | 2     |   |
|      |                                  | CAT40-EM025-0500             |        |      |      | 5.00             | 2.50 | 6.57                |              | 3     |   |
|      |                                  | CAT40-EM025-0600             |        |      |      | 6.00             | 2.50 | 7.57                |              | 3     |   |
|      |                                  | CAT40-EM025-0900             |        |      |      | 9.00             | 2.50 | 10.57               |              | 3     |   |
| 5/16 |                                  | CAT40-EM031-0175             | 0.3125 | 0.88 | 0.44 | 1.75             | 0.88 | 3.32                | 4            | 1     |   |
|      |                                  | CAT40-EM031-0250             |        |      |      | 2.50             | 0.92 | 4.07                |              | 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             | 0.3750 | 1.00 | 0.75 | 1.75             | 0.88 | 4.07                | 5            | 1     |   |
|      |                                  | CAT40-EM037-0250-B           |        |      |      | CAT40-EM037-0250 | 2.50 | 1.00                |              | 4.07  | 2 |
|      |                                  | CAT40-EM037-0400-B           |        |      |      | CAT40-EM037-0400 | 4.00 | 2.50                |              | 5.57  | 2 |
|      |                                  | CAT40-EM037-0450             |        |      |      | 4.50             | 1.00 | 6.07                |              | 3     |   |
|      |                                  | CAT40-EM037-0500             |        |      |      | 5.00             | 1.00 | 6.57                |              | 3     |   |
|      |                                  | CAT40-EM037-0600-B           |        |      |      | CAT40-EM037-0600 | 6.00 | 2.50                |              | 7.57  | 3 |
|      |                                  | CAT40-EM037-0900             |        |      |      | 9.00             | 2.50 | 10.57               |              | 3     |   |
| 7/16 |                                  | CAT40-EM043-0250             | 0.4375 | 1.25 | 0.75 | 2.50             | 1.00 | 4.07                | 5            | 2     |   |
|      |                                  | CAT40-EM050-0175-B           |        |      |      | CAT40-EM050-0175 | 1.75 | 0.96                |              | 3.07  | 1 |
| 1/2  |                                  | CAT40-EM050-0250-B           | 0.5000 | 1.25 | 0.88 | 2.50             | 1.00 | 3.07                | 6            | 2     |   |
|      |                                  | CAT40-EM050-0262             |        |      |      | 2.62             | 1.12 | 3.07                |              | 2     |   |
|      |                                  | CAT40-EM050-0400-B           |        |      |      | CAT40-EM050-0400 | 4.00 | 2.58                |              | 3.07  | 2 |
|      |                                  | CAT40-EM050-0462             |        |      |      | 4.62             | 3.20 | 3.07                |              | 2     |   |
|      |                                  | CAT40-EM050-0500             |        |      |      | 5.00             | 3.50 | 3.07                |              | 2     |   |
|      |                                  | CAT40-EM050-0600-B           |        |      |      | CAT40-EM050-0600 | 6.00 | 3.00                |              | 3.07  | 3 |

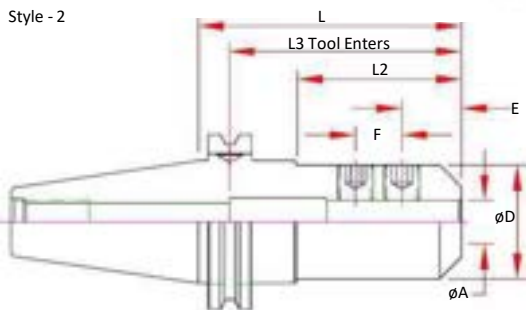
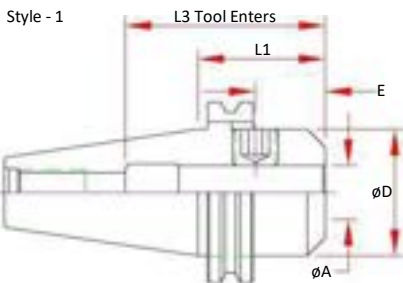
# CAT40 End Mill Adapters

## Features

- 3 µm - 0.0001" Bore Runout
- H5 Bore Tolerance or better
- Tapers are ground better than AT3 for optimal T.I.R.
- Coolant Thru
- Pre-Balanced for use @ 20,000 RPM

## Optional (Order Separately):

- Jet-Blast (add "J" to the part number)
- DIN-B Coolant (Select models)



|       | Dual Contact Spindle Part Number | Standard Spindle Part Number | A Bore | D      | E    | F    | L Projection | L2   | L3 Max. Tool Enters | Screw Number | Style |        |   |
|-------|----------------------------------|------------------------------|--------|--------|------|------|--------------|------|---------------------|--------------|-------|--------|---|
| 5/8   | CAT40-EM062-0175-B               | CAT40-EM062-0175             | 0.6250 | 1.75   | 0.94 | -    | 1.75         | 0.95 | 3.25                | 7            | 1     |        |   |
|       | CAT40-EM062-0250-B               | CAT40-EM062-0250             |        | 1.50   |      |      | 2.50         | 1.70 | 3.62                |              | 2     |        |   |
|       | CAT40-EM062-0300-B               | CAT40-EM062-0300             |        | 1.50   |      |      | 3.00         | 1.50 | 3.50                |              | 2     |        |   |
|       | CAT40-EM062-0400-B               | CAT40-EM062-0400             |        | 1.50   |      |      | 4.00         | 2.50 | 3.50                |              | 2     |        |   |
|       | CAT40-EM062-0500-B               | CAT40-EM062-0500             |        | 1.50   |      |      | 5.00         | 3.50 | 3.50                |              | 2     |        |   |
|       | CAT40-EM062-0600-B               | CAT40-EM062-0600             |        | 1.50   |      |      | 6.00         | 4.50 | 3.50                |              | 2     |        |   |
| 3/4   | CAT40-EM075-0175-B               | CAT40-EM075-0175             | 0.7500 | 1.75   | 1.00 | -    | 1.75         | 0.95 | 3.23                | 8            | 1     |        |   |
|       | CAT40-EM075-0250-B               | CAT40-EM075-0250             |        | 2.50   |      |      | 1.70         | 3.94 | 2                   |              |       |        |   |
|       | CAT40-EM075-0300-B               | CAT40-EM075-0300             |        | 3.00   |      |      | 2.20         | 3.94 | 2                   |              |       |        |   |
|       | CAT40-EM075-0350-B               | CAT40-EM075-0350             |        | 3.50   |      |      | 2.70         | 3.94 | 2                   |              |       |        |   |
|       | CAT40-EM075-0400-B               | CAT40-EM075-0400             |        | 4.00   |      |      | 3.20         | 3.94 | 2                   |              |       |        |   |
|       | CAT40-EM075-0500-B               | CAT40-EM075-0500             |        | 5.00   |      |      | 4.20         | 3.94 | 2                   |              |       |        |   |
| 7/8   | CAT40-EM075-0600-B               | CAT40-EM075-0600             | 0.8750 | 6.00   | 1.00 | -    | 5.20         | 3.94 | 8                   | 2            |       |        |   |
|       | CAT40-EM075-0900-B               | CAT40-EM075-0900             |        | 9.00   |      |      | 8.20         | 3.94 |                     | 2            |       |        |   |
| 1     | CAT40-EM087-0175-B               | CAT40-EM087-0175             | 1.0000 | 1.75   | 1.12 | -    | 1.75         | 0.95 | 2.38                | 9 & 10       | 1     |        |   |
|       | CAT40-EM087-0350-B               | CAT40-EM087-0350             |        | 1.75   |      |      | 0.81         | 3.50 | 2.70                |              | 4.25  | 8      | 2 |
|       | CAT40-EM100-0175-B               | CAT40-EM100-0175             |        | 1.75   |      |      | -            | 1.75 | 0.95                |              | 2.38  | 9      | 1 |
|       | CAT40-EM100-0300-B               | CAT40-EM100-0300             |        | 2.00   |      |      | 1.00         | 3.00 | 2.24                |              | 3.15  | (2) 10 | 2 |
| 1 1/4 | CAT40-EM100-0400-B               | CAT40-EM100-0400             | 1.2500 | 2.00   | 1.12 | -    | 1.00         | 4.00 | 3.24                | (2) 11       | 2     |        |   |
|       | CAT40-EM100-0600-B               | CAT40-EM100-0600             |        | 2.00   |      |      | 1.00         | 6.00 | 5.24                |              | 4.50  | (2) 10 | 2 |
|       | CAT40-EM125-0200-B**             | CAT40-EM125-0200**           |        | 2.25** |      |      | -            | 2.00 | 1.20                |              | 2.38  | 9      | 1 |
|       | CAT40-EM125-0400-B               | CAT40-EM125-0400             |        | 2.50   |      |      | 1.00         | 4.00 | 3.24                |              | 3.54  | (2) 11 | 2 |
| 1 1/2 | CAT40-EM125-0425-B               | CAT40-EM125-0425             | 1.5000 | 2.50   | 1.12 | -    | 1.00         | 4.25 | 3.49                | (2) 11       | 2     |        |   |
|       | CAT40-EM125-0600-B               | CAT40-EM125-0600             |        | 2.50   |      |      | 1.00         | 6.00 | 5.24                |              | 3.54  | (2) 11 | 2 |
| 1 1/2 | CAT40-EM150-0400-B               | CAT40-EM150-0400             | 1.5000 | 2.62   | 1.12 | 1.00 | 4.00         | 3.24 | 2.52                | (2) 11       | 2     |        |   |

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

CAT 40

CAT50

BT30

BT40

HSK 40E

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STRAIGHT SHANKS

COLLETS

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# CAT40 End Mill Adapters—Metric

## Features

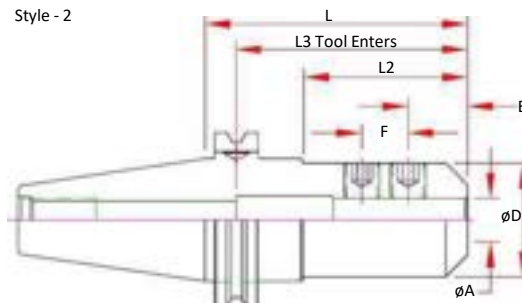
- 3  $\mu\text{m}$  - 0.0001" Bore Runout
- H5 Bore Tolerance or better
- Tapers are ground better than AT3 for optimal T.I.R.
- Coolant Thru
- Pre-Balanced for use @ 20,000 RPM (CAT50 @ 15,000 RPM)

## Optional (Order Separately):

- Jet-Blast (add "J" to the part number)
- DIN-B Coolant (Select models)



Style - 2



| 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-EMM16-0250 | 16mm   | 1.50 | 0.94 | -    | 2.50         | 1.73 | 3.94                | 7       | 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     |



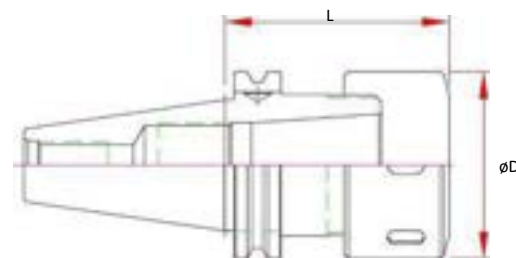
# TG - Collet Chuck

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced @ 20,000 RPM (CAT50 @ 15,000 RPM)
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
- DIN-B Coolant (Select models)



| Part Number      | Range       | D    | L Projection | Collet | Screw    | Nut    | Wrench     |
|------------------|-------------|------|--------------|--------|----------|--------|------------|
| CAT40-TG100-0300 | .094 - 1.00 | 2.48 | 3.00         | TG100  | ASC-ER40 | TGN100 | 58-65 HOOK |

# CAT40 Shell Mill Adapters

## Features

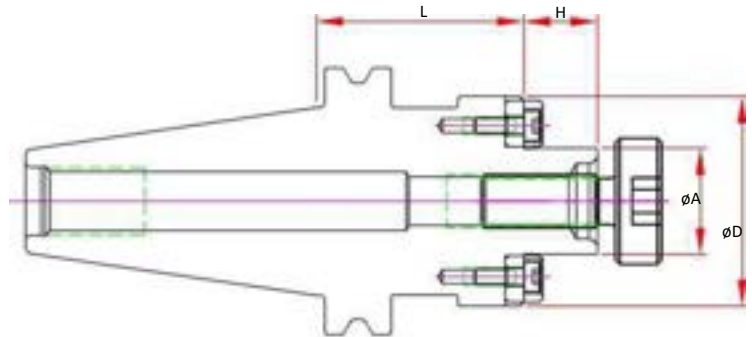
- 3  $\mu\text{m}$  - 0.0001" Bore Runout
- H5 Bore Tolerance or better
- Tapers are ground better than AT3 for optimal T.I.R.
- Coolant Thru Body
- Pre-Balanced for use @ 20,000 RPM

## Optional (Order Separately):

- FX Coolant (add "F" to the part number)
- DIN-B Coolant (Select models)



P-18



| Dual Contact Spindle Part Number | Standard Spindle Part Number | A Pilot | D    | H    | L Projection | Drive Key Size | Drive Key Number | Mounting Screw Thread | Mounting Screw# |
|----------------------------------|------------------------------|---------|------|------|--------------|----------------|------------------|-----------------------|-----------------|
| CAT40-SM050-0175-B               | CAT40-SM050-0175             |         |      |      | 1.75         |                |                  |                       |                 |
| CAT40-SM050-0400-B               | CAT40-SM050-0400             | 0.500   | 1.38 | 0.57 | 4.00         | 0.250          | DK-SM050         | 1/4-28                | SCW-SM050       |
| CAT40-SM050-0600-B               | CAT40-SM050-0600             |         |      |      | 6.00         |                |                  |                       |                 |
|                                  | CAT40-SM050-0900             |         |      |      | 9.00         |                |                  |                       |                 |
| CAT40-SM075-0175-B               | CAT40-SM075-0175             |         |      |      | 1.75         |                |                  |                       |                 |
| CAT40-SM075-0400-B               | CAT40-SM075-0400             |         |      |      | 4.00         |                |                  |                       |                 |
| CAT40-SM075-0600-B               | CAT40-SM075-0600             | 0.750   | 1.75 | 0.69 | 6.00         | 0.312          | DK-SM075         | 3/8-24                | SCW-SM075       |
| CAT40-SM075-0800-B               | CAT40-SM075-0800             |         |      |      | 8.00         |                |                  |                       |                 |
|                                  | CAT40-SM075-0900             |         |      |      | 9.00         |                |                  |                       |                 |
| CAT40-SM100-0200-B               | CAT40-SM100-0200             |         |      |      | 2.00         |                |                  |                       |                 |
| CAT40-SM100-0400-B               | CAT40-SM100-0400             |         |      |      | 4.00         |                |                  |                       |                 |
| CAT40-SM100-0600-B               | CAT40-SM100-0600             | 1.000   | 1.97 | 0.69 | 6.00         | 0.375          | DK-SM100         | 1/2-20                | SCW-SM100       |
|                                  | CAT40-SM100-0800             |         |      |      | 8.00         |                |                  |                       |                 |
| CAT40-SM125-0225-B               | CAT40-SM125-0225             | 1.250   | 2.87 | 0.69 | 2.25         | 0.500          | DK-SM125         | 5/8-18                | SCW-SM125       |
| CAT40-SM150-0240-B               | 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       |

CAT 40

CAT50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT SHANKS

COLLETS

PARTS & ACCESS.

SHRINK MACHINES

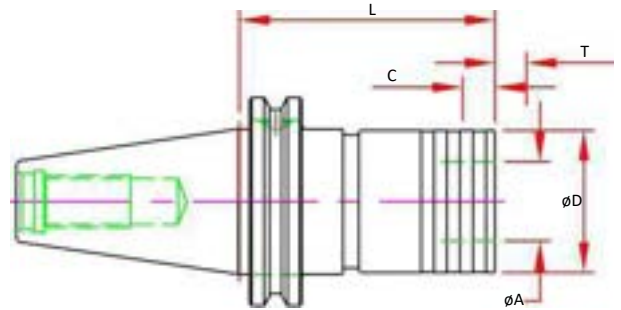
INDEXERS



# 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
- Size 3 includes pull to release system to prevent damage from over stroke
- TC Holders are not designed for Coolant Thru
- For use with both RA and TC adapters
  - TC for machines with limited "Z" control
- 2 Piece Design is assembled Straight Shank Tap Holder with End Mill Adapter
  - Tapers are ground better than AT3 for optimal T.I.R.

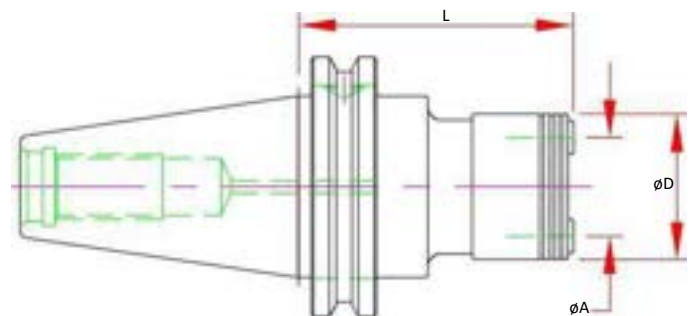


| Size | Dual Contact Spindle Part Number | Standard Spindle Part Number | 2 Piece Design | Capacity   | A    | D    | L    | T Tension | C Comp. |
|------|----------------------------------|------------------------------|----------------|------------|------|------|------|-----------|---------|
| 1    |                                  | CAT40-TC1-59                 |                | #6-9/16    | 0.75 | 1.42 | 2.32 | 0.30      | 0.30    |
| 1    | CAT40-TC1-0333-B                 | CAT40-TC1-0333               | Y              | #6-9/16    | 0.75 | 1.42 | 3.33 | 0.30      | 0.30    |
| 2    |                                  | CAT40-TC2-97                 |                | 5/16-7/8   | 1.22 | 2.09 | 3.82 | 0.49      | 0.49    |
| 2    | CAT40-TC2-0411-B                 | CAT40-TC2-0411               | Y              | 5/16-7/8   | 1.22 | 2.09 | 4.11 | 0.49      | 0.49    |
| 3    |                                  | CAT40-TC3-149                |                | 9/16-1-3/8 | 1.89 | 3.07 | 5.87 | 0.79      | 0.79    |
| 3    | CAT40-TC3-0594-B                 | CAT40-TC3-0594               | Y              | 9/16-1-3/8 | 1.89 | 3.07 | 5.94 | 0.79      | 0.79    |

# RT - Rigid QC Tap Holders

## Features

- Body - Coolant Thru Center
- Tapers are ground better than AT3 for optimal T.I.R.
- **For use with RA Adapters Only!**

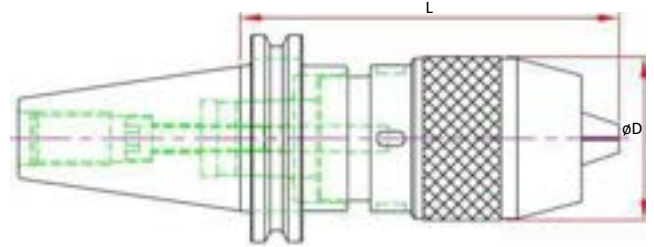


| Size | Dual Contact Spindle Part Number | Standard Spindle Part Number | 2 Piece Design | Capacity   | A    | D    | L Projection |
|------|----------------------------------|------------------------------|----------------|------------|------|------|--------------|
| 1    |                                  | CAT40-RT1-72                 |                | #6-9/16    | 0.75 | 1.34 | 2.83         |
| 1    | CAT40-RT1-0332-B                 | CAT40-RT1-0332               | Y              | #6-9/16    | 0.75 | 1.34 | 3.32         |
| 2    |                                  | CAT40-RT2-91                 |                | 5/16-7/8   | 1.22 | 1.93 | 3.58         |
| 2    | CAT40-RT2-0411-B                 | CAT40-RT2-0411               | Y              | 5/16-7/8   | 1.22 | 1.93 | 4.11         |
| 3    |                                  | CAT40-RT3-130                |                | 9/16-1-3/8 | 1.89 | 2.89 | 5.12         |
| 3    | CAT40-RT3-0574-B                 | CAT40-RT3-0574               | Y              | 9/16-1-3/8 | 1.89 | 2.89 | 5.74         |

# DC - Drill Chuck

## Features:

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

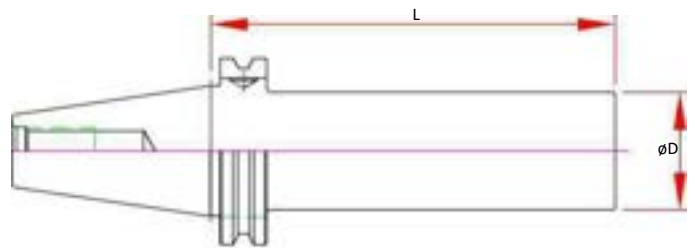


| Part Number      | Range       | D    | L Projection | Wrench |
|------------------|-------------|------|--------------|--------|
| CAT40-DC050-0413 | 0.04 - 0.50 | 1.96 | 4.13         | DCW13  |

# TB - Test Bar

## Features

- Concentric to Taper within 3µm (0.0001") TIR
- Tapers are ground better than AT3 for optimal T.I.R.
- Hardened & Normalized for consistency
- 100% Individually inspected with Certification Sheet included
- Wood Box Included
- Laser Marked with Actual Diameter and Length



| Dual Contact Spindle Part Number | Part Number      | D    | L Projection |
|----------------------------------|------------------|------|--------------|
| CAT40-TB150-1000-B               | CAT40-TB150-1000 | 1.50 | 10.00        |

CAT 40

CAT50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT SHANKS

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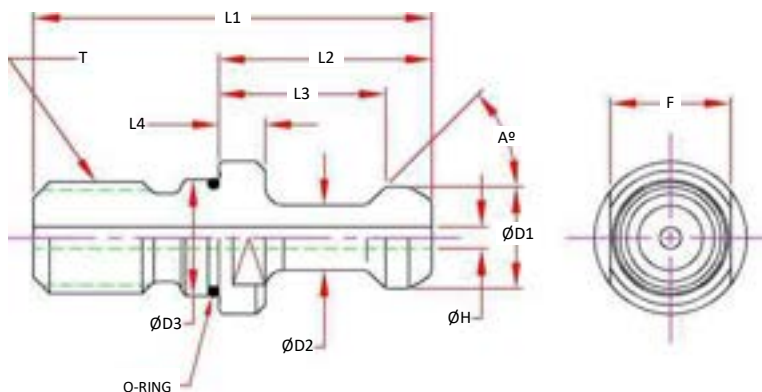
# CAT50

## CAT50 - High Performance Studs

### Features

- Manufactured to the Industry Standards or machine builders specifications.
- Grind Finish to adhere to machine builder recommendations
- Coolant Knobs include O-ring on the thread side pilot diameter to adhere to builder recommendations

**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 or contact the machine manufacturer.



| Part Number        | A Angle | D1 Head | D2 Neck | D3 Pilot | L1 OAL | L2 Proj. | L3 Pull Loc. | L4 Flange | H Hole | Pilot O-Ring | F Flats | T Thread | Socket Wrench | Notes                     |
|--------------------|---------|---------|---------|----------|--------|----------|--------------|-----------|--------|--------------|---------|----------|---------------|---------------------------|
| HPS-C50-MAS-45-C   | 45      | 0.906   | 0.669   | 1.031    | 3.354  | 1.780    | 1.386        | 0.402     | 0.236  | Yes †        |         |          |               | MAS P50T-1                |
| HPS-C50-MAS-60     | 60      | 0.906   | 0.669   | 1.024    | 3.248  | 1.772    | 1.378        | 0.394     | -      | -            | 30mm    |          | TWS-M30       | MAS P50T-2                |
| HPS-C50-MAS-60-C   | 60      | 0.906   | 0.669   | 1.024    | 3.248  | 1.772    | 1.378        | 0.394     | 0.236  | Yes †        |         |          |               | MAS P50T-2 Coolant        |
| HPS-C50-ANSI-C     | 45      | 1.140   | 0.820   | 1.031    | 2.580  | 1.000    | 0.700        | 0.210     | 0.457  | Yes †        | 1.250   |          | TWS-125       | ANSI B5.50                |
| HPS-C50-MAZAK-COF  | 45      | 1.140   | 0.820   | 1.031    | 2.303  | 1.000    | 0.700        | 0.197     | 0.394  | Yes †        | 1.187   |          | TWS-118       | Mazak 16mm C'Bore in Face |
| HPS-C50-MAZAK-C    | 45      | 1.140   | 0.820   | 1.031    | 2.303  | 1.000    | 0.700        | 0.197     | 0.394  | Yes †        | 1.187   | 1"-8     | TWS-118       | Mazak                     |
| HPS-C50-OKUMA-C    | 45      | 1.140   | 0.820   | 1.031    | 2.580  | 1.000    | 0.700        | 0.210     | 0.236  | Yes †        | 1.250   |          |               | Okuma Spec                |
| HPS-C50-MAS-90     | 90      | 0.906   | 0.669   | -        | 3.346  | 1.780    | 1.386        | 0.394     | -      | -            |         |          |               | MAS P50T-3 Mori-Seiki     |
| HPS-C50-MAS-90-C   | 90      | 0.906   | 0.669   | 1.031    | 3.346  | 1.780    | 1.386        | 0.394     | 0.250  | Yes †        |         |          |               | MAS P50T-3 Coolant        |
| HPS-C50-JIS-C      | 75      | 1.102   | 0.827   | 1.031    | 2.913  | 1.338    | 0.984        | 0.197     | 0.468  | Yes †        | 30mm    |          | TWS-M30       | JIS B6339                 |
| HPS-C50-KITAMURA-C | 75      | 1.102   | 0.827   | 1.031    | 2.959  | 1.344    | 0.990        | 0.197     | 0.453  | Yes †        |         |          |               | Kitamura Spec             |

† O-Ring added to Pilot, adheres to machine company changes, remove O-Ring if not required



# CAT50 Nose Index

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# CAT50 Shrink Fit - Inch

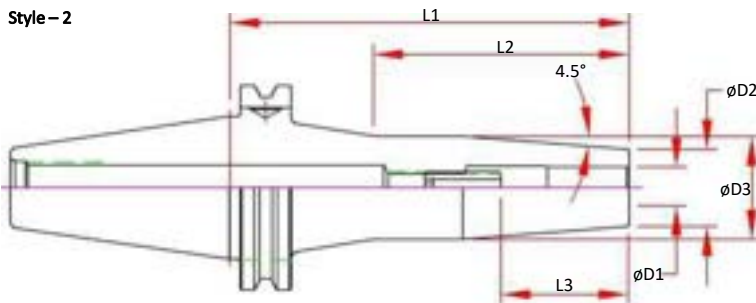
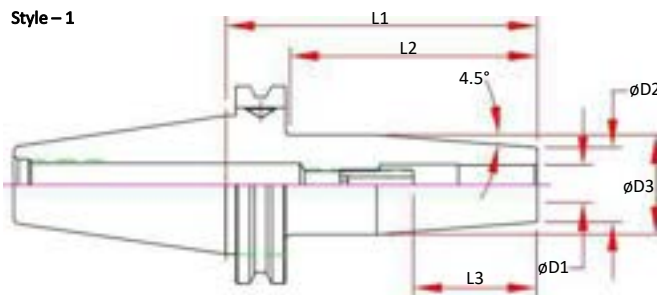
## Features

- 3 μm - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- Coolant Thru the Center
- Tapers are ground better than AT3 for optimal T.I.R.
- Dynamically Balanced for G2.5 @ 25,000 RPM or < 1 gmm
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Carbide Cutting Tools with h6 shank tolerance



## Optional (Order Separately):

- Jet-Blast Coolant Ports - Add "-J"
- DIN-B Coolant - Add "-D"
- Fine Trim Balance (Sample cutter required for balance compensation)



| Part Number     | D1 Bore | D2   | D3   | L1 Projection | L2   | L3 Max Tool Enters | Preset Screw  | Style |
|-----------------|---------|------|------|---------------|------|--------------------|---------------|-------|
| CAT50-SD025-080 | 0.2500  | 0.83 | 1.06 | 3.15          | 2.32 | 1.46               | SCW-ASC-05-23 | 1     |
| CAT50-SD025-160 | 0.2500  | 0.83 | 1.06 | 6.30          | 2.76 | 1.46               | SCW-ASC-05-23 | 2     |
| CAT50-SD031-080 | 0.3125  | 0.83 | 1.06 | 3.15          | 2.32 | 1.46               | SCW-ASC-06-23 | 1     |
| CAT50-SD031-160 | 0.3125  | 0.83 | 1.06 | 6.30          | 2.76 | 1.46               | SCW-ASC-06-23 | 2     |
| CAT50-SD037-080 | 0.3750  | 0.94 | 1.24 | 3.15          | 2.32 | 1.65               | SCW-ASC-08-23 | 1     |
| CAT50-SD037-160 | 0.3750  | 0.94 | 1.26 | 6.30          | 2.76 | 1.65               | SCW-ASC-08-23 | 2     |
| CAT50-SD050-080 | 0.5000  | 0.94 | 1.24 | 3.15          | 2.32 | 1.65               | SCW-ASC-10-23 | 1     |
| CAT50-SD050-160 | 0.5000  | 0.94 | 1.26 | 6.30          | 2.76 | 1.65               | SCW-ASC-10-23 | 2     |
| CAT50-SD062-080 | 0.6250  | 1.06 | 1.34 | 3.15          | 2.32 | 2.01               | SCW-ASC-12-23 | 1     |
| CAT50-SD062-160 | 0.6250  | 1.06 | 1.34 | 6.30          | 2.76 | 2.01               | SCW-ASC-12-23 | 2     |
| CAT50-SD075-080 | 0.7500  | 1.30 | 1.61 | 3.15          | 2.32 | 2.09               | SCW-ASC-12-23 | 1     |
| CAT50-SD075-160 | 0.7500  | 1.30 | 1.61 | 6.30          | 3.35 | 2.09               | SCW-ASC-12-23 | 2     |
| CAT50-SD100-100 | 1.0000  | 1.73 | 2.09 | 3.94          | 3.11 | 2.32               | SCW-ASC-16-23 | 1     |
| CAT50-SD100-160 | 1.0000  | 1.73 | 2.09 | 6.30          | 3.35 | 2.32               | SCW-ASC-16-23 | 2     |
| CAT50-SD125-100 | 1.2500  | 1.73 | 2.09 | 3.94          | 3.11 | 2.48               | SCW-ASC-16-23 | 1     |
| CAT50-SD125-160 | 1.2500  | 1.73 | 2.09 | 6.30          | 3.35 | 2.48               | SCW-ASC-16-23 | 2     |

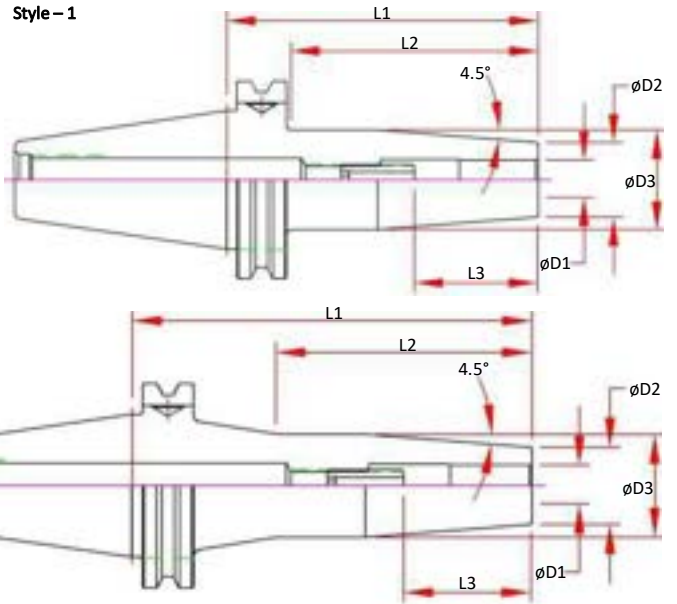
# CAT50 Shrink Fit - Metric

## Features

- 3 μm - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- Coolant Thru the Center
- Tapers are ground better than AT3 for optimal T.I.R.
- Dynamically Balanced for G2.5 @ 25,000 RPM or < 1 gmm
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Carbide Cutting Tools with h6 shank tolerance

## Optional (Order Separately):

- Jet-Blast Coolant Ports - Add "J"
- DIN-B Coolant - Add "D"
- Fine Trim Balance (Sample cutter required for balance compensation)



| Part Number     | D1 Bore | D2 | D3 | L1 Projection | L2 | L3 Max Tool Enters | Preset Screw  | Style |
|-----------------|---------|----|----|---------------|----|--------------------|---------------|-------|
| CAT50-SDM06-080 | 6       | 21 | 27 | 80            | 59 | 37                 | SCW-ASC-05-23 | 1     |
| CAT50-SDM06-160 | 6       | 21 | 27 | 160           | 70 | 37                 | SCW-ASC-05-23 | 2     |
| CAT50-SDM08-080 | 8       | 21 | 27 | 80            | 59 | 37                 | SCW-ASC-06-23 | 1     |
| CAT50-SDM08-160 | 8       | 21 | 27 | 160           | 70 | 37                 | SCW-ASC-06-23 | 2     |
| CAT50-SDM10-080 | 10      | 24 | 32 | 80            | 59 | 42                 | SCW-ASC-08-23 | 1     |
| CAT50-SDM10-160 | 10      | 24 | 32 | 160           | 70 | 42                 | SCW-ASC-08-23 | 2     |
| CAT50-SDM12-080 | 12      | 24 | 32 | 80            | 59 | 48                 | SCW-ASC-10-23 | 1     |
| CAT50-SDM12-160 | 12      | 24 | 32 | 160           | 70 | 48                 | SCW-ASC-10-23 | 2     |
| CAT50-SDM16-080 | 16      | 27 | 34 | 80            | 59 | 51                 | SCW-ASC-12-23 | 1     |
| CAT50-SDM16-160 | 16      | 27 | 34 | 160           | 70 | 51                 | SCW-ASC-12-23 | 2     |
| CAT50-SDM20-080 | 20      | 33 | 42 | 80            | 59 | 53                 | SCW-ASC-12-23 | 1     |
| CAT50-SDM20-160 | 20      | 33 | 42 | 160           | 70 | 53                 | SCW-ASC-12-23 | 2     |
| CAT50-SDM25-100 | 25      | 44 | 53 | 100           | 79 | 59                 | SCW-ASC-16-23 | 1     |
| CAT50-SDM25-160 | 25      | 44 | 53 | 160           | 85 | 59                 | SCW-ASC-16-23 | 2     |
| CAT50-SDM32-100 | 32      | 44 | 53 | 100           | 79 | 63                 | SCW-ASC-16-23 | 1     |
| CAT50-SDM32-160 | 32      | 44 | 53 | 160           | 85 | 63                 | SCW-ASC-16-23 | 2     |

CAT40

CAT 50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT SHANKS

COLLETS

PARTS & ACCESS.

SHRINK MACHINES

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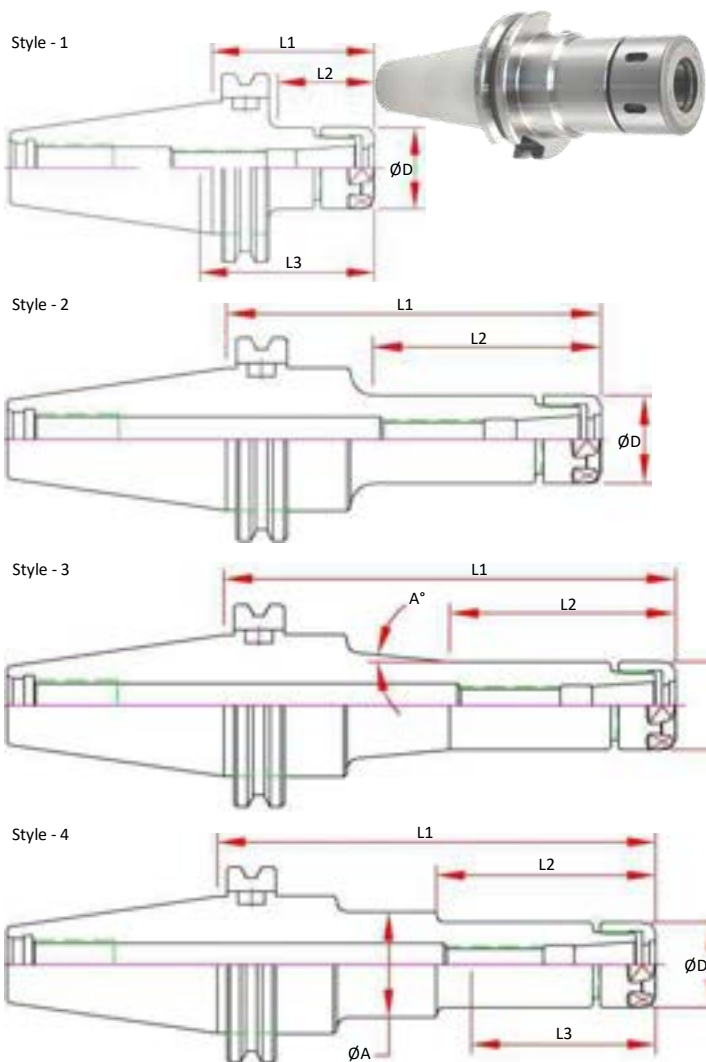
# CAT50 SX Collet Chucks

## Features

- 3 µm - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or <1gmm

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.005mm (0.0002") Standard
  - 0.003mm (0.0001") Ultra Precision
- DIN-B Coolant
- Fine Trim Balance (Sample cutter required for balance compensation)



| Max Capacity | Dual Contact Spindle Part Number | Standard Spindle Part Number | Style | Flange Coolant | A     | B    | D    | L Projection | L2 Max. Preset | Collet | Nut     | Wrench     |
|--------------|----------------------------------|------------------------------|-------|----------------|-------|------|------|--------------|----------------|--------|---------|------------|
| 0.250        | CAT50-SX06-0413-B                | CAT50-SX06-0413              | 1     |                | -     |      |      | 4.13         | 2.11           | SX06   | SXN-06  | SXW-06     |
|              | CAT50-SX06-0531-B                | CAT50-SX06-0531              | 4     | Optional       | Ø32mm | 2.36 | 0.77 | 5.31         | 2.11           |        |         |            |
|              | CAT50-SX06-0650-B                | CAT50-SX06-0650              | 4     | Add -D         | Ø32mm |      |      | 6.50         | 2.11           |        |         |            |
|              | CAT50-SX06-0800-B                |                              | 4     |                | Ø30mm |      |      | 8.00         | 1.37           |        |         |            |
| 0.394        | CAT50-SX10-0413-B                | CAT50-SX10-0413              | 1     |                | -     | 2.36 |      | 4.13         | 3.05           | SX10   | SXN-10  | SXW-10     |
|              | CAT50-SX10-0531-B                | CAT50-SX10-0531              | 4     | Optional       | Ø32mm | 2.95 | 1.08 | 5.31         | 3.05           |        |         |            |
|              | CAT50-SX10-0650-B                | CAT50-SX10-0650              | 4     | Add -D         | Ø32mm | 2.95 |      | 6.50         | 2.71           |        |         |            |
|              | CAT50-SX10-0800-B                |                              | 4     |                | Ø40mm | 2.95 |      | 8.00         | 2.71           |        |         |            |
| 0.630        | CAT50-SX16-0413-B                | CAT50-SX16-0413              | 1     |                | -     | 2.56 |      | 4.13         |                | SX16   | SXN-16  | SXW-16     |
|              | CAT50-SX16-0531-B                | CAT50-SX16-0531              | 1     | Optional       | -     | 3.54 | 1.58 | 5.31         | 3.15           |        |         |            |
|              | CAT50-SX16-0650-B                | CAT50-SX16-0650              | 3     | Add -D         | 8.27° | 3.54 |      | 6.50         |                |        |         |            |
|              | CAT50-SX16-0800-B                |                              | 3     |                | 3.88° | 3.54 |      | 8.00         |                |        |         |            |
| 1.000        | CAT50-SX25M-0413-B               | CAT50-SX25M-0413             | 1     |                | -     | 2.56 |      | 4.13         | 3.87           | SX25   | SXN-25M | 50-55 HOOK |
|              | CAT50-SX25M-0531-B               | CAT50-SX25M-0531             | 1     | Optional       | -     | 3.74 | 1.97 | 5.31         | 3.87           |        |         |            |
|              | CAT50-SX25M-0650-B               | CAT50-SX25M-0650             | 1     | Add -D         | -     | 4.92 |      | 6.50         | 3.80           |        |         |            |
|              | CAT50-SX25M-0800-B               | CAT50-SX25M-0800             | 1     |                | -     | 6.10 |      | 8.00         | 3.87           |        |         |            |

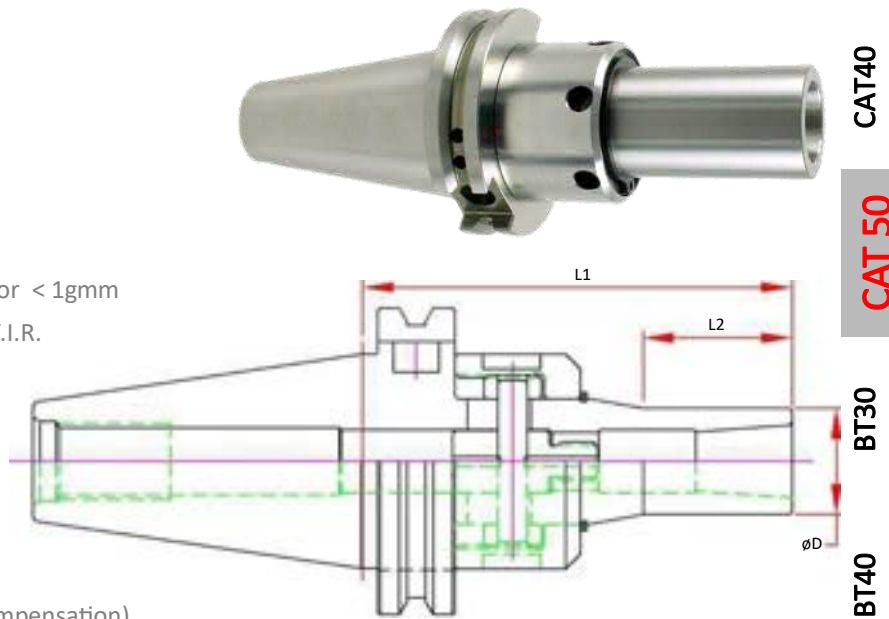
# CAT50 VX - Mini Chuck

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout @ 4X Diameter
- Front Locking System
- Coolant Thru
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or < 1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets, STD and Jet-Blast
- DIN-B Flange Coolant
- Fine Trim Balance (Sample cutter required for balance compensation)



| Dual Contact Spindle Part Number | Standard Spindle Part Number | Collet Range  | D     | L1 Projection | L2   | Collet | Wrench    | Locking Torque Max. |
|----------------------------------|------------------------------|---------------|-------|---------------|------|--------|-----------|---------------------|
| CAT50-VX08-0413-B                | CAT50-VX08-0413              | 0.125 - 0.394 | 0.787 | 4.13          | 1.21 | MX08   | 45-48 PIN | 30 ft/lbs           |
| CAT50-VX08-0654-B                | CAT50-VX08-0654              |               |       | 6.54          |      |        |           |                     |
| CAT50-VX12-0457-B                | CAT50-VX12-0457              | 0.157 - 0.500 | 1.00  | 4.57          | 2.03 | MX12   |           |                     |
| CAT50-VX12-0654-B                | CAT50-VX12-0654              |               |       | 6.54          |      |        |           |                     |

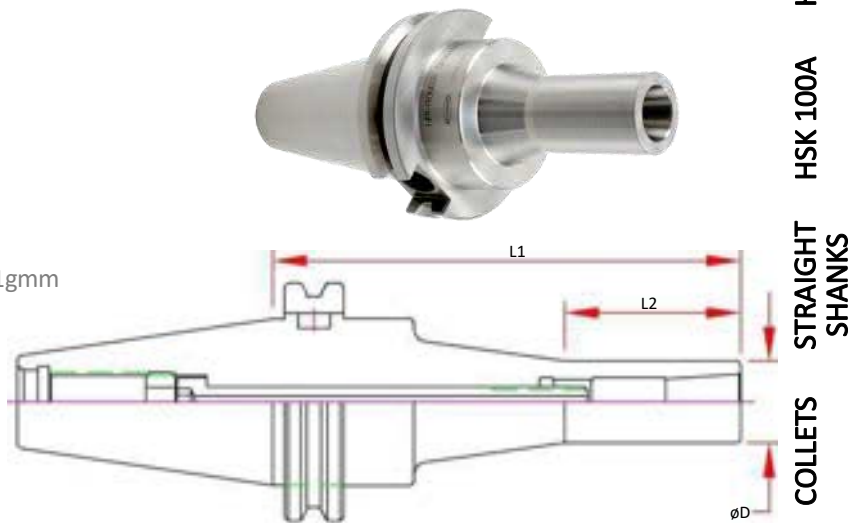
# CAT50 MX - Mini Chuck

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout @ 4X Diameter
- Rear Draw Bolt Locking System
- Coolant Thru
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or < 1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets, STD and Jet-Blast
- DIN-B Flange Coolant
- Fine Trim Balance (Sample cutter required for balance compensation)



| Dual Contact Spindle Part Number | Standard Spindle Part Number | Collet Range  | D     | L1 Projection | L2   | Collet | Wrench | Locking Torque Max. |
|----------------------------------|------------------------------|---------------|-------|---------------|------|--------|--------|---------------------|
| CAT50-MX08-110-B                 | CAT50-MX08-110               | 0.125 - 0.394 | 0.787 | 4.33          | 1.42 | MX08   | MXW05  | 20 ft/lbs           |
| CAT50-MX08-165-B                 | CAT50-MX08-165               |               |       | 6.50          |      |        |        |                     |
| CAT50-MX12-105-B                 | CAT50-MX12-105               | 0.157 - 0.500 | 1.00  | 4.13          | 1.38 | MX12   |        |                     |
| CAT50-MX12-165-B                 | CAT50-MX12-165               |               |       | 6.50          |      |        |        |                     |



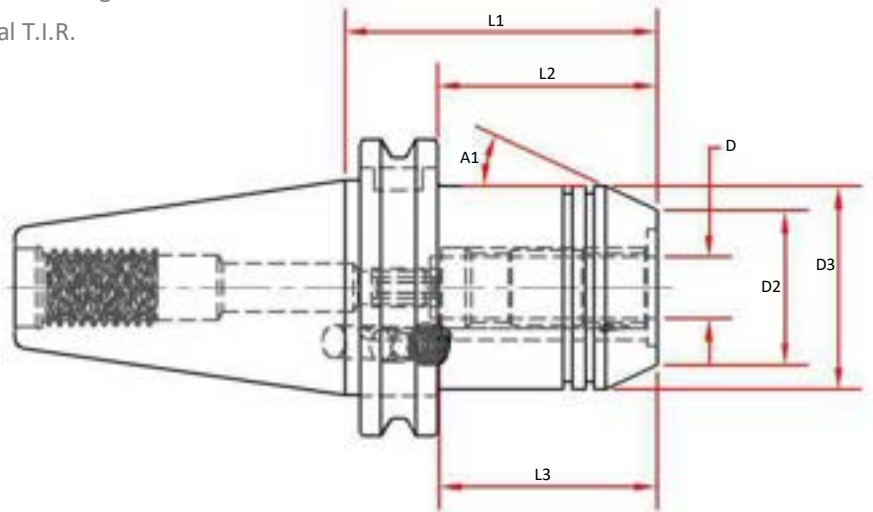
# CAT50 Hydraulic Chucks

## Features

- \* 3  $\mu\text{m}$  - 0.0001" or less run-out providing premium performance in drilling and reaming applications
- Positive Locking System
- Coolant Thru the Center
- Designed for Tool Shanks w/ ISO h6 Class Tolerance
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or < 1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Sealed Collets
- Mill Chuck Collets



| Part Number      | D Bore | D2   | D3   | A1    | L1 Projection | L2   | L3 Max Tool Enters | Wrench |
|------------------|--------|------|------|-------|---------------|------|--------------------|--------|
| CAT50-HC075-0319 | 0.7500 | 1.50 | 1.94 | 25°   | 3.19          | 2.44 | 2.01               | MXW05  |
| CAT50-HC125-0319 | 1.2500 | 2.30 | 2.83 | 18.7° | 3.19          | 2.44 | 2.40               | MXW05  |

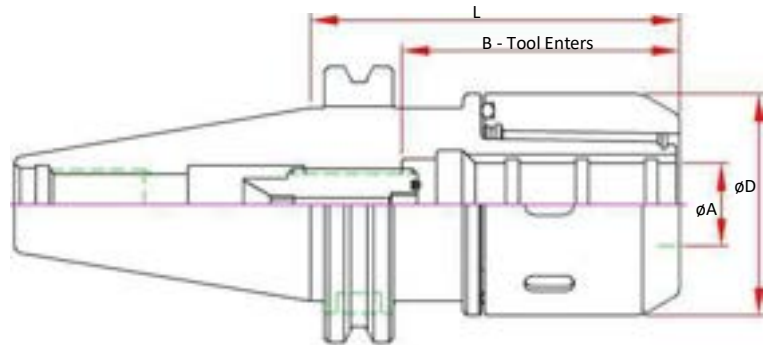
# CAT50 Mill Chucks

## Features

- 5  $\mu\text{m}$  - 0.0002" Runout @ 4 x Cutter Shank Dia.
- Designed for Tool Shanks w/ ISO h6 Class Tolerance
- Tapers are ground better than AT3 for optimal T.I.R.
- Pre-Balanced for use @ 15,000 RPM

## Optional (Order Separately):

- Wrench
- Nylon Screw Seal for short tool shanks
- DIN-B Flange Coolant
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Part Number      | A Bore | B Max. Tool Enters | D    | L Projection | Preset Screw | Collet | Wrench     |
|------------------|--------|--------------------|------|--------------|--------------|--------|------------|
| CAT50-MC075-0354 | 0.7500 | 2.76               | 2.09 | 3.54         | ASC-16-40    | MC075  | 50-55 HOOK |
| CAT50-MC075-0413 |        |                    |      | 4.13         |              |        |            |
| CAT50-MC075-0531 |        |                    |      | 5.31         |              |        |            |
| CAT50-MC075-0650 |        |                    |      | 6.50         |              |        |            |
| CAT50-MC100-0315 | 1.0000 | 2.95               | 2.44 | 3.15         | ASC-16-40    | MC100  | 58-65 HOOK |
| CAT50-MC100-0354 |        |                    |      | 3.54         |              |        |            |
| CAT50-MC100-0413 |        |                    |      | 4.13         |              |        |            |
| CAT50-MC100-0531 |        |                    |      | 5.31         |              |        |            |
| CAT50-MC100-0650 | 6.50   |                    |      |              |              |        |            |
| CAT50-MC125-0354 | 1.2500 | 3.23               | 2.76 | 3.54         | ASC-16-40    | MC125  | 65-70 HOOK |
| CAT50-MC125-0413 |        |                    |      | 4.13         |              |        |            |
| CAT50-MC125-0531 |        |                    |      | 5.31         |              |        |            |
| CAT50-MC125-0650 |        |                    |      | 6.50         |              |        |            |

CAT40

CAT 50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT SHANKS

COLLETS

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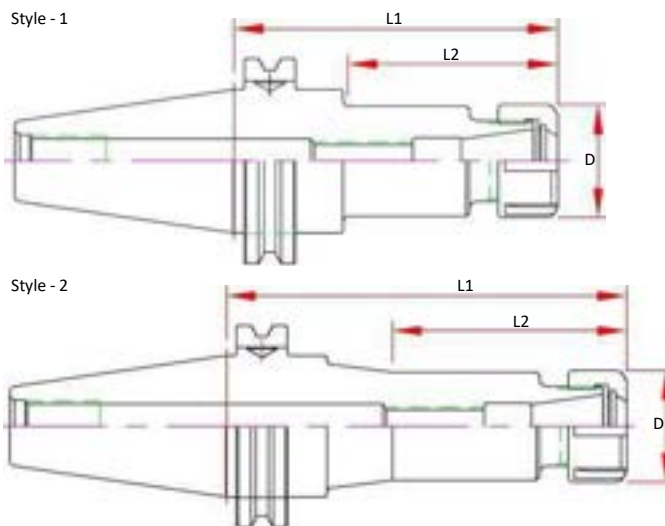
# CAT50 ER Collet Chucks

## Features

- 3 µm - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced G6.3 @ 15,000 RPM or <1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.010mm (0.0004") Standard
  - 0.005mm (0.0002") Ultra Precision
  - Sealed (Select Sizes)
  - Jet-Blast (Select Sizes)
- DIN-B Coolant (Select models)



| Dual Contact Spindle Part Number | Standard Spindle Part Number | Range      | L2   | D    | L1 Projection | Screw    | Nut     | Wrench  | Style |
|----------------------------------|------------------------------|------------|------|------|---------------|----------|---------|---------|-------|
|                                  | CAT50-ER16H-0250             |            | 1.55 |      | 2.50          |          |         |         | 1     |
|                                  | CAT50-ER16H-0400             |            | 2.42 |      | 4.00          |          |         |         | 1     |
|                                  | CAT50-ER16H-0600             | .019-.394  | 2.39 | 1.10 | 6.00          | ASC-ER16 | ERN-16H | ERW-16H | 2     |
|                                  | CAT50-ER16H-0800             |            | 2.39 |      | 8.00          |          |         |         | 2     |
|                                  | CAT50-ER16H-1000             |            | 2.39 |      | 10.00         |          |         |         | 2     |
|                                  | CAT50-ER16H-1200             |            | 2.39 |      | 12.00         |          |         |         | 2     |
|                                  | CAT50-ER20H-0250             |            | 1.55 |      | 2.50          |          |         |         | 1     |
| CAT50-ER20H-0400-B               | CAT50-ER20H-0400             |            | 2.42 |      | 4.00          |          |         |         | 1     |
| CAT50-ER20H-0600-B               | 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     |
|                                  | 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     |
|                                  | CAT50-ER32-0250              |            | 1.71 |      | 2.50          |          |         |         | 1     |
| CAT50-ER32-0400-B                | CAT50-ER32-0400              |            | 2.50 |      | 4.00          |          |         |         | 1     |
| CAT50-ER32-0600-B                | CAT50-ER32-0600              |            | 4.50 |      | 6.00          |          |         |         | 1     |
|                                  | CAT50-ER32-0800              | .039-.787  | 6.50 | 1.96 | 8.00          | ASC-ER32 | ERN-32  | ERW-32E | 1     |
| CAT50-ER32-1000-B                | CAT50-ER32-1000              |            | 4.45 |      | 10.00         |          |         |         | 2     |
| CAT50-ER32-1200-B                | CAT50-ER32-1200              |            | 4.45 |      | 12.00         |          |         |         | 2     |
| CAT50-ER32-1500-B                | CAT50-ER32-1500              |            | 4.45 |      | 15.00         |          |         |         | 2     |
| CAT50-ER40-0400-B                | CAT50-ER40-0400              |            | 2.54 |      | 4.00          |          |         |         | 1     |
|                                  | CAT50-ER40-0500              | .079-1.024 |      | 2.48 | 5.00          | ASC-ER40 | ERN-40  | ERW-40E | 1     |
| CAT50-ER40-0600-B                | CAT50-ER40-0600              |            | 4.54 |      | 6.00          |          |         |         | 1     |
|                                  | CAT50-ER40-0800              |            | 6.54 |      | 8.00          |          |         |         | 1     |



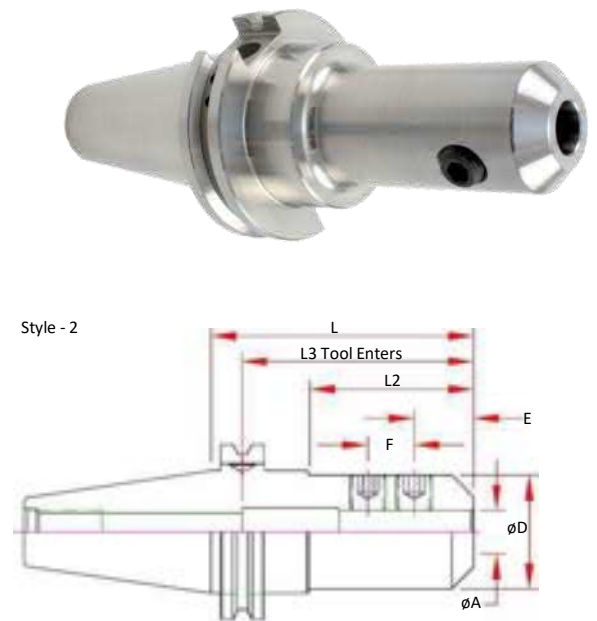
# CAT50 End Mill Adapters—Metric

## Features

- 3  $\mu\text{m}$  - 0.0001" Bore Runout
- H5 Bore Tolerance or better
- Tapers are ground better than AT3 for optimal T.I.R.
- Coolant Thru
- Pre-Balanced for use @ 20,000 RPM (CAT50 @ 15,000 RPM)

## Optional (Order Separately):

- Jet-Blast (add "J" to the part number)
- DIN-B Coolant (Select models)



| Standard Spindle Part Number | A Bore | D    | E    | F    | L Projection | L2   | L3 Max. Tool Enters | Screw # | Style |
|------------------------------|--------|------|------|------|--------------|------|---------------------|---------|-------|
| 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     |

CAT40

CAT 50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT SHANKS

COLLETS

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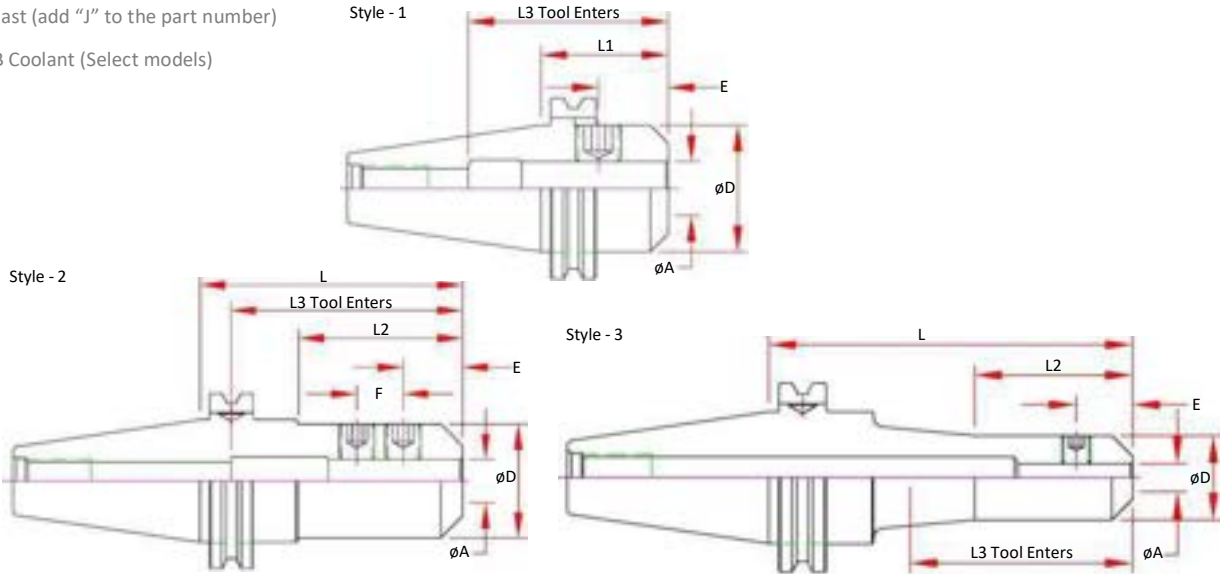
# CAT50 End Mill Adapters

## Features

- 3 µm - 0.0001" Bore Runout
- H5 Bore Tolerance or better
- Tapers are ground better than AT3 for optimal T.I.R.
- Coolant Thru
- Pre-Balanced for use @ 15,000 RPM

## Optional (Order Separately):

- Jet-Blast (add "J" to the part number)
- DIN-B Coolant (Select models)



|      | Dual Contact Spindle Part Number | Standard Spindle 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                |              | 4     |   |
|      |                                  | CAT50-EM025-0600             |        |       |      |   | 6.00             | 1.57 | 8.25                |              | 3     |   |
| 5/16 |                                  | CAT50-EM031-0400             | 0.3125 | 0.88  | 0.44 | - | 4.00             | 2.42 | 6.25                | 4            | 2     |   |
|      |                                  | CAT50-EM031-0600             |        |       |      |   | 6.00             | 1.57 | 8.25                |              | 4     |   |
|      |                                  | CAT50-EM037-0250             |        |       |      |   | 2.50             | 1.00 | 4.75                |              | 2     |   |
| 3/8  |                                  | CAT50-EM037-0300             | 0.3750 | 1.00  | 0.75 | - | 3.00             | 1.42 | 5.25                | 5            | 2     |   |
|      |                                  | CAT50-EM037-0400             |        |       |      |   | 4.00             | 2.42 | 6.25                |              | 5     |   |
|      |                                  | CAT50-EM037-0600             |        |       |      |   | 6.00             | 3.00 | 8.25                |              | 3     |   |
|      |                                  | CAT50-EM037-0800             |        |       |      |   | 8.00             | 3.00 | 10.25               |              | 3     |   |
|      |                                  | CAT50-EM050-0262             |        |       |      |   | 2.62             | 1.20 | 4.87                |              | 2     |   |
| 1/2  |                                  | CAT50-EM050-0300             | 0.5000 | 1.25  | 0.88 | - | 3.00             | 1.42 | 5.25                | 6            | 2     |   |
|      |                                  | CAT50-EM050-0400-B           |        |       |      |   | CAT50-EM050-0400 | 4.00 | 2.42                |              | 6.25  | 2 |
|      |                                  | CAT50-EM050-0462             |        |       |      |   | 4.62             | 3.04 | 6.87                |              | 2     |   |
|      |                                  | CAT50-EM050-0600-B           |        |       |      |   | CAT50-EM050-0600 | 6.00 | 3.13                |              | 8.25  | 6 |
|      |                                  | 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     |   |
| 5/8  |                                  | CAT50-EM050-1200             | 0.6250 | 1.50  | 0.94 | - | 12.00            | 3.13 | 14.25               | 7            | 3     |   |
|      |                                  | CAT50-EM062-0300             |        |       |      |   | 3.00             | 1.50 | 5.25                |              | 2     |   |
|      |                                  | CAT50-EM062-0400-B           |        |       |      |   | CAT50-EM062-0400 | 4.00 | 2.50                |              | 6.25  | 2 |
|      |                                  | CAT50-EM062-0600             |        |       |      |   | 6.00             | 4.42 | 8.25                |              | 2     |   |
|      | CAT50-EM062-0775                 | 7.75                         | 4.25   | 10.00 | 3    |   |                  |      |                     |              |       |   |

# CAT50 End Mill Adapters

## Features

- 3 µm - 0.0001" Bore Runout
- H5 Bore Tolerance or better
- Tapers are ground better than AT3 for optimal T.I.R.
- Coolant Thru
- Pre-Balanced for use @ 15,000 RPM

## Optional (Order Separately):

- Jet-Blast (add "J" to the part number)
- DIN-B Coolant (Select models)



CAT40

CAT 50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT SHANKS

COLLETS

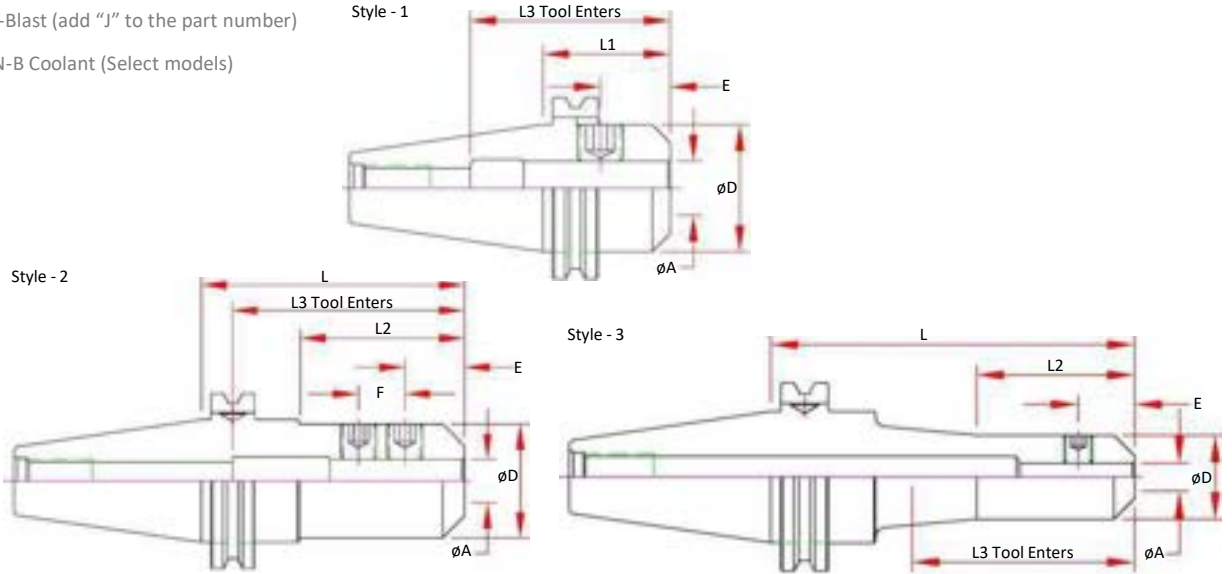
PARTS & ACCESS.

SHRINK MACHINES

INDEXERS



P-38



|       | Dual Contact Spindle Part Number | Standard Spindle Part Number | A Bore           | D    | E    | F      | L Projection     | L2   | L3 Max. Tool Enters | Screw Number | Style              |                  |      |         |      |
|-------|----------------------------------|------------------------------|------------------|------|------|--------|------------------|------|---------------------|--------------|--------------------|------------------|------|---------|------|
| 3/4   |                                  | CAT50-EM075-0175             | 0.7500           | 1.75 | 1.00 | -      | 1.75             | 0.25 | 2.76                | 8            | 1                  |                  |      |         |      |
|       |                                  | CAT50-EM075-0300             |                  |      |      |        | 3.00             | 1.50 | 3.86                |              | 2                  |                  |      |         |      |
|       |                                  | CAT50-EM075-0375             |                  |      |      |        | 3.75             | 2.25 | 4.00                |              | 2                  |                  |      |         |      |
|       |                                  | CAT50-EM075-0400-B           |                  |      |      |        | CAT50-EM075-0400 | 4.00 | 2.50                |              | 3.94               | 2                |      |         |      |
|       |                                  | CAT50-EM075-0600-B           |                  |      |      |        | 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                  |                  |      |         |      |
| 7/8   |                                  | CAT50-EM087-0350             | 0.8750           | 1.88 | 1.00 | 0.81   | 3.50             | 2.00 | 4.19                | 8            | 2                  |                  |      |         |      |
|       |                                  | CAT50-EM100-0162             | 1.0000           | 2.00 | 1.12 | -      | 1.62             | 0.62 | 2.50                | 10           | 1                  |                  |      |         |      |
|       | CAT50-EM100-0300                 | 3.00                         |                  |      |      |        | 1.50             | 4.44 | 10                  | 2            |                    |                  |      |         |      |
| 1     |                                  | CAT50-EM100-0400-B           |                  |      |      |        | CAT50-EM100-0400 | 4.00 | 2.54                | 4.44         | (2) 10             | 2                |      |         |      |
|       |                                  | CAT50-EM100-0600-B           |                  |      |      |        | CAT50-EM100-0600 | 6.00 | 4.50                | 4.44         | (2) 10             | 2                |      |         |      |
|       |                                  | CAT50-EM100-0800             |                  |      |      |        | 8.00             | 6.50 | 4.44                | (2) 10       | 2                  |                  |      |         |      |
|       |                                  | CAT50-EM100-1000             |                  |      |      |        | 10.00            | 4.50 | 4.44                | (2) 10       | 3                  |                  |      |         |      |
|       |                                  | CAT50-EM125-0200             |                  |      |      |        | 1.2500           | 2.50 | 1.12                | 1.00         | 2.00               | 1.20             | 3.50 | 11      | 1    |
|       |                                  | CAT50-EM125-0300             |                  |      |      |        |                  |      |                     |              | 3.00               | 2.20             | 3.50 | (2) 11  | 1    |
| 1 1/4 |                                  | CAT50-EM125-0400-B           | CAT50-EM125-0400 | 4.00 | 2.58 | 3.35   |                  |      |                     |              | (2) 11             | 2                |      |         |      |
|       |                                  | CAT50-EM125-0600-B           | CAT50-EM125-0600 | 6.00 | 4.58 | 3.35   |                  |      |                     |              | (2) 11             | 2                |      |         |      |
|       |                                  | CAT50-EM125-0800             | 8.00             | 6.58 | 3.35 | (2) 11 |                  |      |                     |              | 2                  |                  |      |         |      |
|       |                                  | CAT50-EM125-1000             | 10.00            | 8.58 | 3.35 | (2) 11 |                  |      |                     |              | 2                  |                  |      |         |      |
|       |                                  | CAT50-EM150-0225             | 1.5000           | 2.75 | 1.12 | 1.00   |                  |      |                     |              | 2.25               | 1.45             | 2.44 | 11      | 1    |
|       | 1 1/2                            |                              |                  |      |      |        |                  |      |                     |              | CAT50-EM150-0400-B | CAT50-EM150-0400 | 4.00 | 3.20    | 4.50 |
|       |                                  | CAT50-EM150-0600-B           |                  |      |      |        | CAT50-EM150-0600 | 6.00 | 5.20                | 4.50         | (2) 11             | 2                |      |         |      |
|       |                                  | CAT50-EM150-1000             |                  |      |      |        | 10.00            | 9.20 | 4.50                | (2) 11       | 2                  |                  |      |         |      |
|       |                                  | CAT50-EM200-0362 **          |                  |      |      |        | 2.0000           | 3.75 | 1.41                | 1.50         | 3.62               | 2.82             | 3.66 | 12 & 13 | 2    |
|       | CAT50-EM200-0562-B               | CAT50-EM200-0562             |                  |      |      |        |                  |      |                     |              | 5.62               | 4.86             | 4.13 | (2) 13  | 2    |

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



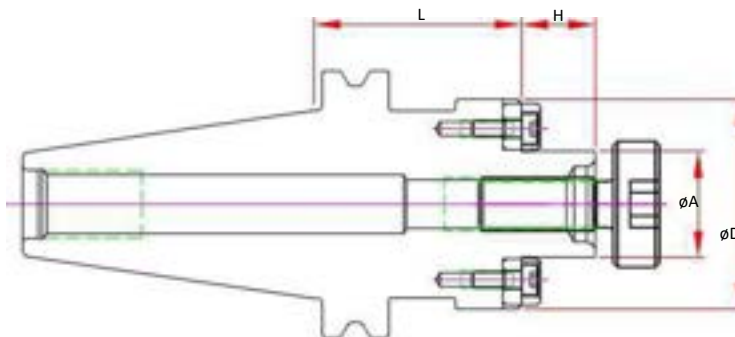
# CAT50 Shell Mill Adapters

## Features

- 3 μm - 0.0001" Bore Runout
- H5 Bore Tolerance or better
- Tapers are ground better than AT3 for optimal T.I.R.
- Coolant Thru Body
- Pre-Balanced for use @ 20,000 RPM

## Optional (Order Separately):

- FX Coolant (add "F" to the part number)
- DIN-B Coolant (Select models)



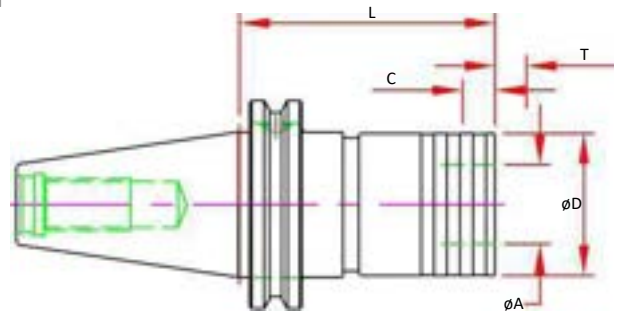
| Dual Contact Spindle Part Number | Standard Spindle Part Number | A Pilot | D    | H    | L Projection | Drive Key Size | Drive Key Number | Mounting Screw Thread | Mounting Screw# |
|----------------------------------|------------------------------|---------|------|------|--------------|----------------|------------------|-----------------------|-------------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

\*\* Stocked in "FX" Coolant Style Only

# 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
- Size 3 includes pull to release system to prevent damage from over stroke
- TC Holders are not designed for Coolant Thru
- For use with both RA and TC adapters
  - TC for machines with limited "Z" control
- 2 Piece Design is assembled Straight Shank Tap Holder with End Mill Adapter
- Tapers are ground better than AT3 for optimal T.I.R.

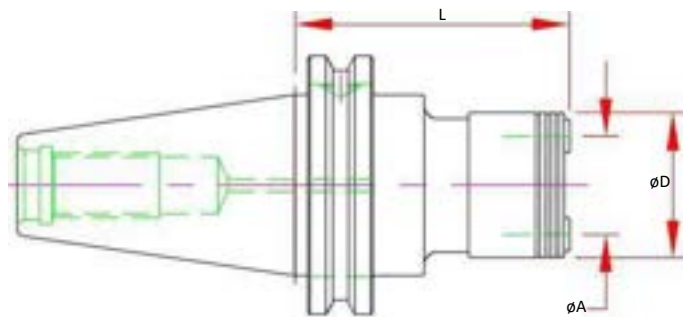


| Size | Dual Contact Spindle Part Number | Standard Spindle Part Number | 2 Piece Design | Capacity   | A    | D    | L    | T Tension | C Comp. |
|------|----------------------------------|------------------------------|----------------|------------|------|------|------|-----------|---------|
| 1    |                                  | CAT50-TC1-0320               | Y              | #6-9/16    | 0.75 | 1.42 | 3.20 | 0.30      | 0.30    |
| 1    | CAT50-TC1-0558-B                 | CAT50-TC1-0558               | Y              | #6-9/16    | 0.75 | 1.42 | 5.58 | 0.30      | 0.30    |
| 2    |                                  | CAT50-TC2-0418               | Y              | 5/16-7/8   | 1.22 | 2.09 | 4.18 | 0.49      | 0.49    |
| 2    | CAT50-TC2-0636-B                 | CAT50-TC2-0636               | Y              | 5/16-7/8   | 1.22 | 2.09 | 6.36 | 0.49      | 0.49    |
| 3    |                                  | CAT50-TC3-0704               | Y              | 9/16-1-3/8 | 1.89 | 3.07 | 7.04 | 0.79      | 0.79    |
| 3    | CAT50-TC3-0904-B                 | CAT50-TC3-0904               | Y              | 9/16-1-3/8 | 1.89 | 3.07 | 9.04 | 0.79      | 0.79    |

# RT - Rigid QC Tap Holders

## Features

- Body - Coolant Thru Center
- Tapers are ground better than AT3 for optimal T.I.R.
- **For use with RA Adapters Only!**



| Size | Dual Contact Spindle Part Number | Standard Spindle Part Number | 2 Piece Design | Capacity   | A    | D    | L Projection |
|------|----------------------------------|------------------------------|----------------|------------|------|------|--------------|
| 1    |                                  | CAT50-RT1-320                | Y              | #6-9/16    | 0.75 | 1.34 | 3.20         |
| 1    | CAT50-RT1-0557-B                 | CAT50-RT1-0557               | Y              | #6-9/16    | 0.75 | 1.34 | 5.57         |
| 2    |                                  | CAT50-RT2-0399               | Y              | 5/16-7/8   | 1.22 | 1.93 | 3.99         |
| 2    | CAT50-RT2-0636-B                 | CAT50-RT2-0636               | Y              | 5/16-7/8   | 1.22 | 1.93 | 6.36         |
| 3    |                                  | CAT50-RT3-0575               | Y              | 9/16-1-3/8 | 1.89 | 2.89 | 5.75         |
| 3    | CAT50-RT3-0774-B                 | CAT50-RT3-0774               | Y              | 9/16-1-3/8 | 1.89 | 2.89 | 7.74         |



CAT40  
CAT 50  
BT30  
BT40  
HSK 40E  
HSK 63A  
HSK 100A  
STRAIGHT SHANKS  
COLLETS  
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SHRINK MACHINES  
INDEXERS

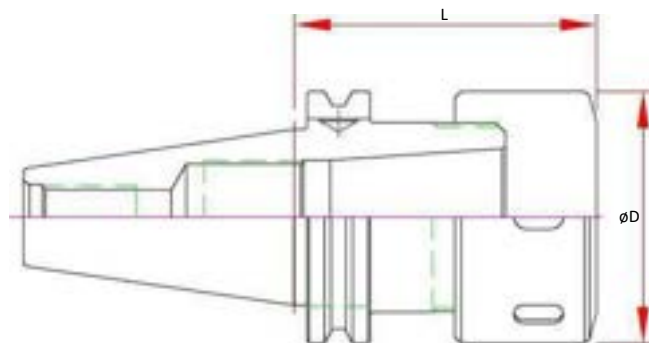
# TG - Collet Chuck

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced @ 20,000 RPM (CAT50 @ 15,000 RPM)
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
- DIN-B Coolant (Select models)

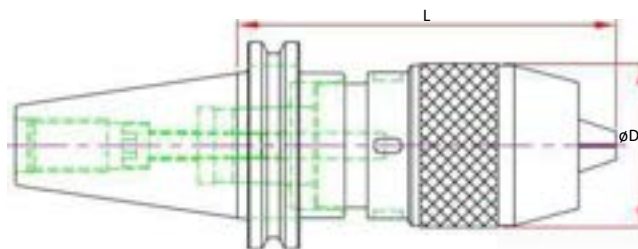


| Part Number      | Range       | D    | L Projection | Collet | Screw    | Nut    | Wrench     |
|------------------|-------------|------|--------------|--------|----------|--------|------------|
| CAT50-TG100-0350 | .094 - 1.00 | 2.48 | 3.50         | TG100  | ASC-ER40 | TGN100 | 58-65 HOOK |
| CAT50-TG100-0550 |             |      | 5.50         |        |          |        |            |

# DC - Drill Chuck

## Features:

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

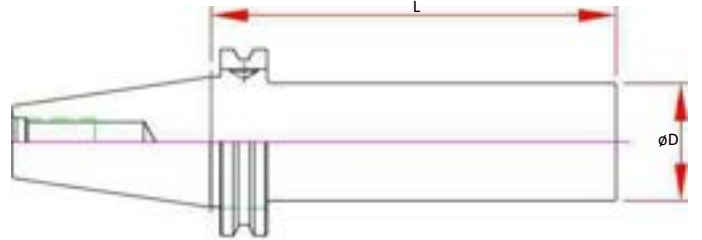


| Part Number      | Range       | D    | L Projection | Wrench |
|------------------|-------------|------|--------------|--------|
| CAT50-DC050-0394 | 0.04 - 0.50 | 1.96 | 3.94         | DCW13  |

# TB - Test Bar

## Features

- Concentric to Taper within 3µm (0.0001") TIR
- Tapers are ground better than AT3 for optimal T.I.R.
- Hardened & Normalized for consistency
- 100% Individually inspected with Certification Sheet included
- Wood Box Included
- Laser Marked with Actual Diameter and Length



| Dual Contact Spindle<br>Part Number | Part<br>Number   | D    | L<br>Projection |
|-------------------------------------|------------------|------|-----------------|
| CAT50-TB200-1200-B                  | CAT50-TB200-1200 | 2.00 | 12.00           |

CAT40

CAT 50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT  
SHANKS

COLLETS

PARTS &  
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MACHINES

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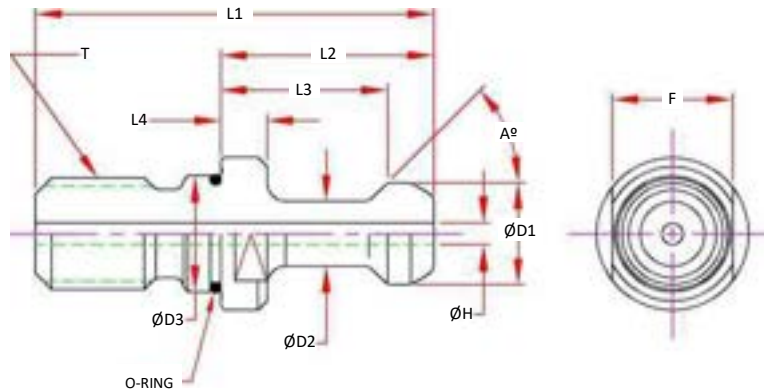
# BT30

## BT30 - High Performance Studs

### Features

- Manufactured to the Industry Standards or machine builders specifications.
- Grind Finish to adhere to machine builder recommendations
- Coolant Knobs include O-ring on the thread side pilot diameter to adhere to builder recommendations

**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 or contact the machine manufacturer.



| Part Number       | A Angle | D1 Head | D2 Neck | D3 Pilot | L1 OAL | L2 Proj. | L3 Pull Loc. | L4 Flange | H Hole | O-Ring | F Flats | T Thread | Socket Wrench | Notes              |
|-------------------|---------|---------|---------|----------|--------|----------|--------------|-----------|--------|--------|---------|----------|---------------|--------------------|
| HPS-B30-MAS-45    |         |         | 0.276   |          |        |          |              |           | -      | -      |         |          |               | MAS P30T-1         |
| HPS-B30-FANUC-C   | 45      |         | 0.315   |          |        |          |              |           | 0.157  | Yes †  |         |          |               | MAS P30T-1 FANUC   |
| HPS-B30-MAS-45-C  |         |         | 0.276   |          |        |          |              |           | 0.098  | Yes †  |         |          |               | MAS P30T-1         |
| HPS-B30-MAS-60    |         | 0.433   | 0.276   | 0.492    | 1.693  | 0.906    | 0.709        | 0.197     | -      | -      | 13mm    | M12      | TWS-M13       | MAS P30T-2         |
| HPS-B30-BROTHER-C | 60      |         | 0.295   |          |        |          |              |           | 0.098  | Yes †  |         |          |               | MAS P30T-2 Brother |
| HPS-B30-MAS-60-C  |         |         | 0.276   |          |        |          |              |           | 0.098  | Yes †  |         |          |               | MAS P30T-2         |
| HPS-B30-KITAMUA-C | 75      | 0.472   | 0.315   |          | 1.693  | 0.921    | 0.724        |           | 0.157  | Yes †  |         |          |               | Kitamura Spec      |

† O-Ring added to Pilot, adheres to machine company changes, remove O-Ring if not required



# BT30 Nose Index

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CAT40

CAT50

**BT 30**

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT SHANKS

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PARTS & ACCESS.

SHRINK MACHINES

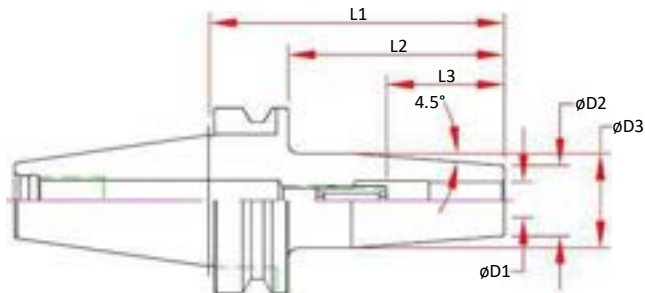
INDEXERS



# BT30 Shrink Fit - Inch

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- X Jet-Blast Pluggable Coolant Ports
- Tapers are ground better than AT3 for optimal T.I.R.
- Dynamically Balanced for G2.5 @ 25,000 RPM or < 1 gmm
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Carbide Cutting Tools with h6 shank tolerance



## Optional (Order Separately):

- Fine Trim Balance (Sample cutter required for balance compensation)



| Dual Contact Spindle Part Number | D1 Bore | D2   | D3   | L1 Projection | L2   | L3 Max Tool Enters | Preset Screw  |
|----------------------------------|---------|------|------|---------------|------|--------------------|---------------|
| BT30-SD012-080-B-X               | 0.1250  | 0.39 | 0.77 | 3.15          | 2.17 | 3.72               | -             |
| BT30-SD018-080-B-X               | 0.1875  | 0.39 | 0.77 | 3.15          | 2.17 | 3.72               | -             |
| BT30-SD025-080-B-X               | 0.2500  | 0.83 | 1.06 | 3.15          | 2.17 | 1.54               | SCW-ASC-05-23 |
| BT30-SD031-080-B-X               | 0.3125  | 0.83 | 1.06 | 3.15          | 2.17 | 1.54               | SCW-ASC-06-23 |
| BT30-SD037-080-B-X               | 0.3750  | 0.94 | 1.26 | 3.15          | 2.17 | 1.73               | SCW-ASC-08-23 |
| BT30-SD050-080-B-X               | 0.5000  | 0.94 | 1.26 | 3.15          | 2.17 | 1.97               | SCW-ASC-10-23 |
| BT30-SD062-080-B-X               | 0.6250  | 1.06 | 1.34 | 3.15          | 2.17 | 2.09               | SCW-ASC-12-23 |
| BT30-SD075-090-B-X               | 0.7500  | 1.30 | 1.65 | 3.54          | 2.56 | 2.09               | SCW-ASC-12-23 |

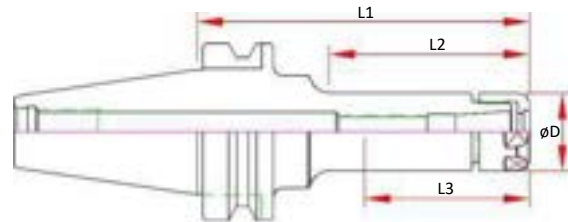
# BT30 SX Collet Chucks

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or <1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.005mm (0.0002") Standard
  - 0.003mm (0.0001") Ultra Precision
- Fine Trim Balance (Sample cutter required for balance compensation)



| Dual Contact Spindle Part Number | Standard Spindle Part Number | D    | L1 Projection | L2   | L3 Max. Preset | Collet | Nut    | Wrench     |
|----------------------------------|------------------------------|------|---------------|------|----------------|--------|--------|------------|
| BT30-SX06-060-B                  | BT30-SX06-060                | 0.77 | 2.36          | 1.30 | 2.15           | SX06   | SXN-06 | SXW-06     |
| BT30-SX06-090-B                  | BT30-SX06-090                |      | 3.54          | 2.20 | 2.15           |        |        |            |
| BT30-SX10-060-B                  | BT30-SX10-060                | 1.08 | 2.36          | 1.38 | 2.30           | SX10   | SXN-10 | SXW-10     |
| BT30-SX10-090-B                  | BT30-SX10-090                |      | 3.54          | 2.56 | 2.40           |        |        |            |
| BT30-SX16-060-B                  | BT30-SX16-060                | 1.58 | 2.36          | 1.46 | 2.30           | SX16   | SXN-16 | SXW-16     |
| BT30-SX16-090-B                  | BT30-SX16-090                |      | 3.54          | 2.64 | 3.03**         |        |        |            |
| BT30-SX25M-070-B                 | BT30-SX25M-070               | 1.97 | 2.76          | 2.68 | 2.42           | SX25   | SXN-25 | 50-55 HOOK |

\*\* 10MM Tool Shanks & Smaller

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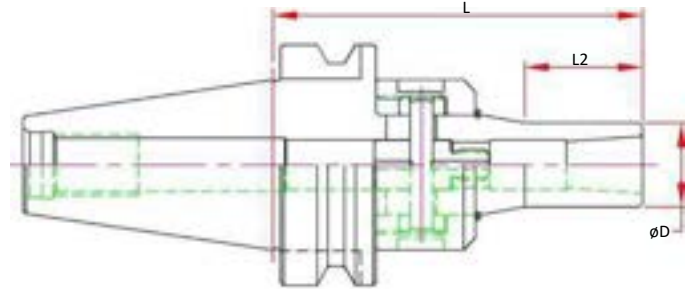
# BT30 VX - Mini Chuck

## Features

- 3 µm - 0.0001" Runout @ 4X Diameter
- Front Locking System
- Coolant Thru
- Dynamically Pre-Balanced G2.5 @ 20,000 RPM or < 1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets, STD and Jet-Blast
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Dual Contact Spindle Part Number | Collet Range  | D     | L1 Projection | L2   | Collet | Wrench    | Locking Torque Max. |
|----------------------------------|---------------|-------|---------------|------|--------|-----------|---------------------|
| BT30-VX06-090-B                  | 0.079 - 0.250 | 0.50  | 3.54          | 1.37 | MX06   | 45-48 PIN | 30 ft/lbs           |
| BT30-VX08-092-B                  | 0.125 - 0.394 | 0.787 | 3.62          | 1.21 | MX08   |           |                     |

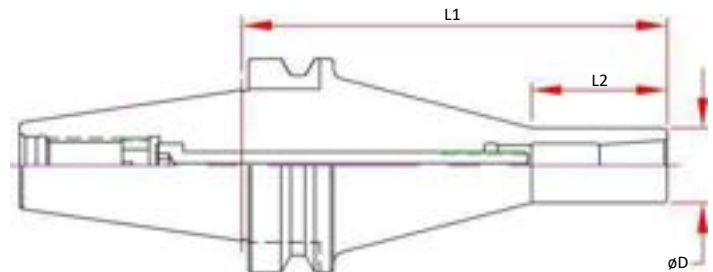
# BT30 MX - Mini Chuck

## Features

- 3 µm - 0.0001" Runout @ 4X Diameter
- Rear Draw Bolt Locking System
- Coolant Thru
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or < 1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets, STD and Jet-Blast
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Dual Contact Spindle Part Number | Standard Spindle Part Number | Collet Range  | D     | L1 Projection | L2   | Collet | Wrench | Locking Torque Max. |
|----------------------------------|------------------------------|---------------|-------|---------------|------|--------|--------|---------------------|
| BT30-MX06-090-B                  | BT30-MX06-090                | 0.079 - 0.250 | 0.500 | 3.54          | 1.42 | MX06   | MXW05  | 20 ft/lbs           |
| BT30-MX08-090-B                  | BT30-MX08-090                | 0.125 - 0.394 | 0.787 | 3.54          | 1.42 | MX08   |        |                     |
| BT30-MX12-105-B                  | BT30-MX12-105                | 0.157 - 0.500 | 1.000 | 4.13          | 1.38 | MX12   |        |                     |

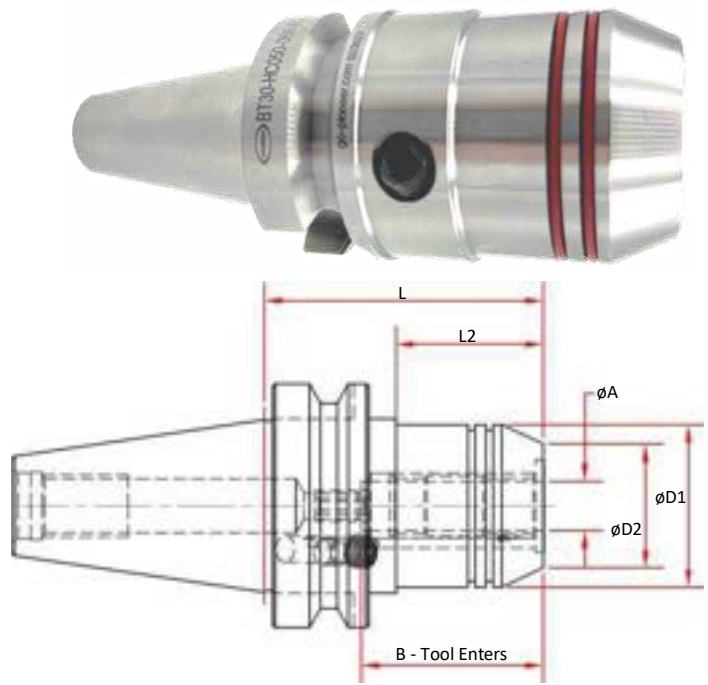
# BT30 Hydraulic Chucks

## Features

- 5  $\mu\text{m}$  - 0.0002" Runout @ 4 x Cutter Shank Dia.
- Designed for Tool Shanks w/ ISO h6 Class Tolerance
- Tapers are ground better than AT3 for optimal T.I.R.
- Pre-Balanced for use @ 20,000 RPM

## Optional (Order Separately):

- Wrench



| Part Number      | A Bore | B Max. Tool Enters | D1   | D2   | L Projection | L2   | Collet        | Wrench |
|------------------|--------|--------------------|------|------|--------------|------|---------------|--------|
| BT30-HC050-069-B | 0.5000 | 1.81               | 1.65 | 1.26 | 2.72         | 1.26 | HC075 / MC075 | HCW04  |
| BT30-HC075-090-B | 0.7500 | 2.00               | 1.65 | 1.50 | 3.54         | 1.97 | MC075         | HCW05  |

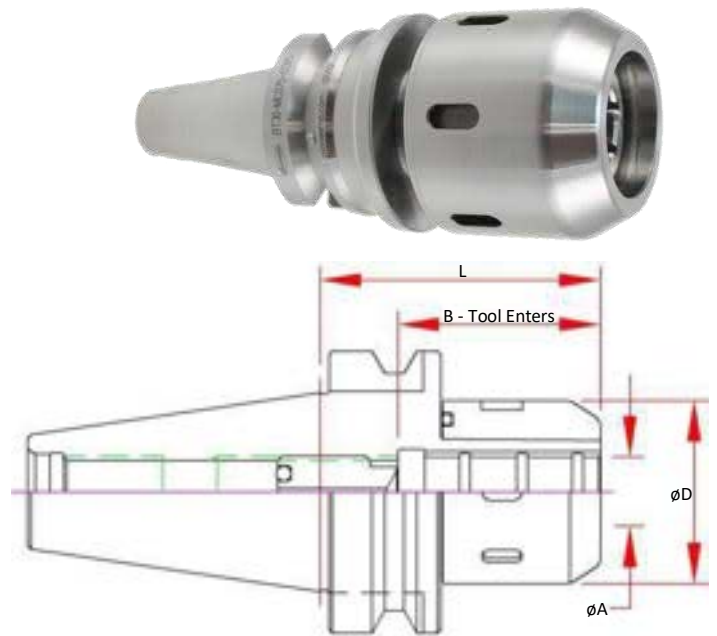
# BT30 Mill Chucks

## Features

- 5  $\mu\text{m}$  - 0.0002" Runout @ 4 x Cutter Shank Dia.
- Designed for Tool Shanks w/ ISO h6 Class Tolerance
- Tapers are ground better than AT3 for optimal T.I.R.
- Pre-Balanced for use @ 20,000 RPM

## Optional (Order Separately):

- Wrench
- Nylon Screw Seal for short tool shanks



| Part Number     | A Bore | B Max. Tool Enters | D    | L Projection | Preset Screw | Collet | Wrench     |
|-----------------|--------|--------------------|------|--------------|--------------|--------|------------|
| BT30-MC075-0315 | 0.7500 | 2.76               | 2.09 | 3.15         | ASC-12-30    | MC075  | 50-55 HOOK |
| BT30-MC075-0335 |        |                    |      | 3.35         |              |        |            |
| BT30-MC20-080   | 20mm   |                    |      | 3.15         |              | MC20   |            |

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# BT30 ER Collet Chucks

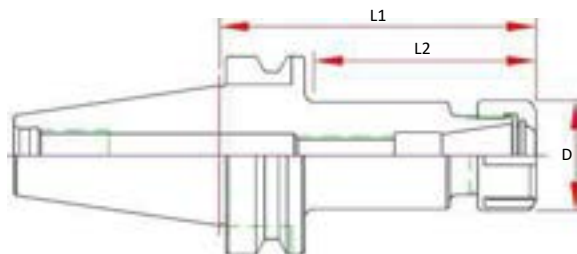


## Features

- 3 μm - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced G6.3 @ 20,000 RPM or <1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.010mm (0.0004") Standard
  - 0.005mm (0.0002") Ultra Precision
  - Sealed (Select Sizes)
  - Jet-Blast (Select Sizes)
- Fine Trim Balance (Sample cutter required for balance compensation)



## BT30 MINI NUT

| Part Number    | Range     | D    | L1 Projection | L2   | Screw    | Nut     | Wrench  |
|----------------|-----------|------|---------------|------|----------|---------|---------|
| BT30-ER11M-060 | .019-.276 | 0.63 | 2.36          | 1.46 | ASC-ER11 | ERN-11M | ERW-11M |
| BT30-ER11M-100 |           |      | 3.94          | 2.95 |          |         |         |
| BT30-ER16M-070 | .019-.394 | 0.87 | 2.76          | 1.86 | ASC-ER16 | ERN-16M | ERW-16M |
| BT30-ER16M-100 |           |      | 3.94          | 3.03 |          |         |         |

## BT30 STD NUT

| Dual Contact Spindle Part Number | Standard Spindle Part Number | Range     | D    | L1 Projection | L2   | Screw    | Nut     | Wrench  |
|----------------------------------|------------------------------|-----------|------|---------------|------|----------|---------|---------|
| BT30-ER11H-060-B                 | BT30-ER11H-060               | .019-.276 | 0.74 | 2.36          | 1.46 | ASC-ER11 | ERN-11H | ERW-11H |
| BT30-ER11H-100-B                 | BT30-ER11H-100               |           |      | 3.94          | 2.95 |          |         |         |
| BT30-ER16H-060-B                 | BT30-ER16H-060               | .019-.394 | 1.10 | 2.36          | 1.46 | ASC-ER16 | ERN-16H | ERW-16H |
| BT30-ER16H-100-B                 | BT30-ER16H-100               |           |      | 3.94          | 3.03 |          |         |         |
| BT30-ER20H-060-B                 | BT30-ER20H-060               | .019-.512 | 1.33 | 2.36          | 1.46 | ASC-ER20 | ERN-20H | ERW-20H |
| BT30-ER20H-100-B                 | BT30-ER20H-100               |           |      | 3.94          | 3.03 |          |         |         |
| BT30-ER25-060-B                  | BT30-ER25-060                | .019-.630 | 1.65 | 2.36          | 1.54 | ASC-ER25 | ERN-25  | ERW-25E |
| BT30-ER25-100-B                  | BT30-ER25-100                |           |      | 3.94          | 3.11 |          |         |         |
| BT30-ER32-060-B                  | BT30-ER32-060                | .039-.787 | 1.96 | 2.36          | 1.54 | ASC-ER32 | ERN-32  | ERW-32E |
| BT30-ER32-100-B                  |                              |           |      | 3.94          | 1.54 |          |         |         |

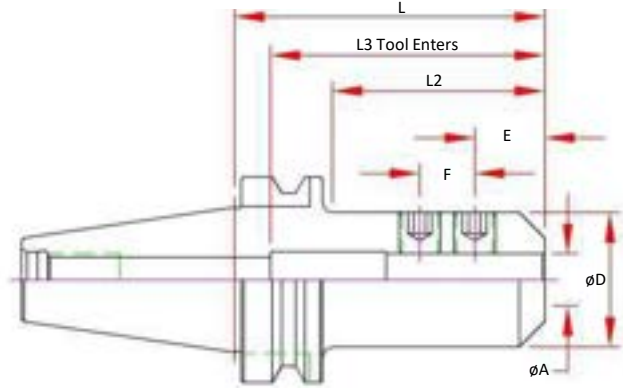
# BT30 End Mill Adapters

## Features

- 3  $\mu\text{m}$  - 0.0001" Bore Runout
- H5 Bore Tolerance or better
- Tapers are ground better than AT3 for optimal T.I.R.
- Coolant Thru
- Pre-Balanced for use @ 20,000 RPM

## Optional (Order Separately):

- Jet-Blast (add "J" to the part number)



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

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**BT 30**

BT40

HSK 40E

HSK 63A

HSK 100A

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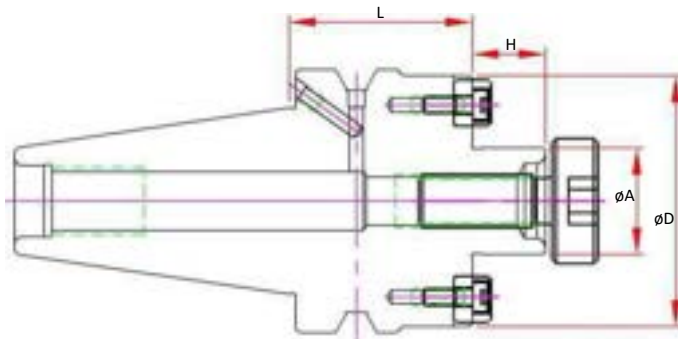
# BT30 Shell Mill Adapters

## Features

- 3  $\mu\text{m}$  - 0.0001" Bore Runout
- H5 Bore Tolerance or better
- Tapers are ground better than AT3 for optimal T.I.R.
- Coolant Thru Body
- Pre-Balanced for use @ 20,000 RPM

## Optional (Order Separately):

- FX Coolant (add "F" to the part number)



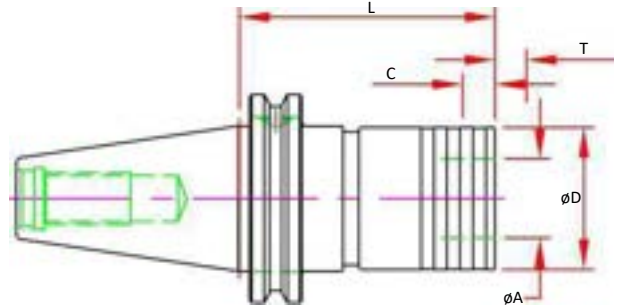
| Dual Contact Spindle Part Number | Standard Spindle Part Number | A Pilot | D    | H    | L Projection | Drive Key Size | Drive Key Number | Mounting Screw Thread | Mounting Screw# |
|----------------------------------|------------------------------|---------|------|------|--------------|----------------|------------------|-----------------------|-----------------|
| BT30-SM050-0119-B                | BT30-SM050-0119              |         |      |      | 1.19         |                |                  |                       |                 |
| BT30-SM050-0200-B                |                              | 0.50    | 1.38 | 0.57 | 2.00         | 0.250          | DK-SM050         | 1/4-28                | SCW-SM050       |
| BT30-SM050-0400-B                |                              |         |      |      | 4.00         |                |                  |                       |                 |
| BT30-SM075-0119-B                | BT30-SM075-0119              |         |      |      | 1.19         |                |                  |                       |                 |
| BT30-SM075-0200-B                |                              | 0.75    | 1.75 | 0.69 | 2.00         | 0.312          | DK-SM075         | 3/8-24                | SCW-SM075       |
| BT30-SM075-0400-B                |                              |         |      |      | 4.00         |                |                  |                       |                 |
| BT30-SM100-0119-B                | BT30-SM100-0119              | 1.00    | 1.97 | 0.69 | 1.19         | 0.375          | DK-SM100         | 1/2-20                | SCW-SM100       |



# 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
- Size 3 includes pull to release system to prevent damage from over stroke
- TC Holders are not designed for Coolant Thru
- For use with both RA and TC adapters
  - TC for machines with limited "Z" control
- 2 Piece Design is assembled Straight Shank Tap Holder with End Mill Adapter
- Tapers are ground better than AT3 for optimal T.I.R.



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**BT 30**

BT40

HSK 40E

HSK 63A

HSK 100A

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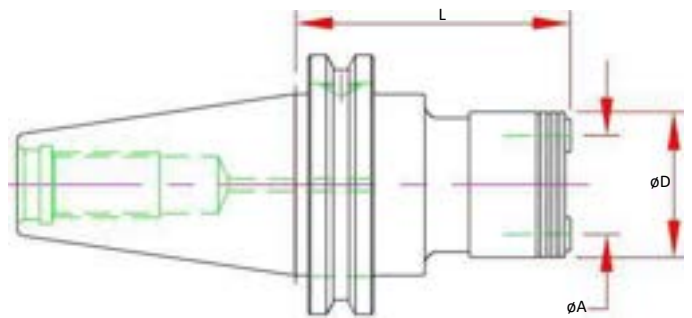


| Size | Dual Contact Spindle Part Number | Standard Spindle Part Number | 2 Piece Design | Capacity | A    | D    | L    | T Tension | C Comp. |
|------|----------------------------------|------------------------------|----------------|----------|------|------|------|-----------|---------|
| 1    | BT30-TC1-0433-B                  | BT30-TC1-0433                | Y              | #6-9/16  | 0.75 | 1.42 | 4.33 | 0.30      | 0.30    |
| 2    | BT30-TC2-0511-B                  | BT30-TC2-0511                | Y              | 5/16-7/8 | 1.22 | 2.09 | 5.11 | 0.49      | 0.49    |

# RT - Rigid QC Tap Holders

## Features

- Body - Coolant Thru Center
- Tapers are ground better than AT3 for optimal T.I.R.
- **For use with RA Adapters Only!**



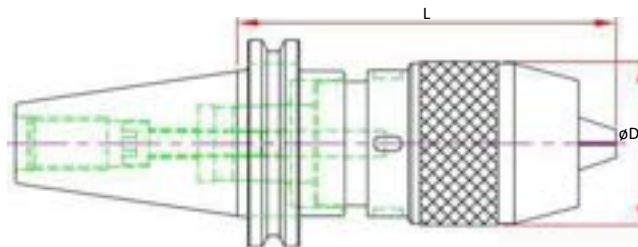
| Size | Dual Contact Spindle Part Number | Standard Spindle Part Number | 2 Piece Design | Capacity | A    | D    | L Projection |
|------|----------------------------------|------------------------------|----------------|----------|------|------|--------------|
| 1    | BT30-RT1-0432-B                  | BT30-RT1-0432                | Y              | #6-9/16  | 0.75 | 1.34 | 4.32         |
| 2    | BT30-RT2-0511-B                  | BT30-RT2-0511                | Y              | 5/16-7/8 | 1.22 | 1.93 | 5.11         |



# DC - Drill Chuck

**Features:**

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

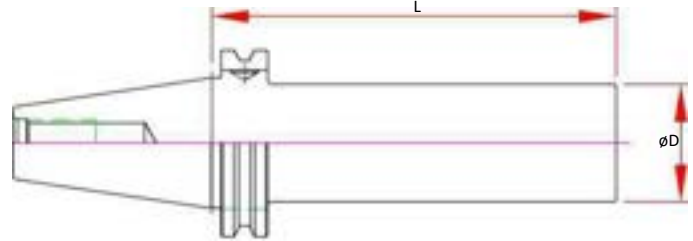


| Part Number   | Range       | D    | L Projection | Wrench     |
|---------------|-------------|------|--------------|------------|
| BT30-DC13-105 | 0.04 - 0.50 | 1.96 | 4.13         | DCW13-BT30 |

# TB - Test Bar

## Features

- Concentric to Taper within  $3\mu\text{m}$  (0.0001") TIR
- Tapers are ground better than AT3 for optimal T.I.R.
- Hardened & Normalized for consistency
- 100% Individually inspected with Certification Sheet included
- Wood Box Included
- Laser Marked with Actual Diameter and Length



| Part Number     | Spindle                 | D    | L Projection |
|-----------------|-------------------------|------|--------------|
| BT30-TB32-200-B | STD & Dual Contact BT30 | 32mm | 200mm        |

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**BT 30**

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HSK 100A

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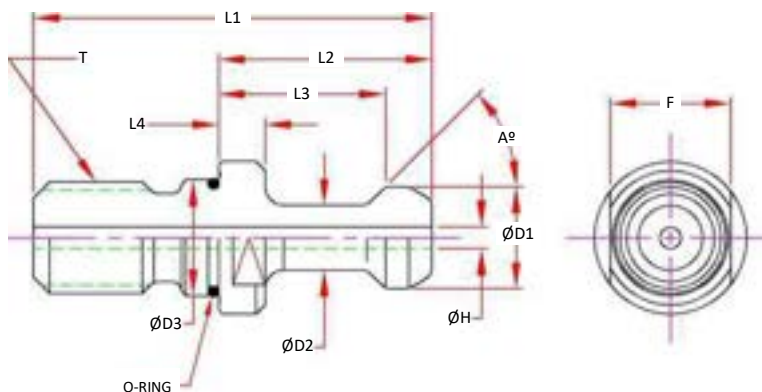
# BT40

## BT40 - High Performance Studs

### Features

- Manufactured to the Industry Standards or machine builders specifications.
- Grind Finish to adhere to machine builder recommendations
- Coolant Knobs include O-ring on the thread side pilot diameter to adhere to builder recommendations

**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 or contact the machine manufacturer.



| Part Number      | A Angle | D1 Head | D2 Neck | D3 Pilot | L1 OAL | L2 Proj. | L3 Pull Loc. | L4 Flange | H Hole | O-Ring | F Flats | T Thread | Socket Wrench | Notes      |
|------------------|---------|---------|---------|----------|--------|----------|--------------|-----------|--------|--------|---------|----------|---------------|------------|
| HPS-B40-MAS-45   | 45      | 0.591   | 0.394   | 0.669    | 2.362  | 1.378    | 1.102        | 0.236     | -      | -      | 19mm    | M16      | TWS-M19       | MAS P40T-1 |
| HPS-B40-MAS-45-C |         |         |         |          |        |          |              | 0.236     | 0.157* | Yes 1  |         |          |               | MAS P40T-1 |
| HPS-806-1        | 75      | 0.748   | 0.551   | 0.669    | 2.126  | 1.142    | 0.906        | 0.276     | 0.236  | Yes 1  | 19mm    | M16      | TWS-M19       | JIS B6339  |
| HPS-G51          | 45      | 0.740   | 0.490   |          | 1.736  | 0.752    | 0.552        | 0.118     | 0.276  | Yes 1  |         |          |               | Coolant    |
| HPS-O8           | 90      | 0.591   | 0.394   |          | 2.362  | 1.378    | 1.102        | 0.236     | -      | -      |         |          |               | MAS P40T-3 |

\* O-Ring added to Pilot, adheres to machine company changes, remove O-Ring if not required

# BT40 Nose Index

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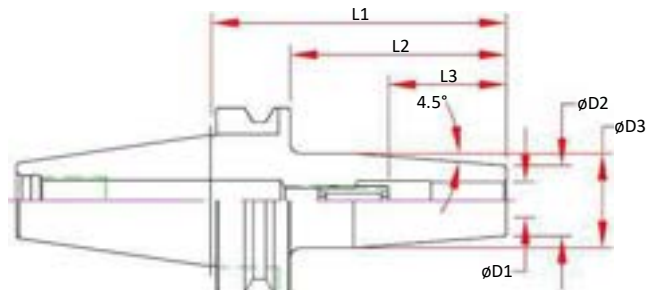
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# BT40 Shrink Fit - Inch

## Features

- 3 μm - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- X Jet-Blast Pluggable Coolant Ports
- Tapers are ground better than AT3 for optimal T.I.R.
- Dynamically Balanced for G2.5 @ 25,000 RPM or < 1 gmm
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Carbide Cutting Tools with h6 shank tolerance



## Optional (Order Separately):

- Fine Trim Balance (Sample cutter required for balance compensation)



| Dual Contact Spindle Part Number | D1 Bore | D2   | D3   | L1 Projection | L2   | L3 Max Tool Enters | Preset Screw  |
|----------------------------------|---------|------|------|---------------|------|--------------------|---------------|
| BT40-SD012-090-B-X               | 0.1250  | 0.39 | 0.77 | 3.54          | 2.28 | 4.57               | -             |
| BT40-SD012-160-B-X               | 0.1250  | 0.39 | 0.77 | 6.30          | 5.43 | 7.73               | -             |
| BT40-SD018-090-B-X               | 0.1875  | 0.39 | 0.77 | 3.54          | 2.28 | 4.57               | -             |
| BT40-SD018-160-B-X               | 0.1875  | 0.39 | 0.77 | 6.30          | 5.43 | 7.73               | -             |
| BT40-SD025-090-B-X               | 0.2500  | 0.83 | 1.06 | 3.54          | 2.28 | 1.54               | SCW-ASC-05-23 |
| BT40-SD025-160-B-X               | 0.2500  | 0.83 | 1.06 | 6.30          | 5.43 | 1.54               | SCW-ASC-05-23 |
| BT40-SD031-090-B-X               | 0.3125  | 0.83 | 1.06 | 3.54          | 2.28 | 1.54               | SCW-ASC-06-23 |
| BT40-SD031-160-B-X               | 0.3125  | 0.83 | 1.06 | 6.30          | 5.43 | 1.54               | SCW-ASC-06-23 |
| BT40-SD037-090-B-X               | 0.3750  | 0.94 | 1.26 | 3.54          | 2.28 | 1.73               | SCW-ASC-08-23 |
| BT40-SD037-160-B-X               | 0.3750  | 0.94 | 1.26 | 6.30          | 5.43 | 1.73               | SCW-ASC-08-23 |
| BT40-SD050-090-B-X               | 0.5000  | 0.94 | 1.26 | 3.54          | 2.28 | 1.97               | SCW-ASC-10-23 |
| BT40-SD050-160-B-X               | 0.5000  | 0.94 | 1.26 | 6.30          | 5.43 | 1.97               | SCW-ASC-10-23 |
| BT40-SD062-090-B-X               | 0.6250  | 1.06 | 1.34 | 3.54          | 2.28 | 2.09               | SCW-ASC-12-23 |
| BT40-SD062-160-B-X               | 0.6250  | 1.06 | 1.34 | 6.30          | 5.43 | 2.09               | SCW-ASC-12-23 |
| BT40-SD075-090-B-X               | 0.7500  | 1.30 | 1.65 | 3.54          | 2.28 | 2.09               | SCW-ASC-12-23 |
| BT40-SD075-160-B-X               | 0.7500  | 1.30 | 1.65 | 6.30          | 5.43 | 2.09               | SCW-ASC-12-23 |
| BT40-SD100-100-B-X               | 1.0000  | 1.73 | 2.09 | 3.94          | 3.07 | 2.28               | SCW-ASC-16-23 |
| BT40-SD100-160-B-X               | 1.0000  | 1.73 | 2.09 | 6.30          | 5.43 | 2.28               | SCW-ASC-16-23 |
| BT40-SD125-100-B-X               | 1.2500  | 1.73 | 2.09 | 3.94          | 3.07 | 2.28               | SCW-ASC-16-23 |
| BT40-SD125-160-B-X               | 1.2500  | 1.73 | 2.09 | 6.30          | 5.43 | 2.28               | SCW-ASC-16-23 |

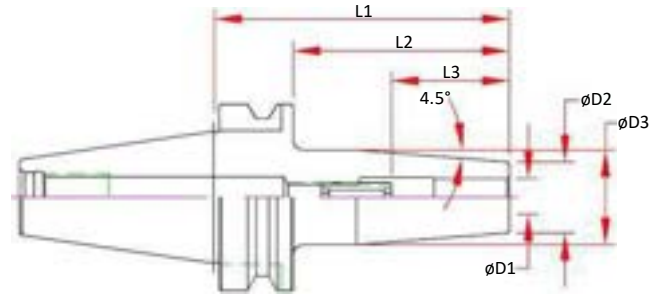
# BT40 Shrink Fit - Metric

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- Coolant Thru the Center
- Tapers are ground better than AT3 for optimal T.I.R.
- Dynamically Balanced for G2.5 @ 25,000 RPM or < 1 gmm
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Carbide Cutting Tools with h6 shank tolerance

## Optional (Order Separately):

- Jet-Blast Coolant Ports - Add "J"
- DIN-B Coolant - Add "D"
- Fine Trim Balance (Sample cutter required for balance compensation)



| Part Number    | D1 Bore | D2   | D3   | L1 Projection | L2   | L3 Max Tool Enters | Preset Screw  |
|----------------|---------|------|------|---------------|------|--------------------|---------------|
| BT40-SDM03-090 | 3.000   | 0.39 | 0.75 | 3.54          | 2.28 | 4.57               | -             |
| BT40-SDM03-160 | 3.000   | 0.39 | 0.75 | 6.30          | 5.43 | 7.73               | -             |
| BT40-SDM04-090 | 4.000   | 0.39 | 0.75 | 3.54          | 2.28 | 4.57               | -             |
| BT40-SDM04-160 | 4.000   | 0.39 | 0.75 | 6.30          | 5.43 | 7.73               | -             |
| BT40-SDM06-090 | 6.000   | 0.83 | 1.06 | 3.54          | 2.28 | 1.54               | SCW-ASC-05-23 |
| BT40-SDM06-160 | 6.000   | 0.83 | 1.06 | 6.30          | 5.43 | 1.54               | SCW-ASC-05-23 |
| BT40-SDM08-090 | 8.000   | 0.83 | 1.06 | 3.54          | 2.28 | 1.54               | SCW-ASC-06-23 |
| BT40-SDM08-160 | 8.000   | 0.83 | 1.06 | 6.30          | 5.43 | 1.54               | SCW-ASC-06-23 |
| BT40-SDM10-090 | 10.000  | 0.94 | 1.26 | 3.54          | 2.28 | 1.73               | SCW-ASC-08-23 |
| BT40-SDM10-160 | 10.000  | 0.94 | 1.26 | 6.30          | 5.43 | 1.73               | SCW-ASC-08-23 |
| BT40-SDM12-090 | 12.000  | 0.94 | 1.26 | 3.54          | 2.28 | 1.97               | SCW-ASC-10-23 |
| BT40-SDM12-160 | 12.000  | 0.94 | 1.26 | 6.30          | 5.43 | 1.97               | SCW-ASC-10-23 |
| BT40-SDM16-090 | 16.000  | 1.06 | 1.34 | 3.54          | 2.28 | 1.97               | SCW-ASC-12-23 |
| BT40-SDM16-160 | 16.000  | 1.06 | 1.34 | 6.30          | 5.43 | 1.97               | SCW-ASC-12-23 |
| BT40-SDM20-090 | 20.000  | 1.30 | 1.65 | 3.54          | 2.28 | 2.17               | SCW-ASC-12-23 |
| BT40-SDM20-160 | 20.000  | 1.30 | 1.65 | 6.30          | 5.43 | 2.17               | SCW-ASC-12-23 |

CAT40

CAT50

BT30

BT 40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT SHANKS

COLLETS

PARTS & ACCESS.

SHRINK MACHINES

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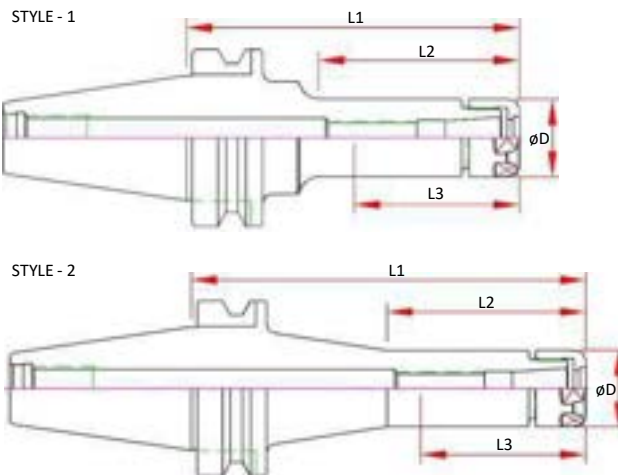
# BT40 SX Collet Chucks

## Features

- 3 µm - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or <1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.005mm (0.0002") Standard
  - 0.003mm (0.0001") Ultra Precision
- DIN-B Coolant
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Dual Contact Spindle Part Number | Style | L2   | D    | L1 Projection | L3 Max. Preset | Collet | Nut     | Wrench     |
|----------------------------------|-------|------|------|---------------|----------------|--------|---------|------------|
| BT40-SX06-090-B                  | 1     | 2.36 |      | 3.54          | 2.16           |        |         |            |
| BT40-SX06-120-B                  | 2     | 2.36 | 0.77 | 4.72          | 2.00           | SX06   | SXN-06  | SXW-06     |
| BT40-SX06-150-B                  | 2     | 2.36 |      | 5.91          | 2.00           |        |         |            |
| BT40-SX10-060-B                  | 1     | 1.18 |      | 2.36          | 2.20           |        |         |            |
| BT40-SX10-090-B                  | 1     | 2.36 | 1.08 | 3.54          | 2.76           | SX10   | SXN-10  | SXW-10     |
| BT40-SX10-120-B                  | 2     | 2.76 |      | 4.72          | 2.56           |        |         |            |
| BT40-SX10-150-B                  | 2     | 2.87 |      | 5.91          | 2.76           |        |         |            |
| BT40-SX16-090-B                  | 1     | 2.28 |      | 3.54          | 2.92           |        |         |            |
| BT40-SX16-120-B                  | 1     | 3.46 | 1.58 | 4.72          | 3.00           | SX16   | SXN-16  | SXW-16     |
| BT40-SX16-150-B                  | 1     | 4.64 |      | 5.91          | 3.00           |        |         |            |
| BT40-SX16-180-B                  | 1     | 5.82 |      | 7.09          | 3.00           |        |         |            |
| BT40-SX25M-090-B                 | 1     | 2.40 | 1.97 | 3.54          | 3.16           | SX25   | SXN-25M | 50-55 HOOK |
| BT40-SX25M-120-B                 | 1     | 2.40 |      | 4.72          | 3.16           |        |         |            |



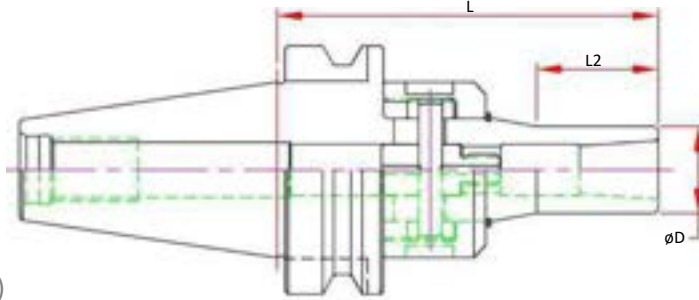
# BT40 VX - Mini Chuck

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout @ 4X Diameter
- Front Locking System
- Coolant Thru
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or < 1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
- DIN-B Flange Coolant
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Dual Contact Spindle Part Number | Collet Range  | D     | L1 Projection | L2   | Collet | Wrench    | Locking Torque Max. |
|----------------------------------|---------------|-------|---------------|------|--------|-----------|---------------------|
| BT40-VX06-100-B                  | 0.079 - 0.250 | 0.50  | 3.94          | 1.48 | MX06   |           |                     |
| BT40-VX06-150-B                  |               |       | 5.91          |      |        |           |                     |
| BT40-VX08-100-B                  | 0.125 - 0.394 | 0.787 | 3.94          | 1.21 | MX08   | 45-48 PIN | 30 ft/lbs           |
| BT40-VX08-150-B                  |               |       | 5.91          |      |        |           |                     |
| BT40-VX12-110-B                  | 0.157 - 0.500 | 1.00  | 4.33          | 2.03 | MX12   |           |                     |
| BT40-VX12-150-B                  |               |       | 5.91          |      |        |           |                     |



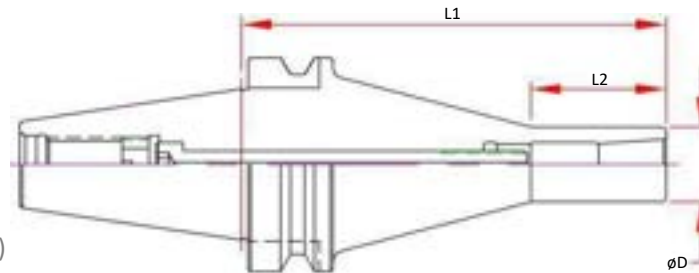
# BT40 MX - Mini Chuck

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout @ 4X Diameter
- Rear Draw Bolt Locking System
- Coolant Thru
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or < 1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets, STD and Jet-Blast
- DIN-B Flange Coolant
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Dual Contact Spindle Part Number | Collet Range  | D     | L1 Projection | L2   | Collet | Wrench | Locking Torque Max. |
|----------------------------------|---------------|-------|---------------|------|--------|--------|---------------------|
| BT40-MX06-085-B                  | 0.079 - 0.250 | 0.500 | 3.35          | 1.42 | MX06   |        |                     |
| BT40-MX06-150-B                  |               |       | 5.91          |      |        |        |                     |
| BT40-MX08-085-B                  | 0.125 - 0.394 | 0.787 | 3.35          | 1.42 | MX08   | MXW05  | 20 ft/lbs           |
| BT40-MX12-090-B                  |               |       | 3.54          |      |        |        |                     |



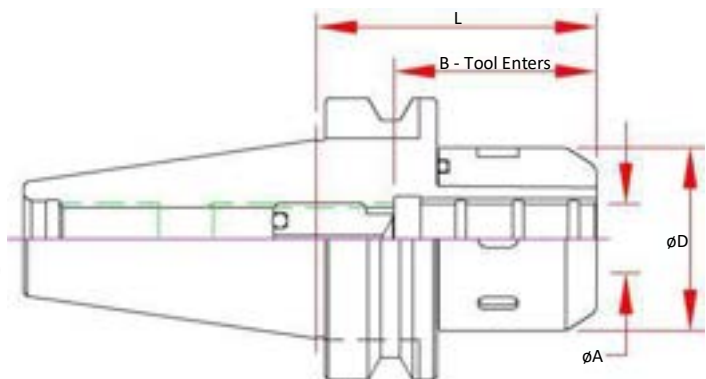
# BT40 Mill Chucks

## Features

- 5  $\mu\text{m}$  - 0.0002" Runout @ 4 x Cutter Shank Dia.
- Designed for Tool Shanks w/ ISO h6 Class Tolerance
- Tapers are ground better than AT3 for optimal T.I.R.
- Pre-Balanced for use @ 20,000 RPM

## Optional (Order Separately):

- Wrench
- Nylon Screw Seal for short tool shanks
- DIN-B Flange Coolant
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Part Number     | A Bore | B Max. Tool Enters | D    | L Projection | Preset Screw | Collet | Wrench     |
|-----------------|--------|--------------------|------|--------------|--------------|--------|------------|
| BT40-MC075-0295 | 0.7500 | 2.76               | 2.09 | 2.95         | ASC-16-40    | MC075  | 50-55 HOOK |
| BT40-MC075-0472 |        |                    |      | 4.72         |              |        |            |
| BT40-MC100-0315 | 1.0000 | 2.91               | 2.44 | 3.15         | ASC-16-40    | MC100  | 58-65 HOOK |
| BT40-MC100-0335 |        |                    |      | 3.35         |              |        |            |
| BT40-MC100-0472 |        |                    |      | 4.72         |              |        |            |
| BT40-MC125-0335 | 1.2500 | 3.07               | 2.76 | 3.35         | ASC-16-40    | MC125  | 65-70 HOOK |
| BT40-MC125-0354 |        |                    |      | 3.54         |              |        |            |
| BT40-MC125-0472 |        |                    |      | 4.72         |              |        |            |

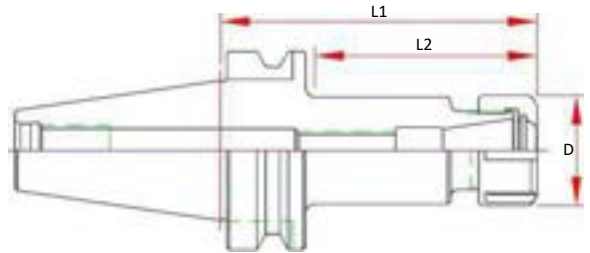
# BT40 ER Collet Chucks

## Features

- **3 μm - 0.0001" Runout Taper to Taper**
- Coolant Thru Body
- Dynamically Pre-Balanced G6.3 @ 20,000 RPM or <1gmm
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.010mm (0.0004") Standard
  - 0.005mm (0.0002") Ultra Precision
  - Sealed (Select Sizes)
  - Jet-Blast (Select Sizes)
- DIN-B Coolant (Select models)
- Fine Trim Balance (Sample cutter required for balance compensation)



| Dual Contact Spindle Part Number | Standard Spindle Part Number | Range      | D    | L1 Projection | L2   | Screw    | Nut     | Wrench  |
|----------------------------------|------------------------------|------------|------|---------------|------|----------|---------|---------|
|                                  | BT40-ER11H-060               |            |      | 2.36          | 1.18 |          |         |         |
|                                  | BT40-ER11H-100               | .019-.276  | 0.74 | 3.94          | 2.75 | ASC-ER11 | ERN-11H | ERW-11H |
|                                  | BT40-ER11H-150               |            |      | 5.91          | 1.57 |          |         |         |
|                                  | BT40-ER16H-060               |            |      | 2.36          | 1.18 |          |         |         |
| BT40-ER16H-100-B                 | BT40-ER16H-100               | .019-.394  | 1.10 | 3.94          | 2.75 | ASC-ER16 | ERN-16H | ERW-16H |
|                                  | BT40-ER16H-160               |            |      | 6.30          | 5.11 |          |         |         |
|                                  | BT40-ER20H-070               |            |      | 2.76          | 1.57 |          |         |         |
|                                  | BT40-ER20H-100               | .019-.512  | 1.33 | 3.94          | 2.75 | ASC-ER20 | ERN-20H | ERW-20H |
|                                  | BT40-ER20H-160               |            |      | 6.30          | 5.11 |          |         |         |
|                                  | BT40-ER25-060                |            |      | 2.36          | 1.26 |          |         |         |
|                                  | BT40-ER25-100                | .019-.630  | 1.65 | 3.94          | 2.83 | ASC-ER25 | ERN-25  | ERW-25E |
|                                  |                              |            |      | 2.36          | 1.30 |          |         |         |
|                                  | BT40-ER32-075                |            |      | 2.95          | 1.88 |          |         |         |
|                                  | BT40-ER32-100                | .039-.787  | 1.96 | 3.94          | 2.87 | ASC-ER32 | ERN-32  | ERW-32E |
|                                  | BT40-ER32-160                |            |      | 6.30          | 5.23 |          |         |         |
|                                  | BT40-ER40-080                |            |      | 3.15          | 2.04 |          |         |         |
|                                  | BT40-ER40-160                | .079-1.024 | 2.48 | 6.30          | 4.40 | ASC-ER40 | ERN-40  | ERW-40E |

CAT40

CAT50

BT30

**BT 40**

HSK 40E

HSK 63A

HSK 100A

STRAIGHT SHANKS

COLLETS

PARTS & ACCESS.

SHRINK MACHINES

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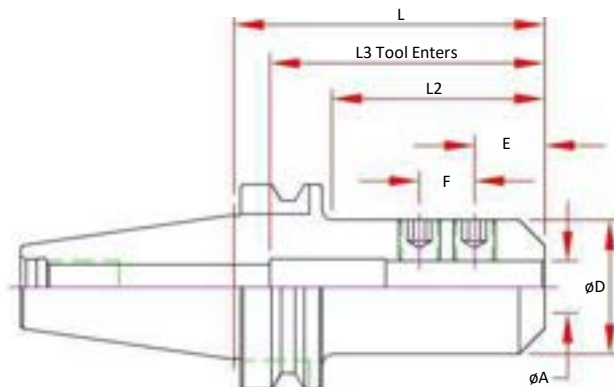
# BT40 End Mill Adapters

## Features

- 3  $\mu\text{m}$  - 0.0001" Bore Runout
- H5 Bore Tolerance or better
- Tapers are ground better than AT3 for optimal T.I.R.
- Coolant Thru
- Pre-Balanced for use @ 20,000 RPM

## Optional (Order Separately):

- Jet-Blast (add "J" to the part number)
- DIN-B Coolant (Select models)



|       | Dual Contact Spindle<br>Part Number | Standard Spindle<br>Part Number | A<br>Bore | D    | E    | F | L<br>Projection | L2   | L3<br>Max. Tool<br>Enters | Screw<br>Number |
|-------|-------------------------------------|---------------------------------|-----------|------|------|---|-----------------|------|---------------------------|-----------------|
| 1/8   |                                     | BT40-EM012-0250                 | 0.1250    | 0.69 | 0.19 | - | 2.50            | 1.31 | 3.89                      | 3               |
|       |                                     | BT40-EM012-0400                 |           |      |      |   | 4.00            | 1.00 | 5.39                      |                 |
| 3/16  |                                     | BT40-EM018-0250                 | 0.1875    | 0.69 | 0.44 | - | 2.50            | 1.31 | 3.89                      | 4               |
|       |                                     | BT40-EM018-0400                 |           |      |      |   | 4.00            | 2.81 | 5.39                      |                 |
| 1/4   |                                     | BT40-EM025-0250                 | 0.2500    | 0.78 | 0.44 | - | 2.50            | 1.31 | 3.89                      | 4               |
|       |                                     | BT40-EM025-0400                 |           |      |      |   | 4.00            | 2.81 | 5.39                      |                 |
|       |                                     | BT40-EM025-0600                 |           |      |      |   | 6.00            | 2.50 | 7.39                      |                 |
| 5/16  |                                     | BT40-EM031-0250                 | 0.3125    | 0.88 | 0.44 | - | 2.50            | 1.31 | 3.89                      | 4               |
|       |                                     | BT40-EM031-0400                 |           |      |      |   | 4.00            | 2.81 | 5.41                      |                 |
|       |                                     | BT40-EM037-0250                 |           |      |      |   | 2.50            | 1.31 | 3.89                      |                 |
| 3/8   |                                     | BT40-EM037-0400                 | 0.3750    | 1.00 | 0.75 | - | 4.00            | 2.81 | 5.39                      | 5               |
|       |                                     | BT40-EM037-0600                 |           |      |      |   | 6.00            | 2.50 | 7.39                      |                 |
|       |                                     | BT40-EM050-0250-B               |           |      |      |   | 2.50            | 1.31 | 2.56                      |                 |
| 1/2   |                                     | BT40-EM050-0400-B               | 0.5000    | 1.25 | 0.88 | - | 4.00            | 2.81 | 2.56                      | 6               |
|       |                                     | BT40-EM050-0600                 |           |      |      |   | 6.00            | 2.50 | 2.56                      |                 |
|       |                                     | BT40-EM062-0250                 |           |      |      |   | 2.50            | 1.31 | 3.50                      |                 |
| 5/8   |                                     | BT40-EM062-0400                 | 0.6250    | 1.50 | 0.94 | - | 4.00            | 2.81 | 3.50                      | 7               |
|       |                                     | BT40-EM075-0250-B               |           |      |      |   | 2.50            | 1.31 | 2.38                      |                 |
|       |                                     | BT40-EM075-0400                 |           |      |      |   | 4.00            | 2.81 | 3.94                      |                 |
| 3/4   |                                     | BT40-EM075-0600                 | 0.7500    | 1.75 | 1.00 | - | 6.00            | 4.81 | 3.94                      | 8               |
|       |                                     | BT40-EM100-0200-B               |           |      |      |   | 2.00            | 0.97 | 2.38                      |                 |
|       |                                     | BT40-EM100-0300                 |           |      |      |   | 3.00            | 1.97 | 3.15                      |                 |
| 1     |                                     | BT40-EM100-0400-B               | 1.0000    | 2.00 | 1.12 | - | 1.00            | 4.00 | 4.44                      | (2) 10          |
|       |                                     | BT40-EM125-0200                 |           |      |      |   | 2.00            | 0.97 | 2.36                      |                 |
| 1 1/4 |                                     | BT40-EM125-0356                 | 1.2500    | 2.25 | 1.12 | - | 1.00            | 3.56 | 3.54                      | (2) 11          |
|       |                                     | BT40-EM150-0433                 |           |      |      |   | 1.00            | 4.33 | 3.14                      | (2) 11          |

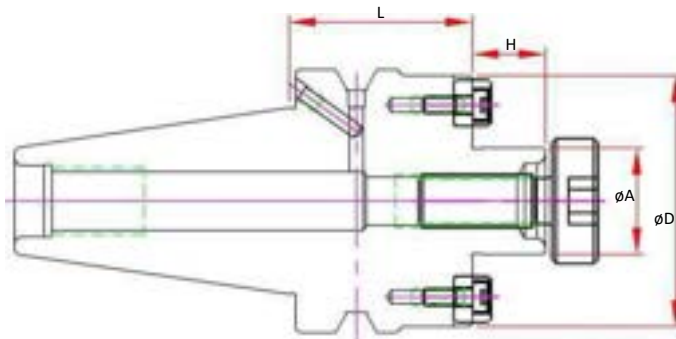
# BT40 Shell Mill Adapters

## Features

- 3  $\mu\text{m}$  - 0.0001" Bore Runout
- H5 Bore Tolerance or better
- Tapers are ground better than AT3 for optimal T.I.R.
- Coolant Thru Body
- Pre-Balanced for use @ 20,000 RPM

## Optional (Order Separately):

- FX Coolant (add "F" to the part number)
- DIN-B Coolant (Select models)



CAT40

CAT50

BT30

BT 40

| Standard Spindle Part Number | A Pilot | D    | H    | L Projection | Drive Key Size | Drive Key Number | Mounting Screw Thread | Mounting Screw# |
|------------------------------|---------|------|------|--------------|----------------|------------------|-----------------------|-----------------|
| BT40-SM075-0175              | 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              | 1.00    | 1.97 | 0.69 | 1.75         | 0.375          | DK-SM100         | 1/2-20                | SCW-SM100       |
| BT40-SM100-0400              |         |      |      | 4.00         |                |                  |                       |                 |
| BT40-SM150-0200              | 1.50    | 3.82 | 0.94 | 2.00         | 0.625          | DK-SM150         | 3/4-16                | SCW-SM150       |



HSK 40E

HSK 63A

HSK 100A

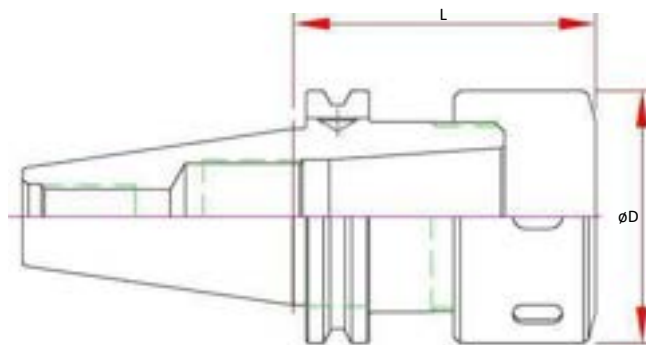
# TG - Collet Chuck

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced @ 20,000 RPM (CAT50 @ 15,000 RPM)
- Tapers are ground better than AT3 for optimal T.I.R.

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
- DIN-B Coolant (Select models)



STRAIGHT SHANKS

COLLETS

PARTS & ACCESS.

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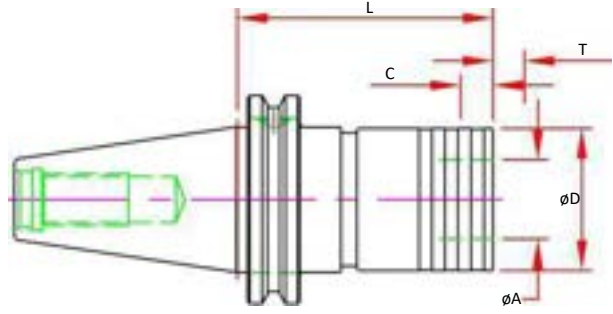
|      | Part Number     | Range       | D    | L Projection | Collet | Screw    | Nut    | Wrench     |
|------|-----------------|-------------|------|--------------|--------|----------|--------|------------|
| BT40 | BT40-TG100-0300 | .094 - 1.00 | 2.48 | 3.00         | TG100  | ASC-ER40 | TGN100 | 58-65 HOOK |



# 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
- Size 3 includes pull to release system to prevent damage from over stroke
- TC Holders are not designed for Coolant Thru
- For use with both RA and TC adapters
  - TC for machines with limited "Z" control
- 2 Piece Design is assembled Straight Shank Tap Holder with End Mill Adapter
- Tapers are ground better than AT3 for optimal T.I.R.

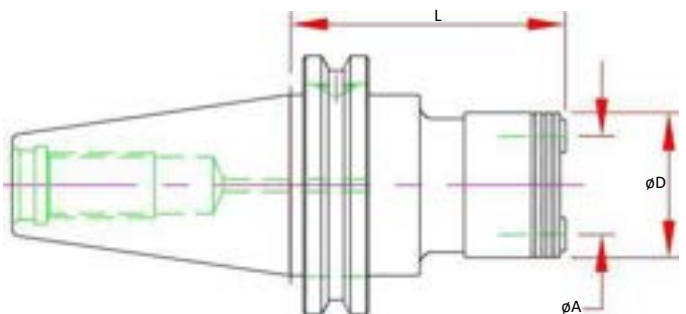


| Size | Dual Contact Spindle Part Number | Standard Spindle Part Number | 2 Piece Design | Capacity | A    | D    | L    | T Tension | C Comp. |
|------|----------------------------------|------------------------------|----------------|----------|------|------|------|-----------|---------|
| 1    |                                  | BT40-TC1-67                  |                | #6-9/16  | 0.75 | 1.42 | 2.64 | 0.30      | 0.30    |
| 1    | BT40-TC1-0358-B                  | BT40-TC1-0358                | Y              | #6-9/16  | 0.75 | 1.42 | 3.58 | 0.30      | 0.30    |
| 2    |                                  | BT40-TC2-94                  |                | 5/16-7/8 | 1.22 | 2.09 | 3.70 | 0.49      | 0.49    |
| 2    | BT40-TC2-0436-B                  | BT40-TC2-0436                | Y              | 5/16-7/8 | 1.22 | 2.09 | 4.36 | 0.49      | 0.49    |

# RT - Rigid QC Tap Holders

## Features

- Body - Coolant Thru Center
- Tapers are ground better than AT3 for optimal T.I.R.
- **For use with RA Adapters Only!**



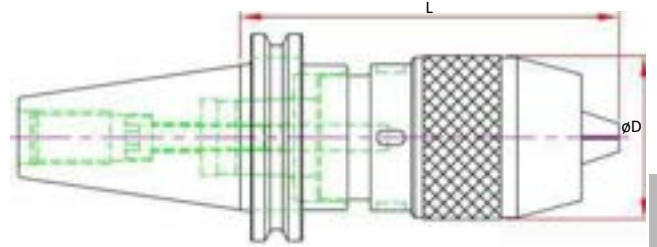
| Size | Dual Contact Spindle Part Number | Standard Spindle Part Number | 2 Piece Design | Capacity | A    | D    | L Projection |
|------|----------------------------------|------------------------------|----------------|----------|------|------|--------------|
| 1    |                                  | BT40-RT1-72                  |                | #6-9/16  | 0.75 | 1.34 | 2.83         |
| 1    | BT40-RT1-0357-B                  | BT40-RT1-0357                | Y              | #6-9/16  | 0.75 | 1.34 | 3.57         |
| 2    |                                  | BT40-RT2-91                  |                | 5/16-7/8 | 1.22 | 1.93 | 3.58         |
| 2    | BT40-RT2-0436-B                  | BT40-RT2-0436                | Y              | 5/16-7/8 | 1.22 | 1.93 | 4.36         |



# DC - Drill Chuck

## Features:

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



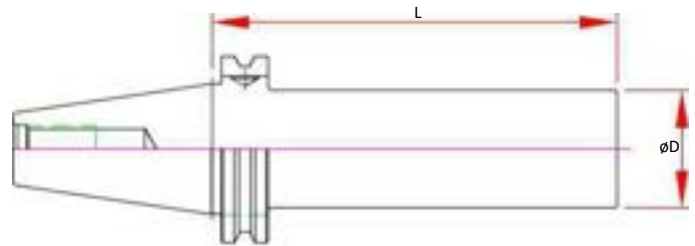
| Part Number   | Range       | D    | L Projection | Wrench |
|---------------|-------------|------|--------------|--------|
| BT40-DC13-110 | 0.04 - 0.50 | 1.96 | 4.33         | DCW13  |

CAT40  
CAT50  
BT30  
**BT 40**

# TB - Test Bar

## Features

- Concentric to Taper within 3µm (0.0001") TIR
- Tapers are ground better than AT3 for optimal T.I.R.
- Hardened & Normalized for consistency
- 100% Individually inspected with Certification Sheet included
- Wood Box Included
- Laser Marked with Actual Diameter and Length



| Part Number     | Spindle                 | D    | L Projection |
|-----------------|-------------------------|------|--------------|
| BT40-TB40-300-B | STD & Dual Contact BT40 | 40mm | 300mm        |

HSK 40E  
HSK 63A  
HSK 100A  
STRAIGHT SHANKS  
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# HSK40E

## HSK Coolant Tubes

- Fits HSK Form A & E Shanks
- Double Seal Design per DIN standard  
Replacement O-Rings listed, CS= Cross Section



| Part Number | Description          | Inner O-Ring    | Outer O-Ring    | Wrench                    |
|-------------|----------------------|-----------------|-----------------|---------------------------|
| TUBE-040A   | HSK 40A Coolant Tube | TUBE-040A ORING | TUBE-040A ORING | WRENCH HSK40A COOLNT TUBE |



# HSK 40E Nose Index

|                 |         |
|-----------------|---------|
| Shrink Fit      | PAGE 80 |
| SX Collet Chuck | PAGE 82 |
| ER Collet Chuck | PAGE 83 |

CAT40

CAT50

BT30

BT40

**HSK 40E**

HSK 63A

HSK 100A

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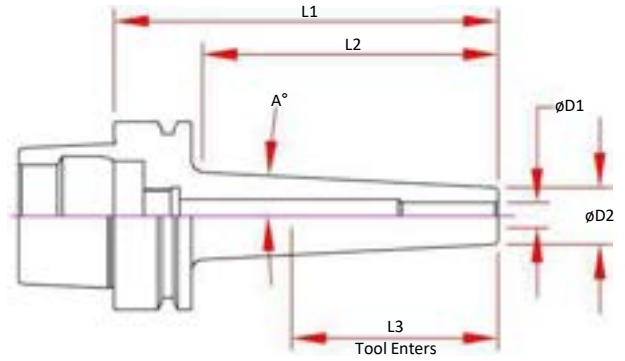
# HSK040E Shrink Fit - Inch

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- X Jet-Blast Pluggable Coolant Ports
- Dynamically Balanced for G2.5 @ 25,000 RPM or < 1 gmm
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Carbide Cutting Tools with h6 shank tolerance

## Optional (Order Separately):

- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Part Number          | D1 Bore | D2    | A° | L1 Projection | L2   | L3 Tool Enters |
|----------------------|---------|-------|----|---------------|------|----------------|
| HSK040A-SD012-060-SN | 0.1250  | 0.354 | 3° | 2.36          | 1.46 | 1.53           |
| HSK040A-SD018-060-SN | 0.1875  | 0.433 | 3° | 2.36          | 1.46 | 1.53           |
| HSK040A-SD025-060-SN | 0.2500  | 0.472 | 3° | 2.36          | 1.46 | 1.53           |
| HSK040A-SD037-060-SN | 0.3750  | 0.630 | 3° | 2.36          | 1.46 | 1.65           |
| HSK040A-SD050-060-SN | 0.5000  | 0.709 | 3° | 2.36          | 1.46 | 1.65           |

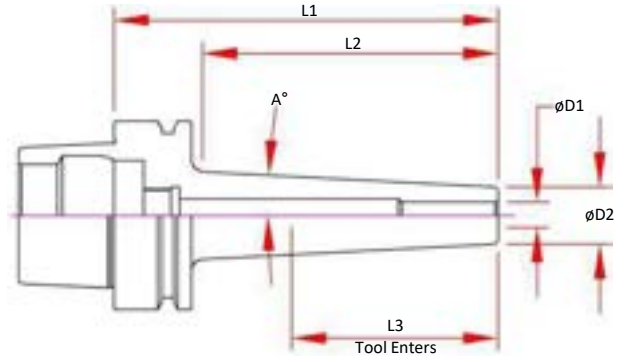
# HSK040E Shrink Fit - Metric

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- X Jet-Blast Pluggable Coolant Ports
- Dynamically Balanced for G2.5 @ 25,000 RPM or < 1 gmm
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Carbide Cutting Tools with h6 shank tolerance

## Optional (Order Separately):

- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Part Number          | D1 Bore | D2    | A° | L1 Projection | L2   | L3 Tool Enters |
|----------------------|---------|-------|----|---------------|------|----------------|
| HSK040A-SDM03-060-SN | 3.000   | 0.354 | 3° | 2.36          | 1.46 | 1.53           |
| HSK040A-SDM04-060-SN | 4.000   | 0.394 | 3° | 2.36          | 1.46 | 1.53           |
| HSK040A-SDM06-060-SN | 6.000   | 0.472 | 3° | 2.36          | 1.46 | 1.53           |
| HSK040A-SDM08-060-SN | 8.000   | 0.551 | 3° | 2.36          | 1.46 | 1.53           |
| HSK040A-SDM10-060-SN | 10.000  | 0.630 | 3° | 2.36          | 1.46 | 1.65           |
| HSK040A-SDM12-060-SN | 12.000  | 0.709 | 3° | 2.36          | 1.46 | 1.65           |

CAT40  
CAT50  
BT30  
BT40  
HSK 40E

HSK 63A

HSK 100A

STRAIGHT SHANKS

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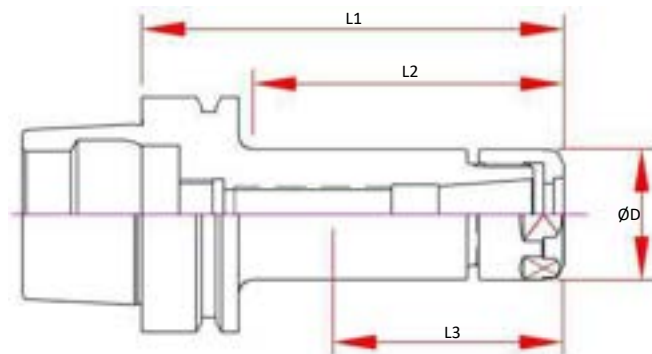
# HSK040E SX Collet Chucks

## Features

- 3 µm - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or <1gmm

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.005mm (0.0002") Standard
  - 0.003mm (0.0001") Ultra Precision
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Part Number      | D    | L Projection | L2   | L3   | Collet | Nut    | Wrench |
|------------------|------|--------------|------|------|--------|--------|--------|
| HSK040E-SX06-060 | 0.77 | 2.36         | 1.46 | 1.56 | SX06   | SXN-06 | SXW-06 |
| HSK040E-SX06-090 | 0.77 | 3.54         | 2.64 | 2.48 | SX06   | SXN-06 | SXW-06 |
| HSK040E-SX10-060 | 1.08 | 2.36         | 1.46 | 1.61 | SX10   | SXN-10 | SXW-10 |
| HSK040E-SX10-090 | 1.08 | 3.54         | 2.64 | 2.48 | SX10   | SXN-10 | SXW-10 |
| HSK040E-SX16-080 | 1.58 | 3.15         | 2.32 | 2.44 | SX16   | SXN-16 | SXW-16 |

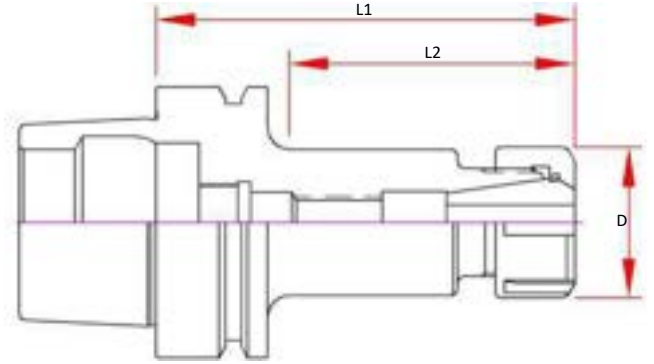
# HSK040E ER Collet Chucks

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced G6.3 @ 20,000 RPM or <1gmm

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.010mm (0.0004") Standard
  - 0.005mm (0.0002") Ultra Precision
  - Sealed (Select Sizes)
  - Jet-Blast (Select Sizes)
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Part Number       | D    | Max. Tool Enters | L1 Projection | L2   | Screw    | Nut     | Wrench  |
|-------------------|------|------------------|---------------|------|----------|---------|---------|
| HSK040E-ER11H-060 | 0.79 | 0.67             | 2.36          | 1.54 | ASC-ER11 | ERN-11H | ERW-11H |
| HSK040E-ER16H-060 | 1.10 | 0.87             | 2.36          | 1.54 | ASC-ER16 | ERN-16H | ERW-16H |
| HSK040E-ER25-070  | 1.65 | 1.10             | 2.76          | 1.93 | ASC-ER25 | ERN-25  | ERW-25E |

CAT40  
CAT50  
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**HSK 40E**  
HSK 63A  
HSK 100A  
STRAIGHT SHANKS  
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SHRINK MACHINES  
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# HSK63A

## HSK Coolant Tubes

- Fits HSK Form A & E Shanks
- Double Seal Design per DIN standard  
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 |

# HSK 63A Nose Index

|                    |         |
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| Shrink Fit         | PAGE 86 |
| Hydraulic Chuck    | PAGE 91 |
| SX Collet Chuck    | PAGE 88 |
| MX Collet Chuck    | PAGE 89 |
| VX Collet Chuck    | PAGE 89 |
| MC Mill Chuck      | PAGE 92 |
| ER Collet Chuck    | PAGE 90 |
| End Mill Adapters  | PAGE 93 |
| TG Collet Chuck    | PAGE 52 |
| Shell Mill         | PAGE 94 |
| Drill Chucks       | PAGE 94 |
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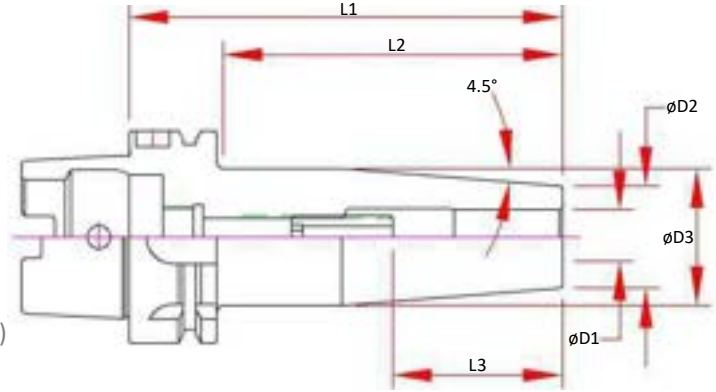
# HSK063A Shrink Fit - Inch

## Features

- 3 μm - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- X Jet-Blast Pluggable Coolant Ports
- Dynamically Balanced for G2.5 @ 25,000 RPM or < 1 gmm
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Carbide Cutting Tools with h6 shank tolerance

## Optional (Order Separately):

- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Part Number        | D1 Bore | D2   | D3   | L1 Projection | L2   | L3 Max Tool Enters | Preset Screw  |
|--------------------|---------|------|------|---------------|------|--------------------|---------------|
| HSK063A-SD012-080X | 0.1250  | 0.39 | 0.71 | 3.15          | 2.02 | 2.28               | -             |
| HSK063A-SD012-130X | 0.1250  | 0.39 | 0.71 | 5.12          | 3.98 | 4.09               | -             |
| HSK063A-SD012-160X | 0.1250  | 0.39 | 0.75 | 6.30          | 5.16 | 5.43               | -             |
| HSK063A-SD018-080X | 0.1875  | 0.39 | 0.71 | 3.15          | 2.02 | 2.28               | -             |
| HSK063A-SD018-130X | 0.1875  | 0.39 | 0.71 | 5.12          | 3.98 | 4.09               | -             |
| HSK063A-SD018-160X | 0.1875  | 0.39 | 0.75 | 6.30          | 5.16 | 5.43               | -             |
| HSK063A-SD025-080X | 0.2500  | 0.83 | 1.06 | 3.15          | 2.02 | 1.54               | SCW-ASC-SD025 |
| HSK063A-SD025-130X | 0.2500  | 0.83 | 1.06 | 5.12          | 3.98 | 1.54               | SCW-ASC-SD025 |
| HSK063A-SD025-160X | 0.2500  | 0.83 | 1.06 | 6.30          | 5.16 | 1.54               | SCW-ASC-SD025 |
| HSK063A-SD031-080X | 0.3125  | 0.83 | 1.06 | 3.15          | 2.02 | 1.54               | SCW-ASC-SD031 |
| HSK063A-SD031-160X | 0.3125  | 0.83 | 1.06 | 6.30          | 5.16 | 1.54               | SCW-ASC-SD031 |
| HSK063A-SD037-085X | 0.3750  | 0.94 | 1.06 | 3.35          | 2.21 | 1.73               | SCW-ASC-SD037 |
| HSK063A-SD037-130X | 0.3750  | 0.94 | 1.06 | 5.12          | 3.98 | 1.73               | SCW-ASC-SD037 |
| HSK063A-SD037-160X | 0.3750  | 0.94 | 1.06 | 6.30          | 5.16 | 1.73               | SCW-ASC-SD037 |
| HSK063A-SD050-090X | 0.5000  | 0.94 | 1.26 | 3.54          | 2.41 | 1.97               | SCW-ASC-SD050 |
| HSK063A-SD050-130X | 0.5000  | 0.94 | 1.26 | 5.12          | 3.98 | 1.97               | SCW-ASC-SD050 |
| HSK063A-SD050-160X | 0.5000  | 0.94 | 1.26 | 6.30          | 5.16 | 1.97               | SCW-ASC-SD050 |
| HSK063A-SD062-095X | 0.6250  | 1.06 | 1.34 | 3.74          | 2.61 | 1.97               | SCW-ASC-SD062 |
| HSK063A-SD062-130X | 0.6250  | 1.06 | 1.34 | 5.12          | 3.98 | 1.97               | SCW-ASC-SD062 |
| HSK063A-SD062-160X | 0.6250  | 1.06 | 1.34 | 6.30          | 5.16 | 1.97               | SCW-ASC-SD062 |
| HSK063A-SD075-100X | 0.7500  | 1.30 | 1.65 | 3.94          | 2.80 | 2.05               | SCW-ASC-SD062 |
| HSK063A-SD075-130X | 0.7500  | 1.30 | 1.65 | 5.12          | 3.98 | 2.05               | SCW-ASC-SD062 |
| HSK063A-SD075-160X | 0.7500  | 1.30 | 1.65 | 6.30          | 5.16 | 2.05               | SCW-ASC-SD062 |
| HSK063A-SD100-115X | 1.0000  | 1.73 | 2.09 | 4.53          | 3.50 | 2.28               | SCW-ASC-SD100 |
| HSK063A-SD100-115X | 1.0000  | 1.73 | 2.09 | 5.12          | 3.98 | 2.28               | SCW-ASC-SD100 |
| HSK063A-SD100-160X | 1.0000  | 1.73 | 2.09 | 6.30          | 5.16 | 2.28               | SCW-ASC-SD100 |
| HSK063A-SD125-120X | 1.2500  | 1.73 | 2.09 | 4.72          | 3.70 | 2.40               | SCW-ASC-SD100 |
| HSK063A-SD125-160X | 1.2500  | 1.73 | 2.09 | 6.30          | 5.16 | 2.40               | SCW-ASC-SD100 |



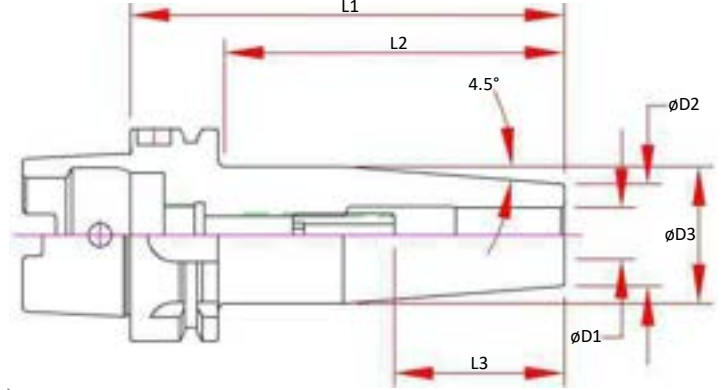
# HSK063A Shrink Fit - Metric

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- X Jet-Blast Pluggable Coolant Ports
- Dynamically Balanced for G2.5 @ 25,000 RPM or < 1 gmm
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Carbide Cutting Tools with h6 shank tolerance

## Optional (Order Separately):

- Fine Trim Balance  
(Sample cutter required for balance compensation)



Note: 120mm, 130mm & 200mm in normally in stock in Germany

| Part Number        | D1 Bore | D2   | D3   | L1 Projection | L2   | L3 Max Tool Enters | Preset Screw  |
|--------------------|---------|------|------|---------------|------|--------------------|---------------|
| HSK063A-SDM03-080X | 3.000   | 0.39 | 0.71 | 3.15          | 2.02 | 2.28               | -             |
| HSK063A-SDM03-160X | 3.000   | 0.39 | 0.75 | 6.30          | 5.16 | 5.43               | -             |
| HSK063A-SDM04-080X | 4.000   | 0.39 | 0.71 | 3.15          | 2.02 | 2.28               | -             |
| HSK063A-SDM04-160X | 4.000   | 0.39 | 0.75 | 6.30          | 5.16 | 5.43               | -             |
| HSK063A-SDM06-080X | 6.000   | 0.83 | 1.06 | 3.15          | 2.02 | 1.54               | SCW-ASC-05-23 |
| HSK063A-SDM06-160X | 6.000   | 0.83 | 1.06 | 6.30          | 5.16 | 1.54               | SCW-ASC-05-23 |
| HSK063A-SDM08-080X | 8.000   | 0.83 | 1.06 | 3.15          | 2.02 | 1.54               | SCW-ASC-06-23 |
| HSK063A-SDM08-160X | 8.000   | 0.83 | 1.06 | 6.30          | 5.16 | 1.54               | SCW-ASC-06-23 |
| HSK063A-SDM10-085X | 10.000  | 0.94 | 1.26 | 3.35          | 2.21 | 1.73               | SCW-ASC-08-23 |
| HSK063A-SDM10-160X | 10.000  | 0.94 | 1.26 | 6.30          | 5.16 | 1.73               | SCW-ASC-08-23 |
| HSK063A-SDM12-090X | 12.000  | 0.94 | 1.26 | 3.54          | 2.41 | 1.97               | SCW-ASC-10-23 |
| HSK063A-SDM12-160X | 12.000  | 0.94 | 1.26 | 6.30          | 5.16 | 1.97               | SCW-ASC-10-23 |
| HSK063A-SDM16-095X | 16.000  | 1.06 | 1.34 | 3.74          | 2.61 | 1.97               | SCW-ASC-12-23 |
| HSK063A-SDM16-160X | 16.000  | 1.06 | 1.34 | 6.30          | 5.16 | 1.97               | SCW-ASC-12-23 |
| HSK063A-SDM20-100X | 20.000  | 1.30 | 1.65 | 3.94          | 2.80 | 2.17               | SCW-ASC-12-23 |
| HSK063A-SDM20-160X | 20.000  | 1.30 | 1.65 | 6.30          | 5.16 | 2.17               | SCW-ASC-12-23 |
| HSK063A-SDM25-115X | 25.000  | 1.73 | 2.09 | 4.53          | 3.50 | 2.40               | SCW-ASC-16-23 |
| HSK063A-SDM25-160X | 25.000  | 1.73 | 2.09 | 6.30          | 5.16 | 2.40               | SCW-ASC-16-23 |



CAT40  
CAT50  
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# HSK063A SX Collet Chucks

## Features

- 3 μm - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or <1gmm

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.005mm (0.0002") Standard
  - 0.003mm (0.0001") Ultra Precision
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Part Number       | Style | A   | D    | L Projection | L2   | L3 Max. Preset | Collet | Nut     | Wrench     |
|-------------------|-------|-----|------|--------------|------|----------------|--------|---------|------------|
| HSK063A-SX06-100  | 1     | -   |      | 3.94         | 1.97 |                |        |         |            |
| HSK063A-SX06-120  | 2     | 3°  | 0.77 | 4.72         | 2.36 | 1.73           | SX06   | SXN-06  | SXW-06     |
| HSK063A-SX06-150  | 3     | Ø32 |      | 5.91         | 2.36 |                |        |         |            |
| HSK063A-SX10-105  | 1     | -   |      | 4.13         | 2.91 | 1.65           |        |         |            |
| HSK063A-SX10-120  | 2     | 3°  | 1.08 | 4.72         | 2.36 | 1.89           | SX10   | SXN-10  | SXW-10     |
| HSK063A-SX10-150  | 3     | Ø32 |      | 5.91         | 2.76 | 1.89           |        |         |            |
| HSK063A-SX16-120  | 1     | -   | 1.58 | 4.72         | 3.50 | 2.44           | SX16   | SXN-16  | SXW-16     |
| HSK063A-SX16-150  | 1     | -   |      | 5.91         | 4.68 | 2.83           |        |         |            |
| HSK063A-SX25M-090 | 1     | -   | 1.97 | 3.54         | 2.52 | 2.44           | SX25   | SXN-25M | 50-55 HOOK |
| HSK063A-SX25M-135 | 1     | -   |      | 5.31         | 4.29 | 2.89           |        |         |            |

# HSK063A VX Mini Chuck+

## Features

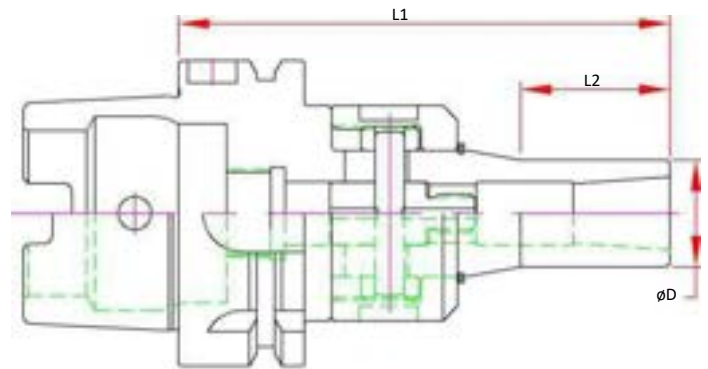
- 3  $\mu\text{m}$  - 0.0001" Runout @ 4X Diameter
- Front Locking System
- Coolant Thru
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or < 1gmm

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets, STD and Jet-Blast
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Part Number      | Collet Range  | D     | L1 Projection | L2   | Collet | Wrench    | Locking Torque Max. |
|------------------|---------------|-------|---------------|------|--------|-----------|---------------------|
| HSK063A-VX06-105 | 0.079 - 0.250 | 0.500 | 4.13          | 1.48 | MX06   |           |                     |
| HSK063A-VX06-150 |               |       | 5.91          |      |        |           |                     |
| HSK063A-VX08-105 | 0.125 - 0.394 | 0.787 | 4.13          | 1.21 | MX08   | 45-48 PIN | 30 ft/lbs           |
| HSK063A-VX08-150 |               |       | 5.91          |      |        |           |                     |
| HSK063A-VX12-115 | 0.157 - 0.500 | 1.000 | 4.53          | 2.03 | MX12   |           |                     |
| HSK063A-VX12-150 |               |       | 5.91          |      |        |           |                     |



# HSK063A MX - Mini Chuck

## Features

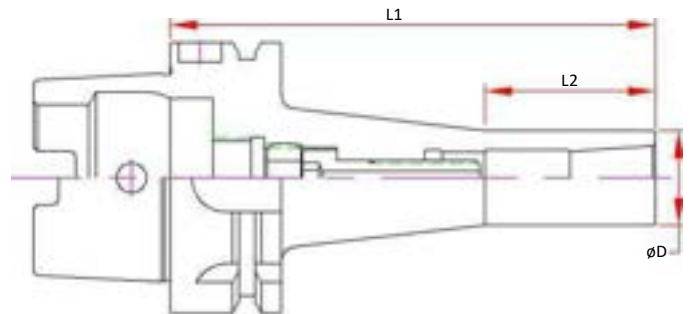
- 3  $\mu\text{m}$  - 0.0001" Runout @ 4X Diameter
- Rear Draw Bolt Locking System
- Coolant Thru
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or < 1gmm

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets, STD and Jet-Blast
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Part Number      | Collet Range  | D     | L1 Projection | L2   | Collet | Wrench | Locking Torque Max. |
|------------------|---------------|-------|---------------|------|--------|--------|---------------------|
| HSK063A-MX06-100 | 0.079 - 0.250 | 0.500 | 3.94          | 1.42 | MX06   |        |                     |
| HSK063A-MX08-100 | 0.125 - 0.394 | 0.787 | 3.94          | 1.42 | MX08   | MXW05  | 20 ft/lbs           |
| HSK063A-MX12-110 | 0.157 - 0.500 | 1.000 | 4.33          | 1.54 | MX12   |        |                     |



CAT40  
CAT50  
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HSK 100A  
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# HSK063A ER Collet Chucks

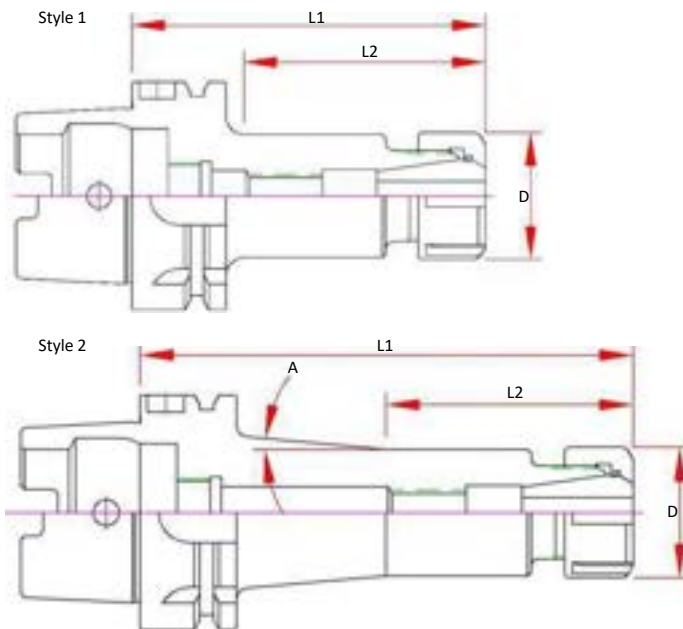


## Features

- **3 μm - 0.0001" Runout Taper to Taper**
- Coolant Thru Body
- Dynamically Pre-Balanced G6.3 @ 20,000 RPM or <1gmm

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.010mm (0.0004") Standard
  - 0.005mm (0.0002") Ultra Precision
  - Sealed (Select Sizes)
  - Jet-Blast (Select Sizes)
- Fine Trim Balance (Sample cutter required for balance compensation)



| Part Number       | Style | A  | D    | Max. Tool Enters | L1 Projection | L2   | Screw    | Nut     | Wrench  |
|-------------------|-------|----|------|------------------|---------------|------|----------|---------|---------|
| HSK063A-ER16H-075 | 1     | -  |      | 1.38             | 2.95          | 1.51 |          |         |         |
| HSK063A-ER16H-100 | 1     | -  | 1.10 | 2.00             | 3.94          | 2.79 | ASC-ER16 | ERN-16H | ERW-16H |
| HSK063A-ER16H-160 | 2     | 5° |      | 3.05             | 6.30          | 2.36 |          |         |         |
| HSK063A-ER20H-075 | 1     | -  |      | 1.34             | 2.95          | 1.51 |          |         |         |
| HSK063A-ER20H-100 | 1     | -  | 1.33 | 1.87             | 3.94          | 2.65 | ASC-ER20 | ERN-20H | ERW-20H |
| HSK063A-ER20H-160 | 1     | -  |      | 2.89             | 6.30          | 5.08 |          |         |         |
| HSK063A-ER25-075  | 1     | -  |      | 1.34             | 2.95          | 1.51 |          |         |         |
| HSK063A-ER25-100  | 1     | -  | 1.65 | 2.20             | 3.94          | 2.72 | ASC-ER25 | ERN-25  | ERW-25E |
| HSK063A-ER25-160  | 1     | -  |      | 3.90             | 6.30          | 5.08 |          |         |         |
| HSK063A-ER32-075  | 1     | -  |      | 1.46             | 2.95          | 1.51 |          |         |         |
| HSK063A-ER32-100  | 1     | -  | 1.96 | 2.17             | 3.94          | 2.83 | ASC-ER32 | ERN-32  | ERW-32E |
| HSK063A-ER32-160  | 1     | -  |      | 4.33             | 6.30          | 5.20 |          |         |         |
| HSK063A-ER40-085  | 1     | -  |      | 1.77             | 3.35          | 1.73 |          |         |         |
| HSK063A-ER40-120  | 1     | -  | 2.48 | 2.83             | 4.72          | 3.70 | ASC-ER40 | ERN-40  | ERW-40E |
| HSK063A-ER40-160  | 1     | -  |      | 4.02             | 6.30          | 5.20 |          |         |         |

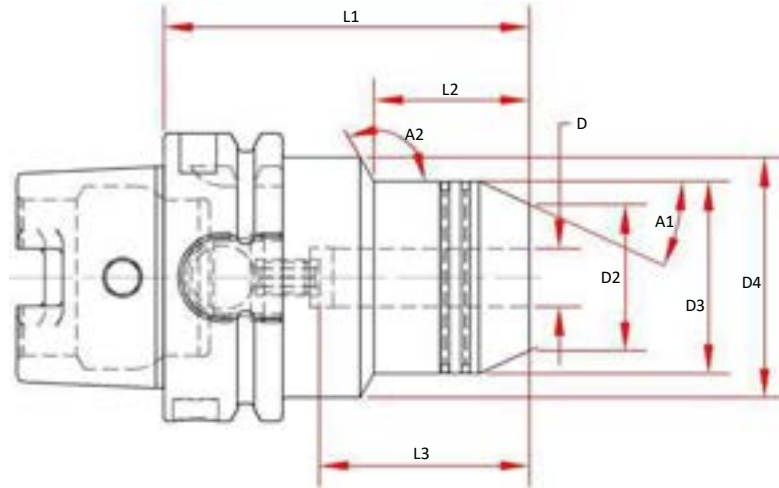
# HSK063A Hydraulic Chucks

## Features

- \* 3  $\mu\text{m}$  - 0.0001" or less run-out providing premium performance in drilling and reaming applications
- Positive Locking System
- Coolant Thru the Center
- Designed for Tool Shanks w/ ISO h6 Class Tolerance
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or < 1gmm

## Optional (Order Separately):

- Wrench
- Sealed Collets
- Mill Chuck Collets



| Part Number        | D Bore | D2   | D3   | D4   | A1    | A2   | L1 Projection | L2   | L3 Max Tool Enters | Wrench |
|--------------------|--------|------|------|------|-------|------|---------------|------|--------------------|--------|
| HSK063A-HC050-0315 | 0.5000 | 1.26 | 1.65 | 2.07 | 24.5° | 120° | 3.15          | 1.34 | 1.81               | MXW04  |
| HSK063A-HC075-0315 | 0.7500 | 1.50 | 2.07 |      | 24.5° |      | 3.15          | 2.13 | 2.01               | MXW05  |

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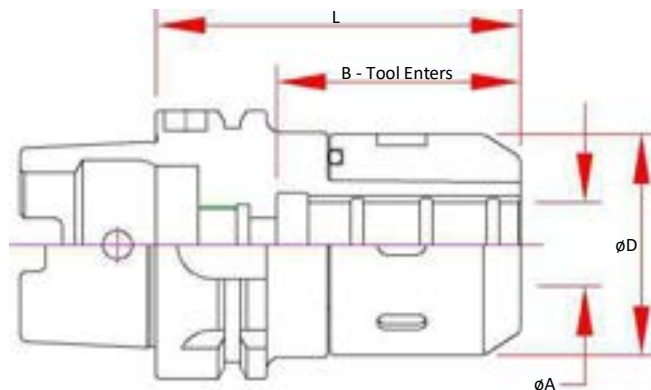
# HSK063A Mill Chuck

## Features

- 5  $\mu\text{m}$  - 0.0002" Runout @ 4 x Cutter Shank Dia.
- Designed for Tool Shanks w/ ISO h6 Class Tolerance
- Pre-Balanced for use @ 20,000 RPM

## Optional (Order Separately):

- Wrench
- Nylon Screw Seal for short tool shanks
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Part Number        | A Bore | B Max. Tool Enters | D    | L Projection | Preset Screw | Collet | Wrench     |
|--------------------|--------|--------------------|------|--------------|--------------|--------|------------|
| HSK063A-MC075-0374 | 0.7500 | 2.36               | 2.09 | 3.74         | -            | MC075  | 50-55 HOOK |
| HSK063A-MC075-0433 | 0.7500 | 2.36               | 2.09 | 4.33         | ASC-16-18    | MC075  | 50-55 HOOK |
| HSK063A-MC100-0394 | 1.0000 | 2.40               | 2.44 | 3.94         | -            | MC100  | 58-65 HOOK |
| HSK063A-MC100-0472 | 1.0000 | 2.40               | 2.44 | 4.72         | ASC-16-18    | MC100  | 58-65 HOOK |
| HSK063A-MC125-0394 | 1.2500 | 2.99               | 2.76 | 3.94         | -            | MC125  | 65-70 HOOK |
| HSK063A-MC125-0472 | 1.2500 | 2.99               | 2.76 | 4.72         | ASC-16-18    | MC125  | 65-70 HOOK |
| HSK063A-MC20-110   | 20.000 | 2.36               | 2.09 | 4.33         | ASC-16-18    | MC20   | 50-55 HOOK |
| HSK063A-MC32-120   | 32.000 | 2.99               | 2.76 | 4.72         | ASC-16-18    | MC32   | 65-70 HOOK |

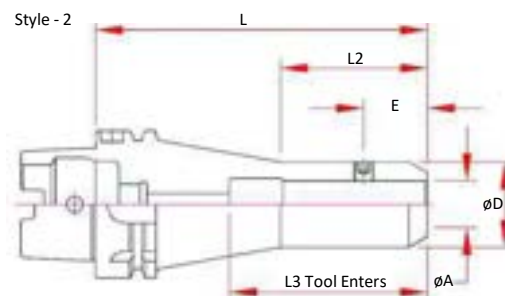
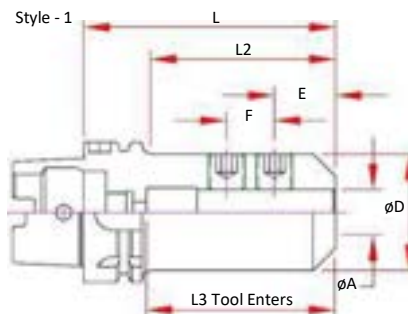
# HSK063A End Mill Adapters

## Features

- 3  $\mu\text{m}$  - 0.0001" Bore Runout
- H5 Bore Tolerance or better
- Coolant Thru
- Pre-Balanced for use @ 20,000 RPM  
(HSK100A @ 15,000 RPM)

## Optional (Order Separately):

- Jet-Blast (add "J" to the part number)



| Part Number        | A Bore | D    | E    | F    | L Projection | L2   | L3 Max. Tool Enters | Screw Number | Style |
|--------------------|--------|------|------|------|--------------|------|---------------------|--------------|-------|
| HSK063A-EM012-0250 | 0.1250 | 0.69 | 0.19 | -    | 2.50         | 1.28 | 1.63                | 3            | 1     |
| HSK063A-EM012-0400 | 0.1250 | 0.69 | 0.19 | -    | 4.00         | 2.78 | 1.63                | 3            | 1     |
| HSK063A-EM012-0600 | 0.1250 | 0.69 | 0.19 | -    | 6.00         | 2.50 | 1.63                | 3            | 2     |
| HSK063A-EM018-0400 | 0.1875 | 0.69 | 0.44 | -    | 4.00         | 2.78 | 1.63                | 3            | 1     |
| HSK063A-EM018-0600 | 0.1875 | 0.69 | 0.44 | -    | 6.00         | 2.50 | 1.63                | 3            | 2     |
| HSK063A-EM025-0250 | 0.2500 | 0.78 | 0.44 | -    | 2.50         | 1.28 | 1.63                | 4            | 1     |
| HSK063A-EM025-0400 | 0.2500 | 0.78 | 0.44 | -    | 4.00         | 2.78 | 1.63                | 4            | 1     |
| HSK063A-EM025-0600 | 0.2500 | 0.78 | 0.44 | -    | 6.00         | 2.50 | 1.63                | 4            | 2     |
| HSK063A-EM031-0250 | 0.3125 | 0.88 | 0.44 | -    | 2.50         | 1.28 | 1.63                | 4            | 1     |
| HSK063A-EM031-0400 | 0.3125 | 0.88 | 0.44 | -    | 4.00         | 2.78 | 1.63                | 4            | 1     |
| HSK063A-EM031-0600 | 0.3125 | 0.88 | 0.44 | -    | 6.00         | 3.00 | 1.63                | 4            | 2     |
| HSK063A-EM037-0250 | 0.3750 | 1.00 | 0.75 | -    | 2.50         | 1.28 | 1.50                | 5            | 1     |
| HSK063A-EM037-0400 | 0.3750 | 1.00 | 0.75 | -    | 4.00         | 2.78 | 1.50                | 5            | 1     |
| HSK063A-EM037-0600 | 0.3750 | 1.00 | 0.75 | -    | 6.00         | 3.00 | 1.50                | 5            | 2     |
| HSK063A-EM050-0315 | 0.5000 | 1.25 | 0.88 | -    | 3.15         | 1.93 | 2.10                | 6            | 1     |
| HSK063A-EM050-0400 | 0.5000 | 1.25 | 0.88 | -    | 4.00         | 2.78 | 2.10                | 6            | 1     |
| HSK063A-EM050-0600 | 0.5000 | 1.25 | 0.88 | -    | 6.00         | 3.00 | 2.10                | 6            | 2     |
| HSK063A-EM062-0315 | 0.6250 | 1.50 | 0.94 | -    | 3.15         | 1.93 | 2.10                | 7            | 1     |
| HSK063A-EM062-0400 | 0.6250 | 1.50 | 0.94 | -    | 4.00         | 2.78 | 2.10                | 7            | 1     |
| HSK063A-EM062-0600 | 0.6250 | 1.50 | 0.94 | -    | 6.00         | 4.78 | 2.10                | 7            | 1     |
| HSK063A-EM075-0315 | 0.7500 | 1.75 | 1.00 | -    | 3.15         | 2.08 | 1.97                | 8            | 1     |
| HSK063A-EM075-0400 | 0.7500 | 1.75 | 1.00 | -    | 4.00         | 2.94 | 1.97                | 8            | 1     |
| HSK063A-EM075-0600 | 0.7500 | 1.75 | 1.00 | -    | 6.00         | 4.94 | 1.97                | 8            | 1     |
| HSK063A-EM100-0400 | 1.0000 | 2.00 | 1.12 | 1.00 | 4.00         | 2.94 | 2.95                | (2) 10       | 1     |
| HSK063A-EM100-0600 | 1.0000 | 2.00 | 1.12 | 1.00 | 6.00         | 2.94 | 2.95                | (2) 10       | 1     |
| HSK063A-EM125-0435 | 1.2500 | 2.81 | 1.12 | 1.00 | 4.35         | 3.32 | 3.23                | (2) 11       | 1     |

CAT40

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**HSK 63A**

HSK 100A

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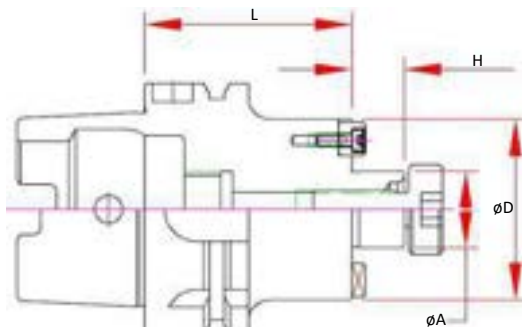
# HSK063A Shell Mill Adapters

## Features

- 3 μm - 0.0001" Bore Runout
- H5 Bore Tolerance or better
- Coolant Thru Body
- Pre-Balanced for use @ 20,000 RPM

## Optional (Order Separately):

- FX Coolant (add "F" to the part number)

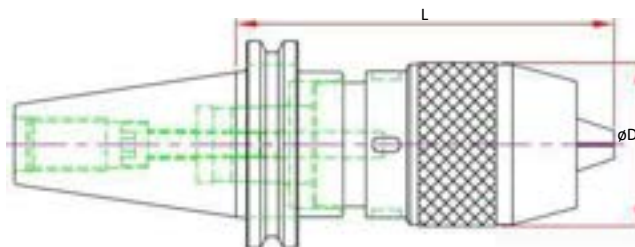


| Part Number        | A Pilot | D    | H    | L Projection | Drive Key Size | Drive Key Number | Mounting Screw Thread | Mounting Screw# |
|--------------------|---------|------|------|--------------|----------------|------------------|-----------------------|-----------------|
| HSK063A-SM050-0177 |         |      |      | 1.77         |                |                  |                       |                 |
| HSK063A-SM050-0394 | 0.500   | 1.38 | 0.57 | 3.94         | 0.250          | DK-SM050         | 1/4-28                | SCW-SM050       |
| HSK063A-SM050-0630 |         |      |      | 6.30         |                |                  |                       |                 |
| HSK063A-SM075-0177 |         |      |      | 1.77         |                |                  |                       |                 |
| HSK063A-SM075-0394 | 0.75    | 1.71 | 0.69 | 3.94         | 0.312          | DK-SM075         | 3/8-24                | SCW-SM075       |
| HSK063A-SM075-0630 |         |      |      | 6.30         |                |                  |                       |                 |
| HSK063A-SM075-0800 |         |      |      | 8.00         |                |                  |                       |                 |
| HSK063A-SM100-0197 |         |      |      | 1.97         |                |                  |                       |                 |
| HSK063A-SM100-0394 | 1.00    | 1.97 | 0.69 | 3.94         | 0.375          | DK-SM100         | 1/2-20                | SCW-SM100       |
| HSK063A-SM100-0630 |         |      |      | 6.30         |                |                  |                       |                 |
| HSK063A-SM125-0236 | 1.25    | 2.75 | 0.69 | 2.36         | 0.500          | DK-SM125         | 5/8-18                | SCW-SM125       |
| HSK063A-SM150-0236 | 1.50    | 3.78 | 0.94 | 2.36         | 0.625          | DK-SM150         | 3/4-16                | SCW-SM150       |

# HSK063A Drill Chuck

## Features:

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



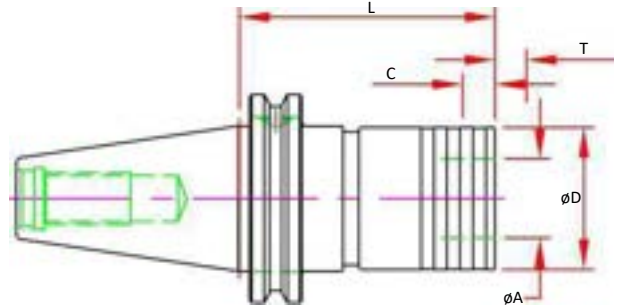
| Part Number      | Range       | D    | L Projection | Wrench |
|------------------|-------------|------|--------------|--------|
| HSK 63A-DC13-155 | 0.04 - 0.50 | 1.96 | 6.10         | DCW13  |



# 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
- Size 3 includes pull to release system to prevent damage from over stroke
- TC Holders are not designed for Coolant Thru
- For use with both RA and TC adapters
  - TC for machines with limited "Z" control
- 2 Piece Design is assembled Straight Shank Tap Holder with End Mill Adapter
- Tapers are ground better than AT3 for optimal T.I.R.

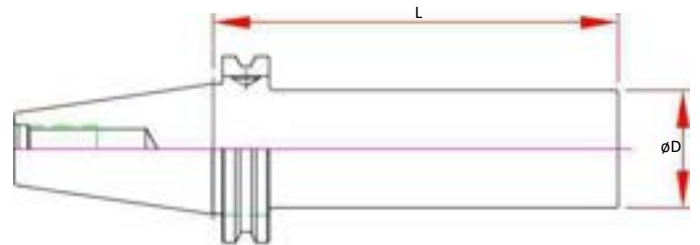


| Size | Standard Spindle Part Number | Capacity | A    | D    | L    | T<br>Tension | C<br>Comp. |
|------|------------------------------|----------|------|------|------|--------------|------------|
| 1    | HSK063A-TC1-102              | #6-9/16  | 0.75 | 1.42 | 4.02 | 0.30         | 0.30       |
| 2    | HSK063A-TC2-137              | 5/16-7/8 | 1.22 | 2.09 | 5.39 | 0.49         | 0.49       |

# HSK063A Test Bar

## Features

- Concentric to Taper within 3µm (0.0001") TIR
- Tapers are ground better than AT3 for optimal T.I.R.
- Hardened & Normalized for consistency
- 100% Individually inspected with Certification Sheet included
- Wood Box Included
- Laser Marked with Actual Diameter and Length



| Part Number       | Spindle    | D    | L<br>Projection |
|-------------------|------------|------|-----------------|
| HSK63A-TB150-1000 | HSK63A & C | 1.50 | 10.00           |

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# HSK100A

## HSK Coolant Tubes

- Fits HSK Form A & E Shanks
- Double Seal Design per DIN standard  
Replacement O-Rings listed, CS= Cross Section



| Part Number | Description           | Inner O-Ring     | Outer O-Ring     | Wrench                    |
|-------------|-----------------------|------------------|------------------|---------------------------|
| TUBE-100A   | HSK 100A Coolant Tube | 15mm ID x 3mm CS | 15mm ID x 3mm CS | WRENCH HSK100 COOLNT TUBE |

# HSK 100A Nose Index

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# HSK100A Shrink Fit - Inch

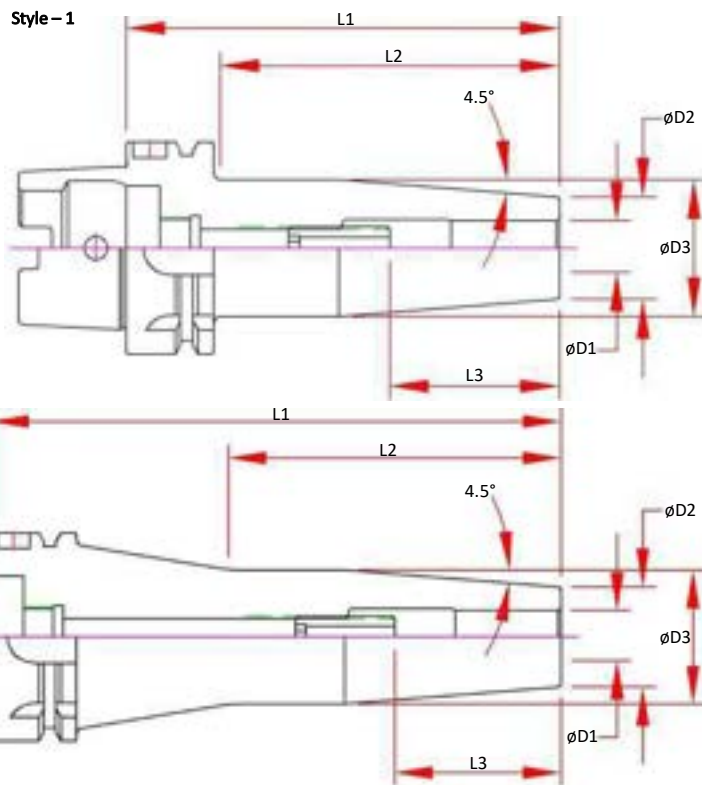


## Features

- 3 μm - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- Coolant Thru the Center
- Dynamically Balanced for G2.5 @ 25,000 RPM or < 1 gmm
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Carbide Cutting Tools with h6 shank tolerance

## Optional (Order Separately):

- Jet-Blast Coolant Ports - Add "-J"
- Fine Trim Balance (Sample cutter required for balance compensation)



| Part Number       | D1 Bore | D2   | D3   | L1 Projection | L2   | L3 Max Tool Enters | Preset Screw  | Style |
|-------------------|---------|------|------|---------------|------|--------------------|---------------|-------|
| HSK100A-SD025-085 | 0.2500  | 0.83 | 1.06 | 3.35          | 1.91 | 1.46               | SCW-ASC-05-23 | 1     |
| HSK100A-SD025-160 | 0.2500  | 0.83 | 1.06 | 6.30          | 2.40 | 1.46               | SCW-ASC-05-23 | 2     |
| HSK100A-SD031-085 | 0.3125  | 0.83 | 1.06 | 3.35          | 1.91 | 1.46               | SCW-ASC-06-23 | 1     |
| HSK100A-SD031-160 | 0.3125  | 0.83 | 1.06 | 6.30          | 2.40 | 1.46               | SCW-ASC-06-23 | 2     |
| HSK100A-SD037-090 | 0.3750  | 0.94 | 1.24 | 3.54          | 2.20 | 1.65               | SCW-ASC-08-23 | 1     |
| HSK100A-SD037-160 | 0.3750  | 0.94 | 1.26 | 6.30          | 2.40 | 1.65               | SCW-ASC-08-23 | 2     |
| HSK100A-SD050-095 | 0.5000  | 0.94 | 1.26 | 3.74          | 2.40 | 1.89               | SCW-ASC-10-23 | 1     |
| HSK100A-SD050-160 | 0.5000  | 0.94 | 1.26 | 6.30          | 2.40 | 1.89               | SCW-ASC-10-23 | 2     |
| HSK100A-SD062-100 | 0.6250  | 1.06 | 1.34 | 3.94          | 2.60 | 2.01               | SCW-ASC-12-23 | 1     |
| HSK100A-SD062-160 | 0.6250  | 1.06 | 1.34 | 6.30          | 2.40 | 2.01               | SCW-ASC-12-23 | 2     |
| HSK100A-SD075-105 | 0.7500  | 1.30 | 1.61 | 4.13          | 2.80 | 2.09               | SCW-ASC-16-23 | 1     |
| HSK100A-SD075-160 | 0.7500  | 1.30 | 1.61 | 6.30          | 2.99 | 2.09               | SCW-ASC-16-23 | 2     |
| HSK100A-SD100-115 | 1.0000  | 1.73 | 2.09 | 4.53          | 3.19 | 2.32               | SCW-ASC-16-23 | 1     |
| HSK100A-SD100-160 | 1.0000  | 1.73 | 2.09 | 6.30          | 4.57 | 2.32               | SCW-ASC-16-23 | 2     |
| HSK100A-SD125-120 | 1.2500  | 1.73 | 2.09 | 4.72          | 3.39 | 2.48               | SCW-ASC-16-23 | 1     |
| HSK100A-SD125-160 | 1.2500  | 1.73 | 2.09 | 6.30          | 4.57 | 2.48               | SCW-ASC-16-23 | 2     |

# HSK100A Shrink Fit - Metric

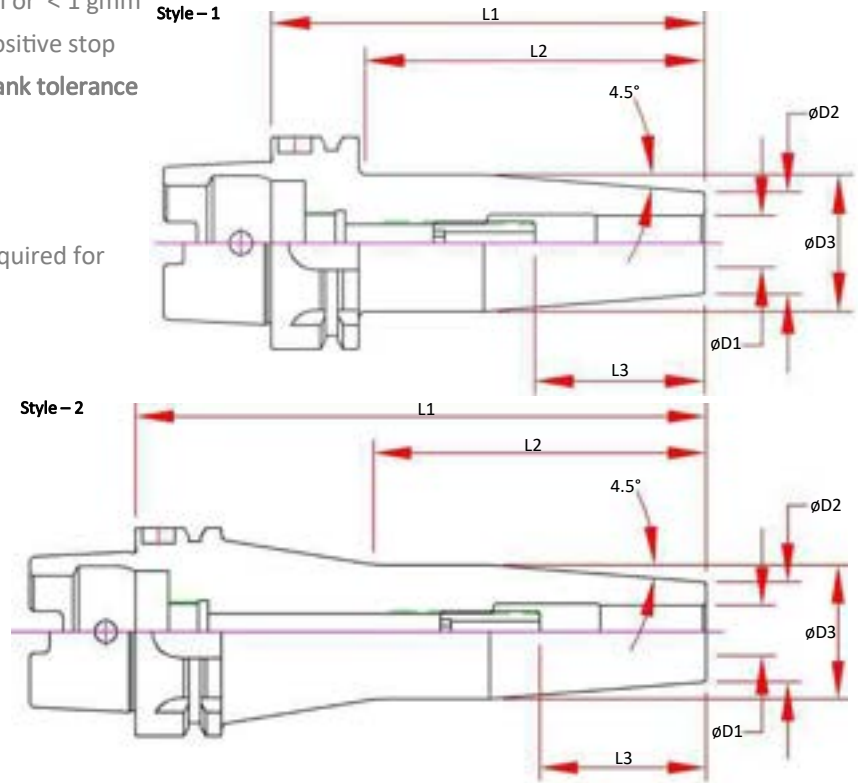


## Features

- 3 μm - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- Coolant Thru the Center
- Dynamically Balanced for G2.5 @ 25,000 RPM or < 1 gmm
- Preset Screw included for 1/4" & larger for positive stop
- Designed for Carbide Cutting Tools with h6 shank tolerance

## Optional (Order Separately):

- Jet-Blast Coolant Ports - Add "-J"
- Fine Trim Balance (Sample cutter required for balance compensation)



| Part Number       | D1 Bore | D2 | D3 | L1 Projection | L2  | L3 Max Tool Enters | Preset Screw  | Style |
|-------------------|---------|----|----|---------------|-----|--------------------|---------------|-------|
| HSK100A-SDM06-085 | 6       | 21 | 27 | 85            | 51  | 37                 | SCW-ASC-05-23 | 1     |
| HSK100A-SDM06-160 | 6       | 21 | 27 | 160           | 126 | 37                 | SCW-ASC-05-23 | 2     |
| HSK100A-SDM08-085 | 8       | 21 | 27 | 85            | 51  | 37                 | SCW-ASC-06-23 | 1     |
| HSK100A-SDM08-160 | 8       | 21 | 27 | 160           | 126 | 37                 | SCW-ASC-06-23 | 2     |
| HSK100A-SDM10-090 | 10      | 24 | 32 | 90            | 56  | 42                 | SCW-ASC-08-23 | 1     |
| HSK100A-SDM10-160 | 10      | 24 | 32 | 160           | 126 | 42                 | SCW-ASC-08-23 | 2     |
| HSK100A-SDM12-095 | 12      | 24 | 32 | 95            | 61  | 48                 | SCW-ASC-10-23 | 1     |
| HSK100A-SDM12-160 | 12      | 24 | 32 | 160           | 126 | 48                 | SCW-ASC-10-23 | 2     |
| HSK100A-SDM16-100 | 16      | 27 | 34 | 100           | 66  | 51                 | SCW-ASC-12-23 | 1     |
| HSK100A-SDM16-160 | 16      | 27 | 34 | 160           | 126 | 51                 | SCW-ASC-12-23 | 2     |
| HSK100A-SDM20-105 | 20      | 33 | 42 | 105           | 71  | 53                 | SCW-ASC-16-23 | 1     |
| HSK100A-SDM20-160 | 20      | 33 | 42 | 160           | 126 | 53                 | SCW-ASC-16-23 | 2     |
| HSK100A-SDM25-115 | 25      | 44 | 53 | 115           | 81  | 59                 | SCW-ASC-16-23 | 1     |
| HSK100A-SDM25-160 | 25      | 44 | 53 | 160           | 126 | 59                 | SCW-ASC-16-23 | 2     |
| HSK100A-SDM32-120 | 32      | 44 | 53 | 120           | 86  | 63                 | SCW-ASC-16-23 | 1     |
| HSK100A-SDM32-160 | 32      | 44 | 53 | 160           | 126 | 63                 | SCW-ASC-16-23 | 2     |

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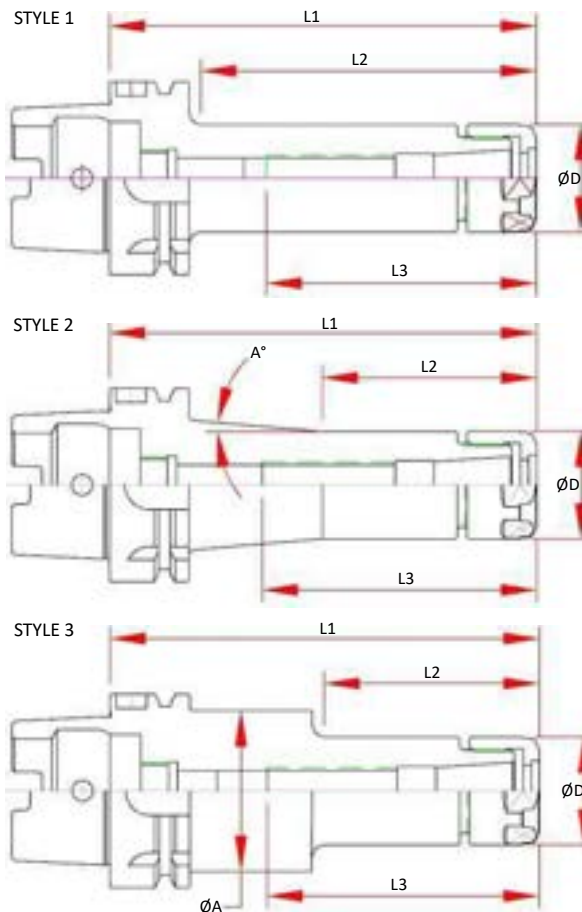
# HSK100A SX Collet Chucks

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or <1gmm

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.005mm (0.0002") Standard
  - 0.003mm (0.0001") Ultra Precision
- Fine Trim Balance  
(Sample cutter required for balance compensation)



| Part Number       | Style | D    | L1 Projection | L2   | L3 Max. Preset | Collet | Nut     | Wrench     |
|-------------------|-------|------|---------------|------|----------------|--------|---------|------------|
| HSK100A-SX10-105  | 1     | 1.08 | 4.13          | 2.83 | 1.65           | SX10   | SXN-10  | SXW-10     |
| HSK100A-SX10-150  | 3     |      | 5.91          | 2.76 |                |        |         |            |
| HSK100A-SX16-120  | 1     | 1.58 | 4.72          | 3.54 | 2.44           | SX16   | SXN-16  | SXW-16     |
| HSK100A-SX16-150  | 1     |      | 5.91          | 4.68 |                |        |         |            |
| HSK100A-SX16-200  | 1     |      | 7.87          | 4.50 |                |        |         |            |
| HSK100A-SX25M-095 | 1     |      | 3.74          | 2.60 |                |        |         |            |
| HSK100A-SX25M-135 | 1     | 1.97 | 5.31          | 4.17 | 2.89           | SX25   | SXN-25M | 50-55 HOOK |
| HSK100A-SX25M-200 | 1     |      | 7.87          | 6.73 |                |        |         |            |

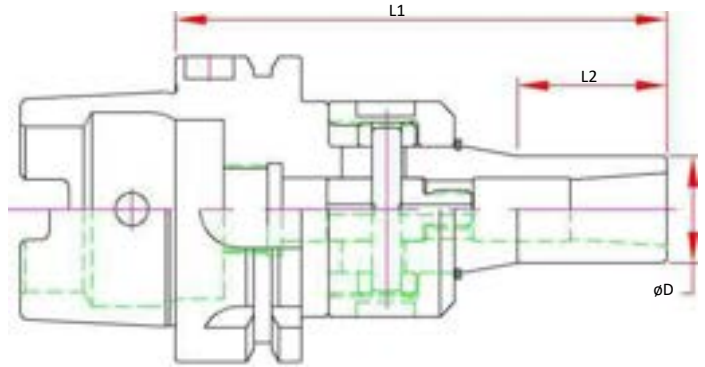
# HSK100A VX Mini Chuck

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout @ 4X Diameter
- Front Locking System
- Coolant Thru
- Dynamically Pre-Balanced G2.5 @ 25,000 RPM or < 1gmm

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets, STD and Jet-Blast
- Fine Trim Balance (Sample cutter required for balance compensation)



|         | Part Number      | Collet Range  | D     | L1<br>Projection | L2   | Collet | Wrench    | Locking<br>Torque Max. |
|---------|------------------|---------------|-------|------------------|------|--------|-----------|------------------------|
| HSK100A | HSK100A-VX06-110 | 0.079 - 0.250 | 0.500 | 4.33             | 1.48 | MX06   | 45-48 PIN | 30 ft/lbs              |
|         | HSK100A-VX06-150 |               |       | 5.91             |      |        |           |                        |
|         | HSK100A-VX08-110 | 0.125 - 0.394 | 0.787 | 4.33             | 1.21 | MX08   |           |                        |
|         | HSK100A-VX08-150 |               |       | 5.91             |      |        |           |                        |
|         | HSK100A-VX12-120 | 0.157 - 0.500 | 1.000 | 4.53             | 2.03 | MX12   |           |                        |
|         | HSK100A-VX12-165 |               |       | 6.49             |      |        |           |                        |

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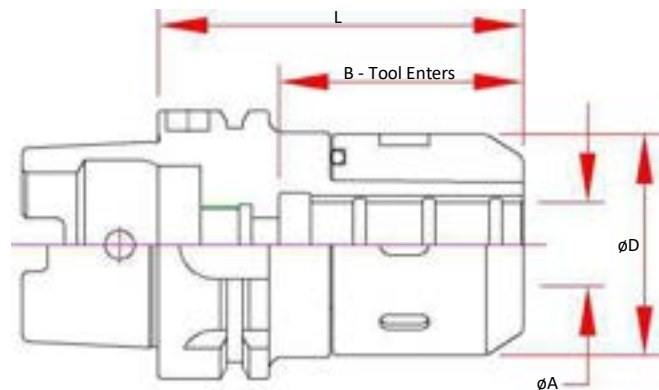
# HSK100A Mill Chuck

## Features

- 5  $\mu\text{m}$  - 0.0002" Runout @ 4 x Cutter Shank Dia.
- Designed for Tool Shanks w/ ISO h6 Class Tolerance
- Pre-Balanced for use @ 20,000 RPM

## Optional (Order Separately):

- Wrench
- Nylon Screw Seal for short tool shanks
- Fine Trim Balance (Sample cutter required for balance compensation)

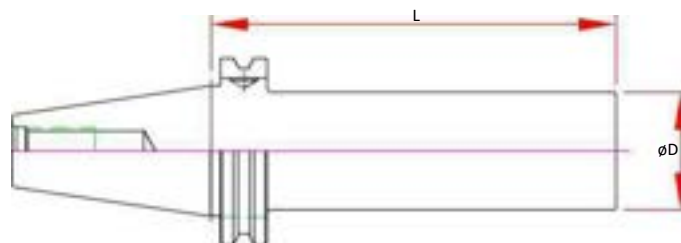


|       | Part Number        | A Bore | B Max. Tool Enters | D    | L Projection | Preset Screw | Collet | Wrench     |
|-------|--------------------|--------|--------------------|------|--------------|--------------|--------|------------|
| 3/4   | HSK100A-MC075-0453 | 0.7500 | 2.52               | 2.09 | 4.53         | ASC-16-18    | MC075  | 50-55 HOOK |
| 1"    | HSK100A-MC100-0512 | 1.0000 | 2.40               | 2.44 | 5.12         | ASC-16-18    | MC100  | 58-65 HOOK |
| 1-1/4 | HSK100A-MC125-0531 | 1.2500 | 3.07               | 2.76 | 5.31         | ASC-16-18    | MC125  | 65-70 HOOK |
| 20mm  | HSK100A-MC20-115   | 20.000 | 2.52               | 2.09 | 4.53         | ASC-16-18    | MC20   | 50-55 HOOK |
| 32mm  | HSK100A-MC32-135   | 32.000 | 3.07               | 2.76 | 5.31         | ASC-16-18    | MC32   | 65-70 HOOK |

# TB - Test Bar

## Features

- Concentric to Taper within 3 $\mu\text{m}$  (0.0001") TIR
- Tapers are ground better than AT3 for optimal T.I.R.
- Hardened & Normalized for consistency
- 100% Individually inspected with Certification Sheet included
- Wood Box Included
- Laser Marked with Actual Diameter and Length



| Part Number      | Spindle     | D    | L Projection |
|------------------|-------------|------|--------------|
| HSK100A-TB50-320 | HSK100A & C | 50mm | 320mm        |



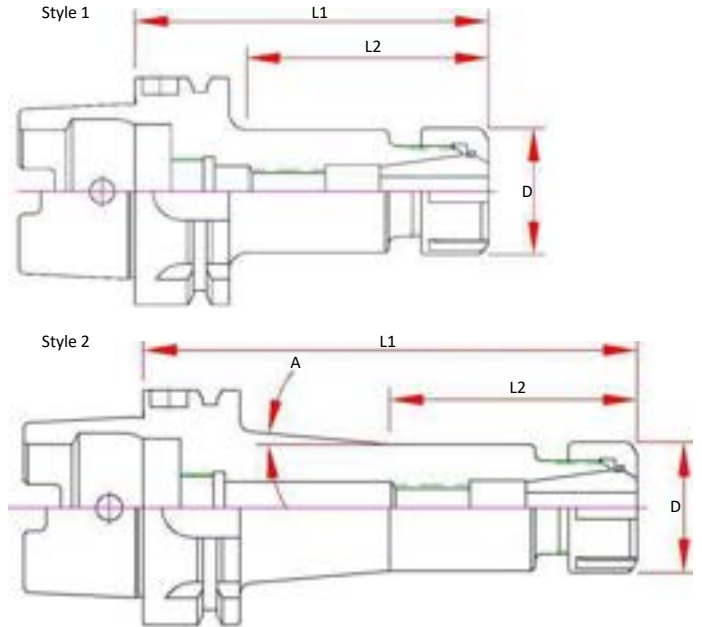
# HSK100A ER Collet Chucks

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout Taper to Taper
- Coolant Thru Body
- Dynamically Pre-Balanced G6.3 @ 15,000 RPM or <1gmm

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.010mm (0.0004") Standard
  - 0.005mm (0.0002") Ultra Precision
  - Sealed (Select Sizes)
  - Jet-Blast (Select Sizes)



| Part Number       | Style | A  | D    | Max. Tool Enters | L1 Projection | L2   | Screw    | Nut     | Wrench  |
|-------------------|-------|----|------|------------------|---------------|------|----------|---------|---------|
| HSK100A-ER16H-100 | 1     | -  | 1.10 | 2.80             | 3.94          | 2.20 | ASC-ER16 | ERN-16H | ERW-16H |
| HSK100A-ER16H-160 | 2     | 6° | 1.10 | 5.17             | 6.30          | 2.76 | ASC-ER16 | ERN-16H | ERW-16H |
| HSK100A-ER25-100  | 1     | -  | 1.65 | 2.63             | 3.94          | 2.20 | ASC-ER25 | ERN-25  | ERW-25E |
| HSK100A-ER25-160  | 2     | 3° | 1.65 | 2.95             | 6.30          | 3.35 | ASC-ER25 | ERN-25  | ERW-25E |
| HSK100A-ER32-100  | 1     | -  | 1.96 | 2.67             | 3.94          | 2.20 | ASC-ER32 | ERN-32  | ERW-32E |
| HSK100A-ER32-160  | 2     | 3° | 1.96 | 3.22             | 6.30          | 3.39 | ASC-ER32 | ERN-32  | ERW-32E |
| HSK100A-ER40-120  | 1     | -  | 2.48 | 3.46             | 4.72          | 3.35 | ASC-ER40 | ERN-40  | ERW-40E |
| HSK100A-ER40-160  | 2     | 4° | 2.48 | 3.78             | 6.30          | 3.48 | ASC-ER40 | ERN-40  | ERW-40E |

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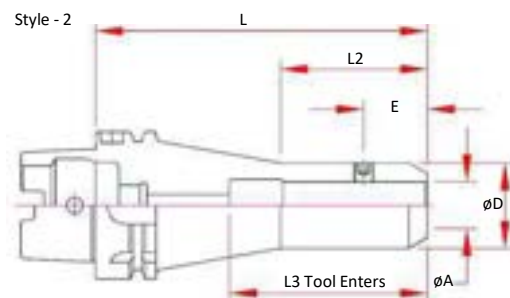
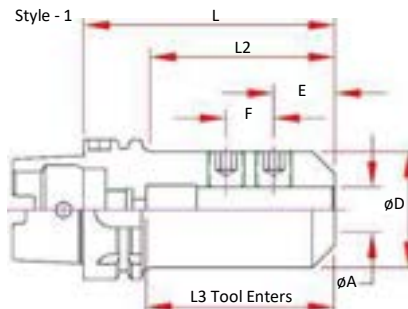
# HSK100A End Mill Adapters

## Features

- 3  $\mu\text{m}$  - 0.0001" Bore Runout
- H5 Bore Tolerance or better
- Coolant Thru
- Pre-Balanced for use @ 20,000 RPM  
(HSK100A @ 15,000 RPM)

## Optional (Order Separately):

- Jet-Blast (add "J" to the part number)



| Part Number        | A Bore | D    | E    | F    | L Projection | L2   | L3 Max. Tool Enters | Screw Number | Style |
|--------------------|--------|------|------|------|--------------|------|---------------------|--------------|-------|
| HSK100A-EM037-0400 | 0.3750 | 1.00 | 0.75 | -    | 4.00         | 2.85 | 3.37                | 5            | 1     |
| HSK100A-EM037-0600 |        |      |      |      | 6.00         | 3.00 | 5.37                |              | 2     |
| HSK100A-EM050-0400 | 0.5000 | 1.25 | 0.88 | -    | 4.00         | 2.85 | 2.56                | 6            | 1     |
| HSK100A-EM050-0600 |        |      |      |      | 6.00         | 3.13 | 3.07                |              | 2     |
| HSK100A-EM050-0800 |        |      |      |      | 8.00         | 3.13 | 3.07                |              | 2     |
| HSK100A-EM062-0400 | 0.6250 | 1.50 | 0.94 | -    | 4.00         | 2.85 | 2.56                | 7            | 1     |
| HSK100A-EM062-0600 |        |      |      |      | 6.00         | 4.85 | 3.50                |              | 1     |
| HSK100A-EM075-0400 | 0.7500 | 1.75 | 1.00 | -    | 4.00         | 2.85 | 2.56                | 8            | 1     |
| HSK100A-EM075-0600 |        |      |      |      | 6.00         | 1.97 | 4.00                |              | 2     |
| HSK100A-EM075-0800 |        |      |      |      | 8.00         | 1.97 | 4.00                |              | 2     |
| HSK100A-EM100-0400 | 1.0000 | 2.56 | 1.12 | 1.00 | 4.00         | 2.85 | 2.70                | (2) 10       | 1     |
| HSK100A-EM100-0600 |        |      |      |      | 6.00         | 4.85 | 4.50                |              | 1     |
| HSK100A-EM100-0800 |        |      |      |      | 8.00         | 6.85 | 4.50                |              | 1     |
| HSK100A-EM125-0400 | 1.2500 | 2.81 | 1.12 | 1.00 | 4.00         | 2.85 | 2.81                | (2) 11       | 1     |
| HSK100A-EM125-0600 |        |      |      |      | 6.00         | 4.85 | 3.23                |              | 1     |
| HSK100A-EM125-0800 |        |      |      |      | 8.00         | 6.85 | 3.23                |              | 1     |
| HSK100A-EM150-0450 | 1.5000 | 2.75 | 1.12 | 1.00 | 4.50         | 3.35 | 3.26                | (2) 11       | 1     |
| HSK100A-EM150-0600 |        |      |      |      | 6.00         | 5.35 | 3.26                |              | 1     |
| HSK100A-EM200-0550 | 2.0000 | 3.75 | 1.41 | 1.50 | 5.50         | 4.35 | 4.13                | (2) 13       | 1     |

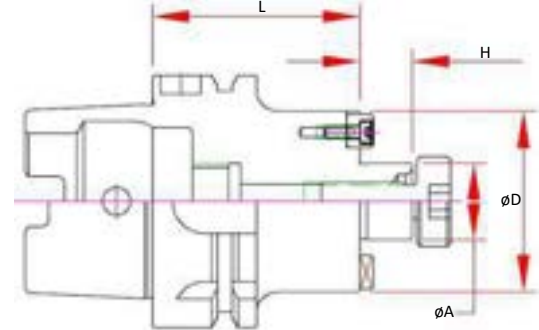
# HSK100A Shell Mill Adapters

## Features

- Coolant Thru Body
- Pre-Balanced for use @ 15,000 RPM

## Optional (Order Separately):

- FX Coolant (add "F" to the part number)



| Part Number         | A Pilot | D    | H    | L Projection | Drive Key Size | Drive Key Number | Mounting Screw Thread | Mounting Screw# |
|---------------------|---------|------|------|--------------|----------------|------------------|-----------------------|-----------------|
| HSK100A-SM075-0225  |         |      |      | 2.25         |                |                  |                       |                 |
| HSK100A-SM075-0350  |         |      |      | 3.50         |                |                  |                       |                 |
| HSK100A-SM075-0550  |         |      |      | 5.50         |                |                  |                       |                 |
| HSK100A-SM075-0800  | 0.75    | 1.71 | 0.69 | 8.00         | 0.312          | DK-SM075         | 3/8-24                | SCW-SM075       |
| HSK100A-SM075-1000  |         |      |      | 10.00        |                |                  |                       |                 |
| HSK100A-SM075-1200F |         |      |      | 12.00        |                |                  |                       |                 |
| HSK100A-SM075-1500F |         |      |      | 15.00        |                |                  |                       |                 |
| HSK100A-SM100-0225  |         |      |      | 2.25         |                |                  |                       |                 |
| HSK100A-SM100-0400  |         |      |      | 4.00         |                |                  |                       |                 |
| HSK100A-SM100-0600  |         |      |      | 6.00         |                |                  |                       |                 |
| HSK100A-SM100-0800  | 1.00    | 1.97 | 0.69 | 8.00         | 0.375          | DK-SM100         | 1/2-20                | SCW-SM100       |
| HSK100A-SM100-1000  |         |      |      | 10.00        |                |                  |                       |                 |
| HSK100A-SM100-1200F |         |      |      | 12.00        |                |                  |                       |                 |
| HSK100A-SM100-1500F |         |      |      | 15.00        |                |                  |                       |                 |
| HSK100A-SM125-0250  |         |      |      | 2.50         |                |                  |                       |                 |
| HSK100A-SM125-0350  |         |      |      | 3.50         |                |                  |                       |                 |
| HSK100A-SM125-0550  | 1.25    | 2.75 | 0.69 | 5.50         | 0.500          | DK-SM125         | 5/8-18                | SCW-SM125       |
| HSK100A-SM125-0800  |         |      |      | 8.00         |                |                  |                       |                 |
| HSK100A-SM150-0250  |         |      |      | 2.50         |                |                  |                       |                 |
| HSK100A-SM150-0400  |         |      |      | 4.00         |                |                  |                       |                 |
| HSK100A-SM150-0600  | 1.50    | 3.78 | 0.94 | 6.00         | 0.625          | DK-SM150         | 3/4-16                | SCW-SM150       |
| HSK100A-SM150-0800  |         |      |      | 8.00         |                |                  |                       |                 |
| HSK100A-SM200-0288  | 2.00    | 4.37 | 0.94 | 2.88         | 0.750          | DK-SM200         | 1"-14                 | SCW-SM200       |
| HSK100A-SM200-0400  |         |      |      | 4.00         |                |                  |                       |                 |

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# STRAIGHT SHANK



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# SX Mini Collet Chuck Extensions

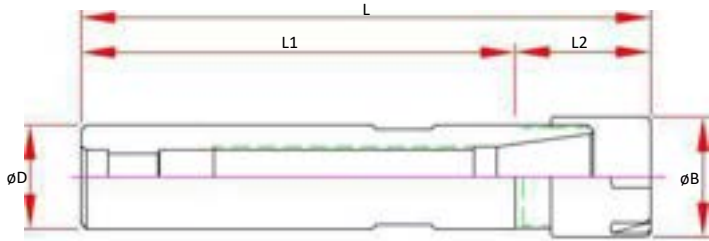


### Features

- 3 μm - 0.0001" Runout Taper to Taper
- Coolant Thru Body

### Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets
  - 0.005mm (0.0002") Standard
  - 0.003mm (0.0001") Ultra Precision



| 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  |

# MX Straight Shank Extensions



### Features

- 3 μm - 0.0001" Runout @ 4X Diameter
- Rear Draw Bolt Locking System
- Coolant Thru

### Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets, STD and Jet-Blast



| Part Number    | Collet Range  | D      | L    | Collet | Wrench | Locking Torque Max. |
|----------------|---------------|--------|------|--------|--------|---------------------|
| S050-MX06-0400 | 0.079 - 0.250 | 0.5000 | 4.00 | MX06   | MXW05  | 20 ft/lbs           |
| S050-MX06-0600 |               |        | 6.00 |        |        |                     |
| S075-MX08-0600 | 0.125 - 0.394 | 0.7500 | 6.00 | MX08   |        |                     |
| S100-MX12-0600 | 0.157 - 0.500 | 1.0000 | 6.00 | MX12   |        |                     |

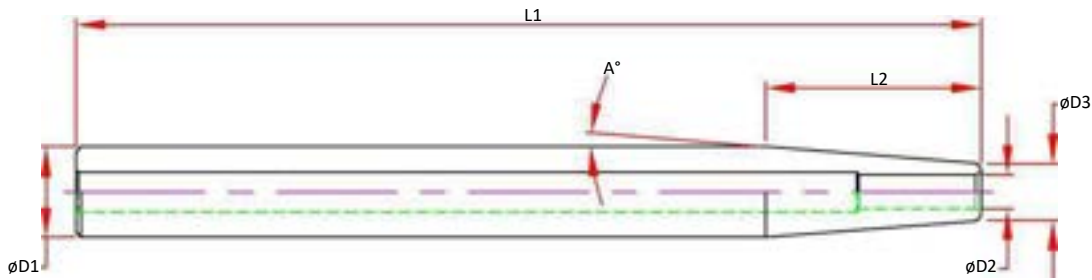
# SD - Shrink Fit Extensions - Metric

## Features:

- 3  $\mu\text{m}$  - 0.0001" Runout
- Coolant Thru the Center
- Close Center to clear fixtures or part walls
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- Designed for Carbide Cutting Tools with h6 shank tolerance

## Optional (Order Separately):

- Jet-Blast Coolant Ports - Add "J"  
**Note: Due to the thin wall Jet-Blast Ports may be into the bore of the extension.**



| Part Number  | D1 Shank mm | D2 Bore mm | D3 Nose mm | L1 Length mm | L2 Nose mm | A Angle |
|--------------|-------------|------------|------------|--------------|------------|---------|
| S12-SD03-160 | 12          | 3          | 8          | 160          | 25.4       | 4.5°    |
| S12-SD04-160 | 12          | 4          | 8          | 160          | 25.4       | 4.5°    |
| S16-SD03-160 | 16          | 3          | 10         | 160          | 38.1       | 4.5°    |
| S16-SD04-160 | 16          | 4          | 10         | 160          | 38.1       | 4.5°    |
| S16-SD05-160 | 16          | 5          | 10         | 160          | 38.1       | 4.5°    |
| S16-SD06-160 | 16          | 6          | 14         | 160          | 38.1       | 4.5°    |
| S20-SD06-160 | 20          | 6          | 14         | 160          | 38.1       | 4.5°    |
| S20-SD06-300 | 20          | 6          | 14         | 300          | 38.1       | 4.5°    |
| S20-SD08-160 | 20          | 8          | 14         | 160          | 38.1       | 4.5°    |
| S20-SD08-300 | 20          | 8          | 14         | 300          | 38.1       | 4.5°    |
| S25-SD10-160 | 25          | 10         | 20         | 160          | 31.8       | 4.5°    |
| S25-SD10-300 | 25          | 10         | 20         | 300          | 31.8       | 4.5°    |
| S25-SD12-160 | 25          | 12         | 20         | 160          | 31.8       | 4.5°    |
| S25-SD12-300 | 25          | 12         | 20         | 300          | 31.8       | 4.5°    |
| S25-SD14-160 | 25          | 14         | 20         | 160          | 31.8       | 4.5°    |
| S25-SD16-160 | 25          | 16         | 22         | 160          | 19.1       | 4.5°    |
| S25-SD16-300 | 25          | 16         | 22         | 300          | 19.1       | 4.5°    |

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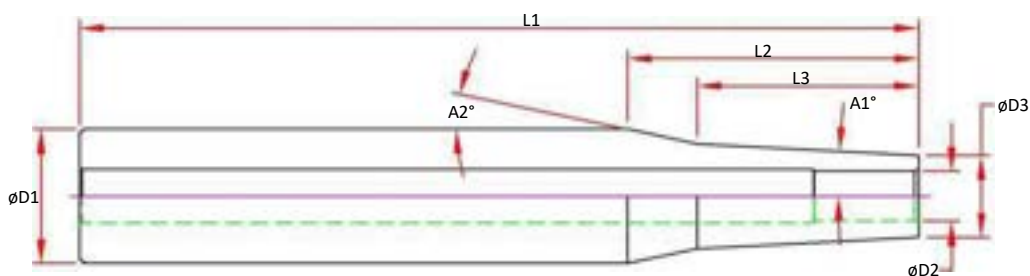
# SD - Shrink Fit Extensions

## Features:

- 3  $\mu\text{m}$  - 0.0001" Runout
- Coolant Thru the Center
- Close Center to clear fixtures or part walls
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- Designed for Carbide Cutting Tools with h6 shank tolerance

## Optional (Order Separately):

- Jet-Blast Coolant Ports - Add "J"  
**Note: Due to the thin wall Jet-Blast Ports may be into the bore of the extension.**



| Part Number     | D1     | D2     | D3   | L1   | L2   | L3   | A1   | A2    |
|-----------------|--------|--------|------|------|------|------|------|-------|
| S075-SD025-0415 | 0.7500 | 0.2500 | 0.49 | 4.15 | 1.38 | 0.87 | 3.0° | 9.4°  |
| S075-SD031-0415 | 0.7500 | 0.3125 | 0.55 | 4.15 | 1.38 | 0.87 | 3.0° | 6.1°  |
| S075-SD037-0415 | 0.7500 | 0.3750 | 0.61 | 4.15 | -    | 1.37 | 3.0° | -     |
| 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°  |



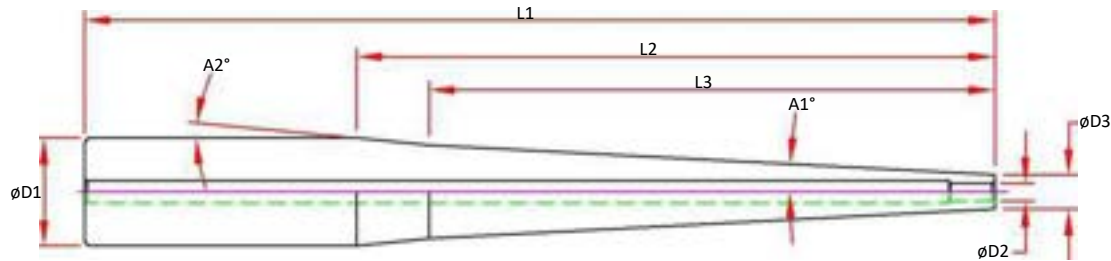
# SN - Shrink Fit Slim Nose Extensions

## Features:

- 3  $\mu\text{m}$  - 0.0001" Runout
- Coolant Thru the Center
- Close Center to clear fixtures or part walls
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- Designed for Carbide Cutting Tools with h6 shank tolerance

## Optional (Order Separately):

- Jet-Blast Coolant Ports - Add "J"  
**Note: Due to the thin wall Jet-Blast Ports may be into the bore of the extension.**



| Part Number     | D1     | D2     | D3   | L1   | L2   | L3   | A1   | A2    |
|-----------------|--------|--------|------|------|------|------|------|-------|
| S037-SN012-0315 | 0.3750 | 0.1250 | 0.24 |      |      |      | 2.8° |       |
| S037-SN018-0315 |        | 0.1875 | 0.31 | 3.15 | 1.40 | -    | 1.5° | -     |
| S050-SN025-0315 | 0.5000 | 0.2500 | 0.37 |      |      |      | 2.8° |       |
| S075-SN012-0800 | 0.7500 | 0.1250 | 0.24 | 8.00 | 4.46 | 3.95 | 3.0° | 5.4°  |
| S075-SN018-0800 |        | 0.1875 | 0.31 | 8.00 | 4.46 | -    | 2.9° | -     |
| S075-SN025-0433 | 0.7500 | 0.2500 | 0.37 | 4.33 | 1.38 | 25.6 | 3.0° | 20.2° |
| S075-SN025-0800 |        | 0.2500 | 0.37 | 8.00 | 4.46 | -    | 2.5° | -     |
| S075-SN031-0433 |        | 0.3125 | 0.43 | 4.33 | 1.38 | 1.00 | 3.0° | 16.1° |
| S075-SN037-0433 |        | 0.3750 | 0.49 | 4.33 | 1.38 | 1.00 | 3.0° | 11.8° |
| S100-SN037-0800 | 1.0000 | 0.3750 | 0.49 | 8.00 | 4.33 | 3.82 | 3.0° | 6.0°  |
| S100-SN050-0610 |        | 0.5000 | 0.62 | 6.10 | 2.00 | 1.63 | 2.9° | 16.1° |
| S100-SN050-0800 |        | 0.5000 | 0.62 | 8.00 | 4.33 | 3.82 | 2.0° | 6.0°  |

| Part Number  | D1 mm | D2 mm | D3 mm | L1 mm | L2 | L3  | A1   | A2 |
|--------------|-------|-------|-------|-------|----|-----|------|----|
| S10-SN04-080 | 10    | 4     | 8     | 80    | -  | 35  | 1.5° | -  |
| S16-SN06-140 | 16    | 6     | 9     | 140   | -  | 67  | 3°   | -  |
| S20-SN06-200 | 20    | 6     | 10    | 200   | -  | 113 | 2.5° | -  |

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# Mill ER Mini Nut Straight Shank

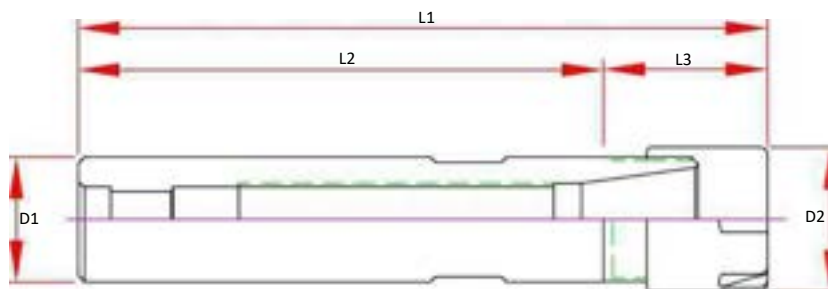


### Features

- 3 µm - 0.0001" Runout Taper to Taper
- Coolant Thru Body (see chart)

### Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets



| Part Number     | Collet Type | D1     | D2   | L1   | L2   | L3   | Preset Screw | Max Tool Dia. | Wrench  | Nut Type | Coolant Thru | Optional 1/8 Hole |
|-----------------|-------------|--------|------|------|------|------|--------------|---------------|---------|----------|--------------|-------------------|
| S037-ER08M-0394 | ER8         | 0.3750 | 0.47 | 4.88 | 3.94 | 0.94 | N/A          | 0.19          | ERW-08M | Mini     | N            | -C                |
| S050-ER11M-0552 | ER11        | 0.5000 | 0.63 | 6.56 | 5.51 | 1.04 | N/A          | 0.29          | ERW-11M | Mini     | Y            |                   |
| S050-ER16M-0552 | ER16        | 0.5000 | 0.87 | 6.97 | 5.51 | 1.46 | N/A          | 0.26          | ERW-16M | Mini     | Y            |                   |
| S062-ER11M-0552 | ER11        | 0.6250 | 0.63 | 6.24 | 5.51 | 0.73 | N/A          | 0.29          | ERW-11M | Mini     | N            | -C                |
| S075-ER16M-0552 | ER16        | 0.7500 | 0.87 | 6.50 | 5.51 | 0.98 | ASC-ER16     | 0.38          | ERW-16M | Mini     | Y            |                   |
| S100-ER20M-0552 | ER20        | 1.0000 | 1.10 | 6.61 | 5.51 | 1.10 | ASC-ER20     | 0.50          | ERW-20M | Mini     | Y            |                   |

# Mill ER Standard Nut Straight Shank

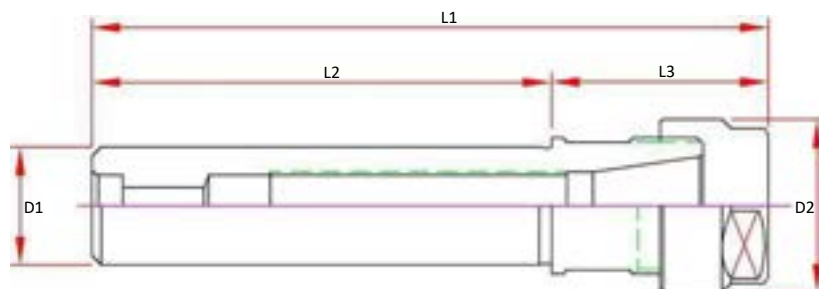


### Features

- 3 µm - 0.0001" Runout Taper to Taper
- Coolant Thru Body (see chart)

### Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets



| Part Number     | Collet Type | D1     | D2   | L1   | L2   | L3   | Preset Screw | Max Tool Dia. | Wrench  | Nut Type | Coolant Thru | Optional 1/8 Hole |
|-----------------|-------------|--------|------|------|------|------|--------------|---------------|---------|----------|--------------|-------------------|
| S050-ER11H-0552 | ER11        | 0.5000 | 0.75 | 6.87 | 5.51 | 0.85 | N/A          | 0.28          | ERW-11H | Hex      | N            | -C                |
| S062-ER16H-0236 | ER16        | 0.6250 | 1.10 | 3.74 | 2.36 | 1.38 | N/A          | 0.28          | ERW-16H | Hex      | N            | -C                |
| S075-ER16H-0197 | ER16        | 0.7500 | 1.10 | 3.35 | 1.97 | 1.38 | ASC-ER16     | 0.38          | ERW-16H | Hex      | Y            |                   |
| S075-ER16H-0394 | ER16        | 0.7500 | 1.10 | 5.32 | 3.94 | 1.38 | ASC-ER16     | 0.38          | ERW-16H | Hex      | Y            |                   |
| S075-ER16H-0552 | ER16        | 0.7500 | 1.10 | 6.89 | 5.51 | 1.38 | ASC-ER16     | 0.38          | ERW-16H | Hex      | Y            |                   |
| S075-ER20H-0250 | ER20        | 0.7500 | 1.34 | 3.94 | 2.50 | 1.50 | ASC-ER16     | 0.38          | ERW-20H | Hex      | Y            |                   |
| S100-ER20H-0552 | ER20        | 1.0000 | 1.34 | 7.11 | 5.51 | 1.59 | ASC-ER20     | 0.50          | ERW-20H | Hex      | Y            |                   |
| S100-ER25-0197  | ER25        | 1.0000 | 1.65 | 3.98 | 1.97 | 2.01 | ASC-ER25     | 0.63          | ERW-25E | Spanner  | Y            |                   |
| S100-ER32-0197  | ER32        | 1.0000 | 1.97 | 4.00 | 1.97 | 2.03 | ASC-ER25     | 0.63          | ERW-32E | Spanner  | Y            |                   |
| S125-ER32-0236  | ER32        | 1.2500 | 1.97 | 4.39 | 2.36 | 2.03 | ASC-ER32     | 0.75          | ERW-32E | Spanner  | Y            |                   |
| S125-ER32-0552  | ER32        | 1.2500 | 1.97 | 7.54 | 5.51 | 2.03 | ASC-ER32     | 0.75          | ERW-32E | Spanner  | Y            |                   |
| S100-ER40-0197  | ER40        | 1.0000 | 2.48 | 4.53 | 1.97 | 2.56 | ASC-ER16     | 0.38          | ERW-40E | Spanner  | Y            |                   |

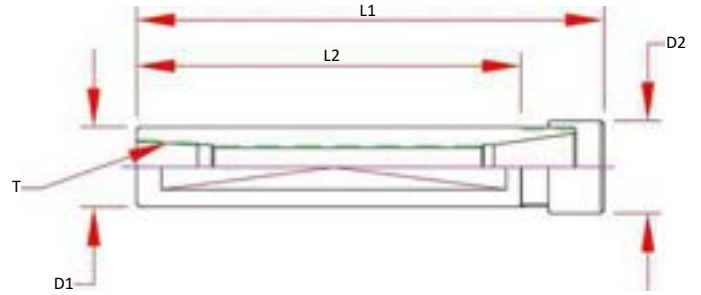
# Lathe Coolant Thru Straight Shank

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout Taper to Taper
- Coolant Thru Body (see chart)
- Includes 1/4" Pipe Threads

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets



| Part Number      | Collet Type | D1     | D2   | L1   | L2   | T- Thread | Set Screw | Max Tool Dia. | Wrench  | Nut Type  |
|------------------|-------------|--------|------|------|------|-----------|-----------|---------------|---------|-----------|
| S075-ER16M-0342C | ER16        | 0.7500 | 0.87 | 4.34 | 3.42 |           | ASC-ER16  | 0.38          | ERW-16M | Mini      |
| S100-ER20M-0331C | ER20        | 1.0000 | 1.10 | 4.38 | 3.31 | 1/4" NPT  | ASC-ER20  | 0.50          | ERW-20M | Mini      |
| S125-ER32-0236C  | ER32        | 1.2500 | 1.97 | 4.52 | 2.36 |           | ASC-ER32  | 0.75          | ERW-32E | E-Spanner |

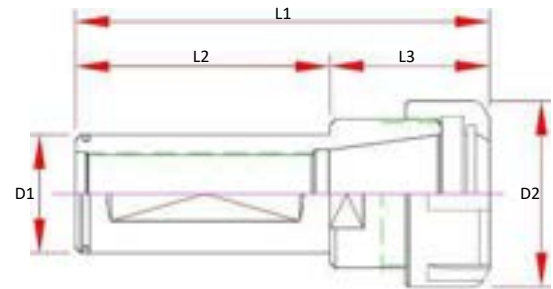
# Lathe ER Straight Shank

## Features

- 3  $\mu\text{m}$  - 0.0001" Runout Taper to Taper
- Coolant Thru Body (see chart)
- Includes O-Ring Shank Seal

## Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets



| Part Number      | Collet Type | D1     | D2   | L1   | L2   | L3   | ID Thread | Wrench  | Nut Type  | O-Ring Shank Seal |
|------------------|-------------|--------|------|------|------|------|-----------|---------|-----------|-------------------|
| S125-ER25-0236NC | ER25        | 1.2500 | 1.65 | 3.82 | 2.36 | 1.46 | 11/16-16  | ERW-25E | E-Spanner | AS-024            |
| S125-ER32-0236NC | ER32        | 1.2500 | 1.97 | 4.06 | 2.36 | 1.69 | 15/16-16  | ERW-32E | E-Spanner | AS-024            |
| S125-ER40-0236NC | ER40        | 1.2500 | 2.48 | 4.72 | 2.36 | 2.36 | 15/16-16  | ERW-40E | E-Spanner | AS-024            |
| S150-ER32-0315NC | ER32        | 1.5000 | 1.97 | 4.65 | 3.15 | 1.50 | 15/16-16  | ERW-32E | E-Spanner | AS-028            |
| S150-ER40-0295NC | ER40        | 1.5000 | 2.48 | 5.31 | 2.95 | 2.36 | 1 1/8-16  | ERW-40E | E-Spanner | AS-028            |

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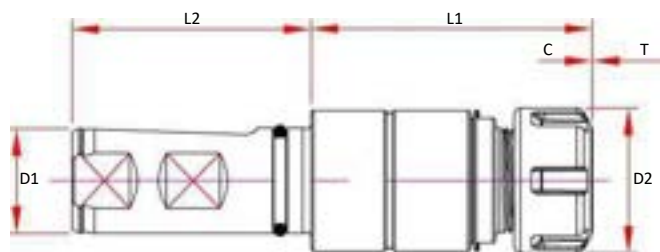
## Precision Sync Tapping ER Straight Shank

### Features

- Coolant Thru, for use up to 1,500 PSI
- Compensates for synchronization errors in the tap cycle
- Minimal length compensation in both Tension and Compression compensates for small pitch differences between the spindle and tap reducing friction on the tap flanks

### Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets



| Part Number    | Collet Type | D1   | D2   | L1   | L2   | C    | T    | Wrench  |
|----------------|-------------|------|------|------|------|------|------|---------|
| S100-PT20-0268 | ER20        | 1.00 | 1.34 | 2.79 | 2.28 | 0.02 | 0.02 | ERW-20H |
| S100-PT32-0325 | ER32        | 1.00 | 1.97 | 3.25 | 2.28 | 0.02 | 0.02 | ERW-32E |

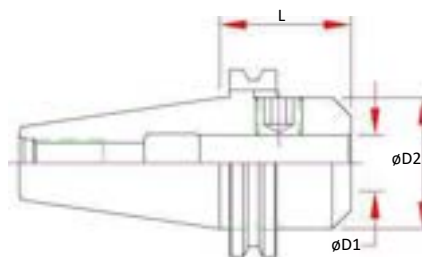
## Modular Taper Assembly

### Features

- Coolant Thru, for use up to 1,500 PSI  
DIN B flange coolant available in some models
- For Total Projection:  
Add "L" from chart below with "L1" from chart above
- Longer projections available see EM section of the catalog

### Optional (Order Separately):

- Wrench
- Torque Wrench
- Collets



| Dual Contact Spindle Part Number | Standard Spindle Part Number | D1    | D2   | L    |
|----------------------------------|------------------------------|-------|------|------|
| BT30-EM100-0275-B                | BT30-EM100-0275              | 1.000 | 2.00 | 2.75 |
| BT40-EM100-0200-B                | BT40-EM100-0200              |       | 2.00 | 2.00 |
| CAT40-EM100-0175-B               | CAT40-EM100-0175             |       | 1.75 | 1.75 |
| CAT50-EM100-0162-B               | CAT50-EM100-0162             |       | 2.75 | 1.62 |
|                                  | HSK 63A-EM100-0400           |       | 2.00 | 4.00 |
|                                  | HSK100A-EM100-0400           |       | 2.00 | 4.00 |

# Straight Shank End Mill Adapters

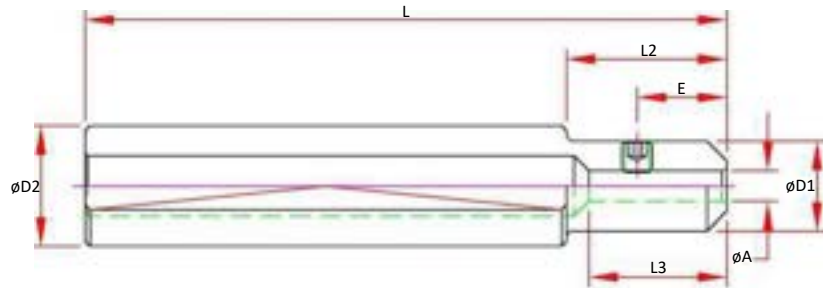


## Features

- 3  $\mu\text{m}$  - 0.0001" Bore Runout
- H5 Bore Tolerance or better
- Coolant Thru

## Optional (Order Separately):

- Jet-Blast (add "J" to the part number)



|      | 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 |        | 0.75        |          | -    |                     | 5            |
| 1/2  | S100-EM050-0600 | 0.5000 | 1.00 | 1.0000 | 0.39 & 0.98 |          | -    |                     | (2) 4        |

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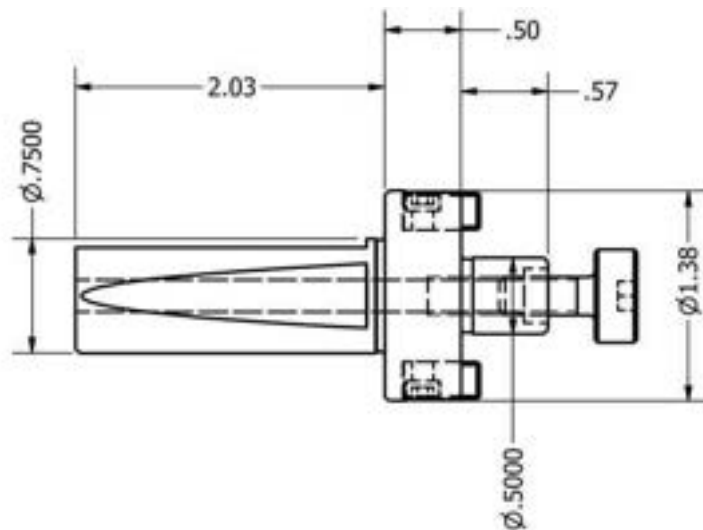
# Straight Shank Shell Mill Adapters

## Features

- Coolant Thru Body

## Optional (Order Separately):

- FX Coolant (add "F" to the part number)

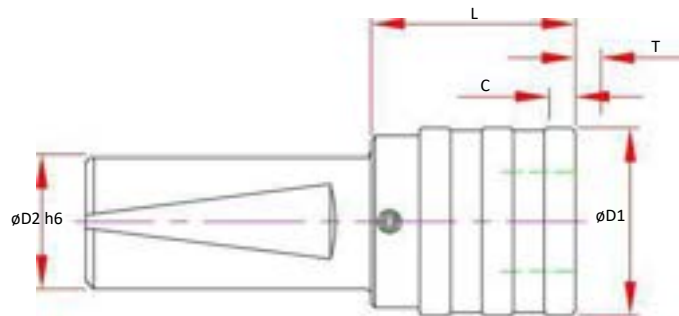


| Standard Spindle Part Number | A Pilot | D    | H    | L Projection | L2   | Drive Key Size | Drive Key Number | Mounting Screw Thread | Mounting Screw# |
|------------------------------|---------|------|------|--------------|------|----------------|------------------|-----------------------|-----------------|
| S075-SM050-0050              | 0.50    | 1.38 | 0.57 | 0.50         | 2.03 | 0.250          | DK-SM050         | 1/4-28                | SCW-SM050       |

# TC - Straight Shank

## Features:

- Non Coolant
- Flats for Lathe Applications
- Compatible with industry standards
- TC Holders are not designed for Coolant Thru

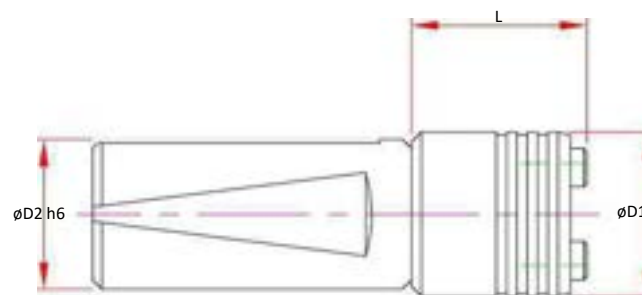


| Size | Part Number   | Capacity     | D1   | D2    | L    | T<br>TENSION | C<br>COMP. |
|------|---------------|--------------|------|-------|------|--------------|------------|
| 1    | S100-TC1-0158 | #6 - 9/16    | 1.42 | 1.000 | 1.58 | 0.30         | 0.30       |
| 2    | S100-TC2-0256 | 5/16 - 7/8   | 2.09 | 1.000 | 2.36 | 0.49         | 0.49       |
| 3    | S125-TC3-0504 | 9/16 - 1-3/8 | 3.07 | 1.250 | 3.94 | 0.79         | 0.79       |

# RT - Straight Shank

## Features:

- Flats for Lathe Applications
- Compatible with industry standards



| Size | Part Number   | Capacity     | D1   | D2    | L    |
|------|---------------|--------------|------|-------|------|
| 1    | S100-RT1-0158 | #6 - 9/16    | 1.34 | 1.000 | 1.57 |
| 2    | S100-RT2-0237 | 5/16 - 7/8   | 1.93 | 1.000 | 2.36 |
| 3    | S125-RT3-0375 | 9/16 - 1-3/8 | 2.89 | 1.250 | 3.74 |

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# 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 |
|---------------|------------|--------|-----------------|------------|----------|---------------|
| <b>Metric</b> |            |        |                 |            |          |               |
| 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-14  | SX25       | 14     | 12.0mm - 25.0mm | 0.5mm      | 0.5mm    | SX25 TRAY     |
| SX25-MSET-10  | SX25       | 10     | 16.0mm - 25.0mm | 1.0mm      | 0.5mm    | SX25 TRAY     |
| <b>Inch</b>   |            |        |                 |            |          |               |
| 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-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   | 12                |
| SX10 TRAY   | 24                |
| SX16 TRAY   | 44                |
| SX25 TRAY   | 29                |



# SX Collets

## Features

- 5µm - 0.0002" T.I.R. @ 4X tool diameter
- 3µm - 0.0001" T.I.R. @ 4X tool diameter  
—Add "P" to the collet part number  
(Hand Inspected from Inventory)
- Up to 0.020" (0.5mm) Collapse Range 3mm (1/8, 0.1250") & Larger >3mm for use ON-Size  
-P Collets for use ON-Size



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BT40

## SX06 Collets

| SX06 Inch |        | Precision     | Ultra Precision |
|-----------|--------|---------------|-----------------|
| Inch      |        | 5 Micron @ 4D | 3 Micron @ 4D   |
|           |        | SX06          | SX06-P          |
| 1/8       | 0.1250 | SX06-0125     | SX06-0125-P     |
| 5/32      | 0.1563 | SX06-0156     | SX06-0156-P     |
| 3/16      | 0.1875 | SX06-0187     | SX06-0187-P     |
| 7/32      | 0.2188 | SX06-0218     | SX06-0218-P     |
| 1/4       | 0.2500 | SX06-0250     | SX06-0250-P     |

| SX06 Metric |            | Precision     | Ultra Precision |
|-------------|------------|---------------|-----------------|
| MM          | MM in INCH | 5 Micron @ 4D | 3 Micron @ 4D   |
|             |            | SX06          | SX06-P          |
| 0.80        | 0.0315     | SX06-M008     |                 |
| 1.00        | 0.0394     | SX06-M010     |                 |
| 1.25        | 0.0492     | SX06-M0125    |                 |
| 1.50        | 0.0591     | SX06-M015     |                 |
| 1.75        | 0.0689     | SX06-M0175    |                 |
| 2.00        | 0.0787     | SX06-M020     |                 |
| 2.25        | 0.0886     | SX06-M0225    |                 |
| 2.50        | 0.0984     | SX06-M025     |                 |
| 2.75        | 0.1083     | SX06-M0275    |                 |
| 3.00        | 0.1181     | SX06-M030     | SX06-M030-P     |
| 3.50        | 0.1378     | SX06-M035     | SX06-M035-P     |
| 4.00        | 0.1575     | SX06-M040     | SX06-M040-P     |
| 4.50        | 0.1772     | SX06-M045     | SX06-M045-P     |
| 5.00        | 0.1969     | SX06-M050     | SX06-M050-P     |
| 5.50        | 0.2165     | SX06-M055     | SX06-M055-P     |
| 6.00        | 0.2362     | SX06-M060     | SX06-M060-P     |

HSK 40E

HSK 63A

HSK 100A

## SX10 Collets

| SX10 Inch |        | Precision     | Ultra Precision |
|-----------|--------|---------------|-----------------|
| Inch      |        | 5 Micron @ 4D | 3 Micron @ 4D   |
|           |        | SX10          | SX10-P          |
| 1/8       | 0.1250 | SX10-0125     | SX10-0125-P     |
| 5/32      | 0.1563 | SX10-0156     | SX10-0156-P     |
| 3/16      | 0.1875 | SX10-0187     | SX10-0187-P     |
| 7/32      | 0.2188 | SX10-0218     | SX10-0218-P     |
| 1/4       | 0.2500 | SX10-0250     | SX10-0250-P     |
| 9/32      | 0.2813 | SX10-0281     | SX10-0281-P     |
| 5/16      | 0.3125 | SX10-0312     | SX10-0312-P     |
| 11/32     | 0.3438 | SX10-0343     | SX10-0343-P     |
| 3/8       | 0.3750 | SX10-0375     | SX10-0375-P     |

| SX10 Metric |            | Precision     | Ultra Precision |
|-------------|------------|---------------|-----------------|
| MM          | MM in INCH | 5 Micron @ 4D | 3 Micron @ 4D   |
|             |            | SX10          | SX10-P          |
| 2.00        | 0.0787     | SX10-M020     |                 |
| 2.25        | 0.0886     | SX10-M0225    |                 |
| 2.50        | 0.0984     | SX10-M025     |                 |
| 2.75        | 0.1083     | SX10-M0275    |                 |
| 3.00        | 0.1181     | SX10-M030     | SX10-M030-P     |
| 3.50        | 0.1378     | SX10-M035     | SX10-M035-P     |
| 4.00        | 0.1575     | SX10-M040     | SX10-M040-P     |
| 4.50        | 0.1772     | SX10-M045     | SX10-M045-P     |
| 5.00        | 0.1969     | SX10-M050     | SX10-M050-P     |
| 5.50        | 0.2165     | SX10-M055     | SX10-M055-P     |
| 6.00        | 0.2362     | SX10-M060     | SX10-M060-P     |
| 6.50        | 0.2559     | SX10-M065     | SX10-M065-P     |
| 7.00        | 0.2756     | SX10-M070     | SX10-M070-P     |
| 7.50        | 0.2953     | SX10-M075     | SX10-M075-P     |
| 8.00        | 0.3150     | SX10-M080     | SX10-M080-P     |
| 8.50        | 0.3346     | SX10-M085     | SX10-M085-P     |
| 9.00        | 0.3543     | SX10-M090     | SX10-M090-P     |
| 9.50        | 0.3740     | SX10-M095     | SX10-M095-P     |
| 10.00       | 0.3937     | SX10-M100     | SX10-M100-P     |

STRAIGHT SHANKS

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# SX16 Collets

## Features

- 5µm - 0.0002" T.I.R. @ 4X tool diameter
- 3µm - 0.0001" T.I.R. @ 4X tool diameter—Add "P" to the collet part number (Hand Inspected from Inventory)
- Flat ground shoulder guarantees the collet to be seated correctly for optimal repeatability.
- Up to 0.020" (0.5mm) Collapse Range 3mm (1/8, 0.1250") & Larger P Collets for use ON-Size



| SX16 Inch |        | Precision     | Ultra Precision |
|-----------|--------|---------------|-----------------|
| Inch      |        | 5 Micron @ 4D | 3 Micron @ 4D   |
|           |        | SX16          | SX16-P          |
| 1/8       | 0.1250 | SX16-0125     | SX16-0125P      |
| 5/32      | 0.1563 | SX16-0156     | SX16-0156P      |
| 3/16      | 0.1875 | SX16-0187     | SX16-0187P      |
| 7/32      | 0.2188 | SX16-0218     | SX16-0218P      |
| 1/4       | 0.2500 | SX16-0250     | SX16-0250P      |
| 9/32      | 0.2813 | SX16-0281     | SX16-0281P      |
| 5/16      | 0.3125 | SX16-0312     | SX16-0312P      |
| 11/32     | 0.3438 | SX16-0343     | SX16-0343P      |
| 3/8       | 0.3750 | SX16-0375     | SX16-0375P      |
| 13/32     | 0.4063 | SX16-0406     | SX16-0406P      |
| 7/16      | 0.4375 | SX16-0437     | SX16-0437P      |
| 15/32     | 0.4688 | SX16-0468     | SX16-0468P      |
| 1/2       | 0.5000 | SX16-0500     | SX16-0500P      |
| 17/32     | 0.5313 | SX16-0531     | SX16-0531P      |
| 9/16      | 0.5625 | SX16-0562     | SX16-0562P      |
| 19/32     | 0.5938 | SX16-0593     | SX16-0593P      |
| 5/8       | 0.6250 | SX16-0625     | SX16-0625P      |

| SX16 Metric |            | Precision     | Ultra Precision |
|-------------|------------|---------------|-----------------|
| MM          | MM in INCH | 5 Micron @ 4D | 3 Micron @ 4D   |
|             |            | SX16          | SX16-P          |
| 3.00        | 0.1181     | SX16-M030     | SX16-M030P      |
| 3.50        | 0.1378     | SX16-M035     | SX16-M035P      |
| 4.00        | 0.1575     | SX16-M040     | SX16-M040P      |
| 4.50        | 0.1772     | SX16-M045     | SX16-M045P      |
| 5.00        | 0.1969     | SX16-M050     | SX16-M050P      |
| 5.50        | 0.2165     | SX16-M055     | SX16-M055P      |
| 6.00        | 0.2362     | SX16-M060     | SX16-M060P      |
| 6.50        | 0.2559     | SX16-M065     | SX16-M065P      |
| 7.00        | 0.2756     | SX16-M070     | SX16-M070P      |
| 7.50        | 0.2953     | SX16-M075     | SX16-M075P      |
| 8.00        | 0.3150     | SX16-M080     | SX16-M080P      |
| 8.50        | 0.3346     | SX16-M085     | SX16-M085P      |
| 9.00        | 0.3543     | SX16-M090     | SX16-M090P      |
| 9.50        | 0.3740     | SX16-M095     | SX16-M095P      |
| 10.00       | 0.3937     | SX16-M100     | SX16-M100P      |
| 10.50       | 0.4134     | SX16-M105     | SX16-M105P      |
| 11.00       | 0.4331     | SX16-M110     | SX16-M110P      |
| 11.50       | 0.4528     | SX16-M115     | SX16-M115P      |
| 12.00       | 0.4724     | SX16-M120     | SX16-M120P      |
| 12.50       | 0.4921     | SX16-M125     | SX16-M125P      |
| 13.00       | 0.5118     | SX16-M130     | SX16-M130P      |
| 13.50       | 0.5315     | SX16-M135     | SX16-M135P      |
| 14.00       | 0.5512     | SX16-M140     | SX16-M140P      |
| 14.50       | 0.5709     | SX16-M145     | SX16-M145P      |
| 15.00       | 0.5906     | SX16-M150     | SX16-M150P      |
| 15.50       | 0.6102     | SX16-M155     | SX16-M155P      |
| 16.00       | 0.6299     | SX16-M160     | SX16-M160P      |

# SX25 Collets

## Features

- 5µm - 0.0002" T.I.R. @ 4X tool diameter
- 3µm - 0.0001" T.I.R. @ 4X tool diameter—Add "P" to the collet part number (Hand Inspected from Inventory)
- Flat ground shoulder guarantees the collet to be seated correctly for optimal repeatability.
- Up to 0.020" (0.5mm) Collapse Range 3mm (1/8, 0.1250") & Larger P Collets for use ON-Size



| SX25 Inch |        | Precision     | Ultra Precision |
|-----------|--------|---------------|-----------------|
| Inch      |        | 5 Micron @ 4D | 3 Micron @ 4D   |
|           |        | SX25          | SX25-P          |
| 1/8       | 0.1250 | SX25-0125     | SX25-0125P      |
| 3/16      | 0.1875 | SX25-0187     | SX25-0187P      |
| 1/4       | 0.2500 | SX25-0250     | SX25-0250P      |
| 5/16      | 0.3125 | SX25-0312     | SX25-0312P      |
| 3/8       | 0.3750 | SX25-0375     | SX25-0375P      |
| 7/16      | 0.4375 | SX25-0437     | SX25-0437P      |
| 1/2       | 0.5000 | SX25-0500     | SX25-0500P      |
| 9/16      | 0.5625 | SX25-0562     | SX25-0562P      |
| 5/8       | 0.6250 | SX25-0625     | SX25-0625P      |
| 11/16     | 0.6875 | SX25-0687     | SX25-0687P      |
| 3/4       | 0.7500 | SX25-0750     | SX25-0750P      |
| 13/16     | 0.8125 | SX25-0812     | SX25-0812P      |
| 7/8       | 0.8750 | SX25-0875     | SX25-0875P      |
| 15/16     | 0.9375 | SX25-0937     | SX25-0937P      |
| 1         | 1.0000 | SX25-1000     | SX25-1000P      |

| SX25 Metric |            | Precision     | Ultra Precision |
|-------------|------------|---------------|-----------------|
| MM          | MM in INCH | 5 Micron @ 4D | 3 Micron @ 4D   |
|             |            | SX25          | SX25-P          |
| 12.0        | 0.4724     | SX25-M120     | SX25-M120P      |
| 13.0        | 0.5118     | SX25-M130     | SX25-M130P      |
| 14.0        | 0.5512     | SX25-M140     | SX25-M140P      |
| 15.0        | 0.5906     | SX25-M150     | SX25-M150P      |
| 16.0        | 0.6299     | SX25-M160     | SX25-M160P      |
| 17.0        | 0.6693     | SX25-M170     | SX25-M170P      |
| 18.0        | 0.7087     | SX25-M180     | SX25-M180P      |
| 19.0        | 0.7480     | SX25-M190     | SX25-M190P      |
| 20.0        | 0.7874     | SX25-M200     | SX25-M200P      |
| 21.0        | 0.8268     | SX25-M210     | SX25-M210P      |
| 22.0        | 0.8661     | SX25-M220     | SX25-M220P      |
| 23.0        | 0.9055     | SX25-M230     | SX25-M230P      |
| 24.0        | 0.9449     | SX25-M240     | SX25-M240P      |
| 25.0        | 0.9843     | SX25-M250     | SX25-M250P      |

CAT40

CAT50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT SHANKS

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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

## Optional (Order Separately):

- Jet-Blast Coolant Ports



### MX06 Collets

| Tool Shank<br>h6 |        | MX06      | Tool Shank<br>Enters Depth |
|------------------|--------|-----------|----------------------------|
| 1/8              | 0.1250 | MX06-0125 | 0.81—0.94                  |
| 5/32             | 0.1563 | MX06-0156 |                            |
| 3/16             | 0.1875 | MX06-0187 | 0.83—0.94                  |
| 7/32             | 0.2188 | MX06-0218 |                            |
| 1/4              | 0.2500 | MX06-0250 | 0.85—0.94                  |
| 2.0              | 0.0787 | MX06-M020 |                            |
| 2.5              | 0.0984 | MX06-M025 | 0.81—0.94                  |
| 3.0              | 0.1181 | MX06-M030 |                            |
| 3.5              | 0.1378 | MX06-M035 |                            |
| 4.0              | 0.1575 | MX06-M040 |                            |
| 4.5              | 0.1772 | MX06-M045 | 0.83—0.94                  |
| 5.0              | 0.1969 | MX06-M050 |                            |
| 5.5              | 0.2165 | MX06-M055 | 0.85—0.94                  |
| 6.0              | 0.2362 | MX06-M060 |                            |

### MX08 Collets

| Tool Shank<br>h6 |        | MX08      | Tool Shank<br>Enters Depth |
|------------------|--------|-----------|----------------------------|
| 1/8              | 0.125  | MX08-0125 | 0.75—1.42                  |
| 5/32             | 0.1563 | MX08-0156 |                            |
| 3/16             | 0.1875 | MX08-0187 | 0.87—1.42                  |
| 1/4              | 0.25   | MX08-0250 |                            |
| 5/16             | 0.3125 | MX08-0312 | 0.98—1.18                  |
| 3/8              | 0.375  | MX08-0375 | 1.14—1.18                  |
| 3.0              | 0.1181 | MX08-M030 | 0.75—1.42                  |
| 4.0              | 0.1575 | MX08-M040 | 0.83—1.42                  |
| 5.0              | 0.1969 | MX08-M050 | 0.87—1.42                  |
| 6.0              | 0.2362 | MX08-M060 | 0.98—1.42                  |
| 7.0              | 0.2756 | MX08-M070 |                            |
| 8.0              | 0.315  | MX08-M080 | 1.14—1.18                  |
| 9.0              | 0.3543 | MX08-M090 |                            |
| 10.0             | 0.3937 | MX08-M100 |                            |

### MX12 Collets

| Tool Shank<br>h6 |        | MX12      | Tool Shank<br>Enters Depth |
|------------------|--------|-----------|----------------------------|
| 1/8              | 0.1250 | MX12-0125 | 0.75—1.61                  |
| 3/16             | 0.1875 | MX12-0187 | 0.87—1.61                  |
| 1/4              | 0.2500 | MX12-0250 | 1.06—1.61                  |
| 5/16             | 0.3125 | MX12-0312 | 1.56—1.61                  |
| 3/8              | 0.3750 | MX12-0375 | 1.56—1.65                  |
| 7/16             | 0.4375 | MX12-0437 |                            |
| 1/2              | 0.5000 | MX12-0500 | 1.61—1.74                  |
| 3.0              | 0.1181 | MX12-M030 | 0.75—1.61                  |
| 4.0              | 0.1575 | MX12-M040 | 0.83—1.61                  |
| 5.0              | 0.1969 | MX12-M050 | 0.95—1.61                  |
| 6.0              | 0.2362 | MX12-M060 | 1.06—1.61                  |
| 8.0              | 0.3150 | MX12-M080 | 1.56—1.61                  |
| 10.0             | 0.3937 | MX12-M100 | 1.56—1.65                  |
| 12.0             | 0.4724 | MX12-M120 |                            |

# MX Jet-Blast Collets

## Features

- 3µm - 0.0001" Runout @ 4X Diameter
- **Jet-Blast for Coolant Around Solid Tools**
- 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 **-J** to the end of the MX Collet number



1/2 Moon Jet-Blast, only used when collet wall is too thin for full diameter Jet-Blast holes.

## MX 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                |

CAT40  
CAT50  
BT30  
BT40  
HSK 40E  
HSK 63A  
HSK 100A  
STRAIGHT SHANKS  
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# MC Milling Chuck Collets

## Non-Coolant Hydraulic Collets



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

- Collets Ground 3µm - 0.0001" Runout OD to ID
- Interchangeable with most competitive models
- On Size  
Designed for h6 tolerance cutting tool shanks
- See Page #128 for Sealed Collets

Note: Mill Chuck Collets reduce the grip force of the Mill Chucks and Hydraulic Chucks. Use caution to prevent cutter slip / pull out.

| Cutter Shank Size |        | MC075      |
|-------------------|--------|------------|
| 1/8               | 0.1250 | MC075-0125 |
| 3/16              | 0.1875 | MC075-0187 |
| 1/4               | 0.2500 | MC075-0250 |
| 5/16              | 0.3125 | MC075-0312 |
| 3/8               | 0.3750 | MC075-0375 |
| 7/16              | 0.4375 | MC075-0437 |
| 1/2               | 0.5000 | MC075-0500 |
| 9/16              | 0.5625 | MC075-0562 |
| 5/8               | 0.6250 | MC075-0625 |
| 6mm               | 0.2362 | MC075-M060 |
| 8mm               | 0.3150 | MC075-M080 |
| 10mm              | 0.3937 | MC075-M100 |
| 12mm              | 0.4724 | MC075-M120 |
| 14mm              | 0.5512 | MC075-M140 |
| 16mm              | 0.6299 | MC075-M160 |

| Cutter Shank Size |        | MC100      |
|-------------------|--------|------------|
| 1/8               | 0.1250 | MC100-0125 |
| 3/16              | 0.1875 | MC100-0187 |
| 1/4               | 0.2500 | MC100-0250 |
| 5/16              | 0.3125 | MC100-0312 |
| 3/8               | 0.3750 | MC100-0375 |
| 7/16              | 0.4375 | MC100-0437 |
| 1/2               | 0.5000 | MC100-0500 |
| 9/16              | 0.5625 | MC100-0562 |
| 5/8               | 0.6250 | MC100-0625 |
| 3/4               | 0.7500 | MC100-0750 |
| 7/8               | 0.8750 | MC100-0875 |
| 6mm               | 0.2362 | MC100-M060 |
| 8mm               | 0.3150 | MC100-M080 |
| 10mm              | 0.3937 | MC100-M100 |
| 12mm              | 0.4724 | MC100-M120 |
| 14mm              | 0.5512 | MC100-M140 |
| 16mm              | 0.6299 | MC100-M160 |
| 18mm              | 0.7087 | MC100-M180 |
| 20mm              | 0.7874 | MC100-M200 |

| Cutter Shank Size |        | MC125      |
|-------------------|--------|------------|
| 1/8               | 0.1250 | MC125-0125 |
| 3/16              | 0.1875 | MC125-0187 |
| 1/4               | 0.2500 | MC125-0250 |
| 5/16              | 0.3125 | MC125-0312 |
| 3/8               | 0.3750 | MC125-0375 |
| 7/16              | 0.4375 | MC125-0437 |
| 1/2               | 0.5000 | MC125-0500 |
| 9/16              | 0.5625 | MC125-0562 |
| 5/8               | 0.6250 | MC125-0625 |
| 3/4               | 0.7500 | MC125-0750 |
| 7/8               | 0.8750 | MC125-0875 |
| 1                 | 1.0000 | MC125-1000 |
| 3mm               | 0.1181 | MC125-M030 |
| 4mm               | 0.1575 | MC125-M040 |
| 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 |

| Cutter Shank Size |        | MC20      |
|-------------------|--------|-----------|
| 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 |
| 16mm              | 0.6299 | MC20-M160 |

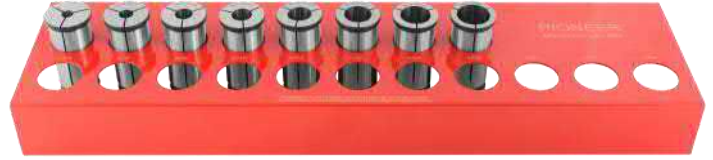
| Cutter Shank Size |        | MC32      |
|-------------------|--------|-----------|
| 1                 | 1.0000 | MC32-1000 |
| 6mm               | 0.2362 | MC32-M060 |
| 8mm               | 0.3150 | MC32-M080 |
| 10mm              | 0.3937 | MC32-M100 |
| 12mm              | 0.4724 | MC32-M120 |
| 16mm              | 0.6299 | MC32-M160 |
| 20mm              | 0.7874 | MC32-M200 |
| 22mm              | 0.8661 | MC32-M220 |
| 24mm              | 0.9449 | MC32-M240 |
| 25mm              | 0.9843 | MC32-M250 |



# 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" |

CAT40  
CAT50  
BT30  
BT40  
HSK 40E  
HSK 63A  
HSK 100A  
STRAIGHT SHANKS  
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## HC Hydraulic Collets - Sealed

HC Collets are Straight Sleeves that allow you to expand the capabilities of your Hydraulic Chuck.

- Collets Ground  $3\mu\text{m}$  - 0.0001" Runout OD to ID
- Sealed for High Pressure Coolant
- Interchangeable with most competitive models
- On Size  
Designed for h6 tolerance cutting tool shanks
- See page 126 for non-sealed collets

Note: Hydraulic Chuck Collets reduce the grip force of the Hydraulic Chuck. Use caution to prevent cutter slip / pull out.



| Cutter Shank Size |        | Part Number |
|-------------------|--------|-------------|
| 1/8               | 0.1250 | HC075-0125  |
| 3/16              | 0.1875 | HC075-0187  |
| 1/4               | 0.2500 | HC075-0250  |
| 3/8               | 0.3750 | HC075-0375  |
| 1/2               | 0.5000 | HC075-0500  |
| 5/8               | 0.6250 | HC075-0625  |
| 6mm               | 0.2362 | HC075-M060  |
| 8mm               | 0.3150 | HC075-M080  |
| 10mm              | 0.3937 | HC075-M100  |
| 12mm              | 0.4724 | HC075-M120  |
| 14mm              | 0.5512 | HC075-M140  |
| 16mm              | 0.6299 | HC075-M160  |

| Cutter Shank Size |        | Part Number |
|-------------------|--------|-------------|
| 1/4               | 0.2500 | HC125-0250  |
| 3/8               | 0.3750 | HC125-0375  |
| 1/2               | 0.5000 | HC125-0500  |
| 5/8               | 0.6250 | HC125-0625  |
| 3/4               | 0.7500 | HC125-0750  |
| 7/8               | 0.8750 | HC125-0875  |
| 1                 | 1.0000 | HC125-1000  |
| 10mm              | 0.3937 | HC125-M100  |
| 12mm              | 0.4724 | HC125-M120  |
| 16mm              | 0.6299 | HC125-M160  |
| 18mm              | 0.7087 | HC125-M180  |
| 20mm              | 0.7874 | HC125-M200  |
| 25mm              | 0.9843 | HC125-M250  |

# HC - Hydraulic Collet Sets - Sealed

HC Collets are Straight Sleeves that allow you to expand the capabilities of your Hydraulic Chuck.

- Interchangeable with most competitive models
- Sealed for High Pressure Coolant
- Designed for h6 tolerance cutting tool shanks
- Collet Tray Included
- See page 126 for non-sealed collets



| Part Number | Collet Size | Pieces | Includes                         |
|-------------|-------------|--------|----------------------------------|
| HC075-ISET  | HC075       | 6      | 1/8, 3/16, 1/4, 3/8, 1/2, 5/8    |
| HC075-MSET  | HC075       | 6      | 6, 8, 10, 12, 14, 16             |
| HC125-ISET  | HC125       | 7      | 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1" |
| HC125-MSET  | HC125       | 6      | 10, 12, 16, 18, 20, 25           |

CAT40

CAT50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT SHANKS

**COLLETS**

PARTS & ACCESS.

SHRINK MACHINES

INDEXERS



## ER Collets

### Optimize your work in many ways:

Pioneer has updated our collet offering to meet the high demands of precision cutting tools and high performance applications.

ER collets are now offered in standard, sealed by design and tap collets.

- Pioneer standard collets come in General Purpose and new RPC Ultra Precision.  
Pioneer Sealed collets are sealed by alternating slots. The cutting tool shank must make full contact with the collet bore to create a seal. This design allows for the highest coolant pressures without damage to the collet.
- Pioneer Tap Collets are available in ANSI and DIN configurations with a square punched into the ID for positive drive.



### RPC—Rust Preventative Coated Precision Collets

Pioneer RPC Collets are only available in a 5 micron (0.0002") TIR @ 3D and 2 micron (0.00008") TIR @ 3D.

The picture to the right is a standard ER collet and a RPC collet that were submerged in Chicago tap water for 3 months. The stainless collet showed no corrosion anywhere compared to the standard collet.

Available in ER08-ER40 in select sizes.



# ER08 Precision Collets

## Features

- Standard 15 Microns @ 2D (0.0006" @ 2D)



ER08

| ER08 Collet Sets |             |       |      | General Purpose |
|------------------|-------------|-------|------|-----------------|
|                  |             |       |      | 15 Micron @ 2D  |
| QTY              | Sizes       | Incr. | Tray | ER08            |
| 5                | 3.0 - 5.0mm | 0.5mm | Tray | ER08 MSET 5PCS  |

| ER08 Metric |            | General Purpose |
|-------------|------------|-----------------|
|             |            | 15 Micron @ 2D  |
| Metric Max  | Metric Min | ER08            |
| 3.0         | 2.5        | ER08-M030       |
| 3.5         | 3.0        | ER08-M035       |
| 4.0         | 3.5        | ER08-M040       |
| 4.5         | 4.0        | ER08-M045       |
| 5.0         | 4.5        | ER08-M050       |

# ER11 Precision Collets

## Features

- Standard 10 Microns @ 2D (0.0004" @ 2D)
- RPC - Rust Preventative Coating  
ER-UP Precision 5 Microns @ 3D (0.0002" @ 3D)
- RPC - Rust Preventative Coating  
ER-UPP Precision 2 Microns @ 3D (0.0001" @ 3D)



ER11



ER11\*\*\*UP  
RPC - Rust Preventative Coating



ER11\*\*\*UPP  
Rust Preventative Coating  
Hand Inspected @ Pioneer

| ER11 Inch |          | General Purpose | Precision                           | Ultra-Precision                      |
|-----------|----------|-----------------|-------------------------------------|--------------------------------------|
|           |          | 10 Micron @ 2D  | 5 Micron @ 3D                       | 3 Micron @ 3D                        |
| Inch Max  | Inch Min | ER11            | ER11UP<br>Rust Preventative Coating | ER11UPP<br>Rust Preventative Coating |
| 0.1250    | 0.1053   | ER11-0125       | ER11-0125UP                         | ER11-0125UPP                         |
| 0.1563    | 0.1366   | ER11-0156       |                                     |                                      |
| 0.1875    | 0.1678   | ER11-0187       | ER11-0187UP                         | ER11-0187UPP                         |
| 0.2188    | 0.1991   | ER11-0218       |                                     |                                      |
| 0.2500    | 0.2303   | ER11-0250       | ER11-0250UP                         | ER11-0250UPP                         |

| ER11 Metric |            | General Purpose | Precision                           | Ultra-Precision                      |
|-------------|------------|-----------------|-------------------------------------|--------------------------------------|
|             |            | 10 Micron @ 2D  | 5 Micron @ 3D                       | 3 Micron @ 3D                        |
| Metric Max  | Metric Min | ER11            | ER11UP<br>Rust Preventative Coating | ER11UPP<br>Rust Preventative Coating |
| 1.0         | 0.5        |                 | ER11-M010UP*                        | ER11-M010UPP*                        |
| 1.5         | 1.0        |                 | ER11-M015UP*                        | ER11-M015UPP*                        |
| 2.0         | 1.5        |                 | ER11-M020UP*                        | ER11-M020UPP*                        |
| 2.5         | 2.0        |                 | ER11-M025UP*                        | ER11-M025UPP*                        |
| 3.0         | 2.5        | ER11-M030       | ER11-M030UP                         | ER11-M030UPP                         |
| 3.5         | 3.0        | ER11-M035       | ER11-M035UP                         | ER11-M035UPP                         |
| 4.0         | 3.5        | ER11-M040       | ER11-M040UP                         | ER11-M040UPP                         |
| 4.5         | 4.0        | ER11-M045       | ER11-M045UP                         | ER11-M045UPP                         |
| 5.0         | 4.5        | ER11-M050       | ER11-M050UP                         | ER11-M050UPP                         |
| 5.5         | 5.0        | ER11-M055       | ER11-M055UP                         | ER11-M055UPP                         |
| 6.0         | 5.5        | ER11-M060       | ER11-M060UP                         | ER11-M060UPP                         |
| 6.5         | 6.0        | ER11-M065       | ER11-M065UP                         | ER11-M065UPP                         |
| 7.0         | 6.5        | ER11-M070       | ER11-M070UP                         | ER11-M070UPP                         |

| ER11 Collet Sets |           |       |  | General Purpose | Ultra Precision                     |
|------------------|-----------|-------|--|-----------------|-------------------------------------|
|                  |           |       |  | 10 Micron @ 2D  | 5 Micron @ 3D                       |
| QTY              | Sizes     | Incr. |  | ER11            | ER11UP<br>Rust Preventative Coating |
| 5                | 1/8-1/4   | 1/32  |  | ER11 ISET 5PCS  |                                     |
| 9                | 3.0-7.0mm | 0.5mm |  | ER11 MSET 9PCS  |                                     |
| 9                | 1.0-7.0mm | 0.5mm |  |                 | ER11 MSET UP 5UM - 9PCS             |



CAT40  
CAT50  
BT30  
BT40  
HSK 40E  
HSK 63A  
HSK 100A  
STRAIGHT SHANKS  
COLLETS  
PARTS & ACCESS.  
SHRINK MACHINES  
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# ER16 Precision Collets

## Features

- Standard 10 Microns @ 2D (0.0004" @ 2D)
- **RPC - Rust Preventative Coating**  
ER-UP Precision 5 Microns @ 3D (0.0002" @ 3D)
- **RPC - Rust Preventative Coating**  
Hand Inspected @ Pioneer  
ER-UPP Precision 3 Microns @ 3D (0.0001" @ 3D)



ER16



ER16\*\*\*UP  
RPC - Rust Preventative Coating



ER16\*\*\*UPP  
RPC - Rust Preventative Coating  
Hand Inspected @ Pioneer

| ER16 Inch |        | General Purpose | Precision                           | Ultra-Precision                      |
|-----------|--------|-----------------|-------------------------------------|--------------------------------------|
|           |        | 10 Micron @ 2D  | 5 Micron @ 3D                       | 3 Micron @ 3D                        |
| Inch      | Inch   | ER16            | ER16UP<br>Rust Preventative Coating | ER16UPP<br>Rust Preventative Coating |
| 0.1250    | 0.0856 | ER16-0125       | ER16-0125UP                         | ER16-0125UPP                         |
| 0.1563    | 0.1169 | ER16-0156       |                                     |                                      |
| 0.1875    | 0.1481 | ER16-0187       | ER16-0187UP                         | ER16-0187UPP                         |
| 0.2188    | 0.1794 | ER16-0218       |                                     |                                      |
| 0.2500    | 0.2106 | ER16-0250       | ER16-0250UP                         | ER16-0250UPP                         |
| 0.2813    | 0.2419 | ER16-0281       |                                     |                                      |
| 0.3125    | 0.2731 | ER16-0312       | ER16-0312UP                         | ER16-0312UPP                         |
| 0.3438    | 0.3044 | ER16-0344       |                                     |                                      |
| 0.3750    | 0.3356 | ER16-0375       | ER16-0375UP                         | ER16-0375UPP                         |
| 0.4063    | 0.3669 | ER16-0406       |                                     |                                      |

| ER16 Metric |        | General Purpose | Precision                           | Ultra-Precision                      |
|-------------|--------|-----------------|-------------------------------------|--------------------------------------|
|             |        | 10 Micron @ 2D  | 5 Micron @ 3D                       | 3 Micron @ 3D                        |
| Metric      | Metric | ER16            | ER16UP<br>Rust Preventative Coating | ER16UPP<br>Rust Preventative Coating |
| 1.0         | 0.5    |                 | ER16-M010UP*                        | ER16-M010UPP*                        |
| 1.5         | 1.0    |                 | ER16-M015UP*                        | ER16-M015UPP*                        |
| 2.0         | 1.5    |                 | ER16-M020UP*                        | ER16-M020UPP*                        |
| 2.5         | 2.0    |                 | ER16-M025UP*                        | ER16-M025UPP*                        |
| 3.0         | 2.0    | ER16-M030       | ER16-M030UP                         | ER16-M030UPP                         |
| 3.5         | 2.5    | ER16-M035       | ER16-M035UP                         | ER16-M035UPP                         |
| 4.0         | 3.0    | ER16-M040       | ER16-M040UP                         | ER16-M040UPP                         |
| 5.0         | 4.0    | ER16-M050       | ER16-M050UP                         | ER16-M050UPP                         |
| 6.0         | 5.0    | ER16-M060       | ER16-M060UP                         | ER16-M060UPP                         |
| 7.0         | 6.0    | ER16-M070       | ER16-M070UP                         | ER16-M070UPP                         |
| 8.0         | 7.0    | ER16-M080       | ER16-M080UP                         | ER16-M080UPP                         |
| 9.0         | 8.0    | ER16-M090       | ER16-M090UP                         | ER16-M090UPP                         |
| 10.0        | 9.0    | ER16-M100       | ER16-M100UP                         | ER16-M100UPP                         |

| ER16 Collet Sets |            |       | General Purpose | Ultra-Precision                     |
|------------------|------------|-------|-----------------|-------------------------------------|
|                  |            |       | 10 Micron @ 2D  | 5 Micron @ 3D                       |
| QTY              | Sizes      | Incr. | ER16            | ER16UP<br>Rust Preventative Coating |
| 9                | 1/8-3/8    | 1/32  | ER16 ISET 9PCS  |                                     |
| 5                | 1/8-3/8    | 1/16  |                 | ER16 ISET UP 5UM - 5PCS             |
| 8                | 3.0-10.0mm | 1mm   | ER16 MSET 8PCS  |                                     |
| 8                | 3.0-10.0mm | 1mm   |                 | ER16 MSET UP 5UM - 8PCS             |

# ER20 Precision Collets

## Features

- Standard 10 Microns @ 2D (0.0004" @ 2D)
- **RPC - Rust Preventative Coating**  
ER-UP Precision 5 Microns @ 3D (0.0002" @ 3D)
- **RPC - Rust Preventative Coating—Hand Inspected @ Pioneer**  
ER-UPP Precision 3 Microns @ 3D (0.0001" @ 3D)



ER20



ER20\*\*\*UP  
RPC - Rust  
Preventative  
Coating



ER20\*\*\*UPP  
RPC - Rust  
Preventative  
Coating  
Hand Inspected  
@ Pioneer

CAT40

CAT50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT  
SHANKS

COLLETS

PARTS &  
ACCESS.

SHRINK  
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| ER20 Inch |        | General Purpose | Precision                              | Ultra-Precision                         |
|-----------|--------|-----------------|--|---|
|           |        | 10 Micron @ 2D  | 5 Micron @ 3D                          | 3 Micron @ 3D                           |
| Inch      | Inch   | ER20            | ER20UP<br>Rust Preventative<br>Coating | ER20UPP<br>Rust Preventative<br>Coating |
| Max       | Min    |                 |  |   |
| 0.1250    | 0.0856 | ER20-0125       | ER20-0125UP                            | ER20-0125UPP                            |
| 0.1563    | 0.1169 | ER20-0156       |  |   |
| 0.1875    | 0.1481 | ER20-0187       | ER20-0187UP                            | ER20-0187UPP                            |
| 0.2188    | 0.1794 | ER20-0218       |  |   |
| 0.2500    | 0.2106 | ER20-0250       | ER20-0250UP                            | ER20-0250UPP                            |
| 0.2813    | 0.2419 | ER20-0281       |  |   |
| 0.3125    | 0.2731 | ER20-0312       | ER20-0312UP                            | ER20-0312UPP                            |
| 0.3438    | 0.3044 | ER20-0344       |  |   |
| 0.3750    | 0.3356 | ER20-0375       | ER20-0375UP                            | ER20-0375UPP                            |
| 0.4063    | 0.3669 | ER20-0406       |  |   |
| 0.4375    | 0.3981 | ER20-0438       | ER20-0438UP                            | ER20-0438UPP                            |
| 0.4688    | 0.4294 | ER20-0469       |  |   |
| 0.5000    | 0.4606 | ER20-0500       | ER20-0500UP                            | ER20-0500UPP                            |

| ER20 Metric |        | General Purpose | Precision                              | Ultra-Precision                         |
|-------------|--------|-----------------|--|---|
|             |        | 10 Micron @ 2D  | 5 Micron @ 3D                          | 3 Micron @ 3D                           |
| Metric      | Metric | ER20            | ER20UP<br>Rust Preventative<br>Coating | ER20UPP<br>Rust Preventative<br>Coating |
| Max         | Min    |                 |  |   |
| 1.0         | 0.5    |                 | ER20-M010UP*                           | ER20-M010UPP*                           |
| 1.5         | 1.0    |                 | ER20-M015UP*                           | ER20-M015UPP*                           |
| 2.0         | 1.5    |                 | ER20-M020UP*                           | ER20-M020UPP*                           |
| 2.5         | 2.0    |                 | ER20-M025UP*                           | ER20-M025UPP*                           |
| 3.0         | 2.0    | ER20-M030       | ER20-M030UP                            | ER20-M030UPP                            |
| 3.5         | 2.5    | ER20-M035       | ER20-M035UP                            | ER20-M035UPP                            |
| 4.0         | 3.0    | ER20-M040       | ER20-M040UP                            | ER20-M040UPP                            |
| 5.0         | 4.0    | ER20-M050       | ER20-M050UP                            | ER20-M050UPP                            |
| 6.0         | 5.0    | ER20-M060       | ER20-M060UP                            | ER20-M060UPP                            |
| 7.0         | 6.0    | ER20-M070       | ER20-M070UP                            | ER20-M070UPP                            |
| 8.0         | 7.0    | ER20-M080       | ER20-M080UP                            | ER20-M080UPP                            |
| 9.0         | 8.0    | ER20-M090       | ER20-M090UP                            | ER20-M090UPP                            |
| 10.0        | 9.0    | ER20-M100       | ER20-M100UP                            | ER20-M100UPP                            |
| 11.0        | 10.0   | ER20-M110       | ER20-M110UP                            | ER20-M110UPP                            |
| 12.0        | 11.0   | ER20-M120       | ER20-M120UP                            | ER20-M120UPP                            |
| 13.0        | 12.0   | ER20-M130       | ER20-M130UP                            | ER20-M130UPP                            |

\* Anti-Rust Coated Steel, 3mm RPC - Rust Preventative Coating

| ER20 Collet Sets |          |       | General Purpose | Ultra-Precision                        |
|------------------|----------|-------|-----------------|--|
|                  |          |       | 10 Micron @ 2D  | 5 Micron @ 3D                          |
| QTY              | Sizes    | Incr. | ER20            | ER20UP<br>Rust Preventative<br>Coating |
| 12               | 5/32-1/2 | 1/32  | ER20 ISET 12PCS |  |
| 7                | 1/8-1/2  | 1/16  |                 | ER20 ISET UP SUM - 7PCS                |
| 11               | 3-13mm   | 1mm   | ER20 MSET 11PCS |  |
| 11               | 3-13mm   | 1mm   |                 | ER20 MSET UP SUM - 11PCS               |

\* Items stocked in Germany



# ER25 Precision Collets

## Features

- Standard 10 Microns @ 2D (0.0004" @ 2D)
- RPC - Rust Preventative Coating  
ER-UP Precision 5 Microns @ 3D (0.0002" @ 3D)
- RPC - Rust Preventative Coating  
Hand Inspected @ Pioneer  
ER-UPP Precision 3 Microns @ 3D (0.0001" @ 3D)



ER25



ER25\*\*\*UP  
RPC - Rust Preventative Coating



ER25\*\*\*UPP  
RPC - Rust Preventative Coating  
Hand Inspected @ Pioneer

| ER25 Inch |        | General Purpose | Precision                           | Ultra-Precision                      |
|-----------|--------|-----------------|-------------------------------------|--------------------------------------|
|           |        | 10 Micron @ 2D  | 5 Micron @ 3D                       | 3 Micron @ 3D                        |
| Inch      | Inch   | ER25            | ER25UP<br>Rust Preventative Coating | ER25UPP<br>Rust Preventative Coating |
| 0.1250    | 0.1053 | ER25-0125       | ER25-0125UP                         | ER25-0125UPP                         |
| 0.1563    | 0.1366 | ER25-0156       |                                     |                                      |
| 0.1875    | 0.1678 | ER25-0187       | ER25-0187UP                         | ER25-0187UPP                         |
| 0.2188    | 0.1991 | ER25-0218       |                                     |                                      |
| 0.2500    | 0.2303 | ER25-0250       | ER25-0250UP                         | ER25-0250UPP                         |
| 0.2813    | 0.2616 | ER25-0281       |                                     |                                      |
| 0.3125    | 0.2928 | ER25-0312       | ER25-0312UP                         | ER25-0312UPP                         |
| 0.3438    | 0.3241 | ER25-0344       |                                     |                                      |
| 0.3750    | 0.3553 | ER25-0375       | ER25-0375UP                         | ER25-0375UPP                         |
| 0.4063    | 0.3866 | ER25-0406       |                                     |                                      |
| 0.4375    | 0.4178 | ER25-0438       | ER25-0438UP                         | ER25-0438UPP                         |
| 0.4688    | 0.4491 | ER25-0469       |                                     |                                      |
| 0.5000    | 0.4803 | ER25-0500       | ER25-0500UP                         | ER25-0500UPP                         |
| 0.5313    | 0.5116 | ER25-0531       |                                     |                                      |
| 0.5625    | 0.5428 | ER25-0563       | ER25-0563UP                         | ER25-0563UPP                         |
| 0.5938    | 0.5741 | ER25-0594       |                                     |                                      |
| 0.6250    | 0.6053 | ER25-0625       | ER25-0625UP                         | ER25-0625UPP                         |

| ER25 Metric |        | General Purpose | Precision                           | Ultra-Precision                      |
|-------------|--------|-----------------|-------------------------------------|--------------------------------------|
|             |        | 10 Micron @ 2D  | 5 Micron @ 3D                       | 3 Micron @ 3D                        |
| Metric      | Metric | ER25            | ER25UP<br>Rust Preventative Coating | ER25UPP<br>Rust Preventative Coating |
| 3.0         | 2.5    | ER25-M030       | ER25-M030UP                         | ER25-M030UPP                         |
| 3.5         | 3.0    | ER25-M035       | ER25-M035UP                         | ER25-M035UPP                         |
| 4.0         | 3.5    | ER25-M040       | ER25-M040UP                         | ER25-M040UPP                         |
| 5.0         | 4.5    | ER25-M050       | ER25-M050UP                         | ER25-M050UPP                         |
| 6.0         | 5.5    | ER25-M060       | ER25-M060UP                         | ER25-M060UPP                         |
| 7.0         | 6.5    | ER25-M070       | ER25-M070UP                         | ER25-M070UPP                         |
| 8.0         | 7.5    | ER25-M080       | ER25-M080UP                         | ER25-M080UPP                         |
| 9.0         | 8.5    | ER25-M090       | ER25-M090UP                         | ER25-M090UPP                         |
| 10.0        | 9.5    | ER25-M100       | ER25-M100UP                         | ER25-M100UPP                         |
| 11.0        | 10.5   | ER25-M110       | ER25-M110UP                         | ER25-M110UPP                         |
| 12.0        | 11.5   | ER25-M120       | ER25-M120UP                         | ER25-M120UPP                         |
| 13.0        | 12.5   | ER25-M130       | ER25-M130UP                         | ER25-M130UPP                         |
| 14.0        | 13.5   | ER25-M140       | ER25-M140UP                         | ER25-M140UPP                         |
| 15.0        | 14.5   | ER25-M150       | ER25-M150UP                         | ER25-M150UPP                         |
| 16.0        | 15.5   | ER25-M160       | ER25-M160UP                         | ER25-M160UPP                         |

| ER25 Collet Sets |            |       | General Purpose | Ultra-Precision                     |
|------------------|------------|-------|-----------------|-------------------------------------|
|                  |            |       | 10 Micron @ 2D  | 5 Micron @ 3D                       |
| QTY              | Sizes      | Incr. | ER25            | ER25UP<br>Rust Preventative Coating |
| 15               | 3/16-5/8   | 1/32  | ER25 ISET 15PCS |                                     |
| 9                | 1/8-5/8    | 1/16  |                 | ER25 ISET UP SUM - 9PCS             |
| 14               | 3.0-16.0mm | 1mm   | ER25 MSET 14PCS |                                     |
| 15               | 3.0-16.0mm | 1mm   |                 | ER25 MSET UP SUM - 14PCS            |



# ER32 Precision Collets

## Features

- Standard 10 Microns @ 2D (0.0004" @ 2D)
- **RPC - Rust Preventative Coating**  
ER-UP Precision 5 Microns @ 3D (0.0002" @ 3D)
- **RPC - Rust Preventative Coating**  
Hand Inspected @ Pioneer  
ER-UPP Precision 3 Microns @ 3D (0.0001" @ 3D)



ER32



ER32\*\*\*UP  
RPC - Rust  
Preventative  
Coating



ER32\*\*\*UPP  
RPC - Rust  
Preventative  
Coating  
Hand Inspected  
@ Pioneer

CAT40

CAT50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT  
SHANKS

COLLETS

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INDEXERS

| ER32 Inch |        | General Purpose | Precision                              | Ultra-Precision                         |
|-----------|--------|-----------------|--|---|
|           |        | 10 Micron @ 2D  | 5 Micron @ 3D                          | 3 Micron @ 3D                           |
| Inch      | Inch   | ER32            | ER32UP<br>Rust Preventative<br>Coating | ER32UPP<br>Rust Preventative<br>Coating |
| Max       | Min    |                 |  |   |
| 0.1250    | 0.0856 | ER32-0125       | ER32-0125UP                            | ER32-0125UPP                            |
| 0.1563    | 0.1169 | ER32-0156       |  |   |
| 0.1875    | 0.1481 | ER32-0187       | ER32-0187UP                            | ER32-0187UPP                            |
| 0.2188    | 0.1794 | ER32-0218       |  |   |
| 0.2500    | 0.2106 | ER32-0250       | ER32-0250UP                            | ER32-0250UPP                            |
| 0.2813    | 0.2419 | ER32-0281       |  |   |
| 0.3125    | 0.2731 | ER32-0312       | ER32-0312UP                            | ER32-0312UPP                            |
| 0.3438    | 0.3044 | ER32-0344       |  |   |
| 0.3750    | 0.3356 | ER32-0375       | ER32-0375UP                            | ER32-0375UPP                            |
| 0.4063    | 0.3669 | ER32-0406       |  |   |
| 0.4375    | 0.3981 | ER32-0438       | ER32-0438UP                            | ER32-0438UPP                            |
| 0.4688    | 0.4294 | ER32-0469       |  |   |
| 0.5000    | 0.4606 | ER32-0500       | ER32-0500UP                            | ER32-0500UPP                            |
| 0.5313    | 0.4919 | ER32-0531       |  |   |
| 0.5625    | 0.5231 | ER32-0563       | ER32-0563UP                            | ER32-0563UPP                            |
| 0.5938    | 0.5544 | ER32-0594       |  |   |
| 0.6250    | 0.5856 | ER32-0625       | ER32-0625UP                            | ER32-0625UPP                            |
| 0.6563    | 0.6169 | ER32-0656       |  |   |
| 0.6875    | 0.6481 | ER32-0688       | ER32-0688UP                            | ER32-0688UPP                            |
| 0.7188    | 0.6794 | ER32-0719       |  |   |
| 0.7500    | 0.7106 | ER32-0750       | ER32-0750UP                            | ER32-0750UPP                            |

| ER32 Metric |        | General Purpose | Precision                              | Ultra-Precision                          |
|-------------|--------|-----------------|--|--|
|             |        | 10 Micron @ 2D  | 5 Micron @ 3D                          | 3 Micron @ 3D                            |
| Metric      | Metric | ER32            | ER32UP<br>Rust Preventative<br>Coating | ER32UP P<br>Rust Preventative<br>Coating |
| Max         | Min    |                 |  |  |
| 3.0         | 2.0    | ER32-M030       | ER32-M030UP                            | ER32-M030UPP                             |
| 3.5         | 2.5    | ER32-M035       | ER32-M035UP                            | ER32-M035UPP                             |
| 4.0         | 3.0    | ER32-M040       | ER32-M040UP                            | ER32-M040UPP                             |
| 5.0         | 4.0    | ER32-M050       | ER32-M050UP                            | ER32-M050UPP                             |
| 6.0         | 5.0    | ER32-M060       | ER32-M060UP                            | ER32-M060UPP                             |
| 7.0         | 6.0    | ER32-M070       | ER32-M070UP                            | ER32-M070UPP                             |
| 8.0         | 7.0    | ER32-M080       | ER32-M080UP                            | ER32-M080UPP                             |
| 9.0         | 8.0    | ER32-M090       | ER32-M090UP                            | ER32-M090UPP                             |
| 10.0        | 9.0    | ER32-M100       | ER32-M100UP                            | ER32-M100UPP                             |
| 11.0        | 10.0   | ER32-M110       | ER32-M110UP                            | ER32-M110UPP                             |
| 12.0        | 11.0   | ER32-M120       | ER32-M120UP                            | ER32-M120UPP                             |
| 13.0        | 12.0   | ER32-M130       | ER32-M130UP                            | ER32-M130UPP                             |
| 14.0        | 13.0   | ER32-M140       | ER32-M140UP                            | ER32-M140UPP                             |
| 15.0        | 14.0   | ER32-M150       | ER32-M150UP                            | ER32-M150UPP                             |
| 16.0        | 15.0   | ER32-M160       | ER32-M160UP                            | ER32-M160UPP                             |
| 17.0        | 16.0   | ER32-M170       | ER32-M170UP                            | ER32-M170UPP                             |
| 18.0        | 17.0   | ER32-M180       | ER32-M180UP                            | ER32-M180UPP                             |
| 19.0        | 18.0   | ER32-M190       | ER32-M190UP                            | ER32-M190UPP                             |
| 20.0        | 19.0   | ER32-M200       | ER32-M200UP                            | ER32-M200UPP                             |

| ER32 Collet Sets |              |       | General Purpose | Ultra-Precision                     |
|------------------|--------------|-------|-----------------|-------------------------------------|
|                  |              |       | 10 Micron @ 2D  | 5 Micron @ 3D                       |
| QTY              | Sizes        | Incr. | ER32            | ER32UP<br>Rust Preventative Coating |
| 10               | 1/8-5/8 +3/4 | 1/16  | ER32 ISET 10PCS |                                     |
| 11               | 1/8-3/4      | 1/16  | ER32 ISET 11PCS |                                     |
| 18               | 7/32-3/4     | 1/32  | ER32 ISET 18PCS |                                     |
| 12               | 1/8-3/4      | 1/16  |                 | ER32 ISET UP 5UM - 11PCS            |
| 18               | 3-20mm       | 1mm   | ER32 MSET 18PCS |                                     |
| 18               | 3-20mm       | 1mm   |                 | ER32 MSET UP 5UM - 18PCS            |



# ER40 Precision Collets

## Features

- Standard 10 Microns @ 2D (0.0004" @ 2D)



ER40

| ER40 Inch   |             | General Purpose<br>10 Micron @ 2D |
|-------------|-------------|-----------------------------------|
| Inch<br>Max | Inch<br>Min | ER40                              |
| 0.1250      | 0.0856      | ER40-0125                         |
| 0.1563      | 0.1169      | ER40-0156                         |
| 0.1875      | 0.1481      | ER40-0187                         |
| 0.2188      | 0.1794      | ER40-0218                         |
| 0.2500      | 0.2106      | ER40-0250                         |
| 0.2813      | 0.2419      | ER40-0281                         |
| 0.3125      | 0.2731      | ER40-0312                         |
| 0.3438      | 0.3044      | ER40-0344                         |
| 0.3750      | 0.3356      | ER40-0375                         |
| 0.4063      | 0.3669      | ER40-0406                         |
| 0.4375      | 0.3981      | ER40-0438                         |
| 0.4688      | 0.4294      | ER40-0469                         |
| 0.5000      | 0.4606      | ER40-0500                         |
| 0.5313      | 0.4919      | ER40-0531                         |
| 0.5625      | 0.5231      | ER40-0563                         |
| 0.5938      | 0.5544      | ER40-0594                         |
| 0.6250      | 0.5856      | ER40-0625                         |
| 0.6563      | 0.6169      | ER40-0656                         |
| 0.6875      | 0.6481      | ER40-0688                         |
| 0.7188      | 0.6794      | ER40-0719                         |
| 0.7500      | 0.7106      | ER40-0750                         |
| 0.7813      | 0.7419      | ER40-0781                         |
| 0.8125      | 0.7731      | ER40-0813                         |
| 0.8438      | 0.8044      | ER40-0844                         |
| 0.8750      | 0.8356      | ER40-0875                         |
| 0.9063      | 0.8669      | ER40-0906                         |
| 0.9375      | 0.8981      | ER40-0938                         |
| 0.9688      | 0.9294      | ER40-0969                         |
| 1.0000      | 0.9606      | ER40-1000                         |
| 1.0313      | 0.9919      | ER40-1031                         |
| 1.0625      | 1.0231      | ER40-1063                         |
| 1.1250      | 1.0856      | ER40-1125                         |

| ER40 Metric   |               | General Purpose<br>10 Micron @ 2D |
|---------------|---------------|-----------------------------------|
| Metric<br>Max | Metric<br>Min | ER40                              |
| 3.0           | 3.0           | ER40-M030                         |
| 3.5           | 3.5           | ER40-M035                         |
| 4.0           | 3.0           | ER40-M040                         |
| 5.0           | 4.0           | ER40-M050                         |
| 6.0           | 5.0           | ER40-M060                         |
| 7.0           | 6.0           | ER40-M070                         |
| 8.0           | 7.0           | ER40-M080                         |
| 9.0           | 8.0           | ER40-M090                         |
| 10.0          | 9.0           | ER40-M100                         |
| 11.0          | 10.0          | ER40-M110                         |
| 12.0          | 11.0          | ER40-M120                         |
| 13.0          | 12.0          | ER40-M130                         |
| 14.0          | 13.0          | ER40-M140                         |
| 15.0          | 14.0          | ER40-M150                         |
| 16.0          | 15.0          | ER40-M160                         |
| 17.0          | 16.0          | ER40-M170                         |
| 18.0          | 17.0          | ER40-M180                         |
| 19.0          | 18.0          | ER40-M190                         |
| 20.0          | 19.0          | ER40-M200                         |
| 21.0          | 20.0          | ER40-M210                         |
| 22.0          | 21.0          | ER40-M220                         |
| 23.0          | 22.0          | ER40-M230                         |
| 24.0          | 23.0          | ER40-M240                         |
| 25.0          | 24.0          | ER40-M250                         |
| 26.0          | 25.0          | ER40-M260                         |

| ER40 Collet Sets |            |                | General Purpose<br>10 Micron @ 2D |
|------------------|------------|----------------|-----------------------------------|
| QTY              | Sizes      | Incr.          | ER40                              |
| 13               | 1/8-3/4 in | 1/16 + 7/8 + 1 | Tray ER40 ISET 13PCS              |
| 15               | 1/8-1      | 1/16           | Tray ER40 ISET 15PCS              |
| 29               | 1/8-1      | 1/32           | Tray ER40 ISET 29PCS              |
| 23               | 4-26mm     | 1mm            | Tray ER40 MSET 23PCS              |

# ER Shrink Collets

## Features

- 3 µm - 0.0001" Runout Taper to Bore
- Manufactured from ISO-40CrMoV5 (H13) Material, Heat Treated for Optimum Elasticity and Tool Life
- Optional Shrink Base with Preset Screw for easy height setting
- Designed for Carbide Cutting Tools with h6 shank tolerance



## Inch

| Cutter Shank | ER 16      | ER 20      | ER 25      | ER 32      | ER 40      |
|--------------|------------|------------|------------|------------|------------|
| 0.1250       | ER16-SD012 | ER20-SD012 | ER25-SD012 | ER32-SD012 |            |
| 0.1875       | ER16-SD018 | ER20-SD018 | ER25-SD018 | ER32-SD018 |            |
| 0.2500       | ER16-SD025 | ER20-SD025 | ER25-SD025 | ER32-SD025 |            |
| 0.3125       | ER16-SD031 | ER20-SD031 | ER25-SD031 | ER32-SD031 |            |
| 0.3750       | ER16-SD037 | ER20-SD037 | ER25-SD037 | ER32-SD037 | ER40-SD037 |
| 0.5000       |            | ER20-SD050 | ER25-SD050 | ER32-SD050 | ER40-SD050 |
| 0.6250       |            |            | ER25-SD062 | ER32-SD062 | ER40-SD062 |
| 0.7500       |            |            |            | ER32-SD075 | ER40-SD075 |
| 0.8750       |            |            |            |            | ER40-SD087 |
| 1.0000       |            |            |            |            | ER40-SD100 |

## Metric

| Cutter Shank | ER 16       | ER 20       | ER 25       | ER 32       | ER 40       |
|--------------|-------------|-------------|-------------|-------------|-------------|
| 3.0          | ER16-SDM030 |             | ER25-SDM030 | ER32-SDM030 |             |
| 4.0          | ER16-SDM040 |             | ER25-SDM040 | ER32-SDM040 |             |
| 5.0          | ER16-SDM050 |             | ER25-SDM050 | ER32-SDM050 |             |
| 6.0          | ER16-SDM060 | ER20-SDM060 | ER25-SDM060 | ER32-SDM060 |             |
| 8.0          | ER16-SDM080 | ER20-SDM080 | ER25-SDM080 | ER32-SDM080 |             |
| 10.0         | ER16-SDM100 | ER20-SDM100 | ER25-SDM100 | ER32-SDM100 | ER40-SDM100 |
| 12.0         |             | ER20-SDM120 | ER25-SDM120 | ER32-SDM120 | ER40-SDM120 |
| 16.0         |             |             | ER25-SDM160 | ER32-SDM160 | ER40-SDM160 |
| 20.0         |             |             |             | ER32-SDM200 | ER40-SDM200 |

# Jet-Blast ER Shrink Collets

## Features:

- High Pressure Coolant - 1,500 PSI
- Designed for h6 Tool Shanks
- Add J to any SD collet part number

The **Jet-Blast** option for SD collet forces the coolant into the **Jet-Blast Ports** maintaining pressure and directing the coolant down the flutes of the cutting tool.



CAT40  
CAT50  
BT30  
BT40  
HSK 40E  
HSK 63A  
HSK 100A  
STRAIGHT SHANKS  
COLLETS  
PARTS & ACCESS.  
SHRINK MACHINES  
INDEXERS



# Sealed ER 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     |
|--------------|--------|--------|-------------|-------------|-------------|-------------|-------------|
| 1/8          | 0.1250 | 3.175  | SSER16-0125 | SSER20-0125 |             | SSER32-0125 |             |
| 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 | SSER32-0218 | 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 Collet Sets

**General Purpose  
10 Micron @ 2D**

| QTY | Sizes    | Incr. |      |               |
|-----|----------|-------|------|---------------|
| 9   | 1/8—3/8  | 1/32  | Tray | SSER16 ISET09 |
| 7   | 4mm—10mm | 1mm   | Tray | SSER16 MSET07 |
| 12  | 5/32—1/2 | 1/32  | Tray | SSER20 ISET12 |
| 10  | 4mm—13mm | 1mm   | Tray | SSER20 MSET10 |
| 16  | 5/32—5/8 | 1/32  | Tray | SSER25 ISET16 |
| 13  | 4mm—16mm | 1mm   | Tray | SSER25 MSET13 |
| 18  | 7/32—3/4 | 1/32  | Tray | SSER32 ISET18 |
| 17  | 4mm—20mm | 1mm   | Tray | SSER32 MSET17 |
| 13  | 1/4—1"   | 1/16  | Tray | SSER40 ISET13 |
| 25  | 1/4—1"   | 1/32  | Tray | SSER40 ISET25 |
| 21  | 6mm—26mm | 1mm   | Tray | SSER40 MSET21 |

# Sealed ER 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     |
|--------------|----------------|-------------|-------------|-------------|-------------|-------------|
| 3.0          | 0.1181         | SSER16-M030 | SSER20-M030 | SSER25-M030 | SSER32-M030 |             |
| 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 ER Coolant Collets

## Features:

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



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



| øShank | Square | Tap Size | TER16U     | TER20U     | TER25U     | TER32U     | TER40U     |
|--------|--------|----------|------------|------------|------------|------------|------------|
| 0.141  | 0.110  | #6       | TER16U-141 | TER20U-141 | TER25U-141 | TER32U-141 | TER40U-141 |
| 0.168  | 0.131  | #8       | TER16U-168 | TER20U-168 | TER25U-168 | TER32U-168 | TER40U-168 |
| 0.194  | 0.152  | #10      | TER16U-194 | TER20U-194 | TER25U-194 | TER32U-194 | TER40U-194 |
| 0.220  | 0.165  | #12      | TER16U-220 | TER20U-220 | TER25U-220 | TER32U-220 | TER40U-220 |
| 0.255  | 0.191  | 1/4"     | TER16U-255 | TER20U-255 | TER25U-255 | TER32U-255 | TER40U-255 |
| 0.318  | 0.238  | 5/16"    | TER16U-318 | TER20U-318 | TER25U-318 | TER32U-318 | TER40U-318 |
| 0.323  | 0.242  | 7/16"    | TER16U-323 | TER20U-323 | TER25U-323 | TER32U-323 | TER40U-323 |
| 0.367  | 0.275  | 1/2"     | TER16U-367 | TER20U-367 | TER25U-367 | TER32U-367 | TER40U-367 |
| 0.381  | 0.286  | 3/8"     | TER16U-381 | TER20U-381 | TER25U-381 | TER32U-381 | TER40U-381 |
| 0.429  | 0.322  | 9/16"    |            |            | TER25U-429 | TER32U-429 | TER40U-429 |
| 0.437  | 0.328  | 1/8" NPT |            |            | TER25U-437 | TER32U-437 | TER40U-437 |
| 0.480  | 0.360  | 5/8"     |            |            | TER25U-480 | TER32U-480 | TER40U-480 |
| 0.542  | 0.406  | 11/16"   |            |            |            | TER32U-542 | TER40U-542 |
| 0.562  | 0.421  | 1/4" NPT |            |            |            | TER32U-562 | TER40U-562 |
| 0.590  | 0.442  | 3/4"     |            |            |            | TER32U-590 | TER40U-590 |
| 0.652  | 0.489  | 13/16"   |            |            |            | TER32U-652 | TER40U-652 |
| 0.687  | 0.515  | 1/2" NPT |            |            |            |            | TER40U-687 |
| 0.697  | 0.523  | 7/8"     |            |            |            |            | TER40U-697 |
| 0.700  | 0.531  | 3/8" NPT |            |            |            |            | TER40U-700 |
| 0.760  | 0.570  | 15/16"   |            |            |            |            | TER40U-760 |
| 0.800  | 0.600  | 1"       |            |            |            |            | TER40U-800 |

| TER ANSI Collet Sets |             |      | Part Number  |
|----------------------|-------------|------|--------------|
| QTY                  | Sizes       |      |              |
| 9                    | 0.141—0.381 | Tray | TER16U-SET9  |
| 9                    | 0.141—0.381 | Tray | TER20U-SET9  |
| 12                   | 0.141—0.480 | Tray | TER25U-SET12 |
| 16                   | 0.141—0.652 | Tray | TER32U-SET16 |
| 21                   | 0.141—0.800 | Tray | TER40U-SET21 |



# 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



### Note:

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



| øShank | Inch  | Square | Inch  | TER16D     | TER20D     | TER25D     | TER32D     | TER40D     |
|--------|-------|--------|-------|------------|------------|------------|------------|------------|
| 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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STRAIGHT SHANKS

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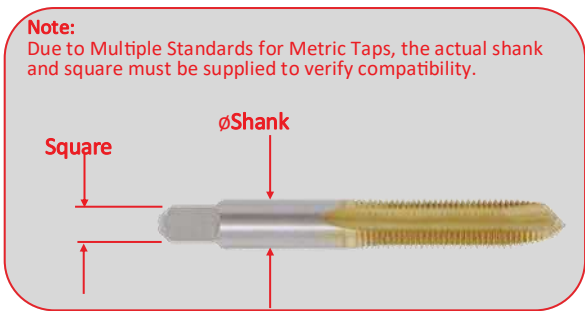


# Sealed ER Rigid Tap Collets - ANSI

## Features

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

- ANSI Shank and Square Standard
- Sealed by design for high pressure coolant



| øShank | Square | Tap Size | TER16U                       | TER20U                       | TER25U                       | TER32U                       | TER40U                       |
|--------|--------|----------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| 0.141  | 0.110  | #6       | <a href="#">TER16U-141-S</a> | <a href="#">TER20U-141-S</a> | <a href="#">TER25U-141-S</a> | <a href="#">TER32U-141-S</a> | <a href="#">TER40U-141-S</a> |
| 0.168  | 0.131  | #8       | <a href="#">TER16U-168-S</a> | <a href="#">TER20U-168-S</a> | <a href="#">TER25U-168-S</a> | <a href="#">TER32U-168-S</a> | <a href="#">TER40U-168-S</a> |
| 0.194  | 0.152  | #10      | <a href="#">TER16U-194-S</a> | <a href="#">TER20U-194-S</a> | <a href="#">TER25U-194-S</a> | <a href="#">TER32U-194-S</a> | <a href="#">TER40U-194-S</a> |
| 0.220  | 0.165  | #12      | <a href="#">TER16U-220-S</a> | <a href="#">TER20U-220-S</a> | <a href="#">TER25U-220-S</a> | <a href="#">TER32U-220-S</a> | <a href="#">TER40U-220-S</a> |
| 0.255  | 0.191  | 1/4"     | <a href="#">TER16U-255-S</a> | <a href="#">TER20U-255-S</a> | <a href="#">TER25U-255-S</a> | <a href="#">TER32U-255-S</a> | <a href="#">TER40U-255-S</a> |
| 0.318  | 0.238  | 5/16"    | <a href="#">TER16U-318-S</a> | <a href="#">TER20U-318-S</a> | <a href="#">TER25U-318-S</a> | <a href="#">TER32U-318-S</a> | <a href="#">TER40U-318-S</a> |
| 0.323  | 0.242  | 7/16"    | <a href="#">TER16U-323-S</a> | <a href="#">TER20U-323-S</a> | <a href="#">TER25U-323-S</a> | <a href="#">TER32U-323-S</a> | <a href="#">TER40U-323-S</a> |
| 0.367  | 0.275  | 1/2"     | <a href="#">TER16U-367-S</a> | <a href="#">TER20U-367-S</a> | <a href="#">TER25U-367-S</a> | <a href="#">TER32U-367-S</a> | <a href="#">TER40U-367-S</a> |
| 0.381  | 0.286  | 3/8"     | <a href="#">TER16U-381-S</a> | <a href="#">TER20U-381-S</a> | <a href="#">TER25U-381-S</a> | <a href="#">TER32U-381-S</a> | <a href="#">TER40U-381-S</a> |
| 0.429  | 0.322  | 9/16"    |                              |                              | <a href="#">TER25U-429-S</a> | <a href="#">TER32U-429-S</a> | <a href="#">TER40U-429-S</a> |
| 0.437  | 0.328  | 1/8" NPT |                              |                              | <a href="#">TER25U-437-S</a> | <a href="#">TER32U-437-S</a> | <a href="#">TER40U-437-S</a> |
| 0.480  | 0.360  | 5/8"     |                              |                              | <a href="#">TER25U-480-S</a> | <a href="#">TER32U-480-S</a> | <a href="#">TER40U-480-S</a> |
| 0.542  | 0.406  | 11/16"   |                              |                              |                              | <a href="#">TER32U-542-S</a> | <a href="#">TER40U-542-S</a> |
| 0.562  | 0.421  | 1/4" NPT |                              |                              |                              | <a href="#">TER32U-562-S</a> | <a href="#">TER40U-562-S</a> |
| 0.590  | 0.442  | 3/4"     |                              |                              |                              | <a href="#">TER32U-590-S</a> | <a href="#">TER40U-590-S</a> |
| 0.652  | 0.489  | 13/16"   |                              |                              |                              | <a href="#">TER32U-652-S</a> | <a href="#">TER40U-652-S</a> |
| 0.687  | 0.515  | 1/2" NPT |                              |                              |                              |                              | <a href="#">TER40U-687-S</a> |
| 0.697  | 0.523  | 7/8"     |                              |                              |                              |                              | <a href="#">TER40U-697-S</a> |
| 0.700  | 0.531  | 3/8" NPT |                              |                              |                              |                              | <a href="#">TER40U-700-S</a> |
| 0.760  | 0.570  | 15/16"   |                              |                              |                              |                              | <a href="#">TER40U-760-S</a> |
| 0.800  | 0.600  | 1"       |                              |                              |                              |                              | <a href="#">TER40U-800-S</a> |

| TER ANSI Collet Sets |             |      | Part Number                    |
|----------------------|-------------|------|--------------------------------|
| QTY                  | Sizes       |      |                                |
| 9                    | 0.141—0.381 | Tray | <a href="#">TER16U S SET9</a>  |
| 9                    | 0.141—0.381 | Tray | <a href="#">TER20U S SET9</a>  |
| 12                   | 0.141—0.480 | Tray | <a href="#">TER25U S SET12</a> |
| 16                   | 0.141—0.652 | Tray | <a href="#">TER32U S SET16</a> |
| 21                   | 0.141—0.800 | Tray | <a href="#">TER40U S SET21</a> |



# Sealed 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
- Sealed by design for high pressure coolant



### Note:

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



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

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STRAIGHT SHANKS

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# RA - Rigid QC Tap Adapters



**Features:**

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

*Recommended for use in both RT & TC Tap Holders*

**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      | 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      | 0.236 | 6.00     | 0.193  | 4.90      | RA1D-M060X049 |               |           |
| 1/4            | M6, M6.3    | 0.255 | 6.48     | 0.191  | 4.85      | RA1U-0255     |               |           |
|                | M7, M9, M10 | 0.276 | 7.00     | 0.217  | 5.50      | RA1D-M070X055 |               |           |
| 1/8 PIPE SS    |             | 0.313 | 7.95     | 0.234  | 5.94      | RA1U-0313     |               |           |
|                | M11         | 0.315 | 8.00     | 0.236  | 6.00      | RA1J-M080X060 |               |           |
|                | M8, M11     | 0.315 | 8.00     | 0.244  | 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     | 0.354 | 9.00     | 0.276  | 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 |
| 1/8 PIPE LS    |             | 0.438 | 11.13    | 0.328  | 8.33      | RA1U-0438     | RA2U-0438     |           |
|                | M16         | 0.472 | 12.00    | 0.354  | 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 |
| 1/4 PIPE       |             | 0.563 | 14.30    | 0.421  | 10.69     |               | RA2U-0563     |           |
| 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 |
| 1/2 PIPE       |             | 0.688 | 17.48    | 0.515  | 13.08     |               | RA2U-0688     | RA3U-0688 |
| 7/8            | M22         | 0.697 | 17.70    | 0.523  | 13.28     |               | RA2U-0697     | RA3U-0697 |
| 3/8 PIPE       |             | 0.700 | 17.78    | 0.531  | 13.49     |               | RA2U-0700     | RA3U-0700 |
| 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 |
| 3/4 PIPE       |             | 0.906 | 23.01    | 0.679  | 17.25     |               |               | RA3U-0906 |
| 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 |
| 1" PIPE        |             | 1.125 | 28.58    | 0.843  | 21.41     |               |               | RA3U-1125 |

# TG100 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.



| 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 |              |          |          |            |



## Collet Sets

| Part Number | Collet Size | Pieces | Range   | Increments |
|-------------|-------------|--------|---------|------------|
| 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       |



# ACCESSORIES



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## SX Collet Nuts



| Nut Part Number | Description                   | Wrench Part Number | O.D. | Hex    | 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-16M            | 0.87 | -      | M19 x 1.0   | 13 ft/lbs   |
| SXN-06H         | SX06 Hex Nut                  | SXW-06H            | 0.77 | 18mm   | M15.5 x 1.0 | 22 ft/lbs   |
| SXN-10H         | SX10 Hex Nut                  | SXW-10H            | 1.08 | 25.4mm | 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-25M         | SX25 Mini Spanner Nut         | 50-55 HOOK         | 1.97 | -      | M45 x 1.5   | 85 ft/lbs   |
| SXN-25MB        | SX25 Mini Bearing Spanner Nut | 50-55 HOOK         | 1.97 | -      | M45 x 1.5   | 120 ft/lbs  |

## SX 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-28-34         | SX25 Nylon Coolant Preset Screw | 4.0          | 17mm OD x 2.0mm | M28 x 2.0  | 34        | 4.0mm & 8.0mm Hex |

# SX Collet Assembly Instructions

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Set the small end of the collet remover on the taper



Push down on the collet remover until the slots collapse



Flip the collet over on the tail end



Set the collet nut on the collet



Push down on the collet remover, the collet will expand into the nut



## 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      |



## 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 | 50-55 HOOK             | 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 (See Previous Page)
- 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 |

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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 Previous Page)
- Jet Slot Available, Order by adding a "J" to the end of the Cap part number



w/ Jet-Blast Option

| 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 Available, Order by adding a "J" to the end of the Cap part number

| 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 |

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# ER Collet Nuts

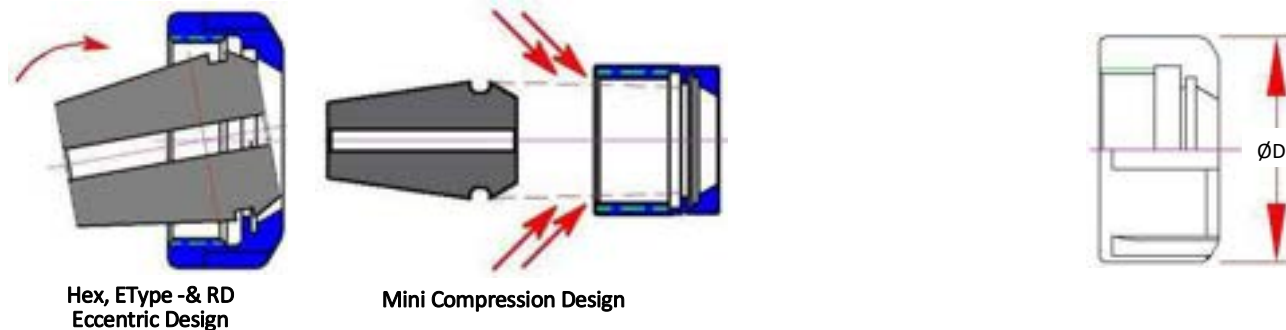
Pioneer replacement ER nuts exceed industry standard for fit, finish and balance. ER nuts are in 4 styles, Mini, Hex, E Type & RD Type.

- **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.
- **-EXT** are external threaded nuts for stub length holders. Due to the constraints of the design collets must be “snapped” into the nut. Tap and Sealed Collets are difficult to install and remove.
- **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.*

## Collet Retainer Type



*Note: ER Nuts are built to DIN standards. Per DIN tolerances the collet may or many not be retained by an eccentric style nut. If the collet is not retained into an eccentric style nut are not defective but a result of the DIN tolerances.*

| Nut Part Number | Description        | Wrench Part Number | Collet Retainer | Ø D          | Thread     | Max. Torque |
|-----------------|--------------------|--------------------|-----------------|--------------|------------|-------------|
| ERN-08M         | ER 8 Mini Nut      | WRENCH ERW-8M      | Compression     | 0.472 / 12mm | M10 x 0.75 | 6 ft/lbs    |
| ERN-11H         | ER 11 Nut -Hex     | WRENCH ERW-11H     | Eccentric       | 0.787 / 20mm | M14 x 0.75 | 18 ft/lbs   |
| ERN-11M         | ER 11 Mini Nut     | WRENCH ERW-11M     | Eccentric       | 0.630 / 16mm | M13 x 0.75 | 9 ft/lbs    |
| ERN-16B         | ER 16 Nut - E Type | WRENCH 30-32 HOOK  | Compression     | 1.260 / 32mm | M22 x 1.5  | 40 ft/lbs   |
| ERN-16H         | ER 16 Nut -Hex     | WRENCH ERW-16H     | Eccentric       | 1.102 / 28mm | M22 x 1.5  | 40 ft/lbs   |
| ERN-16          | ER 16 Nut - E Type | WRENCH ERW-16E     | Eccentric       | 1.260 / 32mm | M22 x 1.5  | 40 ft/lbs   |
| ERN-16M         | ER 16 Mini Nut     | WRENCH ERW-16M     | Eccentric       | 0.866 / 22mm | M19 x 1.0  | 13 ft/lbs   |
| ERN-20B         | ER 20 Nut - E Type | WRENCH 34-38 HOOK  | Compression     | 1.380 / 35mm | M25 x 1.5  | 60 ft/lbs   |
| ERN-20H         | ER 20 Nut -Hex     | WRENCH ERW-20H     | Eccentric       | 1.338 / 34mm | M25 x 1.5  | 60 ft/lbs   |
| ERN-20          | ER 20 Nut - E Type | WRENCH ERW-20E     | Eccentric       | 1.380 / 35mm | M25 x 1.5  | 60 ft/lbs   |
| ERN-20M         | ER 20 Mini Nut     | WRENCH ERW-20M     | Eccentric       | 1.102 / 28mm | M24 x 1.0  | 17 ft/lbs   |
| ERN-25B         | ER 25 Nut - E Type | WRENCH 40-42 HOOK  | Compression     | 1.654 / 42mm | M32 x 1.5  | 75 ft/lbs   |
| ERN-25          | ER 25 Nut - E Type | WRENCH ERW-25E     | Eccentric       | 1.654 / 42mm | M32 x 1.5  | 75 ft/lbs   |
| ERN-32B         | ER 32 Nut - E Type | WRENCH 50-55 HOOK  | Compression     | 1.969 / 50mm | M40 x 1.5  | 100 ft/lbs  |
| ERN-32          | ER 32 Nut - E Type | WRENCH ERW-32E     | Eccentric       | 1.969 / 50mm | M40 x 1.5  | 100 ft/lbs  |
| ERN-32H-EXT     | ER 32 Ext Nut—Hex  | WRENCH DAW180      | Compression     | M40          | M40        | 100 ft/lbs  |
| ERN-40B         | ER 40 Nut - E Type | WRENCH 58-65 HOOK  | Compression     | 2.480 / 63mm | M50 x 1.5  | 125 ft/lbs  |
| ERN-40          | ER 40 Nut - E Type | WRENCH ERW-40E     | Eccentric       | 2.480 / 63mm | M50 x 1.5  | 125 ft/lbs  |

# MC Coolant Cap Sealing System

for MC Collets & MC Chucks

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
- Works with all MC Collets and MC Chucks Only



CAT40

CAT50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT SHANKS

COLLETS

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## MC Coolant Cap

- Works with all MC Collets, **will not fit BC Mill Chucks**
- Requires (1) MCN Nut and (1) MCC Cap
- Order Cap to match MC Collet ID Size

| 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" |



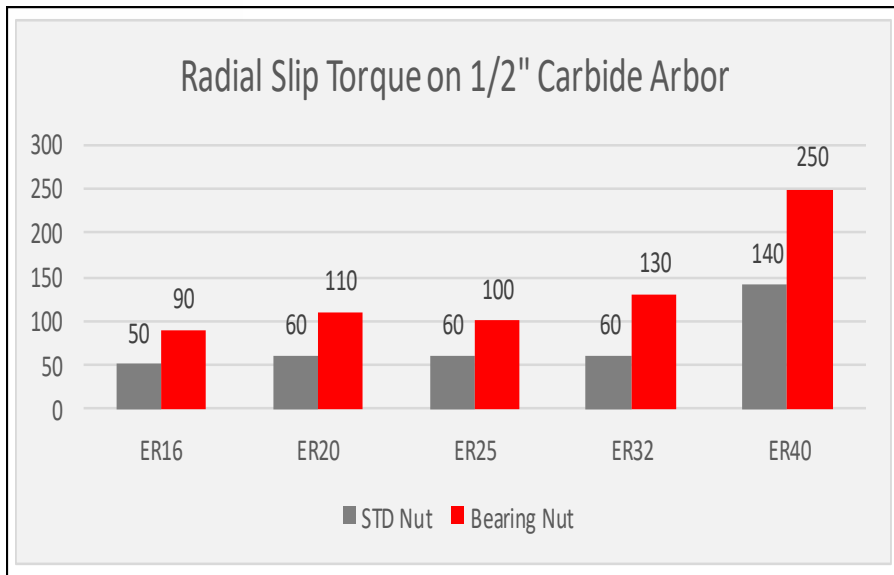


## High Performance Bearing Nuts

**Double your grip force  
without increasing your locking pressure.**

Bearing transfers torque more efficiently with ER collets allowing higher grip forces without increasing locking torque.

*For best performance use ER collets with our bearing nuts!*



ER32 standard nut locked at 100 ft/lbs using a 1/2" carbide test arbor, the arbor slips at 60 ft/lbs of radial torque, using a Pioneer Bearing Nut the arbor slipped at 130 ft/lbs of radial torque. The average improvement on ER16 thru ER40 was 75% to 125% increase in radial holding power.

Note: Cutter size, material and finish may effect results. Recommend on-size collets when available.

### Available sizes & specifications

| Part Number | Diameter   | Locking Torque ft/lbs | Std Wrench #      | Torque Wrench Head # |
|-------------|------------|-----------------------|-------------------|----------------------|
| NUT ERN16B  | 32 [1.26"] | 40                    | WRENCH 30-32 HOOK | WRENCH TWSQ050-S32   |
| NUT ERN20B  | 36 [1.42"] | 60                    | WRENCH 34-38 HOOK | WRENCH TWSQ050-S38   |
| NUT ERN25B  | 43 [1.69"] | 75                    | WRENCH 40-42 HOOK | WRENCH TWSQ050-S40   |
| NUT ERN32B  | 51 [2.01"] | 100                   | WRENCH 50-55 HOOK | WRENCH TWSQ050-S55   |
| NUT ERN40B  | 63 [2.48"] | 125                   | WRENCH 58-65 HOOK | WRENCH TWSQ050-S65   |

# Shell Mill Screws

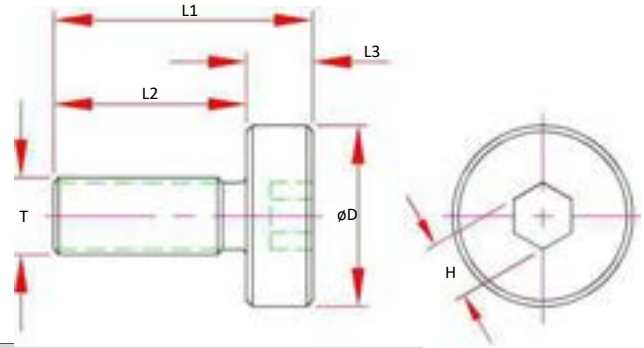
Replacement screw for catalog holders

**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   | Maximum Tightening Torque |
|------------------|--------------------|----------------|------|-------|------|------|------|---------------------------|
| 1/2              | SCW-SM050          | 1/4-28         | 0.62 | 0.25  | 0.91 | 0.63 | 0.28 | 14 ft/lbs                 |
| 1/2              | SCW-SM050-SM       | 1/4-28         | 0.38 | 0.25  | 1.00 | 0.75 | 0.25 | 14 ft/lbs                 |
| 3/4              | SCW-SM075          | 3/8-24         | 0.87 | 0.31  | 1.26 | 0.79 | 0.31 | 45 ft/lbs                 |
| 3/4              | SCW-SM075-SM       | 3/8-24         | 0.56 | 0.31  | 1.38 | 1.00 | 0.38 | 45 ft/lbs                 |
| 1                | SCW-SM100          | 1/2-20         | 1.18 | 0.38  | 1.69 | 1.26 | 0.43 | 60 ft/lbs                 |
| 1                | SCW-SM100-SM       | 1/2-20         | 0.75 | 0.38  | 2.00 | 1.50 | 0.50 | 60 ft/lbs                 |
| 1-1/4            | SCW-SM125          | 5/8-18         | 1.50 | 0.50  | 2.05 | 1.57 | 0.47 | 70 ft/lbs                 |
| 1-1/2            | SCW-SM150          | 3/4-16         | 1.89 | 0.63  | 2.36 | 1.81 | 0.55 | 75 ft/lbs                 |
| 2"               | SCW-SM200          | 1"-14          | 2.48 | 0.83  | 2.52 | 1.97 | 0.55 | 80 ft/lbs                 |

# 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          |                       |

CAT40

CAT50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

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## 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                  |
| 4-BT30       | SCW-EM04-BT30 | BT30-EM031, 5/16          | 5/16-24 | 0.31     | 0.31   | 1/8  | 6                  |
| 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                |

## Mill Chuck Preset Screws

- Nylon Coolant Screw w/ O-Ring Standard

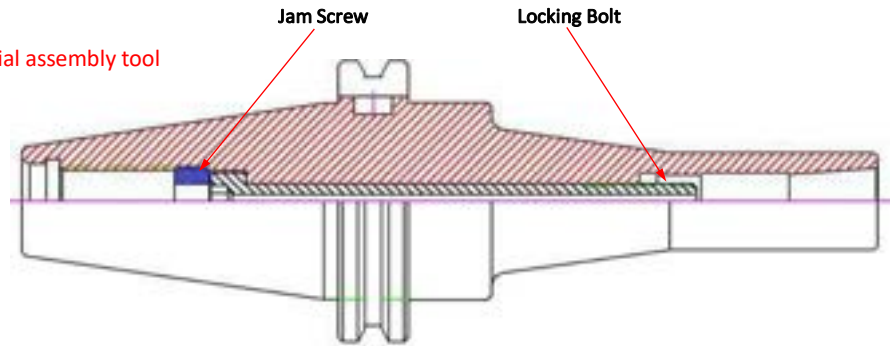


| Part Number | Description                                      | Hole | O-Ring          | Thread     | Length | Wrench            |
|-------------|--|------|-----------------|------------|--------|-------------------|
| ASC-16-40   | MC20, 25, 32, 075, 100 & 125 Nylon Coolant       | 2.50 | 11mm OD 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 |



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

# TWS - Retention Knobs Sockets

## Features

- Fits HPS Retention Knobs on the previous page
- May not fit other manufacturers 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

*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 = 35-40 ft/lbs
- 40 Taper = 75-85 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 runoff. Many companies have started using a lighter torque number to reduce or eliminate the expansion. Many machine tool manufacturers do not recommend this lighter system. **Check with your machine tool manufacturer for recommending operational torque.**

# Torque Wrench

Recommended settings to be 10% below maximum torque to prevent over tightening.

**Note:** It is recommended to calibrate the wrench to manufacturer's specifications and re-calibrate as recommended. Over torque will cause damage to the tool holder (and collet if applicable).



## PITTSBURGH PRO

| Part Number   | Type               | Drive Sq.  | Torque Range           |
|---------------|--------------------|------------|------------------------|
| TWSQ025-W-ECO | Click & Reversible | 1/4 (0.25) | 20-200 in/lbs (+/- 4%) |
| TWSQ037-W-ECO | Click & Reversible | 3/8 (0.37) | 5-80 ft/lbs (+/-4%)    |
| TWSQ050-W-ECO | Click & Reversible | 1/2 (0.50) | 10-150 ft/lbs (+/-4%)  |

## NEIKO PRO

| Part Number     | Type               | Drive Sq.  | Torque Range           |
|-----------------|--------------------|------------|------------------------|
| TWSQ025-W-NEIKO | Click & Reversible | 1/4 (0.25) | 20-200 in/lbs (+/- 4%) |
| TWSQ037-W-NEIKO | Click & Reversible | 3/8 (0.37) | 15-80 ft/lbs (+/-4%)   |
| TWSQ050-W-NEIKO | Click & Reversible | 1/2 (0.50) | 50-250 ft/lbs (+/-4%)  |

# Tool Tags

- Tool Tags to keep your tooling organized by supplying a markable surface that snaps into the v-groove of the tool holder.
- Made From PLA (Polylactic Acid)  
Bioplastic, 100% recyclable
- Designed to snap into the V-groove
- Sold in Packages of 10
- **Made in the USA**



| Part Number      | Description             |
|------------------|-------------------------|
| TOOL TAG BT30    | BT30 Tool Tag—10 Pkg    |
| TOOL TAG BT40    | BT40 Tool Tag—10 Pkg    |
| TOOL TAG CAT40   | CAT40 Tool Tag—10 Pkg   |
| TOOL TAG CAT50   | CAT50 Tool Tag—10 Pkg   |
| TOOL TAG HSK063A | HSK63A Tool Tag—10 Pkg  |
| TOOL TAG HSK100A | HSK100A Tool Tag—10 Pkg |



# Wrenches



## Hook Spanner

For Torque Values see page 164

| Nut Size | Metric | Type         | Works On             | Part Number        | Drive | Torque Wrench Head # |
|----------|--------|--------------|----------------------|--------------------|-------|----------------------|
| 1.26     | 32     | Hook Spanner | ERN16, ERN16B        | WRENCH 30-32 HOOK  | 0.500 | TWSQ050-S32          |
| 1.38     | 35.1   | Hook Spanner | BC037, BC050, ERN20B |                    | 0.500 | TWSQ050-S38          |
| 1.50     | 38.1   | Hook Spanner | BC062                |                    | 0.500 | TWSQ050-S38          |
| 1.58     | 40.1   | Hook Spanner | SXN16                | WRENCH 40-42 HOOK  | 0.500 | TWSQ050-S40          |
| 1.73     | 43.9   | Hook Spanner | BC075, BCM20         |                    | 0.500 | TWSQ050-S45          |
| 1.75     | 44.5   | Hook Spanner | VX                   | WRENCH 45-48 PIN   | 0.500 | TWSQ050-S45          |
| 1.75     | 44.5   | Hook Spanner | DC050-BT30           | WRENCH 45-48 HOOK  |       |                      |
| 1.89     | 48.0   | Hook Spanner | DC050                | WRENCH 45-48 HOOK  |       |                      |
| 1.97     | 50.0   | Hook Spanner | TG075, ER32B         | WRENCH 50-55 HOOK  | 0.500 | TWSQ050-S55          |
| 1.98     | 50.3   | Hook Spanner | SXN25M               | WRENCH 50-55 HOOK  | 0.500 | TWSQ050-S55          |
| 2.09     | 53.1   | Hook Spanner | MC075                | WRENCH 50-55 HOOK  | 0.500 | TWSQ050-S55          |
| 2.12     | 53.8   | Hook Spanner | BC100, BCM25         |                    | 0.500 | TWSQ050-S55          |
| 2.17     | 55.1   | Hook Spanner | SXN25                | WRENCH 50-55 HOOK  | 0.500 | TWSQ050-S55          |
| 2.44     | 62.0   | Hook Spanner | MC100                | WRENCH 58-65 HOOK  | 0.500 | TWSQ050-S65          |
| 2.48     | 63.0   | Hook Spanner | TG100                | WRENCH 58-65 HOOK  | 0.500 | TWSQ050-S65          |
| 2.56     | 65.0   | Hook Spanner | BC125, BCM32         |                    | 0.500 | TWSQ050-S65          |
| 2.76     | 70.1   | Hook Spanner | MC125                | WRENCH 65-70 HOOK  | 0.500 | TWSQ050-S70          |
| 3.19     | 81.0   | Hook Spanner | BC150                | WRENCH 80-85 HOOK  |       |                      |
| 3.23     | 82.0   | Hook Spanner | TG150                | WRENCH 80-85 HOOK  |       |                      |
| 3.78     | 96.0   | Hook Spanner | BC200                | WRENCH 92-100 HOOK | 0.750 |                      |



| Nut Size | Metric | Type        | Works On    | Part Number   |
|----------|--------|-------------|-------------|---------------|
| 0.07     | 1.9    | PIN SPANNER | COOLANT CAP | WRENCH SXW-CC |



| Metric | Type        | Works On | Part Number  |
|--------|-------------|----------|--------------|
| 4.0    | Hex (Allen) | MX       | WRENCH MXW04 |
| 5.0    | Hex (Allen) | MX       | WRENCH MXW05 |



| Metric | Type        | Works On | Part Number  |
|--------|-------------|----------|--------------|
| 4.0    | Hex (Allen) | HC       | WRENCH HCW04 |
| 5.0    | Hex (Allen) | HC       | WRENCH HCW05 |

# Wrenches



## Hex

For Torque Values see page 164

| Nut Size | Metric | Type           | Works On         | Part Number<br>Open End | Part Number<br>Box End | Drive | Torque Wrench<br>Head # |
|----------|--------|----------------|------------------|-------------------------|------------------------|-------|-------------------------|
| 0.50     | 12.7   | Hex (Open End) | DA300            | WRENCH DAW300           |                        |       |                         |
| 0.67     | 17.0   | Hex (Open End) | ER11H            | WRENCH ERW-11 HEX       | WRENCH ERW-11 H-R      | 0.375 | TWSQ037-H17             |
| 0.71     | 18.0   | Hex (Open End) | SXN06            | WRENCH SXW-06 H         |                        | 0.375 | TWSQ037-H18             |
| 0.75     | 19.0   | Hex (Open End) | DA200            | WRENCH DAW200           |                        |       |                         |
| 0.94     | 24.0   | Hex (Open End) | DA100            | WRENCH DAW100           |                        |       |                         |
| 0.98     | 25.0   | Hex (Open End) | ER16H            | WRENCH ERW-16 HEX       | WRENCH ERW-16 H-R      | 0.500 | TWSQ050-H254            |
| 1.00     | 25.4   | Hex (Open End) | SXN10            | WRENCH SXW-10 H         |                        | 0.500 | TWSQ050-H254            |
| 1.18     | 30.0   | Hex (Open End) | ER20H            | WRENCH ERW-20 HEX       | WRENCH ERW-20 H-R      | 0.500 | TWSQ050-H30             |
| 1.26     | 32.0   | Hex (Open End) | DA180, ER32H-EXT | WRENCH DAW180           |                        |       | TWSQ050-H318            |



## E Type

For Torque Values see page 164

| Nut Size | Metric | Type   | Works On | Part Number<br>Open End | Part Number<br>Box End | Drive | Torque Wrench<br>Head # |
|----------|--------|--------|----------|-------------------------|------------------------|-------|-------------------------|
| 1.26     | 32.0   | E Type | ERN16    | WRENCH ERW-16 E         | WRENCH ERW-16 E-R      | 0.500 | TWSQ050-S32             |
| 1.38     | 35.0   | E Type | ERN20    | WRENCH ERW-20 E         | WRENCH ERW-20 E-R      | 0.500 | TWSQ050-S38             |
| 1.65     | 42.0   | E Type | ERN25    | WRENCH ERW-25 E         | WRENCH ERW-25 E-R      | 0.500 | TWSQ050-ER25E           |
| 1.97     | 50.0   | E Type | ERN32    | WRENCH ERW-32 E         | WRENCH ERW-32 E-R      | 0.500 | TWSQ050-ER32E           |
| 2.48     | 63.0   | E Type | ERN40    | WRENCH ERW-40 E         | WRENCH ERW-40 E-R      | 0.500 | TWSQ050-ER40E           |



## Mini E Type

For Torque Values see page 164

| Nut Size | Metric | Type   | Works On     | Part Number     |
|----------|--------|--------|--------------|-----------------|
| 0.47     | 12.0   | Mini E | ER08         | WRENCH ERW- 8M  |
| 0.63     | 16.0   | Mini E | SX06M, ER11M | WRENCH ERW-11 M |
| 0.87     | 22.1   | Mini E | SX10M, ER16M | WRENCH ERW-16 M |
| 1.10     | 28.0   | Mini E | ER20M        | WRENCH ERW-20 M |

CAT40  
CAT50  
BT30  
BT40  
HSK 40E  
HSK 63A  
HSK 100A  
STRAIGHT SHANKS  
COLLETS  
PARTS & ACC.  
SHRINK MACHINES  
INDEXERS



# Collet Chuck Tightening Torque Specs

Below values are Maximum, do not over torque or damage to the chuck or collet may occur. Calibrate your torque wrench on a regular bases, use wrench manufacturer's speciation.

If any distortion is observed in the collet slots, back off the torque until the collet is restored to normal.

| Collet Nut  | Description                      | Wrench Type | Wrench #          | Torque Wrench Head   | Max. Torque       |
|-------------|----------------------------------|-------------|-------------------|----------------------|-------------------|
| BC037       | BC037 MILL CHUCK NUT             | Spanner     |                   | WRENCH TWSQ050-S38   | 100 ft/lbs 135 Nm |
| BC050       | BC050 MILL CHUCK NUT             | Spanner     |                   | WRENCH TWSQ050-S38   | 100 ft/lbs 135 Nm |
| BC062       | BC062 MILL CHUCK NUT             | Spanner     |                   | WRENCH TWSQ050-S38   | 120 ft/lbs 163 Nm |
| BC075       | BC075 MILL CHUCK NUT             | Spanner     |                   | WRENCH TWSQ050-S45   | 120 ft/lbs 163 Nm |
| BC100       | BC100 MILL CHUCK NUT             | Spanner     |                   | WRENCH TWSQ050-S55   | 140 ft/lbs 190 Nm |
| BC125       | BC125 MILL CHUCK NUT             | Spanner     |                   | WRENCH TWSQ050-S65   | 140 ft/lbs 190 Nm |
| SXN-06M     | SX06 Nut - Mini E Type Wrench    | Mini E      | WRENCH ERW-11 M   |                      | 108 in/lbs 12 Nm  |
| SXN-10M     | SX10 Nut - Mini E Type Wrench    | Mini E      | WRENCH ERW-16 M   |                      | 156 in/lbs 17 Nm  |
| SXN-25M     | SX25 Nut - Mini Spanner Wrench   | Spanner     | WRENCH 50-55 HOOK | WRENCH TWSQ050-S55   | 85 ft/lbs 115 Nm  |
| SXN-25MB    | SX25 Bearing Nut - Mini Spanner  | Spanner     | WRENCH 50-55 HOOK | WRENCH TWSQ050-S55   | 120 ft/lbs 162 Nm |
| SXN-06H     | SX06 Nut -Hex Wrench             | Hex         | WRENCH SXW-06 H   | WRENCH TWSQ037-H18   | 22 ft/lbs 29 Nm   |
| SXN-10H     | SX10 Nut -Hex Wrench             | Hex         | WRENCH SXW-10 H   | WRENCH TWSQ050-H254  | 41 ft/lbs 55 Nm   |
| SXN-16S     | SX16 Nut - Spanner Wrench        | Spanner     | WRENCH SXW-16 S   | WRENCH TWSQ050-S40   | 55 ft/lbs 74 Nm   |
| SXN-25S     | SX25 Nut - Spanner Wrench        | Spanner     | WRENCH 50-55 HOOK | WRENCH TWSQ050-S55   | 85 ft/lbs 115 Nm  |
| VX - All    | VX12 - Pin Spanner Wrench        | Pin Spanner | WRENCH 45-48 PIN  | WRENCH TWSQ050-S45   | 30 ft/lbs 94 Nm   |
| ERN-08M     | ER08 Nut - Mini E Type Wrench    | Mini E      | WRENCH ERW- 8 M   |                      | 48 in/lbs 5 Nm    |
| ERN-11M     | ER11 Nut - Mini E Type Wrench    | Mini E      | WRENCH ERW-11 M   |                      | 108 in/lbs 12 Nm  |
| ERN-16M     | ER16 Nut - Mini E Type Wrench    | Mini E      | WRENCH ERW-16 M   |                      | 156 in/lbs 17 Nm  |
| ERN-20M     | ER20 Nut - Mini E Type Wrench    | Mini E      | WRENCH ERW-20 M   |                      | 17 ft/lbs 23 Nm   |
| ERN-11H     | ER11 Nut -Hex Wrench             | Hex         | WRENCH ERW-11 HEX | WRENCH TWSQ037-H17   | 18 ft/lbs 24 Nm   |
| ERN-16H     | ER16 Nut -Hex Wrench             | Hex         | WRENCH ERW-16 HEX | WRENCH TWSQ050-H254  | 40 ft/lbs 54 Nm   |
| ERN-20H     | ER20 Nut -Hex Wrench             | Hex         | WRENCH ERW-20 HEX | WRENCH TWSQ050-H30   | 60 ft/lbs 81 Nm   |
| ERN-16B     | ER16 Nut - Spanner Wrench        | Spanner     | WRENCH 30-32 HOOK | WRENCH TWSQ050-S32   | 40 ft/lbs 54 Nm   |
| ERN-20B     | ER20 Nut - Spanner Wrench        | Spanner     | WRENCH 34-38 HOOK | WRENCH TWSQ050-S38   | 60 ft/lbs 81 Nm   |
| ERN-25B     | ER25 Nut - Spanner Wrench        | Spanner     | WRENCH 40-42 HOOK | WRENCH TWSQ050-S40   | 75 ft/lbs 101 Nm  |
| ERN-32B     | ER32 Nut - Spanner Wrench        | Spanner     | WRENCH 50-55 HOOK | WRENCH TWSQ050-S55   | 100 ft/lbs 135 Nm |
| ERN-40B     | ER40 Nut - Spanner Wrench        | Spanner     | WRENCH 58-65 HOOK | WRENCH TWSQ050-S65   | 125 ft/lbs 169 Nm |
| ERN-32H-EXT | ER32 Ext Thread Nut - Hex Wrench | Hex         | WRENCH DAW180     | WRENCH TWSQ050-H32   | 100 ft/lbs 135 Nm |
| ERN-16E     | ER16 Nut - E Type Wrench         | E Type      | WRENCH ERW-16 E   |                      | 40 ft/lbs 54 Nm   |
| ERN-20E     | ER20 Nut - E Type Wrench         | E Type      | WRENCH ERW-20 E   |                      | 60 ft/lbs 81 Nm   |
| ERN-25E     | ER25 Nut - E Type Wrench         | E Type      | WRENCH ERW-25 E   | WRENCH TWSQ050-ER25E | 75 ft/lbs 101 Nm  |
| ERN-32E     | ER32 Nut - E Type Wrench         | E Type      | WRENCH ERW-32 E   | WRENCH TWSQ050-ER32E | 100 ft/lbs 135 Nm |
| ERN-40E     | ER40 Nut - E Type Wrench         | E Type      | WRENCH ERW-40 E   | WRENCH TWSQ050-ER40E | 125 ft/lbs 169 Nm |
| TGN-075     | TG075 Nut - Spanner Wrench       | Spanner     | WRENCH 50-55 HOOK | WRENCH TWSQ050-S55   | 55 ft/lbs 74 Nm   |

**ROTARY WIPER** makes it possible to view the production/machining process clearly within the machine enclosure. The window will get dirty from 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 areas



#### 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!

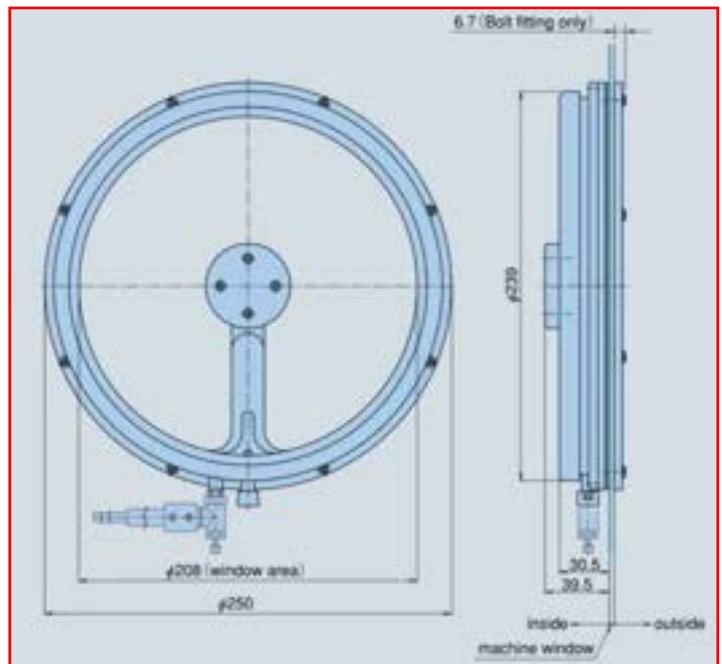
If RW window was to become damaged, easy removal of the 4 screws from the center hub makes window replacement easy.



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)          |



CAT40  
CAT50  
BT30  
BT40  
HSK 40E  
HSK 63A  
HSK 100A  
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## Bearing Type Locking Fixtures

- Bolts to Workbench
- Friction Locking, no drive slots required



| Part Number | Shank  |
|-------------|--|
| TL-BT30     | BT30 / BT30-B                                  |
| TL-HSK032A  | HSK032 A/E/F                                   |
| TL-HSK040A  | HSK040 A/E/F                                   |
| TL-HSK050A  | HSK050 A/E/F                                   |
| TL-HSK063A  | BT40 / BT40-B / CAT40 / CAT40-B / HSK063 A/E/F |
| TL-HSK100A  | HSK100 A/E/F                                   |
| TL-CAT50    | CAT50 / CAT50-B                                |

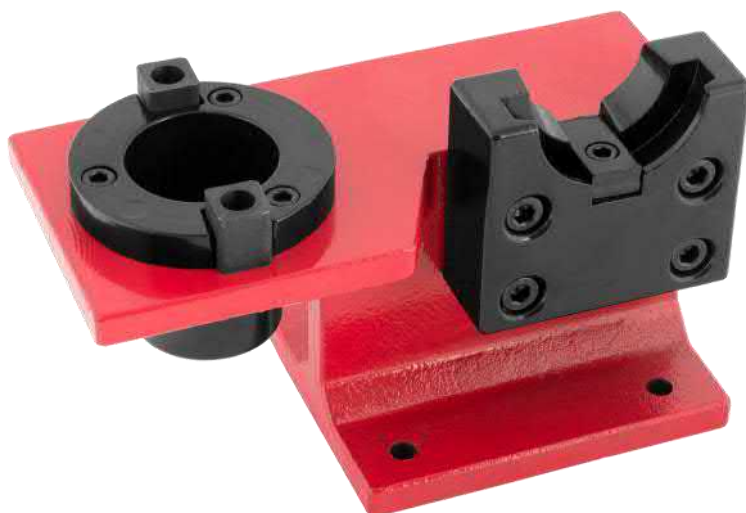
HSK063 Shown

HSK100 Shown

## 2 Position Locking Fixtures

- Bolts to Workbench
- Easy Access to Retention Knob
- Dual Contact only function in the Vertical Position

| Part Number | Shank  |
|-------------|--------|
| TLD-BT30    | BT30*  |
| TLD-BT40    | BT40*  |
| TLD-CAT40   | CAT40* |
| TLD-CAT50   | CAT50* |





# Tool Block

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



CAT40

CAT50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT  
SHANKS

COLLETS

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INDEXERS

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-B / BT30 JMTBA MAS403              |
| TB-BT40 HEAD    | BT40-B / BT40 JMTBA MAS403              |
| TB-CAT40 HEAD   | CAT40, CAT40-B, ISO7388-40, DIN69871-40 |
| TB-CAT50 HEAD   | CAT50, CAT50-B, 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                       |

| Part Number | Description       |
|-------------|-------------------|
| 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.



## HS-6K Shrink Unit

- #HS-6K
- 1/8-3/4 (3-20mm) Capacity
- 220V, 24A Single Phase
- 6kw Output, Air Cooled Coil
- Automatic Coil Return
- Easy to use timer system
- For tools with up to a 12.5" Projection
- 1 Year Limited Warranty
- CE Certified
- **10-20 Second Cycle Time**



## HS-6K Taper Shrink Bases

| Part Number    | Shank Size                  |
|----------------|-----------------------------|
| HS-BASE-BT30   | BT30, ISO30                 |
| HS-BASE-CAT40  | CAT40, BT40, ISO40          |
| HS-BASE-CAT50  | CAT50, BT50, ISO50          |
| HS-BASE-HSK032 | HSK 32 A,C,E - HSK 40 B,D,F |
| HS-BASE-HSK040 | HSK 40 A,C,E - HSK 50 B,D,F |
| HS-BASE-HSK063 | HSK 63 A,C,E - HSK 80 B,D,F |
| HS-BASE-HSK100 | HSK 100 A,C,E               |



## ER Shrink Bases

- Requires (1) HS-BASE-CAT40

| Part Number  | Collet Size |
|--------------|-------------|
| HS-BASE-ER16 | ER16        |
| HS-BASE-ER20 | ER20        |
| HS-BASE-ER25 | ER25        |
| HS-BASE-ER32 | ER32        |
| HS-BASE-ER40 | ER40        |

# HS Cooling Unit

- #HS-WC
- Water Cooling with Shop Coolant (Water Based)
- Separate Cooling, cool 1st tool while heating the 2nd
- 220V, 20A Single Phase
- 1 Year Limited Warranty
- CE Certified
- **30-40 Second Cycle Time**



## HS-6K Cutting Tool Holder

Hot cutting tool storage holder. Fits into HS-WC to allow water cooling.

- #HS-COOL-TRAY

CAT40

CAT50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT  
SHANKS

COLLETS

PARTS &  
ACCESS.

SHRINK  
MACHINES

INDEXERS

# PIONEER Rotary Tables



**PIONEER offers Rotary solutions for todays shop needs.**

PIONEER Rotary Tables are best in class performance and are a cost effective solution. Available in 170mm—2000mm with 4th, 5th axis options, PIONEER can help your shop produce at full protentional.

## 4th Axis or Indexer, which meets your needs?

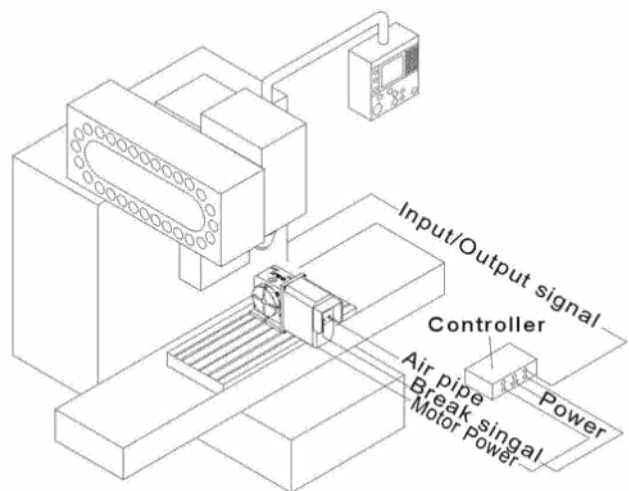


Illustration of an indexer connection

| 4th Axis   | Indexer w/ Control Box  |
|--|---|
| <ul style="list-style-type: none"> <li>Fully integrated into the machine control for synchronized operations</li> <li>Uses machine control motor for guaranteed compatibility</li> <li>Requires professional installation</li> <li>Machine must be 4th axis ready</li> </ul> | <ul style="list-style-type: none"> <li>Uses a control box to connect to the machine control for position / cut operations</li> <li>Controlled with M Code for start stop operations or programming with Macro β with compatible machine control</li> <li>Can be easily moved from machine to machine</li> <li>Can be installed by the customer</li> </ul> |



Need your table installed?

Looking for something heavy duty?

PIONEER offers a complete line of tables in both standard and heavy duty to meet your application needs.

Contact our customer service for more information.

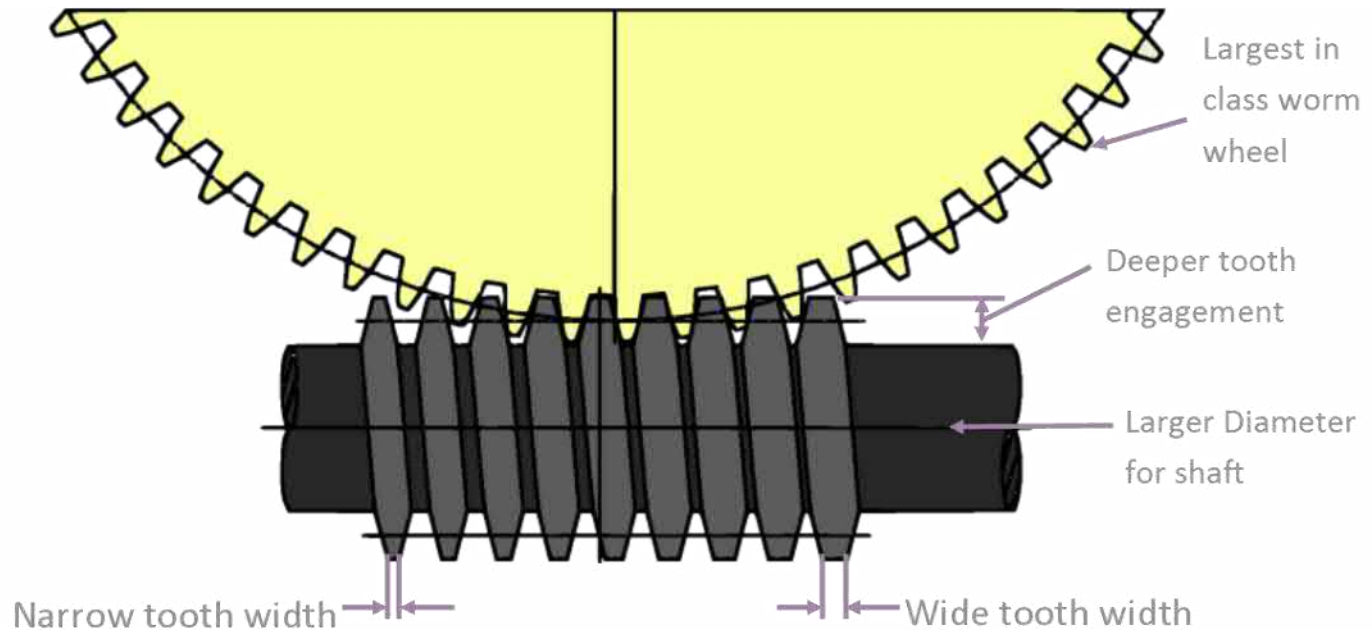


**PIONEER** put the highest level of technology and engineering together to build the CNC Rotary Tables that have the power to perform.



## Durable and Rigid Dual-Lead Gear System

All PIONEER tables use a combination of case hardened special alloy dual-lead screw that has a larger shaft diameter and special high tensile strength brass worm wheel that ensures exceptional wear resistance and long durability for the life of the gear system.



Adjustment of back lash is easy and quick!



# AX-IDX Indexer Packages

Table, Controller, Motor & Cable Set



\*Photo shows generic image of the product and may be different from actual product.

|                            | AX4-171R                   | AX4-200R                   | AX4-250R                   | AX4-320R                      |
|----------------------------|----------------------------|----------------------------|----------------------------|-------------------------------|
| Table Diameter             | 170mm, 6.69"               | 200mm, 7.87"               | 250mm, 9.84"               | 320mm, 12.6"                  |
| Center Height              | 160mm, 6.30"               | 160mm, 6.30"               | 185mm, 7.28"               | 210mm, 8.27"                  |
| Thru Hole Diameter         | 35mm H7                    | 35mm H7                    | 70mm H7                    | 110mm H7                      |
| Faceplate T-Slot Width     | 12mm H7                    | 12mm H7                    | 12mm H7                    | 14mm H7                       |
| Clamp Type Std             | Pneumatic                  | Pneumatic                  | Pneumatic                  | Hydraulic                     |
| Clamp Torque               | 245 Nm 181 ft-lbs @ 72 psi | 245 Nm 181 ft-lbs @ 72 psi | 461 Nm 340 ft-lbs @ 72 psi | 1392 Nm 1026 ft-lbs @ 286 psi |
| Indexing Accuracy          | +/- 12.5 seconds           | +/- 12.5 seconds           | +/- 10 seconds             | +/- 10 seconds                |
| Horizontal Load            | 7840N                      | 8055N                      | 11840N                     | 13475N                        |
| FANUC servo motor          | aif4                       | aif4                       | aif4, 8                    | aif4, 8                       |
| Total Reduction Ratio      | 32874                      | 32874                      | 1/180, 1/90                | 1/180, 1/90                   |
| Max RPM                    | 22.2                       | 22.2                       | 11.1, 22.2                 | 11.1, 22.2                    |
| Guide / Location Key Width | 18mm h7                    | 18mm h7                    | 18mm h7                    | 18mm h7                       |
| Vertical Load              | 392Nm                      | 490Nm                      | 705Nm                      | 900Nm                         |
| Circumferential Load       | 245Nm                      | 245Nm                      | 461Nm                      | 696Nm                         |
| Vertical Weight Limit      | 75kg, 165lbs               | 100kg, 220lbs              | 125kg, 275lbs              | 150kg, 330lbs                 |
| Horizontal Weight Limit    | 150kg, 330lbs              | 200kg, 440lbs              | 300kg, 660lbs              | 350kg, 770lbs                 |
| Table Weight               | 70kg 155lbs                | 84kg 185lbs                | 124kg 275lbs               | 210kg 463lbs                  |

## Indexer Accessories

Options available for select sizes

Hand Controller  
#MPG-1



6" 3 Jaw Scroll Chuck w/ Adapter Plate  
#SC-6 SCROLL CHUCK & #SC-6 ADP-170





## EZX Control

- 15 sets of program, 90 steps for each program
- 0.001° degree minimum increment
- Macro β Functionality
- Power, feedback, M-signal, and power supply cable included
- RS232C capable

CAT40

CAT50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT SHANKS

COLLETS

PARTS & ACCESS.

SHRINK MACHINES

INDEXERS

|  | AX4-400R                        | AX4-500R                        | AX4-630R                        | AX4-800R                         | AX4-800BR                         |
|--|---------------------------------|---------------------------------|---------------------------------|----------------------------------|-----------------------------------|
|  | 400mm, 15.75"                   | 500mm, 19.68"                   | 630mm, 24.8                     | 800mm, 31.5"                     | 800mm, 31.5"                      |
|  | 250mm, 9.84"                    | 310mm, 12.2"                    | 400mm, 15.75"                   | 480mm, 18.9"                     | 480mm, 18.9"                      |
|  | 150mm, 5.91" H7                 | 180mm, 7.08" H7                 | 254mm, 10.00" H7                | 254mm, 10.00" H7                 | 450mm, 17.71" H7                  |
|  | 14mm H7                         | 18mm H7                         | 18mm H7                         | 20mm H7                          | 20mm H7                           |
|  | Hydraulic                       | Hydraulic                       | Hydraulic                       | Hydraulic                        | Hydraulic                         |
|  | 1,803 Nm 1,330 ft-lbs @ 286 psi | 2,450 Nm 1,807 ft-lbs @ 286 psi | 6,860 Nm 5,060 ft-lbs @ 286 psi | 10,297 Nm 7,588 ft-lbs @ 286 psi | 15,690 Nm 11,572 ft-lbs @ 286 psi |
|  | +/- 7.5 seconds                 | +/- 7.5 seconds                 | +/- 7.5 seconds                 | +/- 7.5 seconds                  | +/- 7.5 seconds                   |
|  | 3500Kg                          | 4000Kg                          | 5000Kg                          | 6000Kg                           | 5000Kg                            |
|  | aif12                           | aif12, 22                       | aif22                           | aif22                            | aif22                             |
|  | 32874                           | 1/120                           | 1/180                           | 1/180                            | 1/180                             |
|  | 22.2                            | 16.7                            | 11.1                            | 11.1                             | 11.1                              |
|  | 18mm h7                         | 18mm h7                         | 18mm h7                         | 22mm h7                          | 22mm h7                           |
|  | 250Kgm                          | 350Kgm                          | 800Kgm                          | 1000Kgm                          | 1600Kgm                           |
|  | 184Kgm                          | 380Kgm                          | 700Kgm                          | 1050Kgm                          | 1600Kgm                           |
|  | 300kg, 660lbs                   | 350kg, 770lbs                   | 400kg, 880lbs                   | 600kg, 1,323lbs                  | 1,500kg, 3,307lbs                 |
|  | 500kg, 1,100lbs                 | 600kg, 1,320lbs                 | 1,000kg, 2,205lbs               | 1,500kg, 3,307lbs                | 3,000kg, 6,614lbs                 |
|  | 280kg, 616lbs                   | 380kg, 836lbs                   | 860kg, 1,892lbs                 | 1,200kg 2,640lbs                 | 1,060kg 2,337lbs                  |

Manual Tail Stock  
#TS-A160 TAILSTOCK



Pneumatic / Hydraulic Side Table  
#TS-A200S (P/H) TAILSTOCK  
160mm Center Height, 200mm Face Plate



# PIONEER EDM Rotary Tables



**PIONEER EDM tables are fully sealed with positive air pressure and check valve system.**

PIONEER EDM Rotary Tables are best in class performance and are a cost effective solution. Available in 140mm—250mm with 4th, 5th axis options, PIONEER can supply an EDM option to meet your needs.

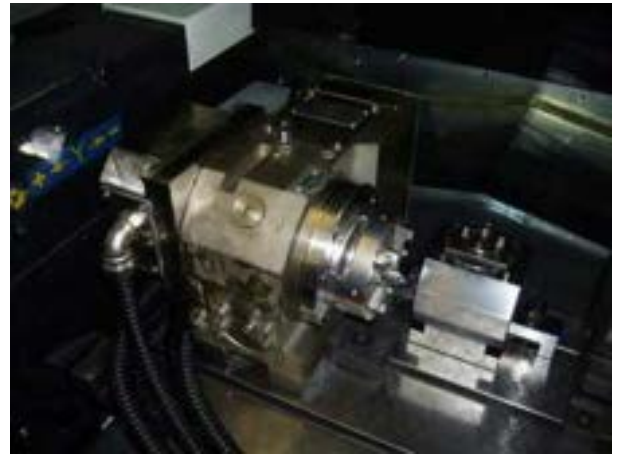
Pioneer EDM Rotary are available in 2 configurations, EDW for Wire, EDS for Sinker machines.

### EDW Wire:

- RPC - Rust Preventative Coating Faceplate
- Communicator block to ground the face plate
- Nickel plating
- High Performance Seals
- RPC - Rust Preventative Coating Screws

### EDS Sinker:

- RPC - Rust Preventative Coating Faceplate
- Optional Nickel plating
- High Performance Seals
- RPC - Rust Preventative Coating Screws



## 4th Axis or Indexer, which meets your needs?

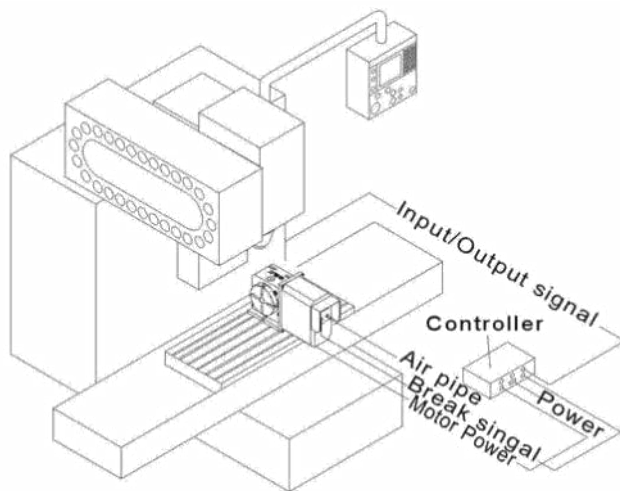


Illustration of an indexer connection

### 4th Axis

- Fully integrated into the machine control for synchronized operations
- Uses machine control motor for guaranteed compatibility
- Requires professional installation
- Machine must be 4th axis ready

### Indexer w/ Control Box

- Uses a control box to connect to the machine control for position / cut operations
- Controlled with M Code for start stop operations or programming with Macro β with compatible machine control
- Can be easily moved from machine to machine
- Can be installed by the customer



# JNC140R-AC5-10-EDW

EDW configuration for Wire EDM applications.  
Table, Controller, Motor & Cable Set

## Specifications

| JNC140               | Inch                        | Metric  |
|----------------------|-----------------------------|---------|
| Table Dia.           | 5.51                        | 140 mm  |
| Center height        | 4.33                        | 110 mm  |
| Through hole         | 1.10                        | 28 mm   |
| Accuracy             | Within 40 sec. cumulatively |         |
| Repeatability        | Within 4 sec.               |         |
| Max. load horizontal | 880 lbs                     | 4,000 N |
| Max. load vertical   | 440 lbs                     | 2,000 N |
| Brake system         | Pneumatic                   |         |
| Brake torque         | 89 ft-lbs                   | 120 N-m |
| Max. rpm             | 41.6 rpm                    |         |
| Gear ratio           | 1/72                        |         |
| Position             | Vertical/Horizontal         |         |
| Weight               | 60 lbs                      | 27 kg   |
| Motor                | Fanuc Beta0.5/1is size      |         |

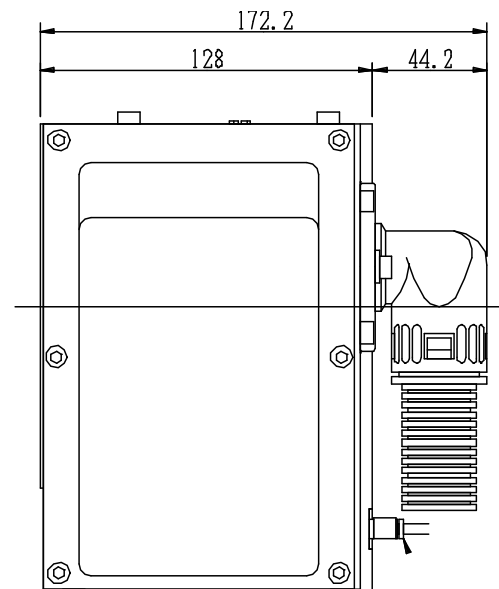
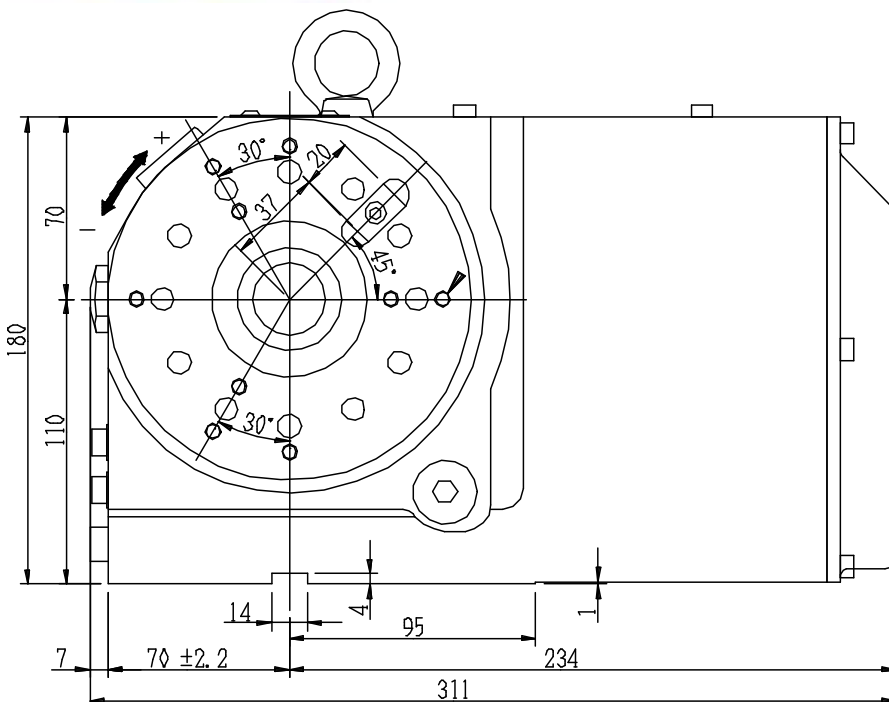


\*Photo shows generic image of the product and may be different from actual product.  
RPC - Rust Preventative Coating Face Plate & Communicator Block not shown



### AC5-10 control

- 10,000 block capacity, Bi-directional
- 0.0001° degree minimum increment
- Power, feedback, M-signal, and power supply cable included.
- RS232C capable
- W 10.25" x H 8" x D9"



CAT40

CAT50

BT30

BT40

HSK 40E

HSK 63A

HSK 100A

STRAIGHT SHANKS

COLLETS

PARTS & ACCESS.

SHRINK MACHINES



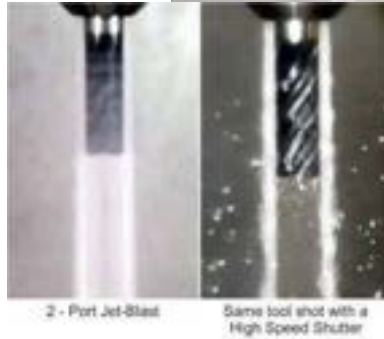
## JET-BLAST Coolant Options

Jet-Blast has been proven over the last 10 years to double tool life in many applications by blasting the chips out of the cut allowing the cutting tool to cut free increasing efficiency and life.

Jet-Blast is a modification we perform at Pioneer by adding coolant ports to holders in stock. The amount of coolant ports and sizes are dependent on the customer and application. Pioneer will EDM in 2 ports standard, additional ports at a per hole fee.

Jet-Blast can be applied to all tool holders 10" and shorter from inventory, all sealed collets and coolant caps.

Coolant Volume, Pressure and RPM will determine the effectiveness of the Jet-Blast system.



### Examples



Large or Small, **PIONEER Rotary** has a cost effective solution for your application



**PIONEER** brings an Installation and Service department **SECOND TO NONE**

**PIONEER** brings an Installation and Service department second to none, with over 20 years experience in full rotary table 4th and 5th Axis installations as well as repair and service on many popular brands.

- Full Turnkey Installations on many Fanuc based controls including Fanuc oi, 16i, 18i, 21i series and more.
- Guaranteed Compatibility - We only install OEM Motors & Controllers to guarantee 100% compatibility with the machine control.



### **PIONEER EDM**

Thanks to excellent water protection by patented auto air purging and optional corrosion protection plating or paint, JNC and TNT models are available as most affordable EDM rotary and indexing solution.

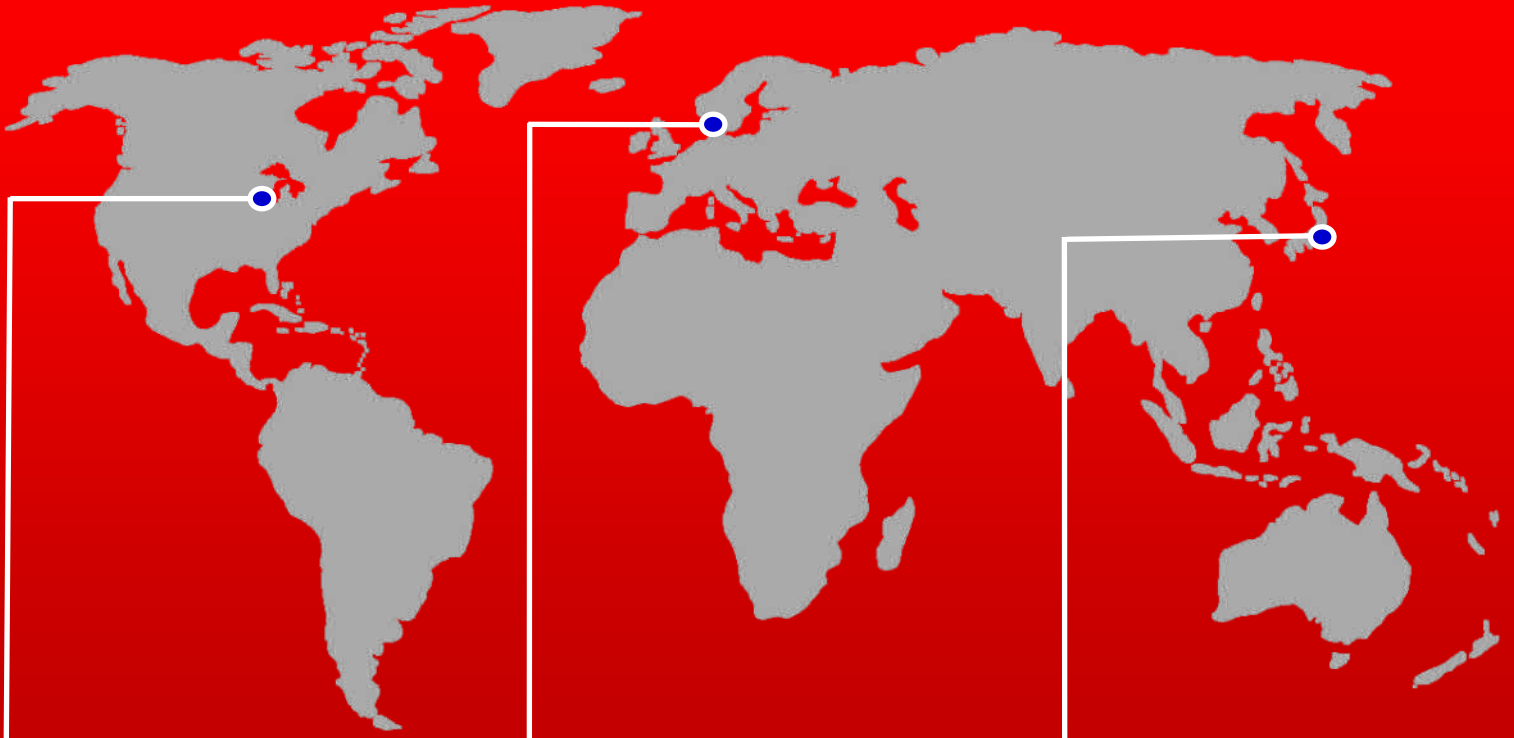
#### **JNC Models                    JNC140 / JNC170 / JNC200 / JNC250**

- Available in 5.5 / 6.7 / 7.9 / 9.8 inch table diameter
- Submersible with standard Auto Air Purging System (PAT)
- Optional stainless face plate with commutator block
- Optional nickel plating for better corrosion protection

#### **TNT models                    TNT100 / TNT170**

- Available in 3.9 / 6.7 inch table diameter
- Submersible with standard Auto Air Purging System (PAT)
- Optional stainless face plate with commutator block
- Optional rust preventative paint for better corrosion protection

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### Rotary Tables & Indexers

- Pioneer Rotary
- Yukiwa Rotary



### Pioneer Machine Tool Air & Diaphragm Chucks



### Pioneer Trading Company ToolHolding for Japan

**Revised 2023-05**  
Catalog P2023 - \$9.95USD  
Pioneer NA 2022