

THE ART OF
PRECISION ENGINEERING



2025



MAIN CATALOGUE

SMS

THE ART OF PRECISION ENGINEERING



TABLE OF CONTENTS

SMS™ Offering Overview	7
Tool holder Selection Guide	12
Spindle Selection	12
Tool Clamping Technology and Selection	14
SMS™ Steep-Taper Face-Contact Chucks Technical Features	16
Balancing Guide	18
PTI Taper Holders (ISO 26623-1)	23
PTI Indexable Static Turning Tools	23
PTI Square Shank Holders	26
PTI Multi-Milling Chucks	27
PTI Hydraulic Chucks	27
PTI Slim Design Hydraulic Chucks	28
PTI Heavy Duty Hydraulic Chucks	28
KTI Taper Holders (ISO26622-1)	29
KTI Indexable Static Turning Tools	29
KTI Square Shank Holders	32
KTI Multi-Milling Chucks	33
KTI Hydraulic Chucks	33
KTI Slim Design Hydraulic Chucks	34
KTI Heavy Duty Hydraulic Chucks	34
KTI ER Collet Holders	35
KTI End Mill Holders	36
KTI TG Collet Chucks	37
KTI Shell Mill Holders	37
KTI Reducer Adaptor	38
KTI Extension Adaptor	38
HSK Taper Holders (DIN 69896 A+C)	39
HSK A Multi-Milling Chucks	39
HSK A Hydraulic Chucks	39
HSK A Slim Design Hydraulic Chucks	40
HSK A Heavy Duty Hydraulic Chucks	40
BTP Face Contact Holders	41
BTP Face Contact Multi-Milling Chucks	41
BTP Face Contact Hydraulic Chucks	41
BTP Face Contact Slim Design Hydraulic Chucks	42
BTP Face Contact Heavy Duty Hydraulic Chucks	42
BT Holders (MAS 403)	43
BT Multi Milling Chucks	43

BT Hydraulic Chucks	43
BT Slim Design Hydraulic Chucks	44
BT Heavy Duty Hydraulic Chucks	44
BT ER Collet Chucks	45
BT ER-Z Short Collet Chucks	46
BT Die Mould Chuck	47
Die Mould Collet	47
BT Screw on Holder	48
BT Modular Adaptor	49
BT End Mill Holders	50
BT Side Lock Holders	51
BT Shell Mill Holders	52
BT Face Mill Holders	53
BT Morse Taper Holders	54
BT Jacob Taper Holders	55
BT Boring Bars (Square Tool Type A)	56
BT Boring Bars (Square Tool Type B)	57
BT Fine Boring Bars (Fine Boring Cartridge Type)	58
SKP Face Contact Holders	59
SKP Face Contact Multi Milling Chucks	59
SKP Face Contact Hydraulic Chucks	59
SKP Face Contact Slim design Hydraulic Chucks	60
SKP Face Contact Heavy Duty Hydraulic Chucks	60
SK Holders (DIN 69871 FORM A)	61
SK Multi Milling Chucks	61
SK Hydraulic Chucks	61
SK Slim Design Hydraulic Chucks	62
SK Heavy Duty Hydraulic Chucks	62
SK ER Collet Chucks	63
SK ER-Z Short Collet Chucks	64
SK End Mill Holders	64
SK Side Lock Holders	65
SK Shell Mill Holders	66
SK Face Mill Holders	66
SK Morse Taper Holders	67
SK Jacob Taper Holders	67
SK Boring Bars (Square Tool Type A)	68
SK Boring Bars (Square Tool Type B)	69
SK Fine Boring Bars (Fine Boring Cartridge Type)	70

CATP Face Contact Holders	71
CATP Face Contact Multi Milling Chucks	71
CATP Face Contact Hydraulic Chucks	71
CATP Face Contact Slim Design Hydraulic Chucks	72
CATP Face Contact Heavy Duty Hydraulic Chucks	72
CAT Taper Holders (ANSI-ASME B5.50-2009)	73
CAT Multi-Milling Chucks	73
CAT Hydraulic Chucks	74
CAT Slim Design Hydraulic Chucks	75
CAT Heavy Duty Hydraulic Chucks	75
CAT ER Collet Holders	76
CAT ER-Z Short Collet Holders	78
CAT TG Collet Holders	78
CAT End Mill Holders	79
CAT End Mill Holders X-Long	82
CAT Shell Mill Holders	86
CAT Shell Mill Holders X-Long	87
CAT Morse Taper Holders	88
CAT Jacob Taper Holders	88
Non-Reversible Tapping Attachment - QCSFL	89
Tapping Adaptor Model (QA)	89
Universal Quick Change Drilling - Floating - Tapping Adaptor	90
Universal Quick Change Drilling Chucks (Model-TF)	90
Universal Quick Change Drilling Adaptor (Model-KD)	90
Universal Quick Change Drilling Adaptor (Model-KD-ER)	90
Universal Quick Change Floating Adaptor (Model-KF)	91
Universal Quick Change Tapping Chuck (Model-KT)	91
Tap Adaptor (Model-QASB)	91
Floating Reamer Holder With Radial Parallel Float	92
Floating Reamer Holder with Trapezoidal Shank - FH / Tr.	92
Floating Reamer Holder with Morse Taper Shank - FH / MT	92
Floating Reamer Holder with Trapezoidal Shank - FHK / Tr.	93
Trapezoidal Shank Collet Chucks	93
Trapezoidal Shank Collet Chuck - Tr. / CHE	93
Adjustable Adaptors Trapezoidal Shank	94
Adjustable Adaptor "D" Type	94
Adjustable Adaptor "H" Type	94
Adjustable Adaptor "F" Type	95
Hardware and Accessories	96
Morse Taper Sockets And Expansions	96

ER Collets Standard, High Precision and Steel Sealed Collets - Inch and Metric - ID Sizes	97
ER Collet Nuts	99
ER Collet Sets	100
ER-T Collets Inch Tap Collets for Rigid Tapping - DIN 6499 / ISO15488	101
ER-T Collets Metric Tap Collets for Rigid Tapping - DIN 6499 / ISO15488	101
Straight Shank ER Collet Holder	102
Straight Shank Double End ER Collet Holder for Swiss Machine Tools	104
Reduction Collets for SMS™ Multi Milling Chucks And SMS™ Hydraulic Chucks	106
Retention Knobs	108
Tool Shank Holding Fixtures	110
"Y" Spanner For ER Collet Chucks	110
ERZ Nut Spanner	110
Shell Mill Arbor Screws	111
HSK and PTI Coolant Tubes	112
Length Adjustment Screw For ER Collet Chucks	113
Y Spanner Wrenches for Multi Milling Chucks	113
Torque Wrenches for Multi Milling Chucks	113
Torque Wrenches for SMS™ Hydraulic Chucks	114
Fine Boring Bar Cartridge FBCAR	114
Square Tool (For BSA & BSB Boring Bars)	114
Taper Shank Standards	115
Tap Standards ANSI / METRIC	118

Overview of Products & Technology

SMS™ Offering Overview

Given the constant evolution of tooling and machining technology plus the ever-increasing needs of our customers for greater accuracy and efficiency - SMS™ is committed to consistently working on developing innovative products and expanding our product offering to meet our customers' production and manufacturing process needs. The following section highlights the tooling solutions available.

Standard CNC Tooling Solutions

End Mill, Shell Mill, ER Collet, MT Socket, Jacobs Taper, Straight Shank, and Shank tooling



Technology Tooling Solutions

Multi Milling Chucks, Face Contact Chucks, KTI and PTI Polygon Shank Chucks, Threaded Connection Chucks, and Hydraulic Chucks



Industry Standard Spindle Connections

DIN, ANSI, BT-MAS, Face Contact, KTI Taper Interface ISO 26622-1 and Polygon Taper Interface ISO26623-1 Shanks



Overview of Products & Technology

SMS™ – Precision manufactured to the global industrial standard specifications and according to ISO 9001-2015 process standards.

Precision and Accuracy as SMS™ is Focused on the “Centerline of Performance”

- TIR maintained to 10µm
- Balanced to G2.5 @ 25,000 RPM
- Bore tolerance: H6/H7
- Taper-to-Bore runout <5µm
- Taper shank ground to AT3 (or better)
- CMM and certified gauge inspection equipment
- All surfaces ground and corrosion resistant oxide coating where required
- All tool holders shipped with Certificate of Balance Accuracy



Overview of Products & Technology

SMS™ High Performance Multi Milling Chucks

High Performance Milling Chucks are excellent products for roughing to finishing applications in all types of materials. This SMS™ design provides the highest possible tool shank gripping force (torsion) with flexibility of reduction sleeves to allow for multiple cutting tools shanks sizes and no loss of TIR. This versatility allows the use of HSS shank tools, solid carbide shank tools, indexable carbide insert tooling, indexable drills, reamers, and many more tools.



Design of the Mill Chuck is unique to SMS™ to maximize metal-removal performance while maximizing cutting edge tool life and providing superior part finishes. The MultiMill™ design incorporates an inner chuck body with a needle roller bearing assembly, and a heavy-wall locking nut to create a high torque rate on the tool shank maximizing torsion break-away of the tool shank. There are internal grooves parallel to the axis of the bore to allow maximum gripping force without loss of TIR accuracy. The needle roller bearing cage squeezes the ID bore when the locking nut is rotated clock-wise using a specific wrench with a handle length specifically designed to produce the highest torque WITHOUT the need for “hammer” or “cheater bar” to apply additional pressure. There are no threads on the internal connection between the tool body and the locking nut. The special taper design allows the roller bearing cage to move down axially to tighten the ID bore around the tool shank. This locking pressure is distributed 360° around the tool shank and to the entire cylindrical length of the tool shank providing maximum TIR accuracy at 4 x Diameter of the tool shank.

	Key Features of the Multi Milling Chuck: • Individual bearing seats in bearing cage • Strong carbon-steel bearing cage • Internal vertical grooves for accurate ID grinding and “dirt grooves” prevent tool slippage • Positive “stop” to prevent over-torquing of clamp nut • “O” Ring seals prevent coolant and “swarf” from entering bearing cage area	Benefits of using the Multi Milling Chuck: • Improved TIR results in long cutting-edge tool life • Improved TIR results in better piece part surface finish • Cylindrical gripping and axial forces create a more rigid cutting tool resulting in strong radial load ability • Reduction sleeves offer multiple diameter tool shank flexibility • Increased machining rates due to high accuracy (TIR) and radial load capability	

Overview of Products & Technology

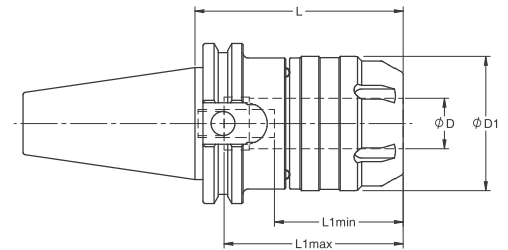
SMS™ High Performance Milling Chucks

To achieve maximum gripping force on the tool shank, rotate the locking nut clock-wise until the rotation force of “normal” pulling force on the wrench handle is achieved. Once this is achieved back-off the locknut counter clockwise 5°-10° and you are all set to begin machining.

MultiMill™ also includes multiple “O”-Ring seals on the top and bottom of the lock nut to prevent coolant and solutions from entering the bearing cage area for maximum tool usage and minimal maintenance. Should the bearing grease be contaminated during use, the tool can be return for a low-cost refurbishment of the grease.

Why MultiMill vs. TG or ER collet chucks and side lock holders?

- High Quality AT3 steep tapers and DIN Standards HSK tapers
- Uniform gripping pressure 360-degrees around tool shank – ER/TG collets do not provide uniform 360-degree gripping forces and are 70% less in overall gripping torque than MultiMill
- Uniform gripping forces the entire length of tool shank – ER/TG collet chucks as well as side lock holders do not provide uniform tool shank gripping pressure the entire length of the tool shank during heavy radial loads.
- Symmetrical design and balance allow for higher RPM machining applications without vibrations from unbalanced/non-symmetrical tool design.
- Cutting tool shank is held with a cylindrical force and maintains cylindricity which allows excellent TIR at 4 x Dia.



FEATURES

- **Balanced to G2.5 @ 25,000 RPM**
- **T.I.R. < 5µm**
- **Taper shank ground to AT3 accuracy (or better)**
- **Bore tolerance: H6**

Proper Care Will Increase MultiMill™ Performance Life

The following simple steps will help maintain maximum operational performance of your chuck.

- **Keep your Milling Chuck clean**
 - Debris caught in between the chuck, reduction sleeve, and tool shank can not only reduce chuck life, it can also reduce accuracy and gripping force of the tool shank. Before assembling the tool's shank into the ID bore and/or reduction sleeve bore, make sure the shank and ID bores are free from grease/coolant, chips, and dirt. Clean slots of reduction sleeves with solvent or compressed air.
- **Store your Milling Chucks Properly**
 - When your milling chuck is not in use, make sure to follow these few guidelines:
 - Loosen the locking nut to relieve pressure on the roller bearing cage
 - Remove reduction sleeves and/or cutting tools from the ID of the milling chuck
 - Wipe Milling Chuck so it is free from coolant and spray with anti-rust solution like WD40™ or LPS 2™
- **DO NOT over-tighten your Milling Chuck**
 - The design of the MultiMill™ and its roller bearing cage are such that excessive torque from “cheater bars” or “hammering the wrench handle” will over tighten the bearing cage causing ID bore distortion and possible long-term TIR run-out. Only use “Y” Claw Wrench supplied and use “normal” human pressure to the end of the wrench.

Overview of Products & Technology

SMS™ Hydraulic Chuck Products

SMS™ hydraulic chucks are almost unbeatable in their combination of gripping power and TIR accuracy. The SMS™ design uses our understanding and knowledge to expand steel in a controlled and precise way. We take this knowledge and transform it into our SMS™ clamping technology.

Benefits:

- Absolute smooth ID surface
- High Accuracy TIR achieved with high-precision ID grinding operations
- High clamping force is achieved by our unique design of two-part hydraulic clamping system chamber and flexible ID surface. Excellent vibration dampening effects.
- Leak-proof hydraulic clamping screw system for a maintenance-free product
- SMS™ torque wrench for proper clamping force without over tightening clamping screw system
- Flexibility due to intermediate coolant-sealed sleeves
- All industry standard shanks can be properly gripped
- ID wiper grooves for debris-free and oil-free cutting tool shanks

Applications:

- High-Speed machining and Fine Milling
- Precision Reaming
- Parallel Milling
- Boring & Chamfering
- Tool Grinding
- Precision Workholding

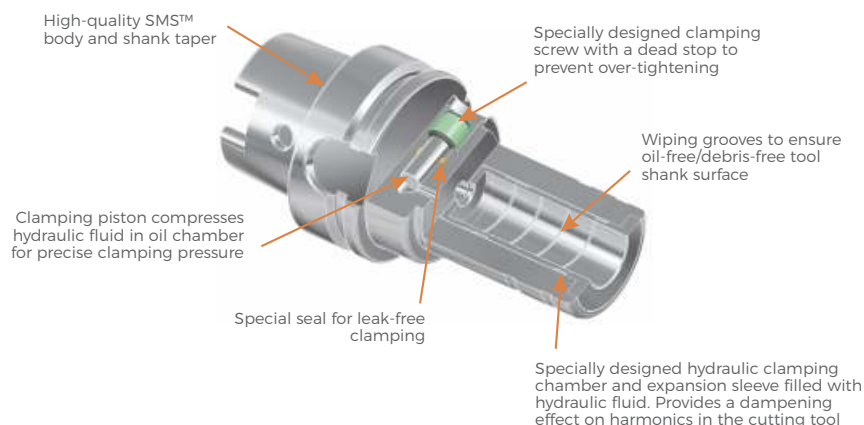
Operational system:

- Make sure all surfaces of tool shank, holder ID bore, and reduction sleeve (if being used) are clean and free from oils, chips, etc.
- Open ID bore with a counterclockwise rotation of the clamping screw until cutting tool shank easily slides into ID bore
- Slightly turn the clamping screw clockwise until you feel tension/gripping force on the shank of the cutting tool.
- If the shank can be inserted full depth and still maintain an acceptable gauge length, this is best operational position.
- If cutting tool needs to be moved up slightly to maintain a required gauge length pull cutting shank upward to the desired position (maintaining a minimum of 75% shank engagement in ID).
- Tighten clamping screw by turning clockwise until torque wrench clicks when it reaches proper clamping pressure

SMS™ Maintenance:

- SMS™ Hydraulic Chuck system is basically a maintenance-free product. There are some good housekeeping rules to follow to maximize the quality and performance of this products
- Never over-tighten the clamping screw. Once the SMS™ torque wrench “clicks” it has reached the required torque and hydraulic pressure to properly grip the cutting tool shank. This practice will always allow proper gripping forces on cutting shank even with the varying shank tolerances.
- Never remove clamp screw from the threaded body it is inserted into. Removal may allow debris in threaded area or in clamping system causing potential damage.
- Never tamper with, remove, or machine oil-fill hole in body of the hydraulic chamber.

The SMS™ Hydraulic Chuck Difference



Tool holder Selection Guide

Spindle Selection

What type of spindles are available on machine tools, and which is best for your needs?

Over the past five to six decades, machine tool builders have developed many varied sizes and styles of machine tool tapers to hold the tool holders and cutting tools they want their machines to utilize. They look at multiple factors such as rigidity, RPM/Speed of spindle, size, and overall performance desired between machine control, accuracy of machine, and speed of table/head feed rate.

Over the past three decades, the metal cutting industry has settled on five to six different spindle connections and machine tool builders design their equipment using any one of these taper technologies as it best suits their machine design.

1920s. ISO – Old technology mainly used on manual equipment and large boring mills where automatic tool changes are not needed.

1980s. CAT40/CAT50 – The ANSI/ASME B5.50 was designed in the early 1980s for use with automatic tool changing systems in machines. This replaced the manual tool changes with automatic tool change arms and tool carousel storage. This steep taper design was produced to help the machine tool builders and the metal working end-users to standardize the spindle connection since many of the machine tool builders in the 1970s and early 1980s had designed their own connection thus making it difficult for the manufacturers to standardize their equipment as they purchased new machines and tooling. The steep taper design allows for more rigid applications when heavy radial loads are part of the machining process. This design has some limitations regarding spindle RPM as high RPM machining tends to cause taper “bell-mouthing” at the spindle’s largest opening allowing increased tool TIR growth and loss of machine taper/tool holder taper contact. CAT is a largely a North American spindle connection compared to balance of the world.

1980s. BT30/BT40/BT50 – MAS403 spindle connection. Originally a standard design on all Japanese designed and produced machine tools. It has slightly better “balanced by design” features and the tool change arm allows for faster tool changes between spindle and tool storage system. Uses the same steep taper design that the ANSI/ASME style offers but allows higher spindle RPM due the “balanced by design” flange. Similar performance as the ANSI/ASME style where heavy radial loads are used in many machining processes.

1990s. BT and CAT Face Contact designs, which were developed by Daishowa Seiki Co. in 1994 under US Patent 5352073, took the benefits of the MAS403 and ANSI/ASME designs but removed the “weakness”



01



02



03

Tool holder Selection Guide

from higher RPM machining by utilizing a face contact between the flange of the tool holder and the spindle face of the machine tool spindle. This additional contact surface allows more rigidity because of the larger “footprint” the spindle face contact offers. This large diameter of contacts increases the “leverage point” between spindle taper, spindle face, tool taper, and tool flange face. Excellent design where long-length tools and/or large diameter tools benefit from additional tool/taper contact for accuracy and rigidity. While this design is like the BT-MAS and CAT-ANSI, interchanging styles of tapers in a face contact spindle is not recommended. SMS™ follows the expired US Patent 5352073 to maintain the integrity of the design as our SMS™ product.



(Note: Not all "Dual Contact" shank holders conform to BigPlus Patented dimensions)

04

1990s. HSK - DIN 69893 A, C, E, and F styles - HSK means “hollow shank” and uses a drawbar that pulls the taper into the machine using internal gripping vs. the external drawbar gripping that steep taper designs use with a retention knob. While this is a spindle connection for metal working machines like the steep taper designs, this design allows for much higher spindle RPM machining because of the spindle/drawbar, and connection design. The “low profile design” and balanced orientation slots allows for a much higher spindle RPM without the spindle opening “bell-mouthing” seen in the steep taper designs. HSK also uses the face contact to increase tool holder rigidity for radial loads. HSK does require a change in “machine programming culture”. With ANSI and MAS403 designs, heavy radial loads at lower spindle RPMs is the normal practice. With the HSK shank such heavy radial loads are handled differently by increasing spindle RPM, lighter chip loads on cutting tools, and an overall increase in machining metal removal rates. By reducing chip load and increasing spindle RPM, most of the “heat” created during the machining process goes with the chip/swarf and not into the cutting tool or work piece material. Better tool life, better work piece accuracy, and better part finishes can be achieved using HSK spindle technology over steep taper designs. As HSK spindle RPM increases, HSK shank tooling tapers and diameters can “shrink” in sizes to better match the machining processes and high spindle RPM demands for high tool assembly balance needs. HSK shanks are available in sizes 20 taper through 125 (number indicates OD size of flange diameter). Styles of flanges can also be changed to increase balance of holder by changing from “A” or “C” styles to “E” or “F” styles.



05

1990s. In the mid-1990s the new machine technology was the Multi-Tasking machining center or the Mill-Turn machining centers. This new machining technology required a spindle connection that not only could rotate for rotational machining applications like milling, drilling, tapping, etc. but also maintain a static or stationary position for turning – thus the multi-tasking or mill-turn names. Rotational tool machining presents a specific set of forces that static or stationary turning does not present. Conversely, static or stationary turning presents machining forces not seen in rotation tooling applications. This required new spindle connect designs to allow the “complete” machining process with a single style tool holder and machine connection. After several attempts by cutting tool manufacturers to develop the “best” spindle/tool holder interface that performs well in both rotating and static applications, two designs have become the primary choices by machine tool builders and metal working customers.

Tool holder Selection Guide

Both designs achieve the desired results of rigidity, quick tool changes, accuracy, and strength in static operations and rotational operations. The style preference is up to the individual's comfort.



ISO26623-1



ISO26622-1

Determining your spindle connection for your next machine tool purchase depends on your comfort level with new spindle technology, need for increased machining capabilities, and type of work you plan to process through the new machine. While there are advantages with Steep Taper designs as well as HSK Taper designs, you will need to match those advantages to your specific machining needs. Most important fact about spindle and tool connection selection – TIR (Total Indicator Runout) is the primary consideration. Quality, price, and accuracy of the tool holder are all considerations, but for every 2 μ m of TIR away from the tool assembly centerline, 10% of your cutting tool life is lost due to uneven cutting tool edge material loads. TIR can be measured where the cutting tool shank and tool holder meet but the true assembly TIR should be measured at the tip of the cutting tool where the dimensional accuracy of your tool assembly and cutting parameters are determined.

Note : "KM63xMZ does not follow the ISO26622-1 standard and is a slight variation of the design specifically for Mazak Integrex machines. Make sure when ordering KTI shank tools you know whether your connection is KM63XMZ or KM63TS.

Tool Clamping Technology and Selection

Which tool clamping or tool holding system is your best overall value for your machining processes?

When it comes to selecting the proper or the "best value" tool clamping system for your machining applications, you must first look at the type and size of cutting tools you want or need to use. The following factors will all have an impact on steering the decision for the most appropriate technology for your application:

1. Shank styles and sizes
2. Shank types – HSS/Tool Steel or Carbide
3. Material you will be machining and whether roughing, semi-roughing/semi-finishing, or finishing
4. Length of surface to be machined with regards to radial load on the cutting tool
5. Metal-removal rates - Aggressive or more "normal"
6. Spindle RPM capability and Spindle type – HSK, Steep-Taper, Steep-Taper with Face Contact, or Multi tasking tapers like PTI or KTI, and finally
7. Budgetary constraints – how much are you able or willing to spend for a tool clamping system

Tool holder Selection Guide

	END MILL HOLDER	ER COLLET CHUCK	HIGH PRECISION COLLET CHUCK	MILLING CHUCK	HYDRAULIC CHUCK	SHRINK FIT HOLDER
TIR ACCURACY						
VERSATILITY						
RIGIDITY						
EASE OF USE						
PRECISION RELIABILITY						
BALANCE						
COST						

POOR
 FAIR
 AVERAGE
 GOOD
 GREAT

For more details when selecting a Tool Clamping System, please refer to our Tool Selection Guide at the back of the catalog.

Tool holder Selection Guide

SMS™ Steep-Taper Face-Contact Chucks Technical Features

SMS™

Steep-Taper Face-Contact Technical Data



Taper and face contact result in greater tool holder stiffness

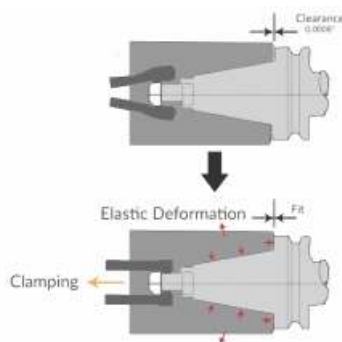
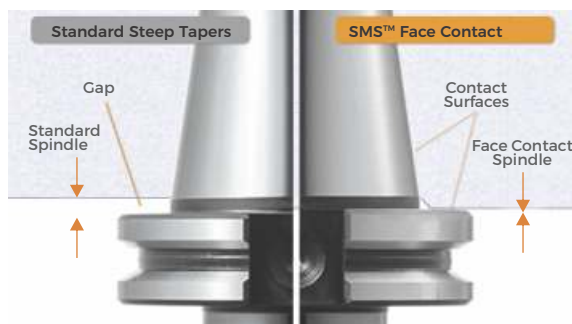


Compatible with BIG-PLUS and standard spindles

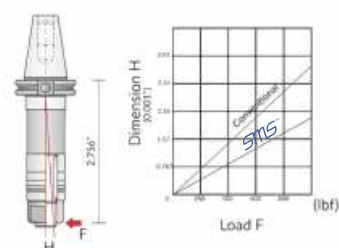


Primary Applications

- Face-Contact tapers provide additional radial load capabilities due to the large spindle contact surface compared with standard ANSI B5.50 or MAS BT 403 tapers.
- Excellent for long-reach axial cutting tools where cutting tool tip TIR is critical for part dimension achievement and machined surface location/
- With the wide face-contact longer axial cutting tools with high radial loads will have less “bending” or improved dynamic stiffness and rigidity. The vibration dampening of these holders reduces spindle wear and extends cutting tool life.
- Designed for use in CNC Machining Centers with Face Contact spindles and automatic tool changers



Deflection of a CAT40 holder
Conventional vs. AccuPlus



Tool holder Selection Guide

Principle Behind Face-Contact Technology

- Prior to spindle clamping, the tool taper and spindle are in contact with each other to establish good taper interface and once clamped, face contact is made because the elastic deformation of the spindle clamping system provides the proper face clamping force between spindle face and tool holder flange face.
- This simultaneous fit provides a strong spindle/tool shank connection for more accurate machining possess and increased tool life due to improved tool assembly (spindle-toolholder-cutting tool)
- Face Contact holders are universally suitable for Drilling, Face milling, End mill with radial loads, Reaming, and even grinding is machine control is capable. The vibration dampening of this face contact system reduces spindle wear and extends cutting tool life.

Important Note about SMS™ and other face contact steep taper tools:

If machine has standard face contact spindle design and face contact holders are to be used, ALL tool holders should be face contact style. Do not inter-mix standard steep taper holders with face contact holders for use in same machine spindle. Face contact holders must maintain contact with spindle face surface to maintain accuracy and proper toolholder shank/machine tool spindle taper interface. Using standard steep taper tools will allow chips, swarf, and residue to collet on the face when face contact is not being maintained thus using a face contact tool holder after using a standard steep taper tool could allow the face of the spindle to have contamination between spindle face and face contact of tool holder causing damage to spindle face and/or face contact holder. Start with SMS™ and face contact and stay with it for ALL tool holder style in that machine.

(Note: Not all "Dual Contact" shank holders conform to BigPlus Patented dimensions)

Tool holder Selection Guide

Balancing Guide

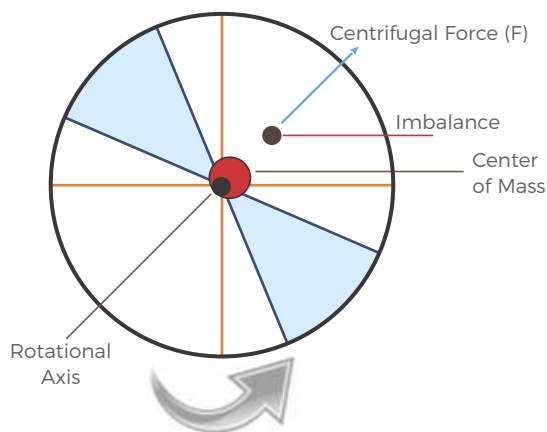
SMS™ Balancing Methodology

SMS™'s high quality and high precision tool clamping products conform to the latest ISO/DIN balancing specifications. In this section, you will find a copy of an actual balance specification sheet supplied with each SMS™ rotating product to show exact balancing dynamics of the product purchased. Before we dive into the specifics of our holder balancing certificate, let's cover some theoretical and practical factors that govern the balancing framework that we follow.

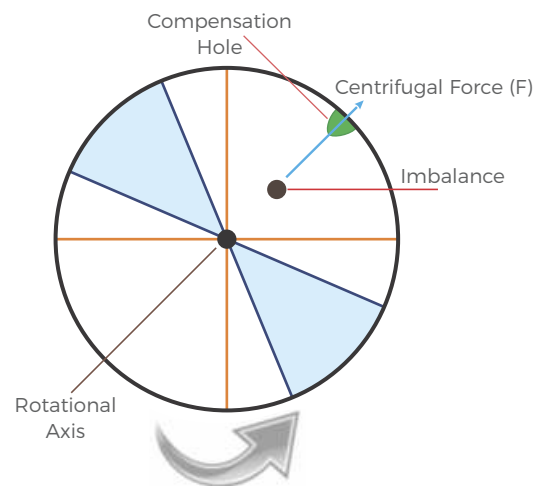
Proven Theory of ISO/DIN 1940-1 and ISO/DIN 1940-2 Balancing specifications

The balance of a rotating tool clamping product is critical to machine spindle wear and cutting tool performance, but how perfect does the balancing need to be? To answer that, we must first look at what imbalance is and how it impacts a holder.

Imbalance Before Corrective Action

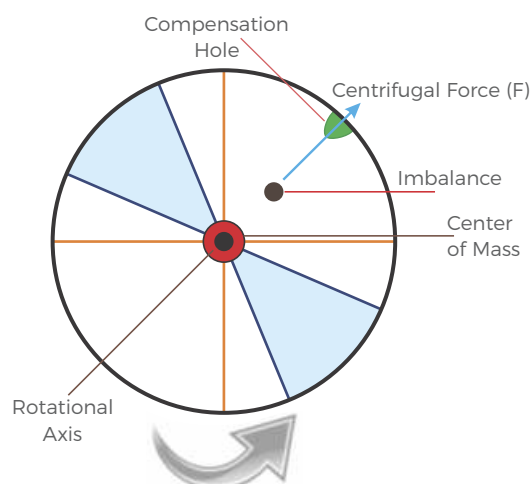


Corrective Action



Imbalance – an unbalanced tool holder (one which has its center of mass away from its rotational axis) produces a centrifugal force at the rotation spindle, impeding efficient operation of a cutting tool. Imbalance also has a negative effect on machine spindle bearings lifespan and cutting tool performance. As in the figure above, corrective action of material removal (compensation hole) rebalances the holder and brings the center of mass back in alignment with the rotational axis.

Balanced With Corrective Action



Tool holder Selection Guide

Balancing Guide

At SMS™, we balance our general purpose holders to a realistic G2.5 @25,000 RPM specification designated by ISO/DIN 1940-2. For most tool holders, any higher degree of balancing is impractical and misleading since the percentage of error increases and the practical application requires rebalancing of every tool assembly to maintain the higher standard. For example, an ER Collet holder balanced to G2.5 will not remain balanced once a retention knob, collet, and cutting tool have been installed. Multiple studies have proven that G2.5 balance levels cannot be maintained on steep taper and HSK taper CNC holders (End mill, Shell mill, ER collet chucks, etc.). The following variances create a high degree of imbalance that makes G2.5 a false rating and misrepresentation of actual repetitive tool assembly balance:

Product	Causes of imbalance in assembly of tool after established G rating Balance					
	Pre-Balance	Retention Knobs	Collets	Collet Nut/Torque	Locking Screw	Arbor Screw
ER COLLET CHUKS	Balancing with Collet Nut and Gauge Pin	✓	✓	✓	-	-
END MILL HOLDERS	Balancing with Gauge pin	✓	-	-	✓	-
SHELL MILL HOLDERS	Balancing with Arbor Screw	✓	-	-	-	✓
SHRINK FIT HOLDERS	*	✓	-	-	-	-
HYDRAULIC HOLDERS	Balancing with Gauge pin	✓	-	-	-	-
Steep Taper Tools						

Higher balance rating on Hydraulic Holders of G2.5 @25,000 RPM is achievable and maintained because there are limited mechanically moving parts to cause variances other than the retention knob. To mitigate any impact of the retention knob installation, all of our holders come with a ground pilot ID for the retention knob pilot location accuracy.

SMS™ balancing methodology ensures performance balance of G2.5 @ 25,000 RPM on all CNC holders and G2.5 @ 25,000 RPM on Hydraulic holders.

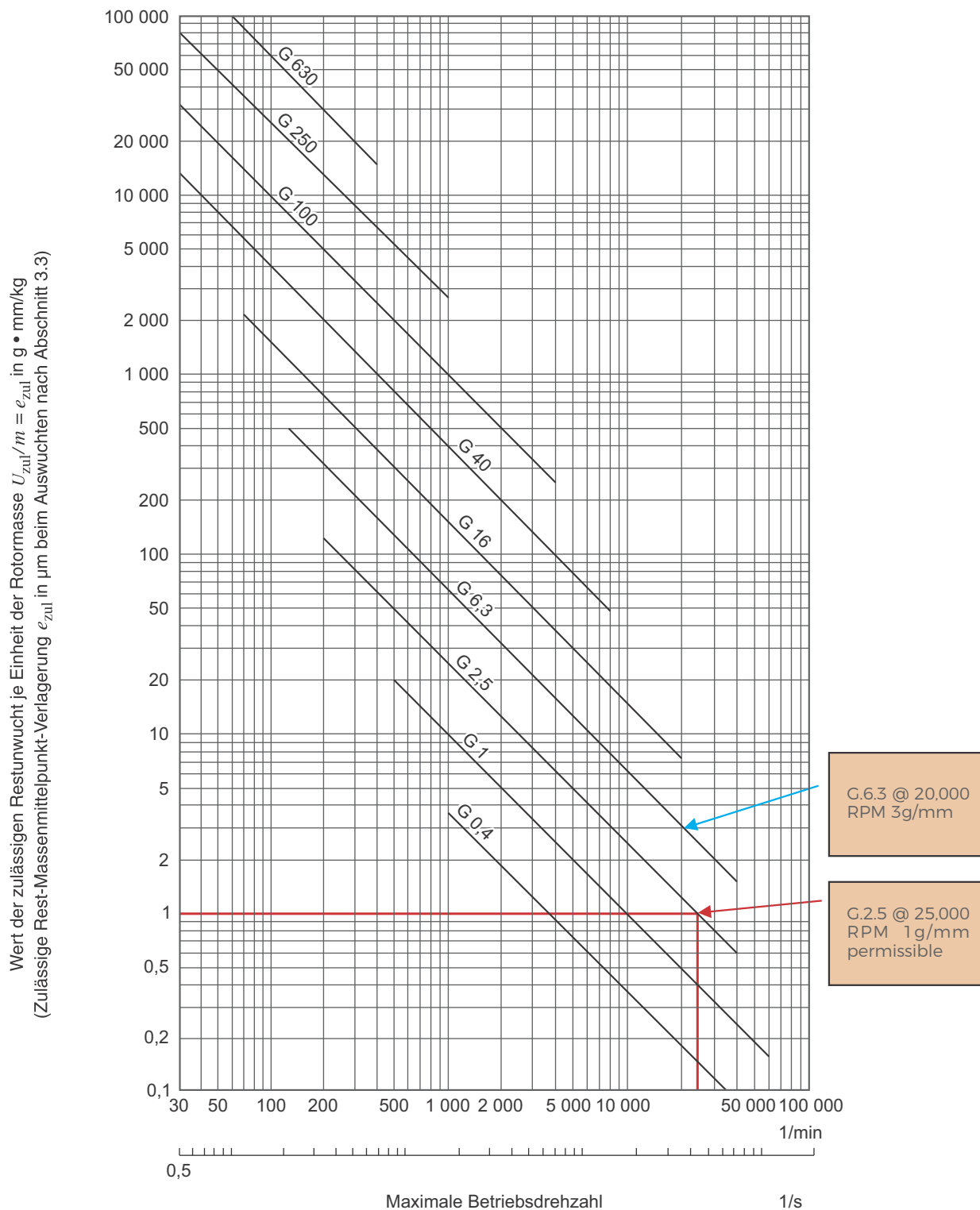
All SMS™ rotation products are balanced with certified test gauge pins and collets to maintain a consistent accuracy reading. All rotating products are balanced in an “assembly” mode – meaning gauge pin and lock screw or gauge pin and ER collet with specific torque ratings to provide accurate and consistent measurements in accordance with ISO/DIN 1940-2 specifications.

Our toolholders bodies are balanced to G2.5@25,000 RPM as well as our ER collet nuts are pre-balanced to G2.5@25,000 RPM, We then assemble the entire toolholder including collet and gauge pin and then assembly is

Tool holder Selection Guide

Balancing Guide

DIN ISO 1940 Teil 1 Seite 7



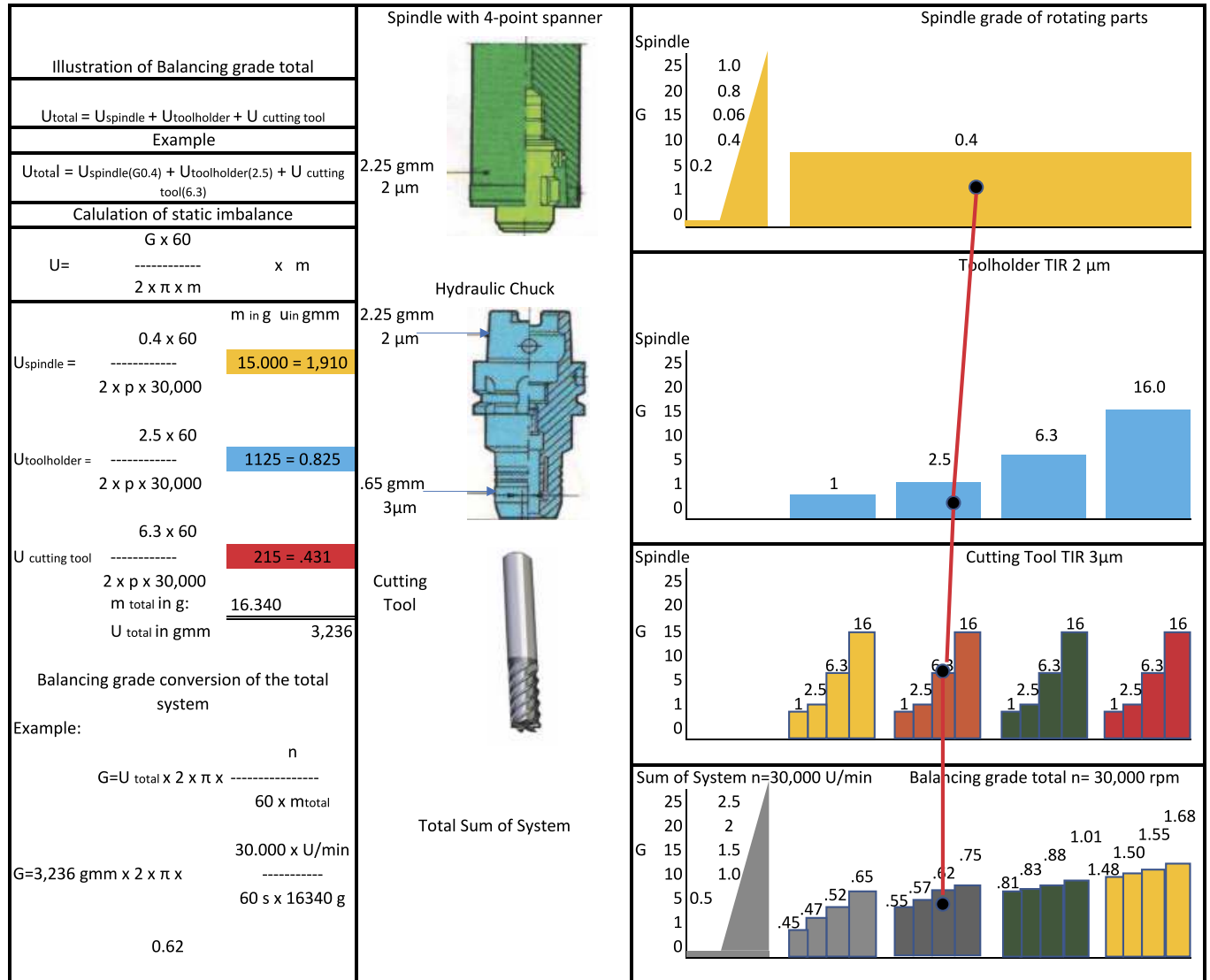
ANMERKUNG: Der Zahlenwert hinter dem Buchstaben G ist gleich dem Produkt $e_{zul} \cdot \omega$, angegeben in mm/s

Bild 2 : Wert der maximal zulässigen spezifischen Restunwucht entsprechend verschiedener Auswucht-Gütestufen

Tool holder Selection Guide

Balancing Guide

Calculations of Balancing Grade Totals - Assembly: Spindle - Tool Holder - Cutting Tool



Tool holder Selection Guide

Balancing Guide

1

Balancing report

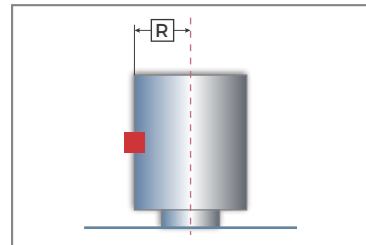
Rotor ID R008061

Type data

Rotor type	BT40 CHE 32.70	Specific Tool Holder
Last change	08/07/2018 13.58	Date & Time that balancing was performed
Set speed	1200 rpm (Direction of Rotation: Forward)	

ABC geometry

Radius 1 46.0 mm



DIN ISO 21940-11 calculation

Calculation based on	Quality grade G	
Deviation (+/-)%	10	Permissible error
Balancing quality grade	G 2,5	"G" Grade
Mass of rotor	2.75 kg	
Service speed	25000 rpm	RPM balance target
Permissible unbalance	2.9 g·mm	Permissible Imbalance

Individual index compensation

08/07/2018/14:22:12

Run	Rotor 0° mounted at machine position 180.0°
Measuring speed	1081 rpm

Unbalance

Static	139 g·mm	119.6°	Initial Imbalance
--------	----------	--------	-------------------

Measuring Results, Run: 3

06/07/2018/14:23:40

Active compensations	Indexing
Measuring speed	1081 rpm

Unbalance

Static	2.67 g·mm	329.5°	Post-Correction Imbalance
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Correction

Correction Plane 1 - Drilling	0.926 mm	329.5°	Correction Detail
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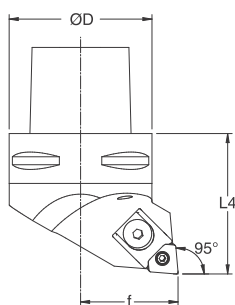
Date

Signature

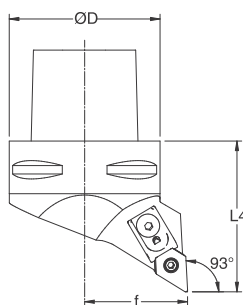
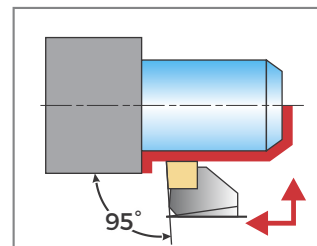
Stamp

PTI Taper Holders

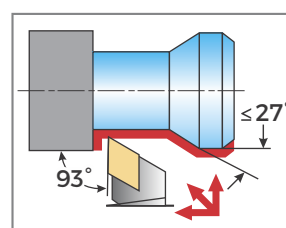
PTI SMS™ Indexable Static Turning Tools



*** MCLN STYLE FOR TURNING AND FACING**



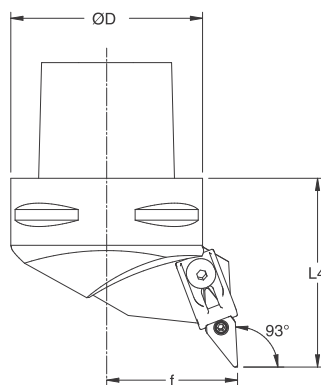
*** MDJN STYLE FOR TURNING, FACING, AND PROFILING**



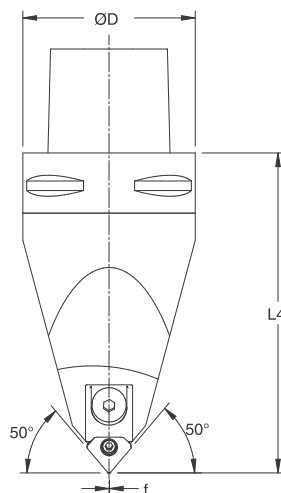
	Catalog Number	Description	Insert IC	L4	f	ØD	Insert	Clamp	Seat	Clamp Screw	Lock Pin
MCLN	74691R45120413	PTI-63 MCLNR-45065-12	0.5	65	45	PTI63	CNxx 1204XX	CMC1204	SCN1204	CSCMC1204	LPSCN1204
	74691L45120413	PTI-63 MCLNL-45065-12	0.5	65	45	PTI63	CNxx 1204XX	CMC1204	SCN1204	CSCMC1204	LPSCN1204
	74701R55120416	PTI-80 MCLNR-55080-12	0.5	80	55	PTI80	CNxx 1204XX	CMC1204	SCN1204	CSCMC1204	LPSCN1204
	74701L55120416	PTI-80 MCLNL-55080-12	0.5	80	55	PTI80	CNxx 1204XX	CMC1204	SCN1204	CSCMC1204	LPSCN1204
MDJN	74692R45110413	PTI63-MDJNR-45065-11	0.375	65	45	PTI63	DNxx1104XX	CMD1104	SDN1104	CSCMD1104	LPSDN1104
	74692L45110413	PTI63-MDJNL-45065-11	0.375	65	45	PTI63	DNxx1104XX	CMD1104	SDN1104	CSCMD1104	LPSDN1104
	74692R45150613	PTI63-MDJNR-45065-15	0.5	65	45	PTI63	DNxx1506XX	CMD1506	SDN1506	CSCMC1204	LPSCN1204
	74692L45150613	PTI63-MDJNL-45065-15	0.5	65	45	PTI63	DNxx1506XX	CMD1506	SDN1506	CSCMC1204	LPSCN1204
	74692R55150616	PTI80-MDJNR-55080-15	0.625	80	55	PTI80	DNxx1506XX	CMD1506	SDN1506	CSCMC1204	LPSCN1204
	74692L55150616	PTI80-MDJNL-55080-15	0.625	80	55	PTI80	DNxx1506XX	CMD1506	SDN1506	CSCMC1204	LPSCN1204

PTI Taper Holders

PTI SMS™ Indexable Static Turning Tools



*** MVJN STYLE FOR TURNING, FACING, AND PROFILING**

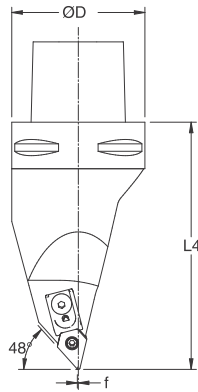


*** MCMN STYLE FOR TURNING, FACING AND PROFILING**

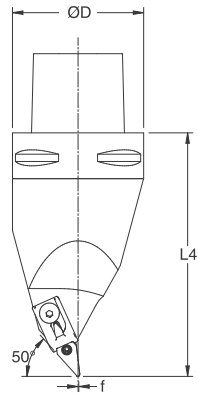
	Catalog Number	Description	Insert IC	L4	f	ØD	Insert	Clamp	Seat	Clamp Screw	Lock Pin
MVJN	74693R45160413	PTI63-MVJNR-45065-16	16	65	45	PTI63	VNxx1604xx	CMV1604	SVN1604	CSCMD1104	LPSDN1104
	74693L45160413	PTI63-MVJNL-45065-16	16	65	45	PTI63	VNxx1604xx	CMV1604	SVN1604	CSCMD1104	LPSDN1104
	74703R55160416	PTI80-MVJNR-55080-16	16	80	55	PTI80	VNxx1604xx	CMV1604	SVN1604	CSCMD1104	LPSDN1104
	74703L55160416	PTI80-MVJNL-55080-16	16	80	55	PTI80	VNxx1604xx	CMV1604	SVN1604	CSCMD1104	LPSDN1104
MCMN	74684N00120421	PTI50-MCMNN-00105-12	12	105	0	PTI50	CNxx1204xx	CMC1204	SCN1204	CSCMC1204	LPSCN1204
	74694N00120418	PTI63-MCMNN-00090-12	12	90	0	PTI63	CNxx1204xx	CMC1204	SCN1204	CSCMC1204	LPSCN1204
	74694N00120423	PTI63-MCMNN-00115-12	12	115	0	PTI63	CNxx1204xx	CMC1204	SCN1204	CSCMC1204	LPSCN1204

PTI Taper Holders

PTI SMS™ Indexable Static Turning Tools



*** MDMN STYLE FOR TURNING,
FACING AND PROFILING**



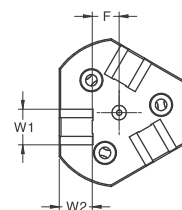
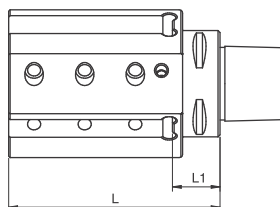
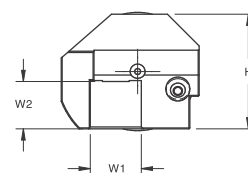
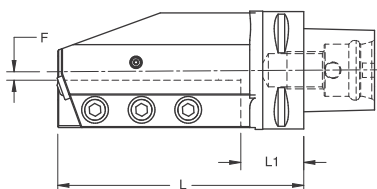
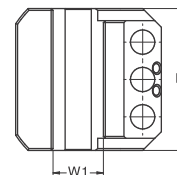
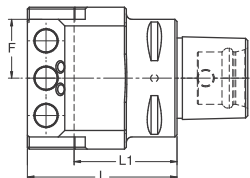
*** MVMN STYLE FOR TURNING,
FACING AND PROFILING**

	Catalog Number	Description	Insert IC	L4	f	ØD	Insert	Clamp	Seat	Clamp Screw	Lock Pin
MDMN	74685N00150623	PTI50-MDMNN-00115-15	15	115	0	PTI50	DNxx-1506xx	CMD1506	SDN1506	CSCMC1204	LPSCN1204
	74695N00150626	PTI63-MDMNN-00130-15	15	130	0	PTI63	DNxx-1506xx	CMD1506	SDN1506	CSCMC1204	LPSCN1204
	74695N33150624	PTI63-MDMNL-33120-15	15	120	33	PTI63	DNxx-1506xx	CMD1506	SDN1506	CSCMC1204	LPSCN1204
	74695N00150632	PTI63-MDMNN-00160-15	15	160	0	PTI63	DNxx-1506xx	CMD1506	SDN1506	CSCMC1204	LPSCN1204
MVMN	74706N00160432	PTI80-MVMNN-00160-16	16	160	0	PTI80	VNxx-1604xx	CMV1604	SVN1604	CSCMD1104	LPSDN1104

PTI Taper Holders

PTI SMS™ Square Shank Holders

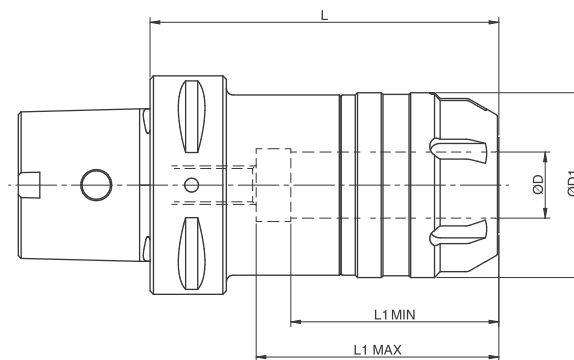
With Coolant Ports in Body



	Catalog Number	Description	L1	L	F	W1	W2	H
ETA Style	7369322516	PTI63-ETA 2580Y	55	80	31.5	25	-	76
	7369322116	PTI63-ETA 1680Y	2.17	3.15	1.25	1.00	-	3.00
STA Style Metric	7269L112020	PTI63-STALF20100Y	25	100	10.75	20	20	60
	7269L062526	PTI63-STALF25130Y	25	130	5.75	25	25	70
	7269R112020	PTI63-STAR20100Y	25	100	10.75	20	20	60
	7269R062526	PTI63-STAR25130Y	25	130	5.75	25	25	70
STA Style Inch	7269L122820	PTI63-STALF12100Y	0.921	3.937	0.460	0.750	0.750	2.362
	7269L052126	PTI63-STALF16130Y	0.906	5.118	0.210	1.000	1.000	2.756
	7269R122820	PTI63-STAR12100Y	0.921	3.937	0.460	0.750	0.750	2.362
	7269R052126	PTI63-STAR16130Y	0.906	5.118	0.210	1.000	1.000	2.756
STA Style Mini-Turret	7269R3162025Y	PTI63-STARF320125Y	28	125	16	20	20	-
	7269L3162025Y	PTI63-STALF320125Y	28	125	16	20	20	-
	7269R3162825Y	PTI63-STARF312125Y	1.10	4.921	0.63	0.750	0.750	-
	7269L3162825Y	PTI63-STALF312125Y	1.10	4.921	0.63	0.750	0.750	-

PTI Taper Holders

PTI SMS™ Multi-Milling Chucks



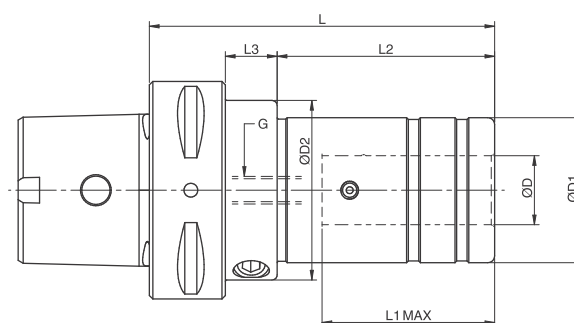
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm

	Catalog Number	Description	Collet Size	Collet Capacity Range	ØD	ØD1	L	L1 Min.	L1 Max.	Coolant Style
PTI50 Shank Metric	97682021	PTI50-MMC 20-105	MC20	3-16	20	53	105	63	70	AD Thru
	97682024	PTI50-MMC 20-120	MC20	3-16	20	53	120	63	70	AD Thru
	97683225	PTI50-MMC 32-125	MC32	3-25	32	67	125	78	85	AD Thru
PTI63 Shank Metric	97692021	PTI63-MMC 20-105	MC20	3-16	20	53	105	63	70	AD Thru
	97692024	PTI63-MMC 20-120	MC20	3-16	20	53	120	63	70	AD Thru
	97693225	PTI63-MMC 32-125	MC32	3-25	32	67	125	78	85	AD Thru
PTI63 Shank inch	97692821	PTI63-MMC 0.750-4.13	MC75	.125-.625	0.750	2.09	4.13	2.50	2.75	AD Thru
	97692824	PTI63-MMC 0.750-4.72	MC75	.125-.625	0.750	2.09	4.72	2.50	2.75	AD Thru
	97692225	PTI63-MMC 1.250-5.00	MC1.25	.125-1.000	1.250	2.64	5.00	3.09	3.34	AD Thru
PTI80 Shank	97702824	PTI80-MMC 0.750-4.72	MC75	.125-.625	.750	2.09	4.72	2.50	2.75	AD Thru
	97702228	PTI80-MMC 1.250-5.50	MC1.25	.125-1.000	1.250	2.64	5.50	3.09	3.34	AD Thru

SMS™ Reduction Collets [on page 106-107](#) | SMS™ Collet Nut wrenches [on page 113](#)
PTI Coolant Tubes [on page 112](#)

PTI SMS™ Hydraulic Chucks



FEATURES

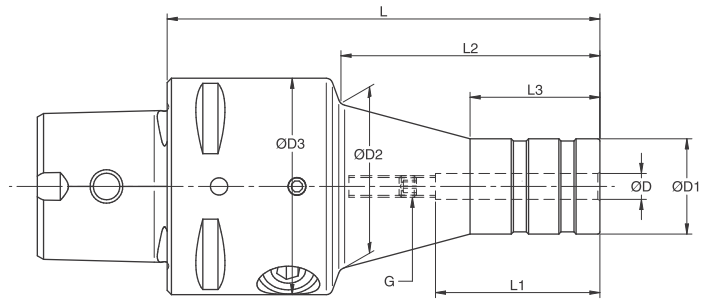
- Balanced to G2.5 @ 25,000 RPM
- Bore tolerance: H6
- T.I.R. < 5µm

	Catalog Number	Description	ØD	ØD1	ØD2	L	L1 Max.	L2	L3	G	Coolant Style
PTI50 Shank	68682020	PTI50-HCS 20-100	20	42	50	100	52	56	16	M8x1	AD Thru
	68682820	PTI50-HCS 0.750-3.94	0.750"	1.65	1.97	3.94"	2.05	2.20	0.63	M8x1	AD Thru
	68682520	PTI50-HCS 25-100	25	50	-	100	52	-	-	M8x1	AD Thru
PTI63 Shank	68692020	PTI63-HCS 20-100	20	42	52	100	52	56	22	M8x1	AD Thru
	68692525	PTI63-HCS 25-125	25	52	52	125	52	102	-	M8x1	AD Thru
	68693225	PTI63-HCS 32-125	32	60	-	125	62	102	-	M8x1	AD Thru
	68692820	PTI63-HCS 0.750-3.94	0.750"	1.65"	2.05"	3.94"	2.05"	2.20"	0.86	M8x1	AD Thru
	68692225	PTI63-HCS 1.250-5.00	1.250"	2.36"	-	5.00"	2.44"	4.05"	-	M8x1	AD Thru

SMS™ Torque wrenches [on page 114](#) | SMS™ Reduction Collets [on page 106-107](#)
PTI Coolant Tubes [on page 112](#)

PTI Taper Holders

PTI SMS™ Slim Design Hydraulic Chucks



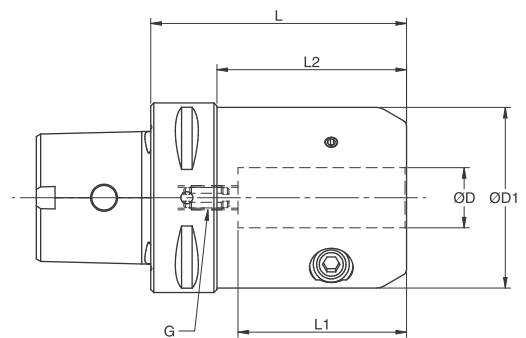
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- Bore Tolerance : H6
- T.I.R. < 5µm

	Catalog Number	Description	ØD	ØD1	ØD2	ØD3	L	L1	L2	L3	G	Coolant Style
PTI50 Shank	68680624SL	PTI50-HCSL 6-120	6	26	36.1	50	120	38	80	32	M5x0.8	AD Thru
	68680630SL	PTI50-HCSL 6-150	6	26	42.4	50	150	38	110	32	M5x0.8	AD Thru
	68680824SL	PTI50-HCSL 8-120	8	28	38.1	50	120	42	80	32	M5x0.8	AD Thru
	68680830SL	PTI50-HCSL 8-150	8	28	44.4	50	150	42	110	32	M5x0.8	AD Thru
	68681024SL	PTI50-HCSL 10-120	10	30	40.1	50	120	45	80	32	M8x1	AD Thru
	68681030SL	PTI50-HCSL 10-150	10	30	46.4	50	150	45	110	32	M8x1	AD Thru
	68681224SL	PTI50-HCSL 12-120	12	32	42.1	50	120	46	80	32	M8x1	AD Thru
	68681230SL	PTI50-HCSL 12-150	12	32	48.4	50	150	46	110	32	M8x1	AD Thru
PTI63 Shank	68690624SL	PTI63-HCSL 6-120	6	26	35.9	52	120	38	67	32	M5x0.8	AD Thru
	68690630SL	PTI63-HCSL 6-150	6	26	44.3	52	150	38	97	32	M5x0.8	AD Thru
	68690824SL	PTI63-HCSL 8-120	8	28	37.9	52	120	42	67	32	M5x0.8	AD Thru
	68690830SL	PTI63-HCSL 8-150	8	28	46.3	52	150	42	97	32	M5x0.8	AD Thru
	68691024SL	PTI63-HCSL 10-120	10	30	39.9	52	120	45	67	32	M8x1	AD Thru
	68691030SL	PTI63-HCSL 10-150	10	30	48.3	52	150	45	97	32	M8x1	AD Thru
	68691224SL	PTI63-HCSL 12-120	12	32	41.9	52	120	46	67	32	M8x1	AD Thru
	68691230SL	PTI63-HCSL 12-150	12	32	50.3	52	150	46	97	32	M8x1	AD Thru

SMS™ Torque Wrench **on page 114** | SMS™ Reduction Collets **on page 106-107** | PTI Coolant Tubes **on page 112**

PTI SMS™ Heavy Duty Hydraulic Chucks



FEATURES

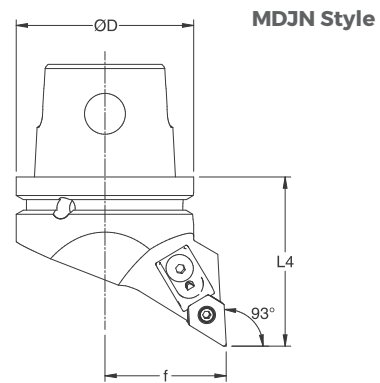
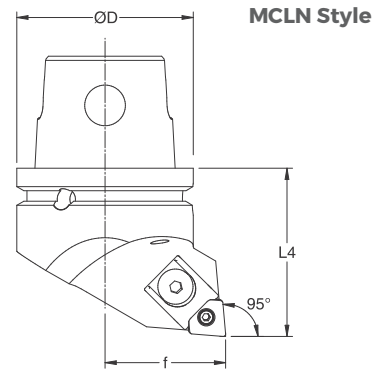
- Balanced to G2.5 @ 25,000 RPM
- Bore tolerance: H6
- T.I.R. < 5µm

	Catalog Number	Description	ØD	ØD1	L	L1 Max.	L2	G	Coolant Style
PTI50 Shank	67682015	PTI50-HC 20-75	20	60	65	56	46	M8x1	AD Thru
PTI63 Shank	67692017	PTI63-HC 20-85	20	60	85	56	63	M8x1	AD Thru
	67693218	PTI63-HC 32-90	32	72	90	63	60	M8x1	AD Thru

SMS™ Torque Wrenches **on page 114** | SMS™ Reduction Collets **on page 106-107** | PTI Coolant Tubes **on page 112**

KTI Taper Holders

KTI SMS™ Indexable Static Turning Tools

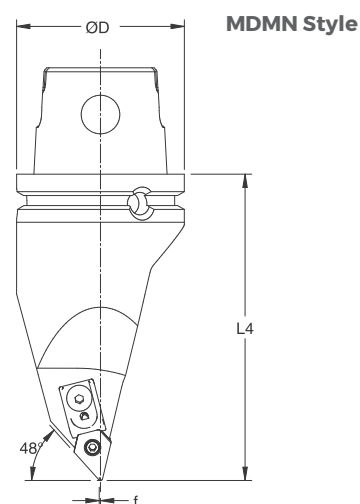
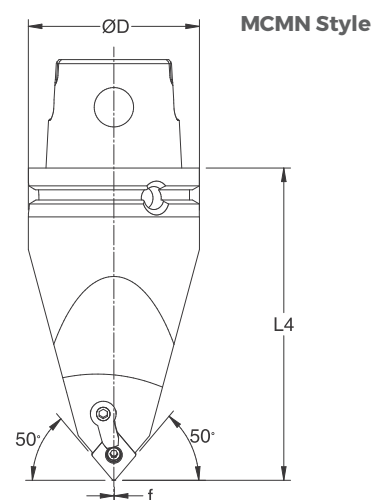


	Catalog Number	Description	L4	ØD	f	Insert	Clamp	Seat	Clamp Screw	Lock Pin
MCLN Style	741501R43120412	KTI63XMZ-MCLNR-1260Y	60	63	43	CNxx120408	CMC1204	SCN1204	CSCMC1204	LPSCN1204
	741501L43120412	KTI63XMZ-MCLNLF-1260Y	60	63	43	CNxx120408	CMC1204	SCN1204	CSCMC1204	LPSCN1204

	Catalog Number	Description	L4	ØD	f	Insert	Clamp	Seat	Clamp Screw	Lock Pin
MDJN Style	741502R43150412	KTI63XMZ-MDJNR-1560Y	60	63	43	DNxx150408	CMD1504	SDN1504	CSCMC1204	LPSCN1204
	741502L43150412	KTI63XMZ-MDJNL-1560Y	60	63	43	DNxx150408	CMD1504	SDN1504	CSCMC1204	LPSCN1204

KTI Taper Holders

KTI SMS™ Indexable Static Turning Tools

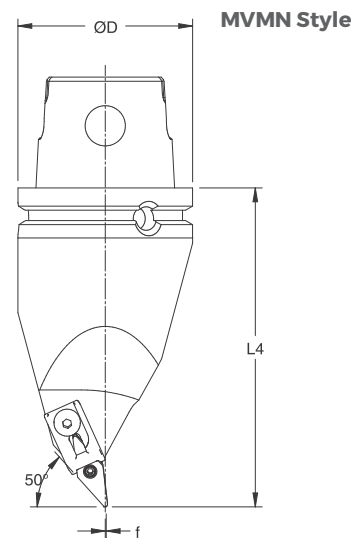


	Catalog Number	Description	L4	ØD	f	Insert	Clamp	Seat	Clamp Screw	Lock Pin
MCMN Style	741504N120423	KTI63XMZ-MCMNMF12115Y	115	63	0	CNxx120408	CMC1204	SCN1204	CSCMS1204	LPSCN1204

	Catalog Number	Description	L4	ØD	f	Insert	Clamp	Seat	Clamp Screw	Lock Pin
MDMN Style	741505R00150423	KTI63XMZ-MDMNR1504115Y	115	63	0	DNxx150408	CMD1504	SDN1504	CSCMC1204	LPSCN1204
	741505R00150623	KTI63XMZ-MDMNR1506115Y	115	63	0	DNxx150608	CMD1506	SDN1506	CSCMC1204	LPSCN1204
	741505L00150423	KTI63XMZ-MDMNLF1504115Y	115	63	0	DNxx150408	CMD1504	SDN1504	CSCMC1204	LPSCN1204
	741505L00150623	KTI63XMZ-MDMNLF1506115Y	115	63	0	DNxx150608	CMD1506	SDN1506	CSCMC1204	LPSCN1204

KTI Taper Holders

KTI SMS™ Indexable Static Turning Tools

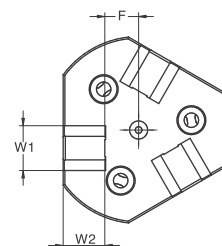
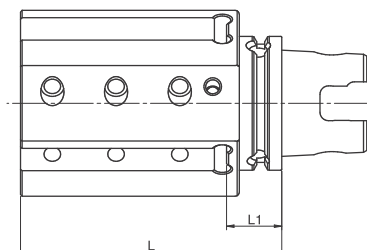
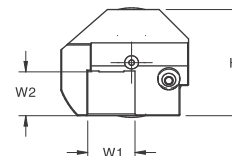
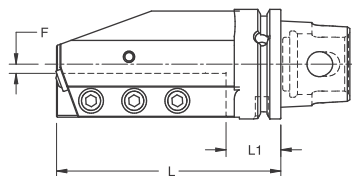
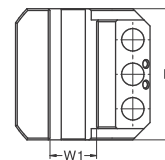
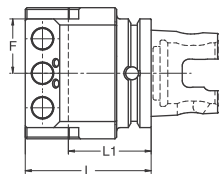


	Catalog Number	Description	L4	D	f	Insert	Clamp	Seat	Clamp Screw	Lock Pin
MVMN Style	741506R00160423	KTI63XMZ-MVMNR16115Y	115	63	0	VNxx160408	CMV1604	SVN1604	CSCMD1104	LPSDN1104
	741506L00160423	KTI63XMZ-MVMNLF16115Y	115	63	0	VNxx160408	CMV1604	SVN1604	CSCMD1104	LPSDN1104
	741506N160423	KTI63XMZ-MVMNNF16115Y	115	63	0	VNxx160408	CMV1604	SVN1604	CSCMD1104	LPSDN1104

KTI Taper Holders

KTI SMS™ Square Shank Holders

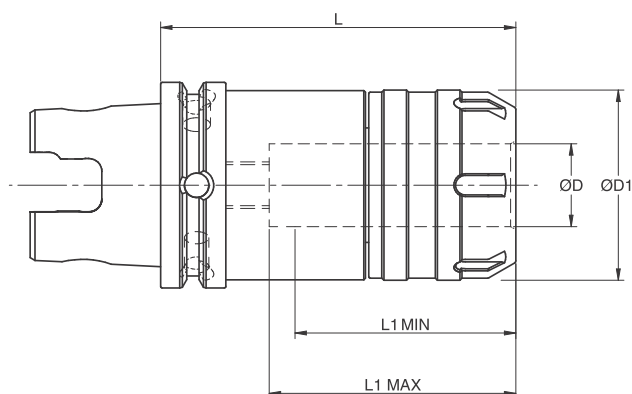
Coolant-Thru Ports in the Body



	Catalog Number	Description	L1	L	F	W1	W2	H
ETA Style	73150322516	KTI63XMZ-ETA 2580Y	55	80	31.5	25	-	76
	73150322116	KTI63XMZ-ETA 1680Y	2.17	3.15	1.24	1.000	-	3.00
STA Style Metric	72150L112020	KTI63XMZ-STALF20100Y	25	100	10.75	20	20	60
	72150L062526	KTI63XMZ-STALF25130Y	25	130	5.75	25	25	70
	72150R112020	KTI63XMZ-STAR20100Y	25	100	10.75	20	20	60
	72150R062526	KTI63XMZ-STAR25130Y	25	130	5.75	25	25	70
STA Style Inch	72150L122820	KTI63XMZ-STALF12100Y	0.921	3.937	0.460	0.750	0.750	2.362
	72150L052126	KTI63XMZ-STALF16130Y	0.906	5.118	0.210	1.000	1.000	2.756
	72150R122820	KTI63XMZ-STAR12100Y	0.921	3.937	0.460	0.750	0.750	2.362
	72150R052126	KTI63XMZ-STAR16130Y	0.906	5.118	0.210	1.000	1.000	2.756
STA Style Metric	72150R3162026y	KTI63XMZ-STARF320130Y	33	130	16	20	0.750	-
	72150L3162026Y	KTI63XMZ-STALF320130Y	33	130	16	20	1.000	-
STA Style Inch	72150R3162826Y	KTI63XMZ-STARF312130Y	1.30	5.12	0.63	0.750	0.750	-
	72150L3162826Y	KTI63XMZ-STALF312130Y	1.30	5.12	0.63	0.750	0.750	-

KTI Taper Holders

KTI SMS™ Multi-Milling Chucks



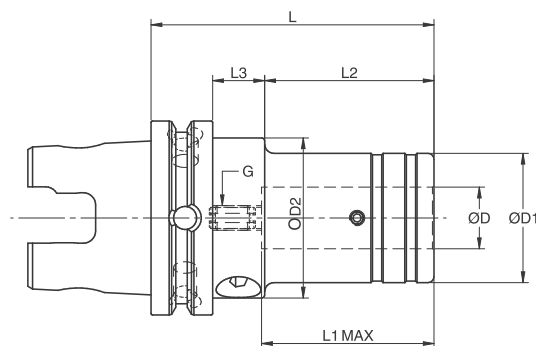
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- Bore tolerance: H6
- T.I.R. < 5µm

	Catalog Number	Description	Collet Size	Collet Capacity Range	ØD	ØD1	L	L1 Min./Max.	Coolant Style
KTI50TS Shank	971422020	KTI50TS-MMC 20-100	MC20	3-16	20	53	100	63/70	AD Thru
KTI63XMZ Shank	971502020	KTI63XMZ-MMC 20-100	MC20	3-16	20	53	100	63/70	AD Thru
	971503221	KTI63XMZ-MMC 32-105	MC32	3-25	32	67	105	78/85	AD Thru

SMS™ Reduction Collets **on page 106-107**
SMS™ Collet Nut Wrenches **on page 113**

KTI SMS™ Hydraulic Chucks



FEATURES

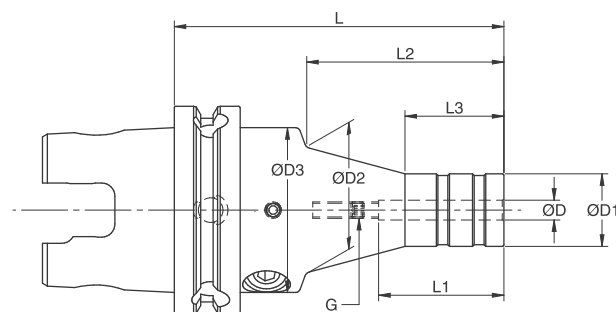
- Balanced to G2.5 @ 25,000 RPM
- Bore tolerance: H6
- T.I.R. < 5µm

	Catalog Number	Description	ØD	ØD1	ØD2	L	L1 Max.	L2	L3	G	Coolant Style
KTI50TS Shank	681422020	KTI50TS-HCS 20-100	20	42	-	100	56	72	-	M8x1	AD Thru
KTI63XMZ Shank	681502020	KTI63XMZ-HCS 20-100	20	42	52	100	56	54	20	M8x1	AD Thru
	681503223	KTI63XMZ-HCS 32-115	32	60	-	115	63	99	-	M8x1	AD Thru

SMS™ Torque wrenches **on page 114**
SMS™ Reduction Collets **on page 106-107**

KTI Taper Holders

KTI SMS™ Slim Design Hydraulic Chucks



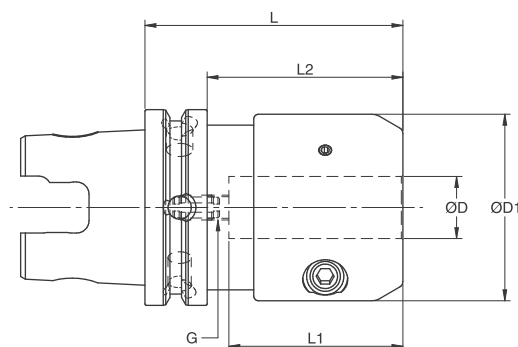
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- Bore Tolerance : H6
- T.I.R. < 5µm

	Catalog Number	Description	ØD	ØD1	ØD2	ØD3	L	L1	L2	L3	G	Coolant Style
KTI50TS Shank	681420624SL	KTI50TS-HCSL 6-120	6	26	36.1	50	120	38	80	32	M5x0.8	AD Thru
	681420630SL	KTI50TS-HCSL 6-150	6	26	42.4	50	150	38	110	32	M5x0.8	AD Thru
	681420824SL	KTI50TS-HCSL 8-120	8	28	38.1	50	120	42	80	32	M5x0.8	AD Thru
	681420830SL	KTI50TS-HCSL 8-150	8	28	44.4	50	150	42	110	32	M5x0.8	AD Thru
	681421024SL	KTI50TS-HCSL 10-120	10	30	40.1	50	120	45	80	32	M8x1	AD Thru
	681421030SL	KTI50TS-HCSL 10-150	10	30	46.4	50	150	45	110	32	M8x1	AD Thru
	681421224SL	KTI50TS-HCSL 12-120	12	32	42.1	50	120	46	80	32	M8x1	AD Thru
	681421230SL	KTI50TS-HCSL 12-150	12	32	48.4	50	150	46	110	32	M8x1	AD Thru
KTI63XMZ Shank	681500624SL	KTI63XMZ-HCSL 6-120	6	26	35.9	52	120	38	67	32	M5x0.8	AD Thru
	681500630SL	KTI63XMZ-HCSL 6-150	6	26	44.3	52	150	38	97	32	M5x0.8	AD Thru
	681500824SL	KTI63XMZ-HCSL 8-120	8	28	37.9	52	120	42	67	32	M5x0.8	AD Thru
	681500830SL	KTI63XMZ-HCSL 8-150	8	28	46.3	52	150	42	97	32	M5x0.8	AD Thru
	681501024SL	KTI63XMZ-HCSL 10-120	10	30	39.9	52	120	45	67	32	M8x1	AD Thru
	681501030SL	KTI63XMZ-HCSL 10-150	10	30	48.3	52	150	45	97	32	M8x1	AD Thru
	681501224SL	KTI63XMZ-HCSL 12-120	12	32	41.9	52	120	46	67	32	M8x1	AD Thru
	681501230SL	KTI63XMZ-HCSL 12-150	12	32	50.3	52	150	46	97	32	M8x1	AD Thru

SMS™ Torque Wrench on page 114 | SMS™ Reduction Collets on page 106-107

KTI SMS™ Heavy Duty Hydraulic Chucks



FEATURES

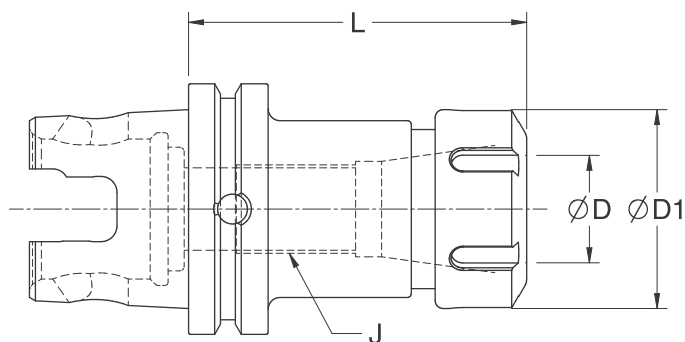
- Balanced to G2.5 @ 25,000 RPM
- Bore tolerance: H6
- T.I.R. < 5µm

	Catalog Number	Description	ØD	ØD1	L	L1 Max.	L2	G	Coolant Style
KTI50TS Shank	671422015	KTI50TS-HC 20-75	20	60	65	56	46	M8x1	AD Thru
KTI63 Shank	671502017	KTI63XMZ-HC 20-85	20	60	85	56	63	M8x1	AD Thru
	671503218	KTI63XMZ-HC 32-90	32	72	90	63	60	M8x1	AD Thru

SMS™ Torque Wrenches on page 114 | SMS™ Reduction Collets on page 106-107

KTI Taper Holders

KTI SMS™ ER Collet Holders



FEATURES

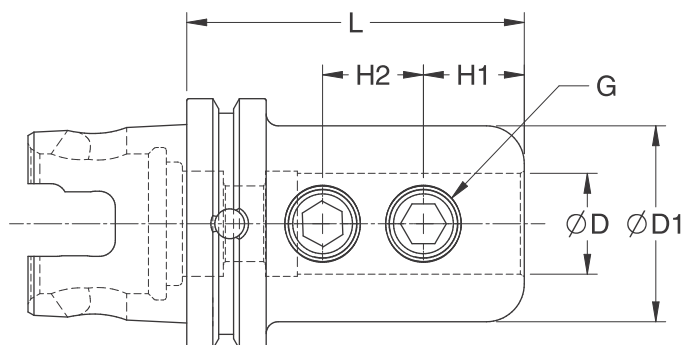
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- AD coolant thru the spindle
- Balanced ER Collet Nuts

	Catalog Number	Description	Collet Size	ØD Range	ØD1	L	J (inch)	Coolant Style
KTI40TS Shank	872141309	KTI40TS-CHE 25-45	ER25	3 - 16	42	45	11/16-16LH	AD Thru
	872141412	KTI40TS-CHE 32-60	ER32	3 - 20	60	50	7/8-16LH	AD Thru
KTI50TS Shank	872142310	KTI50TS-CHE 25-50	ER25	3 - 16	50	42	11/16-16LH	AD Thru
	872142412	KTI50TS-CHE 32-60	ER32	3 - 20	60	50	7/8-16LH	AD Thru
	872142514	KTI50TS-CHE 40-70	ER40	4 - 26	70	63	1.1/8-16LH	AD Thru
KTI63XMZ Shank	8721500M12	KTI63XMZ-CHE 11M-60	ER11	3 - 7	60	16	5/16-24LH	AD Thru
	872150112	KTI63XMZ-CHE 16-60	ER16	3 - 10	60	28	7/16-16LH	AD Thru
	8721501M12	KTI63XMZ-CHE 16M-60	ER16	3 - 10	60	22	7/16-16LH	AD Thru
	872150212	KTI63XMZ-CHE 20-60	ER20	3 - 13	60	34	9/16-16LH	AD Thru
	872150312	KTI63XMZ-CHE 25-60	ER25	3 - 16	60	42	11/16-16LH	AD Thru
	872150418	KTI63XMZ-CHE 32-90	ER32	3 - 20	90	50	7/8-16LH	AD Thru
	872150518	KTI63XMZ-CHE 40-90	ER40	4 - 26	90	63	1.1/8-16LH	AD Thru
KTI63XMZ Shank	872150112	KTI63XMZ-CHE 16-60	ER16	3 - 10	28	60	7/16-16 LH	AD Thru
	8721501M12	KTI63XMZ-CHE 16M-60	ER16	3 - 10	22	60	7/16-16 LH	AD Thru
	872150212	KTI63XMZ-CHE 20-60	ER20	3 - 13	34	60	9/16-16 LH	AD Thru
	872150312	KTI63XMZ-CHE 25-60	ER25	3 - 16	42	60	11/16-16 LH	AD Thru
	872150324	KTI63XMZ-CHE 25-120	ER25	3 - 16	42	120	11/16-16 LH	AD Thru
	872150418	KTI63XMZ-CHE 32-90	ER32	3 - 20	50	60	7/8-16 LH	AD Thru
	872150424	KTI63XMZ-CHE 32-120	ER32	3 - 20	50	120	7/8-16 LH	AD Thru
	872150518	KTI63XMZ-CHE 40-90	ER40	4 - 26	63	60	1-1/8-16 LH	AD Thru

ER Collets on page 97-101
ER Nut Wrenches on page 110

KTI Taper Holders

KTI SMS™ End Mill Holders



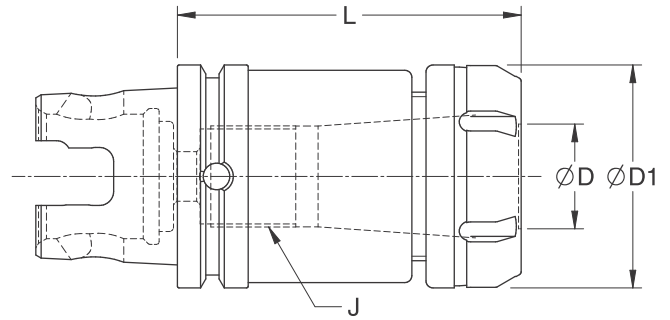
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- Bore tolerance: H6
- T.I.R. < 5µm

	Catalog Number	Description	ØD	ØD1	L	H1	H2	G	Coolant Style
KTI40TS Shank	841412610	KTI40TS-EMH 0.375-1.97	0.375	1.00	1.97	0.75	-	3/8"-24	AD Thru
	841411511	KTI40TS-EMH 0.500-2.16	0.500	1.38	2.17	0.88	-	7/16"-20	AD Thru
	841411712	KTI40TS-EMH 0.625-2.36	0.625	1.63	2.36	0.94	-	9/16"-18	AD Thru
	841412813	KTI40TS-EMH 0.750-2.56	0.750	1.75	2.56	1.00	-	5/8"-18	AD Thru
KTI50TS Shank	841422610	KTI50TS-EMH 0.375-1.97	0.375	1.00	1.97	0.75	-	3/8"-24	AD Thru
	841421511	KTI50TS-EMH 0.500-2.16	0.500	1.38	2.17	0.88	-	7/16"-20	AD Thru
	841421712	KTI50TS-EMH 0.625-2.36	0.625	1.63	2.36	0.94	-	9/16"-18	AD Thru
	841422812	KTI50TS-EMH 0.750-2.36	0.750	1.75	2.36	1.00	-	5/8"-18	AD Thru
	841422117	KTI50TS-EMH 1.00-3.35	1.000	2.00	3.35	0.88	1.00	5/8"-18	AD Thru
	841422217	KTI50TS-EMH 1.25-3.35	1.250	2.50	3.35	1.00	1.00	3/4"-16	AD Thru
KTI63XMZ Shank	841502612	KTI63XMZ-EMH 0.375-2.36	0.375	1.00	2.36	0.75	-	3/8"-24	AD Thru
	841501512	KTI63XMZ-EMH 0.500-2.36	0.500	1.38	2.36	0.88	-	7/16"-20	AD Thru
	841501712	KTI63XMZ-EMH 0.625-2.36	0.625	1.63	2.36	0.94	-	9/16"-18	AD Thru
	841502812	KTI63XMZ-EMH 0.750-2.36	0.750	1.75	2.36	1.00	-	5/8"-18	AD Thru
	841502117	KTI63XMZ-EMH 1.00-3.35	1.000	2.00	3.35	0.88	1.00	5/8"-18	AD Thru
	841502217	KTI63XMZ-EMH 1.25-3.35	1.250	2.50	3.35	1.00	1.00	3/4"-16	AD Thru
KTI63XMZ Shank (Metric) (DIN-1835-B)	841501012	KTI63XMZ-EMH 10-60	10	60	35	20	-	M10X1.5	AD Thru
	841501212	KTI63XMZ-EMH 12-60	12	60	42	22.5	-	M12X1.75	AD Thru
	841501612	KTI63XMZ-EMH 16-60	16	60	48	24	-	M14X2	AD Thru
	841502012	KTI63XMZ-EMH 20-60	20	60	52	25	-	M16X2	AD Thru
	841502512	KTI63XMZ-EMH 25-85	25	85	65	24	25	M18x2	AD Thru
	841503217	KTI63XMZ-EMH 32-85	32	85	72	24	28	M20x2	AD Thru

KTI Taper Holders

KTI SMS™ TG Collect Chucks

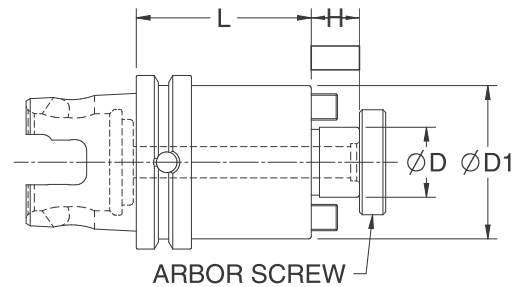
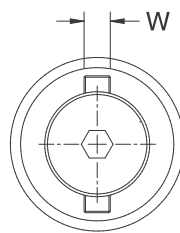


FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm

Catalog Number	Description	Collet Series	ØD Range	ØD1	L	J	Coolant Style
873150320	KTI63XMZTG100100Y	TG100	0.250-1.000	2.48	3.937	1.1/8-1.6 LH	AD Thru

KTI SMS™ Shell Mill Holders



FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm

	Catalog Number	Description	ØD	ØD1	L	H	W	Arbor Screw	Coolant Style
KTI40TS Shank	811415005	KTI40TS-SMH .500-1.024	0.500	1.44	1.024	0.56	0.250	¼-28	AD Thru
	811417505	KTI40TS-SMH .750-1.024	0.750	1.75	1.024	0.69	0.312	3/8-24	AD Thru
	811411006	KTI40TS-SMH 1.00-1.260	1.000	2.19	1.260	0.69	0.375	½-20	AD Thru
KTI63XMZ Shank	811505006	KTI63XMZ-SMH .500-1.25	0.500	1.44	1.25	0.56	0.250	¼-28	AD Thru
	811507506	KTI63XMZ-SMH .750-1.25	0.750	1.75	1.25	0.69	0.312	3/8-24	AD Thru
	811501013	KTI63XMZ-SMH 1.00-2.50	1.000	2.19	2.50	0.69	0.375	½-20	AD Thru
	811501213	KTI63XMZ-SMH 1.25-2.50	1.250	2.75	2.50	0.69	0.500	5/8-18	AD Thru
KTI63XMZ Shank (Metric)	811502209	KTI63XMZ-SMH 22-45	22	45	45	18	10	M10X30 *	AD Thru
	811502218	KTI63XMZ-SMH 22-90	22	90	45	18	10	M10X30 *	AD Thru
	811502712	KTI63XMZ-SMH 27-60	27	60	70	20	12	M12X35 *	AD Thru
	811502718	KTI63XMZ-SMH 27-90	27	90	70	20	12	M12X35 *	AD Thru
	811503212	KTI63XMZ-SMH 32-60	32	60	80	22	14	M16X35 *	AD Thru
	811503218	KTI63XMZ-SMH 32-90	32	90	80	22	14	M16X35 *	AD Thru
	801504012	KTI63XMZ-SMH 40-60	40	60	85	26	16	M20X35 *	AD Thru

NOTE:

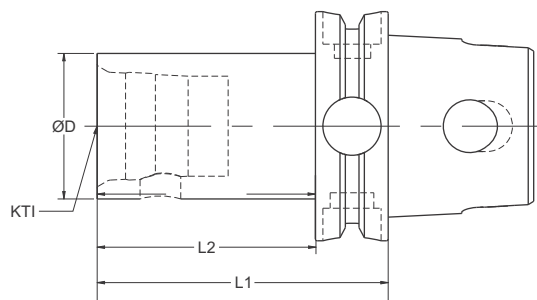
ALL Shell Mill Holders are supplied with coolant through the center up to the arbor screw hole.

* Represent Holders provide with Metric Allen cap bolt

Non coolant and coolant Arbor screws on page 111

KTi Taper Holders

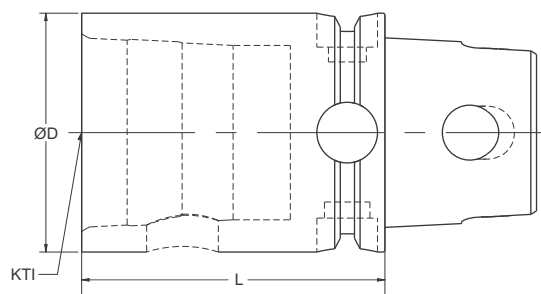
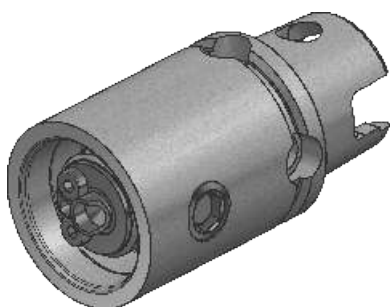
KTi SMS™ Reducer Adaptors



	Catalog Number	Description	External	Internal	ØD	L1	L2	Coolant Style
KTIXMZ Shank	2015014116	KTi63XMZ-KTi40TS-80	63XMZ	40TS	63	80	60	AD Thru
	2015014124	KTi63XMZ-KTi40TS-120	63XMZ	40TS	63	120	100	AD Thru
	2015014220	KTi63XMZ-KTi50TS-100	63XMZ	50TS	63	100	80	AD Thru
	2015014224	KTi63XMZ-KTi50TS-120	63XMZ	50TS	63	120	100	AD Thru
KTITS Shank	2014314116	KTi63TS-KTi40TS-80	63TS	40TS	63	80	60	AD Thru
	2014314124	KTi63TS-KTi40TS-120	63TS	40TS	63	120	100	AD Thru
	2014314220	KTi63TS-KTi50TS-100	63TS	50TS	63	100	80	AD Thru
	2014314224	KTi63TS-KTi50TS-120	63TS	50TS	63	120	100	AD Thru

KTi SMS™ Reducer Spares

Size								
KTi40TS	CB141TS-1	PR141TS-2	BALLØ9	BALLØ9	TS141TS-5	SEB141TS-6	CBTS141TS-7	CP141TS-8
KTi50TS	CB142TS-1	PR142TS-2	BALLØ12	BALLØ12	TS142TS-5	SEB142TS-6	CBTS142TS-7	CP142TS-8



KTi SMS™ Extension Adaptors

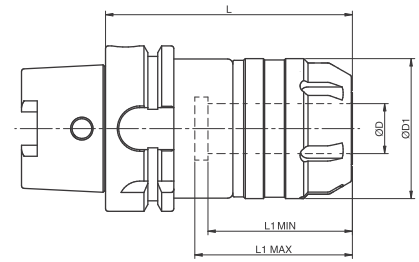
	Catalog Number	Description	External	Internal	ØD	L	Coolant Style
KTIXMZ Shank	2114814816	KTi40XMZ-KTi40XMZ-80	40XMZ	40XMZ	40	80	AD Thru
	2114814824	KTi40XMZ-KTi40XMZ-120	40XMZ	40XMZ	40	120	AD Thru
	2114914914	KTi50XMZ-KTi50XMZ-70	50XMZ	50XMZ	50	70	AD Thru
	2114914924	KTi50XMZ-KTi50XMZ-120	50XMZ	50XMZ	50	120	AD Thru
	2115015016	KTi63XMZ-KTi63XMZ-80	63XMZ	63XMZ	63	80	AD Thru
	2115015024	KTi63XMZ-KTi63XMZ-120	63XMZ	63XMZ	63	120	AD Thru
KTITS Shank	2114114116	KTi40TS-KTi40TS-80	40TS	40TS	40	80	AD Thru
	2114114124	KTi40TS-KTi40TS-120	40TS	40TS	40	120	AD Thru
	2114214214	KTi50TS-KTi50TS-70	50TS	50TS	50	70	AD Thru
	2114214224	KTi50TS-KTi50TS-120	50TS	50TS	50	120	AD Thru
	2114314316	KTi63TS-KTi63TS-80	63TS	63TS	63	80	AD Thru
	2114314324	KTi63TS-KTi63TS-120	63TS	63TS	63	120	AD Thru

KTi SMS™ Extension Adaptors Spares

Size								
KTi40TS	CB141TS-1	PR141TS-2	BALLØ9	EB141TS-4	TS141TS-5	SEB141TS-6	CBTS141TS-7	CP141TS-8
KTi50TS	CB142TS-1	PR142TS-2	BALLØ12	EB142TS-4	TS142TS-5	SEB142TS-6	CBTS142TS-7	CP142TS-8
KTi63TS	CB143TS-1	PR143TS-2	BALLØ14	EB143TS-4	TS143TS-5	SEB143TS-6	CBTS143TS-7	CP143TS-8

HSK Holders

HSK-A SMS™ Multi-Milling Chucks



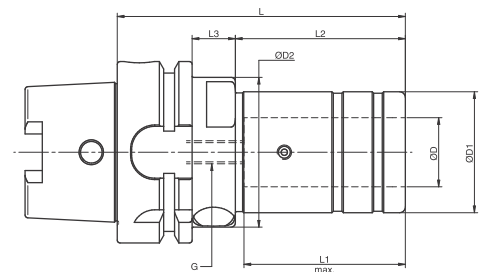
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- Bore tolerance: H6
- T.I.R. < 5µm

	Catalog Number	Description	Collet Size	Collet Capacity Range	ØD (inch)	ØD1 (inch)	L (inch)	L1 Min/Max	Coolant Style
HSK63A Shank	9774A2821	HSK63A-MMC 0.750-4.13	MC75	.125 - .625	0.750	2.09	4.13	2.50/2.75	AD Thru
	9774A2824	HSK63A-MMC 0.750-4.72	MC75	.125 - .625	0.750	2.09	4.72	2.50/2.75	AD Thru
	9774A2225	HSK63A-MMC 1.250-4.92	MC125	.125 - 1.00	1.250	2.64	4.92	3.09/3.34	AD Thru
HSK100A Shank	9776A2824	HSK100A-MMC 0.750-4.75	MC75	.125 - .625	0.750	2.09	4.75	2.50/2.75	AD Thru
	9776A2228	HSK100A-MMC 1.250-5.50	MC125	.125 - 1.00	1.250	2.64	5.50	3.09/3.34	AD Thru
HSK63A Shank (Metric)	9774A2021	HSK63A-MMC 20-105	MC20	3-16	20	53	105	63/70	AD Thru
	9774A2024	HSK63A-MMC 20-120	MC20	3-16	20	53	120	63/70	AD Thru
	9774A3225	HSK63A-MMC 32-125	MC32	3-25	32	67	125	78/85	AD Thru
HSK100A Shank (Metric)	9776A2024	HSK100A-MMC 20-120	MC20	3-16	20	53	120	63/70	AD Thru
	9776A3228	HSK100A-MMC 32-140	MC32	3-25	32	67	140	78/85	AD Thru

SMS™ Reduction Collets [on page 106-107](#) | SMS™ Collet Nut wrenches [on page 113](#) | Coolant Tubes [on page 112](#)

HSK-A SMS™ Hydraulic Chucks



FEATURES

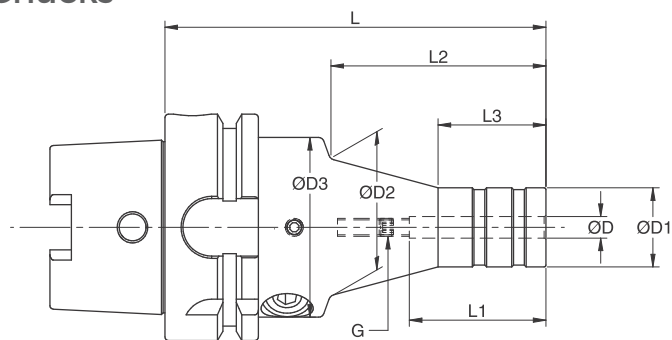
- Balanced to G2.5 @ 25,000 RPM
- Bore tolerance: H6
- T.I.R. < 5µm

	Catalog Number	Description	ØD (inch)	ØD1 (inch)	ØD2 (inch)	L (inch)	L1 (inch)	L2 (inch)	L3 (inch)	G (inch)	Coolant Style
HSK50A	6873A2620	HSK50A-HCS 0.375-4.00	0.375	1.18	1.65	4.00	1.57	2.20	0.71	M8X1	AD Thru
	6873A1520	HSK50A-HCS 0.500-4.00	0.500	1.65	-	4.00	1.78	2.91	-	M8X1	AD Thru
	6873A2824	HSK50A-HCS 0.750-4.75	0.750	1.65	1.97	4.75	2.05	2.20	0.78	M8X1	AD Thru
HSK63A	6874A2820	HSK63A-HCS 0.750-4.00	0.750	1.65	2.05	4.00	2.05	2.20	0.78	M8X1	AD Thru
	6874A2225	HSK63A-HCS 1.25-5.00	1.250	2.36	-	5.00	2.44	4.00	-	M8X1	AD Thru
HSK100A	6876A2823	HSK100A-HCS 0.750-4.50	0.750	1.65	2.05	4.50	2.05	2.40	0.95	M8X1	AD Thru
	6876A2225	HSK100A-HCS 1.25-5.00	1.250	2.36	2.75	5.00	2.44	2.91	0.95	M8X1	AD Thru
HSK50A Shank Metric	6873A2020	HSK50A-HCS 20-100	20mm	42mm	-	100mm	56mm	72mm	-	M8X1	AD Thru
HSK63A Shank Metric	6874A2020	HSK63A-HCS 20-100	20mm	42mm	52mm	100mm	56mm	56mm	20mm	M8X1	AD Thru
	6874A3225	HSK63A-HCS 32-125	32mm	60mm	-	125mm	63mm	99mm	-	M8X1	AD Thru
HSK100A Shank Metric	6876A2023	HSK100A-HCS 20-115	20mm	42mm	52mm	115mm	56mm	61.5mm	24.5mm	M8X1	AD Thru
	6876A3225	HSK100A-HCS 32-125	32mm	60mm	70mm	125mm	63mm	71.5mm	24.5mm	M8X1	AD Thru

SMS™ Torque Wrenches [on page 114](#) | SMS™ Reduction Collets [on page 106-107](#) | Coolant Tubes [on page 112](#)

HSK Holders

HSK-A SMS™ Slim Design Hydraulic Chucks



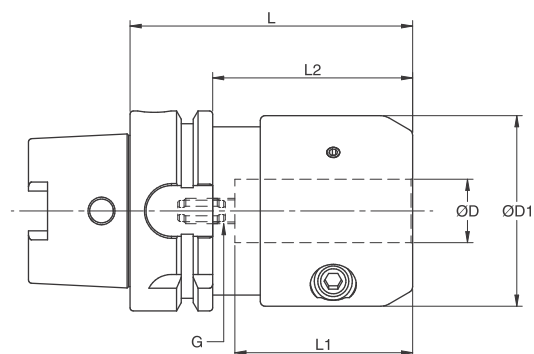
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- Bore Tolerance : H6
- T.I.R. < 5µm

	Catalog Number	Description	ØD	ØD1	ØD2	ØD3	L	L1	L2	L3	G	Coolant Style
HSK50A Shank	6873A0624SL	HSK50A-HCSL 6-120	6	26	36.1	50	120	38	80	32	M5x0.8	AD Thru
	6873A0630SL	HSK50A-HCSL 6-150	6	26	42.4	50	150	38	110	32	M5x0.8	AD Thru
	6873A0824SL	HSK50A-HCSL 8-120	8	28	38.1	50	120	42	80	32	M5x0.8	AD Thru
	6873A0830SL	HSK50A-HCSL 8-150	8	28	44.4	50	150	42	110	32	M5x0.8	AD Thru
	6873A1024SL	HSK50A-HCSL 10-120	10	30	40.1	50	120	45	80	32	M8x1	AD Thru
	6873A1030SL	HSK50A-HCSL 10-150	10	30	46.4	50	150	45	110	32	M8x1	AD Thru
	6873A1224SL	HSK50A-HCSL 12-120	12	32	42.1	50	120	46	80	32	M8x1	AD Thru
	6873A1230SL	HSK50A-HCSL 12-150	12	32	48.4	50	150	46	110	32	M8x1	AD Thru
HSK63A Shank	6874A0624SL	HSK63A-HCSL 6-120	6	26	35.9	52	120	38	67	32	M5x0.8	AD Thru
	6874A0630SL	HSK63A-HCSL 6-150	6	26	44.3	52	150	38	97	32	M5x0.8	AD Thru
	6874A0824SL	HSK63A-HCSL 8-120	8	28	37.9	52	120	42	67	32	M5x0.8	AD Thru
	6874A0830SL	HSK63A-HCSL 8-150	8	28	46.3	52	150	42	97	32	M5x0.8	AD Thru
	6874A1024SL	HSK63A-HCSL 10-120	10	30	39.9	52	120	45	67	32	M8x1	AD Thru
	6874A1030SL	HSK63A-HCSL 10-150	10	30	48.3	52	150	45	97	32	M8x1	AD Thru
	6874A1224SL	HSK63A-HCSL 12-120	12	32	41.9	52	120	46	67	32	M8x1	AD Thru
	6874A1230SL	HSK63A-HCSL 12-150	12	32	50.3	52	150	46	97	32	M8x1	AD Thru

SMS™ Torque Wrench on page 114 | SMS™ Coolant Tubes on page 112 | SMS™ Reduction Collets on page 106-107

HSK-A SMS™ Heavy Duty Hydraulic Chucks



FEATURES

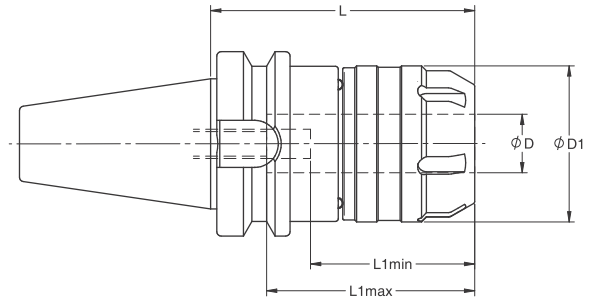
- Balanced to G2.5 @ 25,000 RPM
- Bore tolerance: H6
- T.I.R. < 5µm

	Catalog Number	Description	ØD	ØD1	L	L1 Max.	L2	G	Coolant Style
HSK50A Shank	6773A2015	HSK50A-HC 20-75	20	60	65	56	46	M8x1	AD Thru
HSK63A Shank	6774A2018	HSK63A-HC 20-90	20	60	90	56	64	M8x1	AD Thru
	6774A3220	HSK63A-HC 32-100	32	72	100	63	74	M8x1	AD Thru

SMS™ Torque Wrench on page 114 | SMS™ Coolant Tubes on page 112 | SMS™ Reduction Collets on page 106-107

BTP Face Contact Holders

BTP Face Contact SMS™ Multi-Milling Chucks



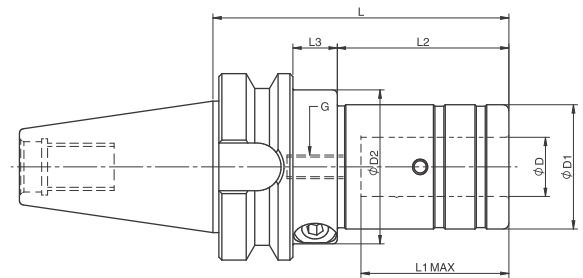
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	Collet Size	Capacity Range	ØD	ØD1	L	L1 Min.	L1 Max.	Coolant Style
BTP30 Inch	971062816	BTP30-MMC 0.750-3.15	0.750	.125-.625	0.750	2.09	3.15	2.50	2.75	AD Thru
	971082816	BTP40-MMC 0.750-3.15	0.750	.125-.625	0.750	2.09	3.15	2.50	2.75	AD Thru
BTP40 Inch	971082824	BTP40-MMC 0.750-4.72	0.750	.125-.625	0.750	2.09	4.72	2.50	2.75	AD Thru
	971082218	BTP40-MMC 1.250-3.54	1.250	.125-1.000	1.000	2.64	3.54	3.09	3.34	AD Thru
	971082224	BTP40-MMC 1.250-4.72	1.250	.125-1.000	1.000	2.64	4.72	3.09	3.34	AD Thru
BTP40 Metric	971082016	BTP40 -MMC- 20-80	20	3--16	20	53	80	63	70	AD Thru
	971082024	BTP40 -MMC- 20-120	20	3--16	20	53	120	63	70	AD Thru
	971083218	BTP40 -MMC- 32-90	32	3--25	32	67	90	78	85	AD Thru
	971083224	BTP40 -MMC- 32-120	32	3--25	32	67	120	78	85	AD Thru
BTP50 Metric	971102018	BTP50-MMC 20-90	20	3-16	20	53	90	63	70	AD Thru
	971102024	BTP50-MMC 20-120	20	3-16	20	53	120	63	70	AD Thru
	971103218	BTP50-MMC 32-90	32	3-25	32	67	90	78	85	AD Thru
	971103224	BTP50-MMC 32-120	32	3-25	32	67	120	78	85	AD Thru

SMS™ Reduction Collets [on page 106-107](#) | SMS™ Collet Nut Wrenches [on page 113](#) | SMS™ Retention Knobs [on page 108-109](#)

BTP Face Contact SMS™ Hydraulic Chucks



FEATURES

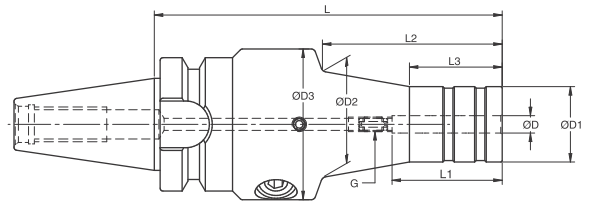
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	ØD	ØD1	D2	L	L1 MAX	L2	L3	G	Coolant Style
BTP30 Metric	681062020	BTP30-HCS 20-100	20	42	52	100	52	55	19	M8X1	AD Thru
BTP40 Metric	681082020	BTP40-HCS 20-100	20	42	52	100	52	56	17	M8X1	AD Thru
	681083223	BTP40-HCS 32-115	32	60	-	115	60	88	-	M8X1	AD Thru
BTP30 inch	681062820	BTP30-HCS 0.750-4.00	0.750	1.65	2.05	4.0	2.05	2.22	0.75	M8X1	AD Thru
BTP40 Inch	681082820	BTP40-HCS 0.750-4.00	0.750	1.65	2.05	4.0	2.05	2.20	0.67	M8X1	AD Thru
	681082223	BTP40-HCS 1.250-4.52	1.250	2.36	-	4.52	2.44	3.50	-	M8X1	AD Thru
BTP50 Metric	681102022	BTP50-HCS 20-110	20	42	60	110	56	55	17	M8X1	AD Thru
	681103225	BTP50-HCS 32-125	32	60	70	125	63	67	20	M8X1	AD Thru

SMS™ Torque Wrenches [on page 114](#) | SMS™ Reduction Collets [on page 106-107](#) | SMS™ Retention Knobs [on page 108-109](#)

BTP Holders

BTP Face Contact SMS™ Slim Design Hydraulic Chucks



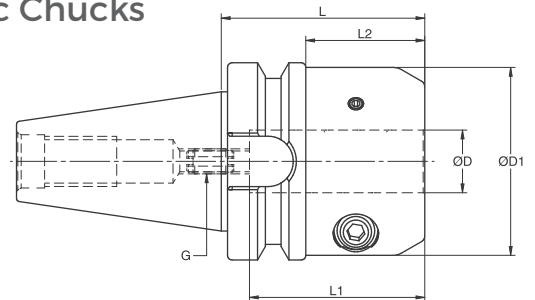
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- Taper shank ground to AT3 accuracy (or better)
- T.I.R. < 5µm
- Bore tolerance: H6

	Catalog Number	Description	ØD	ØD1	ØD2	ØD3	L	L1 (max.)	L2	L3	G	Coolant Style
BTP30	681060624SL	BTP30-HCSL 6-120	6	26	36.6	52	120	38	62	32	M5x0.8	AD Thru
	681060630SL	BTP30-HCSL 6-150	6	26	47.2	52	150	38	92	32	M5x0.8	AD Thru
	681060824SL	BTP30-HCSL 8-120	8	28	38.6	52	120	42	62	32	M5x0.8	AD Thru
	681060830SL	BTP30-HCSL 8-150	8	28	49.2	52	150	42	92	32	M5x0.8	AD Thru
	681061024SL	BTP30-HCSL 10-120	10	30	40.6	52	120	45	62	32	M8x1	AD Thru
	681061030SL	BTP30-HCSL 10-150	10	30	51.2	52	150	45	92	32	M8x1	AD Thru
	681061224SL	BTP30-HCSL 12-120	12	32	42.6	52	120	46	62	32	M8x1	AD Thru
	681061230SL	BTP30-HCSL 12-150	12	32	52	52	150	46	92	32	M8x1	AD Thru
BTP40	681080624SL	BTP40-HCSL 6-120	6	26	36.6	52	120	38	62	32	M5x0.8	AD Thru
	681080630SL	BTP40-HCSL 6-150	6	26	47.2	52	150	38	92	32	M5x0.8	AD Thru
	681080824SL	BTP40-HCSL 8-120	8	28	38.6	52	120	42	62	32	M5x0.8	AD Thru
	681080830SL	BTP40-HCSL 8-150	8	28	49.2	52	150	42	92	32	M5x0.8	AD Thru
	681081024SL	BTP40-HCSL 10-120	10	30	40.6	52	120	45	62	32	M8x1	AD Thru
	681081030SL	BTP40-HCSL 10-150	10	30	51.2	52	150	45	92	32	M8x1	AD Thru
	681081224SL	BTP40-HCSL 12-120	12	32	42.6	52	120	46	62	32	M8x1	AD Thru
	681081230SL	BTP40-HCSL 12-150	12	32	52	52	150	46	92	32	M8x1	AD Thru
BTP50	681100624SL	BTP50-HCSL 6-120	6	26	32.7	56	120	38	51	32	M5x0.8	AD Thru
	681100630SL	BTP50-HCSL 6-150	6	26	43.3	56	150	38	81	32	M5x0.8	AD Thru
	681100824SL	BTP50-HCSL 8-120	8	28	34.7	56	120	42	51	32	M5x0.8	AD Thru
	681100830SL	BTP50-HCSL 8-150	8	28	45.3	56	150	42	81	32	M5x0.8	AD Thru
	681101024SL	BTP50-HCSL 10-120	10	30	36.7	56	120	45	51	32	M8x1	AD Thru
	681101030SL	BTP50-HCSL 10-150	10	30	47.3	56	150	45	81	32	M8x1	AD Thru
	681101224SL	BTP50-HCSL 12-120	12	32	38.7	56	120	46	51	32	M8x1	AD Thru
	681101230SL	BTP50-HCSL 12-150	12	32	49.3	56	150	46	81	32	M8x1	AD Thru

SMS™ Torque Wrenches on page 114 | SMS™ Reduction Collets on page 106-107 | SMS™ Retention knob on page 108-109

BTP Face Contact SMS™ Heavy Duty Hydraulic Chucks



FEATURES

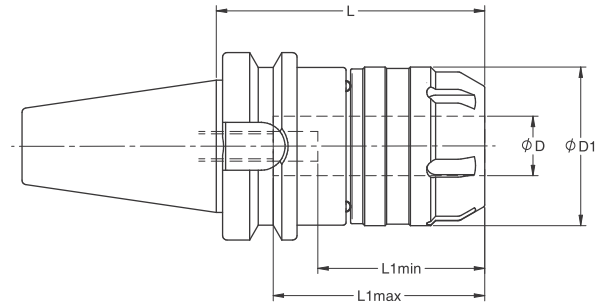
- Balanced to G2.5 @ 25,000 RPM
- Taper shank ground to AT3 accuracy (or better)
- T.I.R. < 5µm
- Bore tolerance: H6

	Catalog Number	Description	ØD	ØD1	L	L1 (max.)	L2	G	Coolant Style
BTP30 Metric	671062014	BTP30-HC 20-70	20	60	70	56	43	M8x1	AD Thru
BTP40 Metric	671082013	BTP40-HC 20-65	20	60	65	56	38	M8x1	AD Thru
	671083218	BTP40-HC 32-90	32	72	90	63	55	M8x1	AD Thru
BTP50 Metric	671102018	BTP50-HC 20-90	20	60	90	56	52	M8x1	AD Thru
	671103218	BTP50-HC 32-90	32	72	90	63	52	M8x1	AD Thru

SMS™ Torque Wrenches on page 114 | SMS™ Reduction Collets on page 106-107 | SMS™ Retention knob on page 108-109

BT Holders

BT SMS™ Multi-Milling Chucks



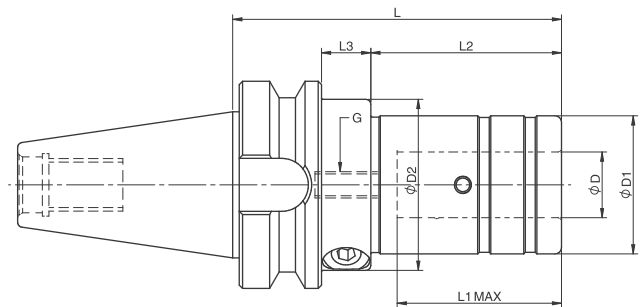
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	Collet Size	Collet Capacity Range	ϕD	ϕD1	L	L1 Min/Max	Coolant Style
BT30 Inch	97102816	BT30-MMC 0.750-3.15	0.750	.125 - .625	0.750	2.09	3.15	2.50/2.75	AD Thru
	97122816	BT40-MMC 0.750-3.15	0.750	.125 - .625	0.750	2.09	3.15	2.50/2.75	AD Thru
BT40 Inch	97122824	BT40-MMC 0.750-4.72	0.750	.125 - .625	0.750	2.09	4.72	2.50/2.75	AD Thru
	97122218	BT40-MMC 1.250-3.54	1.250	.125 - 1.00	1.000	2.64	3.54	3.09/3.34	AD Thru
	97122224	BT40-MMC 1.250-4.72	1.250	.125 - 1.00	1.000	2.64	4.72	3.09/3.34	AD Thru
BT40 Metric	97122016	BT40-MMC 20-80	20	3 - 16	20	53	80	63/70	AD Thru
	97122024	BT40-MMC 20-120	20	3 - 16	20	53	120	63/70	AD Thru
	97123218	BT40-MMC 32-90	32	3 - 25	32	67	90	78/85	AD Thru
	97123224	BT40-MMC 32-120	32	3 - 25	32	67	120	78/85	AD Thru
BT50 Metric	97142018	BT50-MMC 20-90	20	3-16	20	53	90	63/70	AD Thru
	97142024	BT50-MMC 20-120	20	3-16	20	53	120	63/70	AD Thru
	97143218	BT50-MMC 32-90	32	3-25	32	67	90	78/85	AD Thru
	97143224	BT50-MMC 32-120	32	3-25	32	67	120	78/85	AD Thru

SMS™ Reduction Collets on page 106-107 | SMS™ Torque Wrenches on page 113 | SMS™ Retention knob on page 108-109

BT SMS™ Hydraulic Chucks



FEATURES

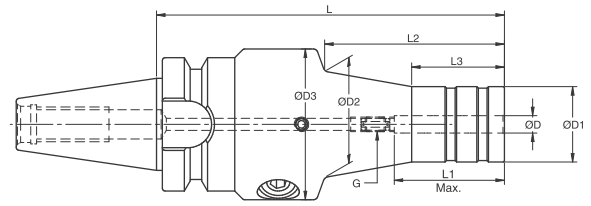
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	ϕD	ϕD1	ϕD2	L	L1 MAX	L2	L3	G	Coolant Style
BT30 Metric	68102020	BT30-HCS 20-100	20	42	52	100	52	53.8	19.05	M8X1	AD Thru
BT40 Metric	68122020	BT40-HCS 20-100	20	42	52	100	52	55.9	17.00	M8X1	AD Thru
	68123223	BT40-HCS 32-115	32	60	-	115	60	80.0	-	M8X1	AD Thru
BT30 inch	68102820	BT30-HCS 0.750-4.00	0.750	1.65	2.05	4.0	2.05	2.18	0.75	M8X1	AD Thru
BT40 Inch	68122820	BT40-HCS 0.750-4.00	0.750	1.65	2.05	4.0	2.05	2.20	0.67	M8X1	AD Thru
	68122223	BT40-HCS 1.250-4.52	1.250	2.36	-	4.52	2.44	3.50	-	M8X1	AD Thru
BT50 Metric	68142022	BT50-HCS 20-110	20	42	60	110	52	55	17	M8X1	AD Thru
	68143225	BT50-HCS 32-125	32	60	70	125	63	67	20	M8X1	AD Thru

SMS™ Reduction Collets on page 106-107 | SMS™ Torque Wrenches on page 114 | SMS™ Retention knob on page 108-109

BT Holders

BT SMS™ Slim Design Hydraulic Chucks



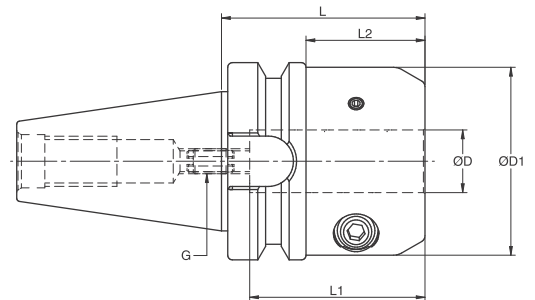
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- Taper shank ground to AT3 accuracy (or better)
- T.I.R. < 5µm
- Bore tolerance: H6

	Catalog Number	Description	ØD	ØD1	ØD2	ØD3	L	L1 (max.)	L2	L3	G	Coolant Style
BT30	68100624SL	BT30-HCSL 6-120	6	26	36.6	52	120	38	62	32	M5x0.8	AD Thru
	68100630SL	BT30-HCSL 6-150	6	26	47.2	52	150	38	92	32	M5x0.8	AD Thru
	68100824SL	BT30-HCSL 8-120	8	28	38.6	52	120	42	62	32	M5x0.8	AD Thru
	68100830SL	BT30-HCSL 8-150	8	28	49.2	52	150	42	92	32	M5x0.8	AD Thru
	68101024SL	BT30-HCSL 10-120	10	30	40.6	52	120	45	62	32	M8x1	AD Thru
	68101030SL	BT30-HCSL 10-150	10	30	51.2	52	150	45	92	32	M8x1	AD Thru
	68101224SL	BT30-HCSL 12-120	12	32	42.6	52	120	46	62	32	M8x1	AD Thru
	68101230SL	BT30-HCSL 12-150	12	32	52	52	150	46	92	32	M8x1	AD Thru
BT40	68120624SL	BT40-HCSL 6-120	6	26	36.6	52	120	38	62	32	M5x0.8	AD Thru
	68120630SL	BT40-HCSL 6-150	6	26	47.2	52	150	38	92	32	M5x0.8	AD Thru
	68120824SL	BT40-HCSL 8-120	8	28	38.6	52	120	42	62	32	M5x0.8	AD Thru
	68120830SL	BT40-HCSL 8-150	8	28	49.2	52	150	42	92	32	M5x0.8	AD Thru
	68121024SL	BT40-HCSL 10-120	10	30	40.6	52	120	45	62	32	M8x1	AD Thru
	68121030SL	BT40-HCSL 10-150	10	30	51.2	52	150	45	92	32	M8x1	AD Thru
	68121224SL	BT40-HCSL 12-120	12	32	42.6	52	120	46	62	32	M8x1	AD Thru
	68121230SL	BT40-HCSL 12-150	12	32	52	52	150	46	92	32	M8x1	AD Thru
BT50	68140624SL	BT50-HCSL 6-120	6	26	32.7	56	120	38	51	32	M5x0.8	AD Thru
	68140630SL	BT50-HCSL 6-150	6	26	43.3	56	150	38	81	32	M5x0.8	AD Thru
	68140824SL	BT50-HCSL 8-120	8	28	34.7	56	120	42	51	32	M5x0.8	AD Thru
	68140830SL	BT50-HCSL 8-150	8	28	45.3	56	150	42	81	32	M5x0.8	AD Thru
	68141024SL	BT50-HCSL 10-120	10	30	36.7	56	120	45	51	32	M8x1	AD Thru
	68141030SL	BT50-HCSL 10-150	10	30	47.3	56	150	45	81	32	M8x1	AD Thru
	68141224SL	BT50-HCSL 12-120	12	32	38.7	56	120	46	51	32	M8x1	AD Thru
	68141230SL	BT50-HCSL 12-150	12	32	49.3	56	150	46	81	32	M8x1	AD Thru

SMS™ Torque Wrenches [on page 114](#) | SMS™ Reduction Collets [on page 106-107](#) | SMS™ Retention knob [on page 108-109](#)

BT SMS™ Heavy Duty Hydraulic Chuck



FEATURES

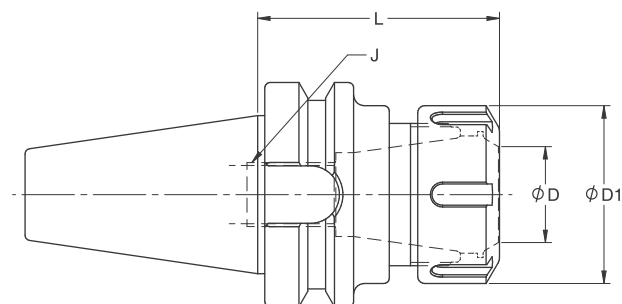
- Balanced to G2.5 @ 25,000 RPM
- Taper shank ground to AT3 accuracy (or better)
- T.I.R. < 5µm
- Bore tolerance: H6

	Catalog Number	Description	ØD	ØD1	L	L1 (max.)	L2	G	Coolant Style
BT30	67102014	BT30-HC 20-70	20	60	70	56	43	M8x1	AD Thru
BT40	67122013	BT40-HC 20-65	20	60	65	56	38	M8x1	AD Thru
	67123218	BT40-HC 32-90	32	72	90	63	55	M8x1	AD Thru
BT50	67142018	BT50-HC 20-90	20	60	90	56	52	M8x1	AD Thru
	67143218	BT50-HC 32-90	32	72	90	63	52	M8x1	AD Thru

SMS™ Torque Wrenches [on page 114](#) | SMS™ Reduction Collets [on page 106-107](#) | SMS™ Retention knob [on page 108-109](#)

BT Holders

BT SMS™ ER Collet Chucks



FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Balanced ER Collet Nuts

	Catalog Number	Description	Collet Size	ØD Range	D1	L	J	Coolant Style
BT30	87210014	BT30-CHE 11-70	ER11	3 - 7	19	70	M8x1.25	AD Thru
	87210020	BT30-CHE 11-100	ER11	3 - 7	19	100	M8x1.25	AD Thru
	87210024	BT30-CHE 11-120	ER11	3 - 7	19	120	M8x1.25	AD Thru
	87210114	BT30-CHE 16-70	ER16	3 - 10	28	70	M10X1.5	AD Thru
	87210120	BT30-CHE 16-100	ER16	3 - 10	28	100	M10X1.5	AD Thru
	87210124	BT30-CHE 16-120	ER16	3 - 10	28	120	M10X1.5	AD Thru
	87210214	BT30-CHE 20-70	ER20	3 - 13	34	70	M12X1.75	AD Thru
	87210220	BT30-CHE 20-100	ER20	3 - 13	34	100	M12X1.75	AD Thru
	87210227	BT30-CHE 20-135	ER20	3 - 13	34	135	M12X1.75	AD Thru
	87210312	BT30-CHE 25-60	ER25	3 - 16	42	60	M16X2	AD THRU
	87210314	BT30-CHE 25-70	ER25	3 - 16	42	70	M16X2.0	AD Thru
	87210320	BT30-CHE 25-100	ER25	3 - 16	42	100	M16X2.0	AD Thru
	87210327	BT30-CHE 25-135	ER25	3 - 16	42	135	M16X2.0	AD Thru
	87210414	BT30-CHE 32-70	ER32	3 - 20	50	70	M18X1.5	AD Thru
BT40	87212014	BT40-CHE 11-70	ER11	3 - 7	19	70	M8x1.25	AD Thru
	87212020	BT40-CHE 11-100	ER11	3 - 7	19	100	M8x1.25	AD Thru
	87212026	BT40-CHE 11-130	ER11	3 - 7	19	130	M8x1.25	AD Thru
	87212114	BT40-CHE 16-70	ER16	3 - 10	28	70	M10X1.5	AD Thru
	87212120	BT40-CHE 16-100	ER16	3 - 10	28	100	M10X1.5	AD Thru
	87212126	BT40-CHE 16-130	ER16	3 - 10	28	130	M10X1.5	AD Thru
	87212214	BT40-CHE 20-70	ER20	3 - 13	34	70	M12X1.75	AD Thru
	87212220	BT40-CHE 20-100	ER20	3 - 13	34	100	M12X1.75	AD Thru
	87212230	BT40-CHE 20-150	ER20	3 - 13	34	150	M16X2.0	AD Thru
	87212314	BT40-CHE 25-70	ER25	3 - 16	42	70	M16X2.0	AD Thru
	87212320	BT40-CHE 25-100	ER25	3 - 16	42	100	M16X2.0	AD Thru
	87212330	BT40-CHE 25-150	ER25	3 - 16	42	150	M16X2.0	AD Thru
	87212414	BT40-CHE 32-70	ER32	3 - 20	50	70	M18X1.5	AD Thru
	87212420	BT40-CHE 32-100	ER32	3 - 20	50	100	M18X1.5	AD Thru
	87212430	BT40-CHE 32-150	ER32	3 - 20	50	150	M18X1.5	AD Thru
	87212516	BT40-CHE 40-80	ER40	4 - 26	63	80	M22X1.5	AD Thru
	87212524	BT40-CHE 40-120	ER40	4 - 26	63	120	M22X1.5	AD Thru

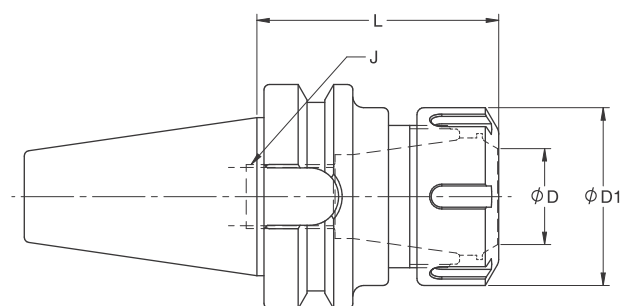
ER Collets **on page 97-101**

ER Nut Wrenches **on page 110**

Retention knobs **on page 108-109**

BT Holders

BT SMS™ ER Collet Chucks



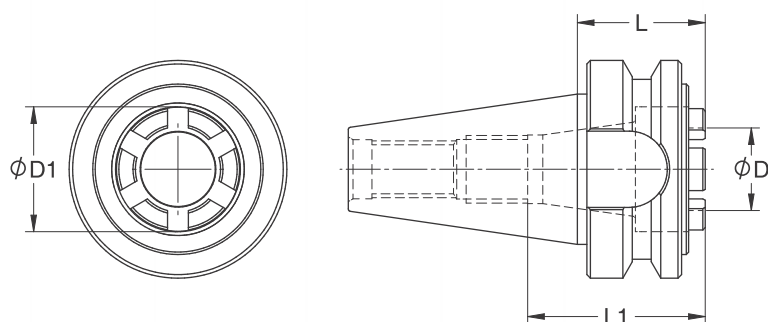
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Balanced ER Collet Nuts

	Catalog Number	Description	Collet Size	ØD Range	ØD1	L	J	Coolant Style
BT50	87214121	BT50-CHE 16-105	ER16	3-10	28	105	M10X1.5	AD Thru
	87214130	BT50-CHE 16-150	ER16	3-10	28	150	M10X1.5	AD Thru
	87214221	BT50-CHE 20-105	ER20	3-13	34	105	M12X1.75	AD Thru
	87214230	BT50-CHE 20-150	ER20	3-13	34	150	M12X1.75	AD Thru
	87214240	BT50-CHE 20-200	ER20	3-13	34	200	M12X1.75	AD Thru
	87214321	BT50-CHE 25-105	ER25	3-16	42	105	M16X2.0	AD Thru
	87214330	BT50-CHE 25-150	ER25	3-16	42	150	M16X2.0	AD Thru
	87214340	BT50-CHE 25-200	ER25	3-16	42	200	M16X2.0	AD Thru
	87214421	BT50-CHE 32-105	ER32	3-20	50	105	M18X1.5	AD Thru
	87214430	BT50-CHE 32-150	ER32	3-20	50	150	M18X1.5	AD THRU
	87214440	BT50-CHE 32-200	ER32	3-20	50	200	M18X1.5	AD Thru
	87214521	BT50-CHE 40-105	ER40	4-26	63	105	M22X1.5	AD Thru
	87214530	BT50-CHE 40-150	ER40	4-26	63	150	M22X1.5	AD Thru
	87214540	BT50-CHE 40-200	ER40	4-26	63	200	M22X1.5	AD Thru

ER Collets on page 97-101 | ER Nut Wrenches on page 110 | Retention knobs on page 108-109

BT SMS™ ER-Z Short Collet Chuck



FEATURES

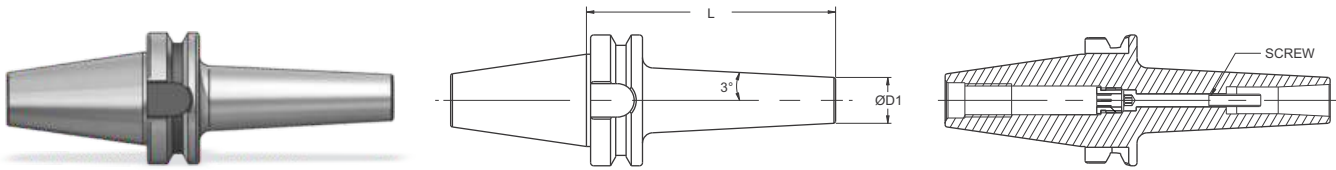
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	Collet Size	D Range	ØD1	L	L1	Coolant Style
BT30	872Z10205	BT30-CHEZ 20-27	ER20	3-13	28	27	35	AD Thru
BT40	872Z12407	BT40-CHEZ 32-36	ER32	3-20	32	36	43	AD Thru

ER Collets on page 97-101 | ER-Z Nut Wrenches on page 110 | ER-Z Nut on page 99 | Retention knobs on page 108-109

BT Holders

BT SMS™ Die Mould Chuck - DMC



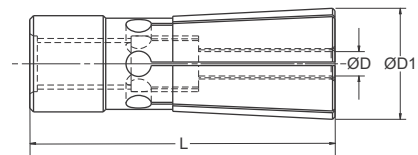
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- Taper shank ground to AT3 accuracy
- Max. run out of the internal taper with respect to the external 0.005µm

	Catalog Number	Description	Suitable Collet Size	Collet Range	ØD1	L	Angle	Screw	Allen Key	Coolant Style
BT40 Shank	960120612	BT40-DMC 06-60	DMC 6	3 - 6	13	60	3°	M5	4 x 200	AD Thru
	960120618	BT40-DMC 06-90	DMC 6	3 - 6	13	90	3°	M5	4 x 200	AD Thru
	960120624	BT40-DMC 06-120	DMC 6	3 - 6	13	120	3°	M5	4 x 200	AD Thru
	960120630	BT40-DMC 06-150	DMC 6	3 - 6	13	150	3°	M5	4 x 200	AD Thru
	960120812	BT40-DMC 08-60	DMC 8	3 - 8	22	60	3°	M6	5 x 200	AD Thru
	960120818	BT40-DMC 08-90	DMC 8	3 - 8	22	90	3°	M6	5 x 200	AD Thru
	960120824	BT40-DMC 08-120	DMC 8	3 - 8	22	120	3°	M6	5 x 200	AD Thru
	960120830	BT40-DMC 08-150	DMC 8	3 - 8	22	150	3°	M6	5 x 200	AD Thru
	960121018	BT40-DMC 10-90	DMC 10	3 - 10	28	90	3°	M8	6 x 200	AD Thru
	960121024	BT40-DMC 10-120	DMC 10	3 - 10	28	120	3°	M8	6 x 200	AD Thru
	960121030	BT40-DMC 10-150	DMC 10	3 - 10	28	150	3°	M8	6 x 200	AD Thru
	960121218	BT40-DMC 12-90	DNC 12	3 - 12	39	90	-	M10	8 x 200	AD Thru
BT50 Shank	960121224	BT40-DMC 12-120	DMC 12	3 - 12	39	120	-	M10	8 x 200	AD Thru
	960121230	BT40-DMC 12-150	DMC 12	3 - 12	39	150	3°	M10	8 x 200	AD Thru
	960141030	BT50-DMC10-150	DMC 10	3 - 10	28	150	3°	M8	6 x 200	AD Thru
	960101230	BT50-DMC 12-150	DMC 12	3 - 12	39	150	3°	M10	8 x 200	AD Thru
	960121440	BT50-DMC 12-200	DMC 12	3 - 12	39	200	3°	M10	8 x 200	AD Thru

SMS™ Retention knob on page 108-109

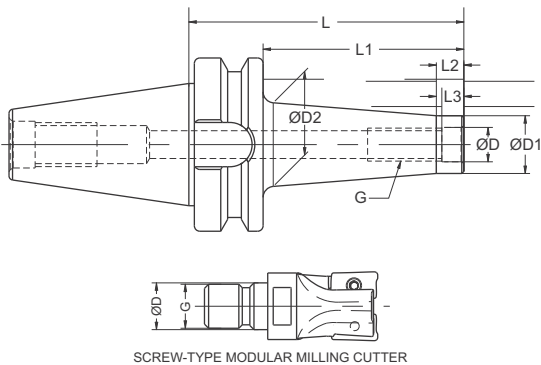
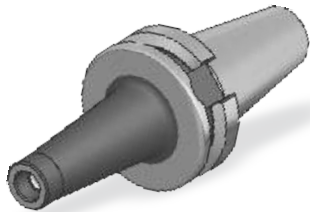
SMS™ DMC Collet



	Catalog Number	Description	Suitable Collet Size	ØD	ØD1	L
DMC Collet	95550603	COLLET DMC 06-03	DMC 6	3	9.6	36
	95550604	COLLET DMC 06-04	DMC 6	4	9.6	36
	95550605	COLLET DMC 06-05	DMC 6	5	9.6	36
	95550606	COLLET DMC 06-06	DMC 6	6	9.6	36
	95550803	COLLET DMC 08-03	DMC 8	3	15	45
	95550804	COLLET DMC 08-04	DMC 8	4	15	45
	95550805	COLLET DMC 08-05	DMC 8	5	15	45
	95550806	COLLET DMC 08-06	DMC 8	6	15	45
	95550808	COLLET DMC 08-08	DMC 8	8	15	45
	95551004	COLLET DMC 10-04	DMC 10	4	19.1	52
	95551005	COLLET DMC 10-05	DMC 10	5	19.1	52
	95551006	COLLET DMC 10-06	DMC 10	6	19.1	52
	95551008	COLLET DMC 10-08	DMC 10	8	19.1	52
	95551010	COLLET DMC 10-10	DMC 10	10	19.1	52
	95551205	COLLET DMC 12-05	DMC 12	12	22	60
	95551206	COLLET DMC 12-06	DMC 12	12	22	60
	95551208	COLLET DMC 12-08	DMC 12	12	22	60
	95551210	COLLET DMC 12-10	DMC 12	12	22	60
	95551212	COLLET DMC 12-12	DMC 12	12	22	60

BT Holders

BT SMS™ Screw on Holder

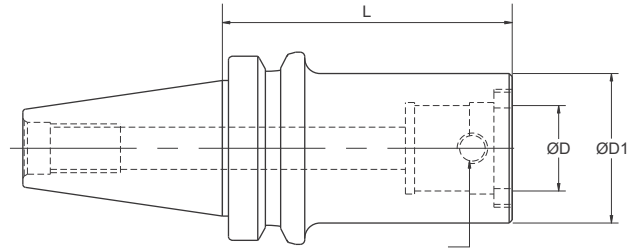
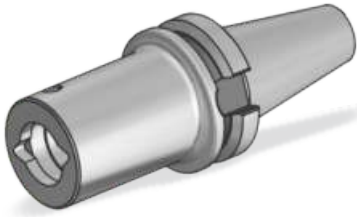


FEATURES											
• Balanced to G2.5 @ 25,000 RPM • T.I.R. < 5µm • Taper shank ground to AT3 accuracy (or better coolant through the center of the body)											
	Catalog Number	Description	ØD	ØD1	ØD2	L	L1 (max.)	L2	L3	G	Coolant Style
BT40 Shank	7612650110	BT40-THC 6-50	6.5	10	10	50	23	-	6	M6	AD Thru
	7612650115	BT40-THC 6-75	6.5	10	20	75	48	10	6	M6	AD Thru
	7612650120	BT40-THC 6-100	6.5	10	23	100	73	10	6	M6	AD Thru
	7612850210	BT40-THC 8-50	8.5	13	13	50	23	-	6	M8	AD Thru
	7612850215	BT40-THC 8-75	8.5	13	23	75	48	10	6	M8	AD Thru
	7612850220	BT40-THC 8-100	8.5	13	23	100	73	10	6	M8	AD Thru
	7612850225	BT40-THC 8-125	8.5	13	25	125	98	10	6	M8	AD Thru
	7614340310	BT40-THC 10-50	10.5	18	18	50	23	-	8	M10	AD Thru
	7614340315	BT40-THC 10-75	10.5	18	23	75	48	10	8	M10	AD Thru
	7614340320	BT40-THC 10-100	10.5	18	28	100	73	10	8	M10	AD Thru
	7614340325	BT40-THC 10-125	10.5	18	32	125	98	10	8	M10	AD Thru
	76121250410	BT40-THC 12-50	12.5	21	21	50	23	-	8	M12	AD Thru
	76121250415	BT40-THC 12-75	12.5	21	24	75	48	10	8	M12	AD Thru
	76121250420	BT40-THC 12-100	12.5	21	31	100	73	10	8	M12	AD Thru
	76121250425	BT40-THC 12-125	12.5	21	33	125	98	10	8	M12	AD Thru
	76121250430	BT40-THC 12-150	12.5	21	36	150	123	10	8	M12	AD Thru
	7612170510	BT40-THC 16-50	17	29	29	50	23	-	10	M16	AD Thru
	7612170515	BT40-THC 16-75	17	29	34	75	48	10	10	M16	AD Thru
	7612170520	BT40-THC 16-100	17	29	36	100	73	10	10	M16	AD Thru
	7612170525	BT40-THC 16-125	17	29	40	125	98	10	10	M16	AD Thru
	7612170530	BT40-THC 16-150	17	29	42.5	150	123	10	10	M16	AD Thru

SMS™ Retention knob on page 108-109

BT Holders

BT SMS™ Modular Adapter - CKB



FEATURES

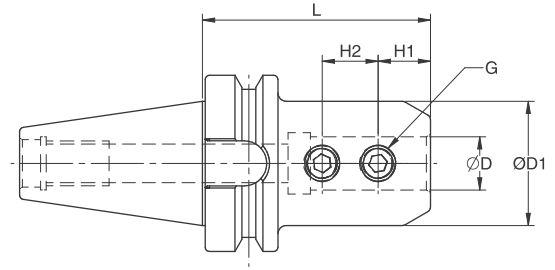
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better coolant through the center of the body)

	Catalog Number	Description	Modular Type	ØD	ØD1	L	G	Coolant Style
BT40 Shank	959120117	BT40-CKB1-85	CKB1	11	19	85	M4 x 0.7	AD Thru
	959120123	BT40-CKB1-115	CKB1	11	19	115	M4 x 0.7	AD Thru
	959120217	BT40-CKB2-85	CKB2	14	24	85	M5 x 0.8	AD Thru
	959120223	BT40-CKB2-115	CKB2	14	24	115	M5 x 0.8	AD Thru
	959120229	BT40-CKB2-145	CKB2	14	24	145	M5 x 0.8	AD Thru
	959120319	BT40-CKB3-95	CKB3	18	31	95	M6 x 1	AD Thru
	959120325	BT40-CKB3-125	CKB3	18	31	125	M6 x 1	AD Thru
	959120331	BT40-CKB3-155	CKB3	18	31	155	M6 x 1	AD Thru
	959120337	BT40-CKB3-185	CKB3	18	31	185	M6 x 1	AD Thru
	959120419	BT40-CKB4-95	CKB4	22	39	95	M8 x 1.25	AD Thru
	959120425	BT40-CKB4-125	CKB4	22	39	125	M8 x 1.25	AD Thru
	959120431	BT40-CKB4-155	CKB4	22	39	155	M8 x 1.25	AD Thru
	959120437	BT40-CKB4-185	CKB4	22	39	185	M8 x 1.25	AD Thru
	959120519	BT40-CKB5-95	CKB4	28	49	95	M10 x 1.5	AD Thru
	959120525	BT40-CKB5-125	CKB4	28	49	125	M10 x 1.5	AD Thru
	959120531	BT40-CKB5-155	CKB5	28	49	155	M10 x 1.5	AD Thru
	959120537	BT40-CKB5-185	CKB5	28	49	185	M10 x 1.5	AD Thru
	959120613	BT40-CKB6-65	CKB6	36	62	65	M12 x 1.75	AD Thru
	959120619	BT40-CKB6-95	CKB6	36	62	95	M12 x 1.75	AD Thru
	959120625	BT40-CKB6-125	CKB6	36	62	125	M12 x 1.75	AD Thru
	959120631	BT40-CKB6-155	CKB6	36	62	155	M12 x 1.75	AD Thru
	959120637	BT40-CK6-185	CKB6	36	62	185	M12 x 1.75	AD Thru
	959120643	BT40-CKB6-215	CKB6	36	62	215	M12 x 1.75	AD Thru
BT50 Shank	959140125	BT50-CKB1-125	CKB1	11	19	125	M4 x 0.7	AD Thru
	959140225	BT50-CKB2-125	CKB2	14	24	125	M5 x 0.8	AD Thru
	959140231	BT50-CKB2-155	CKB2	14	24	155	M5 x 0.8	AD Thru
	959140325	BT50-CKB3-125	CKB3	18	31	125	M6 x 1	AD Thru
	959140331	BT50-CKB3-155	CKB3	18	31	155	M6 x 1	AD Thru
	959140425	BT50-CKB4-125	CKB4	22	39	125	M8 x 1.25	AD Thru
	959140431	BT50-CKB4-155	CKB4	22	39	155	M8 x 1.25	AD Thru
	959140525	BT50-CKB5-125	CKB5	28	49	125	M10 x 1.5	AD Thru
	959140531	BT50-CKB5-155	CKB5	28	49	155	M10 x 1.5	AD Thru
	959140625	BT50-CKB6-125	CKB6	36	62	125	M12 x 1.75	AD Thru
	959140631	BT50-CKB6-155	CKB6	36	62	155	M12 x 1.75	AD Thru

SMS™ Retention knob on page 108-109

BT Holders

BT SMS™ End Mill Holders



FEATURES

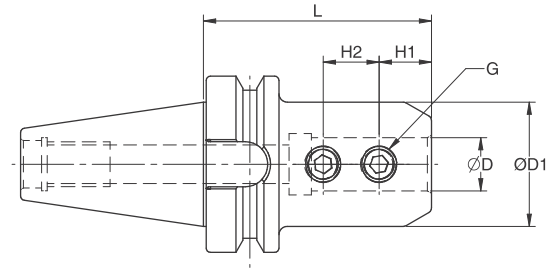
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	ØD	L	ØD1	G	H1	H2	Coolant Style
BT30 Inch	84100712	BT30-EMH 0.125-2.36	0.125	2.36	0.50	#10-32	0.21	-	AD Thru
	84100912	BT30-EMH 0.187-2.36	0.187	2.36	0.69	#10-32	0.56	-	AD Thru
	84101112	BT30-EMH 0.250-2.36	0.250	2.36	0.69	1/4"-28	0.56	-	AD Thru
	84102612	BT30-EMH 0.375-2.36	0.375	2.36	1.00	3/8"-24	0.75	-	AD Thru
	84101512	BT30-EMH 0.500-2.36	0.500	2.36	1.25	7/16"-20	0.88	-	AD Thru
	84101712	BT30-EMH 0.625-2.36	0.625	2.36	1.62	9/16"-18	0.94	-	AD Thru
	84102812	BT30-EMH 0.750-2.36	0.750	2.36	1.75	5/8"-18	1.00	-	AD Thru
	84102115	BT30-EMH 1.000-3.00	1.000	3.00	2.25	3/4"-16	1.00	-	AD Thru
BT30 Metric (DIN-1835-B)	84100612	BT30-EMH 6-60	6	60	25	M6	18.0	-	AD Thru
	84100812	BT30-EMH 8-60	8	60	28	M8	18.0	-	AD Thru
	84101012	BT30-EMH 10-60	10	60	35	M10	20.0	-	AD Thru
	84101212	BT30-EMH 12-60	12	60	42	M12	22.5	-	AD Thru
	84101612	BT30-EMH 16-60	16	60	48	M14	24.0	-	AD Thru
	84102012	BT30-EMH 20-60	20	60	52	M16	25.0	-	AD Thru
BT40 Inch	84120713	BT40-EMH 0.125-2.55	0.125	2.55	0.50	#10-32	0.21	-	AD Thru
	84120913	BT40-EMH 0.187-2.55	0.187	2.55	0.69	#10-32	0.56	-	AD Thru
	84120920	BT40-EMH 0.187-4.00	0.187	4.00	0.69	#10-32	0.56	-	AD Thru
	84121113	BT40-EMH 0.250-2.55	0.250	2.55	0.69	1/4"-28	0.56	-	AD Thru
	84121120	BT40-EMH 0.250-4.00	0.250	4.00	0.69	1/4"-28	0.56	-	AD Thru
	84121313	BT40-EMH 0.312-2.55	0.312	2.55	1.00	1/4"-28	0.75	-	AD Thru
	84121320	BT40-EMH 0.312-4.00	0.312	4.00	1.00	1/4"-28	0.75	-	AD Thru
	84122613	BT40-EMH 0.375-2.55	0.375	2.55	1.00	3/8"-24	0.75	-	AD Thru
	84122620	BT40-EMH 0.375-4.00	0.375	4.00	1.00	3/8"-24	0.75	-	AD Thru
	84121513	BT40-EMH 0.500-2.55	0.500	2.55	1.25	7/16"-20	0.88	-	AD Thru
	84121520	BT40-EMH 0.500-4.00	0.500	4.00	1.25	7/16"-20	0.88	-	AD Thru
	84121713	BT40-EMH 0.625-2.55	0.625	2.55	1.50	9/16"-18	0.94	-	AD Thru
	84121720	BT40-EMH 0.625-4.00	0.625	4.00	1.50	9/16"-18	0.94	-	AD Thru
	84122813	BT40-EMH 0.750-2.55	0.750	2.55	1.75	5/8"-18	1.00	-	AD Thru
	84121917	BT40-EMH 0.875-3.35	0.875	3.35	1.75	5/8"-18	1.00	0.81	AD Thru
	84122119	BT40-EMH 1.000-3.74	1.000	3.74	2.25	3/4"-16	1.13	1.00	AD Thru
	84122125	BT40-EMH 1.000-5.00	1.000	5.00	2.25	3/4"-16	1.13	1.00	AD Thru
	84122218	BT40-EMH 1.250-3.50	1.250	3.50	2.25	3/4"-16	1.00	1.00	AD Thru
	84122220	BT40-EMH 1.250-4.00	1.250	4.00	2.36	3/4"-16	1.13	1.00	AD Thru
	84122322	BT40-EMH 1.500-4.25	1.500	4.25	2.75	3/4"-16	1.12	1.00	AD Thru
BT40 Metric (DIN-1835-B)	84120615	BT40-EMH 6-75	6	75	25	M6	18.0	-	AD Thru
	84120815	BT40-EMH 8-75	8	75	28	M8	18.0	-	AD Thru
	84121015	BT40-EMH 10-75	10	75	35	M10	20.0	-	AD Thru
	84121215	BT40-EMH 12-75	12	75	42	M12	22.5	-	AD Thru
	84121615	BT40-EMH 16-75	16	75	48	M14	24.0	-	AD Thru
	84122015	BT40-EMH 20-75	20	75	52	M16	25.0	-	AD Thru
	84122518	BT40-EMH 25-90	25	90	65	M18	24.0	25	AD Thru
	84123224	BT40-EMH 32-120	32	120	72	M20	24.0	28	AD Thru
	84124024	BT40-EMH 40-120	40	120	90	M20	30.0	32	AD Thru

Retention knobs on page 108-109

BT Holders

BT SMS™ End Mill Holders



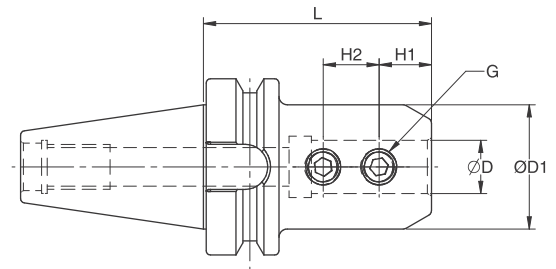
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	ØD	L	ØD1	G	H1	H2	Coolant Style
BT50 Metric (DIN 1835-B)	84141218	BT50-EMH 12-90	12	90	42	M12 x 1.75	22.5	-	AD Thru
	84141618	BT50-EMH 16-90	16	90	48	M14 x 2	24	-	AD Thru
	84142018	BT50-EMH 20-90	20	90	52	M16 x 2	25	-	AD Thru
	84142521	BT50-EMH 25-105	25	105	65	M18 x 2	24	25	AD Thru
	84143224	BT50-EMH 32-120	32	120	72	M20 x 2	24	28	AD Thru
	84144024	BT50-EMH 40-120	40	120	90	M20 x 2	30	32	AD Thru
BT50 Inch	84141518	BT50-EMH 0.500-3.54	0.500	3.54	1.25	7/16"-20	0.88	-	AD Thru
	84141718	BT50-EMH 0.625-3.54	0.625	3.54	1.5	9/16"-18	0.94	-	AD Thru
	84142818	BT50-EMH 0.750-3.54	0.750	3.54	1.75	5/8"-18	1.00	-	AD Thru
	84142121	BT50-EMH 1.000-4.13	1.000	4.13	2.25	3/4"-16	1.13	1.00	AD Thru
	84142224	BT50-EMH 1.250-4.72	1.250	4.72	2.36	3/4"-16	1.13	1.00	AD Thru
	84142324	BT50-EMH 1.500-4.72	1.500	4.72	2.75	3/4"-16	1.13	1.00	AD Thru

BT SMS™ Side Lock Holders

Retention knobs on page 108-109



FEATURES

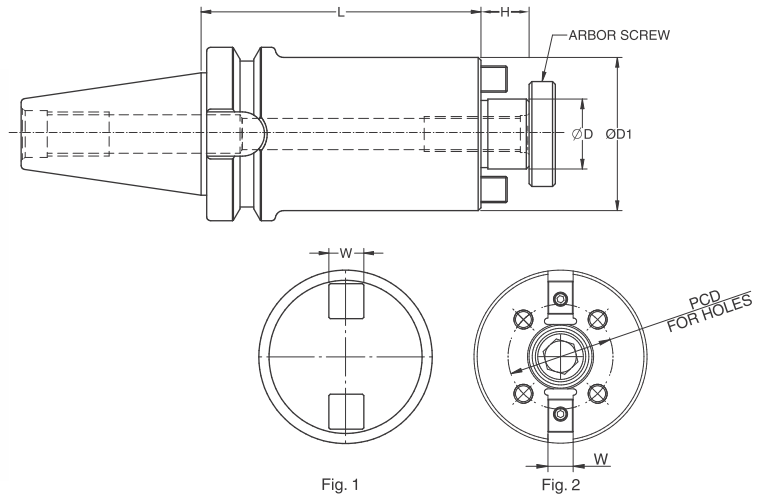
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	ØD	L	ØD1	G	H1	H2	Coolant Style
BT30	85101615	BT30-SLA 16-75	16	75	40	M10 x 1.5	25	-	AD Thru
	85102015	BT30-SLA 20-75	20	75	40	M10 x 1.5	25	20	AD Thru
	85102515	BT30-SLA 25-75	25	75	46	M12 x 1.75	25	20	AD Thru
BT40	85122018	BT40-SLA 20-90	20	90	50	M10 x 1.5	25	20	AD Thru
	85122518	BT40-SLA 25-90	25	90	50	M12 x 1.75	25	20	AD Thru
	85123218	BT40-SLA 32-90	32	90	60	M12 x 1.75	30	20	AD Thru
	85124018	BT40-SLA 40-90	40	90	60	M12 x 1.75	25	25	AD Thru
	85124218	BT40-SLA 42-90	42	90	60	M12 x 1.75	30	20	AD Thru
BT50	85141621	BT50-SLA 16-105	16	105	40	M10 x 1.5	25	20	AD Thru
	85142021	BT50-SLA 20-105	20	105	50	M10 x 1.5	25	20	AD Thru
	85142521	BT50-SLA 25-105	25	105	50	M12 x 1.75	25	20	AD Thru
	85143221	BT50-SLA 32-105	32	105	60	M12 x 1.75	30	20	AD Thru
	85144021	BT50-SLA 40-105	40	105	70	M16 x 2	30	20	AD Thru
	85145021	BT50-SLA 50-105	50	105	80	M16 x 2	30	20	AD Thru

Retention knobs on page 108-109

BT Holders

BT SMS™ Shell Mill Holders



FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Coolant through the center of the body

	Catalog Number	Description	Fig. No.	ØD	L	ØD1	H	W	P.C.D. Holes	Ret. Screw	Coolant Style
BT30 Inch	81105006	BT30-SMH 0.500-1.13	1	0.500	1.13	1.34	0.56	0.250	-	1/4-28	AD THRU
	81107506	BT30-SMH 0.750-1.18	1	0.750	1.18	1.94	0.69	0.312	-	3/8-24	AD THRU
	81101009	BT30-SMH 1.000-1.77	1	1.000	1.77	2.19	0.69	0.375	-	1/2-20	AD THRU
BT30 Metric	81101606	BT30-SMH 16-30	1	16	30	34	15	8	-	M8X25*	AD THRU
	81102209	BT30-SMH 22-45	1	22	45	45	18	10	-	M10X30*	AD THRU
BT40 Inch	81125009	BT40-SMH 0.500-1.77	1	0.500	1.77	1.75	0.56	0.250	-	1/4-28	AD THRU
	81125020	BT40-SMH 0.500-4.00	1	0.500	4.00	1.75	0.56	0.250	-	1/4-28	AD THRU
	81127509	BT40-SMH 0.750-1.77	1	0.750	1.77	1.75	0.69	0.312	-	3/8-24	AD THRU
	81127520	BT40-SMH 0.750-4.00	1	0.750	4.00	1.75	0.69	0.312	-	3/8-24	AD THRU
	81127530	BT40-SMH 0.750-6.00	1	0.750	1.77	1.75	0.69	0.312	-	3/8-24	AD THRU
	81121009	BT40-SMH 1.000-1.77	1	1.000	1.77	2.19	0.69	0.375	-	1/2-20	AD THRU
	81121020	BT40-SMH 1.000-4.00	1	1.000	4.00	2.19	0.69	0.375	-	1/2-20	AD THRU
	81121030	BT40-SMH 1.000-6.00	1	1.000	6.00	2.19	0.69	0.375	-	1/2-20	AD THRU
	81121212	BT40-SMH 1.250-2.36	1	1.250	2.36	2.75	0.69	0.500	-	5/8-18	AD THRU
	81121225	BT40-SMH 1.250-5.00	1	1.250	5.00	2.75	0.69	0.500	-	5/8-18	AD THRU
	80121512	BT40-SMH 1.500-2.36	1	1.500	2.36	3.38	0.94	0.625	-	3/4-16	AD THRU
	80121525	BT40-SMH 1.500-5.00	1	1.500	5.00	3.38	0.94	0.625	-	3/4-16	AD THRU
BT40 Metric	81121612	BT40-SMH 16-60	1	16	60	34	15	8	-	M8X25*	AD THRU
	81122209	BT40-SMH 22-45	1	22	45	45	18	10	-	M10X30*	AD THRU
	81122218	BT40-SMH 22-90	1	22	60	45	18	10	-	M10X30*	AD THRU
	81122712	BT40-SMH 27-60	1	27	60	70	20	12	-	M12X35*	AD THRU
	81122718	BT40-SMH 27-90	1	27	90	70	20	12	-	M12X35*	AD THRU
	81123212	BT40-SMH 32-60	1	32	60	85	22	14	-	M16X35*	AD THRU
	81123215	BT40-SMH 32-75	1	32	75	85	22	14	-	M16X35*	AD THRU
BT40 Metric	80124012	BT40-FMB 40-60	1	40	60	85	26	16	-	M20X35*	AD THRU
	80124018	BT40-FMB 40-90	1	40	90	85	26	16	-	M20X35*	AD THRU
	801240F15	BT40-FMB 40F-75	2	40	75	102	26	16	66.70	M20X35*	AD THRU
	801240F21	BT40-FMB 40F-105	2	40	75	102	26	16	66.70	M20X35*	AD THRU

NOTE:

ALL Shell Mill Holders are supplied with coolant through the center up to the arbor screw hole.

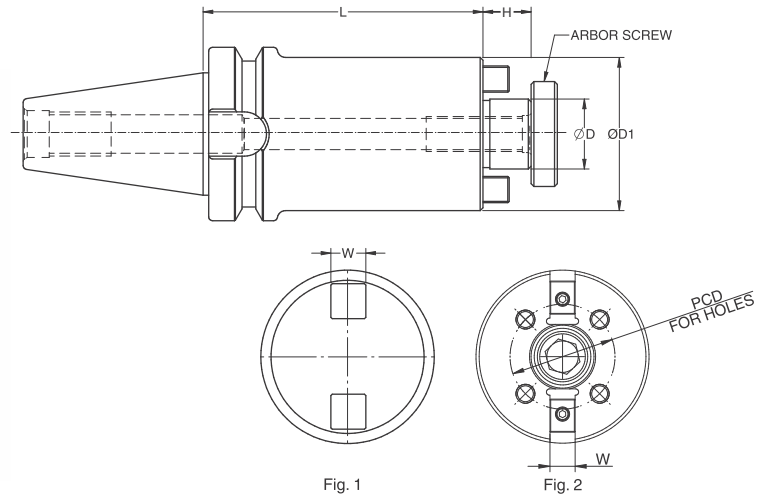
* Represent Holders provide with Metric Allen Cap Bolt.

Retention knobs **on page 108-109**

Non-Coolant and Coolant Arbor Screws **on page 111**

BT Holders

BT SMS™ Shell Mill Holder



FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Coolant through the center of the body

	Catalog Number	Description	Fig. No.	ØD	L	ØD1	H	W	P.C.D. Holes	Allen Cap Screw	Coolant Style
BT50	81142212	BT50-SMH 22-60	1	22	60	45	18	10	-	M10X30	AD THRU
	81142221	BT50-SMH 22-105	1	22	105	45	18	10	-	M10X30	AD THRU
	81142230	BT 50-SMH 22-150	1	22	150	45	18	10	-	M10X30	AD THRU
	81142240	BT50-SMH 22-200	1	22	200	48	18	10	-	M10X30	AD THRU
	81142709	BT50-SMH 27-45	1	27	45	70	20	12	-	M12X35	AD THRU
	81142718	BT50-SMH 27-90	1	27	90	70	20	12	-	M12X35	AD THRU
	81142730	BT50-SMH 27-150	1	27	150	70	20	12	-	M12X35	AD THRU
	81142740	BT50-SMH 27-200	1	27	200	70	20	12	-	M12X35	AD THRU
	81143212	BT50-SMH 32-60	1	32	60	80	22	14	-	M16X35	AD THRU
	81143215	BT50-SMH 32-75	1	32	75	80	22	14	-	M16X35	AD THRU
	81143221	BT50-SMH 32-105	1	32	105	80	22	14	-	M16X35	AD THRU
	81143230	BT50-SMH 32-150	1	32	150	80	22	14	-	M16X35	AD THRU
	81143240	BT50-SMH 32-200	1	32	200	80	26	14	-	M16X35	AD THRU
	80144012	BT50-SMH 40-75	1	40	75	85	26	16	-	M20X35	AD THRU
	80144021	BT50-SMH 40-105	1	40	105	85	26	16	-	M20X35	AD THRU
	801440F15	BT50-FMH 40F-75	2	40	75	103	26	16	66.70	M20X35	AD THRU
	801440F21	BT50-FMH 40F-105	2	40	105	103	26	16	66.70	M20X35	AD THRU
	801460F15	BT50-FMH 60F-75	2	60	75	128	25	25.4	101.60	M24X35	AD THRU
	801460F21	BT50-FMH 60F-105	2	60	105	128	25	25.4	101.60	M24X35	AD THRU

NOTE:

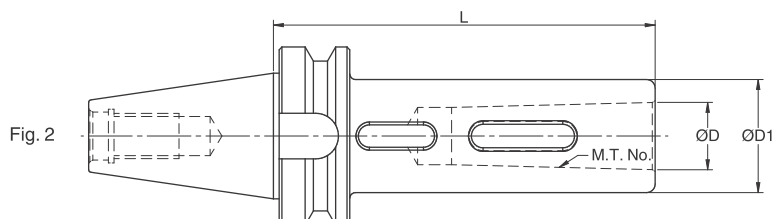
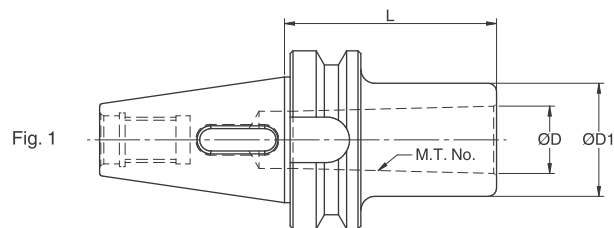
ALL Shell Mill Holders are supplied with coolant through the center up to the arbor screw hole.

Retention knobs **on page 108-109**

Non-Coolant and Coolant Arbor Screws **on page 111**

BT Holders

BT SMS™ Morse Taper Holders



FEATURES

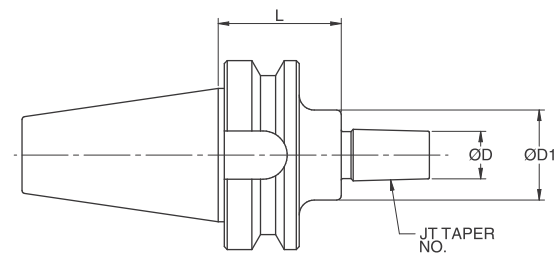
- Balanced to G2.5 @ 25,000 RPM
- Taper shank ground to AT3 accuracy (or better)
- T.I.R. < 5µm

	Catalog Number	Description	Fig. No.	MT Socket	ØD	L	ØD1	Coolant Style
BT30	88010109	BT30-MTA 1-45	1	1	12.065	45	25	N/A
	88010212	BT30-MTA 2-60	1	2	17.780	60	32	N/A
	88010315	BT30-MTA 3-75	1	3	23.825	75	40	N/A
BT40	88012109	BT40-MTA 1-45	1	1	12.065	45	25	N/A
	88012124	BT40-MTA 1-120	2	1	12.065	120	25	N/A
	88012209	BT40-MTA 2-45	1	2	17.780	45	32	N/A
	88012224	BT40-MTA 2-120	2	2	17.780	120	32	N/A
	88012315	BT40-MTA 3-75	1	3	23.825	75	40	N/A
	88012327	BT40-MTA 3-135	2	3	23.825	135	40	N/A
	88012418	BT40-MTA 4-90	1	4	31.267	90	50	N/A
	88012433	BT40-MTA 4-165	2	4	31.267	165	50	N/A
BT50	88014109	BT50-MTA 1-45	1	1	12.065	45	25	N/A
	88014124	BT50-MTA 1-120	2	1	12.065	120	25	N/A
	88014136	BT50-MTA 1-180	2	1	12.065	180	25	N/A
	88014209	BT50-MTA 2-45	1	2	17.780	45	32	N/A
	88014224	BT50-MTA 2-120	2	2	17.780	120	32	N/A
	88014227	BT50-MTA 2-135	2	2	17.780	135	32	N/A
	88014236	BT50-MTA 2-180	2	2	17.780	180	32	N/A
	88014309	BT50-MTA 3-45	1	3	23.825	45	40	N/A
	88014315	BT50-MTA 3-75	1	3	23.825	75	40	N/A
	88014330	BT50-MTA 3-150	2	3	23.825	150	40	N/A
	88014336	BT50-MTA 3-180	2	3	23.825	180	40	N/A
	88014415	BT50-MTA 4-75	1	4	31.267	75	50	N/A
	88014436	BT50-MTA 4-180	2	4	31.267	180	50	N/A
	88014521	BT50-MTA 5-105	1	5	44.399	105	65	N/A
	88014542	BT50-MTA 5-210	2	5	44.399	210	65	N/A

Retention knobs on page 108-109

BT Holders

BT SMS™ Jacob Taper Holders



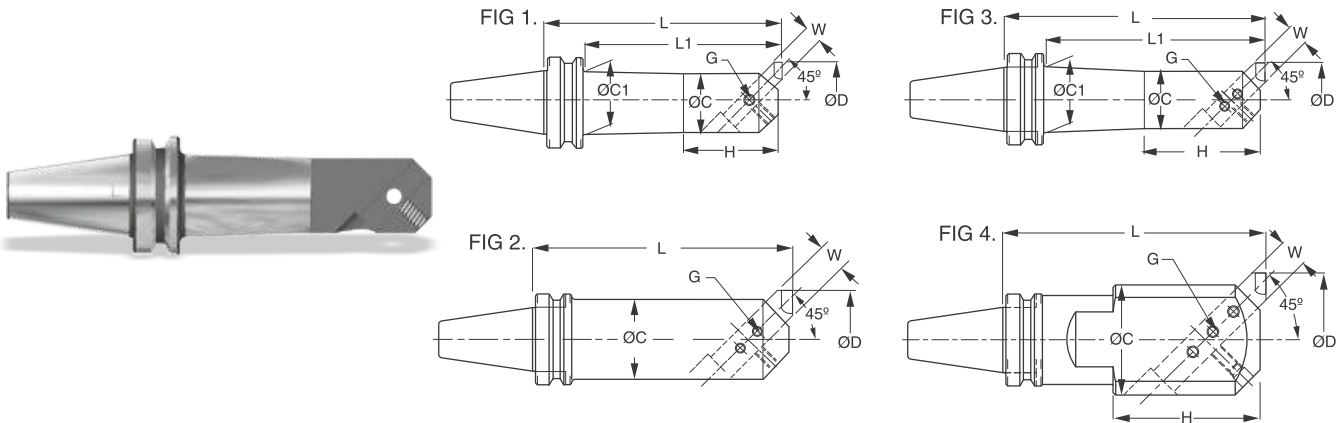
FEATURES						
• Balanced to G2.5 @ 25,000 RPM			• Taper shank ground to AT3 accuracy (or better)			
• T.I.R. < 5µm						

	Catalog Number	Description	JT Taper No.	L	ØD	ØD1
BT40	88412109	BT40-JTA 1-45	1	45	9.754	30
	88412209	BT40-JTA 2-45	2	45	14.199	30
	88412309	BT40-JTA 3-45	3	45	20.599	30
	88412409	BT40-JTA 4-45	4	45	28.550	30
	88412609	BT40-JTA 6-45	6	45	17.170	30
	884123309	BT40-JTA 33-45	33	45	15.850	30
BT50	88414109	BT50-JTA 1-45	1	45	9.754	30
	88414209	BT50-JTA 2-45	2	45	14.199	30
	88414309	BT50-JTA 3-45	3	45	20.599	30
	88414409	BT50-JTA 4-45	4	45	28.550	30
	88414609	BT50-JTA 6-45	6	45	17.170	30
	884143309	BT50- JTA 33-45	33	45	15.850	30

Retention knobs on page 108-109

BT Holders

BT SMS™ Boring Bars (Square Tool Type A)



FEATURES

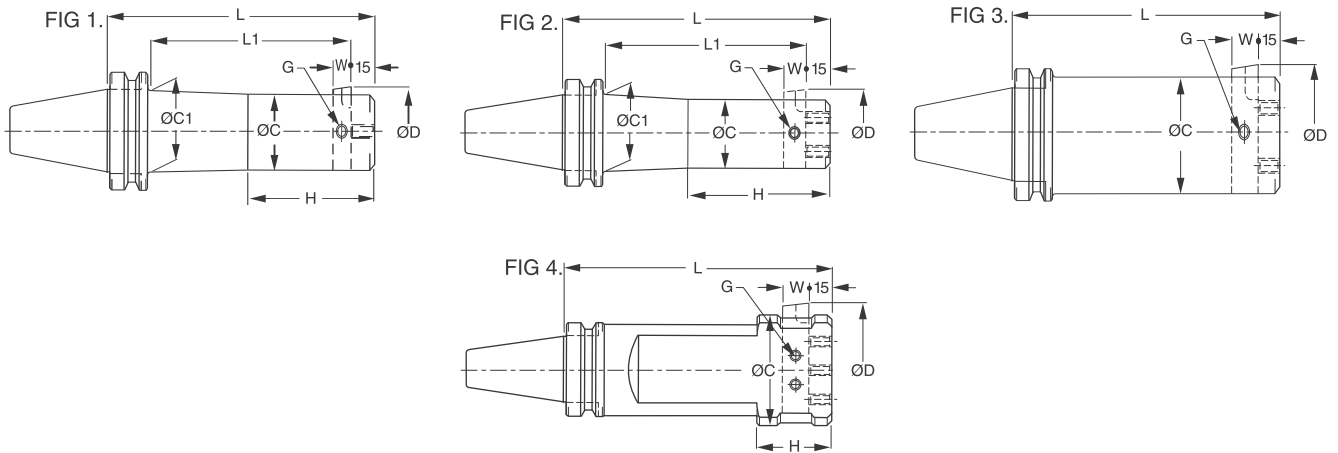
- Balance on request
- T.I.R. < 10µm
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	Fig. No.	ØD Min.	ØD Max.	L	L1	H	ØC	ØC1	W	Suitable Screw
BT30	90101324	BT30-BSA 25-120	1	25	38	120	95	35	20	22	8	M6
	90101527	BT30-BSA 30-135	1	30	42	135	110	40	24	26	8	M6
	90101930	BT30-BSA 38-150	1	38	52	150	125	50	30	33	10	M8
	90102130	BT30-BSA 42-150	1	42	56	150	125	60	34	37	10	M8
	90102530	BT30-BSA 50-150	1	50	65	150	-	65	40	44	12	M10
BT40	90121327	BT40-BSA 25-135	1	25	38	135	103	35	20	22	8	M6
	90121533	BT40-BSA 30-165	1	30	42	165	133	40	24	26	8	M6
	90121936	BT40-BSA 38-180	1	38	52	180	148	50	30	33	10	M8
	90122142	BT40-BSA 42-210	1	42	56	210	178	60	34	37	10	M8
	90122533	BT40-BSA 50-165	1	50	65	165	133	65	40	44	12	M10
	90122542	BT40-BSA 50-210	1	50	65	210	178	65	40	44	12	M10
	90123133	BT40-BSA 62-165	1	62	90	165	133	80	50	56	16	M10
	90123145	BT40-BSA 62-225	1	62	90	225	193	80	50	56	16	M10
	90123633	BT40-BSA 72-165	2	72	110	165	-	-	60	-	20	M10
	90123645	BT40-BSA 72-225	2	72	110	225	-	-	60	-	20	M10
	90124533	BT40-BSA 90-165	3	90	125	165	-	55	75	-	20	M12
	90124542	BT40-BSA 90-210	3	90	125	210	-	55	75	-	20	M12
BT50	90141327	BT50-BSA 25-135	1	25	38	135	92	35	20	22	8	M6
	90141533	BT50-BSA 30-165	1	30	42	165	122	40	24	26	8	M6
	90141936	BT50-BSA 38-180	1	38	52	180	137	50	30	33	10	M8
	90142142	BT50-BSA 42-210	1	42	56	210	167	60	34	37	10	M8
	90142536	BT50-BSA 50-180	1	50	65	180	137	65	40	44	12	M10
	90142548	BT50-BSA 50-240	1	50	65	240	197	65	40	44	12	M10
	90143139	BT50-BSA 62-195	1	62	90	195	152	80	50	56	16	M10
	90143154	BT50-BSA 62-270	1	62	90	270	227	80	50	56	16	M10
	90143639	BT50-BSA 72-195	2	72	110	195	152	95	60	66	20	M10
	90143657	BT50-BSA 72-285	2	72	110	285	242	95	60	66	20	M10
	90144542	BT50-BSA 90-210	2	90	125	210	167	110	75	80	20	M12
	90144560	BT50-BSA 90-300	2	90	125	300	257	110	75	80	20	M12
	90145339	BT50-BSA 105-195	3	105	160	195	-	-	90	-	25	M12
	90145357	BT50-BSA 105-285	2	105	160	285	-	130	90	94	25	M12
	90146551	BT50-BSA 130-255	4	130	190	255	-	85	110	-	25	M12

Retention knobs **on page 108-109** | Square Tools **on page 114**

BT Holders

BT SMS™ Boring Bars (Square Tool Type B)



FEATURES

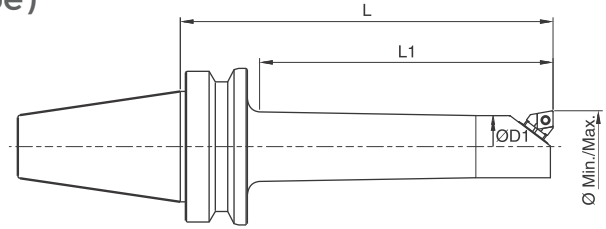
- Balance on request
- Taper shank ground to AT3 accuracy (or better)
- T.I.R. < 10µm

	Catalog Number	Description	Fig. No.	ØD Min.	ØD Max.	L	L1	H	ØC	ØC1	W	Suitable Screw
BT30	91101324	BT30-BSB 25-120	1	25	52	135	95	50	20	22	8	M8
	91101930	BT30-BSB 38-150	1	38	70	165	125	70	30	32	10	M10
	91102530	BT30-BSB 50-150	1	50	90	165	-	85	40	44	12	M10
BT40	91121327	BT40-BSB 25-135	1	25	52	150	103	50	20	22	8	M8
	91121936	BT40-BSB 38-180	1	38	70	195	148	70	30	32	10	M10
	91122533	BT40-BSB 50-165	1	50	90	180	133	85	40	44	12	M10
	91122542	BT40-BSB 50-210	1	50	90	225	178	85	40	44	12	M10
	91123133	BT40-BSB 62-165	2	62	115	180	133	95	50	56	16	M10
	91123145	BT40-BSB 62-225	2	62	115	180	133	95	50	56	16	M10
	91123633	BT40-BSB 72-165	3	72	135	180	-	-	60	-	20	M10
	91123645	BT40-BSB 72-225	3	72	135	240	-	-	60	-	20	M10
	91124533	BT40-BSB 90-165	4	90	150	180	-	50	75	-	20	M12
	91124545	BT40-BSB 90-210	4	90	150	225	-	50	75	-	20	M12
BT50	91141327	BT50-BSB 25-135	1	25	52	150	92	50	20	22	8	M8
	91141936	BT50-BSB 38-180	1	38	70	195	137	70	30	32	10	M10
	91142536	BT50-BSB 50-180	1	50	90	195	137	85	40	44	12	M10
	91142548	BT50-BSB 50-240	1	50	90	255	197	85	40	44	12	M10
	91143139	BT50-BSB 62-195	2	62	115	210	152	95	50	56	16	M10
	91143154	BT50-BSB 62-270	2	62	115	285	227	95	50	56	16	M10
	91143639	BT50-BSB 72-195	2	72	135	210	152	110	60	66	20	M10
	91143657	BT50-BSB 72-285	2	72	135	300	242	110	60	66	20	M10
	91144542	BT50-BSB 90-210	2	90	150	225	167	130	75	80	20	M12
	91144560	BT50-BSB 90-300	2	90	150	315	257	130	75	80	20	M12
	91145339	BT50-BSB 105-195	3	105	190	210	-	-	90	-	25	M12
	91145357	BT50-BSB 105-285	2	105	190	300	-	150	90	94	25	M12
	91146551	BT50-BSB 130-255	4	130	260	270	-	60	110	-	25	M12

Retention knobs on page 108-109 | Square Tools on page 114

BT Holders

BT SMS™ Fine Boring Bars (Cartridge Type)



FEATURES

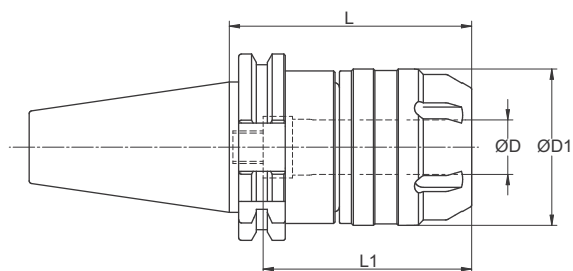
- Balance on request
- T.I.R. < 10µm
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	ØD Min.	D Max.	L	L1	ØD1	
BT40	89121530	BT40-FBC 29-150	29	34	150	118	25	FBCAR16-06
	89121545	BT40-FBC 29-225	29	34	225	193	25	FBCAR16-06
	89121630	BT40-FBC 32-150	32	37	150	118	28	FBCAR16-06
	89121645	BT40-FBC 32-225	32	37	225	193	28	FBCAR16-06
	89121730	BT40-FBC 35-150	35	40	150	118	31	FBCAR16-06
	89121745	BT40-FBC 35-225	35	40	225	193	31	FBCAR16-06
	89121930	BT40-FBC 38-150	37	44	150	118	33	FBCAR20-06
	89121945	BT40-FBC 38-225	37	44	225	193	33	FBCAR20-06
	89122130	BT40-FBC 42-165	42	49	150	118	38	FBCAR20-06
	89122145	BT40-FBC 42-225	42	49	225	193	38	FBCAR20-06
	89122433	BT40-FBC 48-165	48	55	165	133	44	FBCAR20-06
	89122445	BT40-FBC 48-225	48	55	225	193	44	FBCAR20-06
	89122733	BT40-FBC 54-165	54	61	165	133	50	FBCAR20-06
	89122745	BT40-FBC 54-225	54	61	225	193	50	FBCAR20-06
	89123033	BT40-FBC 60-165	60	67	165	133	56	FBCAR20-06
	89123045	BT40-FBC 60-225	60	67	225	193	56	FBCAR20-06
	89123133	BT40-FBC 62-165	62	77	165	133	58	FBCAR22-09
	89123145	BT40-FBC 62-225	62	77	225	193	58	FBCAR22-09
	89123833	BT40-FBC 76-165	76	91	165	133	72	FBCAR22-09
	89123845	BT40-FBC 76-225	76	91	225	193	72	FBCAR22-09
BT50	89141433	BT50-FBC 29-165	29	34	165	122	25	FBCAR16-06
	89141445	BT50-FBC 29-225	29	34	225	182	25	FBCAR16-06
	89141633	BT50-FBC 32-165	32	37	165	122	28	FBCAR16-06
	89141645	BT50-FBC 32-225	32	37	225	182	28	FBCAR16-06
	89141733	BT50-FBC 35-165	35	40	165	122	31	FBCAR16-06
	89141745	BT50-FBC 35-225	35	40	225	182	31	FBCAR16-06
	89141933	BT50-FBC 38-165	37	44	165	122	33	FBCAR20-06
	89141945	BT50-FBC 38-225	37	44	225	182	33	FBCAR20-06
	89142133	BT50-FBC 42-165	42	49	165	122	38	FBCAR20-06
	89142145	BT50-FBC 42-225	42	49	225	182	38	FBCAR20-06
	89142433	BT50-FBC 48-165	48	55	165	122	44	FBCAR20-06
	89142445	BT50-FBC 48-225	48	55	225	182	44	FBCAR20-06
	89142733	BT50-FBC 54-165	54	61	165	122	50	FBCAR20-06
	89142745	BT50-FBC 54-225	54	61	225	182	50	FBCAR20-06
	89143033	BT50-FBC 60-165	60	67	165	122	56	FBCAR20-06
	89143045	BT50-FBC 60-225	60	67	225	182	56	FBCAR20-06
	89143133	BT50-FBC 62-165	62	77	165	122	58	FBCAR22-09
	89143148	BT50-FBC 62-240	62	77	240	197	58	FBCAR22-09
	89143833	BT50-FBC 76-165	76	91	165	122	72	FBCAR22-09
	89143848	BT50-FBC 76-240	76	91	240	197	72	FBCAR22-09
	89144533	BT50-FBC 90-165	90	105	165	122	86	FBCAR22-09
	89144548	BT50-FBC 90-240	90	105	240	197	86	FBCAR22-09
	89145233	BT50-FBC 104-165	104	119	165	122	100	FBCAR22-09
	89145248	BT50-FBC 104-240	104	119	240	197	100	FBCAR22-09

Cartridge FBCAR on page 114 | Retention knobs on page 108-109

SKP Holders

SKP Face Contact SMS™ Multi-Milling Chucks



FEATURES

- Balanced to G2.5 @ 25,000 RPM
- Bore tolerance: H6
- T.I.R. < 5µm

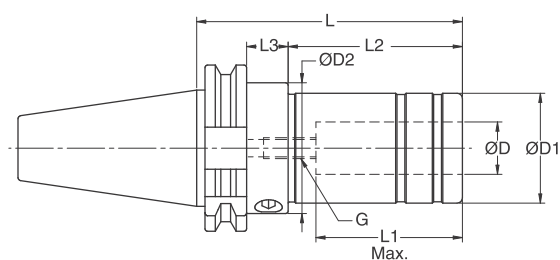
	Catalog Number	Description	Collet	Collect Capacity Range	ØD	ØD1	L	L1 Min/Max	Coolant Style
SKP40 Shank	971262016	SKP40-MMC 20-80	MC20	3-16	20	53	80	65/70	AD Thru
	971262024	SKP40-MMC 20-120	MC20	3-16	20	53	120	65/70	AD Thru
	971263218	SKP40-MMC 32-90	MC32	3-25	32	67	90	78/85	AD Thru
	971263224	SKP40-MMC 32-120	MC32	3-25	32	67	120	78/85	AD Thru
SKP50 Shank	971282016	SKP50-MMC 20-80	MC20	3 -- 16	20	53	80	65/70	AD Thru
	971282024	SKP50-MMC 20-120	MC20	3 -- 16	20	53	120	65/70	AD Thru
	971283218	SKP50-MMC 32-90	MC32	3 -- 25	32	67	90	78/85	AD Thru
	971283224	SKP50-MMC 32-120	MC32	3 -- 25	32	67	120	78/85	AD Thru

SMS™ Reduction Collets **on page 106-107**

SMS™ Collet Nut wrenches **on page 113**

Retention knobs **on page 108-109**

SKP Face Contact SMS™ Hydraulic Chucks



FEATURES

- Balanced to G2.5 @ 25,000 RPM
- Bore tolerance: H6
- T.I.R. < 5µm

	Catalog Number	Description	ØD	ØD1	ØD2	L	L1 Max.	L2	L3	G	Coolant Style
SKP40	681262020	SKP40-HCS 20-100	20	42	52	100	56	58	23	M8x1	AD Thru
	681263224	SKP40-HCS 32-120	32	60	-	120	63	101	-	M8x1	AD Thru
SKP50	681282020	SKP50-HCS 20-100	20	42	52	100	56	58	23	M8x1	AD Thru
	681283225	SKP50-HCS 32-125	32	60	70	125	63	86	20	M8x1	AD Thru

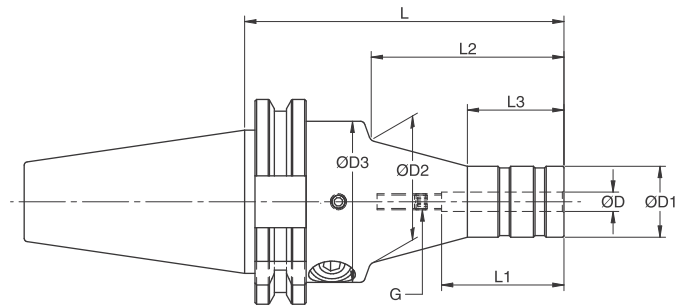
SMS™ Torque Wrenches **on page 114**

SMS™ Reduction Collets **on page 106-107**

Retention knobs **on page 108-109**

SKP Face Contact Holders

SKP Face Contact SMS™ Slim Design Hydraulic Chucks



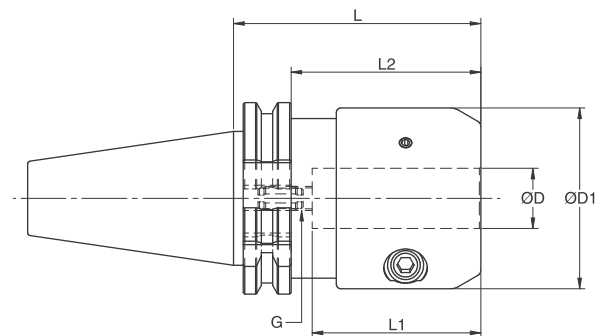
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Bore Tolerance: H6
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	ØD	ØD1	ØD2	ØD3	L	L1 Max.	L2	L3	G	Coolant Style
SKP40	681260624SL	SKP40-HCSL 6-120	6	26	39.4	52	120	38	69.9	32	M5x0.8	AD Thru
	681260630SL	SKP40-HCSL 6-150	6	26	50	52	150	38	99.9	32	M5x0.8	AD Thru
	681260824SL	SKP40-HCSL 8-120	8	28	41.4	52	120	42	69.9	32	M5x0.8	AD Thru
	681260830SL	SKP40-HCSL 8-150	8	28	52	52	150	42	99.9	32	M5x0.8	AD Thru
	681261024SL	SKP40-HCSL 10-120	10	30	43.4	52	120	45	69.9	32	M8x1	AD Thru
	681261030SL	SKP40-HCSL 10-150	10	30	52	52	150	45	99.9	32	M8x1	AD Thru
	681261224SL	SKP40-HCSL 12-120	12	32	45.4	52	120	46	69.9	32	M8x1	AD Thru
SKP50	681261230SL	SKP40-HCSL 12-150	12	32	52	52	150	46	99.9	32	M8x1	AD Thru
	681280624SL	SKP50-HCSL 6-120	6	26	39.4	56	120	38	69.9	32	M5x0.8	AD Thru
	681280630SL	SKP50-HCSL 6-150	6	26	50	56	150	38	99.9	32	M5x0.8	AD Thru
	681280824SL	SKP50-HCSL 8-120	8	28	41.4	56	120	42	69.9	32	M5x0.8	AD Thru
	681280830SL	SKP50-HCSL 8-150	8	28	52	56	150	42	99.9	32	M5x0.8	AD Thru
	681281024SL	SKP50-HCSL 10-120	10	30	43.4	56	120	45	69.9	32	M8x1	AD Thru
	681281030SL	SKP50-HCSL 10-150	10	30	54	56	150	45	99.9	32	M8x1	AD Thru
	681281224SL	SKP50-HCSL 12-120	12	32	45.4	56	120	46	69.9	32	M8x1	AD Thru
	681281230SL	SKP50-HCSL 12-150	12	32	56	56	150	46	99.9	32	M8x1	AD Thru

SMS™ Torque Wrenches on page 114 | SMS™ Reduction Collets on page 106-107 | Retention knobs on page 108-109

SKP Face Contact SMS™ Heavy Duty Hydraulic Chucks



FEATURES

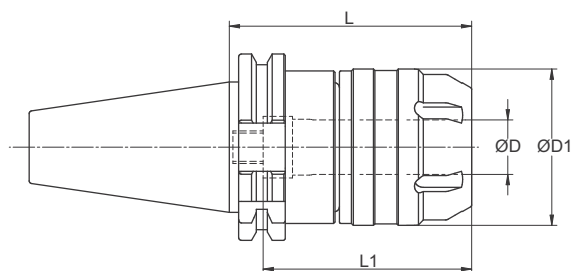
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Bore Tolerance: H6
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	ØD	ØD1	L	L1	L2	G	Coolant Style
SKP40	671262013	SKP40-HC 20-65	20	60	65	56	46	M8x1	AD Thru
	671263218	SKP40-HC 32-90	32	72	90	63	71	M8x1	AD Thru
SKP50	671282018	SKP50-HC 20-90	20	60	90	56	71	M8x1	AD Thru
	671283218	SKP50-HC 32-90	32	72	90	63	71	M8x1	AD Thru

SMS™ Torque Wrenches on page 114 | SMS™ Reduction Collets on page 106-107 | Retention knobs on page 108-109

SK Holders

SK SMS™ Multi-Milling Chucks



FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

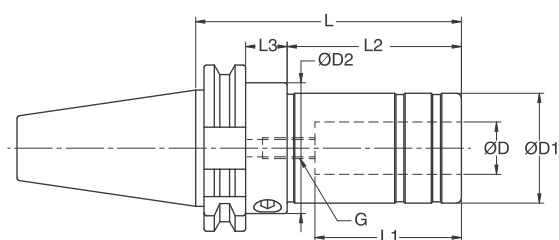
	Catalog Number	Description	Collet	Collect Capacity Range	ØD	ØD1	L	L1 Min/Max	Coolant Style
SK40 Shank	97192016	SK40-MMC 20-80	MC20	3-16	20	53	80	65/70	AD Thru
	97192024	SK40-MMC 20-120	MC20	3-16	20	53	120	65/70	AD Thru
	97193218	SK40-MMC 32-90	MC32	3-25	32	67	90	78/85	AD Thru
	97193224	SK40-MMC 32-120	MC32	3-25	32	67	120	78/85	AD Thru
SK50 Shank	97212016	SK50-MMC 20-80	MC20	3-16	20	53	80	65/70	AD Thru
	97212024	SK50-MMC 20-120	MC20	3-16	20	53	120	65/70	AD Thru
	97213218	SK50-MMC 32-90	MC32	3-25	32	67	90	78/85	AD Thru
	97213224	SK50-MMC 32-120	MC32	3-25	32	67	120	78/85	AD Thru

SMS™ Reduction Collets **on page 106-107**

SMS™ Collet Nut wrenches **on page 113**

Retention knobs **on page 108-109**

SK SMS™ Hydraulic Chucks



FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	ØD	ØD1	ØD2	L	L1	L2	L3	G	Coolant Style
SK40 Shank	68192020	SK40-HCS 20-100	20	42	52	100	52	58	23	M8x1	AD Thru
	68193223	SK40-HCS 32-115	32	60	60	115	62	88	-	M8x1	AD Thru
SK50 Shank	68212020	SK50-HCS 20-100	20	42	52	100	52	58	23	M8x1	AD Thru
	68213225	SK50-HCS 32-125	32	60	70	125	62	88	20	M8x1	AD Thru

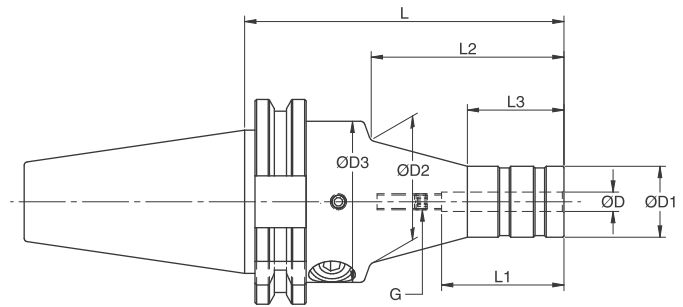
SMS™ Torque wrenches **on page 114**

SMS™ Reduction Collets **on page 106-107**

Retention knobs **on page 108-109**

SK Face Contact Holders

SK SMS™ Slim Design Hydraulic Chucks



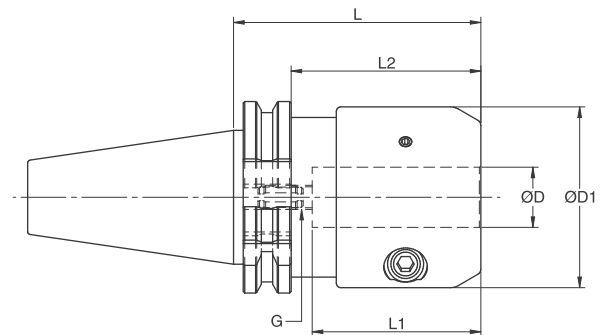
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- Bore Tolerance: H6
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	ØD	ØD1	ØD2	ØD3	L	L1 Max.	L2	L3	G	Coolant Style
SK40	68190624SL	SK40-HCSL 6-120	6	26	39.4	52	120	38	69.9	32	M5x0.8	AD Thru
	68190630SL	SK40-HCSL 6-150	6	26	50	52	150	38	99.9	32	M5x0.8	AD Thru
	68190824SL	SK40-HCSL 8-120	8	28	41.4	52	120	42	69.9	32	M5x0.8	AD Thru
	68190830SL	SK40-HCSL 8-150	8	28	52	52	150	42	99.9	32	M5x0.8	AD Thru
	68191024SL	SK40-HCSL 10-120	10	30	43.4	52	120	45	69.9	32	M8x1	AD Thru
	68191030SL	SK40-HCSL 10-150	10	30	52	52	150	45	99.9	32	M8x1	AD Thru
	68191224SL	SK40-HCSL 12-120	12	32	45.4	52	120	46	69.9	32	M8x1	AD Thru
	68191230SL	SK40-HCSL 12-150	12	32	52	52	150	46	99.9	32	M8x1	AD Thru
SK50	68210624SL	SK50-HCSL 6-120	6	26	39.4	56	120	38	69.9	32	M5x0.8	AD Thru
	68210630SL	SK50-HCSL 6-150	6	26	50	56	150	38	99.9	32	M5x0.8	AD Thru
	68210824SL	SK50-HCSL 8-120	8	28	41.4	56	120	42	69.9	32	M5x0.8	AD Thru
	68210830SL	SK50-HCSL 8-150	8	28	52	56	150	42	99.9	32	M5x0.8	AD Thru
	68211024SL	SK50-HCSL 10-120	10	30	43.4	56	120	45	69.9	32	M8x1	AD Thru
	68211030SL	SK50-HCSL 10-150	10	30	54	56	150	45	99.9	32	M8x1	AD Thru
	68211224SL	SK50-HCSL 12-120	12	32	45.4	56	120	46	69.9	32	M8x1	AD Thru
	68211230SL	SK50-HCSL 12-150	12	32	56	56	150	46	99.9	32	M8x1	AD Thru

SMS™ Torque wrenches [on page 114](#) | SMS™ Reduction Collets [on page 106-107](#) | Retention knobs [on page 108-109](#)

SK SMS™ Heavy Duty Hydraulic Chucks



FEATURES

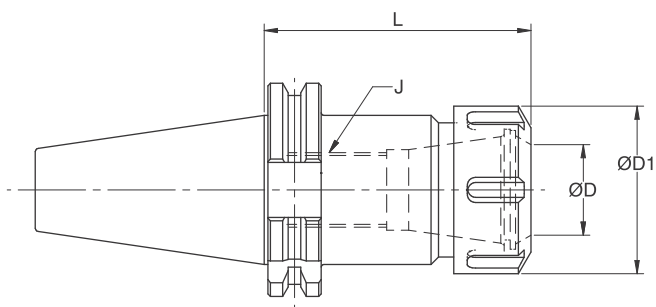
- Balanced to G2.5 @ 25,000 RPM
- Bore Tolerance: H6
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	ØD	ØD1	L	L1	L2	G	Coolant Style
SK40	67192013	SK40-HC 20-65	20	60	65	56	46	M8x1	AD Thru
	67193218	SK40-HC 32-90	32	72	90	63	71	M8x1	AD Thru
SK50	67212018	SK50-HC 20-90	20	60	90	56	71	M8x1	AD Thru
	67213218	SK50-HC 32-90	32	72	90	63	71	M8x1	AD Thru

SMS™ Torque wrenches [on page 114](#) | SMS™ Reduction Collets [on page 106-107](#) | Retention knobs [on page 108-109](#)

SK Holders

SK SMS™ ER Collet Holder



FEATURES

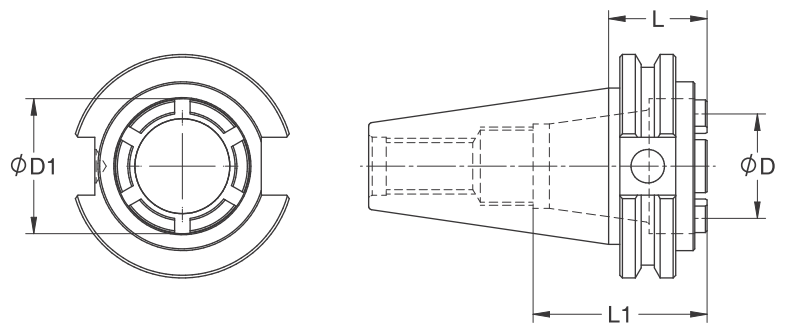
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- AD coolant thru the spindle
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	Collet Size	ØD Range	ØD1	L	J	Coolant Style
SK40	87219014	SK40-CHE 11-70	ER11	3-7	19	70	M8x1.25	AD Thru
	87219020	SK40-CHE 11-100	ER11	3-7	19	100	M8x1.25	AD Thru
	87219026	SK40-CHE 11-130	ER11	3-7	19	130	M8x1.25	AD Thru
	87219114	SK40-CHE 16-70	ER16	3-10	28	70	M10x1.5	AD Thru
	87219120	SK40-CHE 16-100	ER16	3-10	28	100	M10x1.5	AD Thru
	87219126	SK40-CHE 16-130	ER16	3-40	28	130	M10x1.5	AD Thru
	87219130	SK40-CHE 16-150	ER16	3-10	28	150	M10x1.5	AD Thru
	87219214	SK40-CHE 20-70	ER20	3-13	34	70	M12x1.75	AD Thru
	87219220	SK40-CHE 20-100	ER20	3-13	34	100	M12x1.75	AD Thru
	87219230	SK40-CHE 20-150	ER20	3-13	34	150	M12x1.75	AD Thru
	87219314	SK40-CHE 25-70	ER25	3-16	42	70	M16x2	AD Thru
	87219320	SK40-CHE 25-100	ER25	3-16	42	100	M16x2	AD Thru
	87219330	SK40-CHE 25-150	ER25	3-16	42	150	M16x2	AD Thru
	87219414	SK40-CHE 32-70	ER32	3-20	50	70	M18x1.5	AD Thru
	87219420	SK40-CHE 32-100	ER32	3-20	50	100	M18x1.5	AD Thru
	87219430	SK40-CHE 32-150	ER32	3-20	50	150	M18x1.5	AD Thru
	87219516	SK40-CHE 40-80	ER40	4-26	63	80	M22x1.5	AD Thru
	87219520	SK40-CHE 40-100	ER40	4-26	63	100	M22x1.5	AD Thru
	87219524	SK40-CHE 40-120	ER40	4-26	63	120	M22x1.5	AD Thru
SK50	87221121	SK50-CHE 16-105	ER16	3-10	28	105	M10x1.5	AD Thru
	87221130	SK50-CHE 16-150	ER16	3-10	28	150	M10x1.5	AD Thru
	87221221	SK50-CHE 20-105	ER20	3-13	34	105	M12x1.75	AD Thru
	87221230	SK50-CHE 20-150	ER20	3-13	34	150	M12x1.75	AD Thru
	87221240	SK50-CHE 20-200	ER20	3-13	34	200	M12x1.75	AD Thru
	87221321	SK50-CHE 25-105	ER25	3-16	42	105	M16x2	AD Thru
	87221330	SK50-CHE 25-150	ER25	3-16	42	150	M16x2	AD Thru
	87221340	SK50-CHE 25-200	ER25	3-16	42	200	M16x2	AD Thru
	87221421	SK50-CHE 32-105	ER32	3-20	50	105	M18x1.5	AD Thru
	87221430	SK50-CHE 32-150	ER32	3-20	50	150	M18x1.5	AD Thru
	87221440	SK50-CHE 32-200	ER32	3-20	50	200	M18x1.5	AD Thru
	87221521	SK50-CHE 40-105	ER40	4-26	63	105	M22x1.5	AD Thru
	87221530	SK50-CHE 40-150	ER40	4-26	63	150	M22x1.5	AD Thru
	87221540	SK50-CHE 40-200	ER40	4-26	63	200	M22x1.5	AD Thru

ER Collets **on page 97-101**
ER Nut Wrenches **on page 110**
Retention knobs **on page 108-109**

SK Holders

SK SMS™ ER-Z Short Collet Chucks



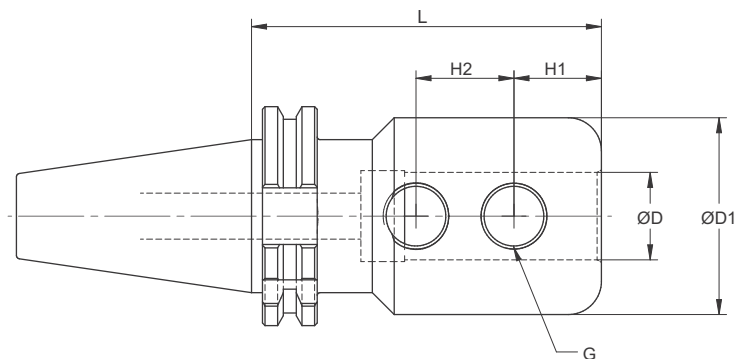
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	Collet Size	ØD Range	ØD1	L	L1	Coolant Style
SK40	872Z19406	SK40-CHEZ 32-28	ER32	3-20	32	28	34	AD Thru
SK50	872Z21406	SK50-CHEZ 32-28	ER32	3-20	32	28	34	AD Thru

ER Collets on page 97-101 | ER-Z Nut Wrenches on page 110 | ER-Z Nut on page 99 | Retention knobs on page 108-109

SK SMS™ End Mill Holders



FEATURES

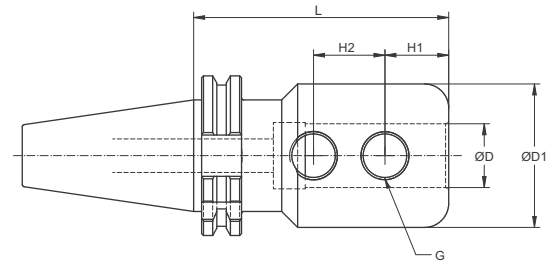
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	ØD	L	ØD1	H1	H2	G	Coolant Style
SK40	84190615	SK40-EMH 6-75	6	75	25	18	-	M6	AD Thru
	84190815	SK40-EMH 8-75	8	75	28	18	-	M8×1.25	AD Thru
	84191015	SK40-EMH 10-75	10	75	35	20	-	M10×1.5	AD Thru
	84191215	SK40-EMH 12-75	12	75	42	22.50	-	M12×1.75	AD Thru
	84191615	SK40-EMH 16-75	16	75	48	24	-	M14×2	AD Thru
	84192015	SK40-EMH 20-75	20	75	52	25	-	M16×2	AD Thru
	84192518	SK40-EMH 25-90	25	90	65	24	25	M18×2	AD Thru
	84193224	SK40-EMH 32-120	32	120	72	24	28	M20×2.5	AD Thru
SK50	84211218	SK50-EMH 12-90	12	90	42	22.5	-	M12×1.75	AD Thru
	84211618	SK50-EMH 16-90	16	90	48	24	-	M14×2	AD Thru
	84212018	SK50-EMH 20-90	20	90	52	25	-	M16×2	AD Thru
	84212521	SK50-EMH 25-105	25	105	65	24	25	M18×2	AD Thru
	84213224	SK50-EMH 32-120	32	120	72	24	28	M20×2	AD Thru
	84214024	SK50-EMH 40-120	40	120	90	30	32	M20×2	AD Thru

Retention knobs on page 108-109

SK Holders

SK SMS™ End Mill Holders



FEATURES

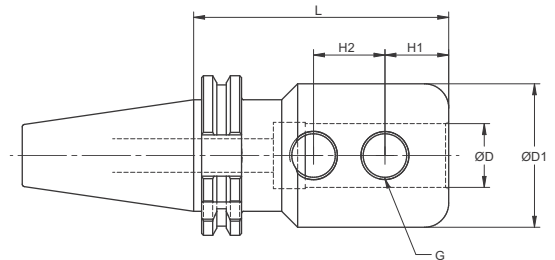
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	ØD	L	ØD1	H1	H2	G	Coolant Style
SK40 Shank	84190615	SK40-EMH 6-75	6.00	75	25	18	-	M6	AD Thru
	84190815	SK40-EMH 8-75	8.00	75	28	18	-	M8×1.25	AD Thru
	84191015	SK40-EMH 10-75	10.00	75	35	20	-	M10×1.5	AD Thru
	84191215	SK40-EMH 12-75	12.00	75	42	22.50	-	M12×1.75	AD Thru
	84191615	SK40-EMH 16-75	16.00	75	48	24	-	M14×2	AD Thru
	84192015	SK40-EMH 20-75	20.00	75	52	25	-	M16×2	AD Thru
	84192518	SK40-EMH 25-90	25.00	90	65	24	25	M18×2	AD Thru
SK50 Shank	84193224	SK40-EMH 32-120	32.00	120	72	24	28	M20×2.5	AD Thru
	84211218	SK50-EMH 12-90	12.00	90	42	22.5	-	M12×1.75	AD Thru
	84211618	SK50-EMH 16-90	16.00	90	48	24	-	M14×2	AD Thru
	84212018	SK50-EMH 20-90	20.00	90	52	25	-	M16×2	AD Thru
	84212521	SK50-EMH 25-105	25.00	105	65	24	25	M18×2	AD Thru
	84213224	SK50-EMH 32-120	32.00	120	72	24	28	M20×2	AD Thru
	84214024	SK50-EMH 40-120	40.00	120	90	30	32	M20×2	AD Thru

SK SMS™ Side Lock Holders



Retention knobs on page 108-109



FEATURES

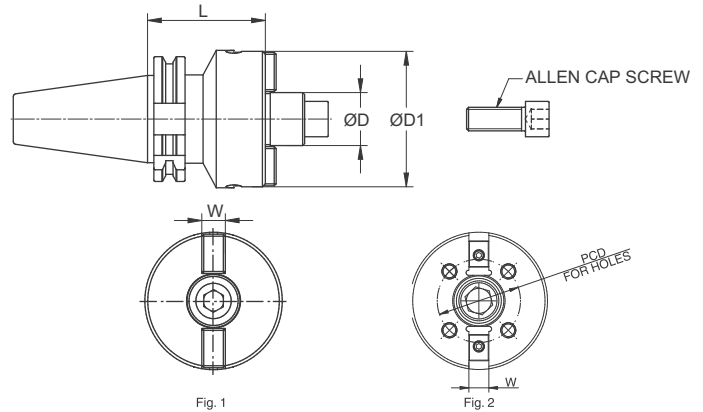
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	ØD	L	ØD1	H1	H2	G	Coolant Style
SK30 Shank	85181615	SK30-SLA 16-75	16	75	40	25	-	M10 x 1.5	AD Thru
	85182015	SK30-SLA 20-75	20	75	40	25	20	M10 x 1.5	AD Thru
	85182515	SK30-SLA 25-75	25	75	46	25	20	M12 x 1.75	AD Thru
SK40 Shank	85192018	SK40-SLA 20-90	20	90	50	25	20	M10 x 1.5	AD Thru
	85192518	SK40-SLA 25-90	25	90	50	25	20	M12 x 1.75	AD Thru
	85193218	SK40-SLA 32-90	32	90	60	30	20	M12 x 1.75	AD Thru
	85194018	SK40-SLA 40-90	40	90	60	25	25	M12 x 1.75	AD Thru
	85194218	SK40-SLA 42-90	42	90	60	30	20	M12 x 1.75	AD Thru
SK50 Shank	85211621	SK50-SLA 16-105	16	105	40	25	20	M10 x 1.5	AD Thru
	85212021	SK50-SLA 20-105	20	105	50	25	20	M10 x 1.5	AD Thru
	85212521	SK50-SLA 25-105	25	105	50	25	20	M12 x 1.75	AD Thru
	85213221	SK50-SLA 32-105	32	105	60	30	20	M12 x 1.75	AD Thru
	85214021	SK50-SLA 40-105	40	105	70	30	20	M16 x 2	AD Thru
	85215021	SK50-SLA 50-105	50	105	80	30	20	M16 x 2	AD Thru

Retention knobs on page 108-109

SK Holders

SK SMS™ Shell Mill Holder



FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Coolant through the center of the body

	Catalog Number	Description	Fig. No.	ØD	L	ØD1	H	W	P.C.D. Holes	Allen Cap Screw	Coolant Style
SK30 Shank	81181607	SK30-SMH 16-35	1	16	35	34	15	8	-	M8x25	AD Thru
	81182209	SK30-SMH 22-45	1	22	45	45	18	8	-	M10x30	AD Thru
SK40 Shank	81192209	SK40-SMH 22-45	1	22	45	45	18	10	-	M10x30	AD Thru
	81192218	SK40-SMH 22-90	1	22	90	45	18	10	-	M10x30	AD Thru
	81192712	SK40-SMH 27-60	1	27	60	70	20	12	-	M12x35	AD Thru
	81192718	SK40-SMH 27-90	1	27	90	70	20	12	-	M12x35	AD Thru
	81193212	SK40-SMH 32-60	1	32	60	85	22	14	-	M16x35	AD Thru
	81193218	SK40-SMH 32-90	1	32	90	85	22	14	-	M16x35	AD Thru
	80194012	SK40-SMH 40-60	1	40	60	85	26	16	-	M20x35	AD THRU
	80194018	SK40-SMH 40-90	1	40	90	85	26	16	-	M20x35	AD THRU
	801940F15	SK40-FMH 40F-75	2	40	75	98	26	16	66.7	M20x35	AD THRU
SK50 Shank	801940F21	SK40-FMH 40F-105	2	40	105	98	26	16	66.7	M20x35	AD THRU
	81212212	SK50-SMH 22-60	1	22	60	45	18	10	-	M10x30	AD THRU
	81212221	SK50-SMH 22-105	1	22	105	45	18	10	-	M10x30	AD THRU
	81212230	SK50-SMH 22-150	1	22	150	45	18	10	-	M10x30	AD THRU
	81212240	SK50-SMH 22-200	1	22	200	45	18	10	-	M10x30	AD THRU
	81212709	SK50-SMH 27-45	1	27	45	70	20	12	-	M12x35	AD THRU
	81212718	SK50-SMH 27-90	1	27	90	70	20	12	-	M12x35	AD THRU
	81212730	SK50-SMH 27-150	1	27	150	70	20	12	-	M12x35	AD THRU
	81212740	SK50-SMH 27-200	1	27	200	70	20	12	-	M12x35	AD THRU
	81213212	SK50-SMH 32-60	1	32	60	80	22	14	-	M16x35	AD THRU
	81213221	SK50-SMH 32-105	1	32	105	80	22	14	-	M16x35	AD THRU
	81213230	SK50-SMH 32-150	1	32	150	80	22	14	-	M16x35	AD THRU
	81213240	SK50-SMH 32-200	1	32	200	80	22	14	-	M16x35	AD THRU
	80214015	SK50-SMH 40-75	1	40	75	85	26	16	-	M16x35	AD THRU
	80214021	SK50-SMH 40-105	1	40	105	85	26	16	-	M16x35	AD THRU
	80214030	SK50-SMH 40-150	1	40	150	85	26	16	-	M20x35	AD THRU
	802140F15	SK50-FMH40F-75	2	40	75	98	26	16	66.7	M20x35	AD THRU
	802140F21	SK50-FMH40F-105	2	40	105	98	26	16	66.7	M20x35	AD THRU
	802160F15	SK50-FMH 60F-75	2	60	75	128	25	25.4	101.6	M24x40	AD THRU
	802160F21	SK50-FMH 60F-105	2	60	105	128	25	25.4	101.6	M24x40	AD THRU

NOTE:

ALL Shell Mill Holders are supplied with coolant through the center up to the arbor screw hole.

Retention knobs **on page 108-109**

Non-Coolant and Coolant Arbor Screws **on page 111**

SK Holders

SK SMS™ Morse Taper Holders

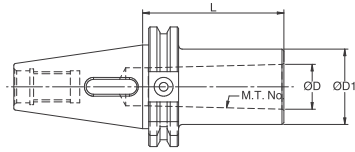


Fig. 1

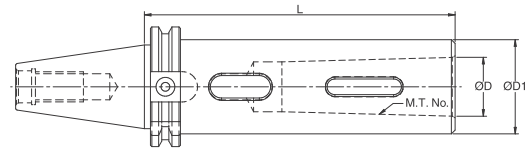


Fig. 2

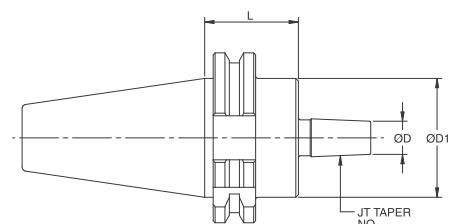
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	Fig. No.	MT Socket	ØD	L	ØD1	Coolant Style
SK40	88019109	SK40-MTA 1-45	1	1	12.065	45	25	N/A
	88019124	SK40-MTA 1-120	2	1	12.065	120	25	N/A
	88019209	SK40-MTA 2-45	1	2	17.780	45	32	N/A
	88019224	SK40-MTA 2-120	2	2	17.780	120	32	N/A
	88019315	SK40-MTA 3-75	1	3	23.825	75	40	N/A
	88019327	SK40-MTA 3-135	2	3	23.825	135	40	N/A
	88019418	SK40-MTA 4-90	1	4	31.267	90	50	N/A
	88019433	SK40-MTA 4-165	2	4	31.267	165	50	N/A
SK50	88021109	SK50-MTA 1-45	1	1	12.065	45	25	N/A
	88021124	SK50-MTA 1-120	2	1	12.065	120	25	N/A
	88021136	SK50-MTA 1-180	2	1	12.065	180	25	N/A
	88021209	SK50-MTA 2-45	1	2	17.780	45	32	N/A
	88021224	SK50-MTA 2-120	2	2	17.780	120	32	N/A
	88021230	SK50-MTA 2-150	2	2	17.780	150	32	N/A
	88021236	SK50-MTA 2-180	2	2	17.780	180	32	N/A
	88021309	SK50-MTA 3-45	1	3	23.825	45	40	N/A
	88021315	SK50-MTA 3-75	1	3	23.825	75	40	N/A
	88021330	SK50-MTA 3-150	2	3	23.825	150	40	N/A
	88021336	SK50-MTA 3-180	2	3	23.825	180	40	N/A
	88021415	SK50-MTA 4-75	1	4	31.267	75	50	N/A
	88021436	SK50-MTA 4-180	2	4	31.267	180	50	N/A
	88021521	SK50-MTA 5-105	1	5	44.399	105	65	N/A
	88021542	SK50-MTA 5-210	2	5	44.399	210	65	N/A

SK SMS™ Jacob Taper Holders

Retention knobs on page 108-109



FEATURES

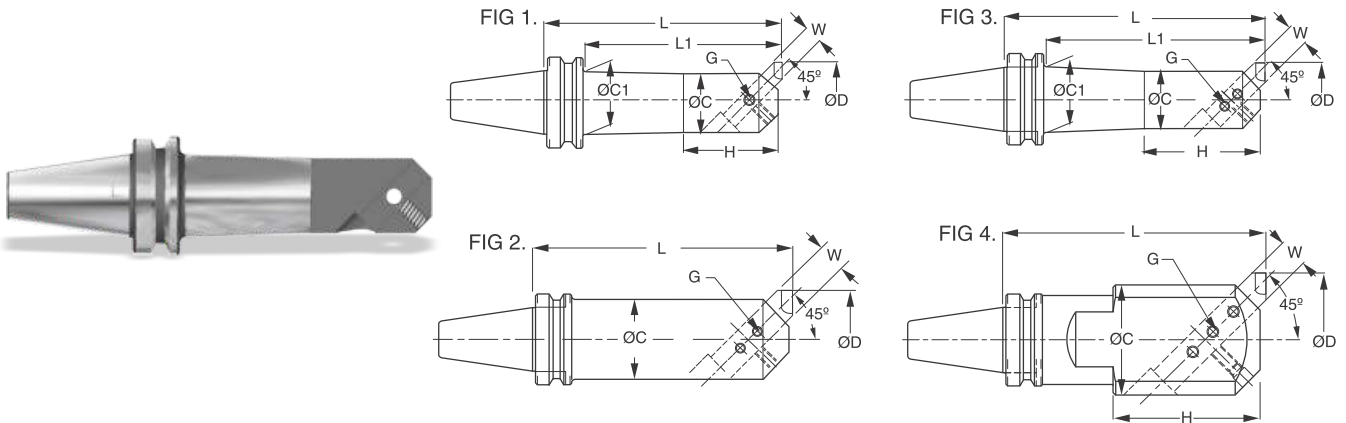
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	JT Taper No.	L	ØD	ØD1
SK40	88419109	SK40-JTA 1-45	1	45	9.754	45
	88419209	SK40-JTA 2-45	2	45	14.199	45
	88419309	SK40-JTA 3-45	3	45	20.599	45
	88419409	SK40-JTA 4-45	4	45	28.550	45
	88419609	SK40-JTA 6-45	6	45	17.170	45
	884193309	SK40-JTA 33-45	33	45	15.850	45
SK50	88421109	SK50-JTA 1-45	1	45	9.754	45
	88421209	SK50-JTA 2-45	2	45	14.199	45
	88421309	SK50-JTA 3-45	3	45	20.599	45
	88421409	SK50-JTA 4-45	4	45	28.550	45
	88421609	SK50-JTA 6-45	6	45	17.170	45
	884213309	SK50-JTA 33-45	33	45	15.850	45

Retention knobs on page 108-109

SK Holders

SK SMS™ Boring Bars (Square Tool Type A)



FEATURES

- Balanced on request
- T.I.R. < 10µm
- Taper shank ground to AT3 accuracy (or better)

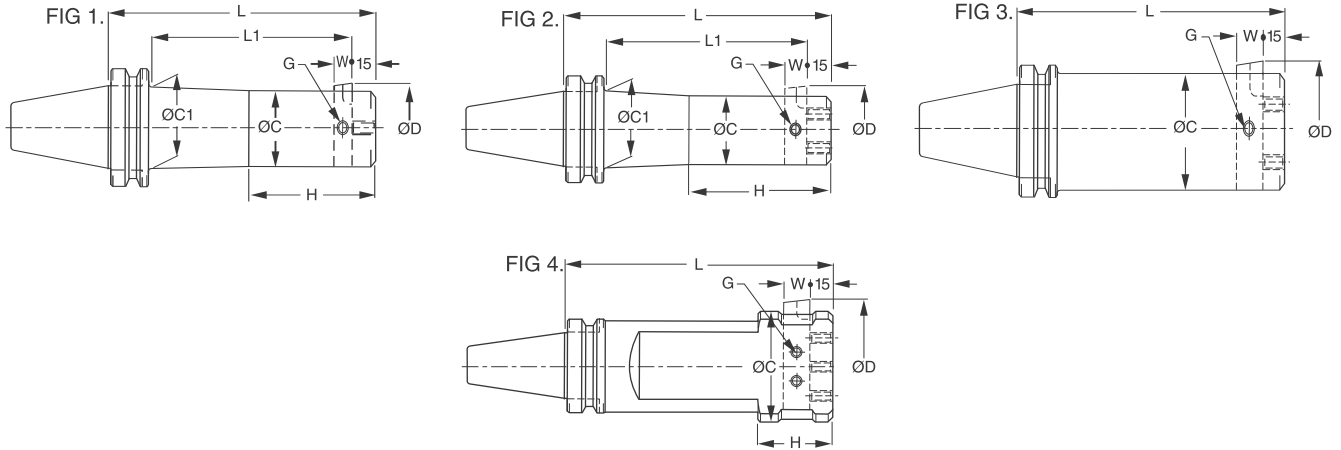
	Catalog Number	Description	Fig. No.	ØD Min.	ØD Max.	L	L1	H	ØC	ØC1	W	Suitable Screw
SK30	90181324	SK30-BSA 25-120	1	25	38	120	95	35	20	22	8	M6
	90181527	SK30-BSA 30-135	1	30	42	135	110	40	24	26	8	M6
	90181930	SK30-BSA 38-150	1	38	52	150	125	50	30	33	10	M8
	90182130	SK30-BSA 42-150	1	42	56	150	125	60	34	37	10	M8
	90182530	SK30-BSA 50-150	1	50	65	150	-	65	40	44	12	M10
SK40	90191327	SK40-BSA 25-135	1	25	38	135	103	35	20	22	8	M6
	90191533	SK40-BSA 30-165	1	30	42	165	133	40	24	26	8	M6
	90191936	SK40-BSA 38-180	1	38	52	180	148	50	30	33	10	M8
	90192142	SK40-BSA 42-210	1	42	56	210	178	60	34	37	10	M8
	90192533	SK40-BSA 50-165	1	50	65	165	133	65	40	44	12	M10
	90192542	SK40-BSA 50-210	1	50	65	210	178	65	40	44	12	M10
	90193133	SK40-BSA 62-165	1	62	90	165	133	80	50	56	16	M10
	90193145	SK40-BSA 62-225	1	62	90	225	193	80	50	56	16	M10
	90193633	SK40-BSA 72-165	2	72	110	165	-	-	60	-	20	M10
	90193645	SK40-BSA 72-225	2	72	110	225	-	-	60	-	20	M10
	90194533	SK40-BSA 90-165	3	90	125	165	-	55	75	-	20	M12
	90194542	SK40-BSA 90-210	3	90	125	210	-	55	75	-	20	M12
SK50	90211327	SK50-BSA 25-135	1	25	38	135	92	35	20	22	8	M6
	90211533	SK50-BSA 30-165	1	30	42	165	122	40	24	26	8	M6
	90211936	SK50-BSA 38-180	1	38	52	180	137	50	30	33	10	M8
	90212142	SK50-BSA 42-210	1	42	56	210	167	60	34	37	10	M8
	90212536	SK50-BSA 50-180	1	50	65	180	137	65	40	44	12	M10
	90212548	SK50-BSA 50-240	1	50	65	240	197	65	40	44	12	M10
	90213139	SK50-BSA 62-195	1	62	90	195	152	80	50	56	16	M10
	90213154	SK50-BSA 62-270	1	62	90	270	227	80	50	56	16	M10
	90213639	SK50-BSA 72-195	2	72	110	195	152	95	60	66	20	M10
	90213657	SK50-BSA 72-285	2	72	110	285	242	95	60	66	20	M10
	90214542	SK50-BSA 90-210	2	90	125	210	167	110	75	80	20	M12
	90214560	SK50-BSA 90-300	2	90	125	300	257	110	75	80	20	M12
	90215339	SK50-BSA 105-195	3	105	160	195	-	-	90	-	25	M12
	90215357	SK50-BSA 105-285	2	105	160	285	-	130	90	94	25	M12
	90216551	SK50-BSA 130-255	4	130	190	255	-	85	110	-	25	M12

Retention knobs **on page 108-109**

Square Tools **on page 114**

SK Holders

SK SMS™ Boring Bars (Square Tool Type B)



FEATURES

- Balanced on request
- T.I.R. < 10µm

- Taper shank ground to AT3 accuracy (or better)

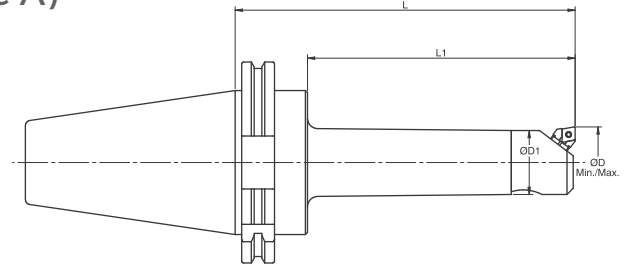
	Catalog Number	Description	Fig. No.	ØD Min.	ØD Max.	L	L1	H	ØC	ØC1	W	Suitable Screw
SK30	91181324	SK30-BSB 25-120	1	25	52	135	95	50	20	22	8	M8
	91181930	SK30-BSB 38-150	1	38	70	165	125	70	30	32	10	M10
	91182530	SK30-BSB 50-150	1	50	90	165	-	85	40	44	12	M10
SK40	91191327	SK40-BSB 25-135	1	25	52	150	103	50	20	22	8	M8
	91191936	SK40-BSB 38-180	1	38	70	195	148	70	30	32	10	M10
	91192533	SK40-BSB 50-165	1	50	90	180	133	85	40	44	12	M10
	91192542	SK40-BSB 50-210	1	50	90	225	178	85	40	44	12	M10
	91193133	SK40-BSB 62-165	2	62	115	180	133	95	50	56	16	M10
	91193145	SK40-BSB 62-225	2	62	115	180	133	95	50	56	16	M10
	91193633	SK40-BSB 72-165	3	72	135	180	-	-	60	-	20	M10
	91193645	SK40-BSB 72-225	3	72	135	240	-	-	60	-	20	M10
	91194533	SK40-BSB 90-165	4	90	150	180	-	50	75	-	20	M12
	91194545	SK40-BSB 90-210	4	90	150	225	-	50	75	-	20	M12
SK50	91211327	SK50-BSB 25-135	1	25	52	150	92	50	20	22	8	M8
	91211936	SK50-BSB 38-180	1	38	70	195	137	70	30	32	10	M10
	91212536	SK50-BSB 50-180	1	50	90	195	137	85	40	44	12	M10
	91212548	SK50-BSB 50-240	1	50	90	255	197	85	40	44	12	M10
	91213139	SK50-BSB 62-195	2	62	115	210	152	95	50	56	16	M10
	91213154	SK50-BSB 62-270	2	62	115	285	227	95	50	56	16	M10
	91213639	SK50-BSB 72-195	2	72	135	210	152	110	60	66	20	M10
	91213657	SK50-BSB 72-285	2	72	135	300	242	110	60	66	20	M10
	91214542	SK50-BSB 90-210	2	90	150	225	167	130	75	80	20	M12
	91214560	SK50-BSB 90-300	2	90	150	315	257	130	75	80	20	M12
	91215339	SK50-BSB 105-195	3	105	190	210	-	-	90	-	25	M12
	91215357	SK50-BSB 105-285	2	105	190	300	-	150	90	94	25	M12
	91216551	SK50-BSB 130-255	4	130	260	270	-	60	110	-	25	M12

Retention knobs **on page 108-109**

Square Tools **on page 114**

SK Holders

SK SMS™ Fine Boring Bars (Cartridge Type A)



FEATURES

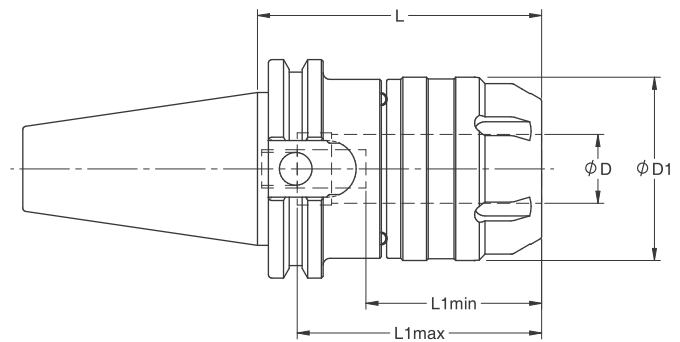
- Balanced on request
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	ØD Min.	ØD Max.	L	L1	ØD1	
SK40	89191530	SK40-FBC 29-150	29	34	150	118	25	FBCAR16-06
	89191545	SK40-FBC 29-225	29	34	225	193	25	FBCAR16-06
	89191630	SK40-FBC 32-150	32	37	150	118	28	FBCAR16-06
	89191645	SK40-FBC 32-225	32	37	225	193	28	FBCAR16-06
	89191730	SK40-FBC 35-150	35	40	150	118	31	FBCAR16-06
	89191745	SK40-FBC 35-225	35	40	225	193	31	FBCAR16-06
	89191930	SK40-FBC 38-150	37	44	150	118	33	FBCAR20-06
	89191945	SK40-FBC 38-225	37	44	225	193	33	FBCAR20-06
	89192130	SK40-FBC 42-165	42	49	150	118	38	FBCAR20-06
	89192145	SK40-FBC 42-225	42	49	225	193	38	FBCAR20-06
	89192433	SK40-FBC 48-165	48	55	165	133	44	FBCAR20-06
	89192445	SK40-FBC 48-225	48	55	225	193	44	FBCAR20-06
	89192733	SK40-FBC 54-165	54	61	165	133	50	FBCAR20-06
	89192745	SK40-FBC 54-225	54	61	225	193	50	FBCAR20-06
	89193033	SK40-FBC 60-165	60	67	165	133	56	FBCAR20-06
	89193045	SK40-FBC 60-225	60	67	225	193	56	FBCAR20-06
	89193133	SK40-FBC 62-165	62	77	165	133	58	FBCAR22-09
	89193145	SK40-FBC 62-225	62	77	225	193	58	FBCAR22-09
	89193833	SK40-FBC 76-165	76	91	165	133	72	FBCAR22-09
	89193845	SK40-FBC 76-225	76	91	225	193	72	FBCAR22-09
SK50	89211433	SK50-FBC 29-165	29	34	165	122	25	FBCAR16-06
	89211445	SK50-FBC 29-225	29	34	225	182	25	FBCAR16-06
	89211633	SK50-FBC 32-165	32	37	165	122	28	FBCAR16-06
	89211645	SK50-FBC 32-225	32	37	225	182	28	FBCAR16-06
	89211733	SK50-FBC 35-165	35	40	165	122	31	FBCAR16-06
	89211745	SK50-FBC 35-225	35	40	225	182	31	FBCAR16-06
	89211933	SK50-FBC 38-165	37	44	165	122	33	FBCAR20-06
	89211945	SK50-FBC 38-225	37	44	225	182	33	FBCAR20-06
	89212133	SK50-FBC 42-165	42	49	165	122	38	FBCAR20-06
	89212145	SK50-FBC 42-225	42	49	225	182	38	FBCAR20-06
	89212433	SK50-FBC 48-165	48	55	165	122	44	FBCAR20-06
	89212445	SK50-FBC 48-225	48	55	225	182	44	FBCAR20-06
	89212733	SK50-FBC 54-165	54	61	165	122	50	FBCAR20-06
	89212745	SK50-FBC 54-225	54	61	225	182	50	FBCAR20-06
	89213033	SK50-FBC 60-165	60	67	165	122	56	FBCAR20-06
	89213045	SK50-FBC 60-225	60	67	225	182	56	FBCAR20-06
	89213133	SK50-FBC 62-165	62	77	165	122	58	FBCAR22-09
	89213148	SK50-FBC 62-240	62	77	240	197	58	FBCAR22-09
	89213833	SK50-FBC 76-165	76	91	165	122	72	FBCAR22-09
	89213848	SK50-FBC 76-240	76	91	240	197	72	FBCAR22-09
	89214533	SK50-FBC 90-165	90	105	165	122	86	FBCAR22-09
	89214548	SK50-FBC 90-240	90	105	240	197	86	FBCAR22-09
	89215233	SK50-FBC 104-165	104	119	165	122	100	FBCAR22-09
	89215248	SK50-FBC 104-240	104	119	240	197	100	FBCAR22-09

Retention knobs on page 108-109 | Cartridge FBCAR on page 114

CATP Face Contact Holders

CATP Face Contact SMS™ Multi-Milling Chucks



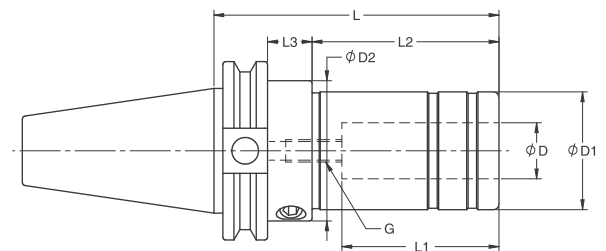
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	Collet Size	Collet Capacity Range	ϕD	$\phi D1$	L	L1 Min.	L1 Max.	Coolant Style
CATP40 Metric	971362018	CATP40-MMC 20-90	MC20	3 - 16	20	53	90	63	70	AD Thru
	971363220	CATP40-MMC 32-100	MC32	3 - 25	32	74	100	78	85	AD Thru
CATP40 Inch	971362818	CATP40-MMC 0.750-3.50	MC 0.750	.125 - .625	0.75	2.09	3.50	2.50	2.75	AD Thru
	971362825	CATP40-MMC 0.750-5.00	MC0.750	.125 - .625	0.75	2.09	5.00	2.50	2.75	AD Thru
	971362218	CATP40-MMC 1.250-3.50	MC 1.250	.125 - 1.000	1.25	2.64	3.50	3.09	3.34	AD Thru
	971362225	CATP40-MMC 1.250-5.00	MC 1.250	.125 - 1.000	1.25	2.64	5.00	3.09	3.34	AD Thru
CATP50 Metric	971382021	CATP50-MMC 20-105	MC20	3 - 16	20	53	105	63	70	AD Thru
	971383221	CATP50-MMC 32-105	MC32	3 - 25	32	67	105	78	85	AD Thru
CATP50 Inch	971382817	CATP50-MMC 0.750-3.25	MC 0.750	.125 - .625	0.75	2.09	3.25	2.50	2.75	AD Thru
	971382825	CATP50-MMC 0.750-5.00	MC 0.750	.125 - .625	0.75	2.09	5.00	2.50	2.75	AD Thru
	971382217	CATP50-MMC 1.250-3.25	MC 1.250	.125 - 1.00	1.25	2.64	3.25	3.09	3.34	AD Thru
	971382225	CATP50-MMC 1.250-5.00	MC 1.250	.125 - 1.00	1.25	2.64	5.00	3.09	3.34	AD Thru

SMS™ Reduction Collets on page 106-107 | SMS™ Collet Nut wrenches on page 113 | Retention knobs on page 108-109

CATP Face Contact SMS™ Hydraulic Chucks



FEATURES

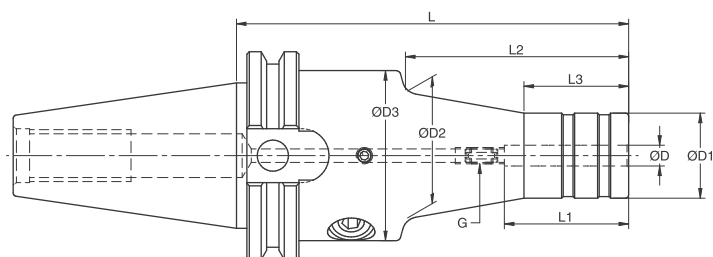
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	ϕD	$\phi D1$	$\phi D2$	L	L1	L2	L3	G	Coolant Style
CATP40 Metric	681362020	CATP40-HCS 20-100	20	42	52	100	52	56.4	24.5	M8x1	AD Thru
	681363223	CATP40-HCS 32-115	32	60	60	115	60	60	-	M8x1	AD Thru
CATP40 Inch	681362820	CATP40-HCS 0.750-4.00	0.750	1.65	2.05	4.00	2.05	2.28	0.96	M8x1	AD Thru
	681362223	CATP40-HCS 1.250-4.52	1.250	2.36	2.36	4.52	2.44	3.78	-	M8x1	AD Thru
CATP50 Inch	681382820	CATP50-HCS 0.750-4.00	0.750	1.65	2.05	4.00	2.05	2.28	0.96	M8x1	AD Thru
	681382225	CATP50-HCS 1.250-5.00	1.250	2.36	2.75	5.00	2.44	3.46	0.78	M8x1	AD Thru
CATP50 Metric	681382020	CATP50-HCS 20-100	20	42	52	100	52	56.4	24.5	M8x1	AD Thru
	681382520	CATP50-HCS 25-100	25	52	69.85	100	52	56.4	24.5	M8x1	AD Thru
	681383225	CATP50-HCS 32-125	32	60	69.85	125	60	85.9	20	M8x1	AD Thru

SMS™ Torque wrenches on page 114 | SMS™ Reduction Collets on page 106-107 | Retention knobs on page 108-109

CATP Face Contact Holders

CATP Face Contact SMS™ Slim Design Hydraulic Chucks



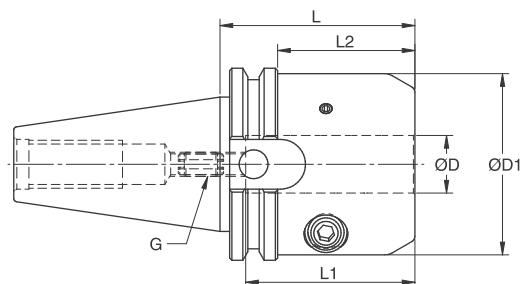
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	ØD	ØD1	ØD2	ØD3	L	L1	L2	L3	G	Coolant Style
CATP40 Shank	681360624SL	CATP40 HCSL 6-120	6	26	39	52	120	38	68	32	M5x0.8	AD Thru
	681360824SL	CATP40 HCSL 8-120	8	28	41	52	120	42	68	32	M5x0.8	AD Thru
	681361024SL	CATP40 HCSL 10-120	10	30	43	52	120	45	68	32	M8x1	AD Thru
	681361224SL	CATP40 HCSL 12-120	12	32	45	52	120	46	68	32	M8x1	AD Thru
CATP50 Shank	681380624SL	CATP50 HCSL 6-120	6	26	39	63	120	38	68	32	M5x0.8	AD Thru
	681380824SL	CATP50 HCSL 8-120	8	28	41	63	120	42	68	32	M5x0.8	AD Thru
	681381024SL	CATP50 HCSL 10-120	10	30	43	63	120	45	68	32	M8x1	AD Thru
	681381224SL	CATP50 HCSL 12-120	12	32	45	63	120	46	68	32	M8x1	AD Thru

SMS™ Torque wrenches [on page 114](#) | SMS™ Reduction Collets [on page 106-107](#) | Retention knobs [on page 108-109](#)

CATP Face Contact SMS™ Heavy Duty Hydraulic Chucks



FEATURES

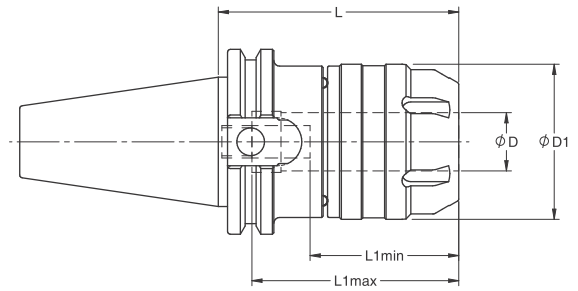
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	ØD	ØD1	L	L1	L2	G	Coolant Style
CATP40 Inch	671362813	CATP40-HC 0.750-2.50	0.750	2.36	2.50	2.05	1.75	M8x1	AD Thru
	671362217	CATP40-HC 1.250-3.25	1.250	2.84	3.25	2.44	2.50	M8x1	AD Thru
CATP40 Metric	671362013	CATP40-HC 20-65	20	60	65	56	46	M8x1	AD Thru
	671363218	CATP40-HC 32-90	32	72	90	63	71	M8x1	AD Thru
CATP50 Inch	671382817	CATP50-HC 0.750-3.25	0.750	2.36	3.25	2.05	2.50	M8x1	AD Thru
	671382217	CATP50-HC 1.250-3.25	1.250	2.84	3.25	2.44	2.50	M8x1	AD Thru
CATP50 Metric	671382018	CATP50-HC 20-90	20	60	90	56	71	M8x1	AD Thru
	671383218	CATP50-HC 32-90	32	72	90	63	71	M8x1	AD Thru

SMS™ Torque wrenches [on page 114](#) | SMS™ Reduction Collets [on page 106-107](#) | Retention knobs [on page 108-109](#)

CAT Holders

CAT SMS™ Multi-Milling Chucks



FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µM
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	Collet Size	Collet Capacity Range	ØD	ØD1	L	L1 Min.	L1 Max.	Coolant Style
CAT40 Inch	97242818	CAT40-MMC 0.750-3.50	MC75	.125 - .625	0.75	2.09	3.50	2.50	2.75	AD Thru
	97242825	CAT40-MMC 0.750-5.00	MC75	.125 - .625	0.75	2.09	5.00	2.50	2.75	AD Thru
	97242118	CAT40-MMC 1.000-3.50	MC1.00	.125 - .750	1.00	2.09	3.50	2.50	2.75	AD Thru
	97242218	CAT40-MMC 1.250-3.50	MC125	.125 - 1.00	1.25	2.64	3.50	3.09	3.34	AD Thru
	97242225	CAT40-MMC 1.250-5.00	MC125	.125 - 1.00	1.25	2.64	5.00	3.09	3.34	AD Thru
CAT40 Metric	97242018	CAT40-MMC 20-90	MC20	3 - 16	20	53	90	63	70	AD Thru
	97242024	CAT40-MMC 20-120	MC20	3 - 16	20	53	120	63	70	AD Thru
	97243218	CAT40-MMC 32-90	MC32	3 - 25	32	67	90	78	85	AD Thru
	97243224	CAT40-MMC 32-120	MC32	3 - 25	32	67	120	78	85	AD Thru
CAT50 Inch	97262816	CAT50-MMC 0.750-3.25	MC75	.125 - .625	0.75	2.09	3.25	2.50	2.75	AD Thru
	97262825	CAT50-MMC 0.750-5.00	MC75	.125 - .625	0.75	2.09	5.00	2.50	2.75	AD Thru
	97262216	CAT50-MMC 1.250-3.25	MC125	.125 - 1.00	1.25	2.64	3.25	3.09	3.38	AD Thru
	97262225	CAT50-MMC 1.250-5.00	MC125	.125 - 1.00	1.25	2.64	5.00	3.09	3.38	AD Thru
CAT50 Metric	97262016	CAT50-MMC 20-80	MC20	3 -- 16	20	53	80	63	70	AD Thru
	97262024	CAT50-MMC 20-120	MC20	3 -- 16	20	53	120	63	70	AD Thru
	97263218	CAT50-MMC 32-90	MC32	3 -- 25	32	67	90	78	85	AD Thru
	97263224	CAT50-MMC 32-120	MC32	3 -- 25	32	67	120	78	85	AD Thru

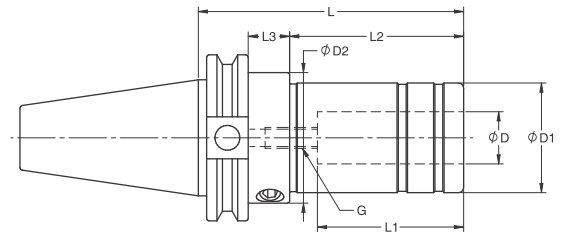
SMS™ Reduction Collets **on page 106-107**

SMS™ Collet Nut Wrenches **on page 113**

Retention knobs **on page 108-109**

CAT Holders

CAT SMS™ Hydraulic Chucks



FEATURES

- Balanced to G2.5 @ 25,000 RPM
- Taper shank ground to AT3 accuracy (or better)
- T.I.R. < 5µm
- Bore tolerance: H6

	Catalog Number	Description	ØD	ØD1	ØD2	L	L1	L2	L3	G	Coolant Style
CAT40 Inch	68242820	CAT40-HCS 0.750-4.00	0.750	1.65	2.05	4.00	2.05	2.28	0.96	M8x1	AD Thru
	68242223	CAT40-HCS 1.250-4.52	1.250	2.36	2.36	4.52	2.44	3.78	-	M8x1	AD Thru
CAT40 Metric	68242020	CAT40-HCS 20-100	20	42	52	100	52	56.4	25.4	M8x1	AD Thru
	68243223	CAT40-HCS 32-115	32	60	60	115	60	60	-	M8x1	AD Thru
CAT50 Inch	68262820	CAT50-HCS 0.750-4.00	0.750	1.65	2.05	4.00	2.05	2.28	0.96	M8x1	AD Thru
	68262225	CAT50-HCS 1.250-5.00	1.250	2.36	2.75	5.00	2.44	3.46	0.78	M8x1	AD Thru
CAT50 Metric	68262020	CAT50-HCS 20-100	20	42	52	100	52	56	25	M8x1	AD Thru
	68263225	CAT50-HCS 32-125	32	60	71	125	60	86	20	M8x1	AD Thru

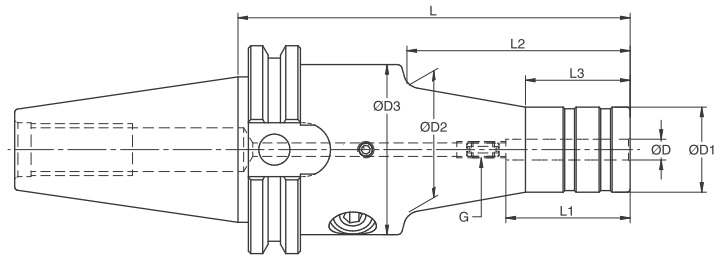
SMS™ Torque Wrenches **on page 114**

SMS™ Reduction Collets **on page 106-107**

Retention knobs **on page 108-109**

CAT Holders

CAT SMS™ Slim Design Hydraulic Chucks



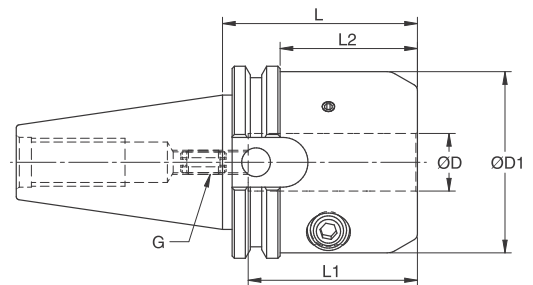
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	ØD	ØD1	ØD2	ØD3	L	L1	L2	L3	G	Coolant Style
CAT40	68240624SL	CAT40 HCSL 6-120	6	26	39	52	120	38	68	32	M5x0.8	AD Thru
	68240824SL	CAT40 HCSL 8-120	8	28	41	52	120	42	68	32	M5x0.8	AD Thru
	68241024SL	CAT40 HCSL 10-120	10	30	43	52	120	45	68	32	M8x1	AD Thru
	68241224SL	CAT40 HCSL 12-120	12	32	45	52	120	46	68	32	M8x1	AD Thru
CAT50	68260624SL	CAT50 HCSL 6-120	6	26	39	63	120	38	68	32	M5x0.8	AD Thru
	68260824SL	CAT50 HCSL 8-120	8	28	41	63	120	42	68	32	M5x0.8	AD Thru
	68261024SL	CAT50 HCSL 10-120	10	30	43	63	120	45	68	32	M8x1	AD Thru
	68261224SL	CAT50 HCSL 12-120	12	32	45	63	120	46	68	32	M8x1	AD Thru

SMS™ Torque wrenches [on page 114](#) | SMS™ Reduction Collet [on page 106-107](#) | Retention knobs [on page 108-109](#)

CAT SMS™ Heavy Duty Hydraulic Chucks



FEATURES

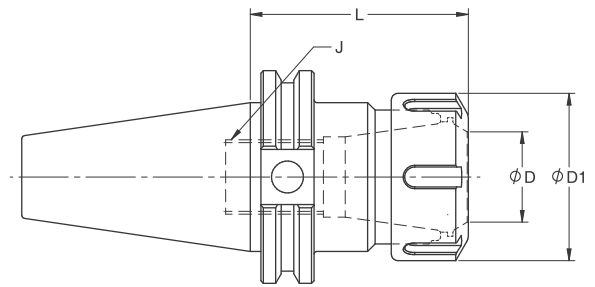
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

	Catalog Number	Description	ØD	ØD1	L	L1	L2	G	Coolant Style
CAT40 Inch	67242813	CAT40-HC 0.750-2.50	0.75	2.36	2.50	2.05	1.75	M8x1	AD Thru
	67242217	CAT40-HC 1.250-3.25	1.25	2.84	3.25	2.44	2.50	M8x1	AD Thru
CAT40 Metric	67242013	CAT40-HC 20-65	20	60	65	56	46	M8x1	AD Thru
	67243218	CAT40-HC 32-90	32	72	90	63	71	M8x1	AD Thru
CAT50 Inch	67262817	CAT50-HC 0.750-3.25	0.75	2.36	3.25	2.05	2.50	M8x1	AD Thru
	67262217	CAT50-HC 1.250-3.25	1.25	2.84	3.25	2.44	2.50	M8x1	AD Thru
CAT50 Metric	67262018	CAT50-HC 20-90	20	60	90	56	71	M8x1	AD Thru
	67263218	CAT50-HC 32-90	32	72	90	63	71	M8x1	AD Thru

SMS™ Torque Wrenches [on page 114](#) | SMS™ Reduction Collets [on page 106-107](#) | Retention knobs [on page 108-109](#)

CAT Holders

CAT SMS™ ER Collet Holders



FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- AD coolant thru the spindle
- Taper shank ground to AT3 accuracy (or better)
- Balanced ER Collet Nuts

Catalog Number	Description	Collet Size	ØD Range	ØD1 (inch)	L (inch)	J (inch)	Coolant Style
872240M14	CAT40-CHE 11M-2.75	ER11	.118 - .275	0.630	2.75	5/16-24LH	AD Thru
872240M20	CAT40-CHE 11M-4.00	ER11	.118 - .275	0.630	4.00	5/16-24LH	AD Thru
872240M30	CAT40-CHE 11M-6.00	ER11	.118 - .275	0.630	6.00	5/16-24LH	AD Thru
87224014	CAT40-CHE 11-2.75	ER11	.118 - .275	0.748	2.75	5/16-24LH	AD Thru
87224020	CAT40-CHE 11-4.00	ER11	.118 - .275	0.748	4.00	5/16-24LH	AD Thru
87224025	CAT40-CHE 11-5.00	ER11	.118 - .275	0.748	5.00	5/16-24LH	AD Thru
87224114	CAT40-CHE 16-2.75	ER16	.118 - .393	1.102	2.76	7/16-16LH	AD Thru
87224120	CAT40-CHE 16-4.00	ER16	.118 - .393	1.102	4.00	7/16-16LH	AD Thru
87224125	CAT40-CHE 16-5.00	ER16	.118 - .393	1.102	5.00	7/16-16LH	AD Thru
87224130	CAT40-CHE 16-6.00	ER16	.118 - .393	1.102	6.00	7/16-16LH	AD Thru
87224141	CAT40-CHE 16-8.00	ER16	.118 - .393	1.102	8.00	7/16-16 LH	AD Thru
872241M20	CAT40-CHE 16M-4.00	ER16	.118 - .393	0.866	4.00	7/16-16 LH	AD Thru
872241M30	CAT40-CHE 16M-6.00	ER16	.118 - .393	0.866	6.00	7/16-16 LH	AD Thru
872241M41	CAT40-CHE 16M-8.00	ER16	.118 - .393	0.866	8.00	7/16-16 LH	AD Thru
87224214	CAT40-CHE 20-2.75	ER20	.118 - .511	1.338	2.75	9/16-16LH	AD Thru
87224220	CAT40-CHE 20-4.00	ER20	.118 - .511	1.338	4.00	9/16-16LH	AD Thru
87224230	CAT40-CHE 20-6.00	ER20	.118 - .511	1.338	5.51	9/16-16LH	AD Thru
87224241	CAT40-CHE 20-8.00	ER20	.118 - .511	1.338	8.00	9/16-16LH	AD Thru
87224314	CAT40-CHE 25-2.75	ER25	.118 - .629	1.653	2.75	11/16-16LH	AD Thru
87224320	CAT40-CHE 25-4.00	ER25	.118 - .629	1.653	4.00	11/16-16LH	AD Thru
87224330	CAT40-CHE 25-6.00	ER25	.118 - .629	1.653	6.00	11/16-16LH	AD Thru
87224341	CAT40-CHE 25-8.00	ER25	.118 - .629	1.653	8.00	11/16-16LH	AD Thru
87224414	CAT40-CHE 32-2.75	ER32	.118 - .787	1.968	2.75	7/8-16LH	AD Thru
87224420	CAT40-CHE 32-4.00	ER32	.118 - .787	1.968	4.00	7/8-16LH	AD Thru
87224430	CAT40-CHE 32-6.00	ER32	.118 - .787	1.968	6.00	7/8-16LH	AD Thru
87224441	CAT40-CHE 32-8.00	ER32	.118 - .787	1.968	8.00	7/8-16LH	AD Thru
87224516	CAT40-CHE 40-3.00	ER40	.157 - 1.023	2.480	3.00	1.1/8-16LH	AD Thru
87224520	CAT40-CHE 40-4.00	ER40	.157 - 1.023	2.480	4.00	1.1/8-16LH	AD Thru
87224530	CAT40-CHE 40-6.00	ER40	.157 - 1.023	2.480	6.00	1.1/8-16LH	AD Thru
87224541	CAT40-CHE 40-8.00	ER40	.157 - 1.023	2.480	8.00	1.1/8"-16LH	AD Thru

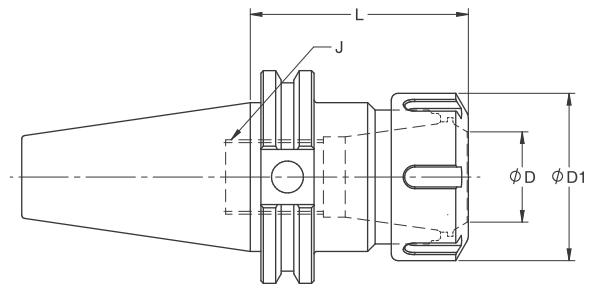
ER Collets **on page 97-101**

ER Nut Wrenches **on page 110**

Retention knobs **on page 108-109**

CAT Holders

CAT SMS™ ER Collet Holders



FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Balanced ER Collet Nuts
- AD coolant thru the spindle
- Taper shank ground to AT3 accuracy (or better)

Catalog Number	Description	Collet Size	ØD Range (inch)	ØD1 (inch)	L (inch)	J (inch)	Coolant Style
87226114	CAT50-CHE 16-2.75	ER16	.118 - .393	1.102	2.75	7/16-16LH	AD Thru
87226120	CAT50-CHE 16-4.00	ER16	.118 - .275	1.102	4.00	7/16-16LH	AD Thru
87226130	CAT50-CHE 16-6.00	ER16	.118 - .275	1.102	6.00	7/16-16LH	AD Thru
87226141	CAT50-CHE 16-8.00	ER16	.118 - .393	1.102	8.00	7/16-16LH	AD Thru
87226151	CAT50-CHE 16-10.00	ER16	.118 - .393	1.102	10.00	7/16-16LH	AD Thru
87226214	CAT50-CHE 20-2.75	ER20	.118 - .511	1.338	2.75	9/16-16LH	AD Thru
87226220	CAT50-CHE 20-4.00	ER20	.118 - .393	1.338	4.00	9/16-16LH	AD Thru
87226230	CAT50-CHE 20-6.00	ER20	.118 - .393	1.338	6.00	9/16-16LH	AD Thru
87226241	CAT50-CHE 20-8.00	ER20	.118 - .511	1.338	8.00	9/16-16LH	AD Thru
87226320	CAT50-CHE 25-4.00	ER25	.118 - .629	1.653	4.00	11/16-16LH	AD Thru
87226330	CAT50-CHE 25-6.00	ER25	.118 - .629	1.653	6.00	11/16-16LH	AD Thru
87226341	CAT50-CHE 25-8.00	ER25	.118 - .629	1.653	8.00	11/16-16LH	AD Thru
87226414	CAT50-CHE 32-2.75	ER32	.118 - .787	1.968	2.75	7/8-16LH	AD Thru
87226420	CAT50-CHE 32-4.00	ER32	.118 - .787	1.968	4.00	7/8-16LH	AD Thru
87226430	CAT50-CHE 32-6.00	ER32	.118 - .787	1.968	6.00	7/8-16LH	AD Thru
87226441	CAT50-CHE 32-8.00	ER32	.118 - .787	1.968	8.00	7/8-16LH	AD Thru
87226451	CAT50-CHE 32-10.00	ER32	.118 - .787	1.968	10.00	7/8-16LH	AD Thru
87226520	CAT50-CHE 40-4.00	ER40	.157 - 1.023	2.480	4.00	1-1/8-16LH	AD Thru
87226530	CAT50-CHE 40-6.00	ER40	.157 - 1.023	2.480	6.00	1-1/8-16LH	AD Thru

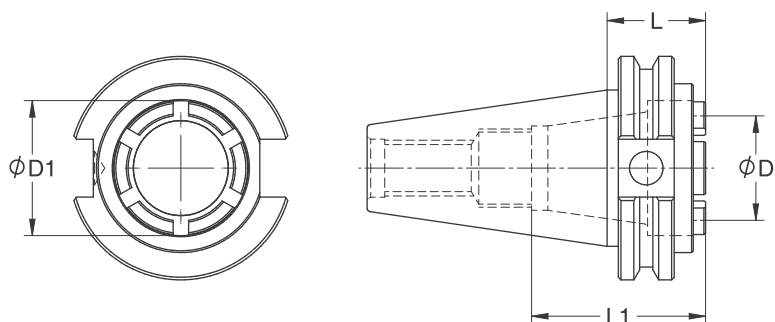
ER Collets **on page 97-101**

ER Nut Wrenches **on page 110**

Retention knobs **on page 108-109**

CAT Holders

CAT SMS™ ER-Z Short Collet Chucks



FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5 μ m
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	Collet Size	ϕD Range (inch)	$\phi D1$ (inch)	L (inch)	L1 (inch)	Coolant Style
CAT40	872Z24406	CAT40-CHEZ 32-1.10	ER32	.118 - .787	1.26	1.10	1.34	AD Thru
CAT50	872Z26406	CAT50-CHEZ 32-1.10	ER32	.118 - .787	1.26	1.10	1.34	AD Thru

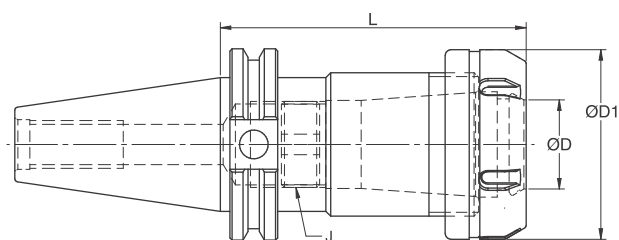
ER Collets [on page 97-101](#)

ER-Z Nut Wrenches [on page 110](#)

ER-Z Nut [on page 99](#)

Retention knobs [on page 108-109](#)

CAT SMS™ TG Collet Holders



FEATURES

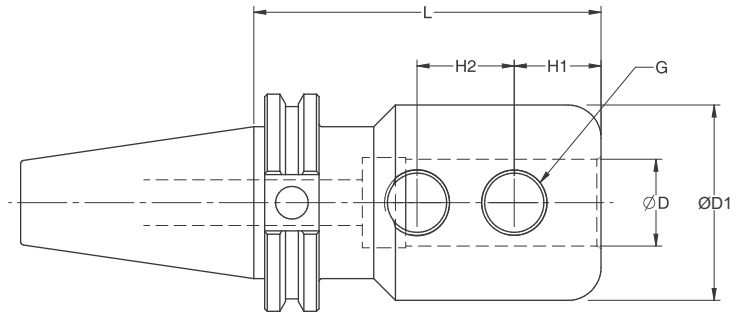
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5 μ m
- AD coolant thru the spindle
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	Collet Size	ϕD Range (inch)	$\phi D1$ (inch)	L (inch)	J (inch)	Coolant Style
CAT40	87324315	CAT40-CHT 100-3.00	TG100	0.250-1.000	2.48	3.00	1.1/8-16LH	AD Thru
	87324320	CAT40-CHT 100-4.00	TG100	0.250-1.000	2.48	4.00	1.1/8-16LH	AD Thru
	87324330	CAT40-CHT 100-6.00	TG100	0.250-1.000	2.48	6.00	1.1/8-16LH	AD Thru
CAT50	87326328	CAT50-CHT 100-5.50	TG100	0.250-1.000	2.48	5.50	1.1/8-16LH	AD Thru

Retention knobs [on page 108-109](#)

CAT Holders

CAT SMST™ End Mill Holders



FEATURES

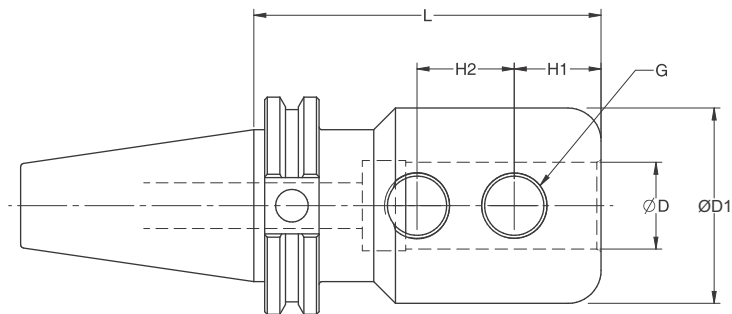
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 10µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

Catalog Number	Description	ØD (inch)	L (inch)	ØD1 (inch)	H1	H2	G	Coolant Style
84240712	CAT40-EMH 0.125-2.38	0.125	2.38	0.50	0.22	-	#10-32	AD Thru
84240913	CAT40-EMH 0.187-2.50	0.187	2.50	0.69	0.56	-	#10-32	AD Thru
84240915	CAT40-EMH 0.187-3.00	0.187	3.00	0.69	0.56	-	#10-32	AD Thru
84241113	CAT40-EMH 0.250-2.50	0.250	2.50	0.69	0.56	-	1/4"-28	AD Thru
84241120	CAT40-EMH 0.250-4.00	0.250	4.00	0.69	0.56	-	1/4"-28	AD Thru
84241313	CAT40-EMH 0.312-2.50	0.312	2.50	1.00	0.75	-	1/4"-28	AD Thru
84242613	CAT40-EMH 0.375-2.50	0.375	2.50	1.00	0.75	-	3/8"-24	AD Thru
84242620	CAT40-EMH 0.375-4.00	0.375	4.00	1.00	0.75	-	3/8"-24	AD Thru
84242713	CAT40-EMH 0.4375-2.50	0.4375	2.50	1.38	0.88	-	7/16"-20	AD Thru
84241509	CAT40-EMH 0.500-1.75	0.500	1.75	1.75	0.88	-	7/16"-20	AD Thru
84241513	CAT40-EMH 0.500-2.50	0.500	2.50	1.25	0.88	-	7/16"-20	AD Thru
84241523	CAT40-EMH 0.500-4.62	0.500	4.62	1.25	0.88	-	7/16"-20	AD Thru
84241534	CAT40-EMH 0.500-6.62	0.500	6.62	1.25	0.88	-	7/16"-20	AD Thru
84243315	CAT40-EMH 0.5625-3.00	0.5625	3.00	1.62	0.94	-	9/16"-18	AD Thru
84241709	CAT40-EMH 0.625-1.75	0.625	1.75	1.75	0.94	-	9/16"-18	AD Thru
84241715	CAT40-EMH 0.625-3.00	0.625	3.00	1.62	0.94	-	9/16"-18	AD Thru
84241719	CAT40-EMH 0.625-3.75	0.625	3.75	1.62	0.94	-	9/16"-18	AD Thru
84241729	CAT40-EMH 0.625-5.75	0.625	5.75	1.62	0.94	-	9/16"-18	AD Thru
84242809	CAT40-EMH 0.750-1.75	0.750	1.75	1.75	1.00	-	5/8"-18	AD Thru
84242815	CAT40-EMH 0.750-3.00	0.750	3.00	1.75	1.00	-	5/8"-18	AD Thru
84242819	CAT40-EMH 0.750-3.75	0.750	3.75	1.75	1.00	-	5/8"-18	AD Thru
84242829	CAT40-EMH 0.750-5.75	0.750	5.75	1.75	1.00	-	5/8"-18	AD Thru
84241918	CAT40-EMH 0.875-3.50	0.875	3.50	1.75	1.00	-	5/8"-18	AD Thru
84241929	CAT40-EMH 0.875-5.75	0.875	5.75	2.00	1.00	0.81	5/8"-18*	AD Thru
84242109	CAT40-EMH 1.000-1.75	1.000	1.75	1.75	1.12	-	5/8"-18	AD Thru
84242115	CAT40-EMH 1.000-3.00	1.000	3.00	1.95	0.88	1.00	5/8"-18*	AD Thru
84242120	CAT40-EMH 1.000-4.00	1.000	4.00	2.25	1.00	1.12	3/4"-16*	AD Thru
84242130	CAT40-EMH 1.000-6.00	1.000	6.00	2.25	1.12	1.12	3/4"-16*	AD Thru
84242210	CAT40-EMH 1.250-2.00	1.250	2.00	2.25	1.12	-	5/8"-18	AD Thru
84242222	CAT40-EMH 1.250-4.25	1.250	4.25	2.50	1.00	1.12	3/4"-16*	AD Thru
84242230	CAT40-EMH 1.250-6.00	1.250	6.00	2.50	1.00	1.12	3/4"-16*	AD Thru
84242323	CAT40-EMH 1.500-4.62	1.500	4.62	2.75	1.12	1.00	3/4"-16*	AD Thru
84242330	CAT40-EMH 1.500-6.00	1.500	6.00	2.75	1.12	1.00	3/4"-16*	AD Thru

Retention knobs on page 108-109

CAT Holders

CAT SMS™ End Mill Holders



FEATURES

• Balanced to G2.5 @ 25,000 RPM

• T.I.R. < 10µm

• Taper shank ground to AT3 accuracy (or better)

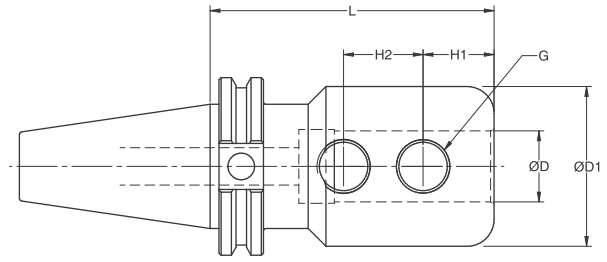
• Bore tolerance: H6

Catalog Number	Description	ØD (mm)	L (mm)	ØD1 (mm)	H1	H2	G	Coolant Style
84240312	CAT40-EMH 3-60	3	60	12.70	5.30	-	M3x0.7	AD Thru
84240415	CAT40-EMH 4-75	4	75	17.50	14.2	-	#10-32	AD Thru
84240515	CAT40-EMH 5-75	5	75	20	16	-	M6x1	AD Thru
84240612	CAT40-EMH 6-60	6	60	25	18	-	M6x1	AD Thru
84240815	CAT40-EMH 8-75	8	75	28	18	-	M8x1.25	AD Thru
84241015	CAT40-EMH 10-75	10	75	35	20	-	M10x1.5	AD Thru
84241215	CAT40-EMH 12-75	12	75	42	22.5	-	M12x1.75	AD Thru
84241609	CAT40-EMH 16-45	16	45	44.45	33.9	-	M14x2	AD Thru
84242015	CAT40-EMH 20-75	20	75	42.90	25	-	M16x2	AD Thru
84242516	CAT40-EMH 25-80	25	80	50	24	-	M18x2	AD Thru
84242530	CAT40-EMH 25-6.00	25	152.4	63	24	25	M18x2	AD Thru
84243210	CAT40-EMH 32-50	32	50	57.15	24	-	M14x2	AD Thru

Retention knobs on page 108-109

CAT Holders

CAT SMS™ End Mill Holders



FEATURES

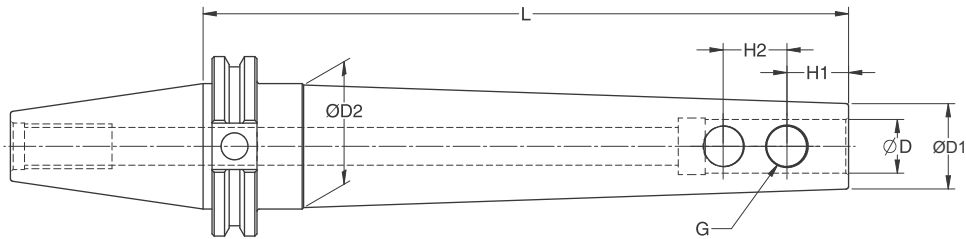
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 10µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

Catalog Number	Description	ØD (inch)	L (inch)	ØD1 (inch)	H1	H2	G	Coolant Style
84260713	CAT50-EMH 0.125-2.50	0.125	2.50	0.50	0.22	-	#10-32	AD Thru
84260913	CAT50-EMH 0.187-2.50	0.187	2.50	0.69	0.56	-	#10-32	AD Thru
84261113	CAT50-EMH 0.250-2.50	0.250	2.50	0.69	0.56	-	1/4"-28	AD Thru
84261120	CAT50-EMH 0.250-4.00	0.250	4.00	0.69	0.56	-	1/4"-28	AD Thru
84261313	CAT50-EMH 0.312-2.50	0.312	2.50	1.00	0.75	-	1/4"-28	AD Thru
84261320	CAT50-EMH 0.312-4.00	0.312	4.00	1.00	0.75	-	1/4"-28	AD Thru
84262613	CAT50-EMH 0.375-2.50	0.375	2.50	1.00	0.75	-	3/8"-24	AD Thru
84262620	CAT50-EMH 0.375-4.00	0.375	4.00	1.00	0.75	-	3/8"-24	AD Thru
84262630	CAT50-EMH 0.375-6.00	0.375	6.00	1.00	0.75	-	3/8"-24	AD Thru
84262720	CAT50-EMH 0.4375-4.00	0.4375	4.00	1.38	0.88	-	7/16"-20	AD Thru
84261513	CAT50-EMH 0.500-2.62	0.500	2.62	1.38	0.88	-	7/16"-20	AD Thru
84261520	CAT50-EMH 0.500-4.00	0.500	4.00	1.38	0.88	-	7/16"-20	AD Thru
84261530	CAT50-EMH 0.500-6.00	0.500	6.00	1.38	0.88	-	7/16"-20	AD Thru
84261541	CAT50-EMH 0.500-8.00	0.500	8.00	1.38	0.88	-	7/16"-20	AD Thru
84263320	CAT50-EMH 5.625-4.00	0.5625	4.00	1.62	0.94	-	9/16"-18	AD Thru
84261720	CAT50-EMH 0.625-4.00	0.625	4.00	1.62	0.94	-	9/16"-18	AD Thru
84261730	CAT50-EMH 0.625-6.00	0.625	6.00	1.62	0.94	-	9/16"-18	AD Thru
84261741	CAT50-EMH 0.625-8.00	0.625	8.00	1.62	0.94	-	9/16"-18	AD Thru
84262820	CAT50-EMH 0.750-4.00	0.750	4.00	1.75	1.00	-	5/8"-18	AD Thru
84262830	CAT50-EMH 0.750-6.00	0.750	6.00	1.75	1.00	-	5/8"-18	AD Thru
84262841	CAT50-EMH 0.750-8.00	0.750	8.00	1.75	1.00	-	5/8"-18	AD Thru
84261920	CAT50-EMH 0.875-4.00	0.875	4.00	2.00	1.00	0.81	5/8"-18	AD Thru
84261930	CAT50-EMH 0.875-6.00	0.875	6.00	2.00	1.00	0.81	5/8"-18	AD Thru
84262113	CAT50-EMH 1.000-2.62	1.000	2.62	2.75	1.12	-	3/4"-16	AD Thru
84262120	CAT50-EMH 1.000-4.00	1.000	4.00	2.25	1.12	1.00	3/4"-16	AD Thru
84262130	CAT50-EMH 1.000-6.00	1.000	6.00	2.25	1.12	1.00	3/4"-16	AD Thru
84262141	CAT50-EMH 1.000-8.00	1.000	8.00	2.25	1.12	1.00	3/4"-16	AD Thru
84262215	CAT50-EMH 1.250-3.00	1.250	3.00	2.50	1.12	1.00	3/4"-16	AD Thru
84262220	CAT50-EMH 1.250-4.00	1.250	4.00	2.50	1.12	1.00	3/4"-16	AD Thru
84262230	CAT50-EMH 1.250-6.00	1.250	6.00	2.50	1.12	1.00	3/4"-16	AD Thru
84262241	CAT50-EMH 1.250-8.00	1.250	8.00	2.50	1.12	1.00	3/4"-16	AD Thru
84262246	CAT50-EMH 1.250-9.00	1.250	9.00	2.50	1.12	1.00	3/4"-16	AD Thru
84262320	CAT50-EMH 1.500-4.00	1.500	4.00	2.75	1.12	1.00	3/4"-16	AD Thru
84262330	CAT50-EMH 1.500-6.00	1.500	6.00	2.75	1.12	1.00	3/4"-16	AD Thru
84262341	CAT50-EMH 1.500-8.00	1.500	8.00	2.75	1.12	1.00	3/4"-16	AD Thru
84262929	CAT50-EMH 2.000-5.62	2.000	5.62	3.75	1.38	1.50	1"-14	AD Thru
84262939	CAT50-EMH 2.000-7.75	2.000	7.75	3.75	1.38	1.50	1"-14	AD Thru
84263130	CAT50-EMH 2.500-6.00	2.500	6.00	4.25	1.56	1.69	1"-14	AD Thru
84260613	CAT50-EMH 6-65	6mm	65mm	25mm	18mm	-	M6x1	AD Thru
84260813	CAT50-EMH 8-65	8mm	65mm	28mm	18mm	-	M8x1.25	AD Thru
84261020	CAT50-EMH 10-100	10mm	100mm	35mm	20mm	-	M10x1.5	AD Thru
84261220	CAT50-EMH 12-100	12mm	100mm	42mm	22.5mm	-	M12x1.75	AD Thru
84261620	CAT50-EMH 16-100	16mm	100mm	48mm	24mm	-	M14x2	AD Thru
84262020	CAT50-EMH 20-100	20mm	100mm	52mm	25mm	-	M16x2	AD Thru
84262520	CAT50-EMH 25-100	25mm	100mm	65mm	24mm	25mm	M18x2	AD Thru
84262530	CAT50-EMH 25-6.00	25mm	152.4mm	65mm	24mm	25mm	M18x2	AD Thru
84262532	CAT50-EMH 25-160	25mm	160mm	65mm	24mm	25mm	M18x2	AD Thru

Retention knobs on page 108-109

CAT Holders

CAT SMS™ End Mill Holders X-Long



FEATURES

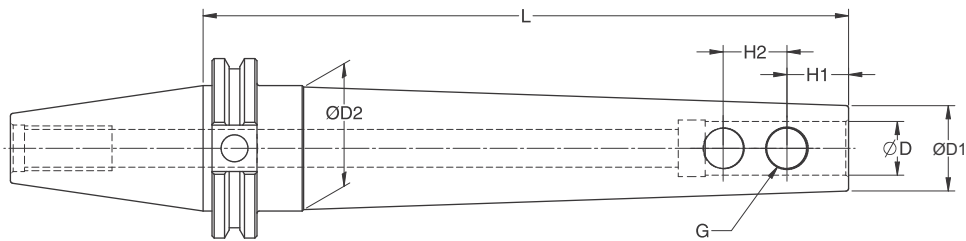
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 10µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

Catalog Number	Description	ØD (inch)	ØD2" (inch)	ØD1 (inch)	L	H1	H2	G	Coolant Style
84240720XL	CAT40-EMHXL 0.125-4	0.125	0.68	0.50	4.00	0.22	-	#10-32 x 3/32	AD THRU
84240730XL	CAT40-EMHXL 0.125-6	0.125	0.82	0.50	6.00	0.22	-	#10-32 X 3/32	AD THRU
84240746XL	CAT40-EMHXL 0.125-9	0.125	1.03	0.50	9.00	0.22	-	#10-32 X 3/32	AD THRU
84240920XL	CAT40-EMHXL 0.187-4	0.187	0.74	0.56	4.00	0.56	-	#10-32 X 1/8	AD THRU
84240930XL	CAT40-EMHXL 0.187-6	0.187	0.88	0.56	6.00	0.56	-	#10-32 X 1/8	AD THRU
84240946XL	CAT40-EMHXL 0.187-9	0.187	1.09	0.56	9.00	0.56	-	#10-32 X 1/8	AD THRU
84241120XL	CAT40-EMHXL 0.250-4	0.250	0.77	0.59	4.00	0.56	-	#10-32 X 1/8	AD THRU
84241130XL	CAT40-EMHXL 0.250-6	0.250	0.91	0.59	6.00	0.56	-	#10-32 X 1/8	AD THRU
84241146XL	CAT40-EMHXL 0.250-9	0.250	1.12	0.59	9.00	0.56	-	#10-32 X 1/8	AD THRU
84241320XL	CAT40-EMHXL 0.312-4	0.312	0.80	0.62	4.00	0.75	-	1/4-28 X 1/8	AD THRU
84241330XL	CAT40-EMHXL 0.312-6	0.312	0.94	0.62	6.00	0.75	-	1/4-28 X 1/8	AD THRU
84241346XL	CAT40-EMHXL 0.312-9	0.312	1.15	0.62	9.00	0.75	-	1/4-28 X 1/8	AD THRU
84242620XL	CAT40-EMHXL 0.375-4	0.375	0.98	0.81	4.00	0.75	-	5/16-24 X 5/32	AD THRU
84242630XL	CAT40-EMHXL 0.375-6	0.375	1.12	0.81	6.00	0.75	-	5/16-24 X 5/32	AD THRU
84242646XL	CAT40-EMHXL 0.375-9	0.375	1.33	0.81	9.00	0.75	-	5/16-24 X 5/32	AD THRU
84242720XL	CAT40-EMHXL 0.437-4	0.437	1.04	0.87	4.00	0.88	-	3/8-24 X 3/16	AD THRU
84242730XL	CAT40-EMHXL 0.437-6	0.437	1.18	0.87	6.00	0.88	-	3/8-24 X 3/16	AD THRU
84242746XL	CAT40-EMHXL 0.437-9	0.437	1.39	0.87	9.00	0.88	-	3/8-24 X 3/16	AD THRU
84241520XL	CAT40-EMHXL 0.500-4	0.500	1.11	0.94	4.00	0.88	-	7/16-20 X 7/32	AD THRU
84241530XL	CAT40-EMHXL 0.500-6	0.500	1.25	0.94	6.00	0.88	-	7/16-20 X 7/32	AD THRU
84241546XL	CAT40-EMHXL 0.500-9	0.500	1.46	0.94	9.00	0.88	-	7/16-20 X 7/32	AD THRU
84243320XL	CAT40-EMHXL 0.562-4	0.562	1.11	0.94	4.00	0.94	-	1/2-20 X 1/4	AD THRU
84243330XL	CAT40-EMHXL 0.562-6	0.562	1.25	0.94	6.00	0.94	-	1/2-20 X 1/4	AD THRU
84243346XL	CAT40-EMHXL 0.562-9	0.562	1.46	0.94	9.00	0.94	-	1/2-20 X 1/4	AD THRU
84241720XL	CAT40-EMHXL 0.625-4	0.625	1.23	1.06	4.00	0.94	-	1/2-20 X 1/4	AD THRU
84241730XL	CAT40-EMHXL 0.625-6	0.625	1.37	1.06	6.00	0.94	-	1/2-20 X 1/4	AD THRU
84241746XL	CAT40-EMHXL 0.625-9	0.625	1.58	1.06	9.00	0.94	-	1/2-20 X 1/4	AD THRU
84242820XL	CAT40-EMHXL 0.750-4	0.750	1.36	1.19	4.00	1.00	-	1/2-20 X 1/4	AD THRU
84242830XL	CAT40-EMHXL 0.750-6	0.750	1.50	1.19	6.00	1.00	-	1/2-20 X 1/4	AD THRU
84242846XL	CAT40-EMHXL 0.750-9	0.750	1.71	1.19	9.00	1.00	-	1/2-20 X 1/4	AD THRU
84241920XL	CAT40-EMHXL 0.875-4	0.875	1.48	1.31	4.00	1.00	0.81	5/8-18 X 5/16	AD THRU
84241930XL	CAT40-EMHXL 0.875-6	0.875	1.62	1.31	6.00	1.00	0.81	5/8-18 X 5/16	AD THRU
84241946XL	CAT40-EMHXL 0.875-9	0.875	1.75	1.31	9.00	1.00	0.81	5/8-18 X 5/16	AD THRU
84242120XL	CAT40-EMHXL 1.000-4	1.000	1.75	1.62	4.00	1.12	1.00	5/8-18 X 5/16	AD THRU
84242130XL	CAT40-EMHXL 1.000-6	1.000	1.75	1.62	6.00	1.12	1.00	5/8-18 X 5/16	AD THRU
84242146XL	CAT40-EMHXL 1.000-9	1.000	1.75	1.62	9.00	1.12	1.00	5/8-18 X 5/16	AD THRU
84242220XL	CAT40-EMHXL 1.250-4	1.250	2.04	1.75	4.00	1.12	1.00	5/8-18 X 5/16	AD THRU
84242230XL	CAT40-EMHXL 1.250-6	1.250	2.18	1.75	6.00	1.12	1.00	5/8-18 X 5/16	AD THRU
84242246XL	CAT40-EMHXL 1.250-9	1.250	2.39	1.75	9.00	1.12	1.00	5/8-18 X 5/16	AD THRU

Retention knobs on page 108-109

CAT Holders

CAT SMS™ End Mill Holders X-Long



FEATURES

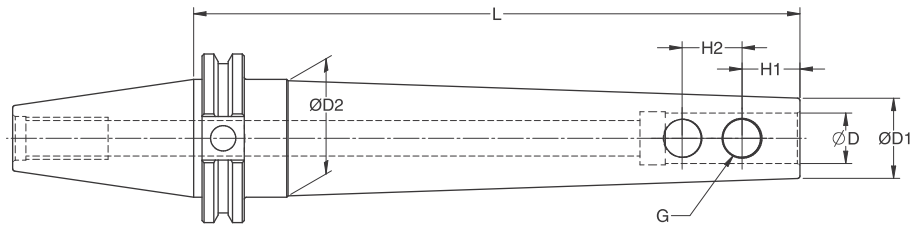
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 10µm
- Taper shank ground to AT3 accuracy (or better)
- Bore tolerance: H6

Catalog Number	Description	ØD	ØD2	ØD1	L	H1	H2	G	Coolant Style
84240630XL	CAT40-EMHXL 6-150	6mm	23mm	15mm	150mm	14mm	-	M6 x 1	AD THRU
84240645XL	CAT40-EMHXL 6-225	6mm	28.5mm	15mm	225mm	14mm	-	M6 x 1	AD THRU
84240830XL	CAT40-EMHXL 8-150	8mm	24.25mm	16mm	150mm	19mm	-	M6 x 1	AD THRU
84240845XL	CAT40-EMHXL 8-225	8mm	29.5mm	16mm	225mm	19mm	-	M6 x 1	AD THRU
84241030XL	CAT40-EMHXL 10-150	10mm	29mm	21mm	150mm	19mm	-	M8 x 1.25	AD THRU
84241045XL	CAT40-EMHXL 10-225	10mm	34.5mm	21mm	225mm	19mm	-	M8 x 1.25	AD THRU
84241230XL	CAT40-EMHXL 12-150	12mm	32mm	24mm	150mm	22.5mm	-	M10 x 1.5	AD THRU
84241245XL	CAT40-EMHXL 12-225	12mm	37.5mm	24mm	225mm	22.5mm	-	M10 x 1.5	AD THRU
84241630XL	CAT40-EMHXL 16-150	16mm	35mm	27mm	150mm	24mm	-	M12 x 1.75	AD THRU
84241645XL	CAT40-EMHXL 16-225	16mm	40.25mm	27mm	225mm	24mm	-	M12 x 1.75	AD THRU
84242030XL	CAT40-EMHXL 20-150	20mm	38mm	30mm	150mm	25mm	-	M12 x 1.75	AD THRU
84242045XL	CAT40-EMHXL 20-225	20mm	43.25mm	30mm	225mm	25mm	-	M12 x 1.75	AD THRU

Retention knobs on page 108-109

CAT Holders

CAT SMS™ End Mill Holders X-Long



FEATURES

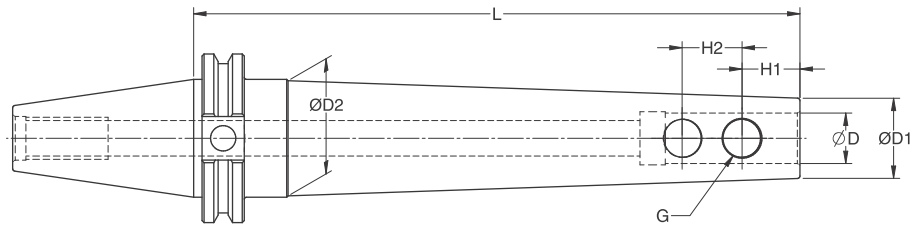
- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 10µm
- Taper shank ground to AT3 accuracy (or better)

Catalog Number	Description	ØD (inch)	ØD2 (inch)	ØD1 (inch)	L	H1	H2	G	Coolant Style
84260746XL	CAT50-EMHXL 0.125-9	0.125	1.04	0.50	9.0	0.22	-	#10-32 X 3/32	AD THRU
84260930XL	CAT50-EMHXL 0.187-6	0.187	0.88	0.56	6.0	0.56	-	#10-32 X 1/8	AD THRU
84260946XL	CAT50-EMHXL 0.187-9	0.187	1.11	0.56	9.0	0.56	-	#10-32 X 1/8	AD THRU
84261130XL	CAT50-EMHXL 0.250-6	0.250	0.91	0.59	6.0	0.56	-	#10-32 X 1/8	AD THRU
84261146XL	CAT50-EMHXL 0.250-9	0.250	1.12	0.59	9.0	0.56	-	#10-32 X 1/8	AD THRU
84261161XL	CAT50-EMHXL 0.250-12	0.250	1.33	0.59	12.0	0.56	-	#10-32 X 1/8	AD THRU
84261176XL	CAT50-EMHXL 0.250-15	0.250	1.53	0.59	15.0	0.56	-	#10-32 X 1/8	AD THRU
84261330XL	CAT50-EMHXL 0.312-6	0.312	0.94	0.62	6.0	0.75	-	1/4-28 X 1/8	AD THRU
84261346XL	CAT50-EMHXL 0.312-9	0.312	1.15	0.62	9.0	0.75	-	1/4-28 X 1/8	AD THRU
84261361XL	CAT50-EMHXL 0.312-12	0.312	1.36	0.62	12.0	0.75	-	1/4-28 X 1/8	AD THRU
84261376XL	CAT50-EMHXL 0.312-15	0.312	1.57	0.62	15.0	0.75	-	1/4-28 X 1/8	AD THRU
84262630XL	CAT50-EMHXL 0.375-6	0.375	1.12	0.81	6.0	0.75	-	5/16-24 X 5/32	AD THRU
84262646XL	CAT50-EMHXL 0.375-9	0.375	1.33	0.81	9.0	0.75	-	5/16-24 X 5/32	AD THRU
84262661XL	CAT50-EMHXL 0.375-12	0.375	1.54	0.81	12.0	0.75	-	5/16-24 X 5/32	AD THRU
84262676XL	CAT50-EMHXL 0.375-15	0.375	1.75	0.81	15.0	0.75	-	5/16-24 X 5/32	AD THRU
84262730XL	CAT50-EMHXL 0.437-6	0.437	1.19	0.87	6.0	0.88	-	3/8-24 X 3/16	AD THRU
84262746XL	CAT50-EMHXL 0.437-9	0.437	1.4	0.87	9.0	0.88	-	3/8-24 X 3/16	AD THRU
84262761XL	CAT50-EMHXL 0.437-12	0.437	1.61	0.87	12.0	0.88	-	3/8-24 X 3/16	AD THRU
84262776XL	CAT50-EMHXL 0.437-15	0.437	1.77	0.87	15.0	0.88	-	3/8-24 X 3/16	AD THRU
84261530XL	CAT50-EMHXL 0.500-6	0.500	1.25	0.94	6.0	0.88	-	7/16-20 X 7/32	AD THRU
84261546XL	CAT50-EMHXL 0.500-9	0.500	1.46	0.94	9.0	0.88	-	7/16-20 X 7/32	AD THRU
84261561XL	CAT50-EMHXL 0.500-12	0.500	1.67	0.94	12.0	0.88	-	7/16-20 X 7/32	AD THRU
84261576XL	CAT50-EMHXL 0.500-15	0.500	1.88	0.94	15.0	0.88	-	7/16-20 X 7/32	AD THRU
84261730XL	CAT50-EMHXL 0.625-6	0.625	1.37	1.06	6.0	0.94	-	1/2-20 X 1/4	AD THRU
84261746XL	CAT50-EMHXL 0.625-9	0.625	1.58	1.06	9.0	0.94	-	1/2-20 X 1/4	AD THRU
84261761XL	CAT50-EMHXL 0.625-12	0.625	1.79	1.06	12.0	0.94	-	1/2-20 X 1/4	AD THRU
84261776XL	CAT50-EMHXL 0.625-15	0.625	2.00	1.06	15.0	0.94	-	1/2-20 X 1/4	AD THRU
84262830XL	CAT50-EMHXL 0.750-6	0.750	1.5	1.19	6.0	1.00	-	1/2-20 X 1/4	AD THRU
84262846XL	CAT50-EMHXL 0.750-9	0.750	1.71	1.19	9.0	1.00	-	1/2-20 X 1/4	AD THRU
84262861XL	CAT50-EMHXL 0.750-12	0.750	1.92	1.19	12.0	1.00	-	1/2-20 X 1/4	AD THRU
84262876XL	CAT50-EMHXL 0.750-15	0.750	2.13	1.19	15.0	1.00	-	1/2-20 X 1/4	AD THRU
84261930XL	CAT50-EMHXL 0.875-6	0.875	1.62	1.43	6.0	1.00	0.81	5/8-18 X 5/16	AD THRU
84261946XL	CAT50-EMHXL 0.875-9	0.875	1.83	1.43	9.0	1.00	0.81	5/8-18 X 5/16	AD THRU
84261961XL	CAT50-EMHXL 0.875-12	0.875	2.04	1.43	12.0	1.00	0.81	5/8-18 X 5/16	AD THRU
84261976XL	CAT50-EMHXL 0.875-15	0.875	2.25	1.43	15.0	1.00	0.81	5/8-18 X 5/16	AD THRU
84262130XL	CAT50-EMHXL 1.000-6	1.000	1.93	1.62	6.0	1.12	1.00	5/8-18 X 5/16	AD THRU
84262146XL	CAT50-EMHXL 1.000-9	1.000	2.13	1.62	9.0	1.12	1.00	5/8-18 X 5/16	AD THRU
84262161XL	CAT50-EMHXL 1.000-12	1.000	2.34	1.62	12.0	1.12	1.00	5/8-18 X 5/16	AD THRU
84262176XL	CAT50-EMHXL 1.000-15	1.000	2.55	1.62	15.0	1.12	1.00	5/8-18 X 5/16	AD THRU
84262230XL	CAT50-EMHXL 1.250-6	1.250	2.19	1.88	6.0	1.12	1.00	5/8-18 X 5/16	AD THRU
84262246XL	CAT50-EMHXL 1.250-9	1.250	2.39	1.88	9.0	1.12	1.00	5/8-18 X 5/16	AD THRU
84262261XL	CAT50-EMHXL 1.250-12	1.250	2.60	1.88	12.0	1.12	1.00	5/8-18 X 5/16	AD THRU
84262276XL	CAT50-EMHXL 1.250-15	1.250	2.75	1.88	15.0	1.12	1.00	5/8-18 X 5/16	AD THRU
84262330XL	CAT50-EMHXL 1.500-6	1.500	2.55	2.25	6.0	1.12	1.00	3/4-16 X 3/8	AD THRU
84262346XL	CAT50-EMHXL 1.500-9	1.500	2.75	2.25	9.0	1.12	1.00	3/4-16 X 3/8	AD THRU
84262361XL	CAT50-EMHXL 1.500-12	1.500	2.96	2.25	12.0	1.12	1.00	3/4-16 X 3/8	AD THRU
84262376XL	CAT50-EMHXL 1.500-15	1.500	3.17	2.25	15.0	1.12	1.00	3/4-16 X 3/8	AD THRU
84262930XL	CAT50-EMHXL 2.000-6	2.000	3.46	3.19	6.0	1.38	1.50	1-14 X 3/4	AD THRU
84262946XL	CAT50-EMHXL 2.000-9	2.000	3.66	3.19	9.0	1.38	1.50	1-14 X 3/4	AD THRU
84262961XL	CAT50-EMHXL 2.000-12	2.000	3.86	3.19	12.0	1.38	1.50	1-14 X 3/4	AD THRU
84262976XL	CAT50-EMHXL 2.000-15	2.000	3.86	3.19	15.0	1.38	1.50	1-14 X 3/4	AD THRU
84263136XL	CAT50-EMHXL 2.500-7	2.500	4.5	4.5	7.0	1.56	1.69	1-14 X 3/4	AD THRU

Retention knobs on page 108-109

CAT Holders

CAT SMS™ End Mill Holders X-Long



FEATURES

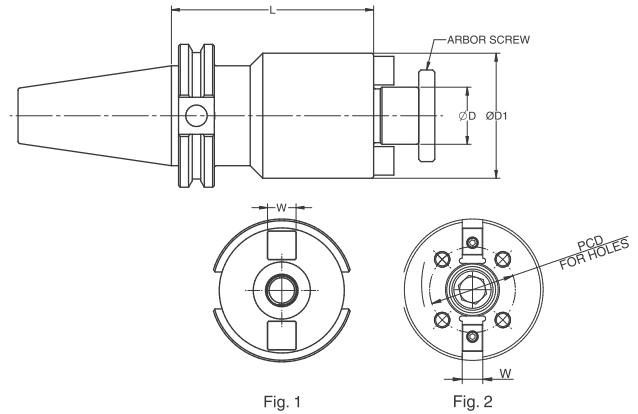
- Balanced to G2.5 @ 25,000 RPM
- Taper shank ground to AT3 accuracy (or better)
- T.I.R. < 10µm

Catalog Number	Description	ØD	ØD2	ØD1	L	H1	H2	G	Coolant Style
84260630XL	CAT50-EMHXL 6-150	6mm	23mm	15mm	150mm	14mm	-	M6 x 1	AD THRU
84260645XL	CAT50-EMHXL 6-225	6mm	28.5mm	15mm	225mm	14mm	-	M6 x 1	AD THRU
84260660XL	CAT50-EMHXL 6-300	6mm	34mm	15mm	300mm	14mm	-	M6 x 1	AD THRU
84260830XL	CAT50-EMHXL 8-150	8mm	24.25mm	16mm	150mm	19mm	-	M6 x 1	AD THRU
84260845XL	CAT50-EMHXL 8-225	8mm	29.5mm	16mm	225mm	19mm	-	M6 x 1	AD THRU
84260860XL	CAT50-EMHXL 8-300	8mm	40.25mm	16mm	300mm	19mm	-	M6 x 1	AD THRU
84261030XL	CAT50-EMHXL 10-150	10mm	29mm	21mm	150mm	19mm	-	M8 x 1.25	AD THRU
84261045XL	CAT50-EMHXL 10-225	10mm	34.5mm	21mm	225mm	19mm	-	M8 x 1.25	AD THRU
84261060XL	CAT50-EMHXL 10-300	10mm	40mm	21mm	300mm	19mm	-	M8 x 1.25	AD THRU
84261230XL	CAT50-EMHXL 12-150	12mm	32mm	24mm	150mm	22.5mm	-	M10 x 1.5	AD THRU
84261245XL	CAT50-EMHXL 12-225	12mm	37.5mm	24mm	225mm	22.5mm	-	M10 x 1.5	AD THRU
84261260XL	CAT50-EMHXL 12-300	12mm	43mm	24mm	300mm	22.5mm	-	M10 x 1.5	AD THRU
84261630XL	CAT50-EMHXL 16-150	16mm	35mm	27mm	150mm	24mm	-	M12 x 1.75	AD THRU
84261645XL	CAT50-EMHXL 16-225	16mm	40.25mm	27mm	225mm	24mm	-	M12 x 1.75	AD THRU
84261660XL	CAT50-EMHXL 16-300	16mm	46mm	27mm	300mm	24mm	-	M12 x 1.75	AD THRU
84262030XL	CAT50-EMHXL 20-150	20mm	38mm	30mm	150mm	25mm	-	M12 x 1.75	AD THRU
84262045XL	CAT50-EMHXL 20-225	20mm	43.25mm	30mm	225mm	25mm	-	M12 x 1.75	AD THRU
84262060XL	CAT50-EMHXL 20-300	20mm	49mm	30mm	300mm	25mm	-	M12 x 1.75	AD THRU

Retention knobs on page 108-109

CAT Holders

CAT SMS™ Shell Mill Holders



FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 5µm
- Taper shank ground to AT3 accuracy (or better)
- Coolant through center of body

	Catalog Number	Description	FIG.	ØD (inch)	L (inch)	ØD1 (inch)	W (inch)	PCD	Arbor Screw	Coolant Style
CAT40 Inch	81245007	CAT40-SMH 0.500-1.38	1	0.500	1.38	1.75	0.250	-	1/4"-28	AD THRU
	81247509	CAT40-SMH 0.750-1.77	1	0.750	1.77	1.75	0.312	-	3/8"-24	AD THRU
	81247518	CAT40-SMH 0.750-3.54	1	0.750	3.54	1.75	0.312	-	3/8"-24	AD THRU
	81241012	CAT40-SMH 1.000-2.36	1	1.000	2.36	2.19	0.375	-	1/2"-20	AD THRU
	81241018	CAT40-SMH 1.000-3.54	1	1.000	3.54	2.19	0.375	-	1/2"-20	AD THRU
	81241030	CAT40-SMH 1.000-6.00	1	1.000	6.00	2.19	0.375	-	1/2"-20	AD THRU
	81241212	CAT40-SMH 1.250-2.36	1	1.250	2.36	2.75	0.500	-	5/8"-18	AD THRU
	81241222	CAT40-SMH 1.250-4.25	1	1.250	4.25	2.75	0.500	-	5/8"-18	AD THRU
	80241512	CAT40-SMH 1.500-2.36	1	1.500	2.36	3.38	0.625	-	3/4"-16	AD THRU
	80241520	CAT40-SMH 1.500-4.00	1	1.500	4.00	3.38	0.625	-	3/4"-16	AD THRU
CAT40 Metric	81241607	CAT40-SMH 16-35	1	16mm	35mm	35mm	8mm	-	M8 x L25 *	AD THRU
	84242210	CAT40-SMH 22-50	1	22mm	50mm	45mm	10mm	-	M10 x L25 *	AD THRU
	81242220	CAT40-SMH 22-100	1	22mm	100mm	45mm	10mm	-	M10 x L25 *	AD THRU
	81242710	CAT40-SMH 27-50	1	27mm	50mm	70mm	12mm	-	M12 x L30 *	AD THRU
	81242720	CAT40-SMH 27-100	1	27mm	100mm	70mm	12mm	-	M12 x L30 *	AD THRU
CAT50 Inch	81265020	CAT50-SMH 0.50-4.00	1	0.50	4.00	1.75	0.250	-	¼-28	AD THRU
	81267518	CAT50-SMH 0.75-3.50	1	0.75	3.50	1.75	0.312	-	3/8-24	AD THRU
	81267528	CAT50-SMH 0.75-5.50	1	0.75	5.50	1.75	0.312	-	3/8-24	AD THRU
	81267541	CAT50-SMH 0.75-8.00	1	0.75	8.00	1.75	0.312	-	3/8-24	AD THRU
	84261010	CAT50-SMH 1.00-2.00	1	1.00	2.00	2.19	0.375	-	1/2"-20	AD THRU
	81261020	CAT50-SMH 1.00-4.00	1	1.00	4.00	2.19	0.375	-	½-20	AD THRU
	81261030	CAT50-SMH 1.00-6.00	1	1.00	6.00	2.19	0.375	-	½-20	AD THRU
	81261041	CAT50-SMH 1.00-8.00	1	1.00	8.00	2.19	0.375	-	½-20	AD THRU
	81261051	CAT50-SMH 1.00-10.00	1	1.00	10.00	2.19	0.375	-	½-20	AD THRU
	81261209	CAT50-SMH 1.25-1.75	1	1.25	1.75	2.75	0.500	-	5/8-18	AD THRU
	81261218	CAT50-SMH 1.25-3.50	1	1.25	3.50	2.75	0.500	-	5/8-18	AD THRU
	81261230	CAT50-SMH 1.25-6.00	1	1.25	6.00	2.75	0.500	-	5/8-18	AD THRU
	80261513	CAT50-SMH 1.50-2.50	1	1.50	2.50	3.94	0.625	-	¾-16	AD THRU
	80261520	CAT50-SMH 1.50-4.00	1	1.50	4.00	3.94	0.625	-	¾-16	AD THRU
	80261530	CAT50-SMH 1.50-6.00	1	1.50	6.00	3.94	0.625	-	¾-16	AD THRU
	80262013	CAT50-SMH 2.00-2.50	1	2.00	2.50	4.44	0.750	-	1-14	AD THRU
	80262020	CAT50-SMH 2.00-4.00	1	2.00	4.00	4.44	0.750	-	1-14	AD THRU
	80262030	CAT50-SMH 2.00-6.00	1	2.00	6.00	4.44	0.750	-	1-14	AD THRU
	802620F13	CAT50-FMH 2.00-2.50	2	2.00	2.50	4.90	0.750	4.0	1-14	AD THRU
	802620F20	CAT50-FMH 2.00-4.00	2	2.00	4.00	4.90	0.750	4.0	1-14	AD THRU
	802625F13	CAT50-FMH 2.50-2.50	2	2.50	2.50	4.90	1.000	4.0	1-14	AD THRU
	802625F20	CAT50-FMH 2.50-4.00	2	2.50	4.00	4.90	1.000	4.0	1-14	AD THRU
CAT50 Metric	81262218	CAT50-SMH 22-90	1	22mm	90mm	45mm	10mm	-	M10xL25*	AD THRU
	81262228	CAT50-SMH 22-140	1	22mm	140mm	45mm	10mm	-	M10xL25*	AD THRU

NOTE: ALL Shell Mill Holders are supplied with coolant through the center up to the arbor screw hole.

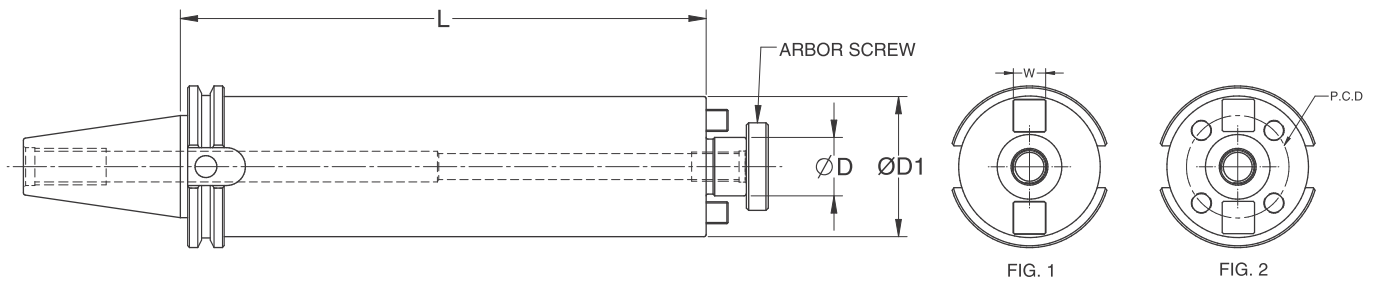
NOTE: * Represents holders provide with metric allen cap bolt.

Retention knobs **on page 108-109**

Non-Coolant and Coolant Arbor Screws **on page 111**

CAT Holders

CAT SMS™ Shell Mill Holders X-Long



FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 10µm
- Taper shank ground to AT3 accuracy (or better)
- Coolant through center of body

	Catalog Number	Description	Fig. No.	ØD (inch)	ØD1 (inch)	L (inch)	W (inch)	PCD	Arbor Screw	Coolant Style
CAT40 Shank	81245025XL	CAT40-SMHXL 0.500-5	1	0.500	1.25	5.00	0.250	-	1/4"-28	AD THRU
	81245041XL	CAT40-SMHXL 0.500-8	1	0.500	1.25	8.00	0.250	-	1/4"-28	AD THRU
	812475S20XL	CAT-40-SMHXL 0.750-4S	1	0.750	1.40	4.00	0.312	-	3/8"-24	AD THRU
	812475S30XL	CAT40-SMHXL 0.750-6S	1	0.750	1.40	6.00	0.312	-	3/8"-24	AD THRU
	812475S46XL	CAT40-SMHXL 0.750-9S	1	0.750	1.40	9.00	0.312	-	3/8"-24	AD THRU
	812475W20XL	CAT40-SMHXL 0.750-4W	1	0.750	1.90	4.00	0.312	-	3/8"-24	AD THRU
	812475W30XL	CAT40-SMHXL 0.750-6W	1	0.750	1.90	6.00	0.312	-	3/8"-24	AD THRU
	812475W46XL	CAT40-SMHXL 0.750-9W	1	0.750	1.90	9.00	0.312	-	3/8"-24	AD THRU
	81241020XL	CAT40-SMHXL1.000-4	1	1.000	2.40	4.00	0.375	-	1/2"-20	AD THRU
	81241030XL	CAT40-SMHXL1.000-6	1	1.000	2.40	6.00	0.375	-	1/2"-20	AD THRU
	81241046XL	CAT40-SMHXL1.000-9	1	1.000	2.40	9.00	0.375	-	1/2"-20	AD THRU
	81241220XL	CAT40-SMHXL1.250-4	1	1.250	2.90	4.00	0.500	-	5/8"-18	AD THRU
	81241230XL	CAT40-SMHXL1.250-6	1	1.250	2.90	6.00	0.500	-	5/8"-18	AD THRU
	81241246XL	CAT40-SMHXL1.250-9	1	1.250	2.90	9.00	0.500	-	5/8"-18	AD THRU
	80241520XL	CAT40-SMHXL1.500-4	1	1.500	3.88	4.00	0.625	-	3/4"-16	AD THRU
CAT50 Shank	81265030XL	CAT50-SMHXL 0.500-6	1	0.500	1.25	6.00	0.250	-	1/4"-28	AD THRU
	81265046XL	CAT50-SMHXL 0.500-9	1	0.500	1.25	9.00	0.250	-	1/4"-28	AD THRU
	81267520XL	CAT50-SMHXL 0.750-4	1	0.750	1.90	4.00	0.312	-	3/8"-24	AD THRU
	81267530XL	CAT50-SMHXL 0.750-6	1	0.750	1.90	6.00	0.312	-	3/8"-24	AD THRU
	81267546XL	CAT50-SMHXL 0.750-9	1	0.750	1.90	9.00	0.312	-	3/8"-24	AD THRU
	81267561XL	CAT50-SMHXL 0.750-12	1	0.750	1.90	12.00	0.312	-	3/8"-24	AD THRU
	81267576XL	CAT50-SMHXL 0.750-15	1	0.750	1.90	15.00	0.312	-	3/8"-24	AD THRU
	81261025XL	CAT50-SMHXL 1.000-5	1	1.000	2.40	5.00	0.375	-	1/2"-20	AD THRU
	81261036XL	CAT50-SMHXL 1.000-7	1	1.000	2.40	7.00	0.375	-	1/2"-20	AD THRU
	81261051XL	CAT50-SMHXL 1.000-10	1	1.000	2.40	10.00	0.375	-	1/2"-20	AD THRU
	81261061XL	CAT50-SMHXL 1.000-12	1	1.000	2.40	12.00	0.375	-	1/2"-20	AD THRU
	81261076XL	CAT50-SMHXL 1.000-15	1	1.000	2.40	15.00	0.375	-	1/2"-20	AD THRU
	81261230XL	CAT50-SMHXL 1.250-6	1	1.250	2.90	6.00	0.500	-	5/8"-18	AD THRU
	81261246XL	CAT50-SMHXL 1.250-9	1	1.250	2.90	9.00	0.500	-	5/8"-18	AD THRU
	81261261XL	CAT50-SMHXL 1.250-12	1	1.250	2.90	12.00	0.500	-	5/8"-18	AD THRU
	81261276XL	CAT50-SMHXL 1.250-15	1	1.250	2.90	15.00	0.500	-	5/8"-18	AD THRU
	80261525XL	CAT50-SMHXL 1.500-5	1	1.500	3.88	5.00	0.625	-	3/4"-16	AD THRU
	80261541XL	CAT50-SMHXL 1.500-8	1	1.500	3.88	8.00	0.625	-	3/4"-16	AD THRU
	80261561XL	CAT50-SMHXL 1.500-12	1	1.500	3.88	12.00	0.625	-	3/4"-16	AD THRU
	80261576XL	CAT50-SMHXL 1.500-15	1	1.500	3.88	15.00	0.625	-	3/4"-16	AD THRU
	80262061XL	CAT50-SMHXL 2.00-12	1	2.000	4.38	12.00	0.750	-	1"-14	AD THRU
	802620F30XL	CAT50-FMHXL 2.000-6	2	2.000	4.90	6.00	0.750	4.00	1"-14	AD THRU
	802625F20XL	CAT50-FMHXL 2.500-42	2	2.500	4.90	4.00	1.000	4.00	1"-14	AD THRU
	802625F41XL	CAT50-FMHXL 2.500-8	2	2.500	4.90	8.00	1.000	4.00	1"-14	AD THRU

NOTE:

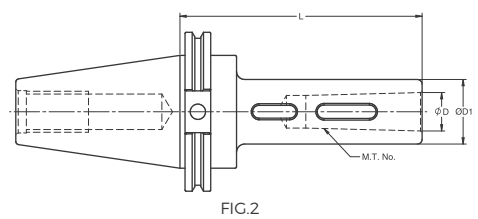
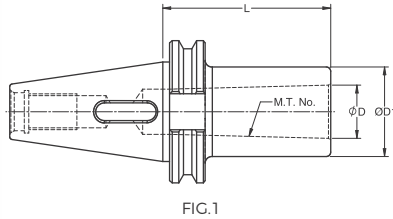
ALL Shell Mill Holders are supplied with coolant through the center up to the arbor screw hole.

Retention knobs on page 108-109

Non-Coolant and Coolant Arbor Screws on page 111

CAT Holders

CAT SMS™ Morse Taper Holder



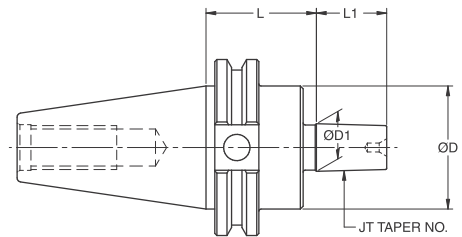
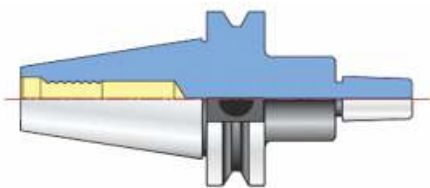
FEATURES

- Balanced to G2.5 @ 25,000 RPM
- T.I.R. < 10µm
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	MT Socket	ØD (inch)	L (inch)	ØD1 (inch)	Coolant Style
CAT40 Inch	88024109	CAT40-MTA 1-1.77	1	0.475	1.77	0.98	N/A
	88024209	CAT40-MTA 2-1.77	2	0.700	1.77	1.25	N/A
	88024315	CAT40-MTA 3-2.95	3	0.938	2.95	1.57	N/A
	88024418	CAT40-MTA 4-3.54	4	1.231	3.54	1.97	N/A
CAT50 Inch	88026109	CAT50-MTA 1-1.77	1	0.475	1.77	0.98	N/A
	88026124	CAT50-MTA 1-4.72	1	0.475	4.72*	0.98	N/A
	88026136	CAT50-MTA 1-7.08	1	0.475	7.08*	0.98	N/A
	88026209	CAT50-MTA 2-1.77	2	0.700	1.77	1.25	N/A
	88026227	CAT50-MTA 2-5.31	2	0.700	5.31*	1.25	N/A
	88026236	CAT50-MTA 2-7.08	2	0.700	7.08*	1.25	N/A
	88026309	CAT50-MTA 3-1.77	3	0.938	1.77	1.57	N/A
	88026330	CAT50-MTA 3-5.90	3	0.938	5.90*	1.57	N/A
	88026336	CAT50-MTA 3-7.08	3	0.938	7.08*	1.57	N/A
	88026415	CAT50-MTA 4-2.95	4	1.231	2.95	1.97	N/A
	88026436	CAT50-MTA 4-7.08	4	1.231	7.08*	1.97	N/A
	88026521	CAT50-MTA 5-4.13	5	1.748	4.13	2.55	N/A
	88026542	CAT50-MTA 5-8.26	5	1.748	8.26*	2.55	N/A

Retention knobs on page 108-109 | NOTE: * Fig. 2 style above

CAT SMS™ Jacob Taper Holder



FEATURES

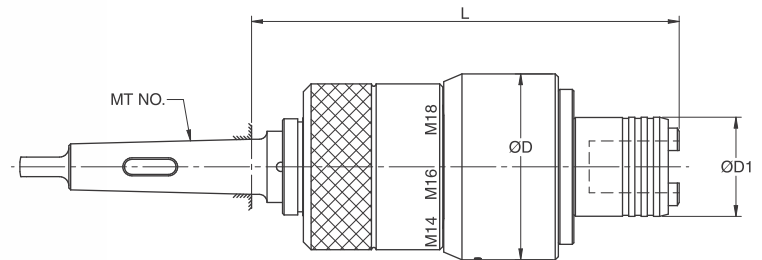
- Balanced to G2.5 @ 25,000 RPM
- Taper shank ground to AT3 accuracy (or better)

	Catalog Number	Description	JT Taper No.	L	L1	ØD	ØD1
CAT40 Inch	88424108	CAT40-JTA 1-1.57	1	1.57	0.656	1.75	0.384
	88424208	CAT40-JTA 2-1.57	2	1.57	0.875	1.75	0.559
	88424308	CAT40-JTA 3-1.57	3	1.57	1.219	1.75	0.811
	88424408	CAT40-JTA 4-1.57	4	1.57	1.656	1.75	1.124
	88424608	CAT40-JTA 6-1.57	6	1.57	1.000	1.75	0.676
	884243308	CAT40-JTA 33-1.57	33	1.57	1.000	1.75	0.624
CAT50 Inch	88426208	CAT50-JTA 2-1.57	2	1.57	0.875	2.75	0.559
	88426308	CAT50-JTA 3-1.57	3	1.57	1.129	2.75	0.811
	88426408	CAT50-JTA 4-1.57	4	1.57	1.656	2.75	1.124
	88426608	CAT50-JTA 6-1.57	6	1.57	1.000	2.75	0.676
	884263308	CAT50-JTA 33-1.57	33	1.57	1.000	2.75	0.624

Retention knobs on page 108-109

SMS™ Non-Reversible Tapping Attachment

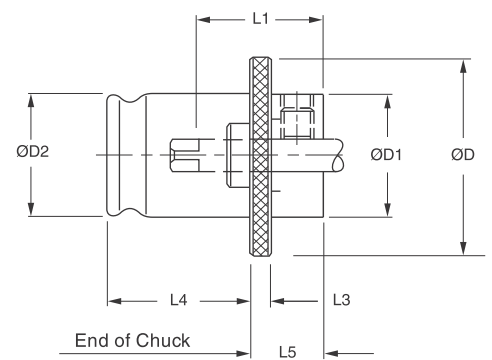
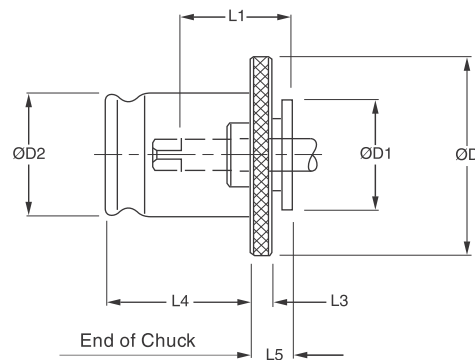
With Length Compensation on Compression and Expansion - Model - QCSFL



Catalog Number	Description	For Taps	Suitable Adaptors QA-QAL	Length Compensation		Float	ØD	ØD1	L	MT. No.
				Comp.	Expand.					
11601229	QCSFL12/MT2	M3 - M12	1	10	20	1	58	32	145	2
11601328	QCSFL12/MT3	M3 - M12	1	10	20	1	58	32	142	3
11602338	QCSFL20/MT3	M8 - M20	2	10	20	1.5	83	50	190	3
11602438	QCSFL20/MT4	M8 - M20	2	10	20	1.5	83	50	191	4
11603451	QCSFL30/MT4	M14 - M30	3	10	30	2	106	72	254	4
11603551	QCSFL30/MT5	M14 - M30	3	10	30	2	106	72	256	5
11604551	QCSFL42/MT5	M18 - M42	3	10	30	2	106	72	256	5

Tapping Adaptor

Without Safety Clutch - Model - QA



Catalog Number	Description	For Taps		Suitable For QCSFL	ØD	ØD1	ØD2	L1	L3	L4	L5
		Thread	Shanks Ø								
40100...	QA 1	M3-M12	3.50-11.30	Size 12	30	19	19	17	4	21.5	7
40200...	QA 2	M8-M20	7-18	Size 20	48	30	31	30	5	35	11
40300...	QA 3	M18-M42	14-28	Size 30/42	70	48	48	44	6	55.5	14
56300...	QAL 3	M33-M42	>28-36	Size 42	70	48	48	55	6	55.5	28

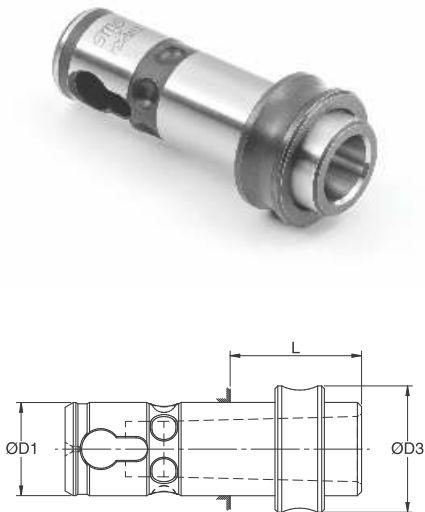
Universal Quick Change Drilling - Floating - Tapping Adaptor

SMS™ Universal Quick Change Drilling Chucks Model - TF



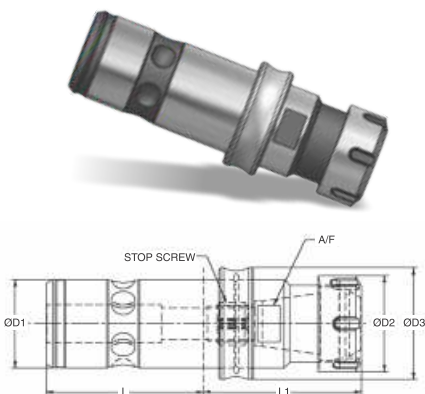
Catalog Number	Description	MT. No.	L	Suitable Adaptor KD/KF/KT	ØD	ØD1
10001113	TF1/MT1	1	65.5	SIZE 1	33	18
10002215	TF2/MT2	2	75	SIZE 2	48	26
10003215	TF2/MT3	3	76	SIZE 2	48	26
10003317	TF3/MT3	3	85	SIZE 3	61	34
10004317	TF3/MT4	4	86	SIZE 3	61	34
10004421	TF4/MT4	4	105.5	SIZE 4	82	46
10005422	TF4/MT5	5	107.5	SIZE 4	82	46
10005526	TF5/MT5	5	130.5	SIZE 5	100	60
10006527	TF5/MT6	6	133	SIZE 5	100	60

SMS™ Universal Quick Change Drilling Adaptors Model - KD



Catalog Number	Description	Female MT. No.	Suitable For Chuck	ØD1	ØD3	L
11101103	KD1-MT1	1	TF 1	18	28	15
11101203	KD2-MT1	1	TF 2	26	37	18
11102206	KD2-MT2	2	TF 2	26	37	30
11101303	KD3-MT1	1	TF 3	34	46	15
11102305	KD3-MT2	2	TF 3	34	46	25
11103308	KD3-MT3	3	TF 3	34	46	43
11101404	KD4-MT1	1	TF 4	46	58	22
11102406	KD4-MT2	2	TF 4	46	58	22
11103406	KD4-MT3	3	TF 4	46	58	31
11104411	KD4-MT4	4	TF 4	46	58	55
11102505	KD5-MT2	2	TF 5	60	73	25
11103505	KD5-MT3	3	TF 5	60	73	25
11104506	KD5-MT4	4	TF 5	60	73	31
11105513	KD5-MT5	5	TF 5	60	73	68

SMS™ Universal Quick Change Drilling Adaptors Model - KD-ER



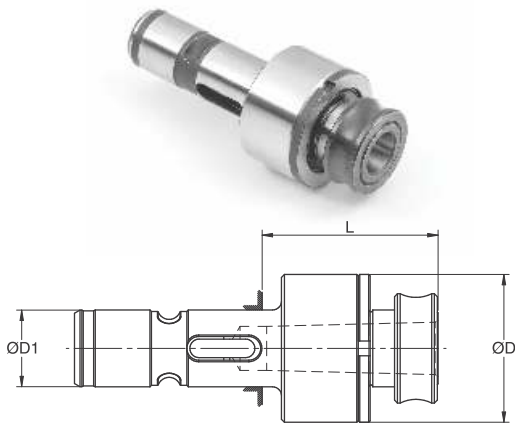
Catalog Number	Description	Female Collet Size	Collet Range	Suitable For Chuck	ØD1	ØD2	ØD3	L	L1
87211102211	KD2-ER20	ER20	3-13	TF2	26	28	37	60	56
87211102313	KD2-ER25	ER25	3-16	TF2	26	42	37	60	65
87211103313	KD3-ER25	ER25	3-16	TF3	34	42	46	65	65
87211103415	KD3-ER32	ER32	3-20	TF3	34	50	46	65	75
87211104415	KD4-ER32	ER32	3-20	TF4	46	50	58	82	75
87211104516	KD4-ER40	ER40	3-26	TF4	46	63	58	82	80
87211105516	KD5-ER40	ER40	3-26	TF5	60	63	73	105	80

ER Collet [on page 97-101](#)

ER Nut Wrenches [on page 110](#)

Universal Quick Change Drilling - Floating - Tapping Adaptor

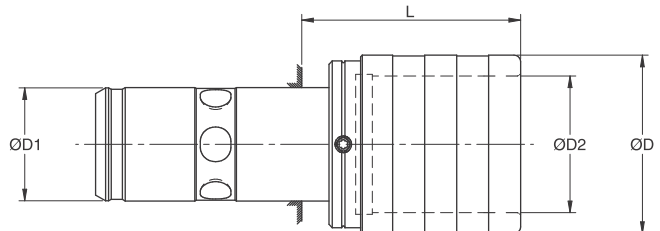
SMS™ Universal Quick Change Floating Adaptors Model - KF



Catalog Number	Description	Suitable Shank	Female MT. No.	Float Action	ØD	ØD1	L
11301210	KF2/MT1	TF 2	1	1	50	26	54
11302213	KF2/MT2	TF 2	2	1	50	26	63
11302312	KF3/MT2	TF 3	2	1	67	34	60.5
11303314	KF3/MT3	TF 3	3	1	67	34	80
11303414	KF4/MT3	TF 4	3	1.5	78	46	71.5
11304419	KF4/MT4	TF 4	4	1.5	78	46	96.5
11304518	KF5/MT4	TF 5	4	2	102	60	91.5
11305524	KF5/MT5	TF 5	5	2	102	60	118.5

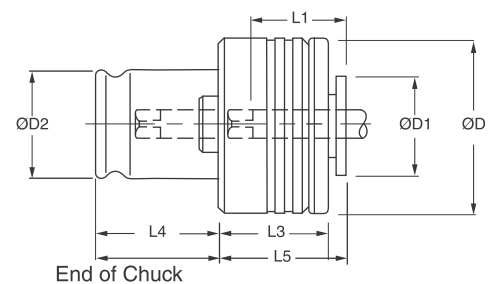
SMS™ Universal Quick Change Tapping Chucks

With Length Compensation on Compression and Expansion - Model - KT



Catalog Number	Description	Suitable Adaptors QA-QASB	For Taps	Suitable For Chuck	Length Compensation		ØD	ØD1	ØD2	L
					Comp.	Expand.				
11401209	KT 2/1	SIZE 1	M3-M12	TF 2	7.5	7.5	36	26	19	45
11402213	KT 2/2	SIZE 2	M8-M20	TF 2	12.5	12.5	53	26	31	66
11401309	KT 3/1	SIZE 1	M3-M12	TF 3	7.5	7.5	36	34	19	45
11402314	KT 3/2	SIZE 2	M8-M20	TF 3	12.5	12.5	53	34	31	70.5
11403324	KT 3/3	SIZE 3	M14-M33	TF 3	20	20	78	34	48	122
11401409	KT 4/1	SIZE 1	M3-M12	TF 4	7.5	7.5	36	46	19	45
11402413	KT 4/2	SIZE 2	M8-M20	TF 4	12.5	12.5	53	46	31	65.5
11403421	KT 4/3	SIZE 3	M14-M33	TF 4	20	20	78	46	48	107
11404425	KT 4/4	SIZE 4	M22-M48	TF 4	22.5	22.5	96	46	60	128
11402513	KT 5/2	SIZE 2	M8-M20	TF 5	12.5	12.5	53	60	31	65.5
11403519	KT 5/3	SIZE 3	M14-M33	TF 5	20	20	78	60	48	98.5
11404522	KT 5/4	SIZE 4	M22-M48	TF 5	22.5	22.5	96	60	60	109.5

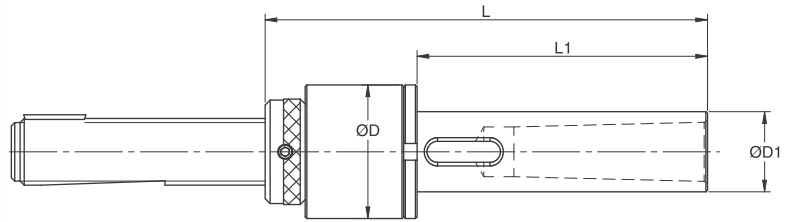
SMS™ Tapping Adaptor Model - QASB



Catalog Number	Description	For Taps		Suitable For KT	ØD	ØD1	ØD2	L1	L3	L4	L5
		Thread	Shanks Ø								
41100...	QASB1	M3-M12	3.50-11.30	Size 2/1, 3/1, 4/1	32	19	19	17	25	21.5	25
41200...	QASB2	M8-M20	7-18	Size 2/2, 3/2, 4/2, 5/2	50	30	31	30	31	35	34
41300...	QASB3	M14-M30	11-28	Size 3/3, 4/3, 5/3	72	48	48	44	41	55.5	45
41400...	QASB4	M22-M48	18-36	Size 4/4, 5/4	95	60	60	71	61	63	68

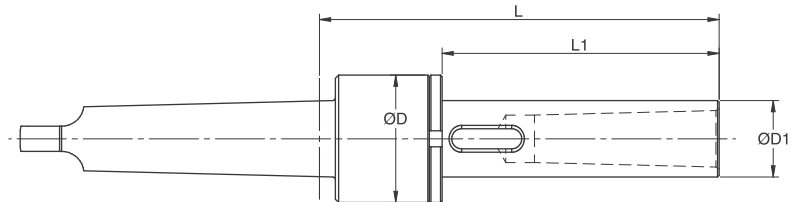
SMS™ Floating Reamer Holder with Radial Parallel Float

Floating Reamer Holder with Trapezoidal Shank Model : FH-Tr.



Catalog Number	Description	Shank Size	Female Morse Taper	Float	ØD	ØD1	L	L1
77301050	FH1/Tr.16x1.5	Tr.16x1.5	1	0.5	32	18	113	72.5
77301080	FH1/Tr.20x2	Tr.20x2	1	0.5	32	18	113	72.5
77301130	FH1/Tr.28x2	Tr.28x2	1	0.5	32	18	113	72.5
77302080	FH2/Tr.20x2	Tr.20x2	2	0.5	40	24	132	86.5
77302130	FH2/Tr.28x2	Tr.28x2	2	0.5	40	24	132	86.5
77303130	FH3/Tr.28x2	Tr.28x2	3	1	50	32	158.5	108.5
77303160	FH3/Tr.36x2	Tr.36x2	3	1	50	32	160.5	108.5
77304160	FH4/Tr.36x2	Tr.36x2	4	1.5	67	42	196.5	134
77304200	FH4/Tr.48x2	Tr.48x2	4	1.5	67	42	200.5	134

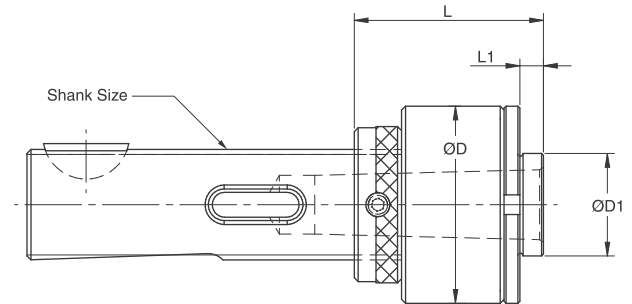
Floating Reamer Holder with Morse Taper Shank Model : FH-MT



Catalog Number	Description	Shank Size	Female Morse Taper	Float	ØD	ØD1	L	L1
77101010	FH1/MT1	MT1	1	0.5	32	16	106	72.5
77101020	FH1/MT2	MT2	1	0.5	32	16	106	72.5
77102020	FH2/MT2	MT2	2	0.5	40	24	127	86.5
77102030	FH2/MT3	MT3	2	0.5	40	24	128	86.5
77103030	FH3/MT3	MT3	3	1	50	32	151.5	108.5
77103040	FH3/MT4	MT4	3	1	50	32	153	108.5
77104040	FH4/MT4	MT4	4	1.5	67	42	189	134
77104050	FH4/MT5	MT5	4	1.5	67	42	189	134
77105050	FH5/MT5	MT5	5	1.5	88	58	232	165.5
77105060	FH5/MT6	MT6	5	1.5	88	58	233.5	165.5

SMS™ Floating Reamer Holder with Radial Parallel Float

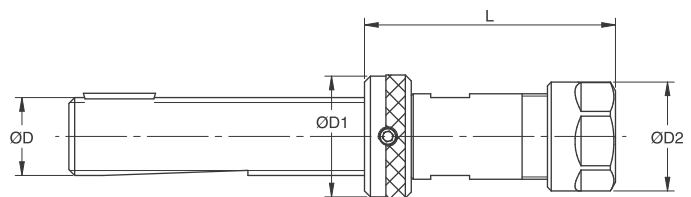
Floating Reamer Holder with Trapezoidal Shank Model : FHK-Tr.



Catalog Number	Description	Shank Size	Female Morse Taper	Float Action	ØD	ØD1	L	L1
78301080	FHK1/Tr.20x2	Tr.20x2	1	0.5	40	18	49	5
78301110	FHK1/Tr.25x2	Tr.25x2	1	0.5	40	18	49	5
78301130	FHK1/Tr.28x2	Tr.28x2	1	0.5	40	18	49	5
78301160	FHK1/Tr.36x2	Tr.36x2	1	0.5	40	18	51	5
78302110	FHK2/Tr.25x2	Tr.25x2	2	1	50	26	65	23
78302130	FHK2/Tr.28x2	Tr.28x2	2	1	50	26	48	6
78302160	FHK2/Tr.36x2	Tr.36x2	2	1	50	26	50	6
78303160	FHK3/Tr.36x2	Tr.36x2	3	1	67	42	63	5
78303200	FHK3/Tr.48x2	Tr.48x2	3	1	67	42	67	5
78304200	FHK4/Tr.48x2	Tr.48x2	4	1.5	67	42	72	8

SMS™ Trapezoidal Shank Collet Chucks

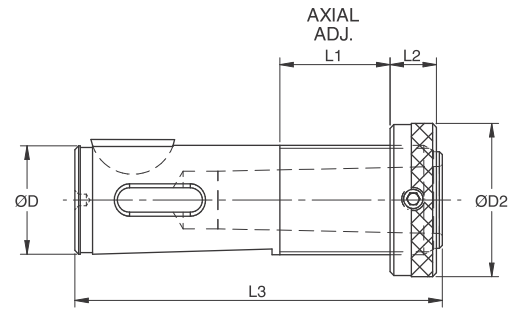
Trapezoidal Shank Collet Chuck Model : Tr.-CHE



Catalog Number	Description	ER Collet	ØD	ØD1	ØD12	L
872T16110	Tr.16x1.5-CHE 16-50	ER16	16	25	28	50
872T16210	Tr.16x1.5-CHE 20-50	ER20	16	25	34	50
872T20110	Tr.20x2-CHE 16-50	ER16	20	32	28	50
872T20212	Tr.20x2-CHE 20-60	ER20	20	32	34	60
872T25212	Tr.25x2-CHE 20-60	ER20	20	37	34	60
872T25312	Tr.25x2-CHE 25-60	ER25	25	37	42	60
872T28212	Tr.28x2-CHE 20-60	ER20	28	40	34	60
872T28312	Tr.28x2-CHE 25-60	ER25	28	40	42	60
872T28412	Tr.28x2-CHE 32-60	ER32	28	40	50	60
872T36412	Tr.36x2-CHE 32-60	ER32	36	50	50	60

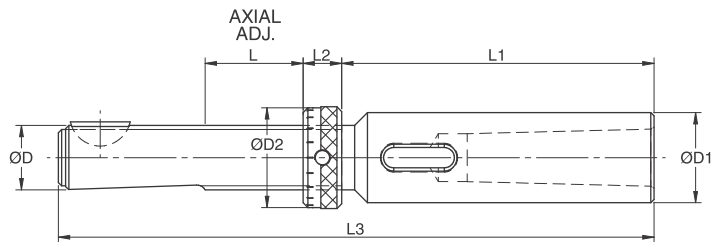
SMS™ Adjustable Adaptor Trapezoidal Shank

Adujstable Adaptor “D”-Type



Catalog Number	Description	MT Number	Thread Size	ØD	ØD2	L	L2	L3	Nut Part Number	Key Part Number
75205100	D16x1	1	Tr.16x1.5	16	25	28	12	85	S02050	S01120
75208100	D20x1	1	Tr.20x2	20	32	28	12	88	S02080	S01130
75211100	D25x1	1	Tf.25x2	25	37	30	12	95	S02110	S01160
75211200	D25x2	2	Tr.25x2	25	37	30	12	95	S02110	S01160
75213100	D28x1	1	Tr.28x2	28	40	30	12	95	S02130	S01160
75213200	D28x2	2	Tr.28x2	28	40	30	12	95	S02130	S01160
75216200	D36x2	2	Tr.36x2	36	50	36	14	118	S02160	S01200
75216300	D36x3	3	Tr.36x2	36	50	36	14	118	S02160	S01200
75220300	D48x3	3	Tr.48x2	48	67	47	18	144	S02200	S01230
75220400	D48x4	4	Tr.48x2	48	67	47	18	144	S02200	S01230

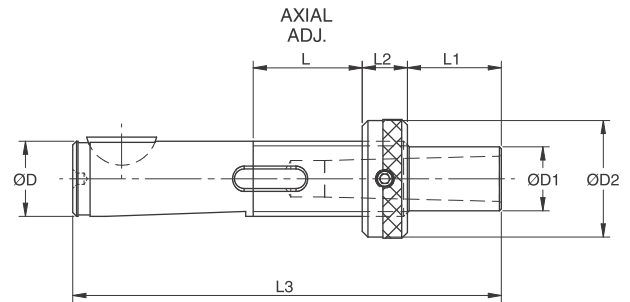
Adjustable Adaptor “H”-Type



Catalog Number	Description	MT Number	Thread Size	ØD	ØD1	ØD2	L	L1	L2	L3	Nut Part Number	Key Part Number
75805100	H16x1	1	Tr.16x1.5	16	20	28	28	79	12	164	S02050	S01120
75805200	H16x2	2	Tr.16x1.5	16	25	28	28	94	12	179	S02050	S01120
75808200	H20x2	2	Tr.20x2	20	28	32	28	94	12	182	S02080	S01130
75811300	H25x3	3	Tf.25x2	25	36	37	30	117	12	212	S02110	S01160
75813300	H28x3	3	Tf.28x2	28	36	40	30	117	12	212	S02130	S01160
75816400	H36x4	4	Tf.36x2	36	48	50	36	146	14	264	S02160	S01200

SMS™ Adjustable Adaptor Trapezoidal Shank

Adjustable Adaptor “F”-Type

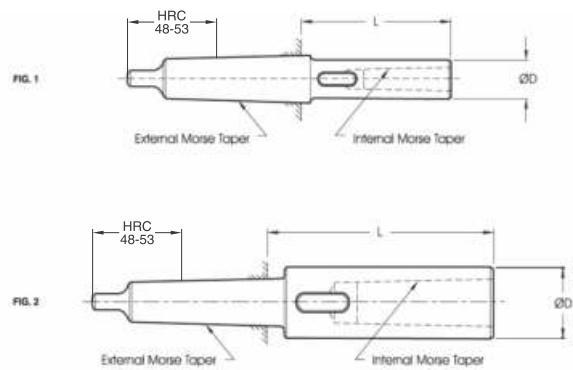
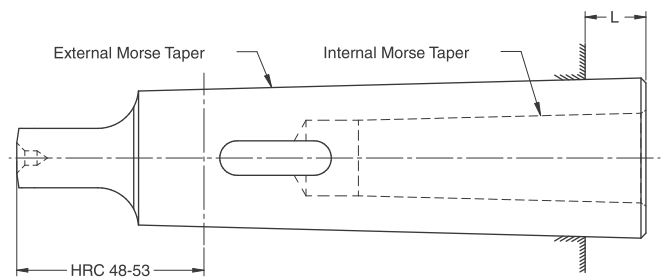


Catalog Number	Description	MT Number	Thread Size	ØD	ØD1	ØD2	L	L1	L2	L3	Nut Part Number	Key Part Number
75505105	F16x1x25	1	Tr.16x1.5	16	16	25	28	25	12	110	S02050	S01120
75505110	F16x1x50	1	Tr.16x1.5	16	16	25	28	50	12	135	S02050	S01120
75505115	F16x1x75	1	Tr.16x1.5	16	16	25	28	75	12	160	S02050	S01120
75505120	F16x1x100	1	Tr.16x1.5	16	16	25	28	100	12	185	S02050	S01120
75508105	F20x1x25	1	Tr.20x2	20	17	32	30	25	12	113	S02080	S01130
75508110	F20x1x50	1	Tr.20x2	20	17	32	30	50	12	138	S02080	S01130
75508115	F20x1x75	1	Tr.20x2	20	17	32	30	75	12	163	S02080	S01130
75508120	F20x1x100	1	Tr.20x2	20	17	32	30	100	12	188	S02080	S01130
75511105	F25x1x25	1	Tr.25x2	25	22	37	30	25	12	120	S02110	S01160
75511110	F25x1x50	1	Tr.25x2	25	22	37	30	50	12	145	S02110	S01160
75511115	F25x1x75	1	Tr.25x2	25	22	37	30	75	12	170	S02110	S01160
75511120	F25x1x100	1	Tr.25x2	25	22	37	30	100	12	195	S02110	S01160
75511205	F25x2x25	2	Tr.25x2	25	25	37	30	25	12	120	S02110	S01160
75511210	F25x2x50	2	Tr.25x2	25	25	37	30	50	12	145	S02110	S01160
75511215	F25x2x75	2	Tr.25x2	25	25	37	30	75	12	170	S02110	S01160
75511220	F25x2x100	2	Tr.25x2	25	25	37	30	100	12	195	S02110	S01160
75513105	F28x1x25	1	Tr.28x2	28	25	40	30	25	12	120	S02130	S01180
75513110	F28x1x50	1	Tr.28x2	28	25	40	30	50	12	145	S02130	S01180
75513115	F28x1x75	1	Tr.28x2	28	25	40	30	75	12	170	S02130	S01180
75513120	F28x1x100	1	Tr.28x2	28	25	40	30	100	12	195	S02130	S01180
75513205	F28x2x25	2	Tr.28x2	28	25	40	30	25	12	120	S02130	S01180
75513210	F28x2x50	2	Tr.28x2	28	25	40	30	50	12	145	S02130	S01180
75513215	F28x2x75	2	Tr.28x2	28	25	40	30	75	12	170	S02130	S01180
75513220	F28x2x100	2	Tr.28x2	28	25	40	30	100	12	195	S02130	S01180
75516206	F36x2x30	2	Tr.36x2	36	33	50	36	30	14	148	S02160	S01200
75516212	F36x2x60	2	Tr.36x2	36	33	50	36	60	14	178	S02160	S01200
75516218	F36x2x90	2	Tr.36x2	36	33	50	36	90	14	208	S02160	S01200
75516224	F36x2x120	2	Tr.36x2	36	33	50	36	120	14	238	S02160	S01200
75516306	F36x3x30	3	Tr.36x2	36	33	50	36	30	14	148	S02160	S01200
75516312	F36x3x60	3	Tr.36x2	36	33	50	36	60	14	178	S02160	S01200
75516318	F36x3x90	3	Tr.36x2	36	33	50	36	90	14	208	S02160	S01200
75516324	F36x3x120	3	Tr.36x2	36	33	50	36	120	14	238	S02160	S01200
75520308	F48x3x40	3	Tr.48x2	48	45	67	47	40	18	184	S02200	S01230
75520316	F48x3x80	3	Tr.48x2	48	45	67	47	80	18	224	S02200	S01230
75520324	F48x3x120	3	Tr.48x2	48	45	67	47	120	18	264	S02200	S01230
75520332	F48x3x160	3	Tr.48x2	48	45	67	47	160	18	304	S02200	S01230
75520408	F48x4x40	4	Tr.48x2	48	45	67	47	40	18	184	S02200	S01230
75520416	F48x4x80	4	Tr.48x2	48	45	67	47	80	18	224	S02200	S01230
75520424	F48x4x120	4	Tr.48x2	48	45	67	47	120	18	264	S02200	S01230
75520432	F48x4x160	4	Tr.48x2	48	45	67	47	160	18	304	S02200	S01230

Hardware and Accessories

Morse Taper Sockets and Extensions

RS And ES Styles



RS Style

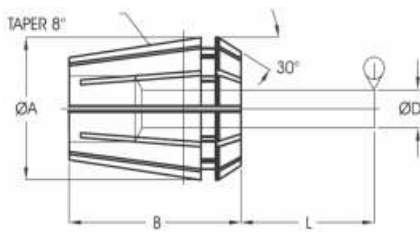
Catalog Number	Description	Morse Tape		L
		External	Internal	
212100	RS 21	2	1	17
213100	RS 31	3	1	5
213200	RS 32	3	2	18
214100	RS 41	4	1	6.5
214200	RS 42	4	2	6.5
214300	RS 43	4	3	22.5
215100	RS 51	5	1	6.5
215200	RS 52	5	2	6.5
215300	RS 53	5	3	6.5
215400	RS 54	5	4	6.5
216100	RS 61	6	1	8
216200	RS 62	6	2	8
216300	RS 63	6	3	8
216400	RS 64	6	4	8
216500	RS 65	6	5	8

ES Style

Catalog Number	Description	Morse Tape		Fig #	ØD	L
		External	Internal			
201100	ES 11	1	1	2	20	83
201200	ES 12	1	2	2	30	98
202100	ES 21	2	1	2	30	85
202200	ES 22	2	2	2	20	100
202300	ES 23	2	3	2	36	121
203100	ES 31	3	1	1	20	81
203200	ES 32	3	2	2	30	100
203300	ES 33	3	3	2	36	121
203400	ES 34	3	4	2	48	148
204100	ES 41	4	1	1	20	83
204200	ES 42	4	2	1	30	98
204300	ES 43	4	3	2	36	123
204400	ES 44	4	4	2	48	148
204500	ES 45	4	5	2	63	183
205100	ES 51	5	1	1	20	83
205200	ES 52	5	2	1	30	97
205300	ES 53	5	3	1	36	124
205400	ES 54	5	4	2	48	150
205500	ES 55	5	5	2	63	185
206100	ES 61	5	1	1	20	84
206200	ES 62	6	2	1	30	99
206300	ES 63	6	3	1	36	120
206400	ES 64	6	4	1	48	145
206500	ES 65	6	5	1	63	180

Hardware and Accessories

ER Collets- Standard, High Precision, and Steel Sealed Collets - Inch and Metric ID Sizes



Collet Dimensions		
ER Size	ØA	B
11	11.5	18
16	17	27.5
20	21	31.5
25	26	34
32	33	40
40	41	46

Collet Accuracy					
L Range	ØD Range	Standard	High Precision	DIN 6499	Micro Precision
15	3-6.5	0.010	0.005	0.015	0.003
25	6-10	0.010	0.005	0.015	0.003
40	10-18	0.010	0.005	0.015	0.003
50	18-26	0.010	0.005	0.015	0.003
60	26-34			0.025	0.003

SMS™ Micro-Precision available on request



Standard ER Collet
(.0004"/10 micron TIR)
(0.039"/1.0mm collapse range)



HP - High Precision Collet
(.0002"/5 micron TIR)
(.020/.5mm collapse range)



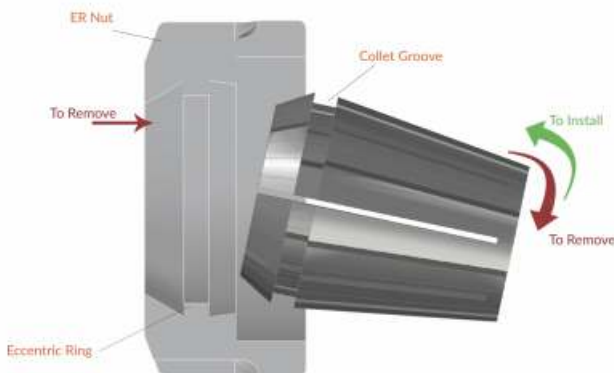
Steel-Sealed Coolant Collet
1000 PSI - 0.0004"/10 micron TIR
(no collapse range)

Operating Instructions

DIN 6499 – ISO 15488

Assembly Instructions

The ER Collet must first be inserted into the ER Nut before it can be put onto the Collet Chuck. Never insert the collet into the chuck and then attempt to tighten the nut over – this will damage the assembly. Make note of the high point of the eccentric ring (indicated by a "E" mark on the face of the Nut) and insert the collet such that the groove fits over the ring. Push the collet into position (you will hear a click) as per the illustration on the left. Now it is safe to thread the Nut and Collet assembly into the collet chuck.



Disassembly Instructions

Remove the Nut and Collet assembly from the collet chuck and follow the instructions in reverse of the assembly steps. Press on the face of the collet (see red arrows) and push the collet down until the collet removes from the nut.

Please Note!

Correct assembly is critical for maintaining concentricity (TIR accuracy) of the collet – improper assembly may result in damage to the clamping nut.

All MC and HC Collets are supplied with Rubber and at seals that are removable not desired.

Never clamp oversized tool shanks!

Example: Never use a 11mm-10mm collet for a tool shank diameter of 11.2mm. Use the next size larger collet 11.5mm-11mm. All SMS™ ER collets have .5mm collapse range.

For the best gripping strength and collet TIR accuracy, ensure that the full length of the cutting tool shank is inserted in the collet ID bore. If full insertion is not possible, make sure at least 2/3 of the shank is inserted into the ID bore. Improper tool shank insertion will permanently deform the collet and will result in poor collet TIR/runout.

Hardware and Accessories

ER Collets- Standard, High Precision, and Steel Sealed Collets - Inch and Metric ID Sizes

ID Size	ER11	ER16	ER20	ER25	ER32	ER40
	Standard	Standard	Standard	Standard	Standard	Standard
3mm	95220030	95221030	95222030	95223030	95224030	95225030
1/8"	95220318	95221318	95222318	95223318	95224318	95225318
3.5mm	95220035	95221035	95222035	95223035	95224035	95225035
9/64"	95220357	95221357	95222357	95223357	95224357	95225357
5/32"	95220397	95221397	95222397	95223397	95224397	95225397
4mm	95220040	95221040	95222040	95223040	95224040	95225040
11/64"	95220437	95221437	95222437	95223437	95224437	95225437
4.5mm	95220045	95221045	95222045	95223045	95224045	95225045
3/16"	95220476	95221476	95222476	95223476	95224476	95225476
5mm	95220050	95221050	95222050	95223050	95224050	95225050
13/64"	95220516	95221516	95222516	95223516	95224516	95225516
5.5mm	95220055	95221055	95222055	95223055	95224055	95225055
7/32"	95220556	95221556	95222556	95223556	95224556	95225556
15/64"	95220595	95221595	95222595	95223595	95224595	95225595
6mm	95220060	95221060	95222060	95223060	95224060	95225060
1/4"	95220635	95221635	95222635	95223635	95224635	95225635
6.5mm	95220065	95221065	95222065	95223065	95224065	95225065
17/64"	95220675	95221675	95222675	95223675	95224675	95225675
7mm	95220070	95221070	95222070	95223070	95224070	95225070
9/32"		95221714	95222714	95223714	95224714	95225714
7.5mm		95221075	95222075	95223075	95224075	95225075
19/64"		95221754	95222754	95223754	95224754	95225754
5/16"		95221794	95222794	95223794	95224794	95225794
8mm		95221080	95222080	95223080	95224080	95225080
21/64"		95221833	95222833	95223833	95224833	95225833
8.5mm		95221085	95222085	95223085	95224085	95225085
11/32"		95221873	95222873	95223873	95224873	95225873
9mm		95221090	95222090	95223090	95224090	95225090
23/64"		95221913	95222913	95223913	95224913	95225913
9.5mm		95221095	95222095	95223095	95224095	95225095
3/8"		95221953	95222953	95223953	95224953	95225953
25/64"		95221992	95222992	95223992	95224992	95225992
10mm		95221100	95222100	95223100	95224100	95225100
13/32"			95222102	95223102	95224102	95225102
10.5mm			95222105	95223105	95224105	95225105
27/64"			95222107	95223107	95224107	95225107
11mm			95222110	95223110	95224110	95225110
7/16"			95222111	95223111	95224111	95225111
11.5mm			95222115	95223115	95224115	95225115
29/64"			95222116	95223116	95224116	95225116
15/32"			95222119	95223119	95224119	95225119
12mm			95222120	95223120	95224120	95225120
31/64"			95222123	95223123	95224123	95225123
12.5mm			95222125	95223125	95224125	95225125
1/2"			95222127	95223127	95224127	95225127
13mm			95222130	95223130	95224130	95225130
33/64"				95223131	95224131	95225131
17/32"				95223134	95224134	95225134
13.5mm				95223135	95224135	95225135
35/64"				95223138	95224138	95225138
14mm				95223140	95224140	95225140
9/16"				95223142	95224142	95225142
14.5mm				95223145	95224145	95225145
37/64"				95223146	95224146	95225146
15mm				95223150	95224150	95225150
19/32"				95223151	95224151	95225151
39/64"				95223154	95224154	95225154
15.5mm				95223155	95224155	95225155
5/8"				95223158	95224158	95225158
16mm				95223160	95224160	95225160

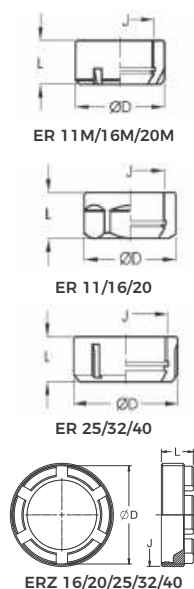
Hardware and Accessories

ER Collets- Standard, High Precision, and Steel Sealed Collets - Inch and Metric ID Sizes

NOTE : Add HP to part number for High Precision, MP for Micron Precision or SS for Steel Sealed Collets.

ID Size		ER11	ER16	ER20	ER25	ER32	ER40
		Standard	Standard	Standard	Standard	Standard	Standard
41/64"						95224162	95225162
16.5mm						95224165	95225165
21/32"						95224166	95225166
17mm						95224170	95225170
43/64"						95224171	95225171
11/16"						95224174	95225174
17.5mm						95224175	95225175
45/64"						95224178	95225178
18mm						95224180	95225180
23/32"						95224182	95225182
18.5mm						95224185	95225185
47/64"						95224186	95225186
19mm						95224190	95225190
3/4"						95224191	95225191
49/64"						95224194	95225194
19.5mm						95224195	95225195
25/32"						95224198	95225198
20mm						95224200	95225200
51/64"							95225202
20.5mm							95225205
13/16"							95225206
21mm							95225210
53/64"							95225211
27/32"							95225214
21.5mm							95225215
55/64"							95225218
22mm							95225220
7/8"mm							95225222
22.5mm							95225225
57/64"							95225226
23mm							95225230
29/32"							95225231
59/64"							95225234
23.5mm							95225235
15/16"							95225238
24mm							95225240
61/64"							95225242
24.5mm							95225245
31/32"							95225246
25mm							95225250
63/64"							95225251
1.0"							95225254
25.5mm							95225255
26mm							95225260

ER Collet Nuts



Catalog Number	Collet Size and Type	ØD (mm)	L (mm)	J (mm)
87921111	ER11M	16	10.8	M13x0.75
87921110	ER11	19	11.3	M14X0.75
87921161	ER16M	22	18	M19X1
87921160	ER16	28	17	M22X1.5
87921201	ER20M	28	19	M24X1
87921200	ER20	34	19	M25X1.5
87921251	ER25M	35	20	M30X1
87921250	ER25	42	20	M32X1.5
87921320	ER32	50	22	M40X1.5
87921400	ER40	63	25	M50X1.5
879Z21160	ER16Z	24	11.5	M24X1
879Z21200	ER20Z	28	12	M28x1.5
879Z21250	ER25Z	32	12.5	M32X1.5
879Z21320	ER32Z	40	12.4	M40X1.5
879Z21400	ER40Z	50	14.5	M50X1.5

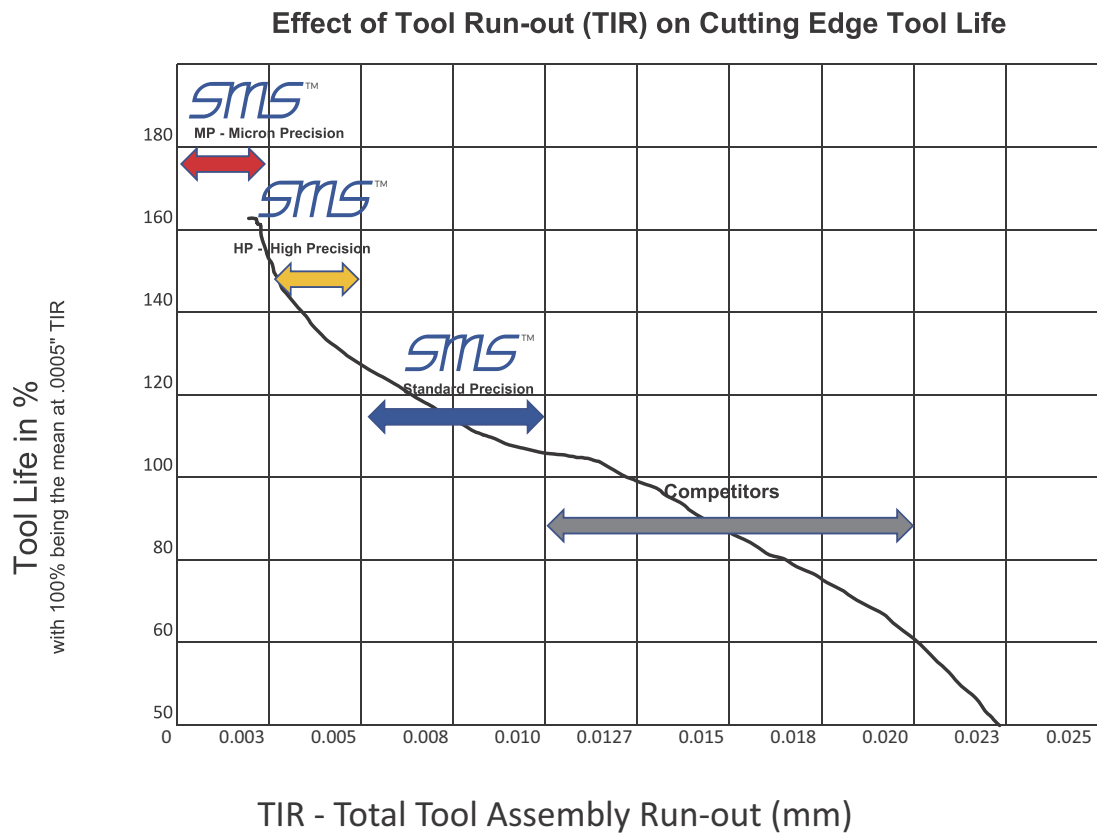
Hardware and Accessories

ER Collet Sets



	Catalog Number	Collet Size	Number of Collets	Collets Included	Fits Shank Sizes
Inch ID Sets	95220000	ER11	7	.125-.250	.125-.250
	95220001	ER11	13	.125-.250	.125-.250
	95221000	ER16	11	.125-.375	.125-.375
	95222000	ER20	15	.125-.500	.125-.500
	95223000	ER25	18	.125-.625	.125-.625
	95224000	ER32	21	.125-.750	.187-.750
	95225000	ER40	15	.125-1.00	.125-1.00
Metric ID Sets	95220009	ER11	13	3mm-7mm	3mm-7mm
	95221009	ER16	10	3mm-10mm	3mm-10mm
	95222009	ER20	12	3mm-13mm	3mm-13mm
	95223009	ER25	15	3mm-16mm	3mm-16mm
	95224009	ER32	18	3mm-20mm	3mm-20mm
	95225009	ER40	23	4mm-26mm	3mm-26mm

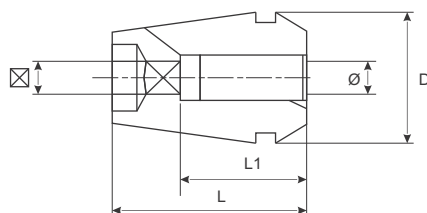
Note: High Precision (HP) and Steel Sealed (SS) Sets available



Hardware and Accessories

ER-T Collets – Inch Tap Collets for Rigid Tapping

Tap Collets are sized for tap shank diameter and tap shank square



Collet Series	ØD	L
ER16	16mm	27.5mm
ER20	20mm	31.5mm
ER25	25mm	34.0mm
ER32	32mm	40.0mm
ER40	40mm	46.0mm

ANSI Standard Taps								
Tap Size	Shank Size Ø	Square size ☒	ER11	ER16	ER20	ER25	ER32	ER40
#0-#6	0.141	0.110	95530112	95531112	95532112	95533112	95534112	95535112
#8	0.168	0.131	95530147	95531147	95532147	95533147	95534147	95535147
#10	0.194	0.152	95530180	95531180	95532180	95533180	95534180	95535180
#12	0.220	0.165	95530218	95531218	95532218	95533218	95534218	95535218
1/4"	0.255	0.191		95531266	95532266	95533266	95534266	95535266
5/16"	0.318	0.238		95531324	95532324	95533324	95534324	95535324
3/8"	0.381	0.286			95532385	95533385	95534385	95535385
7/16"	0.323	0.242			95532330	95533330	95534330	95535330
1/2"	0.367	0.275			95532366	95533366	95534366	95535366
9/16"	0.429	0.322				95533402	95534402	95535402
5/8"	0.480	0.360				95533435	95534435	95535435
11/16"	0.542	0.406					95534460	95535460
3/4"	0.590	0.442					95534481	95535481
13/16"	0.652	0.489					95534652	95535652
7/8"	0.697	0.523						95535697
15/16"	0.760	0.570						95535760
1.0"	0.800	0.600						95535800
1/8"NPT	0.313	0.234			95532306	95533306	95534306	95535306
1/8" NPT	0.437	0.329				95533412	95534412	95535412
1/4" NPT	0.563	0.421					95534476	95535476
3/8" NPT	0.700	0.531						95535521

ER-T Collets – Metric Tap Collets for Rigid Tapping– DIN6499/ISO15488

Tap Collets are sized for tap shank diameter and tap shank square

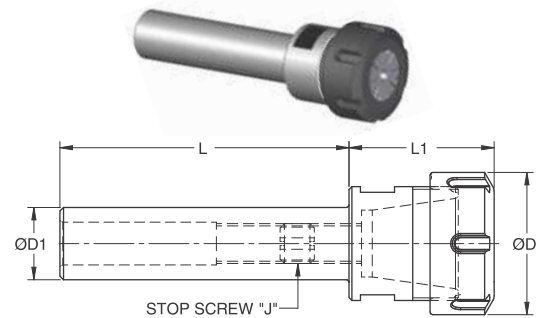
ANSI Standard Taps								
Tap Size	Shank Size Ø	Square size ☒	ER11	ER16	ER20	ER25	ER32	ER40
M3 (DIN371)	3.5	2.7	95530091	95531091	95532091	95533091	95534091	95535091
M3.5 (DIN371)	4.0	3.0	95530121	95531121	95532121	95533121	95534121	95535121
M6 (DIN376)	4.5	3.4	95530151	95531151	95532151	95533151	95534151	95535151
M6 (DIN371)	6.0	4.9	95530232	95531232	95532232	95533232	95534232	95535232
M8 (DIN376)	6.0	4.9	95530232	95531232	95532232	95533232	95534232	95535232
M10 (DIN376)	7.0	5.5		95531274	95532274	95533274	95534274	95535274
M8 (DIN371)	8.0	6.2		95531310	95532310	95533310	95534310	95535310
M12 (DIN376)	9.0	7.0		95531348	95532348	95533348	95534348	95535348
M10 (DIN371)	10.0	8.0		95531389	95532389	95533389	95534389	95535389
M14 (DIN376)	11.0	9.0			95532408	95533408	95534408	95535408
M16 (DIN376)	12.0	9.0			95532430	95533430	95534430	95535430
M18 (DIN376)	14.0	11.0				95533465	95534465	95535465
M20 (DIN376)	16.0	12.0				95533491	95534491	95535491
M22/M24 (DIN376)	18.0	14.5						95535531
M27 (DIN376)	20.0	16.0						95535556
M30 (DIN376)	22.0	18.0						95535578
M33 (DIN376)	25.0	20.0						95535615

Hardware and Accessories

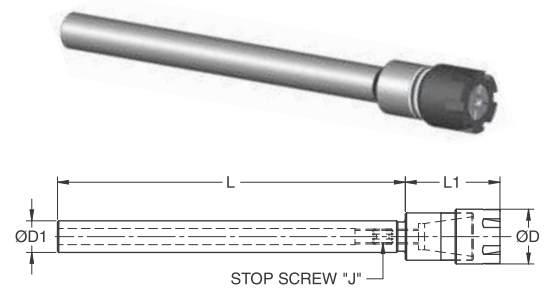
Straight Shank

ER Collet Holder

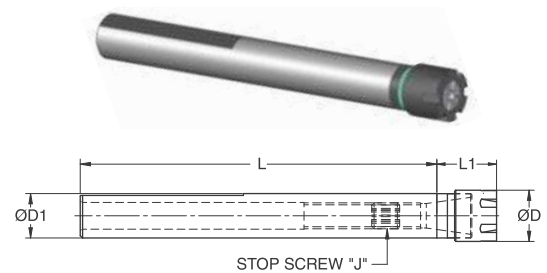
SMS™ Style SSH -CHE Cylindrical straight shank with no flats on shank. Can be used in Swiss style machines as well as ER collets for extended reach when required. All SSH Style holders will have ER Hex nut for ER11 - ER20 and Y-Spanner nut for ER25, ER32, and ER40.



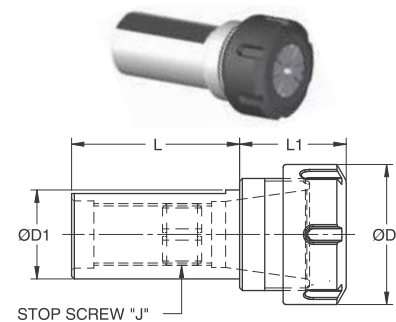
SMS™ Style SSH-CHE-M Cylindrical straight shank with no flats on shank. Can be used in Swiss style machines as well as ER collets for extended reach when required. All SSH-CHE-M Style holders will have ER Mini- nut for ER11 - ER25.



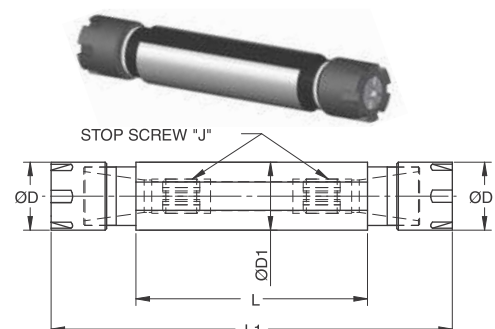
SMS™ Style SSHF-CHE-M Cylindrical straight shank with flats on shank. Can be used in Swiss style machines as well as ER collets for extended reach when required. All SSH-CHE-M Style holders will have ER Mini- nut for ER11 - ER25.



SMS™ Style SSH-NC-CHE Cylindrical straight shank with flats on shank. Can be used in conventional CNC lathe machines. All SSH-NC-M Style holders will have ER Y Spanner nuts ER25-ER40.



SMS™ Style SSH-DEF-CHE-M Cylindrical straight shank with flats on shank and dual ER collet ends. Can be used in Swiss style machines as well as ER collets for extended reach when required. All SSH-DE-CHE-M Style holders will have ER Mini- nut for ER8 - ER20.



Hardware and Accessories

Straight Shank

ER Collet Holder - SSH-CHE - NO FLAT ON SHANK

Catalog Number	Description	Machine Brand	ER Collet	Stop Screw "J"	ØD1	Shank L	Proj. L1	ØD	Flat on Shank
87241014	SSH-500-CHE 11-2.75	Various	ER11	M6x1	0.500	2.75	1.12	0.748	N
87241028	SSH-500-CHE 11-5.50	Various	ER11	M6X1	0.500	5.50	1.12	0.748	N
87241120	SSH-500-CHE 16-4.00	Various	ER16	M6X1	0.500	4.00	1.50	1.102	N
87241220	SSH-500-CHE 20-4.00	Various	ER20	M6X1	0.500	4.00	1.75	1.338	N
87242112	SSH-625-CHE 16-2.36	Various	ER16	5/16-24LH	0.625	2.36	1.44	1.102	N
87242220	SSH-625-CHE 20-4.00	Tornos	ER16	5/16-24LH	0.625	4.00	1.75	1.338	N
87245110	SSH-750-CHE 16-2.00	Citizen	ER16	7/16-16LH	0.750	2.00	1.25	1.102	N
87245120	SSH-750-CHE 16-4.00	Citizen	ER16	7/16-16LH	0.750	4.00	1.25	1.102	N
87245125	SSH-750-CHE 16-5.00	-	ER16	7/16-16LH	0.750	5.00	1.25	1.102	N
87245212	SSH-750-CHE 20-2.36	Citizen	ER20	7/16-16LH	0.750	2.36	1.50	1.338	N
87245228	SSH-750-CHE 20-5.50	Various	ER20	7/16-16LH	0.750	5.50	1.50	1.338	N
87245310	SSH-750-CHE 25-2.00	Citizen	ER25	7/16-16LH	0.750	2.00	1.88	1.653	N
87246110	SSH-20-CHE 16-50	Tsugami	ER16	M10x1.5	20mm	50mm	32mm	28mm	N
87246120	SSH-20-CHE 16-100	Tsugami	ER16	M10x1.5	20mm	100mm	32mm	28mm	N
87246206	SSH-20-CHE 20-30	Tsugami	ER20	M10x1.5	20mm	30mm	38mm	34mm	N
87246212	SSH-20-CHE 20-60	Tsugami	ER20	M10x1.5	20mm	60mm	38mm	34mm	N
87246310	SSH-20-CHE 25-50	Tsugami	ER25	M10x1.5	20mm	50mm	47mm	42mm	N
87246320	SSH-20-CHE 25-100	Tsugami	ER25	M10x1.5	20mm	100mm	47mm	42mm	N
87246410	SSH-20-CHE 32-50	Tsugami	ER32	M10x1.5	20mm	50mm	55mm	50mm	N
87246420	SSH-20-CHE 32-100	Tsugami	ER32	M10x1.5	20mm	100mm	55mm	50mm	N
87251220	SSH-1.00-CHE 20-4.00	Various	ER20	9/16-16LH	1.000	4.00	1.57	1.338	N
87251230	SSH-1.00-CHE 20-6.00	Various	ER20	9/16-16LH	1.000	6.00	1.57	1.338	N
87251310	SSH-1.00-CHE 25-2.00	Citizen/Miyano	ER25	11/16-16LH	1.000	2.00	1.88	1.653	N
87251320	SSH-1.00-CHE 25-4.00	Citizen/Miyano	ER25	11/16-16LH	1.000	4.00	1.88	1.653	N
87251410	SSH-1.00-CHE 32-2.00	Citizen/Miyano	ER32	M14x2	1.000	2.00	2.00	1.968	N
87251420	SSH-1.00-CHE 32-4.00	Citizen/Miyano	ER32	M14x2	1.000	4.00	2.00	1.968	N
87251425	SSH-1.00-CHE 32-5.00	Citizen/Miyano	ER32	M14x2	1.000	5.00	2.00	1.968	N
87251510	SSH-1.00-CHE 40-2.00	Citizen/Miyano	ER40	M14x2	1.000	2.00	2.36	2.48	N
87250310	SSH-25-CHE 25-50	Tornos	ER25	M16x2	25mm	50mm	50mm	42mm	N
87250320	SSH-25-CHE 25-100	Tornos	ER25	M16x2	25mm	100mm	50mm	42mm	N
87250410	SSH-25-CHE 32-50	Tornos	ER32	M16x2	25mm	50mm	55mm	50mm	N
87250510	SSH-25-CHE 40-50	Tornos	ER40	M16x2	25mm	50mm	60mm	63mm	N
87254412	SSH-1.250-CHE 32-2.50	Various	ER32	7/8-16LH	1.25	2.50	2.10	1.968	N
87254428	SSH-1.250-CHE 32-5.50	Various	ER32	7/8-16LH	1.25	5.50	2.10	1.968	N

Hardware and Accessories

Straight Shank

ER Collet Holder - SSH-CHE (M) - NO FLAT ON SHANK

Catalog Number	Description	Machine Brand	ER Collet	Stop Screw J	ØD1	Shank L	Proj. L1	ØD	Flat on Shank
872410M14	SSH-.500-CHE 11M-2.75	-	ER11	M6x1	0.500	2.75	1.18	0.63	N
872410M28	SSH-.500-CHE 11M-5.50	Various	ER11	M6x1	0.500	5.50	1.18	0.63	N
872411M14	SSH-.500-CHE 16M-2.75	-	ER16	M6x1	0.500	2.75	1.50	0.866	N
872411M28	SSH-.500-CHE 16M-5.50	Various	ER16	M6x1	0.500	5.50	1.50	0.866	N
872412M28	SSH-.500-CHE 20M-5.50	Various	ER20	M6x1	0.500	5.50	1.75	1.10	N
872420M28	SSH-.625-CHE 11M-5.50	-	ER11	5/16-24LH	0.500	5.50	0.88	0.63	N
872420M30	SSH-.625-CHE 11M-6.00	Tornos	ER11	5/16-24LH	0.625	6.00	0.88	0.63	N
872451M30	SSH-.750-CHE 16M-6.00	Citizen	ER16	7/16-16LH	0.750	6.00	1.10	0.866	N
872452M28	SSH-.750-CHE 20M-5.50	Various	ER20	7/16-16LH	0.750	5.50	1.60	1.10	N
872453M20	SSH-.750-CHE 25M-4.00	Citizen	ER25	7/16-16LH	0.750	4.00	1.88	1.38	N
8772453M25	SSH-.750-CHE 25M-5.00	-	ER25	7/16-16LH	0.750	5.00	1.88	1.378	N
872461M22	SSH-20-CHE 16M-110	-	ER16	M10x1.5	20mm	110mm	25.5mm	22mm	N
872461M31	SSH-20-CHE 16M-155	Tsugami	ER16	M10x1.5	20mm	155mm	25.5mm	22mm	N
872462M24	SSH-20-CHE 20M-120	-	ER20	M12x1.75	20mm	120mm	40mm	28mm	N
872462M36	SSH-20-CHE 20M-180	Various	ER20	M12x1.75	20	140	40	28	N
872462M42	SSH-20-CHE 20M-8.20	-	ER20	M12x1.75	20mm	8.20	1.57	1.102	N
872501M19	SSH-25-CHE 16M-95	-	ER16	M10x1.5	25mm	95mm	25.5mm	22mm	N
872502M31	SSH-25-CHE 20M-155	Tornos	ER20	M12x1.75	25	155	27	28	N
872503M24	SSH-25-CHE 25M-120	-	ER25	M16x2	25mm	120mm	36mm	35mm	N
872512M30	SSH-1.00-CHE 20M-6.00	Citizen/Miyano	ER20	9/16-16LH	1.000	6.00	1.10	1.10	N
872513M28	SSH-1.00-CHE 25M-5.50	-	ER25	11/16-16LH	1.000	5.50	2.00	1.378	N
872513M34	SSH-1.00-CHE 25M-6.70	-	ER25	11/16-16LH	1.000	6.70	2.00	1.378	N

Straight Shank - ER Collet Holder - MODEL SSH-NC-CHE - FLAT ON SHANK

Catalog Number	Description	Machine Brand	ER Collet	Stop Screw "J"	ØD1	Shank L	Proj. L1	ØD	Flat on Shank
87254F312	SSHF-NC-1.250-CHE 25-2.36	Various	ER25	11/16-16LH	1.250	2.36	1.25	1.653	Y
87254F318	SSHF-NC-1.250-CHE 25-3.62	-	ER25	11/16-16LH	1.250	3.62	1.25	1.653	Y
87254F412	SSHF-NC-1.250-CHE 32-2.36	Various	ER32	M22x1.5	1.250	2.36	1.50	1.968	Y
87254F425	SSHF-NC-1.250-CHE 32-4.86	-	ER32	M22x1.5	1.250	4.86	1.50	1.968	Y
87254F420	SSHF-NC-1.250-CHE 32-3.86	Various	ER32	M22x1.5	1.250	3.86	1.50	1.968	Y
87254F512	SSHF-NC-1.250-CHE 40-2.36	Various	ER32	M22x1.5	1.250	2.36	2.20	2.480	Y
87259F416	SSHF-NC-1.500-CHE 32-3.15	Various	ER32	M22x1.5	1.500	3.15	1.50	1.968	Y
87259F423	SSHF-NC-1.500-CHE 32-4.50	-	ER32	M22x1.5	1.500	4.50	1.50	1.968	Y
87259F425	SSHF-NC-1.500-CHE 32-5.00	-	ER32	M22x1.5	1.500	5.00	1.50	1.968	Y
87259F515	SSHF-NC-1.500-CHE 40-3.00	Various	ER40	M22x1.5	1.500	3.00	2.20	2.480	Y
87259F528	SSHF-NC-1.500-CHE 40-5.50	Various	ER40	M22x1.5	1.500	5.50	2.20	2.480	Y

Straight Shank - ER Collet Holder - MODEL SSH-DEF-CHE (M) - FLAT ON SHANK

Catalog Number	Description	Machine Brand	ER Collet	Stop Screw "J"	ØD1	Shank L	Proj. L1	ØD	Flat on Shank
872430M0M18	SSH-DEF-16-CHE 11M-50	Star	ER11	M6x1	16	50	89	16	Y
872450M M16	SSH-DEF-.750-CHE 11M-40	Citizen	ER11	5/16-24LH	19.05	40	79	16	Y
872450M0M22	SSH-DEF-.750-CHE 11M-70	Citizen	ER11	5/16-24LH	19.05	70	109	16	Y
872450M0M26	SSH-DEF-.750-CHE 11M-90	Citizen	ER11	5/16-24LH	19.05	90	129	16	Y
872451M1M21	SSH-DEF-.750-CHE 16M-55	Citizen	ER16	7/16-16LH	19.05	55	107	22	Y
872460M0M14	SSH-DEF-20-CHE 11M-30	Tsugami	ER11	5/16-24LH	20	30	69	16	Y
872460M0M28	SSH-DEF-20-CHE 11M-50	Tsugami	ER11	5/16-24LH	20	50	89	16	Y
872461M1M21	SSH-DEF-20-CHE 16M-55	Tsugami	ER16	7/16-16LH	20	55	107	22	Y
872471M1M22	SSH-DEF-22-CHE 16M-55	Star/Tsugami	ER16	7/16-16LH	22	55	110	22	Y
872471M1M26	SSH-DEF-22-CHE 16M-75	Star/Tsugami	ER16	7/16-16LH	22	75	130	22	Y
872501M1M24	SSH-DEF-25-CHE 16M-62	Tornos	ER16	7/16-16LH	25	62	117	22	Y
872511M1M24	SSH-DEF-1.00-CHE 16M-62	Miyano	ER16	7/16-16LH	25.4	62	117	22	Y
872552M2M22	SSH-DEF-32-CHE 20M-55	Various	ER20	9/16-16LH	32	55	110	28	Y
872552M2M26	SSH-DEF-32-CHE 20M-75	Various	ER20	9/16-16LH	32	75	130	28	Y

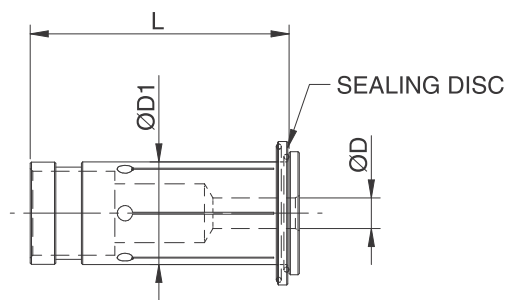
Hardware and Accessories

Straight Shank - ER Collet Holder - MODEL SSHF-CHE (M) - FLAT ON SHANK

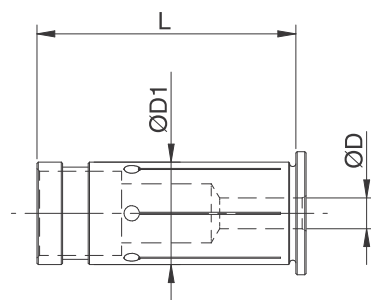
Catalog Number	Description	Machine Brand	ER Collet	Stop Screw "J"	ØD1	Shank L	Proj L1	ØD	Flat on Shank
87242F0M08	SSHF-.625-CHE 11M-1.50	Various	ER11	5/16-24LH	0.625	1.50	0.75	0.63	Y
87242F0M28	SSHF-.625-CHE 11M-5.50	Various	ER11	5/16-24LH	0.625	5.50	0.75	0.63	Y
87243F0M08	SSHF-16-CHE 11M-38	Star	ER11	M8x1	16mm	38mm	19mm	16mm	Y
87243F0M28	SSHF-16-CHE 11M-140	Star	ER11	M8x1	16mm	140mm	19mm	16mm	Y
87245F0M23	SSHF-.750-CHE 11M-4.50	Citizen	ER11	7/16-16LH	0.750	4.50	0.75	0.63	Y
87245F1M08	SSHF-.750-CHE 16M-1.50	Citizen	ER16	7/16-16LH	0.750	1.50	1.10	0.866	Y
87245F1M14	SSHF-.750-CHE 16M-2.75	Citizen	ER16	7/16-16LH	0.750	2.75	1.10	0.866	Y
87245F1M24	SSHF-.750-CHE 16M-4.75	Citizen	ER16	7/16-16LH	0.750	4.75	1.10	0.866	Y
87245F1M28	SSHF-.750-CHE 16M-5.50	Citizen	ER16	7/16-16LH	0.750	5.50	1.10	0.866	Y
87245F1M30	SSHF-.750-CHE 16M-6.00	-	ER16	7/16-16LH	0.750	6.00	1.10	0.866	Y
87246F0M12	SSHF-20-CHE 11M-60	Various	ER11	M8x1	20mm	60mm	19mm	16mm	Y
87246F1M08	SSHF-20-CHE 16M-38	Various	ER16	M10x1.5	20mm	38mm	27mm	22mm	Y
87246F1M14	SSHF-20CHE 16M-70	Tsugami	ER16	M10x1.5	20mm	70mm	27mm	22mm	Y
87246F1M24	SSHF-20-CHE 16M-120	Tsugami	ER16	M10x1.5	20mm	120mm	27mm	22mm	Y
87246F1M28	SSHF-20-CHE 16M-140	Tsugami	ER16	M10x1.5	20mm	140mm	27mm	22mm	Y
87251F1M07	SSHF-1.00-CHE 16M-1.30	Various	ER16	7/16-16LH	1.000	1.30	1.10	0.866	Y
87251F1M13	SSHF-1.00-CHE 16M-2.55	Citizen/Miyano	ER16	7/16-16LH	1.000	2.55	1.10	0.866	Y
87251F1M15	SSHF-1.00-CHE 16M-3.00	Citizen/Miyano	ER16	7/16-16LH	1.000	3.00	1.10	0.866	Y
87251F1M20	SSHF-1.00-CHE 16M-4.00	Citizen/Miyano	ER16	7/16-16LH	1.000	4.00	1.10	0.866	Y
87251F1M26	SSHF-1.00-CHE 16M-130	-	ER16	7/16-16LH	1.000	130mm	1.10	0.866	Y
87251F2M20	SSHF-1.00-CHE 20M-4.00	Citizen/Miyano	ER20	9/16-16LH	1.000	4.00	1.10	1.10	Y
87251F2M28	SSHF-1.00-CHE 20M-5.50	Citizen/Miyano	ER20	9/16-16LH	1.000	5.50	1.10	1.10	Y
87251F2M34	SSHF-1.00-CHE 20M-6.64	-	ER20	9/16-16LH	1.000	6.64	1.10	1.102	Y
87250F1M13	SSHF-25-CHE 16M-65	Tornos	ER16	7/16"-16LH	25mm	65mm	28mm	22mm	Y
87250F1M19	SSHF-25-CHE 16M-95	-	ER16	7/16"-16LH	25mm	95mm	28mm	22mm	Y
87250F2M20	SSHF-25-CHE 20M-100	Tornos	ER20	M12x1.75	25mm	100mm	28mm	28mm	Y
87250F2M30	SSHF-25-CHE 20M-150	Tornos	ER20	M12x1.75	25mm	150mm	28mm	28mm	Y
872503M15	SSHF-25-CHE 25M-75	Tornos	ER25	M16x2	25mm	75mm	50mm	35mm	Y
872503M29	SSHF-25-CHE 25M-145	Tornos	ER25	M16x2	25mm	145mm	36mm	35mm	Y

Hardware and Accessories

Reduction Collets for SMS™ Multi Milling Chucks and SMS™ Hydraulic Chucks



COLLET FOR ACCUMILL MULTI MILLING CHUCKS
MODEL - MC



COLLET FOR ACCUCLAMP HYDRAULIC CHUCKS
MODEL - HC

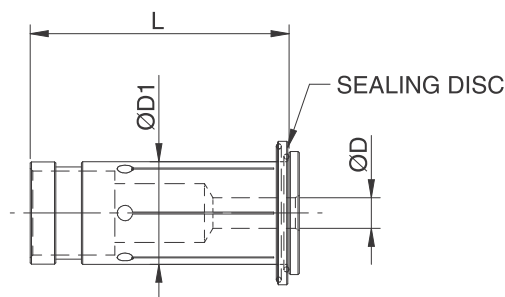
Series	ØD1	L
MC20	20	50.8
MC32	32	60.5
MC75	0.750	2.00
MC125	1.250	2.38

20mm MMC		20mm HCS		0.75" MMC		0.75" HCS	
Catalog Number	ØD Description	Catalog Number	ØD Description	Catalog Number	ØD Description	Catalog Number	ØD Description
954MC020003	MC20-3mm	954HC020003	HC20-3mm	954MC075003	MC75-3mm	954HC075003	HC75-3mm
954MC020004	MC20-4mm	954HC020004	HC20-4mm	954MC075004	MC75-4mm	954HC075004	HC75-4mm
954MC020005	MC20-5mm	954HC020005	HC20-5mm	954MC075005	MC75-5mm	954HC075005	HC75-5mm
954MC020006	MC20-6mm	954HC020006	HC20-6mm	954MC075006	MC75-6mm	954HC075006	HC75-6mm
954MC020007	MC20-7mm	954HC020007	HC20-7mm	954MC075007	MC75-7mm	954HC075007	HC75-7mm
954MC020008	MC20-8mm	954HC020008	HC20-8mm	954MC075008	MC75-8mm	954HC075008	HC75-8mm
954MC020009	MC20-9mm	954HC020009	HC20-9mm	954MC075009	MC75-9mm	954HC075009	HC75-9mm
954MC020010	MC20-10mm	954HC020010	HC20-10mm	954MC075010	MC75-10mm	954HC075010	HC75-10mm
954MC020011	MC20-11mm	954HC020011	HC20-11mm	954MC075011	MC75-11mm	954HC075011	HC75-11mm
954MC020012	MC20-12mm	954HC020012	HC20-12mm	954MC075012	MC75-12mm	954HC075012	HC75-12mm
954MC020013	MC20-13mm	954HC020013	HC20-13mm	954MC075013	MC75-13mm	954HC075013	HC75-13mm
954MC020014	MC20-14mm	954HC020014	HC20-14mm	954MC075014	MC75-14mm	954HC075014	HC75-14mm
954MC020015	MC20-15mm	954HC020015	HC20-15mm	954MC075015	MC75-15mm	954HC075015	HC75-15mm
954MC020016	MC20-16mm	954HC020016	HC20-16mm	954MC075016	MC75-16mm	954HC075016	HC75-16mm
954MC020125	MC20- 1/8"	954HC020125	HC20- 1/8"	954MC075125	MC75-1/8"	954HC075125	HC75-1/8"
954MC020187	MC20- 3/16"	954HC020187	HC20- 3/16"	954MC075187	MC75-3/16"	954HC075187	HC75-3/16"
954MC020250	MC20-1/4"	954HC020250	HC20-1/4"	954MC075250	MC75-1/4"	954HC075250	HC75-1/4"
954MC020312	MC20-5/16"	954HC020312	HC20-5/16"	954MC075312	MC75-5/16"	954HC075312	HC75-5/16"
954MC020375	MC20-3/8"	954HC020375	HC20-3/8"	954MC075375	MC75-3/8"	954HC075375	HC75-3/8"
954MC020437	MC20-7/16"	954HC020437	HC20-7/16"	954MC075437	MC75-7/16"	954HC075437	HC75-7/16"
954MC020500	MC20-1/2"	954HC020500	HC20-1/2"	954MC075500	MC75-1/2"	954HC075500	HC75-1/2"
954MC020562	MC20-9/16"	954HC020562	HC20-9/16"	954MC075562	MC75-9/16"	954HC075562	HC75-9/16"
954MC020625	MC20-5/8"	954HC020625	HC20-5/8"	954MC075625	MC75-5/8"	954HC075625	HC75-5/8"

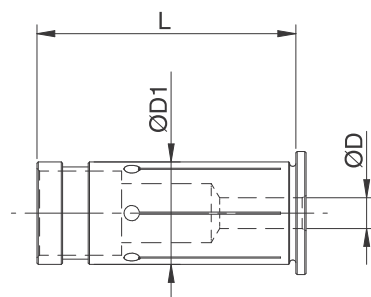
All MC Collet supplied with Sealing Disc. & all HC Collet supplied with Aluminium coolant seals that are removable but not desired.

Hardware and Accessories

Reduction Collets for SMS™ Multi Milling Chucks and SMS™ Hydraulic Chucks



COLLET FOR ACCUMILL MULTI MILLING CHUCKS
MODEL - MC



COLLET FOR ACCUCLAMP HYDRAULIC CHUCKS
MODEL - HC

Series	ØD1	L
MC20	20	50.8
MC32	32	60.5
MC75	0.750	2.00
MC125	1.250	2.38

32mm MMC		32mm HCS		1.25" MMC		1.25" HCS	
Catalog Number	ØD Description	Catalog Number	ØD Description	Catalog Number	ØD Description	Catalog Number	ØD Description
954MC032003	MC32-3mm	954HC032003	HC32-3mm	954MC125003	MC125-3mm	954HC125003	HC125-3mm
954MC032004	MC32-4mm	954HC032004	HC32-4mm	954MC125004	MC125-4mm	954HC125004	HC125-4mm
954MC032005	MC32-5mm	954HC032005	HC32-5mm	954MC125005	MC125-5mm	954HC125005	HC125-5mm
954MC032006	MC32-6mm	954HC032006	HC32-6mm	954MC125006	MC125-6mm	954HC125006	HC125-6mm
954MC032007	MC32-7mm	954HC032007	HC32-7mm	954MC125007	MC125-7mm	954HC125007	HC125-7mm
954MC032008	MC32-8mm	954HC032008	HC32-8mm	954MC125008	MC125-8mm	954HC125008	HC125-8mm
954MC032009	MC32-9mm	954HC032009	HC32-9mm	954MC125009	MC125-9mm	954HC125009	HC125-9mm
954MC032010	MC32-10mm	954HC032010	HC32-10mm	954MC125010	MC125-10mm	954HC125010	HC125-10mm
954MC032011	MC32-11mm	954HC032011	HC32-11mm	954MC125011	MC125-11mm	954HC125011	HC125-11mm
954MC032012	MC32-12mm	954HC032012	HC32-12mm	954MC125012	MC125-12mm	954HC125012	HC125-12mm
954MC032013	MC32-13mm	954HC032013	HC32-13mm	954MC125013	MC125-13mm	954HC125013	HC125-13mm
954MC032014	MC32-14mm	954HC032014	HC32-14mm	954MC125014	MC125-14mm	954HC125014	HC125-14mm
954MC032015	MC32-15mm	954HC032015	HC32-15mm	954MC125015	MC125-15mm	954HC125015	HC125-15mm
954MC032016	MC32-16mm	954HC032016	HC32-16mm	954MC125016	MC125-16mm	954HC125016	HC125-16mm
954MC032017	MC32-17mm	954HC032017	HC32-17mm	954MC125017	MC125-17mm	954HC125017	HC125-17mm
954MC032018	MC32-18mm	954HC032018	HC32-18mm	954MC125018	MC125-18mm	954HC125018	HC125-18mm
954MC032019	MC32-19mm	954HC032019	HC32-19mm	954MC125019	MC125-19mm	954HC125019	HC125-19mm
954MC032020	MC32-20mm	954HC032020	HC32-20mm	954MC125020	MC125-20mm	954HC125020	HC125-20mm
954MC032021	MC32-21mm	954HC032021	HC32-21mm	954MC125021	MC125-21mm	954HC125021	HC125-21mm
954MC032022	MC32-22mm	954HC032022	HC32-22mm	954MC125022	MC125-22mm	954HC125022	HC125-22mm
954MC032023	MC32-23mm	954HC032023	HC32-23mm	954MC125023	MC125-23mm	954HC125023	HC125-23mm
954MC032024	MC32-24mm	954HC032024	HC32-24mm	954MC125024	MC125-24mm	954HC125024	HC125-24mm
954MC032025	MC32-25mm	954HC032025	HC32-25mm	954MC125025	MC125-25mm	954HC125025	HC125-25mm
954MC032125	MC32-1/8"	954HC032125	HC32-1/8"	954MC125125	MC125-1/8"	954HC125125	HC125-1/8"
954MC032187	MC32-3/16"	954HC032187	HC32-3/16"	954MC125187	MC125-3/16"	954HC125187	HC125-3/16"
954MC032250	MC32-1/4"	954HC032250	HC32-1/4"	954MC125250	MC125-1/4"	954HC125250	HC125-1/4"
954MC032312	MC32-5/16"	954HC032312	HC32-5/16"	954MC125312	MC125-5/16"	954HC125312	HC125-5/16"
954MC032375	MC32-3/8"	954HC032375	HC32-3/8"	954MC125375	MC125-3/8"	954HC125375	HC125-3/8"
954MC032437	MC32-7/16"	954HC032437	HC32-7/16"	954MC125437	MC125-7/16"	954HC125437	HC125-7/16"
954MC032500	MC32-1/2"	954HC032500	HC32-1/2"	954MC125500	MC125-1/2"	954HC125500	HC125-1/2"
954MC032562	MC32-9/16"	954HC032562	HC32-9/16"	954MC125562	MC125-9/16"	954HC125562	HC125-9/16"
954MC032625	MC32-5/8"	954HC032625	HC32-5/8"	954MC125625	MC125-5/8"	954HC125625	HC125-5/8"
954MC032750	MC32-3/4"	954HC032750	HC32-3/4"	954MC125750	MC125-3/4"	954HC125750	HC125-3/4"
954MC032875	MC32-7/8"	954HC032875	HC32-7/8"	954MC125875	MC125-7/8"	954HC125875	HC125-7/8"
954MC032100	MC32-1"	954HC032100	HC32-1"	954MC125100	MC125-1"	954HC125100	HC125-1"

All MC Collet supplied with Sealing Disc. & all HC Collet supplied with Aluminium coolant seals that are removable but not desired.

Hardware and Accessories

Retention Knobs

Machine Spindle	Brands
A	Hurco
B	DMC/Mori Seiki
C	Toyoda
D	Mazak
E	Okuma
F	Brother
G	Fanuc
I	Matsuura
H	Haas
J	OKK
K	Doosan
M	Kitamura
N	Makino
P	SNK
R	Yasda
S	Mitsui Seiki
T	Fadal
U	Ikegai
V	Victor
W	Kira
Y	Kia
Z	Toshiba

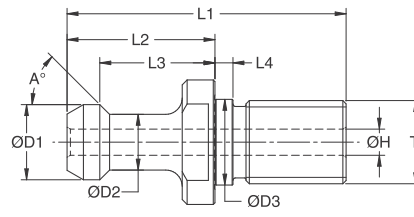


Figure-1

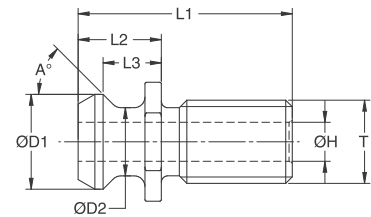


Figure-2

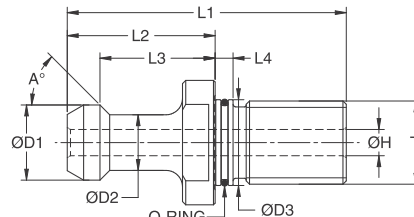


Figure-3

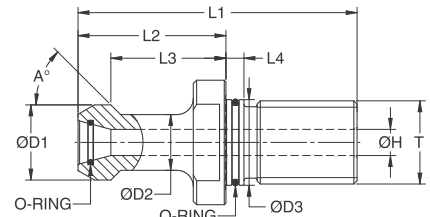


Figure-4

Catalog Number	Machine Spindle Taper	Coolant Hole Y/N	Fig.	A Pull Angle	ØD1 Head	ØD2 Neck	ØD3 Pilot Dia.	L4 Pilot Length	L1 OAL	L2 Proj.	L3 Pull Length	ØH Coolant Hole	Flats	T Knob Thread	Machine Spindle
9610450102	BT30	N		45	13.2mm	9.8mm	-	-	27.95mm	11.7mm	8.1mm	N	13mm	M12	A
9610450105	BT30	N	1	45	11mm	7mm	12.5mm	4mm	42.75mm	23mm	18mm	N	13mm	M12	G, H, J
9610600105	BT30	N	1	60	11mm	7mm	12.5mm	4mm	42.75mm	23mm	18mm	N	13mm	M12	B, E, F, I
9610900105	BT30	N	1	90	13.95mm	7.95mm	12.5mm	4mm	44.95mm	23mm	18mm	N	13mm	M12	
9612450207	BT40	N	1	45	15mm	10mm	17mm	6mm	60mm	35mm	28mm	N	19mm	M16	AEJ,M,C,E,H,N
9612600207	BT40	N	1	60	15mm	10mm	17mm	6mm	60mm	35mm	28mm	N	19mm	M16	E
9612750206	BT40	N	1	75	19mm	14mm	17mm	6mm	54mm	29mm	23mm	N	19mm	M16	E, I, K, N, R
9612900205	BT40	N	1	90	15mm	10mm	17mm	6mm	54mm	25mm	18mm	N	19mm	M16	S
9612900207	BT40	N	1	90	15mm	10mm	17mm	6mm	60mm	35mm	28mm	N	19mm	M16	B, J, T
9624450703	CAT40	N	2	45	0.740	0.490	-	-	1.624	0.640	0.440	N	19mm	5/8"-11	D, E
9624450706	CAT40	N	1	45	0.591	0.394	0.641	0.177	2.250	1.266	0.990	N	19mm	5/8"-11	A,C,E,H,J,K
9624600706	CAT40	N	1	60	0.591	0.394	0.641	0.177	2.250	1.266	0.990	N	19mm	5/8"-11	
9624750705	CAT40	N	1	75	0.748	0.551	0.641	0.177	2.010	1.024	0.787	N	19mm	5/8"-11	I, K, M, N
9624900706	CAT40	N	1	90	0.591	0.394	0.641	0.177	2.244	1.260	0.984	N	19mm	5/8"-11	B, J
9626450905	CAT50	N	2	45	1.140	0.820	-	-	2.300	1.000	0.700	N	1.250	1"-8	A, N
9626450909	CAT50	N	1	45	0.906	0.669	1.031	0.217	3.354	1.780	1.386	N	30mm	1"-8	H, M
9626600909	CAT50	N	1	60	0.906	0.669	1.024	0.217	3.354	1.772	1.378	N	30mm	1"-8	I, P
9626900909	CAT50	N	1	90	0.906	0.669	1.031	0.217	3.346	1.780	1.386	N	30mm	1"-8	B, E, J
9610450105C	BT30	Y	1	45	11mm	7mm	12.5mm	4mm	42.75mm	23mm	18mm	3mm	13mm	M12	C, H, J
9610450105CO	BT30	Y	3	45	11mm	7mm	12.5mm	4mm	42.75mm	23mm	18mm	3mm	13mm	M12	B
9610600105C	BT30	Y	1	60	11mm	7mm	12.5mm	4mm	42.75mm	23mm	18mm	3mm	13mm	M12	B, E, F, I
9610750105C	BT30	Y	1	75	12mm	7.95mm	12.5mm	4mm	42.75mm	23.35mm	18.35	3mm	13mm	M12	R
9610900105C	BT30	Y	1	90	14mm	7.95mm	12.5mm	4mm	45mm	23mm	18mm	3mm	13mm	M12	
9612450204C	BT40	Y	1	45	18.8mm	12.5mm	17mm	6mm	44mm	19mm	14mm	7mm	19mm	M16	D
9612450207C	BT40	Y	1	45	15mm	10mm	17mm	6mm	60mm	35mm	28mm	5mm	19mm	M16	AEJ,M,C,E,H,N
9612750206C	BT40	Y	1	75	19mm	14mm	17mm	6mm	54mm	29mm	23mm	6mm	19mm	M16	E, I, K, N, R
9624450703C	CAT40	Y	2	45	0.740	0.490	-	-	1.624	0.640	0.440	0.157	19mm	5/8"-11	D, E
9624450706C	CAT40	Y	1	45	0.591	0.394	0.641	0.177	2.250	1.266	0.990	0.200	19mm	5/8"-11	A,C,E,H,J,K
9624750705C	CAT40	Y	1	75	0.748	0.551	0.641	0.177	2.010	1.024	0.787	0.236	19mm	5/8"-11	I, K, M, N
9624750705C-2O	CAT40	Y	4	75	0.748	0.551	0.641	0.177	2.010	1.024	0.787	0.236	19mm	5/8"-11	
9624750705CO	CAT40	Y	3	75	0.748	0.551	0.641	0.177	2.010	1.024	0.787	0.236	19mm	5/8"-11	B
9624900706C	CAT40	Y	1	90	0.591	0.394	0.641	0.177	2.244	1.260	0.984	0.200	19mm	5/8"-11	B, J
9626450905COP	CAT50	Y	3	45	1.140	0.820	1.031	0.240	2.575	1.000	0.700	0.468	1.250	1"-8	A, C, D, N
9626450905CP	CAT50	Y	1	45	1.140	0.820	1.031	0.240	2.575	1.000	0.700	0.468	1.250	1"-8	A, C, D, N
9626450909C	CAT50	Y	1	45	0.906	0.669	1.031	0.217	3.354	1.780	1.386	0.312	30mm	1"-8	H, M
9626450909CO	CAT50	Y	3	45	0.906	0.669	1.031	0.217	3.354	1.780	1.386	0.312	30mm	1"-8	C
9626600909CO	CAT50	Y	3	60	0.906	0.669	1.024	0.217	3.508	1.772	1.378	0.312	30mm	1"-8	E
9626750907C	CAT50	Y	1	75	1.102	0.826	1.031	0.217	2.919	1.344	0.990	0.315	30mm	1"-8	I, K
9626900906C	CAT50	Y	1	90	0.942	0.706	1.031	0.217	2.519	1.218	0.903	0.315	1.250	1"-8	K (HP)*
9626900909C	CAT50	Y	1	90	0.906	0.669	1.031	0.217	3.346	1.780	1.386	0.312	30mm	1"-8	B, E, J
9626900909C-2O	CAT50	Y	4	90	0.906	0.669	1.031	0.217	3.346	1.780	1.386	0.312	30mm	1"-8	B, E, J (HP)*

C = COOLANT THRU, O = 1 O-RING, 2O = 2 O-RING, HP = High Pressure Coolant Spindle

Note: Machine Tool Builders change retention knob specifications from time to time.

Always double check the required diemsnions of the retention knob you require.

Hardware and Accessories

Retention Knobs

Machine Spindle	Brands
A	Hurco
B	DMG/Mori Seiki
C	Toyoda
D	Mazak
E	Okuma
F	Brother
G	Fanuc
I	Matsuura
H	Haas
J	OKK
K	Doosan
M	Kitamura
N	Makino
P	SNK
R	Yasda
S	Mitsui Seiki
T	Fadal
U	Ikegai
V	Victor
W	Kira
Y	Kia
Z	Toshiba

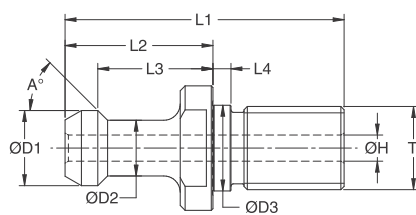


Figure-1

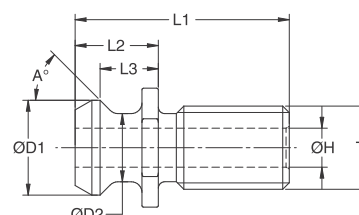


Figure-2

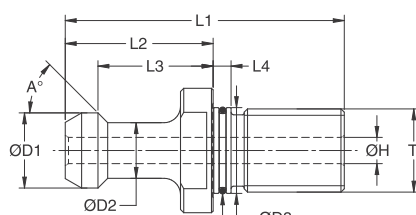


Figure-3

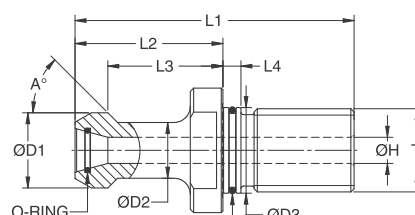


Figure-4

Catalog Number	Machine Spindle Taper	Coolant Hole Y/N	Fig.	A Pull Angle	ØD1 Head	ØD2 Neck	ØD3 Pilot Dia.	L4 Pilot Length	L1 OAL	L2 Proj.	L3 Pull Length	ØH Coolant Hole	Flats	T Knob Thread	Machine Spindle
9610450102C	BT30	Y	2	45	13.2mm	9.8mm	-	-	27.95mm	11.7mm	8.1mm	3mm	13mm	M12	A
9610450102P	BT30	N	1	45	13.2mm	9.8mm	12.5mm	4mm	35.2mm	11.7mm	8.1mm	-	13mm	M12	A
9610450102CP	BT30	Y	1	45	13.2mm	9.8mm	12.5mm	4mm	35.2mm	11.7mm	8.1mm	3mm	13mm	M12	A
9612450203C	BT40	Y	1	45	18.8mm	12.5mm	17mm	6mm	42mm	16.2mm	11.2mm	5mm	19mm	M16	A
9612450207CO	BT40	Y	3	45	15mm	10mm	17mm	6mm	60mm	35mm	18mm	5mm	19mm	M16	U
9612600207C	BT40	Y	1	60	15mm	10mm	17mm	6mm	60mm	35mm	28mm	5mm	19mm	M16	W
9612900207C	BT40	Y	1	90	15mm	10mm	17mm	6mm	60mm	35mm	28mm	5mm	19mm	M16	Y
96127502062301C-2O	BT40	Y	4	75	19mm	14mm	17mm	6mm	58.5mm	29mm	23mm	6mm	19mm	M16	-
9624450703CO	CAT40	Y	3	45	0.740	0.490	0.641	0.177	1.624	0.640	0.440	0.157	19mm	5/8"-11	D (HP)*
9624600706C	CAT40	Y	1	60	0.591	0.394	0.641	0.177	2.250	1.266	0.990	0.200	19mm	5/8"-11	C, Z
9626600909C	CAT50	Y	1	60	0.906	0.669	1.024	0.217	3.354	1.772	1.378	0.315	30mm	1"-8	E
9618150105	SK30	N	1	75	13mm	9mm	13mm	5mm	44mm	24mm	19mm	N	14mm	M12	P
9618150105C	SK30	Y	1	75	13mm	9mm	13mm	5mm	44mm	24mm	19mm	3mm	14mm	M12	P
9619150205	SK40	N	1	75	19mm	14mm	17mm	7mm	54mm	26mm	20mm	N	19mm	M16	SK40
9619150205C	SK40	Y	1	75	19mm	14mm	17mm	7mm	54mm	26mm	20mm	7mm	19mm	M16	SK40
9621150407	SK50	N	1	75	28mm	21mm	25mm	10mm	74mm	34mm	25mm	N	30mm	M24	P
9621150407C	SK50	Y	1	75	28mm	21mm	25mm	10mm	74mm	34mm	25mm	11.50mm	30mm	M24	P
9614900409	BT50	N	1	90	23mm	17mm	25mm	8mm	85mm	45mm	35mm	-	30mm	M24	-
9614900409C	BT50	Y	1	90	23mm	17mm	25mm	8mm	85mm	45mm	35mm	9mm	30mm	M24	-
9614600409	BT50	N	1	60	23mm	17mm	25mm	8mm	85mm	45mm	35mm	-	30mm	M24	-
9614600409C	BT50	Y	1	60	23mm	17mm	25mm	8mm	85mm	45mm	35mm	9mm	30mm	M24	-
9614450409	BT50	N	1	45	23mm	17mm	25mm	8mm	85mm	45mm	35mm	-	30mm	M24	-
9614450409C	BT50	Y	1	45	23mm	17mm	25mm	8mm	85mm	45mm	35mm	9mm	30mm	M24	-

C = COOLANT THRU, O = 1 O-RING, 2O = 2 O-RING, HP = High Pressure Coolant Spindle

Note: Machine Tool Builders change retention knob specifications from time to time.

Always double check the required diemsnions of the retention knob you require.

Hardware and Accessories

Tool Shank Holding Fixtures

For tool setup

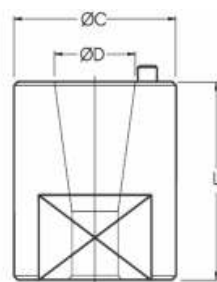


FIG.1

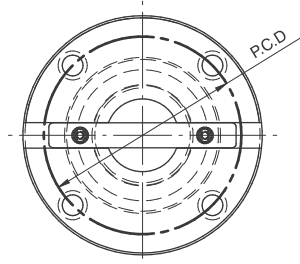
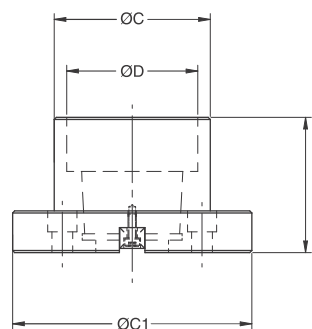


FIG.2



Catalog Number	Description	ØD (mm)	ØC (mm)	ØC1 (mm)	L (mm)	PCD (mm)	Fig. No.
952030	HF 30 Taper	31.75	70	-	75	-	1
952040	HF 40 Taper	44.45	75	-	100	-	1
952050	HF 50 Taper	69.85	100	-	135	-	1
952A40	HF HSK 40 Taper	40	50	100	50	90	2
952A50	HF HSK 50 Taper	50	60	115	60	95	2
952A63	HF HSK 63 Taper	63	75	115	65	95	2
952A10	HF HSK 100 Taper	100	105	170	95	140	2
952P50	HF PTI 50 Taper	-	70	115	75	95	1
952P63	HF PTI 63 Taper	-	80	115	85	95	1
952P80	HF PTI 80 Taper	-	100	170	100	140	1

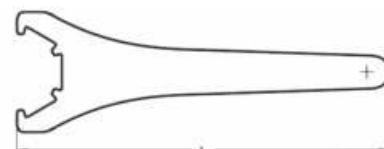
ER Nut Wrenches



ER 11M/16M/20M



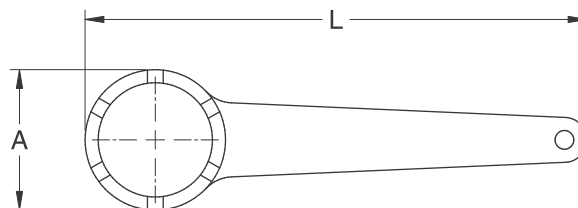
ER 11/16/20



ER 25/32/40

Catalog Number	Description	Collet Size and Type	A (mm)	L (mm)
87922111	ER11M-Spanner	ER11M	16.8	90
87922110	ER11-C-Spanner	ER11	32.0	95
87922161	ER16M-Spanner	ER16M	22.5	110
87922160	ER16-C-Spanner	ER16	42.0	140
87922201	ER20M-Spanner	ER20M	29.0	120
87922200	ER20-C-Spanner	ER20	60.0	135
87922250	ER25-Y-Spanner	ER25	-	205
87922320	ER32-Y-Spanner	ER32	-	250
87922400	ER40-Y-Spanner	ER40	-	287

ERZ Nut Spanner

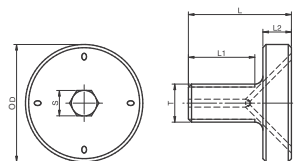


Catalog Number	Description	"D" (mm)	"A" (mm)	"L" (mm)
87922160Z	ERZ16 Spanner	ERZ16	22	97
87922200Z	ERZ20 Spanner	ERZ20	25.5	97
87922250Z	ERZ25 Spanner	ERZ25	30	134
87922320Z	ERZ32 Spanner	ERZ32	37.5	134
87922400Z	ERZ40 Spanner	ERZ40	47	150

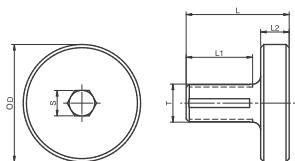
Hardware and Accessories

Shell Mill Arbor Screws

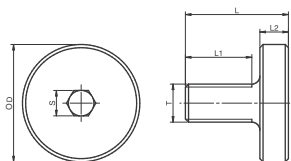
For use with Shell Mill holders – Standard and Coolant style



ACCUKOOL - CD



ACCUKOOL - CS



STANDARD



	Catalog Number	Description	Style	Cutter Pilot Size	ØD	L	L1	L2	T Thread	Key
Inch	9615006	SMLS-050	Standard	0.50	0.656	1.34	1.0	0.34	1/4"-28	3/16"
	9615006CS	SMLS-CS-050	AccuKool	0.50	0.656	1.34	1.0	0.34	1/4"-28	3/16"
	9615006CD	SMLS-CD-050	AccuKool	0.50	0.656	1.38	1.0	0.38	1/4"-28	3/16"
	9615006-SM	SMLS-050-SM	Small Head Standard	0.50	0.394	1.34	1.0	0.34	1/4"-28	3/16"
	9615006CS-SM	SMLS-CS-050-SM	Small Head AccuKool	0.50	0.394	1.34	1.0	0.34	1/4"-28	3/16"
	9615006CD-SM	SMLS-CD-050-SM	Small Head AccuKool	0.50	0.394	1.38	1.0	0.38	1/4"-28	3/16"
	9617507	SMLS-075	Standard	0.75	0.875	1.8	1.43	0.37	3/8"-24	1/4"
	9617507CS	SMLS-CS-075	AccuKool	0.75	0.875	1.8	1.43	0.37	3/8"-24	1/4"
	9617507CD	SMLS-CD-075	AccuKool	0.75	0.875	1.8	1.37	0.43	3/8"-24	1/4"
	9617507-SM	SMLS-075-SM	Small Head Standard	0.75	0.625	1.8	1.43	0.37	3/8"-24	1/4"
	9617507CS-SM	SMLS-CS-075-SM	Small Head AccuKool	0.75	0.625	1.8	1.43	0.37	3/8"-24	1/4"
	9617507CD-SM	SMLS-CD-075-SM	Small Head AccuKool	0.75	0.625	1.8	1.30	0.50	3/8"-24	1/4"
	9611008	SMLS-100	Standard	1.00	1.19	1.62	1.25	0.37	1/2"-20	5/16"
	9611008CS	SMLS-CS-100	AccuKool	1.00	1.19	1.62	1.25	0.37	1/2"-20	5/16"
	9611008CD	SMLS-CD-100	AccuKool	1.00	1.19	1.68	1.25	0.43	1/2"-20	5/16"
	9611008-SM	SMLS-100-SM	Small Head Standard	1.00	0.750	1.62	1.25	0.37	1/2"-20	5/16"
	9611008CS-SM	SMLS-CS-100-SM	Small Head AccuKool	1.00	0.750	1.62	1.25	0.37	1/2"-20	5/16"
	9611008CD-SM	SMLS-CD-100-SM	Small Head AccuKool	1.00	0.750	1.70	1.20	0.50	1/2"-20	5/16"
	9611209	SMLS-125	Standard	1.25	1.50	1.44	0.94	0.50	5/8"-18	5/16"
	9611209CS	SMLS-CS-125	AccuKool	1.25	1.50	1.44	0.94	0.50	5/8"-18	5/16"
	9611209CD	SMLS-CD-125	AccoKool	1.25	1.50	1.49	0.94	0.55	5/8"-18	5/16"
	9611209-SM	SMLS-125-SM	Small Head Standard	1.25	0.940	1.44	0.94	0.50	5/8"-18	5/16"
	9611209CS-SM	SMLS-CS-125-SM	Small Head AccuKool	1.25	0.940	1.44	0.94	0.50	5/8"-18	5/16"
	9611209CD-SM	SMLS-CD-125-SM	Small Head AccuKool	1.25	0.940	1.54	1.00	0.56	5/8"-18	5/16"
	9611510	SMLS-150	Standard	1.50	1.875	1.63	1.13	0.50	3/4"-16	3/8"
	9611510CS	SMLS-CS-150	AccuKool	1.50	1.875	1.63	1.13	0.50	3/4"-16	3/8"
	9611510CD	SMLS-CD-150	AccuKool	1.50	1.875	1.68	1.13	0.55	3/4"-16	3/8"
	9612011	SMLS-200	Standard	2.00	2.40	1.81	1.31	0.50	1"-14	1/2"
	9612011CS	SML-CS-200	AccuKool	2.00	2.40	1.81	1.31	0.50	1"-14	1/2"
	9612011CD	SMLS-CD-200	AccuKool	2.00	2.40	1.88	1.33	0.55	1"-14	1/2"
	9612511	SMLS-250	AccuKool	2.50	3.10	2.00	1.5	0.50	1"-14	1/2"
	9612511CS	SMLS-CS-250	AccoKool	2.50	3.10	2.00	1.5	0.50	1"-14	1/2"
	9612511CD	SMSL-CD-250	AccuKool	2.50	3.10	2.05	1.5	0.55	1"-14	1/2"
Metric	9611601	SMLS-16M	Standard	16mm	13mm	33mm	25mm	8mm	M8X1.25	6mm
	9612202	SMLS-22M	Standard	22mm	16mm	35mm	25mm	10mm	M10X1.5	8mm
	9612202CS	SMLS-CS-22M	AccuKool	22mm	28mm	25mm	18mm	7mm	M10X1.5	8mm
	9612202CD	SMLS-CD-22M	AccuKool	22mm	28mm	25mm	18mm	7mm	M10X1.5	8mm
	9612703	SMLS-27M	Standard	27mm	18mm	47mm	35mm	12mm	M12X1.75	10mm
	9612703CS	SMLS-CS-27M	AccuKool	27mm	35mm	30mm	22mm	8mm	M12X1.75	10mm
	9612703CD	SMLS-CD-27M	AccuKool	27mm	35mm	30mm	22mm	8mm	M12X1.75	10mm
	9613204	SMLS-32M	Standard	32mm	24mm	51mm	35mm	16mm	M16X2.00	14mm
	9613204CS	SMLS-CS-32M	AccuKool	32mm	42mm	35mm	26mm	9mm	M16X2.00	14mm
	9613204CD	SMLS-CD-32M	AccuKool	32mm	42mm	35mm	26mm	9mm	M16X2.00	14mm
	9614005	SMLS-40M	Standard	40mm	30mm	55mm	35mm	20mm	M20X2.5	17mm
	9614005CS	SMLS-CS-40M	AccuKool	40mm	52mm	45mm	30mm	15mm	M20X2.5	17mm
	9614005CD	SMLS-CD-40M	AccuKool	40mm	52mm	40mm	30mm	15mm	M20X2.5	17mm

NOTE:

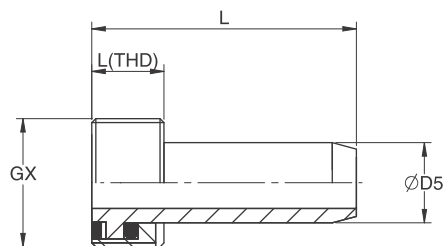
CD Style Arbor Screw features coolant-thru the arbor screw and exiting thru the face of the arbor screw.

CS Style Arbor Screw features coolant slots along the threads of the arbor screw and into then body of the Coolant-thru Cutter

Hardware and Accessories

HSK Coolant Tubes

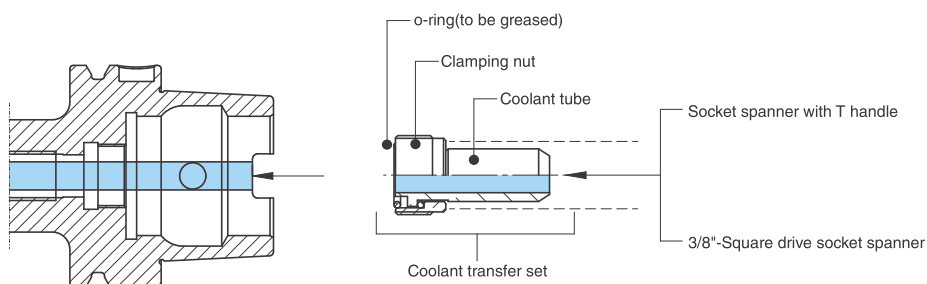
For HSK Holders 32 - 125 Tapers



Catalog Number	Description	GX (mm)	L (mm)	ØD5 (mm)	Torque for holder Assembly Nm/In Lbs.
9697110CB	HSK32 Tube	M10x1	26.70	6	7Nm/
9697212CB	HSK40 Tube	M12x1	29.5	8	11Nm/
9697316CB	HSK50 Tube	M16x1	33.20	10	15Nm/
9697418CB	HSK63 Tube	M18x1	36.60	12	20Nm/
9697520CB	HSK80 Tube	M20x1.5	40.10	14	25Nm/
9697624CB	HSK100 Tube	M24x1.5	44.2	16	30Nm/
9697730CB	HSK125 Tube	M30x1.5	48.0	18	35Nm/

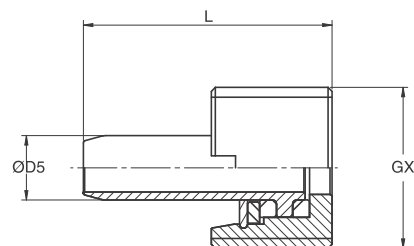
Assembly instructions for the Coolant Tube internal taper shank of HSK holders

- 1) Shank must be clean of all machining debris
- 2) Add lubricant (light grease) to O-Ring before assembly
- 3) Completely insert the Coolant tube centrally in HSK
- 4) Screw in the coolant tube using the proper installation wrench
- 5) Check the coolant tube for radial movement - should be none
- 6) Check the coolant tube for axial movement - should be none
- 7) Standard coolant tubes are supplied in a brass material. Steel coolant tubes are available in HSK63, HSK80, and HSK100 sizes. Add "S" to end of part number



PTI Coolant Tubes

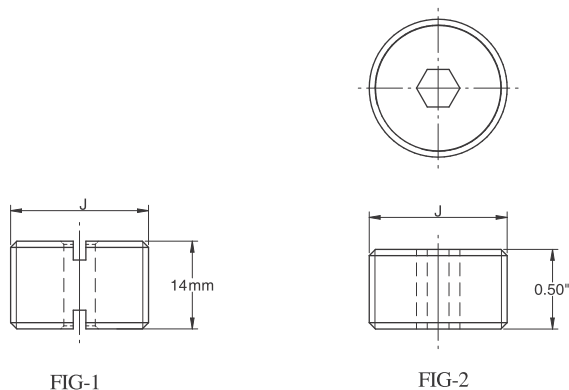
For PTI Holders 63 & 80 Tapers



Catalog Number	Description	GX (mm)	L (mm)	D5 (mm)
966920C	PTI63 Tube	M20x2.0	31.0	8
967020C	PTI80 Tube	M20x2.0	33.5	10

Hardware and Accessories

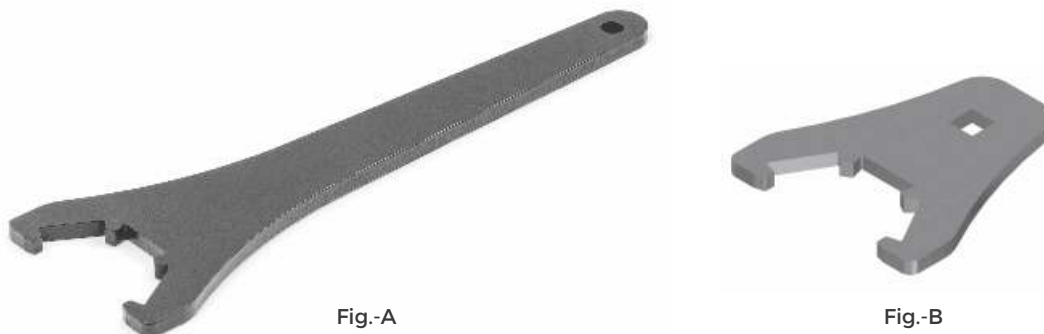
Length Adjustment Screws for ER Collet Chucks



Catalog Number	J	Fig.
87922081	M8X1.25	1
87922111	M10X1.50	1
87922110	M12X1.75	1
87922161	M14X2.00	1
87922160	M16X2.00	1
87922201	M18X1.50	1
87922200	M22X1.50	1
87922250	M28X1.50	1

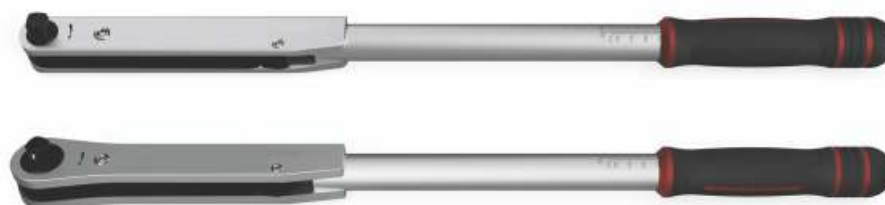
Catalog Number	Description	ER Collet Chuck Size	J	Fig.
87922794	ER11 - .250	ER11	5/16"-24 LH	2
87922437	ER16 - .437	ER16	7/16"-16 LH	2
87922563	ER20 - .562	ER20	9/16"-16 LH	2
87922688	ER25 - .687	ER25	11/16"-16 LH	2
87922875	ER32 - .875	ER32	7/8"-16 LH	2
87922112	ER40 - 1.125	ER40	1-1/8"-16 LH	2

"Y" Spanner Wrenches for SMS™ Multi-Milling Chucks



Catalog Number	Description	Milling Chuck Size	L (mm)	Fig.
87922320	MMC 75 Spanner	20mm/.750"	250	A
87922400	MMC 125 Spanner	32mm/1.250"	287	A
87922329	MMC 75 "Y" Claw Wrench	20mm/.750"	85	B
87922409	MMC 125 "Y" Claw Wrench	32mm/1.250"	104.5	B

Torque Wrench for Multi-Milling Chucks



Catalog Number	Description	Milling Chuck Size	(Nm)
87932065	Torque Wrench 3/8" Sq. Drive	20mm/.750"	65
87940155	Torque Wrench 1/2" Sq. Drive	32mm/1.250"	155

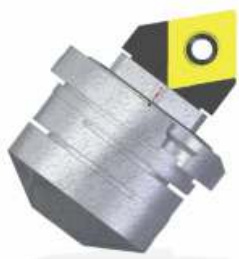
Hardware and Accessories

Torque Wrench for SMS™ Hydraulic Chuck



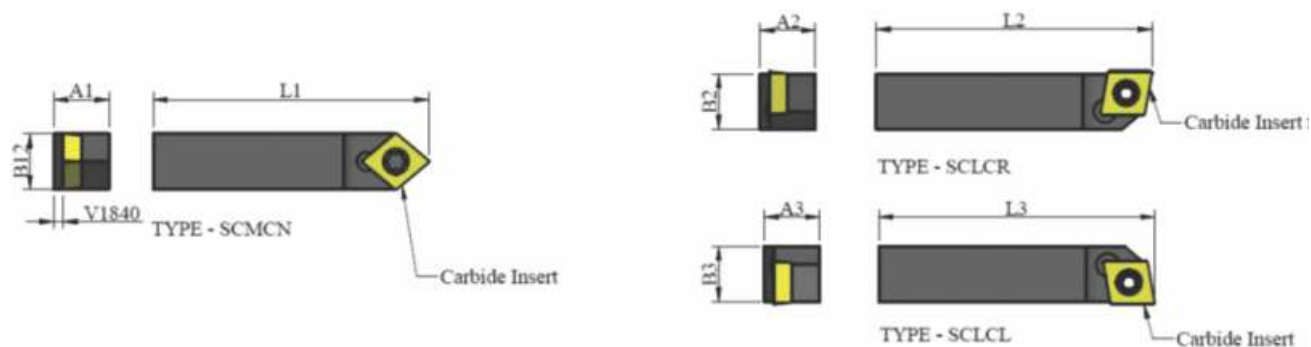
Catalog Number	Description	Nm	Ft-lbs.
87924H20	HCS-0.75 / 20	5.5	4.00
87924H32	HCS-1.250 / 32	6.0	4.34

Fine Boring Bar Cartridge FBCAR



Description	Suitable Insert
FBCAR 1606	CCMT 06
FBCAR 2006	CCMT 06
FBCAR 2209	TCMT 09

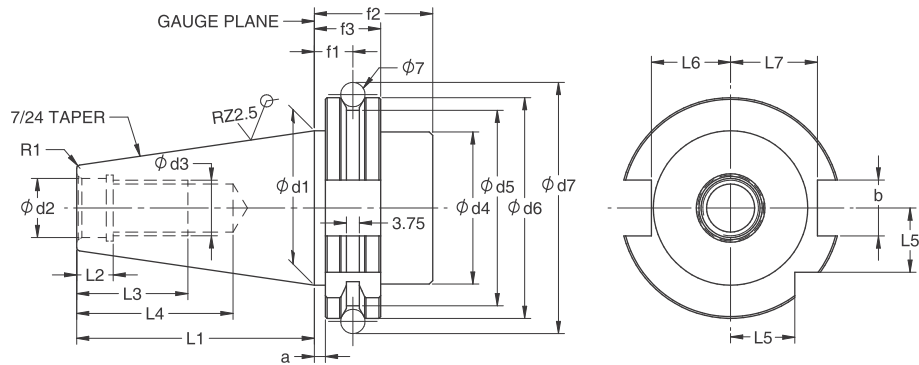
Square Tool For BSA / BSB Boring Bar



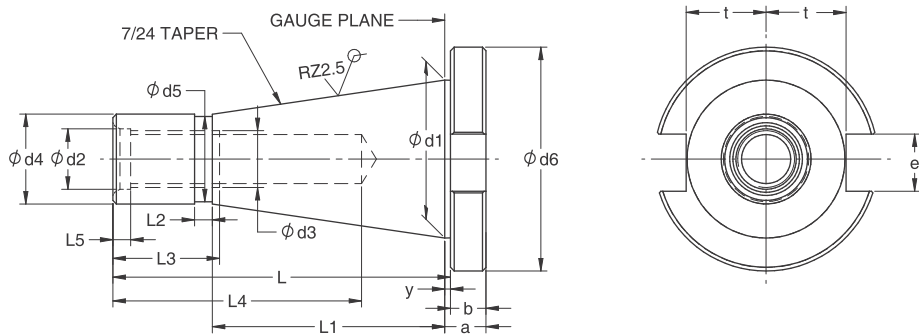
Model	A1 / A2 / A3	B1 / B2 / B3	L	Suitable Insert
SCMCN0808 D6	8	8	35	CCMT 06
SCLCR0808 D6	8	8	35	CCMT 06
SCLCL0808 D6	8	8	35	CCMT 06
SCMCN1010 D6	10	10	40	CCMT 06
SC:CR1010 D6	10	10	40	CCMT 06
SCLCL1010 D6	10	10	40	CCMT 06
SCMCN1212 D9	12	12	40	CCMT 09
SCLCR1212 D9	12	12	60	CCMT 09
SCLCL1212 D9	12	12	60	CCMT 09
SCMCN1616 D9	16	16	60	CCMT 09
SCLCR1616 D9	16	16	60	CCMT 09
SCLCL1616 D9	16	16	60	CCMT 09
SCMCN2020 D9	20	20	80	CCMT 09
SCLCR2020 D9	20	20	80	CCMT 09
SCLCL2020 D9	20	20	80	CCMT 09
SCMCN2525 D9	25	25	100	CCMT 09
SCLCR2525 D9	25	25	100	CCMT 09
SCLCL2525 D9	25	25	100	CCMT 09

Taper Shank Standards

DIN 69871/DIN 2080 Shank Details



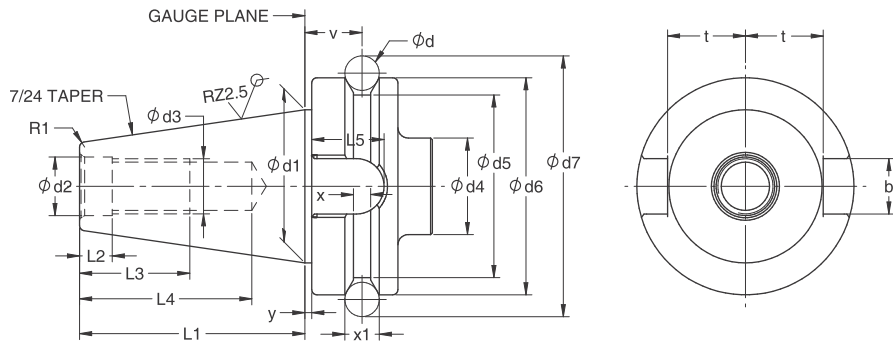
Designation	a ± 0.1	b H12	φd1	φd3	φd2 H7	φd7 ± 0.05	φd6 -0.1	φd5 -0.5	φd4 max	f1 ± 0.1
SK30	3.2	16.1	31.75	M12	13	59.3	50	44.3	45	11.1
SK40	3.2	16.1	44.45	M16	17	72.3	63.55	56.25	50	11.1
SK50	3.2	25.7	69.85	M24	25	107.25	97.50	91.25	80	11.1
Designation	f2 min	f3 -0.1	L1 -0.3	L2 +0.5	L3 min	L4 min	L5 -0.3	L6 -0.4	L7 -0.4	R1
SK30	35	19.1	47.8	5.5	24	33.5	15	16.4	19	0.6
SK40	35	19.1	68.4	8.2	32	42.5	18.5	22.8	25	1.2
SK50	35	19.1	101.75	11.5	47	61.5	30	35.5	37.7	2.5



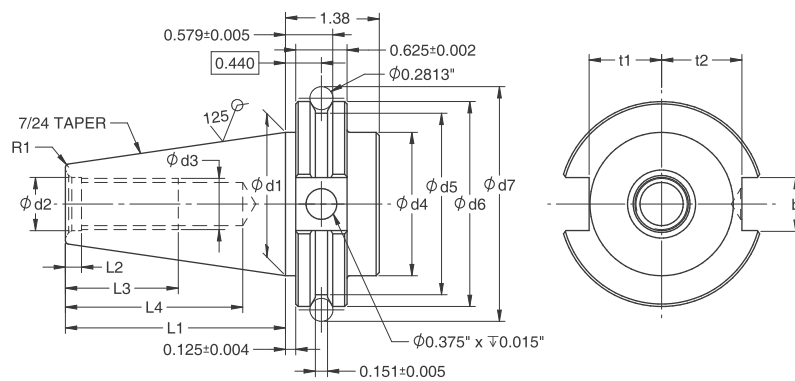
Designation	Ød1 Basic	Ød4 a10	Ød5	L max	L1	L2	y ±0.4	Ød6 a10	a ±0.1
ISO30	31.75	17.4	16.5	70	50	3	1.6	50	9.6
ISO40	44.45	25.3	24	95	67	5	1.6	63	11.6
ISO50	69.85	39.6	38	130	105	8	3.2	100/95	15.2
Designation	b	e H12	t max	Ød3	Ød2		L5	L3	L4 min
ISO30	8	16.1	16.2	M12	12.5		3	24	50
ISO40	10	16.1	22.5	M16	17		4.5	30	70
ISO50	12	25.7	35.3	M24	25		6	45	90

Taper Shank Standards

BT and CAT Shank Details



Designation	ϕd1	L1 ± 0.2	R1 max	L2 +0.5	L3 min	L4	ϕd2 H8	ϕd3	t -0.2	b H12
BT30	31.75	48.4	0.5	7.0	24	34	12.5	M12	16.3	16.1
BT40	44.45	65.4	1	9.0	30	43	17	M16	22.6	16.1
BT50	69.85	101.8	1	13.0	45	62	25	M24	35.4	25.7
Designation	L5 min	ϕd4 -0.5	ϕd5	ϕd6 h8	ϕd7	y ± 0.4	ϕd	V -0.1	x	X1 +0.1
BT30	17	32.00	38	46	56.144	2	8	13.6	4	8
BT40	21	44.70	53	63	75.679	2	10	16.6	5	10
BT50	31	70.10	85	100	119.019	3	15	23.2	7	15

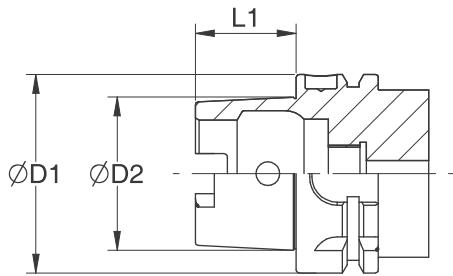


Designation	Ød1 -0.005	L1 ± 0.005	L2 ± 0.010	L3 min.	Ød2 +0.0.15	d3 UNC-2B	Ød4 max.	Ød5
CAT30	1.250	1.875	0.188	1.00	0.516	0.500-13	1.812	1.531
CAT40	1.750	2.687	0.188	1.12	0.641	0.625-11	2.50	2.219
CAT50	2.750	4.000	0.250	1.75	1.031	1.000-8	3.875	3.594
Designation	Ød6	Ød7 ±0.002	t1 -0.015	t2 -0.015	b ±0.015	R1 ± 0.010		
CAT30	1.812	2.176	0.640	0.735	0.645	0.020		
CAT40	2.500	2.863	0.890	0.985	0.645	0.040		
CAT50	3.875	4.238	1.390	1.485	1.020	0.040		

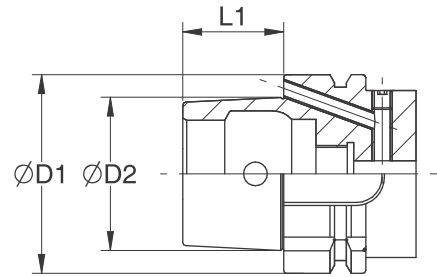
Taper Shank Standards

HSK Shank Details - A, C, E and F

Shape A

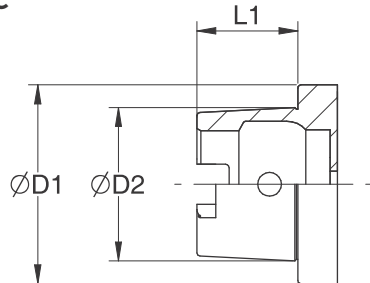


Shape B

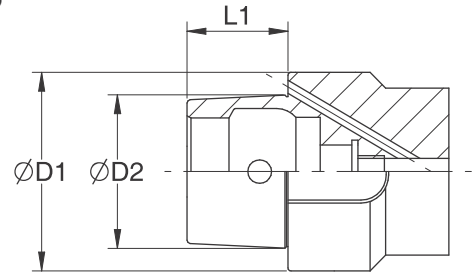


Hollow-shank taper for automatic tool changing with gripping and locating groove. Manual operation is possible through the access hole in the taper. Torque is transmitted both positively and non-positively.

Shape C

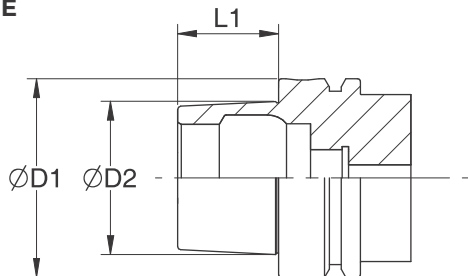


Shape D

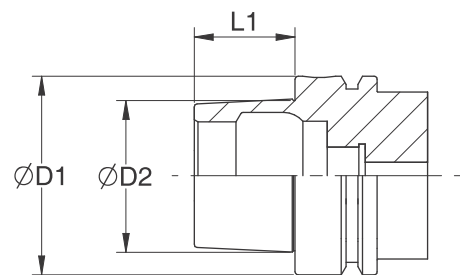


Hollow-shank taper for manual tool changing. operation is possible through the access hole in the taper. Torque is transmitted both positively and non-positively.

Shape E



Shape F



Hollow-shank taper for automatic tool changing (manual operation through access hole in taper not possible). Torque is transmitted non-positively.

HSK Shape A,C,E			HSK Shape B,D,F		
Nominal Size ØD1 (mm)	ØD2 (mm)	L1 (mm)	Nominal Size ØD1 (mm)	ØD2 (mm)	L1 (mm)
25	19	13	-	-	-
32	24	16	-	-	-
40	30	20	40	24	16
50	38	25	50	30	20
63	48	32	63	38	25
80	60	40	80	48	32
100	75	50	100	60	40

Tap Standards ANSI / Metric

ANSI Shank							Metric Shank												
metric thread ANSI Shank	Tap #	fract. Dia.	inch shank Dia.	inch square	Dia (mm)	square (mm)	inch shank Dia.	inch square	Dia (mm)	square (mm)	DIN352 hand tap short	DIN353 inch	DIN371 strong shank	DIN376 DIN374 normal + fine	DIN2182 normal inch	DIN2183 out of range inch	ISO 529	JIS	JIS INCH
M1.6	0		0.141	0.110	3.58	2.79	0.098	0.083	2.50	2.1	M1		M1	M3.5	1/16"	1/16"			
M1.8	1		0.141	0.110	3.58	2.79	0.098	0.083	2.50	2.1	M1.1		M1.1						
M2,M2.2	2		0.141	0.110	3.58	2.79	0.098	0.083	2.50	2.1	M1.2		M1.2						
M2.5	3		0.141	0.110	3.58	2.79	0.098	0.083	2.50	2.1	M1.4		M1.4						
	4		0.141	0.110	3.58	2.79	0.098	0.083	2.50	2.1	M1.6		M1.6						
M3,M3.15	5	1/8"	0.141	0.110	3.58	2.79	0.098	0.083	2.50	2.1	M1.8		M1.8						
M3.5	6		0.141	0.110	3.58	2.79	0.110	0.083	2.80	2.1	M2		M2	M4	3/32"	5/32"			
	7		0.168	0.130	4.26	3.3	0.110	0.083	2.80	2.1	M2.2		M2.2						
M4	8	5/32"	0.168	0.130	4.26	3.3	0.110	0.083	2.80	2.1	M2.5		M2.5						
	9		0.194	0.152	4.93	3.86	0.110	0.088	2.80	2.24							M2.5		
M5	10	3/16"	0.194	0.152	4.93	3.86	0.118	0.098	3	2.5								M2.5	#3
	12	7/32"	0.220	0.165	5.59	4.19	0.124	0.098	3.15	2.5							#8		
M6,M6.3	14	1/4"	0.247	0.185	6.27	4.7	0.124	0.110	3.15	2.8							#4		
	16		0.273	0.205	6.93	5.2	0.138	0.106	3.5	2.7	M3		M3	M5	1/8"				
	18		0.299	0.225	7.59	5.71	0.140	0.110	3.55	2.8							#6		
	20		0.325	0.244	8.25	6.2	0.157	0.118	4	3	M3.5		M3.5 #6		7/32"				
		5/32"	0.160	0.122	4.06	3.1	0.157	0.126	4	3.2								M3	#5, #6
		3/16"	0.192	0.149	4.88	3.78	0.177	0.134	4.5	3.4	M4		M4	M6	5/32"	1/4"			
		7/32"	0.223	0.167	5.66	4.24	0.197	0.157	5	4							#10	M4, M5	#8
		1/4"	0.255	0.191	6.48	4.85	0.217	0.177	5.5	4.5								M4, M5.5	#10
		9/32"	0.286	0.214	7.26	5.44	0.220	0.177	5.6	4.5							#12	M6	1/4"-20
M7,M8		5/16"	0.318	0.238	8.08	6.05	0.236	0.177	6	4.5									
		11/32"	0.349	0.262	8.86	6.65	0.236	0.193	6	4.9	M5		M5						
M10		3/8"	0.381	0.286	9.68	7.26	0.236	0.193	6	4.9	M6,M8		M6	M8					
		13/32"	0.323	0.242	8.20	6.15	0.240	0.197	6.1	5								M6	
		7/16"	0.323	0.242	8.20	6.15	0.244	0.197	6.20	5								M8, M7	5/16"-18
		15/32"	0.354	0.265	8.99	6.73	0.248	0.197	6.30	5							1/4"-20		
M12, M12.5		1/2"	0.367	0.275	9.32	6.99	0.276	0.217	7	5.5	M10	G1/8"		M10	1/4"	3/8"		M10, M9	
		17/32"	0.398	0.298	10.11	7.57	0.315	0.236	8	6								M11	1/8"
M14		9/16"	0.429	0.322	10.90	8.18	0.315	0.244	8	6.2			M8		5/16"	7/16"			
		19/32"	0.460	0.345	11.68	8.76	0.315	0.248	8	6.3							5/16"-18		
M16		5/8"	0.480	0.360	12.19	9.14	0.335	0.256	8.5	6.5								M12	
		21/32"	0.511	0.383	12.96	9.73	0.354	0.276	9	7				M12	3/8"	1/2"		M12	
M18		11/16"	0.542	0.406	13.77	10.31	0.394	0.315	10	8			M10						
		23/32"	0.573	0.430	14.55	10.92	0.413	0.315	10.5	8								M14, M15	
		3/4"	0.590	0.442	14.99	11.23	0.433	0.354	11	9	M14	G1/4"		M14		9/16"			1/4"
		25/32"	0.621	0.466	15.77	11.84	0.472	0.354	12	9	M16	G3/8"		M16		5/8"		M14, M15	
M20		13/16"	0.652	0.489	16.56	12.42	0.492	0.394	12.5	10							M16	M16	
		27/32"	0.684	0.513	17.37	13.03	0.512	0.394	13	10								M17	

Tap Standards ANSI / Metric

ANSI Shank							Metric Shank												
metric thread ANSI Shank	Tap #	fract. Dia.	inch shank Dia.	inch square	Dia (mm)	square (mm)	inch shank Dia.	inch square	Dia (mm)	square (mm)	DIN352 hand tap short	DIN353 inch	DIN371 strong shank	DIN374 normal + fine	DIN2182 normal inch	out of range inch	ISO 529	JIS	JIS INCH
M22		7/8"	0.697	0.523	17.70	13.28	0.551	0.433	14	11	M18			M18		11/16"		M18	3/8"
							0.551	0.441	14	11.2								M18	
M24		15/16"	0.760	0.570	19.30	14.48	0.591	0.472	15	12								M20	
M25		1"	0.800	0.600	20.32	15.24	0.630	0.472	16	12	M20	G1/2"		M20		13/16"			
M27		1-1/16"	0.862	0.646	21.89	16.41	0.669	0.512	17	13								M22	
		1-1/8"	0.896	0.672	22.76	17.07	0.709	0.551	18	14									1/2"
M30		1-3/16"	0.959	0.719	24.36	18.26	0.709	0.571	18	14.5	M22	G5/8"		M22		7/8"			
		1-1/4"	1.021	0.766	25.93	19.46	0.709	0.571	18	14.5	M24			M24		15/16"			
M33		1-5/16"	1.084	0.813	27.53	20.65	0.748	0.591	19	15								M24, M25	1/2"NPT
		1-3/8"	1.108	0.831	28.14	21.11	0.787	0.591	20	15								M26, M27	
M36		1-7/16"	1.171	0.878	29.74	22.3	0.787	0.630	20	16	M27	G3/4"		M27		1"		M28	
		1-1/2"	1.233	0.925	31.32	23.5	0.827	0.669	21	17									
M39		1-5/8"	1.305	0.979	33.15	24.87	0.866	0.669	22	17								M28	
M42		1-3/4"	1.430	1.072	36.32	27.23	0.866	0.709	22	18	M30	G7/8"		M30		1-1/8"			
		1-7/8"	1.519	1.139	38.58	28.93	0.906	0.669	23	17								M30	3/4"
M48		2"	1.644	1.233	41.76	31.32	0.945	0.748	24	19								M32	3/4"NPT
							0.984	0.748	25	19								M33	
							0.984	0.787	25	20	M33	G1"		M33		1-1/4"			
Pulley Taps							1.024	0.827	26	21								M35, M34	1"
M6		1/4"	0.255	0.191	6.48	4.85	1.102	0.827	28	21								M36, M38	1" NPT
M8		5/16"	0.318	0.238	8.08	6.04	1.102	0.866	28	22	M36	G1-1/8"		M36		1-3/8"			
M10		3/8"	0.381	0.286	9.68	7.26	1.102	0.882	28	22.4									
		7/16"	0.444	0.333	11.28	8.46	1.181	0.906	30	23								M39, M40	
		1/2"	0.504	0.380	12.80	9.65	1.260	0.945	32	24	M39	G1-1/4"		M39		1-1/2"			
		5/8"	0.633	0.475	16.08	12.06	1.260	0.945	32	24	M42	G1-1/4"		M42		1-5/8"			
		3/4"	0.756	0.569	19.20	14.45	1.260	1.024	32	26								M42	1-1/4"
Pipe Taps							1.378	1.024	35	26								M45	1-3/8"
		1/8"SS	0.313	0.234	7.94	5.94	1.417	1.142	36	29	M45	G1-3/8"		M45		1-3/4"			
		1/8"LS	0.437	0.328	11.11	8.33	1.417	1.142	36	29	M48	G1-1/2"		M48		1-7/8"			
		1/4"	0.563	0.421	14.29	10.69	1.417	1.142	36	29		G1-3/4"							
		3/8"	0.700	0.531	17.78	13.49	1.417	1.142	36	29		G2"							
		1/2"	0.687	0.515	17.46	13.08	1.496	1.142	38	29								M48	1-1/2"
		5/8"	0.813	0.594	20.64	15.09	1.575	1.260	40	32	M52	G2-1/4"		M52		2"			
		3/4"	0.906	0.679	23.02	17.25	1.772	1.378	45	35	M56	G2-1/2"		M56		2-1/4"			
		7/8"	1.094	0.812	25.78	20.62	1.772	1.378	45	35	M60			M60		2-1/2"			
		1"	1.125	0.843	28.57	21.41	1.969	1.535	50	39	M64	G2-3/4"		M64		2-1/2"			
		1-1/4"	1.313	0.984	33.34	24.99	1.969	1.535	50	39		G3"							
		1-3/8"	1.108	0.831	28.14	21.11	2.205	1.732	56	44	M68	G3-1/4"		M68		2-3/4"			
		1-1/2"	1.500	1.125	38.10	28.57	2.205	1.732	56	44						3"			



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BLOCK NO. 135/3, BILESHWARPURA,

P. O. CHHATRAL - 382729.

DIST. : GANDHINAGAR, GUJARAT, INDIA.

TEL. : +91 88493 81955

E-mail : sms@imitoolsindia.com



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