

COMMAND Tooling Systems Main Toolholder Catalog



Command Tooling Systems Terms of Sale



Payment Terms - Payment terms are net 30 days from shipment, for customers of satisfactory credit. No shipments will be made to delinquent accounts.

Prices, Freight Terms, and Order Minimum- All prices are subject to change without notice. All products are shipped FOB Command Tooling Systems Ramsey, MN USA. There is no minimum order quantity on Standard Command parts. Custom or Made to Order parts have a minimum order requirement two parts.

Return Goods

1. To return a product, contact Command's Customer Service Department for a Returned Material Authorization (RMA) number.
2. Credit for returned product is good for use toward purchases only and must be used within **60 days** of issuance, afterwards the credit will be null and void.
3. Be sure to include the RMA number on the return package for prompt processing.
4. Product may be returned for credit only upon prior approval from Command Tooling Systems and is subject to the following conditions:
 - a. Returns must be made within **60 days** from date of factory shipment. All exchanges must be accompanied by an order of equal or greater value. Restocking charge of 15% will apply to returns that do not include orders of equal or greater value.
 - b. Product must be received in like-new saleable condition and of current manufacture.
 - c. Product must be returned complete. All returns are subject to inspection.
 - d. "M" Made to order, modified standard, and custom manufactured products are non- returnable.
 - e. ThermoLock® products that have been heated are non-returnable.
 - f. Return transportation charges must be prepaid.

Exchanging Purchased Parts – The replacement order must be of greater or equal value of the original order to the original customer to avoid the 15% restocking fee. Returned product must be in like-new saleable condition, and of current manufacture. To return product, contact Command's Customer Service Department for a Returned Material Authorization (RMA) number. A new Purchase Order for replacement order must be placed at the same time to avoid the 15% re-stocking fee. Returned product must have the RMA number on the return package for prompt processing.

Cancellation Fees for Custom Manufactured Parts – A cancellation fee applies to custom manufactured orders. The fee is 25% of the order amount or the cost of labor & materials at the time of cancellation, whichever is higher.

Damage Claims & Shipping Shortages - Command Tooling Systems assumes no responsibility for loss or damage in transit. The consignee should present claims for such damage to the carrier. Our terms of sales are FOB Command Tooling Systems, Ramsey, Minnesota USA. **Shipping shortages must be reported to the factory within 5 business days after receipt of material.**

Warranty - Our policy of 100% unconditionally guaranteed materials and workmanship assures your satisfaction. Command Tooling Systems' manufactured products are covered by our 100% satisfaction guarantee. Should they prove to be defective in materials or workmanship, simply contact the Customer Service Department to obtain a RMA number and shipping instructions. Warranty determined by Command Tooling Systems within 60 days of factory shipment.

Command Tooling Systems disclaims any and all warranties, either expressed or implied, arising by law or otherwise, including but not limited to non-infringement and implied warranties of merchantability or fitness for a particular purpose. Command Tooling Systems' liability, if any, is limited to and shall not exceed the amount paid for a defective part. In no event will Command Tooling Systems be liable for any indirect, special or consequential damages, including but not limited to: lost profits or lost revenues, even if Command Tooling Systems has been advised of the possibility of these damages.

Vision:

A premier tooling solutions company for precision machining.

Our Mission:

To advance precision machining productivity by providing the world's finest tools and tooling solutions faster than the competition through superior dealers and distributors supported by highly motivated and well-trained employees.

Command Quality:

The best in product, service, availability, and value. This is our foundation and our path to growth.

Command Tooling Systems Terms Of Sale I

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Toolholder Icon Index



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End Mill Holders	C-32 thru C-37			
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Thermolock® Shrink Fit Holders	SEE SEPARATE CATALOG			
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Shell Mill Holders	S-3 & S-4			
Tension & Compression Synchronous (Rigid) Tap Holders	S-5 & S-6			
Boring Head Holders	S-8			
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Comflex®, Digiset 2™, Digiset 6™, Micro Precision®, R&R™, System II™, ThermoLock®, Blue Chip™, MicroMax™, IntraMax™, VersaMax™, MegaMax™, Quick Tune™, Fine Tune™ Mass Symmetry®, XT Precision® are trademarks of Command Tooling Systems. Shrinker® is a registered trademark of Tooling Innovations, Dana Point, CA. Beta Modul® is a trademark of Urma AG, Rapperswil, Switzerland. ©Copyright 2006

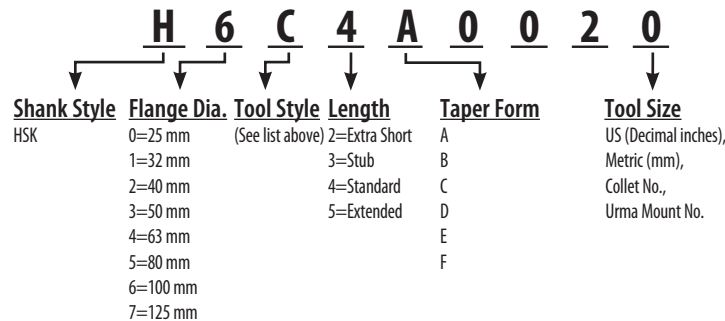
Toolholder Identification System

Tapered & Straight Shank Toolholders

Command Toolholder Part Numbering System



For HSK Toolholders



Note: With HSK, it is the flange diameter that determines toolholder size, NOT the taper size as with BT and V-Flange holders.

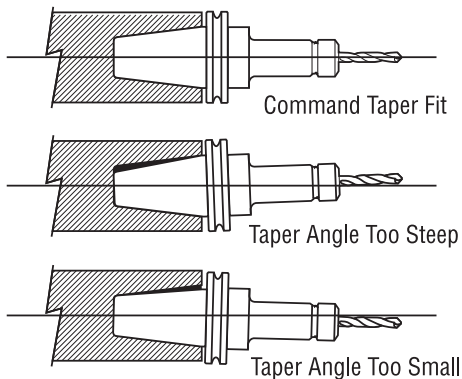
For Optional Black Oxide Complete

- Our standard toolholder part numbers represent two-tone finish toolholders. Black Oxide Complete is available upon request.
- The Black Oxide Complete is not available for Command HSK, ThermoLock®, Milling Chucks, Integral Shank Keyless Chucks or Test Bars.
- For delivery details, contact Command Customer Service.

Command Toolholder Benefits:

- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Concentric to $<.0002$ (.005 mm or 5 microns) — puts tool precisely on spindle centerline.
- Less tool wear and replacement — less scrap.
- Fully ground flange and V-groove — easy on tool changers for less spindle and changer maintenance.
- All tapers and lengths ready to ship — get your tools fast.

Command's AT3 accuracy for shank taper is a minimum of 35% better than the ANSI Standard. This virtually eliminates play when the machine's spindle bore is in good condition and of equal or better accuracy. The toolholder will not wobble. Superior cutting accuracy raises quality of manufactured parts and reduces rejects. Tools cut smoother with less fatigue for longer life and lower tool costs. Command grinds toolholder shanks to an accurate and uniform taper with ultra-precise



computerized equipment. Without uniformity, toolholder and spindle bore tapers will have raised areas or asperities. Cutting pressure and vibration tend to weld these asperities to the surfaces they touch. As the welds break and re-form, both surfaces pit metal from toolholder and spindle bore turns to powder and oxidizes. This is called fretting. Uniform taper, Command toolholder shanks resist fretting. Command toolholders keep their accuracy, last longer, and the machine spindles will last longer, too.

Accuracy from the shank-to-spindle union is carried through to the cutting tip of the tool. Command toolholder concentricity is the proven best in the industry. This positions the tool precisely on a centerline from the spindle. It runs true. The cut is smooth and uniform for best piece-part quality and minimum scrap. Tools last longer to reduce tooling costs and downtime.

Flanges and V-grooves are fully ground for smooth, sure handling in tool changers and reduced vibration at high RPMs. In addition to protecting machines from costly toolholder hang ups, the cutting performance is improved.

Versatile Command toolholders mill, drill, ream, and bore. No need to stock different toolholders for each operation when one Command toolholder does it all. A complete inventory of tapers and lengths is available for immediate shipment to minimize waiting downtime. Straight shank extensions extend reach without requiring costly custom toolholders. Of course, special tapers or lengths are available upon request.

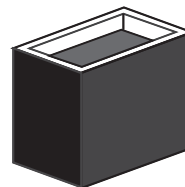
Command Micro Precision® and XT Precision® Collet System Benefits:

Micro Precision® and XT Precision® collets collapse to accept a wide range of tools. Fewer collets are needed to accommodate the entire tool range of a toolholder, reducing collet inventory and collet cost. Selected fractional on-size collets, listed by decimal equivalents, are also available. They provide a quick fit for standard fractional tools and superb rigidity for top cutting performance and tool durability.

NOTE: Tool shanks must engage full length of collet ID bore. Failure to follow this practice may result in tool failure.

Clean Collets Maintain Close Tolerances

Command recommends the use of all three techniques for proper collet cleaning:



Bench-top Ultrasonic Cleaners dislodge fine chips and debris deposited from coolant and manufacturing.



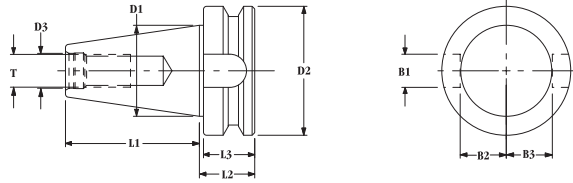
Bottle brush helps to dislodge foreign material from interior collet slots.



Toothbrush or other helps to dislodge foreign material from exterior collet slots.

Shank Identification & h6 Tool Shank Tolerances

JIS B 6339 (BT-Flange Style)

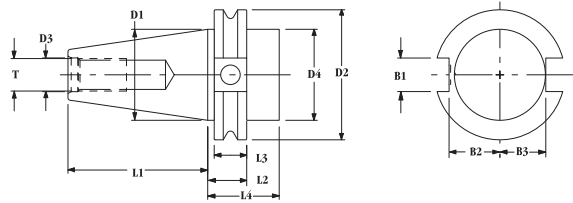


h6 Tool Shank Tolerance

Shank Size Inch (mm)	Tolerance Inch (mm)
.2362-.3937 (6-10)	-.00035 (-.009)
.3937-.7087 (10-18)	-.00043 (-.011)
.7087-1.1811 (18-30)	-.00051 (-.013)
1.1811-1.9685 (30-50)	-.00063 (-.016)

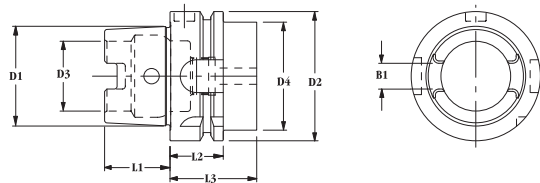
Taper	D1(mm)	D2(mm)	D3(mm)	T	L1(mm)	L2(mm)	L3(mm)	B1(mm)	B2(mm)	B3(mm)
30	31.75	46.00	12.50	M12 X 1.75	48.40	22.00	20.00	16.10	16.30	16.30
35	38.10	53.00	12.50	M12 X 1.75	56.40	24.00	22.00	16.10	19.60	19.60
40	44.45	63.00	17.00	M16 X 2	65.40	27.00	25.00	16.10	22.50	22.50
45	57.15	85.00	21.00	M20 X 2.5	82.80	33.00	30.00	19.30	29.10	29.10
50	69.85	100.00	25.00	M24 X 3	101.80	38.00	35.00	25.70	35.40	35.40

ANSI B5.50 (CAT, V-Flange Style)



Taper	D1	D2	D3	D4	T	L1	L2	L3	L4	B1	B2	B3
30	1.250	1.812	0.516	1.250	.500-13	1.875	0.750	0.625	1.380 Min.	0.645	0.735	0.640
40	1.750	2.500	0.641	1.750	.625-11	2.687	0.750	0.625	1.380 Min.	0.645	0.985	0.890
45	2.250	3.250	0.766	2.250	.750-10	3.250	0.750	0.625	1.380 Min.	0.770	1.235	1.140
50	2.750	3.875	1.031	2.750	1.000-8	4.000	0.750	0.625	1.380 Min.	1.020	1.485	1.390
60	4.250	5.500	1.281	4.250	1.250-7	6.375	0.750	0.625	1.380 Min.	1.020	2.235	2.140

ISO 12164-1 HSK FORM A



Taper	D1(mm)	D2(mm)	D3(mm)	D4(mm)	L1(mm)	L2(mm)	L3(mm)	B1(mm)
32	24	32	17	26 Max.	16	20	35 Min.	7.05
40	30	40	21	34 Max.	20	20	35 Min.	8.05
63	48	63	34	53 Max.	32	26	42 Min.	12.54
80	60	80	42	68 Max.	40	26	42 Min.	16.04
100	75	100	53	88 Max.	50	29	45 Min.	20.02
125	95	125	67	111 Max.	63	29	45 Min.	25.02

HSK

The HSK spindle interface features a hollow taper, which is the connection's mating surface (see drawing below). When the clamping mechanism is actuated, there is intimate contact between the back of the toolholder flange and the face of the spindle. Initially, there is a nominal gap between the spindle face and the flange of the toolholder. The drawbar pulls back the clamping cone, which wedges the gripper fingers into the clamping position. As the fingers lock, they pull the toolholder into the spindle by cam action to effect an interference fit in the spindle and force the flange against the spindle face. This simultaneous fit concept results in excellent radial and axial positioning.

Not only does the drawbar system provide a positive lock between the toolholder and spindle, it does so without preloading the entire spindle as conventional drawbars do. Centrifugal force generated by spindle rotation, usually an enemy of spindle connections, actually increases the gripping strength, increasing the system's rigidity.

At elevated spindle speeds, when spindle growth becomes a factor, the toolholder walls remain in contact with the spindle. This assures continued spindle runout accuracy while the face contact retains the z-axis accuracy.

Note:
Left side of diagram illustrates unclamped position.
Right side shows clamped position.

Standard HSK Forms

Forms A and B

We manufacture to the latest ISO and DIN standard. Form A for general service and Form B, with greater flange support, for heavier work. The increase in flange dimension was gained by making the taper smaller. Thus, Form A and Form B toolholders with the same flange diameter are not interchangeable because their tapers differ.

Forms C and D

These standards are similar to A and B, but are for manual tool change applications.

Forms E and F

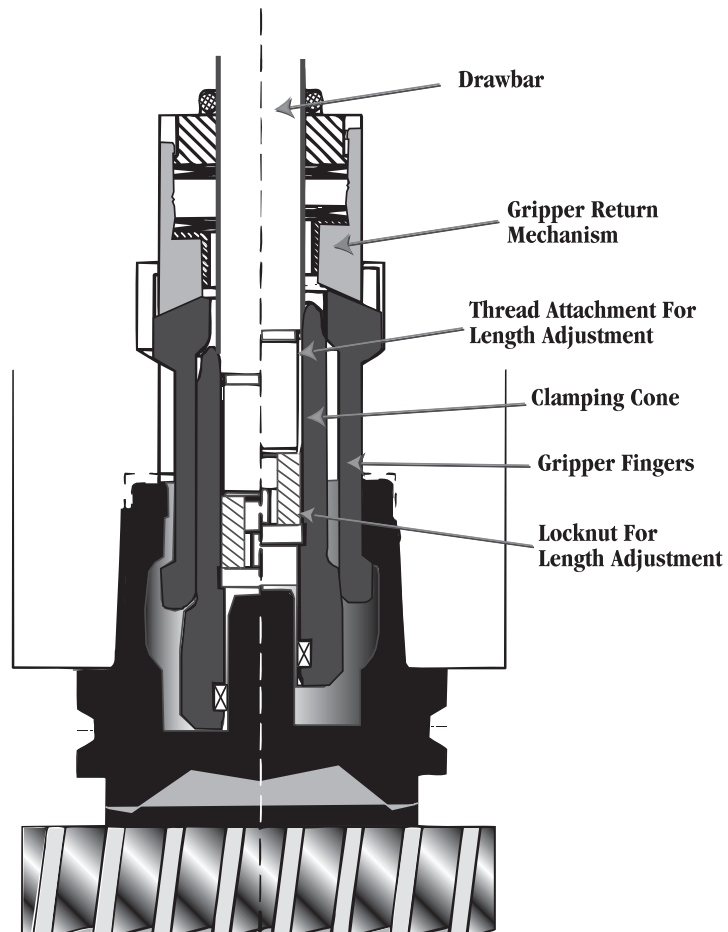
These standards balance toolholders for high speeds by omitting drive key, identification, and indexing features which detract from symmetry of toolholder mass.

Command HSK Toolholders

- Premium Material.
- Command Tooling Systems is on the leading edge of changes in the industrial specifications for HSK.

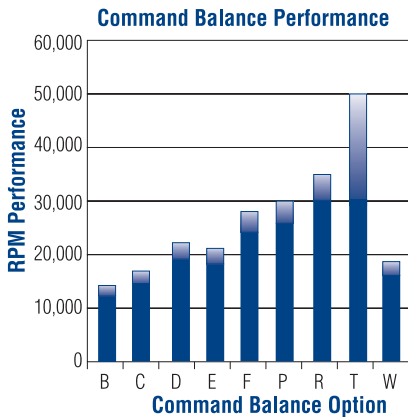
Unique Features

- Harnesses centrifugal force for higher machining speeds. The faster it spins, the tighter it seats.
- High static and dynamic toolholder rigidity holds radial and axial position well at all speeds for improved accuracy, repeatability, and material removal.
- Short, light taper for reduced tool changer travel and faster tool changes.
- Positive locking and centrifugal clamping for enhanced safety.



Courtesy of Ott-Jakob GmbH and Co.

Customize Your Toolholder with Balance or Nosepiece Options



Guidelines for acceptable balance for machine tools must come from the machinery builder. Command Tooling Systems offers state-of-the-art balancing options with the commitment to serving our customers requirements.

Command Balance Options

Option	Description	Explanation
B	Mass Symmetry® (Command's Standard Balance)	• Unequal drive slot depths, set screws, tapped holes, and other design asymmetries are counterbalanced
C	G2.5@15,000 RPM	• Counterbalances toolholder asymmetry
D	G2.5@15,000 RPM	• Counterbalances toolholder and retention knob asymmetry
E	G2.5@20,000 RPM	• Counterbalances toolholder asymmetry
F	G2.5@20,000 RPM	• Counterbalances toolholder and retention knob asymmetry
P	Premium Balance	<ul style="list-style-type: none"> • Includes certificate of balance • Counterbalances toolholder body, retention knob, collet, and pin completely assembled • Includes Fine Balance nosepiece and choice of collet and pin • Parts are balanced individually and assembly is certified to less than 3 g-mm • Available for: Micro Precision® and XT Precision® collet chucks, and ThermoLock® Toolholders only
R	Premium Adjustable Balance	• Same as Premium Balance except includes Fine Tune™ nosepiece
T	Custom Engineered	• Designed to meet individual requirements—Consult Command Customer Service
W	Assemblies	• Balancing of Urma assemblies, shell mill holders, and other built-up assemblies

To Order Command Balanced Toolholders

Just add the balance option code shown above after the standard part number. Questions? Contact customer service.

For example: C6E5-1000-C (C indicates G2.5 @ 15,000 RPM balance option)
H6C4A0020-P (P indicates the Premium balance option)

Notes

- Balancing Equipment, contact Command Customer Service.
- Balancing Rings, contact Command Customer Service.
- Return Policy: Once standard toolholders are modified, they cannot be returned.

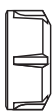
Command Nosepiece Options

Nosepiece Options For Command Collet Chucks

Optional nosepieces easily replace the standard nosepiece that come with Command Collet Chucks. Refer to proper collet chuck page to order the correct wrench and optional nosepieces.

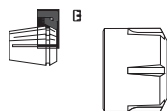
For complete listing of nosepiece options and additional product details, contact Command's Customer Service. A sampling of the nosepiece options are listed below.

Classic Nosepiece



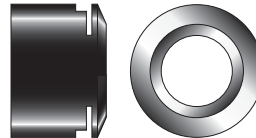
- Used to be Command's standard nosepiece until 2006
- Smaller diameter, in most sizes
- Replaceable clip for most sizes

Ball Bearing Nosepiece



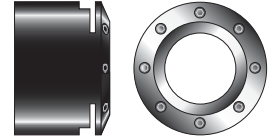
- Increases holding power
- Improves tool concentricity

Fine Balance Nosepiece



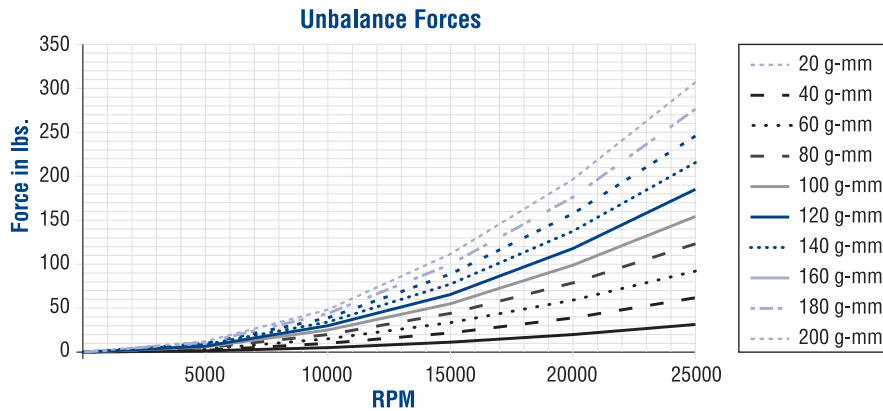
- For use without a balancing machine

Fine Tune™ Nosepiece



- 8 small set screws ringing the nose can be removed or replaced to obtain correction
- Requires a balancing machine

Importance of Toolholder Balance



Understanding Balance

Command Toolholders can be balanced for the speed you need. The perfect balance configuration can be rendered useless by a single variable. The benefits of balance are becoming so critical in high speed machining, we want our customers to understand and select the most appropriate choice for their application.

Slight imbalance at low spindle speeds will not damage your machine tool spindle. However, it is important to remember that as the definition of "low spindle speed" increases, the definition of slight imbalance must decrease accordingly!

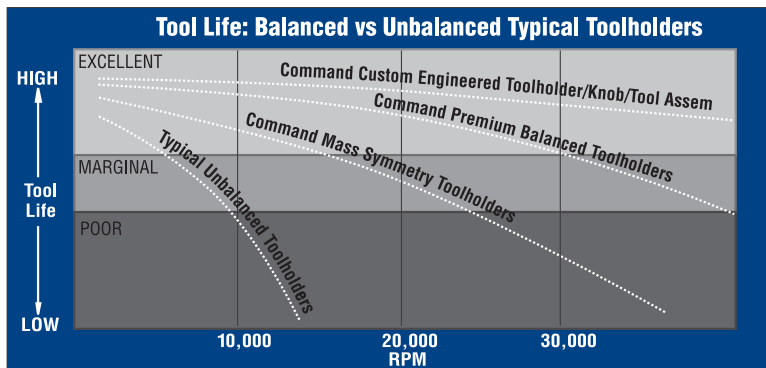
Just take a look at how force increases with imbalance and spindle RPM (see figure above).

Generally as imbalance increases, the amount of force generated increases. When dealing with a toolholder, this means increased tool deflection and less machining accuracy. If forces are high enough, spindle damage can result.

Command Tooling Systems offers toolholders with the balance you need—but that is only the first step! Overall balance is impacted by many variables. To obtain optimal balance performance, other limiting variables must also be controlled. These include:

1. Spindle fit
2. Assembly tolerance of components (i.e., nosepiece, retention knob)
3. Tooling repeatability
4. Eliminating bad or worn out tooling

All the pieces must be in place for optimal high speed machining applications. A balanced system is only as strong as the weakest link. As shown in figure above, there are no hard and fast steps in centrifugal force or balance grades.



Look to Command for Balance Beyond the Rest

- Command uses the latest balancing equipment in-house to provide you with fast service.
- Command is one of the toolholder manufacturers recommended by leading machine tool builders for demanding high-speed applications.
- Command has been balancing toolholders since 1985. We offer you more experience in toolholder balance than anyone. We understand balance and the commitment it takes to provide our customers with properly balanced toolholders.

Notes

- Balancing Equipment, contact Command Customer Service.
- Balancing Rings, contact Command Customer Service.

- Return Policy: Once standard toolholders are modified, they cannot be returned.

Balance

- Unbalanced Toolholder
 - Vibrations
 - Harmonics
 - Sympathetic vibrations
 - Wrecks alignment
 - Cuts unevenly
 - Roughens part finish
 - Chips tool edges
 - Raises costs
- Balanced Toolholder
 - Runs smooth
 - Cuts balanced chips
 - High finish on parts
 - Fewer rejects
 - Longer tool life
 - Reduced maintenance
 - Saves material & time
 - Lowers costs

Command Standard Balance Chart

Micro Precision® Collet Chucks

	G 2.5 @ 15,000 RPM	G 2.5 @ 18,000 RPM	G 2.5 @ 20,000 RPM	G 6.3 @ 24,000 RPM	Not Rated
BT 30					
BT 35					
BT 40					
BT 45					
BT 50					
V 30					
V 40					
V 45					
V 50					
HSK40					
HSK63					
HSK100					

XT Precision® Collet Chucks

	G 2.5 @ 15,000 RPM	G 2.5 @ 18,000 RPM	G 2.5 @ 20,000 RPM	G 6.3 @ 24,000 RPM	Not Rated
BT 30					
BT 35					
BT 40					
BT 45					
BT 50					
V 30					
V 40					
V 45					
V 50					
HSK40					
HSK63					
HSK100					

High Precision® Collet Chucks

	G 2.5 @ 15,000 RPM	G 2.5 @ 18,000 RPM	G 2.5 @ 20,000 RPM	G 6.3 @ 24,000 RPM	Not Rated
BT 40					
BT 50					
V 40					
V 50					
HSK63A					
HSK100A					

 Standard Level of Balance

Notes

- Return Policy: Once standard toolholders are modified, they cannot be returned.

Command is ready to meet the challenges of custom toolholders with quick turnaround.

Machining requirements often go beyond standard toolholders

- Unusual Part Shapes
- Extra Reach
- High RPM Machining
- Difficult-to-Machine Materials
- Tight Tolerances

Whatever it takes... we'll get you there.



Keep in mind—

- Pricing for custom made toolholders is quantity sensitive.
- If we require cutting tools for balancing, they must arrive at Command within two weeks after receipt of order.
- If special tooling is required to finish your product, it must be in house before we can start manufacturing.
- If a print is sent for approval, it must be returned within two working days to assure prompt order processing of custom toolholders.
- A cancellation charge will apply to cancelled orders for custom manufactured product. This charge will be 25% of order amount or cost of time and materials, whichever is greater.
- When reordering a part, please advise Command of any design changes.

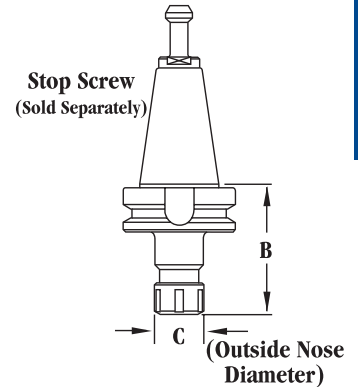
**Contact us for help with design.
Send in a sketch or print for us to quote.**

Call or Fax us for a Quote on Custom Configuration Toolholders:

Quantity	
Shank Style (V, BT, HSK, SS)	
Taper Size/Shank Diameter	
Function of Feature	
(Shell Mill Holder, End Mill Holder, Collet Chuck, etc)	
Gage Length (B)	in/mm
Size of Feature (A)	in/mm
Form (Applies to HSK only)	
Outside Nose Diameter (C)	in/mm
Other Requirements:	
Nosepiece	
Black Oxide	Yes/No
Identification Chip Pocket	Yes/No
ISO Orientation Notch (Maho Notch)	Yes/No
Through-Spindle Coolant	Yes/No
Through-Flange Coolant	Yes/No
Surround Coolant	Yes/No
Shell Mill Coolant	Yes/No
Special Components	
(Print needed for Command to Manufacture)	
Special Material	
Machine Make & Model	
Maximum RPM	
Balance Requirements	
Customer-Supplied Cutting Tools Provided	Yes/No
Knob Installed	Yes/No
Knob Part Number	
Customer-Supplied Chips Installed	Yes/No
Other	

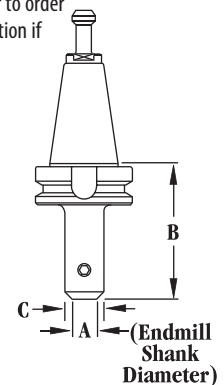
Fax to: 800-555-7694 or 763-576-6911

Collet Chuck

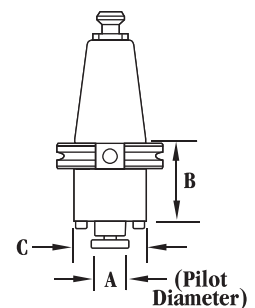


End Mill Holder

Remember to order coolant option if required.



Shell Mill Holder



Recommended Torque Values

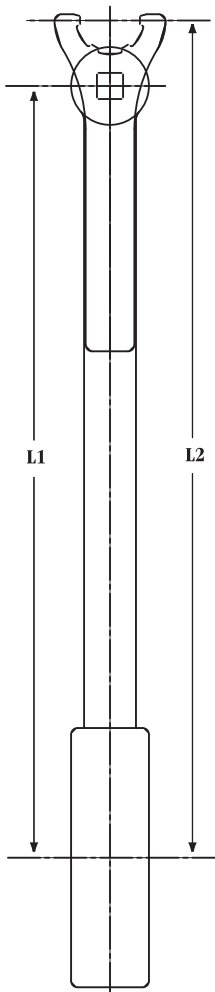


**For Accurate Measurement of These Values,
a Torque Wrench is Required.**

Retention Knob Torque Values

Taper & Flange	Thread Size	Recommended ANSI Installation Torque Ft-Lbs
V 30	1/2 - 13	8
V 40	5/8 - 11	30
V 45	3/4 - 10	50
V 50	1 - 8	75
BT 30	M12 - 1.75	8
BT 35	M12 - 1.75	12
BT 40	M16 - 2.0	30
BT 45	M20 - 2.5	50
BT 50	M24 - 3.0	75

- Avoid cost of damaged toolholders and spindles from incorrectly torqued retention knobs.



End Mill Holder Side Lock Screw Torque Values

End Mill Size	Thread Size	Max Torque Inch-Lbs
0.125	8 - 32	18
0.187	10 - 32	30
0.250	1/4 - 28	60
0.312	5/16 - 24	120
0.375	3/8 - 24	200
0.437	3/8 - 24	200
0.500	7/16 - 20	220
0.562	7/16 - 20	220
0.625	1/2 - 20	500
0.750	5/8 - 18	560
0.875	5/8 - 18	560
1.000	3/4 - 16	1150
1.250	3/4 - 16	1150
1.500	3/4 - 16	1150
2.000	1 - 14	1500
6 mm	M6 - 1.0	60
8 mm	M8 - 1.25	120
10 mm	M10 - 1.5	180
12 mm	M12 - 1.75	250
14 mm	M12 - 1.75	250
16 mm	M14 - 2.0	450
18 mm	M14 - 2.0	450
20 mm	M16 - 2.0	840



To calculate the effect of torque wrench extensions:

Formula for calculating the effect of torque wrench extensions:

$$M2 = M1 \times L2/L1$$

L1 is the center line of the toolholder.

L2 is the center line of the square hole.

M1 is the maximum recommended torque.

M2 is the actual torque applied to the nosepiece.

Notes

- Select proper wrench by retention knob

Collet Chuck Nosepiece Torque Values



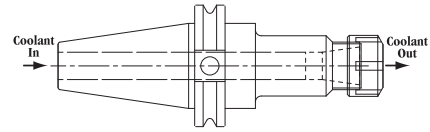
- Overtightening of collet chuck nosepieces commonly causes distortion of the collet chuck pocket and uneven compression of collets. This can result in excessive runout in the tool assembly.
- Gross overtightening can result in damage to the collet, tool body, or nosepiece.
- Our wrenches for collet chuck nosepieces come with a square drive to adapt to a torque wrench.
- A torque wrench is required to accurately measure these values.

Wrenches for Collet Chuck Nosepieces					Corresponding Torque Wrench Data				
Nosepiece Wrench Part No.	Collet Chuck Description Series/Size	Nosepiece Style	Drive Square (Inches)	Nosepiece Wrench Thread Size	Command Part No.	Drive Square (Inches)	Range (Ft Lbs)	Recommended with Command Torque Wrench M1 (Ft Lbs)	Maximum Theoretical Recommended Torque
XCCW-D011	ER11	Standard	3/8	M13-.75	XTQW-0045*	3/8	5-45	7	8
XCCW-T011	XT11	Fine Tune			XTQW-0045	3/8	5-45	35	40
XCCW-D016	ER16	Standard	3/8	M22-1.5	XTQW-0080*	3/8	15-80	21	24
					XTQW-0150	1/2	30-150	36	40
					XTQW-0045	3/8	5-45	33	40
XCCW-FT16	ER16	Fine Balance & Fine Tune	3/8	M22-1.5	XTQW-0080*	3/8	15-80	34	40
					XTQW-0150	1/2	30-150	35	40
					XTQW-0045	3/8	5-45	34	40
XCCW-H016	ER16	Hex	3/8	M22-1.5	XTQW-0080*	3/8	15-80	35	40
					XTQW-0150	1/2	30-150	36	40
					XTQW-0080*	3/8	15-80	S=32; BB=53	S=36; BB=60
XCCW-D020	ER20	Standard & Ball Bearing	3/8	M25-1.5	XTQW-0150	1/2	30-150	55	60
XCCW-FT20	ER20	Fine Balance & Fine Tune	3/8	M25-1.5	XTQW-0080*	3/8	15-80	50	60
					XTQW-0150	1/2	30-150	52	60
XCCW-H020	ER20	Hex	3/8	M25-1.5	XTQW-0080*	3/8	15-80	52	60
					XTQW-0150	1/2	30-150	54	60
XCCW-D025	ER25	Standard & Ball Bearing	3/8	M32-1.5	XTQW-0080*	3/8	15-80	S=38; BB=60	S=42; BB=70
					XTQW-0150	1/2	30-150	63	70
XCCW-FT25	ER25	Fine Balance & Fine Tune	3/8	M32-1.5	XTQW-0080*	3/8	15-80	56	70
					XTQW-0150	1/2	30-150	59	70
XCCW-D032	ER32	Standard & Ball Bearing	3/8	M40-1.5	XTQW-0080*	3/8	15-80	S=43; BB=67	S=48; BB=80
					XTQW-0150	1/2	30-150	70	80
XCCW-FT32	ER32	Fine Balance & Fine Tune	3/8	M40-1.5	XTQW-0080*	3/8	15-80	61	80
					XTQW-0150	1/2	30-150	66	80
XCCW-P032INT	ER32	Shorty Standard	3/8	M40-1.5	XTQW-0080*	3/8	15-80	43	48
					XTQW-0150	1/2	30-150	71	80
XCCW-0040	ER40	Standard	1/2	M50-1.5	XTQW-0150*	1/2	30-150	65	72
XCCW-FT40	ER40	Fine Balance & Fine Tune	1/2	M50-1.5	XTQW-0150*	1/2	30-150	93	120
XCCW-T011	XT11	Standard	3/8	M13-.75	XTQW-0045*	3/8	5-45	7	8
					XTQW-0045	3/8	5-45	35	40
XCCW-D016	XT16	Standard & Fine Tune	3/8	M22-1.5	XTQW-0080*	3/8	15-80	35	40
					XTQW-0150	1/2	30-150	36	40
XCCW-D020	XT20	Standard & Fine Tune	3/8	M25-1.5	XTQW-0080*	3/8	15-80	53	60
					XTQW-0150	1/2	30-150	55	60
XCCW-D025	XT25	Standard & Fine Tune	3/8	M32-1.5	XTQW-0080*	3/8	15-80	60	70
					XTQW-0150	1/2	30-150	63	70
XCCW-D032	XT32	Standard & Fine Tune	3/8	M40-1.5	XTQW-0080*	3/8	15-80	67	80
					XTQW-0150	1/2	30-150	70	80
XCCW-0040	XT40	Standard & Fine Tune	1/2	M50-1.5	XTQW-0150*	1/2	30-150	104	120
XCCW-H100	TG100	Hex	3/8	1 7/8-12 ACME	XTQW-0080*	3/8	15-80	49	60
XCCW-1000	TH100	Standard			XTQW-0150	1/2	30-150	52	60
XCCW-FT10	TG100	Fine Balance & Fine Tune	3/8	1 7/8-12 ACME	XTQW-0080*	3/8	15-80	47	60
					XTQW-0150	1/2	30-150	50	60
XCCW-1500	TG150	Standard	----	2 5/8-12 ACME	----	----	----	----	100

*Indicates recommended torque wrench part no. • S= Standard, BB= Ball Bearing

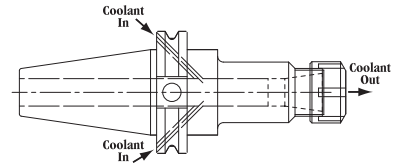
Through-Spindle Coolant

- Standard for all Command Toolholder bodies
- Retention Knobs available coolant-through, see pages T-1 & T-2.
Part no. with -C designates coolant hole, -H designates O-ring included
- Stop Screws available with coolant passage and Urethane seal (Shown on pages by respective toolholders)



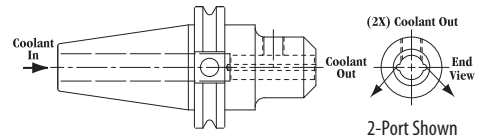
Through-Flange Coolant

- May also be referred to as DIN 69871 Form B Coolant
- Modification available for most Command Toolholders



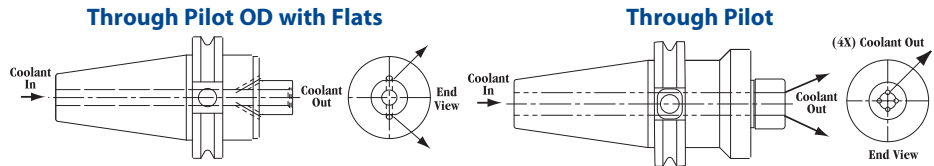
Surround Coolant

- Modification available for end mill holders and ThermoLock®
- Specify 2-Port or 4-Port



Shell Mill Coolant

- Modification available in two variations
- Specify Through Pilot OD with Flats, or Through Pilot



Choose the Correct Coolant Accessories from Command

Retention Knobs

- Available coolant-through.
- Part No. with "-C" designates coolant hole, and "-H" designates O-ring included

Blue Chip™ Coolant Containment System

- Available for Micro Precision® ER & Comflex® TG collets
- Does not affect collet collapse range
- Sealing disk contains coolant to 800 PSI for coolant through tools

External Coolant Collets

- Available for Micro Precision® ER
- Collapse range .005
- Maximum 600 PSI

Rubber Sealed Collets

- Available for Micro Precision® ER & Comflex® TG collets
- Collapse range .005
- Maximum 600 PSI

Steel Sealed Coolant Collets

- Available for Micro Precision® ER
- All metal, no rubber seals
- Collapse range .005
- Maximum 2000 PSI

Front Coolant Seal Disks & Nosepieces

- Available for all standard ER Micro Precision Collets including Tap collets.
- Requires coolant seal nosepiece
- Does not affect collet collapse range
- Maximum 1500 PSI

Notes

- Return Policy: Once standard toolholders are modified, they cannot be returned.

- For additional coolant options, call Command Customer Service.

Command's ER Collet Chucks & Collets

Micro Precision® ER32 Shorty Collet Chuck

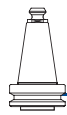
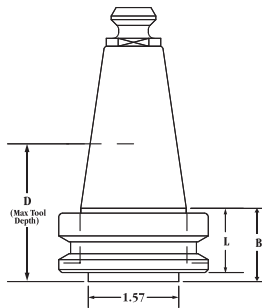
ER32 Shorty Collet Chucks:

- Uses ER32 Collets – made to precise specifications for tool shank sizes .079 - .787" (2.0 mm - 20.0 mm).
- Shortest gage length with recessed nosepiece design. No stop screws, no safe area.
- These toolholders do not meet the safe zone dimensions of ANSI B5.50 1994 and may not work on all tool change mechanisms.
- **IMPORTANT:** Maximum recommended torque is listed on page A-11. Do not overtighten nose assembly.

Command Micro Precision® Collet System Benefits:

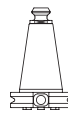
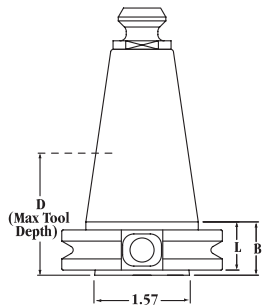
- Flush precision closure nut — grips tool close to cutting edge — accurate, rigid.
- Concentric to .0002" TIR — puts tool precisely on spindle centerline.
- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Wide .040" range collets — reduces collet and toolholder inventories.
- Straight shank extensions in stock — long reach without custom tool costs.
- All tapers and lengths ready to ship — get your tools fast.
- Less tool wear and replacement — less scrap.
- Fully ground flange and V-groove — easy on tool changers for less spindle and changer maintenance.

BT-Flange



Taper	Part No	B	D	L
BT 40	B4C1-0032	1.06	1.9	1.06

V-Flange

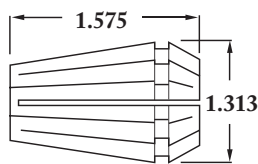


Taper	Part No	B	D	L
V 40	C4C1-0032	.83	1.9	0.75
V 50	C6C1-0032	.83	3.1	0.75



Replacement Parts & Accessories

ER32 Series Collets



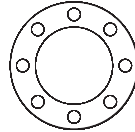
Micro Precision® ER Collets, pages B-25 thru B-28

Replacement Nosepiece Assembly

Side View



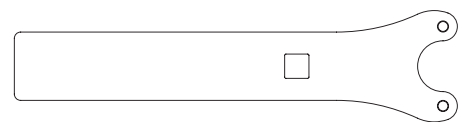
End View



Collet Nut

Part No.	Description
XGCN-0032INT	Shorty Collet Nut

Wrench



Wrench

Part No.	Description
XCCW-P032INT	Shorty Wrench (3/8" Square In handle)

Notes

- Black oxide complete on toolholders, page A-2.
- High speed balance options, page A-6.
- Coolant options, page A-12.
- Micro Precision® ER collets are compatible with DIN 6499 standard collets.
- Front disk & nosepieces for coolant, pages B-29 & B-30.
- Blue Chip™ Coolant Containment System, page C-55.
- Collet chuck nosepiece torque values & wrenches, page A-11.
- Retention Knobs & Setup Holding Fixtures, pages D-75 & D-76, D-78.

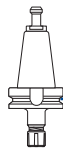
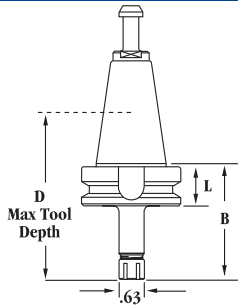
ER11 Toolholders:

- Made to precise specifications for tool shank sizes .020-.275" (.5-7.0 mm).
- Small diameter nose well suited for working in close quarters.
- Increased flexibility for milling, drilling, and reaming.
- **IMPORTANT:** Maximum recommended torque is listed on page A-11. Do not overtighten nose assembly.

Micro Precision® Collet System Benefits:

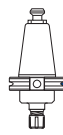
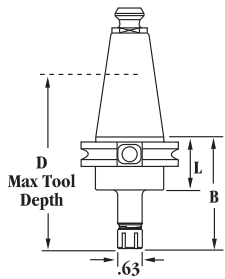
- Flush precision closure nut — grips tool close to cutting edge — accurate, rigid.
- Concentric to .0002" TIR — puts tool precisely on spindle centerline.
- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Straight shank extensions in stock — long reach without custom tool costs.
- Less tool wear and replacement — less scrap.
- Fully ground flange and V-groove — easy on tool changers for less spindle and changer maintenance.

BT-Flange

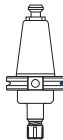


		Standard			
Taper	Part No.	B	D	L	
BT 30	B2C4-0011	3.00	3.5	0.87	
BT 35	B3C4-0011	3.00	3.9	0.87	
BT 40	B4C4-0011	3.00	4.1	1.06	

V-Flange

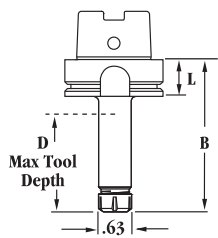


		Stub			
Taper	Part No.	B	D	L	
V 40	C4C3-0011	2.00	3.5	N/A	

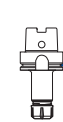


		Standard			
Taper	Part No.	B	D	L	
V 40	C4C4-0011	3.00	4.5	1.38	

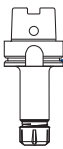
HSK



(HSK Form A Illustrated)



		Stub			
Taper	Part No.	B	D	L	
HSK40A	H2C3A0011	2.36	1.3	0.79	
HSK40E	H2C3E0011	2.36	1.3	0.79	
HSK63A	H4C3A0011	2.00	1.1	1.02	
HSK63F	H4C3F0011	2.00	1.0	1.02	



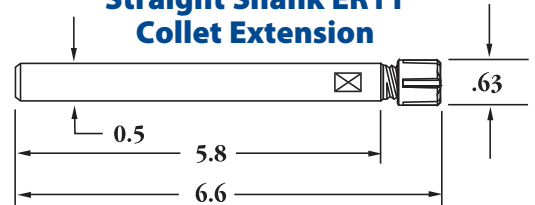
		Standard			
Taper	Part No.	B	D	L	
HSK40A	H2C4A0011	3.94	1.6	0.79	
HSK40E	H2C4E0011	3.94	1.6	0.79	
HSK63A	H4C4A0011	4.00	3.1	1.02	
HSK63F	H4C4F0011	4.00	3.0	1.02	



		Extended			
Taper	Part No.	B	D	L	
HSK40A	H2C5A0011	6.30	1.6	0.79	
HSK40E	H2C5E0011	6.30	1.6	0.79	

Replacement Parts & Accessories

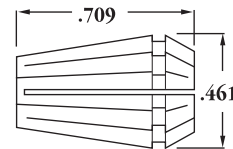
Straight Shank ER11 Collet Extension



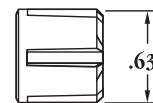
Part No.

ERCE-0011
(Coolant through)

ER11 Series Collets



Micro Precision® ER Collets, pages B-25 thru B-28



Standard Part No.

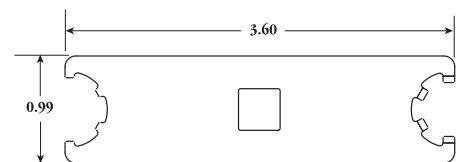
XGSN-0011
(M13 x .75)



Classic Part No.

XCNA-0011
(M13 x .75)

Wrench



Notes

- Black oxide complete on toolholders, page A-2.
- No Stop Screws on ER11 holders.
- High speed balance & nosepiece options, page A-6.
- Coolant options, page A-12.
- Micro Precision® ER collets are compatible with DIN 6499 standard collets.
- Blue Chip™ Coolant Containment System, page C-55.
- Collet chuck nosepiece torque values & wrenches, page A-11.
- Retention Knobs, pages D-75 - D-76.
- HSK Accessories & Setup Holding Fixtures, page D-79.
- HSK coolant hole plugs and coolant tubes sold separately, see page D-79.

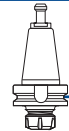
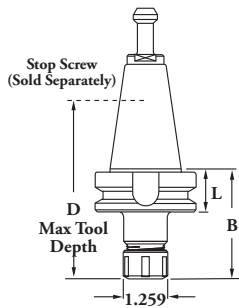
ER16 Toolholders:

- Made to precise specifications for tool shank sizes .020-.393" (.5-10.0 mm).
- Small diameter nose well suited for working in close quarters.
- Increased flexibility for milling, drilling, and reaming.
- **IMPORTANT:** Maximum recommended torque is listed on page A-11. Do not overtighten nose assembly.

Command Micro Precision® Collet System Benefits:

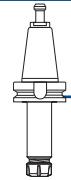
- Flush precision closure nut — grips tool close to cutting edge — accurate, rigid.
- Concentric to .0002" TIR — puts tool precisely on spindle centerline.
- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Wide .040" range collets — reduces collet and toolholder inventories.
- Straight shank extensions in stock — long reach without custom tool costs.
- Less tool wear and replacement — less scrap.
- Fully ground flange and V-groove — easy on tool changers for less spindle and changer maintenance.

BT-Flange



Stub

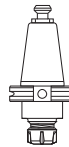
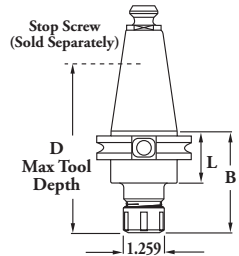
Taper	Part No.	B	D	L
BT 30	B2C3-0016	2.00	2.0	0.87
Standard				
Taper	Part No.	B	D	L
BT 30	B2C4-0016	2.88	3.0	0.87
BT 35	B3C4-0016	2.88	3.0	0.87
BT 40	B4C4-0016	2.88	3.0	1.06
BT 45	B5C4-0016	3.88	3.0	1.31
BT 50	B6C4-0016	4.88	3.0	1.50



Extended

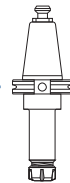
Taper	Part No.	B	D	L
BT 35	B3C5-0016	4.88	3.0	0.87
BT 40	B4C5-0016	4.88	3.0	1.06

V-Flange



Stub

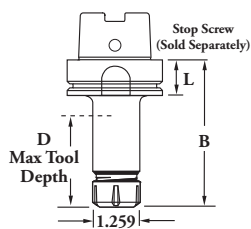
Taper	Part No.	B	D	L
V 40	C4C3-0016	2.00	2.5	N/A
Standard				
Taper	Part No.	B	D	L
V 30	C2C4-0016	3.00	2.7	1.38
V 40	C4C4-0016	2.88	3.0	1.38
V 45	C5C4-0016	3.88	3.0	1.38
V 50	C6C4-0016	4.88	3.0	1.38



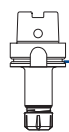
Extended

Taper	Part No.	B	D	L
V 40	C4C5-0016	4.88	3.0	1.38
V 50	C6C5-0016	6.88	3.0	1.38

HSK



(HSK Form A Illustrated)



Stub

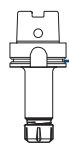
Taper	Part No.	B	D	L
HSK40A	H2C3A0016	2.36	1.1	0.79
HSK40E	H2C3E0016	2.36	1.1	0.79
HSK63A	H4C3A0016	2.50	1.3	1.02
HSK63F	*H4C3F0016	2.50	1.0	1.02
HSK100A	H6C3A0016	2.50	1.3	1.14

No room for Stop Screws on HSK Stub length holders.



Extended

Taper	Part No.	B	D	L
HSK40A	H2C5A0016	6.30	3.0	0.79
HSK40E	H2C5E0016	6.30	3.0	0.79
HSK63A	H4C5A0016	6.50	3.0	1.02
HSK100A	H6C5A0016	6.50	3.0	1.14

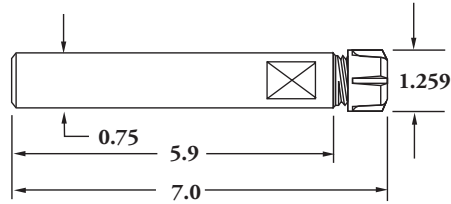


Standard

Taper	Part No.	B	D	L
HSK40A	H2C4A0016	3.94	2.3	0.79
HSK40E	H2C4E0016	3.94	2.3	0.79
HSK63A	H4C4A0016	4.50	2.0	1.02
HSK63F	*H4C4F0016	4.50	2.3	1.02
HSK100A	H6C4A0016	4.50	3.0	1.14

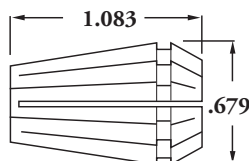
Replacement Parts & Accessories

Straight Shank ER16 Collet Extension



Part No.
ERCE-0016
(Coolant through)

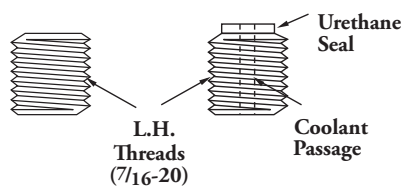
ER16 Series Collets



Micro Precision® ER Collets, pages B-25 thru B-28

Stop Screws

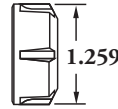
(Sold Separately)



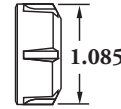
Part No.
XCCS-0720

Part No.
XCCS-0720-C

Replacement Nosepiece Assemblies & Wrenches



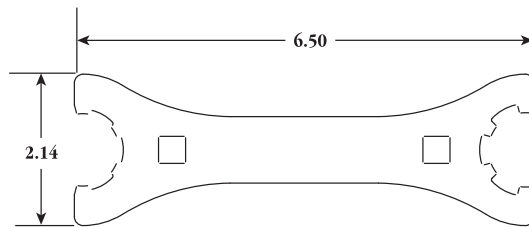
**Standard
Part No.**
XGSN-0016
(M22 x 1.5)



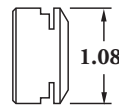
**Classic
Part No.**
XCNA-0016
(M22 x 1.5)



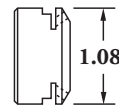
**Classic
Extractor Clips
Part No.**
XCNA-K016
Pack of 10 clips
(Use with XCNA-0016)



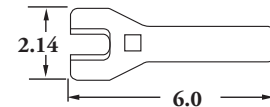
**Double-Ended
Part No.**
XCCW-D016
(3/8" Square in handle)



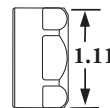
**Fine Balance
Part No.**
XCNA-FB16
(M22 x 1.5)



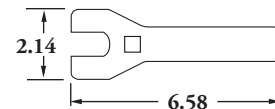
**Fine Tune™
Part No.**
XCNA-FT16
(M22 x 1.5)
Includes balance screws



**Wrench
Part No.**
XCCW-FT16
(3/8" Square in handle)



**Hex
Part No.**
XCNA-H016
(M22 x 1.5)
25 mm Hex



**Hex Wrench
Part No.**
XCCW-H016
(3/8" Square in handle)

Notes

- Black oxide complete on toolholders, page A-2.
- No room for Stop Screws on HSK Stub length holders.
- HSK63F for ER16 comes with Fine Balance™ nosepiece.
- High speed balance & nosepiece options, page A-6.
- Coolant options, page A-12.
- Micro Precision® ER collets are compatible with DIN 6499 standard collets.
- Front disk & nosepieces for coolant, pages B-29 & B-30.
- Blue Chip™ Coolant Containment System, page C-55.
- Collet chuck nosepiece torque values & wrenches, page A-11.
- Retention Knobs, pages D-76 - D-77.
- HSK Accessories & Setup Holding Fixtures, page D-79.
- HSK coolant hole plugs and coolant tubes sold separately, see page D-79.

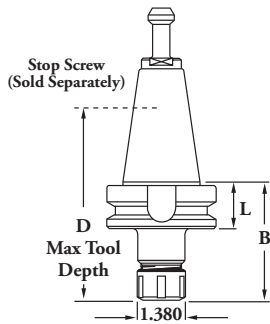
ER20 Toolholders:

- Made to precise specifications for tool shank sizes .040-.511" (1.0-13.0 mm).
- Small diameter nose well suited for working in close quarters.
- Increased flexibility for milling, drilling, and reaming.
- **IMPORTANT:** Maximum recommended torque is listed on page A-11. Do not overtighten nose assembly.

Micro Precision® Collet System Benefits:

- Flush precision closure nut — grips tool close to cutting edge — accurate, rigid.
- Concentric to .0002" TIR — puts tool precisely on spindle centerline.
- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Wide .040" range collets — reduces collet and toolholder inventories.
- Straight shank extensions in stock — long reach without custom tool costs.
- Less tool wear and replacement — less scrap.
- Fully ground flange and V-groove — easy on tool changers for less spindle and changer maintenance.

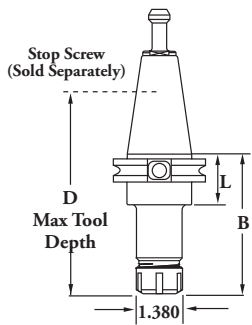
BT-Flange



		Stub			
Taper	Part No.	B	D	L	
BT 30	B2C3-0020	2.00	2.0	0.87	
BT 40	B4C3-0020	2.20	2.4	1.06	
		Standard			
Taper	Part No.	B	D	L	
BT 30	B2C4-0020	3.00	2.9	0.87	
BT 35	B3C4-0020	3.00	3.2	0.87	
BT 40	B4C4-0020	4.00	3.5	1.06	
BT 45	B5C4-0020	4.00	3.5	1.31	
BT 50	B6C4-0020	4.00	3.5	1.50	

		Extended			
Taper	Part No.	B	D	L	
BT 35	B3C5-0020	5.00	3.5	0.87	
BT 40	B4C5-0020	6.00	3.5	1.06	
		R&R™ (Reach & Rigidity)			
Taper	Part No.	B	D	L	
BT 40	B4K5-0020	6.00	3.5	1.06	

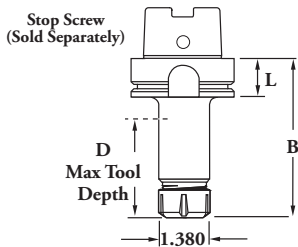
V-Flange



		Stub			
Taper	Part No.	B	D	L	
V 40	C4C3-0020	2.55	2.9	1.38	
		Standard			
Taper	Part No.	B	D	L	
V 30	C2C4-0020	3.00	3.0	N/A	
V 40	C4C4-0020	4.00	3.5	1.38	
V 45	C5C4-0020	4.00	3.5	1.38	
V 50	C6C4-0020	4.00	3.5	1.38	
		Extended			
Taper	Part No.	B	D	L	
V 40	C4C5-0020	6.00	3.5	1.38	
V 50	C6C5-0020	6.00	3.5	1.38	

		Extra Extended			
Taper	Part No.	B	D	L	
V 40	C4C6-0020	8.00	3.5	1.38	
V 50	C6C6-0020	8.00	3.5	1.38	
		R&R™ (Reach & Rigidity)			
Taper	Part No.	B	D	L	
V 40	C4K5-0020	6.00	3.5	1.38	
V 50	C6K5-0020	6.00	3.5	1.38	
V 50	C6K6-0020	8.00	3.5	1.38	

HSK



		Stub			
Taper	Part No.	B	D	L	
HSK40A	H2C3A0020	2.36	1.1	0.79	
HSK40E	H2C3E0020	2.36	1.1	0.79	
HSK63A	H4C3A0020	2.75	1.4	1.02	
HSK63F	*H4C3F0020	2.75	1.5	1.02	
HSK100A	H6C3A0020	3.00	1.4	1.14	
		Standard			
Taper	Part No.	B	D	L	
HSK40A	H2C4A0020	3.94	2.1	0.79	
HSK40E	H2C4E0020	3.94	2.1	0.79	
HSK63A	H4C4A0020	4.75	2.4	1.02	
HSK63F	*H4C4F0020	4.75	2.4	1.02	
HSK100A	H6C4A0020	5.00	2.4	1.14	

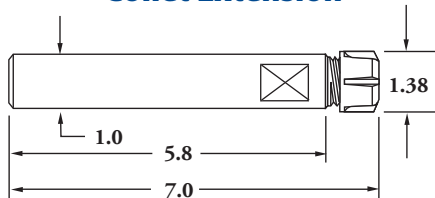
		Extended			
Taper	Part No.	B	D	L	
HSK40A	H2C5A0020	6.30	3.5	0.79	
HSK40E	H2C5E0020	6.30	3.5	0.79	
HSK63A	H4C5A0020	6.75	3.5	1.02	
HSK63F	*H4C5F0020	6.75	4.4	1.02	
HSK100A	H6C5A0020	7.00	3.5	1.14	

No room for Stop Screws on HSK Stub length holders.

*Fine balance nosepiece standard. Use XCCW-FT20 wrench

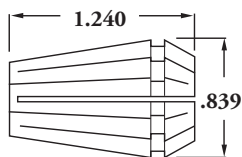
Replacement Parts & Accessories

Straight Shank ER20 Collet Extension



Part No.
ERCE-0020
(Coolant through)

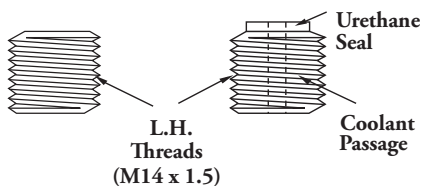
ER20 Series Collet



Micro Precision® ER Collets, pages B-25 thru B-28

Stop Screws

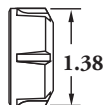
(Sold Separately)



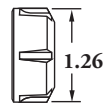
Part No.
XCCS-1415

Part No.
XCCS-1415-C

Replacement Nosepiece Assemblies & Wrenches



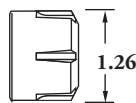
**Standard
Part No.**
XGSN-0020
(M25 x 1.5)



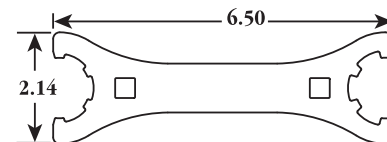
**Classic
Part No.**
XCNA-0020
(M25 x 1.5)



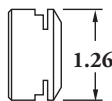
**Classic Extractor
Clips
Part No.**
XCNA-K020
Pack of 10 clips
(Use with XCNA-0020)



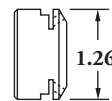
**Ball Bearing
Part No.**
XCNA-BB20
(M25 x 1.5)



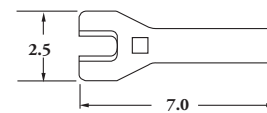
**Double-Ended
Part No.**
XCCW-D020
(3/8" Square in handle)



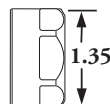
**Fine Balance
Part No.**
XCNA-FB20
(M25 x 1.5)



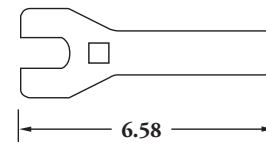
**Fine Tune™
Part No.**
XCNA-FT20
(M25 x 1.5)
(Includes balance screws)



**Wrench
Part No.**
XCCW-FT20
(3/8" Square in handle)



**Hex
Part No.**
XCNA-H020
(M25 x 1.5)
(30 mm Hex)



**Hex Wrench
Part No.**
XCCW-H020
(3/8" Square in handle)

COLLET CHUCKS & ACCESSORIES

Notes

- Black oxide complete on toolholders, page A-2.
- No room for Stop Screws on HSK Stub length holders.
- HSK63F for ER16 comes with Fine Balance™ nosepiece.
- High speed balance & nosepiece options, page A-6.
- Coolant options, page A-12.
- Micro Precision® ER collets are compatible with DIN 6499 standard collets.
- Front disk & nosepieces for coolant, pages B-29 & B-30.
- Blue Chip™ Coolant Containment System, page C-55.
- Collet chuck nosepiece torque values & wrenches, page A-11.
- Retention Knobs, pages D-76 - D-77.
- HSK Accessories & Setup Holding Fixtures, page D-79.
- HSK coolant hole plugs and coolant tubes sold separately, see page D-79.

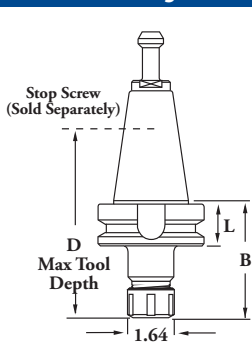
ER25 Toolholders:

- Made to precise specifications for tool shank sizes .040-.629" (1.0-16.0 mm)
- Increased flexibility for milling, drilling, and reaming.
- **IMPORTANT:** Maximum recommended torque is listed on page A-11. Do not overtighten nose assembly.

Micro Precision® Collet System Benefits:

- Flush precision closure nut — grips tool close to cutting edge — accurate, rigid.
- Concentric to .0002" TIR — puts tool precisely on spindle centerline.
- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Wide .040" range collets — reduces collet and toolholder inventories.
- Straight shank extensions in stock — long reach without custom tool costs.
- Less tool wear and replacement — less scrap.
- Fully ground flange and V-groove — easy on tool changers for less spindle and changer maintenance.

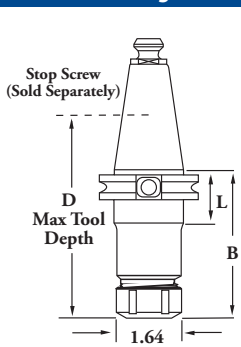
BT-Flange



		Stub			
Taper	Part No.	B	D	L	
BT 40	B4C3-0025	2.50	2.7	1.06	
		Standard			
Taper	Part No.	B	D	L	
BT 40	B4C4-0025	4.00	3.5	1.06	

		Extended			
Taper	Part No.	B	D	L	
BT 40	B4C5-0025	6.00	3.5	1.06	

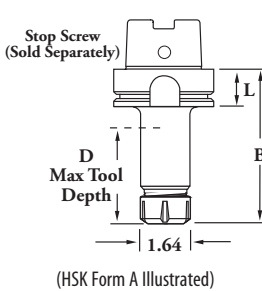
V-Flange



		Stub			
Taper	Part No.	B	D	L	
V 40	C4C3-0025	2.50	3.0	1.08	
		Standard			
Taper	Part No.	B	D	L	
V 40	C4C4-0025	4.00	3.5	1.38	
V 50	C6C4-0025	4.00	3.5	1.38	

		Extended			
Taper	Part No.	B	D	L	
V 40	C4C5-0025	6.00	3.5	1.38	

HSK

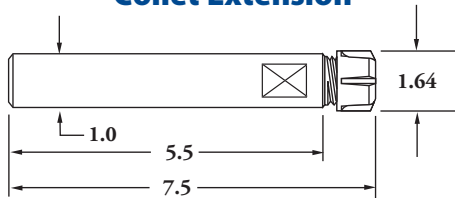


		Stub			
Taper	Part No.	B	D	L	
HSK63A	H4C3A0025	3.00	1.7	1.02	
HSK100A	H6C3A0025	3.25	1.7	1.14	
No room for Stop Screws on HSK Stub length holders.					
		Standard			
Taper	Part No.	B	D	L	
HSK63A	H4C4A0025	5.00	2.8	1.02	
HSK100A	H6C4A0025	5.25	2.6	1.14	

		Extended			
Taper	Part No.	B	D	L	
HSK63A	H4C5A0025	7.00	3.5	1.02	
HSK100A	H6C5A0025	7.25	3.5	1.14	

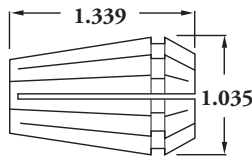
Replacement Parts & Accessories

Straight Shank ER25 Collet Extension



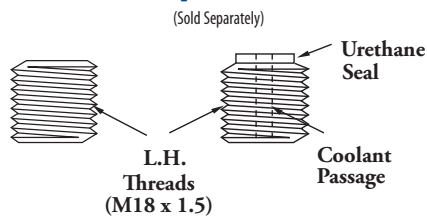
Part No.
ERCE-0025
(Coolant through)

ER25 Series Collets



Micro Precision® ER Collets, pages B-25 thru B-28

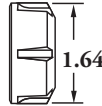
Stop Screws



Part No.
XCCS-1815

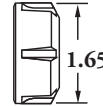
Part No.
XCCS-1815-C

Replacement Nosepiece Assemblies & Wrenches



**Standard
Part No.**

XCNS-0025
(M32 x 1.5)



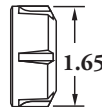
**Classic
Part No.**

XCNA-0025
(M32 x 1.5)



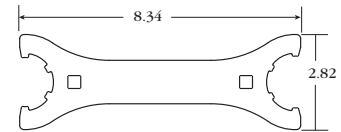
**Classic Extractor Clips
Part No.**

XCNA-K025
Pack of 10 clips
(Use with XCNA-0025)



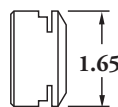
**Ball Bearing
Part No.**

XCNA-BB25
(M32 x 1.5)



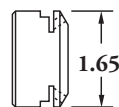
**Double-Ended
Part No.**

XCCW-D025
(3/8" Square In-Handle)



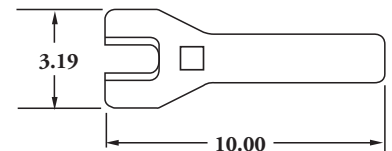
**Fine Balance
Part No.**

XCNA-FB25
(M32 x 1.5)



**Fine Tune™
Part No.**

XCNA-FT25 (M32 x 1.5)
(Includes balance screws)



**Wrench
Part No.**

XCCW-FT25
(3/8" Square in handle)

COLLET CHUCKS & ACCESSORIES

Notes

- Black oxide complete on toolholders, page A-2.
- No room for Stop Screws on HSK Stub length holders.
- HSK63F for ER16 comes with Fine Balance™ nosepiece.
- High speed balance & nosepiece options, page A-6.
- Coolant options, page A-12.
- Micro Precision® ER collets are compatible with DIN 6499 standard collets.
- Front disk & nosepieces for coolant, pages B-29 & B-30.
- Blue Chip™ Coolant Containment System, page C-55.
- Collet chuck nosepiece torque values & wrenches, page A-11.
- Retention Knobs, pages D-76 - D-77.
- HSK Accessories & Setup Holding Fixtures, page D-79.
- HSK coolant hole plugs and coolant tubes sold separately, see page D-79.

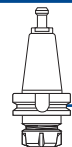
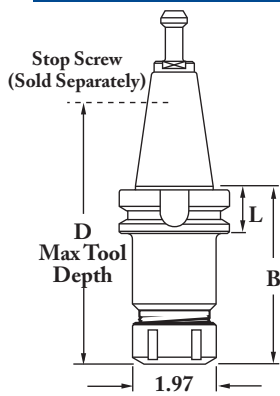
ER32 Toolholders:

- Made to precise specifications for tool shank sizes .079-.787" (2.0-20.0 mm).
- Increased flexibility for milling, drilling, and reaming.
- IMPORTANT:** Maximum recommended torque is listed on page A-11. Do not overtighten nose assembly.

Micro Precision® Collet System Benefits:

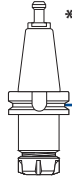
- Flush precision closure nut — grips tool close to cutting edge — accurate, rigid.
- Concentric to .0002" TIR — puts tool precisely on spindle centerline.
- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Wide .040" range collets — reduces collet and toolholder inventories.
- Straight shank extensions in stock — long reach without custom tool costs.
- Less tool wear and replacement — less scrap.
- Fully ground flange and V-groove — easy on tool changers for less spindle and changer maintenance.

BT-Flange

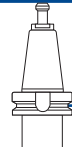


		Stub		
Taper	Part No.	B	D	L
BT 30	*B2C3-0032	2.15	2.1	0.87
BT 40	B4C3-0032	2.40	2.7	1.06

*No room for Stop Screw



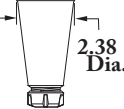
		Standard		
Taper	Part No.	B	D	L
BT 30	B2C4-0032	3.00	2.5	0.87
BT 35	B3C4-0032	3.00	2.8	0.87
BT 40	B4C4-0032	4.00	4.0	1.06
BT 45	B5C4-0032	4.00	4.0	1.31
BT 50	B6C4-0032	4.00	2.6	1.50



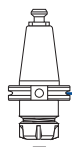
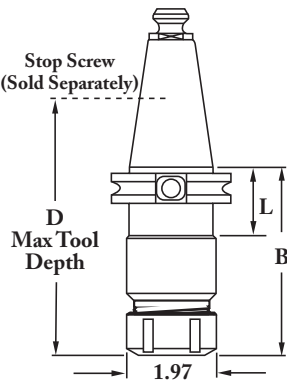
		Extended		
Taper	Part No.	B	D	L
BT 35	B3C5-0032	5.00	4.0	0.87
BT 40	B4C5-0032	6.00	4.0	1.06



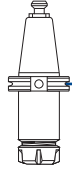
		R&R™ (Reach & Rigidity)		
Taper	Part No.	B	D	L
BT 40	B4K5-0032	6.00	4.0	1.06



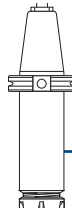
V-Flange



		Stub		
Taper	Part No.	B	D	L
V 40	C4C3-0032	2.70	3.3	1.38



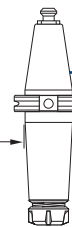
		Standard		
Taper	Part No.	B	D	L
V 30	C2C4-0032	3.00	2.5	1.44
V 40	C4C4-0032	4.00	4.0	1.44
V 45	C5C4-0032	4.00	4.0	1.38
V 50	C6C4-0032	4.00	4.0	1.38



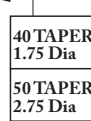
		Extended		
Taper	Part No.	B	D	L
V 40	C4C5-0032	6.00	4.0	1.38
V 50	C6C5-0032	6.00	4.0	1.38



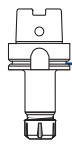
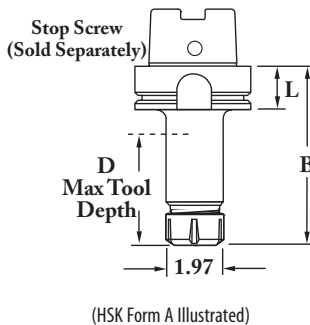
		Extra Extended		
Taper	Part No.	B	D	L
V 40	C4C6-0032	8.00	4.0	1.38
V 50	C6C6-0032	8.00	4.0	1.38



		R&R™ (Reach & Rigidity)		
Taper	Part No.	B	D	L
V 50	C6K5-0032	6.00	4.0	1.38
V 50	C6K6-0032	8.00	4.0	1.38

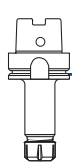


HSK

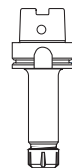


		Stub		
Taper	Part No.	B	D	L
HSK63A	H4C3A0032	3.25	1.8	1.02
HSK63F	*H4C3F0032	3.25	1.9	1.02
HSK100A	H6C3A0032	3.38	1.8	1.14

No room for Stop Screws on HSK Stub length holders.



		Standard		
Taper	Part No.	B	D	L
HSK63A	H4C4A0032	5.25	2.8	1.02
HSK63F	*H4C4F0032	5.25	3.0	1.02
HSK100A	H6C4A0032	5.38	2.9	1.14



		Extended		
Taper	Part No.	B	D	L
HSK63A	H4C5A0032	7.25	4.0	1.02
HSK100A	H6C5A0032	7.38	4.0	1.14

*Fine balance nosepiece standard. Use XCCW-FT32 wrench

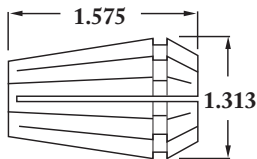
Replacement Parts & Accessories

Straight Shank ER32 Collet Extension



Part No.
ERCE-0032
(Coolant through)

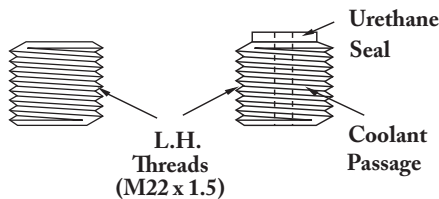
ER32 Series Collets



Micro Precision® ER Collets, pages B-25 thru B-28

Stop Screws

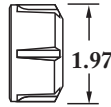
(Sold Separately)



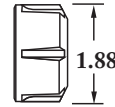
Part No.
XCCS-2215

Part No.
XCCS-2215-C

Replacement Nosepiece Assemblies & Wrenches



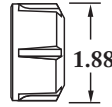
Standard Part No.
XGSN-0032
(M40 x 1.5)



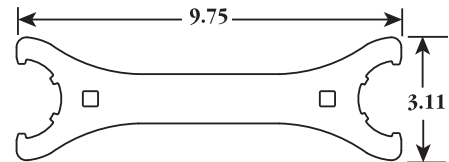
Classic Part No.
XCNA-0032
(M40 x 1.5)



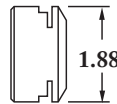
Classic Extractor Clips Part No.
XCNA-K032
Pack of 10 clips
(Use with XCNA-0032)



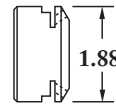
Ball Bearing Part No.
XCNA-BB32
(M40 x 1.5)



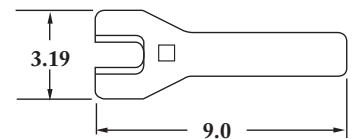
Double-Ended Part No.
XCCW-D032
(3/8" Square in handle)



Fine Balance Collet Nut Part No.
XCNA-FB32
(M40 x 1.5)



Fine Tune™ Collet Nut Part No.
XCNA-FT32
(M40 x 1.5)
(Includes balance screws)



Wrench Part No.
XCCW-FT32
(3/8" Square in handle)

R&R™ (Reach & Rigidity) Collet Chucks Available!

Notes

- Black oxide complete on toolholders, page A-2.
- No room for Stop Screws on HSK Stub length holders.
- HSK63F for ER16 comes with Fine Balance™ nosepiece.
- High speed balance & nosepiece options, page A-6.
- Coolant options, page A-12.
- Micro Precision® ER collets are compatible with DIN 6499 standard collets.
- Front disk & nosepieces for coolant, pages B-29 & B-30.
- Blue Chip™ Coolant Containment System, page C-55.
- Collet chuck nosepiece torque values & wrenches, page A-11.
- Retention Knobs, pages D-76 - D-77.
- HSK Accessories & Setup Holding Fixtures, page D-79.
- HSK coolant hole plugs and coolant tubes sold separately, see page D-79.

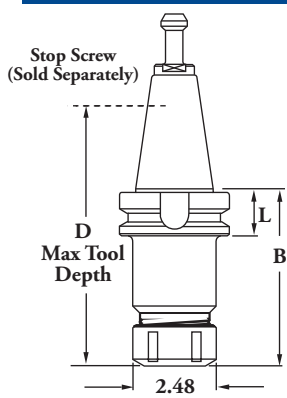
ER40 Toolholders:

- Made to precise specifications for tool shank sizes .086-1.023" (3.0-26.0 mm).
- Increased flexibility for milling, drilling, and reaming.
- **IMPORTANT:** Maximum recommended torque is listed on page A-11. Do not overtighten nose assembly.

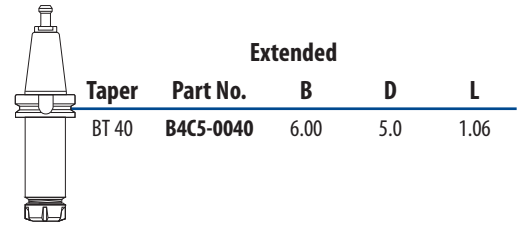
Micro Precision® Collet System Benefits:

- Flush precision closure nut — grips tool close to cutting edge — accurate, rigid.
- Concentric to .0002" TIR — puts tool precisely on spindle centerline.
- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Wide .040" range collets — reduces collet and toolholder inventories.
- Straight shank extensions in stock — long reach without custom tool costs.
- Less tool wear and replacement — less scrap.
- Fully ground flange and V-groove — easy on tool changers for less spindle and changer maintenance.

BT-Flange

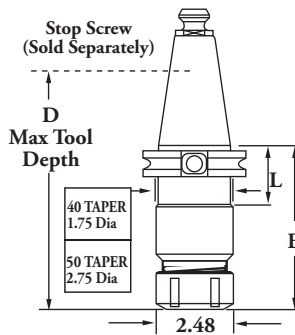


Stub					
Taper	Part No.	B	D	L	
BT 40	B4C3-0040	2.75	2.0	1.06	
Standard					
Taper	Part No.	B	D	L	
BT 40	B4C4-0040	4.00	2.6	1.06	
BT 50	B6C4-0040	4.00	4.0	1.50	

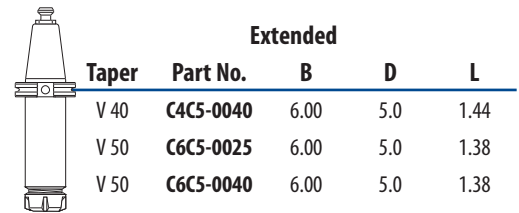


Extended					
Taper	Part No.	B	D	L	
BT 40	B4C5-0040	6.00	5.0	1.06	

V-Flange

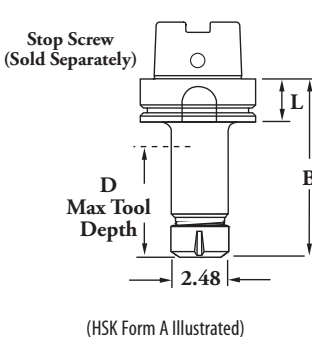


Stub					
Taper	Part No.	B	D	L	
V 40	C4C3-0040	3.00	2.2	1.44	
Standard					
Taper	Part No.	B	D	L	
V 40	C4C4-0040	4.00	3.2	1.44	
V 50	C6C4-0040	4.00	4.0	1.38	



Extended					
Taper	Part No.	B	D	L	
V 40	C4C5-0040	6.00	5.0	1.44	
V 50	C6C5-0025	6.00	5.0	1.38	
V 50	C6C5-0040	6.00	5.0	1.38	

HSK

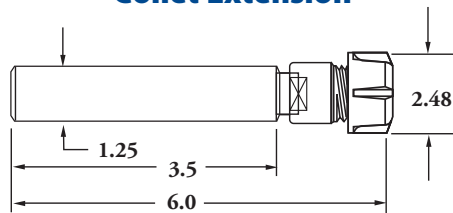


Stub					
Taper	Part No.	B	D	L	
HSK63A	H4C3A0040	3.15	1.75	1.02	
Standard					
Taper	Part No.	B	D	L	
HSK63A	H4C4A0040	4.72	2.5	1.02	
HSK100A	H6C4A0040	4.72	2.6	1.14	

No room for Stop Screws on HSK Stub length holders.

Replacement Parts & Accessories

Straight Shank ER40 Collet Extension

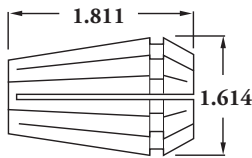


Part No.

ERCE-0040

(Coolant through)

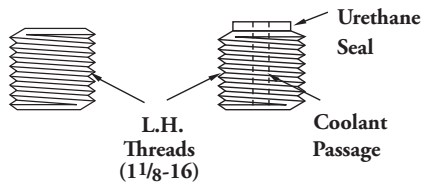
ER40 Series Collet



Micro Precision® ER Collets, pages B-25 thru B-28

Stop Screws

(Sold Separately)



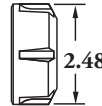
Part No.

XCCS-1816

Part No.

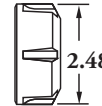
XCCS-1816-C

Replacement Nosepiece Assemblies & Wrenches



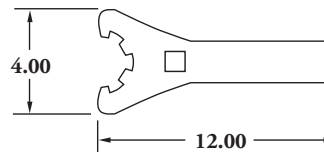
**Standard
Collet Nut Part No.**

XGSN-0040
(M50 x 1.5)



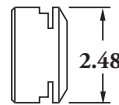
**Classic
Collet Nut Part No.**

XCNA-0040
(M50 x 1.5)



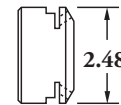
Wrench Part No.

XCCW-0040
(1/2" Square in handle)



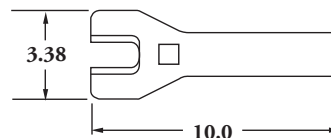
**Fine Balance Style
Collet Nut Part No.**

XCNA-FB40
(M50 x 1.5)



**Fine Tune™ Style
Collet Nut Part No.**

XCNA-FT40
(M50 x 1.5) (Includes balance
screws)



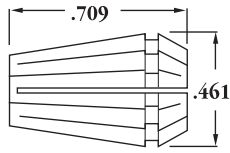
Wrench Part No.

XCCW-FT40
(1/2" Square in handle)

Notes

- Black oxide complete on toolholders, page A-2.
- No room for Stop Screws on HSK Stub length holders.
- HSK63F for ER16 comes with Fine Balance™ nosepiece.
- High speed balance & nosepiece options, page A-6.
- Coolant options, page A-12.
- Micro Precision® ER collets are compatible with DIN 6499 standard collets.
- Front disk & nosepieces for coolant, pages B-29 & B-30.
- Blue Chip™ Coolant Containment System, page C-55.
- Collet chuck nosepiece torque values & wrenches, page A-11.
- Retention Knobs, pages D-76 - D-77.
- HSK Accessories & Setup Holding Fixtures, page D-79.
- HSK coolant hole plugs and coolant tubes sold separately, see page D-79.

ER11



ER11 Series Metric Collets

Part No.	Range (inch)	Range (mm)
ER11-0100	.020 - .039	0.5 - 1.0
ER11-0150	.040 - .059	1.0 - 1.5
ER11-0200	.060 - .078	1.5 - 2.0
ER11-0250	.079 - .098	2.0 - 2.5
ER11-0300	.099 - .118	2.5 - 3.0
ER11-0350	.119 - .137	3.0 - 3.5
ER11-0400	.138 - .157	3.5 - 4.0
ER11-0450	.158 - .177	4.0 - 4.5
ER11-0500	.178 - .196	4.5 - 5.0
ER11-0550	.197 - .216	5.0 - 5.5
ER11-0600	.217 - .236	5.5 - 6.0
ER11-0650	.237 - .255	6.0 - 6.5
ER11-0700	.256 - .275	6.5 - 7.0
ER11-13ST	SET	SET

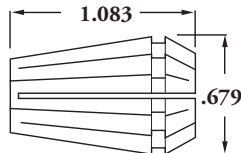
ER11 Series Fractional Collets

Part No.	Range (inch)
ER11-F125	.106 - .125
ER11-F187	.168 - .187
ER11-F250	.231 - .250
ER11-03ST	SET

Notes

- * Collets not included in the Collet Sets
- Tool shanks must engage full length of collet ID bore. Failure to follow this practice may result in tool failure.
- For best results, use collet closest to the cutter shank size.
- Micro Precision® ER collets are compatible with DIN 6499 standard collets.
- Sealed & external coolant Micro Precision® ER collets, pages B-29 & B-30.
- Blue Chip™ Coolant Containment System, page C-55.
- Check tap shank & square size before ordering Tap Collets.

ER16



ER16 Series Metric Collets

Part No.	Range (inch)	Range (mm)
ER16-0100	.020 - .039	0.5 - 1.0
ER16-0150*	.039 - .059	1.0 - 1.5
ER16-0200	.040 - .078	1.0 - 2.0
ER16-0250*	.078 - .098	2.0 - 2.5
ER16-0300	.079 - .118	2.0 - 3.0
ER16-0400	.119 - .157	3.0 - 4.0
ER16-0500	.158 - .196	4.0 - 5.0
ER16-0600	.197 - .236	5.0 - 6.0
ER16-0700	.237 - .275	6.0 - 7.0
ER16-0800	.276 - .315	7.0 - 8.0
ER16-0900	.315 - .354	8.0 - 9.0
ER16-1000	.355 - .393	9.0 - 10.0
ER16-10ST	SET	SET

ER16 Series Fractional Collets

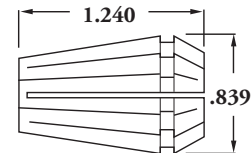
Part No.	Range (inch)
ER16-F062	.043 - .062
ER16-F093	.054 - .093
ER16-F125	.086 - .125
ER16-F156	.117 - .156
ER16-F187	.148 - .187
ER16-F218	.179 - .218
ER16-F250	.211 - .250
ER16-F281	.242 - .281
ER16-F312	.273 - .312
ER16-F343	.304 - .343
ER16-F375	.336 - .375
ER16-11ST	SET

ER16 Series Tap Collets

(rigid with square drive)

Part No.	Tap Size	Shank Dia.	Square
ER16-T006	No. 0-6	0.141	0.110
ER16-T008	No. 8	0.168	0.131
ER16-T010	No. 10	0.194	0.152
ER16-T012	No. 12	0.220	0.165
ER16-T250	1/4"	0.255	0.191

ER20



ER20 Series Metric Collets

Part No.	Range (inch)	Range (mm)
ER20-0150*	.039 - .059	1.0 - 1.5
ER20-0200	.040 - .078	1.0 - 2.0
ER20-0250*	.078 - .098	2.0 - 2.5
ER20-0300	.079 - .118	2.0 - 3.0
ER20-0400	.119 - .157	3.0 - 4.0
ER20-0500	.158 - .196	4.0 - 5.0
ER20-0600	.197 - .236	5.0 - 6.0
ER20-0700	.237 - .275	6.0 - 7.0
ER20-0800	.276 - .315	7.0 - 8.0
ER20-0900	.315 - .354	8.0 - 9.0
ER20-1000	.355 - .393	9.0 - 10.0
ER20-1100	.394 - .433	10.0 - 11.0
ER20-1200	.434 - .472	11.0 - 12.0
ER20-1300	.473 - .511	12.0 - 13.0
ER20-12ST	SET	SET

ER20 Series Fractional Collets

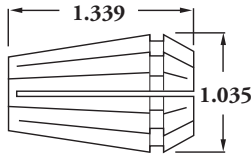
Part No.	Range (inch)
ER20-F062	.043 - .062
ER20-F093	.054 - .093
ER20-F125	.086 - .125
ER20-F156	.117 - .156
ER20-F187	.148 - .187
ER20-F218	.179 - .218
ER20-F250	.211 - .250
ER20-F281	.242 - .281
ER20-F312	.273 - .312
ER20-F343	.303 - .343
ER20-F375	.336 - .375
ER20-F406	.367 - .406
ER20-F437	.398 - .437
ER20-F468	.429 - .468
ER20-F500	.461 - .500
ER20-15ST	SET

ER20 Series Tap Collets

(rigid with square drive)

Part No.	Tap Size	Shank Dia.	Square
ER20-T008	No. 8	0.168	0.131
ER20-T010	No. 10	0.194	0.152
ER20-T012	No. 12	0.220	0.165
ER20-T250	1/4"	0.255	0.191
ER20-T312	5/16"	0.318	0.238
ER20-T375	3/8"	0.381	0.286
ER20-T437	7/16"	0.323	0.242
ER20-T500	1/2"	0.367	0.275

ER25



ER25 Series Metric Collets

Part No.	Range (inch)	Range(mm)
ER25-0150*	.019 - .059	0.5 - 1.5
ER25-0200	.040 - .078	1.0 - 2.0
ER25-0250*	.059 - .098	1.5 - 2.5
ER25-0300	.079 - .118	2.0 - 3.0
ER25-0400	.119 - .157	3.0 - 4.0
ER25-0500	.158 - .196	4.0 - 5.0
ER25-0600	.197 - .236	5.0 - 6.0
ER25-0700	.237 - .275	6.0 - 7.0
ER25-0800	.276 - .315	7.0 - 8.0
ER25-0900	.315 - .354	8.0 - 9.0
ER25-1000	.355 - .393	9.0 - 10.0
ER25-1100	.394 - .433	10.0 - 11.0
ER25-1200	.434 - .472	11.0 - 12.0
ER25-1300	.473 - .511	12.0 - 13.0
ER25-1400	.512 - .551	13.0 - 14.0
ER25-1500	.552 - .590	14.0 - 15.0
ER25-1600	.591 - .629	15.0 - 16.0
ER25-15ST	SET	SET

ER25 Series Fractional Collets

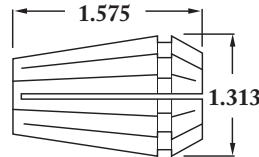
Part No.	Range (inch)
ER25-F125	.086 - .125
ER25-F187	.148 - .187
ER25-F250	.211 - .250
ER25-F312	.273 - .312
ER25-F375	.336 - .375
ER25-F437	.398 - .437
ER25-F500	.461 - .500
ER25-F562	.523 - .562
ER25-F625	.586 - .625
ER25-09ST	SET

ER25 Series Tap Collets

(rigid with square drive)

Part No.	Tap Size	Shank Dia.	Square
ER25-P062	1/16", 1/8" Pipe	0.313	0.234
ER25-P125	1/8" Pipe	0.437	0.328
ER25-T008	No. 8	0.168	0.131
ER25-T010	No. 10	0.194	0.152
ER25-T012	No. 12	0.220	0.165
ER25-T250	1/4"	0.255	0.191
ER25-T312	5/16"	0.318	0.238
ER25-T375	3/8"	0.381	0.286
ER25-T437	7/16"	0.323	0.242
ER25-T500	1/2"	0.367	0.275
ER25-T562	9/16"	0.429	0.322
ER25-T625	5/8"	0.480	0.360

ER32



ER32 Series Metric Collets

Part No.	Range (inch)	Range(mm)
ER32-0300	.079 - .118	2.0 - 3.0
ER32-0400	.119 - .157	3.0 - 4.0
ER32-0500	.158 - .196	4.0 - 5.0
ER32-0600	.197 - .236	5.0 - 6.0
ER32-0700	.237 - .275	6.0 - 7.0
ER32-0800	.276 - .315	7.0 - 8.0
ER32-0900	.315 - .354	8.0 - 9.0
ER32-1000	.355 - .393	9.0 - 10.0
ER32-1100	.394 - .433	10.0 - 11.0
ER32-1200	.434 - .472	11.0 - 12.0
ER32-1300	.473 - .511	12.0 - 13.0
ER32-1400	.512 - .551	13.0 - 14.0
ER32-1500	.552 - .590	14.0 - 15.0
ER32-1600	.591 - .629	15.0 - 16.0
ER32-1700	.630 - .669	16.0 - 17.0
ER32-1800	.670 - .708	17.0 - 18.0
ER32-1900	.709 - .748	18.0 - 19.0
ER32-2000	.748 - .787	19.0 - 20.0
ER32-18ST	SET	SET

ER32 Series Fractional Collets

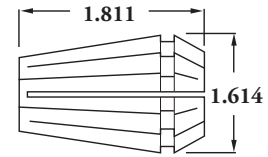
Part No.	Range	Part No.	Range
ER32-F125	.086-.125	ER32-F500	.461-.500
ER32-F187	.148-.187	ER32-F562	.523-.562
ER32-F250	.211-.250	ER32-F625	.586-.625
ER32-F281	.242-.281		
ER32-F312	.273-.312	ER32-F687	.648-.687
ER32-F375	.336-.375	ER32-F750	.711-.750
ER32-F437	.398-.437	ER32-11ST	SET

ER32 Series Tap Collets

(rigid with square drive)

Part No.	Tap Size	Shank Dia.	Square
ER32-P062	1/16", 1/8" Pipe	0.313	0.234
ER32-P125	1/8" Pipe	0.437	0.328
ER32-P250	1/4" Pipe	0.562	0.421
ER32-T008	No. 8	0.168	0.131
ER32-T010	No. 10	0.194	0.152
ER32-T012	No. 12	0.220	0.165
ER32-T250	1/4"	0.255	0.191
ER32-T312	5/16"	0.318	0.238
ER32-T375	3/8"	0.381	0.286
ER32-T437	7/16"	0.323	0.242
ER32-T500	1/2"	0.367	0.275
ER32-T562	9/16"	0.429	0.322
ER32-T625	5/8"	0.480	0.360
ER32-T687	11/16"	0.542	0.406
ER32-T750	3/4"	0.590	0.442
ER32-T812	13/16"	0.652	0.489

ER40



ER40 Series Metric Collets

Part No.	Range (inch)	Range(mm)
ER40-0400	.119 - .157	3.0 - 4.0
ER40-0500	.158 - .196	4.0 - 5.0
ER40-0600	.197 - .236	5.0 - 6.0
ER40-0700	.237 - .275	6.0 - 7.0
ER40-0800	.276 - .315	7.0 - 8.0
ER40-0900	.315 - .354	8.0 - 9.0
ER40-1000	.355 - .393	9.0 - 10.0
ER40-1100	.394 - .433	10.0 - 11.0
ER40-1200	.434 - .472	11.0 - 12.0
ER40-1300	.473 - .511	12.0 - 13.0
ER40-1400	.512 - .551	13.0 - 14.0
ER40-1500	.552 - .590	14.0 - 15.0
ER40-1600	.591 - .629	15.0 - 16.0
ER40-1700	.630 - .669	16.0 - 17.0
ER40-1800	.670 - .708	17.0 - 18.0
ER40-1900	.709 - .748	18.0 - 19.0
ER40-2000	.748 - .787	19.0 - 20.0
ER40-2100	.788 - .826	20.0 - 21.0
ER40-2200	.827 - .866	21.0 - 22.0
ER40-2300	.867 - .905	22.0 - 23.0
ER40-2400	.906 - .944	23.0 - 24.0
ER40-2500	.945 - .984	24.0 - 25.0
ER40-2600	.985 - 1.023	25.0 - 26.0
ER40-23ST	SET	SET

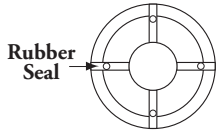
ER40 Series Fractional Collets

Part No.	Range	Part No.	Range
ER40-F125	.086 - .125	ER40-F625	.586 - .625
ER40-F187	.148 - .187	ER40-F687	.648 - .687
ER40-F250	.211 - .250	ER40-F750	.711 - .750
ER40-F312	.273 - .312	ER40-F812	.774 - .812
ER40-F375	.336 - .375	ER40-F875	.836 - .875
ER40-F437	.398 - .437	ER40-F937	.899 - .937
ER40-F500	.461 - .500	ER40-F100	.961 - 1.00
ER40-F562	.523 - .562	ER40-15ST	SET

ER40 Series Tap Collets (rigid with square drive)

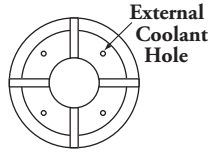
Part No.	Tap Size	Shank Dia.	Square
ER40-T250	1/4"	0.255	0.191
ER40-T312	5/16"	0.318	0.238
ER40-T375	3/8"	0.381	0.286
ER40-T437	7/16"	0.323	0.242
ER40-T500	1/2"	0.367	0.275
ER40-T562	9/16"	0.429	0.322
ER40-T625	5/8"	0.480	0.360
ER40-T687	11/16"	0.542	0.406
ER40-T750	3/4"	0.590	0.442
ER40-T812	13/16"	0.652	0.489
ER40-T875	7/8"	0.697	0.523
ER40-T937	15/16"	0.760	0.570
ER40-T100	1"	0.800	0.600

ER Collets: Sealed & External Coolant Metric & Fractional



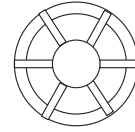
RUBBER SEALED COOLANT COLLET

Collapse: 0.005
Pressure: Maximum 600 psi



EXTERNAL COOLANT COLLETS

Collapse: 0.005
Pressure: Maximum 600 psi



STEEL SEALED COOLANT COLLETS

Collapse: 0.005
Pressure: Maximum 2000 psi

ER16 Metric Coolant Collets

Collets Rubber Sealed	External Coolant	Steel Sealed Coolant	Size (mm)
ER16-0300S	ER16-0300EC	ER16-0300SS	3.0
ER16-0400S	ER16-0400EC	ER16-0400SS	4.0
ER16-0500S	ER16-0500EC	ER16-0500SS	5.0
ER16-0600S	ER16-0600EC	ER16-0600SS	6.0
ER16-0700S	ER16-0700EC	ER16-0700SS	7.0
ER16-0800S	ER16-0800EC	ER16-0800SS	8.0
ER16-0900S	ER16-0900EC	ER16-0900SS	9.0
ER16-1000S	ER16-1000EC	ER16-1000SS	10.0
ER16-08STS	ER16-08STEC	-	SET

ER20 Metric Coolant Collets

Rubber Sealed Collets	External Coolant	Steel Sealed Coolant	Size (mm)
ER20-0300S	ER20-0300EC	-	3.0
ER20-0400S	ER20-0400EC	-	4.0
ER20-0500S	ER20-0500EC	-	5.0
ER20-0600S	ER20-0600EC	ER20-0600SS	6.0
ER20-0700S	ER20-0700EC	-	7.0
ER20-0800S	ER20-0800EC	-	8.0
ER20-0900S	ER20-0900EC	-	9.0
ER20-1000S	ER20-1000EC	-	10.0
ER20-1100S	ER20-1100EC	-	11.0
ER20-1200S	ER20-1200EC	-	12.0
ER20-1300S	ER20-1300EC	-	13.0
ER20-11STS	ER20-11STEC	-	SET

ER25 Metric Coolant Collets

Rubber Sealed Collets	External Coolant	Steel Sealed Coolant	Size (mm)
ER25-0300S	ER25-0300EC	ER25-0300SS	3.0
ER25-0400S	ER25-0400EC	ER25-0400SS	4.0
ER25-0500S	ER25-0500EC	ER25-0500SS	5.0
ER25-0600S	ER25-0600EC	ER25-0600SS	6.0
ER25-0700S	ER25-0700EC	ER25-0700SS	7.0
ER25-0800S	ER25-0800EC	ER25-0800SS	8.0
ER25-0900S	ER25-0900EC	ER25-0900SS	9.0
ER25-1000S	ER25-1000EC	ER25-1000SS	10.0
ER25-1100S	ER25-1100EC	ER25-1100SS	11.0
ER25-1200S	ER25-1200EC	ER25-1200SS	12.0
ER25-1300S	ER25-1300EC	ER25-1300SS	13.0
ER25-1400S	ER25-1400EC	ER25-1400SS	14.0
ER25-1500S	ER25-1500EC	ER25-1500SS	15.0
ER25-1600S	ER25-1600EC	ER25-1600SS	16.0
ER25-14STS	ER25-14STEC	ER25-14STSS	SET

ER16 Fractional Coolant Collets

Rubber Sealed Collets	External Coolant	Steel Sealed Coolant	Size (in)
ER16-F125S	ER16-F125EC	ER16-F125SS	0.125
ER16-F156S	ER16-F156EC	ER16-F156SS	0.156
ER16-F187S	ER16-F187EC	ER16-F187SS	0.187
ER16-F218S	ER16-F218EC	ER16-F218SS	0.218
ER16-F250S	ER16-F250EC	ER16-F250SS	0.250
ER16-F281S	ER16-F281EC	ER16-F281SS	0.281
ER16-F312S	ER16-F312EC	ER16-F312SS	0.312
ER16-F343S	ER16-F343EC	ER16-F343SS	0.343
ER16-F375S	ER16-F375EC	ER16-F375SS	0.375
ER16-09STS	ER16-9FSTEC	ER16-09STSS	SET

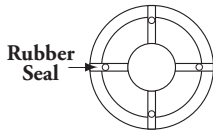
ER20 Fractional Coolant Collets

Rubber Sealed Collets	External Coolant	Steel Sealed Coolant	Size (in)
ER20-F125S	ER20-F125EC	-	0.125
ER20-F156S	ER20-F156EC	ER20-F156SS	0.156
ER20-F187S	ER20-F187EC	ER20-F187SS	0.187
ER20-F218S	ER20-F218EC	ER20-F218SS	0.218
ER20-F250S	ER20-F250EC	ER20-F250SS	0.250
ER20-F281S	ER20-F281EC	ER20-F281SS	0.281
ER20-F312S	ER20-F312EC	ER20-F312SS	0.312
ER20-F343S	ER20-F343EC	ER20-F343SS	0.343
ER20-F375S	ER20-F375EC	ER20-F375SS	0.375
ER20-F406S	ER20-F406EC	ER20-F406SS	0.406
ER20-F437S	ER20-F437EC	ER20-F437SS	0.437
ER20-F468S	ER20-F468EC	ER20-F468SS	0.468
ER20-F500S	ER20-F500EC	ER20-F500SS	0.500
ER20-13STS	ER20-13STEC	ER20-12STSS	SET

ER25 Fractional Coolant Collet

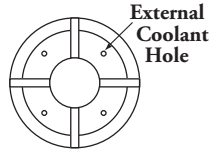
Rubber Sealed Collets	External Coolant	Steel Sealed Coolant	Size (in)
ER25-F125S	ER25-F125EC	-	0.125
ER25-F187S	ER25-F187EC	-	0.187
ER25-F250S	ER25-F250EC	ER25-F250SS	0.250
ER25-F312S	ER25-F312EC	ER25-F312SS	0.312
ER25-F375S	ER25-F375EC	ER25-F375SS	0.375
ER25-F437S	ER25-F437EC	ER25-F437SS	0.437
ER25-F500S	ER25-F500EC	ER25-F500SS	0.500
ER25-F562S	ER25-F562EC	ER25-F562SS	0.562
ER25-F625S	ER25-F625EC	ER25-F625SS	0.625
ER25-09STS	ER25-09STEC	ER25-07STSS	SET

ER Collets: Sealed & External Coolant Metric & Fractional



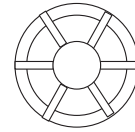
RUBBER SEALED COOLANT COLLET

Collapse: 0.005
Pressure: Maximum 600 psi



EXTERNAL COOLANT COLLETS

Collapse: 0.005
Pressure: Maximum 600 psi



STEEL SEALED COOLANT COLLETS

Collapse: 0.005
Pressure: Maximum 2000 psi

ER32 Metric Coolant Collets

Rubber Sealed Collets	External Coolant	Steel Sealed Coolant	Size (mm)
ER32-0400S	ER32-0400EC	ER32-0400SS	4.0
ER32-0500S	ER32-0500EC	ER32-0500SS	5.0
ER32-0600S	ER32-0600EC	ER32-0600SS	6.0
ER32-0700S	ER32-0700EC	ER32-0700SS	7.0
ER32-0800S	ER32-0800EC	ER32-0800SS	8.0
ER32-0900S	ER32-0900EC	ER32-0900SS	9.0
ER32-1000S	ER32-1000EC	ER32-1000SS	10.0
ER32-1100S	ER32-1100EC	ER32-1100SS	11.0
ER32-1200S	ER32-1200EC	ER32-1200SS	12.0
ER32-1300S	ER32-1300EC	ER32-1300SS	13.0
ER32-1400S	ER32-1400EC	ER32-1400SS	14.0
ER32-1500S	ER32-1500EC	ER32-1500SS	15.0
ER32-1600S	ER32-1600EC	ER32-1600SS	16.0
ER32-1700S	ER32-1700EC	-	17.0
ER32-1800S	ER32-1800EC	ER32-1800SS	18.0
ER32-1900S	ER32-1900EC	-	19.0
ER32-2000S	ER32-2000EC	ER32-2000SS	20.0
-	-	ER32-08STSS	SET
-	-	ER32-13STSS	SET
ER32-17STS	ER32-17STEC	-	SET

ER40 Metric Coolant Collets

Rubber Sealed Collets	External Coolant	Steel Sealed Coolant	Size (mm)
ER40-0400S	ER40-0400EC	-	4.0
ER40-0500S	ER40-0500EC	-	5.0
ER40-0600S	ER40-0600EC	-	6.0
ER40-0700S	ER40-0700EC	-	7.0
ER40-0800S	ER40-0800EC	-	8.0
ER40-0900S	ER40-0900EC	-	9.0
ER40-1000S	ER40-1000EC	-	10.0
ER40-1100S	ER40-1100EC	-	11.0
ER40-1200S	ER40-1200EC	-	12.0
ER40-1300S	ER40-1300EC	-	13.0
ER40-1400S	ER40-1400EC	-	14.0
ER40-1500S	ER40-1500EC	-	15.0
ER40-1600S	ER40-1600EC	-	16.0
ER40-1700S	ER40-1700EC	-	17.0
ER40-1800S	ER40-1800EC	-	18.0
ER40-1900S	ER40-1900EC	-	19.0
ER40-2000S	ER40-2000EC	-	20.0
ER40-2100S	ER40-2100EC	-	21.0
ER40-2200S	ER40-2200EC	-	22.0
ER40-2300S	ER40-2300EC	-	23.0
ER40-2400S	ER40-2400EC	-	24.0
ER40-2500S	ER40-2500EC	ER40-2500SS	25.0
ER40-2600S	ER40-2600EC	-	26.0
ER40-23STS	ER40-23STEC	-	SET

ER32 Fractional Coolant Collets

Rubber Sealed Collets	External Coolant	Steel Sealed Coolant	Size (in)
ER32-F125S	ER32-F125EC	-	0.125
ER32-F187S	ER32-F187EC	-	0.187
ER32-F250S	ER32-F250EC	ER32-F250SS	0.250
ER32-F281S	-	ER32-F281SS	0.281
ER32-F312S	ER32-F312EC	ER32-F312SS	0.312
ER32-F375S	ER32-F375EC	ER32-F375SS	0.375
ER32-F437S	ER32-F437EC	ER32-F437SS	0.437
ER32-F500S	ER32-F500EC	ER32-F500SS	0.500
ER32-F562S	ER32-F562EC	ER32-F562SS	0.562
ER32-F625S	ER32-F625EC	ER32-F625SS	0.625
ER31-F656S	-	ER32-F656SS	0.656
ER32-F687S	ER32-F687EC	ER32-F687SS	0.687
ER32-F750S	ER32-F750EC	ER32-F750SS	0.750
ER32-11STS	ER32-11STEC	ER32-09STSS	SET

ER40 Fractional Coolant Collets

Rubber Sealed Collets	External Coolant	Steel Sealed Coolant	Size (in)
ER40-F125S	ER40-F125EC	-	0.125
ER40-F187S	ER40-F187EC	-	0.187
ER40-F250S	ER40-F250EC	-	0.250
ER40-F312S	ER40-F312EC	-	0.312
ER40-F343S	-	-	0.343
ER40-F375S	ER40-F375EC	ER40-F375SS	0.375
ER40-F437S	ER40-F437EC	ER40-F437SS	0.437
ER40-F500S	ER40-F500EC	ER40-F500SS	0.500
ER40-F562S	ER40-F562EC	ER40-F562SS	0.562
ER40-F625S	ER40-F625EC	ER40-F625SS	0.625
ER40-F687S	ER40-F687EC	ER40-F687SS	0.687
ER40-F750S	ER40-F750EC	ER40-F750SS	0.750
ER40-F812S	ER40-F812EC	-	0.812
ER40-F875S	ER40-F875EC	ER40-F875SS	0.875
ER40-F937S	ER40-F937EC	-	0.937
ER40-F100S	ER40-F100EC	ER40-F100SS	1.000
ER40-15STS	ER40-15STEC	ER40-09STSS	SET

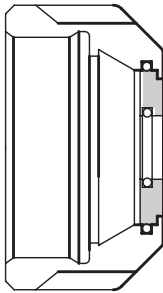
COLLET CHUCKS & ACCESSORIES

Front Coolant Seal Disks & Nosepieces

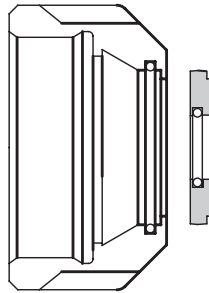
Front Coolant Seals & Nosepieces

- Available for all standard ER Micro Precision® Collets including Tap Collets.

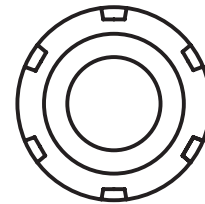
- Requires coolant seal nosepiece (listed below).
- Does not affect collet collapse range.
- **NOTE:** Maximum 1500 psi



Side View:
Assembled Nosepiece with Front Disk Seal
(Sold Separately)



Side View:
Nosepiece & Front Disk Seal



Front View:
Front Disk Seal

Part No.	Description	Diameter (D)	Part No.	Description	Diameter (D)
XGCN-C016	ER16 Coolant Collet Nosepiece	1.25	XGCN-C025	ER25 Coolant Collet Nosepiece	1.63
XGCN-C020	ER20 Coolant Collet Nosepiece	1.38			

ER16 Seal Disks

Part No.	Size (mm)
CSD16-0350	3.5
CSD16-0400	4.0
CSD16-0450	4.5
CSD16-0500	5.0
CSD16-0550	5.5
CSD16-0600	6.0
CSD16-0650	6.5
CSD16-0700	7.0
CSD16-0750	7.5
CSD16-0800	8.0
CSD16-0850	8.5
CSD16-0900	9.0
CSD16-0950	9.5
CSD16-1000	10.0

ER20 Seal Disks

Part No.	Size (mm)
CSD20-0350	3.5
CSD20-0400	4.0
CSD20-0450	4.5
CSD20-0500	5.0
CSD20-0550	5.5
CSD20-0600	6.0
CSD20-0650	6.5
CSD20-0700	7.0
CSD20-0750	7.5
CSD20-0800	8.0
CSD20-0850	8.5
CSD20-0900	9.0
CSD20-0950	9.5
CSD20-1000	10.0
CSD20-1050	10.5
CSD20-1100	11.0
CSD20-1150	11.5
CSD20-1200	12.0
CSD20-1250	12.5
CSD20-1300	13.0

ER25 Seal Disks

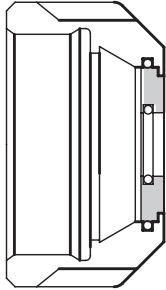
Part No.	Size (mm)
CSD25-0350	3.5
CSD25-0400	4.0
CSD25-0450	4.5
CSD25-0500	5.0
CSD25-0550	5.5
CSD25-0600	6.0
CSD25-0650	6.5
CSD25-0700	7.0
CSD25-0750	7.5
CSD25-0800	8.0
CSD25-0850	8.5
CSD25-0900	9.0
CSD25-0950	9.5
CSD25-1000	10.0
CSD25-1050	10.5
CSD25-1100	11.0
CSD25-1150	11.5
CSD25-1200	12.0

ER25 Seal Disks

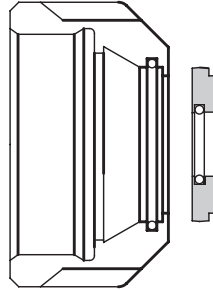
Part No.	Size (mm)
CSD25-1250	12.5
CSD25-1300	13.0
CSD25-1350	13.5
CSD25-1400	14.0
CSD25-1450	14.5
CSD25-1500	15.0
CSD25-1550	15.5
CSD25-1600	16.0



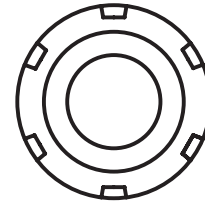
Front Coolant Seal Disks & Nosepieces



Side View:
Assembled Nosepiece with
Front Disk Seal



Side View:
Nosepiece & Front
Disk Seal



Front View:
Front Disk Seal

Part No.	Description	Diameter (D)	Part No.	Description	Diameter (D)
XGCN-C032	ER32 Coolant Collet Nosepiece	1.93	XGCN-C040	ER40 Coolant Collet Nosepiece	2.48

ER32 Seal Disks

Part No.	Size (mm)
CSD32-0350	3.5
CSD32-0400	4.0
CSD32-0450	4.5
CSD32-0500	5.0
CSD32-0550	5.5
CSD32-0600	6.0
CSD32-0650	6.5
CSD32-0700	7.0
CSD32-0750	7.5
CSD32-0800	8.0
CSD32-0850	8.5
CSD32-0900	9.0
CSD32-0950	9.5
CSD32-1000	10.0
CSD32-1050	10.5
CSD32-1100	11.0
CSD32-1150	11.5
CSD32-1200	12.0
CSD32-1250	12.5
CSD32-1300	13.0
CSD32-1350	13.5
CSD32-1400	14.0
CSD32-1450	14.5

ER32 Seal Disks

Part No.	Size (mm)
CSD32-1500	15.0
CSD32-1550	15.5
CSD32-1600	16.0
CSD32-1650	16.5
CSD32-1700	17.0
CSD32-1750	17.5
CSD32-1800	18.0
CSD32-1850	18.5
CSD32-1900	19.0
CSD32-1950	19.5
CSD32-2000	20.0
CSD32-2050	20.5
CSD32-2100	21.0



ER40 Seal Disks

Part No.	Size (mm)
CSD40-0350	3.5
CSD40-0400	4.0
CSD40-0450	4.5
CSD40-0500	5.0
CSD40-0550	5.5
CSD40-0600	6.0
CSD40-0650	6.5
CSD40-0700	7.0
CSD40-0750	7.5
CSD40-0800	8.0
CSD40-0850	8.5
CSD40-0900	9.0
CSD40-0950	9.5
CSD40-1000	10.0
CSD40-1050	10.5
CSD40-1100	11.0
CSD40-1150	11.5
CSD40-1200	12.0
CSD40-1250	12.5
CSD40-1300	13.0
CSD40-1350	13.5
CSD40-1400	14.0
CSD40-1450	14.5

ER40 Seal Disks

Part No.	Size (mm)
CSD40-1500	15.0
CSD40-1550	15.5
CSD40-1600	16.0
CSD40-1650	16.5
CSD40-1700	17.0
CSD40-1750	17.5
CSD40-1800	18.0
CSD40-1850	18.5
CSD40-1900	19.0
CSD40-1950	19.5
CSD40-2000	20.0
CSD40-2050	20.5
CSD40-2100	21.0
CSD40-2150	21.5
CSD40-2200	22.0
CSD40-2250	22.5
CSD40-2300	23.0
CSD40-2350	23.5
CSD40-2400	24.0
CSD40-2450	24.5
CSD40-2500	25.0
CSD40-2550	25.5
CSD40-2600	26.0



CNC Toolholding Systems

XT Precision® Collet System

Latest High Performance Collet Technology

Tired of Excessive Runout?

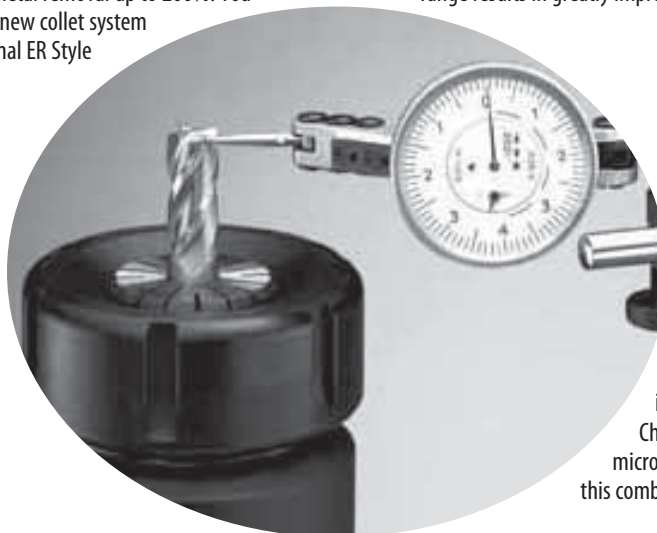
XT Precision®, the latest high performance collet system from Command Tooling Systems, features outstanding accuracy and gripping pressure at any speed. The extreme accuracy and gripping pressure ensures precise tool centering and rigidity — tools last longer and cut more accurately. This balanced chip-cutting feature increases metal removal up to 200%. You can double toolholder accuracy with this new collet system while using existing inventory of traditional ER Style Collet Chucks.

XT Precision® Accuracy

Significant improvements in TIR will result with the XT Precision® Collet System. Design ensures precise tool centering, rigidity, and tools last longer and cut more accurately at any speed. Ideal for long run repeatability on CNC milling, drilling, and reaming operations.

XT Precision® Grip

Equipped with XT Precision® Collets, the toolholder easily takes the thrust of drilling and reaming as well as milling. Single angle collet chuck design efficiently transfers torque on the compression nose piece into gripping force on the tool. Improved gripping pressure throughout the entire collapse range results in greatly improved tool life.



XT Precision® Performance Guaranteed

Optimal performance of the XT Precision® Collet System results when XT Precision® Collets are used in conjunction with XT Precision® Collet Chucks. Runout of <.0002 (.005 mm or 5 microns) at the collet face is guaranteed with this combination of new XT Precision® Products.

Full Range of XT Precision® Products Available BT-Flange, V-Flange, and HSK

Notes

- Black oxide complete on toolholders, page A-2.
- High speed balance options, page A-6.
- Through-spindle coolant standard. Other coolant options, page A-12.
- XT Precision® collets: metric & fractional, pages B-43 & B-44.
- Blue Chip™ Coolant Containment System, page C-55.
- Collet chuck nosepiece torque values & wrenches, page A-11.
- Retention Knobs, pages D-76 & D-77.
- HSK Accessories & Setup Holding Fixtures, page D-79.
- HSK coolant hole plugs and coolant tubes sold separately, see page D-79.

XT Precision® XT11 Collet Chucks & Accessories



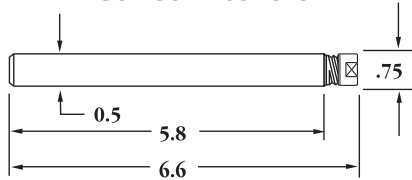
XT11 Toolholders

- Made to precise specifications for tool shank sizes .020-.275" (.50-7.00 mm).
- Small diameter nose, well suited for working in close quarters.
- Increased flexibility for milling, drilling, and reaming.

- **IMPORTANT:** Maximum recommended torque is listed on page A-11. Do not overtighten nose assembly.
- **NOTE:** No room for stop screws on XT11 holders.

REPLACEMENT PARTS & ACCESSORIES

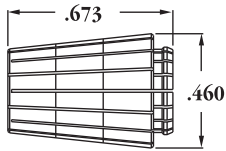
Straight Shank XT11 Collet Extension



Part No.

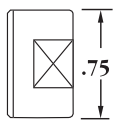
ERCE-0011-ZX
(Coolant through)

XT11 Collets



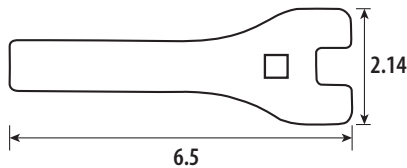
XT Precision® collets: metric & fractional, pages B-43 & B-44.

Replacement Nosepiece Assembly & Wrench



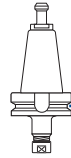
Standard Style Part No.

XCNA-T011
(17 mm across flats)
(M13 x .75)



Part No.

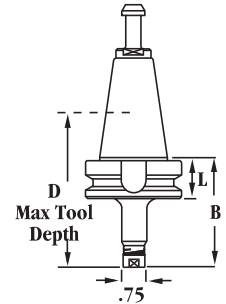
XCCW-T011
(3/8" Square in handle)



Standard

Taper	Part No.	B	D	L
BT 30	B2C4-0011-ZX	2.97	3.4	0.87
BT 35	B3C4-0011-ZX	2.97	3.8	0.87
BT 40	B4C4-0011-ZX	2.97	4.0	1.06

BT-Flange



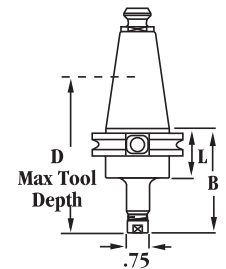
Stub

Taper	Part No.	B	D	L
V 40	C4C3-0011-ZX	1.97	3.3	N/A

Standard

Taper	Part No.	B	D	L
V 40	C4C4-0011-ZX	2.97	4.2	1.38

V-Flange



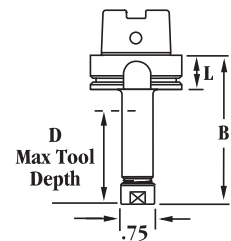
Stub

Taper	Part No.	B	D	L
HSK40A	H2C3A0011-ZX	2.33	1.2	0.79
HSK40E	H2C3E0011-ZX	2.33	1.2	0.79
HSK63A	H4C3A0011-ZX	1.97	0.9	1.02
HSK63F	H4C3F0011-ZX	1.97	1.0	1.02

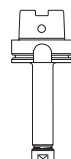
Standard

Taper	Part No.	B	D	L
HSK40A	H2C4A0011-ZX	3.91	1.5	0.79
HSK63A	H4C4A0011-ZX	3.97	2.9	1.02
HSK63F	H4C4F0011-ZX	3.97	3.0	1.02

HSK



(HSK Form A Illustrated)

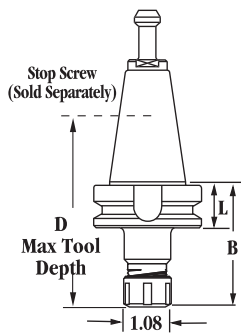


Extended

Taper	Part No.	B	D	L
HSK40A	H2C5A0011-ZX	6.27	1.5	0.79

COLLET CHUCKS & ACCESSORIES

BT-Flange

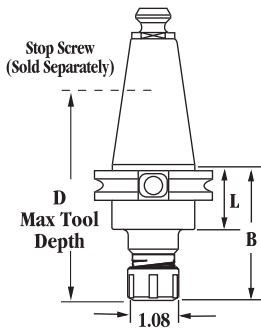


Stub					
Taper	Part No.	B	D	L	
BT 30	B2C3-0016-ZX	1.86	1.9	0.87	
Standard					
Taper	Part No.	B	D	L	
BT 30	B2C4-0016-ZX	2.74	2.9	0.87	
BT 35	B3C4-0016-ZX	2.74	2.9	0.87	
BT 40	B4C4-0016-ZX	2.74	2.9	1.06	
BT 45	B5C4-0016-ZX	3.74	2.9	1.31	
BT 50	B6C4-0016-ZX	4.74	2.9	1.50	



Extended					
Taper	Part No.	B	D	L	
BT 35	B3C5-0016-ZX	4.74	2.9	0.87	
BT 40	B4C5-0016-ZX	4.74	2.9	1.06	

V-Flange

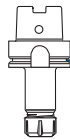
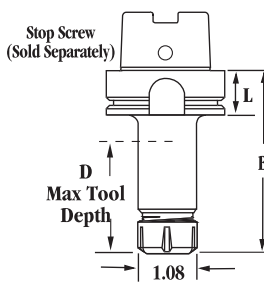


Stub					
Taper	Part No.	B	D	L	
V 40	C4C3-0016-ZX	1.97	2.3	N/A	
Standard					
Taper	Part No.	B	D	L	
V 30	C2C4-0016-ZX	2.86	2.6	1.38	
V 40	C4C4-0016-ZX	2.74	2.9	1.38	
V 45	C5C4-0016-ZX	3.74	2.9	1.38	
V 50	C6C4-0016-ZX	4.74	2.9	1.38	



Extended					
Taper	Part No.	B	D	L	
V 40	C4C5-0016-ZX	4.74	2.9	1.38	
V 50	C6C5-0016-ZX	6.74	2.9	1.38	

HSK



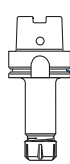
Stub					
Taper	Part No.	B	D	L	
HSK40A	H2C3A0016-ZX	2.33	1.0	0.79	
HSK40E	H2C3E0016-ZX	2.36	1.0	0.79	
HSK63A	H4C3A0016-ZX	2.36	1.1	1.02	
HSK63F	H4C3F0016-ZX	2.36	1.1	1.02	
HSK100A	H6C3A0016-ZX	2.36	0.8	1.14	



Extended					
Taper	Part No.	B	D	L	
HSK40A	H2C5A0016-ZX	6.27	2.9	0.79	
HSK40E	H2C5E0016-ZX	6.27	2.9	0.79	
HSK63A	H4C5A0016-ZX	6.36	2.9	1.02	
HSK100A	H6C5A0016-ZX	4.36	2.8	1.14	

No room for stop screws on HSK stub length holders

(HSK Form A Illustrated)



Standard					
Taper	Part No.	B	D	L	
HSK40A	H2C4A0016-ZX	3.91	2.2	0.79	
HSK40E	H2C4E0016-ZX	3.91	2.2	0.79	
HSK63A	H4C4A0016-ZX	4.36	1.9	1.02	
HSK63F	H4C4F0016-ZX	4.36	2.1	1.02	
HSK100A	H6C4A0016-ZX	4.36	2.8	1.14	

XT Precision® XT16 Replacement Parts & Accessories



XT16 Toolholders

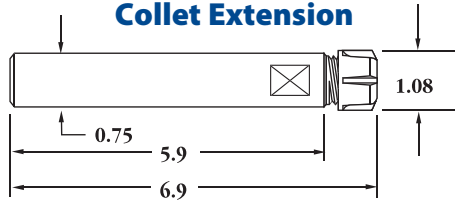
- Made to precise specifications for tool shank sizes .0295-.3937" (0.75-10.00 mm).
- Small diameter nose, well suited for working in close quarters.
- Increased flexibility for milling, drilling, and reaming.
- **IMPORTANT:** Maximum recommended torque is listed on page A-11. Do not overtighten nose assembly.

XT Precision® Collet System Benefits:

- Performance guaranteed with a combination of XT Precision® Collets & Chucks; Assembled concentricity of <.0002 (.005 mm or 5 microns) at the collet face.
- Improved gripping pressure throughout the entire collet collapse range with XT Precision® Collets.
- Less tool wear and replacement — less scrap.
- Precision closure nosepiece — generates accurate, rigid grip on tool.
- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Fully ground flange and V-groove — easy on tool changers for less spindle and changer maintenance.

Replacement Parts & Accessories

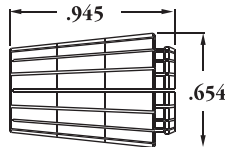
Straight Shank XT16 Collet Extension



Part No.

ERCE-0016-ZX
(Coolant through)

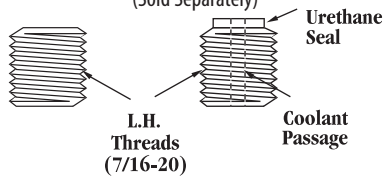
XT16 Series Collets



XT Precision® collets: metric & fractional,
pages B-43 & B-44.

Stop Screws

(Sold Separately)



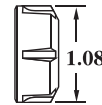
Part No.

XCCW-0720

**Double-Ended
Part No.**

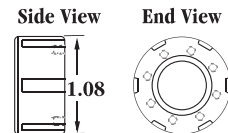
XCCW-D016
(3/8" Square in handle)

Replacement Nosepiece Assemblies & Wrench



**Standard Balance
Part No.**

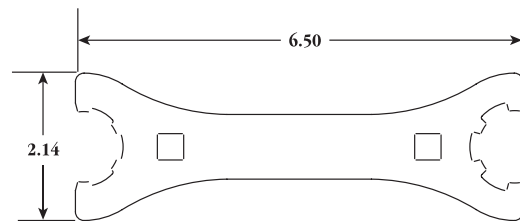
XCNA-T016
(M22 x 1.5)



**Fine Tune™
Part No.**

XCNA-TT16
(M22 x 1.5)
(Includes balance screws)

Wrench



**Double-Ended
Part No.**

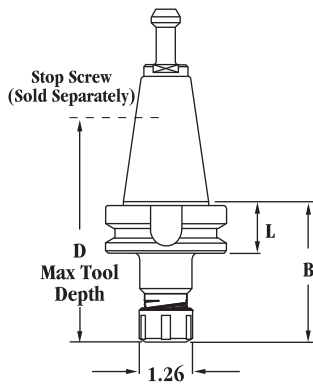
XCCW-D016
(3/8" Square in handle)

COLLET CHUCKS & ACCESSORIES

Notes

- Black oxide complete on toolholders, page A-2.
- High speed balance options, page A-6.
- Through-spindle coolant standard. Other coolant options, page A-12.
- XT Precision® collets: metric & fractional, pages B-43 & B-44.
- Blue Chip™ Coolant Containment System, page C-55.
- Collet chuck nosepiece torque values & wrenches, page A-11.
- Retention Knobs, pages D-76 & D-77.
- HSK Accessories & Setup Holding Fixtures, page D-79.
- HSK coolant hole plugs and coolant tubes sold separately, see page D-79.

BT-Flange



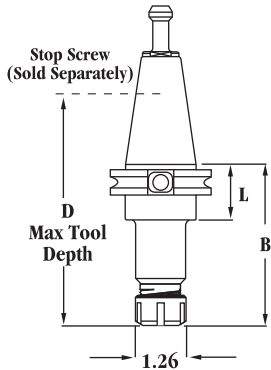
		Stub			
Taper	Part No.	B	D	L	
BT 30	B2C3-0020-ZX	1.85	1.8	0.87	
BT 40	B4C3-0020-ZX	2.05	2.3	1.06	

		Standard			
Taper	Part No.	B	D	L	
BT 30	B2C4-0020-ZX	2.85	2.7	0.87	
BT 35	B3C4-0020-ZX	2.85	3.1	0.87	
BT 40	B4C4-0020-ZX	3.85	3.3	1.06	
BT 45	B5C4-0020-ZX	3.85	3.3	1.31	
BT 50	B6C4-0020-ZX	3.85	3.3	1.50	

		Extended			
Taper	Part No.	B	D	L	
BT 35	B3C5-0020-ZX	4.85	3.3	0.87	
BT 40	B4C5-0020-ZX	5.85	3.3	1.06	

		R&R™ (Reach & Rigidity)			
Taper	Part No.	B	D	L	
BT 40	B4K5-0020-ZX	5.85	3.3	1.06	

V-Flange



		Stub			
Taper	Part No.	B	D	L	
V 40	C4C3-0020-ZX	2.40	2.7	1.38	

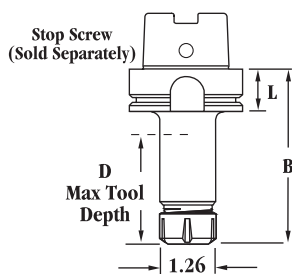
		Standard			
Taper	Part No.	B	D	L	
V 30	C2C4-0020-ZX	2.85	2.8	N/A	
V 40	C4C4-0020-ZX	3.85	3.3	1.38	
V 45	C5C4-0020-ZX	3.85	3.3	1.38	
V 50	C6C4-0020-ZX	3.85	3.3	1.38	

		Extended			
Taper	Part No.	B	D	L	
V 40	C4C5-0020-ZX	5.85	3.3	1.38	
V 50	C6C5-0020-ZX	5.85	3.3	1.38	

		Extra Extended			
Taper	Part No.	B	D	L	
V 40	C4C6-0020-ZX	7.85	3.3	1.38	
V 50	C6C6-0020-ZX	7.85	3.3	1.38	

		R&R™ (Reach & Rigidity)			
Taper	Part No.	B	D	L	
V 40	C4K5-0020-ZX	5.85	3.3	1.38	
V 50	C6K5-0020-ZX	5.85	3.3	1.38	
V 50	C6K6-0020-ZX	7.85	3.3	1.38	

HSK



(HSK Form A Illustrated)

		Stub			
Taper	Part No.	B	D	L	
HSK40A	H2C3A0020-ZX	2.33	1.1	0.79	
HSK40E	H2C3E0020-ZX	2.33	1.1	0.79	
HSK63A	H4C3A0020-ZX	2.60	1.2	1.02	
HSK63F	H4C3F0020-ZX	2.60	1.3	1.02	
HSK100A	H6C3A0020-ZX	2.85	1.2	1.14	

		Standard			
Taper	Part No.	B	D	L	
HSK40A	H2C4A0020-ZX	3.91	2.0	0.79	
HSK40E	H2C4E0020-ZX	3.91	2.0	0.79	
HSK63A	H4C4A0020-ZX	4.60	2.3	1.02	
HSK63F	H4C4F0020-ZX	4.60	2.3	1.02	
HSK100A	H6C4A0020-ZX	4.85	2.2	1.14	

		Extended			
Taper	Part No.	B	D	L	
HSK40A	H2C5A0020-ZX	6.27	3.4	0.79	
HSK40E	H2C5E0020-ZX	6.27	3.4	0.79	
HSK63A	H4C5A0020-ZX	6.60	3.3	1.02	
HSK63F	H4C5F0020-ZX	6.60	4.3	1.02	
HSK100A	H6C5A0020-ZX	6.85	3.3	1.14	

No room for stop screws on HSK stub length holders.

XT Precision® XT20 Replacement Parts & Accessories



XT20 Toolholders

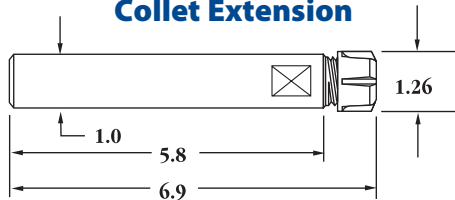
- Made to precise specifications for tool shank sizes .0689-.5118" (1.75-13.00 mm).
- Small diameter nose well suited for working in close quarters.
- Increased flexibility for milling, drilling, and reaming.
- **IMPORTANT:** Maximum recommended torque is listed on page A-11. Do not overtighten nose assembly.

XT Precision® Collet System Benefits:

- Performance guaranteed with a combination of XT Precision® Collets and Chucks; Assembled concentricity of <.0002 (.005mm or 5 microns) at the collet face.
- Improved gripping pressure throughout the entire collet collapse range with XT Precision® Collets.
- Less tool wear and replacement — less scrap.
- Precision closure nosepiece — generates accurate, rigid grip on tool.
- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Fully ground flange and V-groove — easy on tool changers for less spindle and changer maintenance.

Replacement Parts & Accessories

Straight Shank XT20 Collet Extension

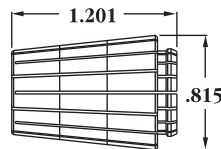


Part No.

ERCE-0020-ZX
(Coolant through)

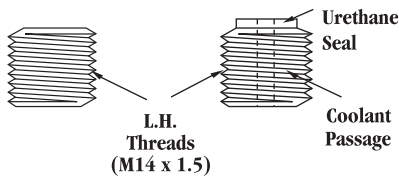
XT20 Series Collet

XT Precision® collets: metric & fractional, pages B-43 & B-44.



Stop Screws

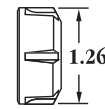
(Sold Separately)



Part No.
XCCS-1415

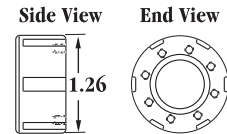
Part No.
XCCS-1415-C

Replacement Nosepiece Assemblies & Wrench



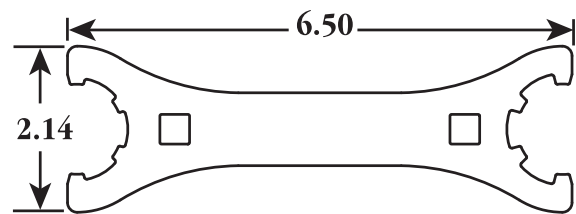
Standard Balance
Part No.

XCNA-T020
(M25 x 1.5)



Fine Tune™
Part No.

XCNA-TT20
(M25 x 1.5)
(Includes balance screws)



Part No.

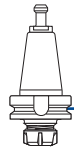
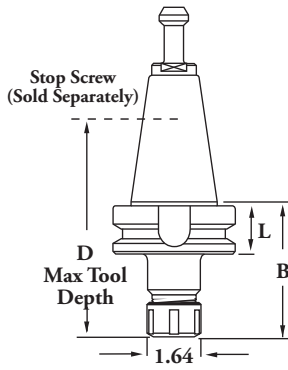
XCCW-D020
(3/8" Square in handle)

COLLET CHUCKS & ACCESSORIES

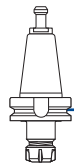
Notes

- Black oxide complete on toolholders, page A-2.
- High speed balance options, page A-6.
- Through-spindle coolant standard. Other coolant options, page A-12.
- XT Precision® collets: metric & fractional, pages B-43 & B-44.
- Blue Chip™ Coolant Containment System, page C-55.
- Collet chuck nosepiece torque values & wrenches, page A-11.
- Retention Knobs, pages D-76 & D-77.
- HSK Accessories & Setup Holding Fixtures, page D-79.
- HSK coolant hole plugs and coolant tubes sold separately, see page D-79.

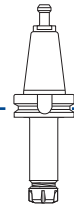
BT-Flange



Stub					
Taper	Part No.	B	D	L	
BT 40	B4C3-0025-ZX	2.32	2.6	1.06	

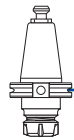
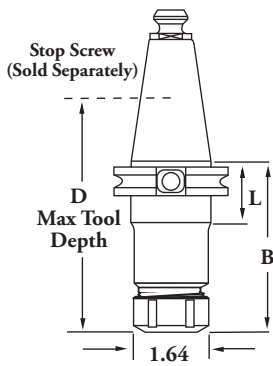


Standard					
Taper	Part No.	B	D	L	
BT 40	B4C4-0025-ZX	3.82	3.3	1.06	

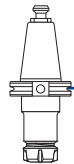


Extended					
Taper	Part No.	B	D	L	
BT 40	B4C5-0025-ZX	5.82	3.3	1.06	

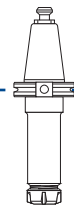
V-Flange



Stub					
Taper	Part No.	B	D	L	
V 40	C4C3-0025-ZX	2.32	2.8	1.08	

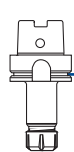
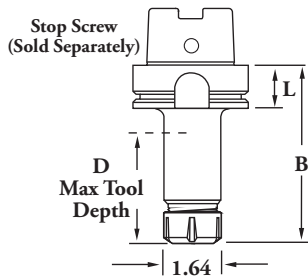


Standard					
Taper	Part No.	B	D	L	
V 40	C4C4-0025-ZX	3.82	3.3	1.38	
V 50	C6C4-0025-ZX	3.82	3.3	1.38	



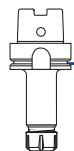
Extended					
Taper	Part No.	B	D	L	
V 40	C4C5-0025-ZX	5.82	3.3	1.38	
V 50	C6C5-0025-ZX	5.82	3.3	1.38	

HSK



Stub					
Taper	Part No.	B	D	L	
HSK63A	H4C3A0025-ZX	2.82	1.5	1.02	
HSK100A	H6C3A0025-ZX	3.07	1.5	1.14	

No room for stop screws on HSK stub length holders.



Standard					
Taper	Part No.	B	D	L	
HSK63A	H4C4A0025-ZX	4.82	2.6	1.02	
HSK100A	H6C4A0025-ZX	5.07	2.4	1.14	



Extended					
Taper	Part No.	B	D	L	
HSK63A	H4C5A0025-ZX	6.82	3.3	1.02	
HSK100A	H6C5A0025-ZX	7.07	3.3	1.14	

XT25 Toolholders

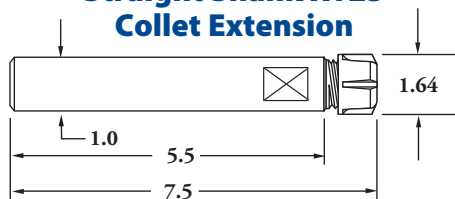
- Made to precise specifications for tool shank sizes .0984-.6299" (2.50-16.00 mm).
- Increased flexibility for milling, drilling, and reaming.
- **IMPORTANT:** Maximum recommended torque is listed on page A-11. Do not overtighten nose assembly.

XT Precision® Collet System Benefits:

- Performance guaranteed with a combination of XT Precision® Collets and Chucks; Assembled concentricity of <.0002 (.005 mm or 5 microns) at the collet face.
- Improved gripping pressure throughout the entire collet collapse range with XT Precision® Collets.
- Less tool wear and replacement — less scrap.
- Precision closure nosepiece — generates accurate, rigid grip on tool.
- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Fully ground flange and V-groove — easy on tool changers for less spindle and changer maintenance.

Replacement Parts & Accessories

Straight Shank XT25 Collet Extension

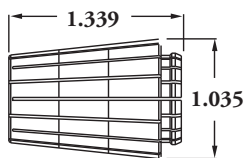


Part No.

ERCE-0025-ZX
(Coolant through)

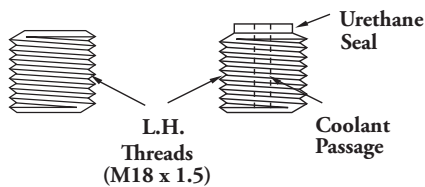
XT25 Series Collets

XT Precision® collets: metric & fractional, pages B-43 & B-44.



Stop Screws

(Sold Separately)



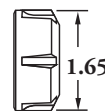
Part No.

XCCS-1815

Part No.

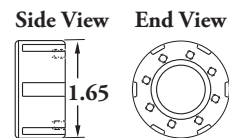
XCCS-1815-C

Replacement Nosepiece Assemblies & Wrench



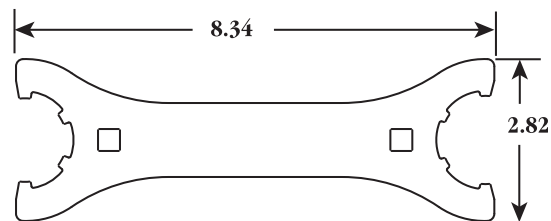
**Standard Balance
Part No.**

XCNA-T025
(M32 x 1.5)



**Fine Tune™
Part No.**

XCNA-TT25
(M32 x 1.5)
(Includes balance screws)



Wrench

**Double Ended
Part No.**

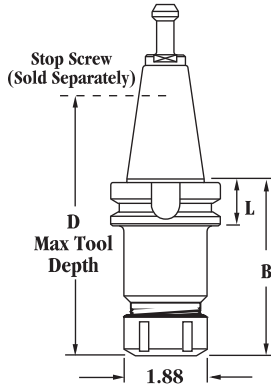
XCCW-D025
(3/8" Square in handle)

Notes

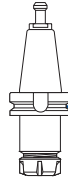
- Black oxide complete on toolholders, page A-2.
- High speed balance options, page A-6.
- Through-spindle coolant standard. Other coolant options, page A-12.
- XT Precision® collets: metric & fractional, pages B-43 & B-44.
- Blue Chip™ Coolant Containment System, page C-55.
- Collet chuck nosepiece torque values & wrenches, page A-11.
- Retention Knobs, pages D-76 & D-77.
- HSK Accessories & Setup Holding Fixtures, page D-79.
- HSK coolant hole plugs and coolant tubes sold separately, see page D-79.

XT Precision® XT32 Collet Chucks

BT-Flange



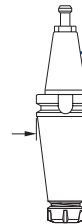
Stub					
Taper	Part No.	B	D	L	
BT 30	B2C3-0032-ZX	2.05	2.0	0.87	
BT 40	B4C3-0032-ZX	2.30	2.6	1.06	



Standard					
Taper	Part No.	B	D	L	
BT 30	B2C4-0032-ZX	2.90	2.4	.87	
BT 35	B3C4-0032-ZX	2.90	2.7	.87	
BT 40	B4C4-0032-ZX	3.90	3.9	1.06	
BT 45	B5C4-0032-ZX	3.90	3.9	1.31	
BT 50	B6C4-0032-ZX	3.90	3.9	1.50	

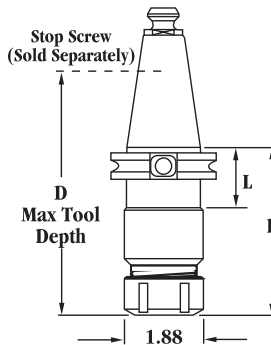


Extended					
Taper	Part No.	B	D	L	
BT 35	B3C5-0032-ZX	4.90	3.9	0.87	
BT 40	B4C5-0032-ZX	5.90	3.9	1.06	

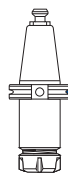


R&R™ (Reach & Rigidity)					
Taper	Part No.	B	D	L	
BT 40	B4K5-0032-ZX	5.90	3.9	1.06	

V-Flange



Stub					
Taper	Part No.	B	D	L	
V 40	C4C3-0032-ZX	2.60	3.2	1.38	



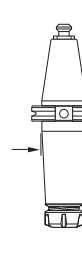
Standard					
Taper	Part No.	B	D	L	
V 30	C2C4-0032-ZX	2.90	2.4	1.44	
V 40	C4C4-0032-ZX	3.90	3.9	1.44	
V 45	C5C4-0032-ZX	3.90	3.9	1.38	
V 50	C6C4-0032-ZX	3.90	3.9	1.38	



Extended					
Taper	Part No.	B	D	L	
V 40	C4C5-0032-ZX	5.90	3.9	1.38	
V 50	C6C5-0032-ZX	5.90	3.9	1.38	

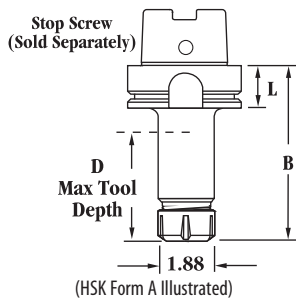


Extra Extended					
Taper	Part No.	B	D	L	
V 40	C4C6-0032-ZX	7.97	3.8	1.38	
V 50	C6C6-0032-ZX	7.90	3.9	1.38	



R&R™ (Reach & Rigidity)					
Taper	Part No.	B	D	L	
V 50	C6K5-0032-ZX	5.90	3.9	1.38	
V 50	C6K6-0032-ZX	7.90	3.9	1.38	

HSK

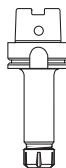


Stub					
Taper	Part No.	B	D	L	
HSK63A	H4C3A0032-ZX	3.15	1.7	1.02	
HSK63F	H4C3F0032-ZX	3.15	1.8	1.02	
HSK100A	H6C3A0032-ZX	3.28	1.7	1.14	

No room for stop screws on HSK stub length holders.



Standard					
Taper	Part No.	B	D	L	
HSK63A	H4C4A0032-ZX	5.15	2.7	1.02	
HSK63F	H4C4F0032-ZX	5.15	3.0	1.02	
HSK100A	H6C4A0032-ZX	5.28	2.8	1.14	



Extended					
Taper	Part No.	B	D	L	
HSK63A	H4C5A0032-ZX	7.15	3.9	1.02	
HSK100A	H6C5A0032-ZX	7.28	3.9	1.14	

XT Precision® XT32 Replacement Parts & Accessories



XT32 Toolholders

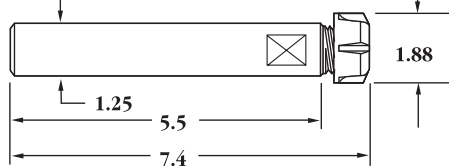
- Made to precise specifications for tool shank sizes .0984-.7874" (2.50-20.00 mm).
- Increased flexibility for milling, drilling, and reaming.
- **IMPORTANT:** Maximum recommended torque is listed on page A-11. Do not overtighten nose assembly.

XT Precision® Collet System Benefits:

- Performance guaranteed with a combination of XT Precision® Collets and Chucks; Assembled concentricity of <.0002 (.005mm or 5 microns) at the collet face.
- Improved gripping pressure throughout the entire collet collapse range with XT Precision® Collets.
- Less tool wear and replacement — less scrap.
- Precision closure nosepiece — generates accurate, rigid grip on tool.
- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Fully ground flange and V-groove — easy on tool changers for less spindle and changer maintenance.

Replacement Parts & Accessories

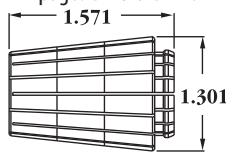
Straight Shank XT32 Collet Extension



Part No.
ERCE-0032-ZK
(Coolant through)

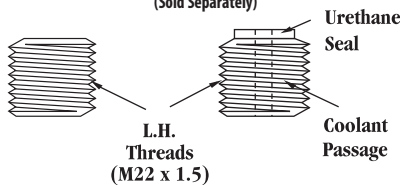
XT32 Series Collet

XT Precision® collets: metric & fractional, pages B-43 & B-44.



Stop Screws

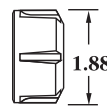
(Sold Separately)



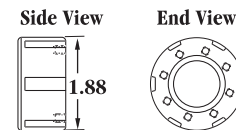
Part No.
XCCS-2215

Part No.
XCCS-2215-C

Replacement Nosepiece Assemblies & Wrench

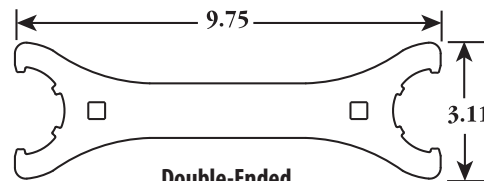


Standard Balance
Part No.
XCNA-T032
(M40 x 1.5)



Fine Tune™
Part No.
XCNA-TT32
(M40 x 1.5)
(Includes balance screws)

Wrench



Double-Ended
Part No.
XCCW-D032
(3/8" Square in handle)

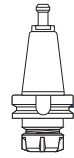
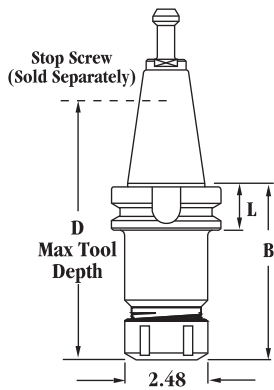
R&R™ (Reach & Rigidity)
Collet Chucks Available!

COLLET CHUCKS & ACCESSORIES

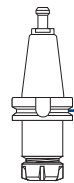
Notes

- Black oxide complete on toolholders, page A-2.
- High speed balance options, page A-6.
- Through-spindle coolant standard. Other coolant options, page A-12.
- XT Precision® collets: metric & fractional, pages B-43 & B-44.
- Blue Chip™ Coolant Containment System, page C-55.
- Collet chuck nosepiece torque values & wrenches, page A-11.
- Retention Knobs, pages D-76 & D-77.
- HSK Accessories & Setup Holding Fixtures, page D-79.
- HSK coolant hole plugs and coolant tubes sold separately, see page D-79.

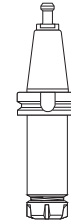
BT-Flange



Stub					
Taper	Part No.	B	D	L	
BT 40	B4C3-0040-ZX	2.63	1.4	1.06	

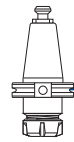
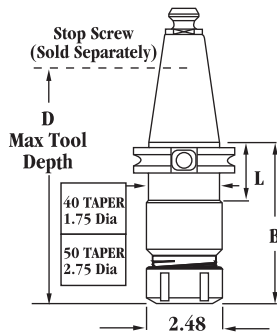


Standard					
Taper	Part No.	B	D	L	
BT 40	B4C4-0040-ZX	3.88	2.5	1.06	
BT 50	B6C4-0040-ZX	3.88	3.9	1.50	

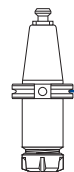


Extended					
Taper	Part No.	B	D	L	
BT 40	B4C5-0040-ZX	5.88	4.9	1.06	

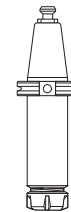
V-Flange



Stub					
Taper	Part No.	B	D	L	
V 40	C4C3-0040-ZX	2.88	2.1	1.44	

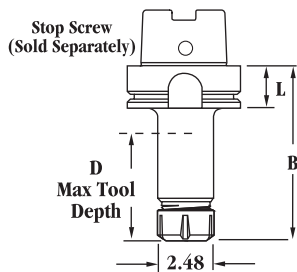


Standard					
Taper	Part No.	B	D	L	
V 40	C4C4-0040-ZX	3.88	3.1	1.44	
V 50	C6C4-0040-ZX	3.88	3.9	1.38	



Extended					
Taper	Part No.	B	D	L	
V 40	C4C5-0040-ZX	5.88	4.9	1.44	
V 50	C6C5-0040-ZX	5.88	4.9	1.38	

HSK

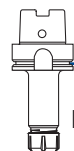


(HSK Form A Illustrated)



Stub					
Taper	Part No.	B	D	L	
HSK63A	H4C3A0040-ZX	3.03	1.6	1.02	

No room for stop screws on HSK stub length holders.



Standard					
Taper	Part No.	B	D	L	
HSK63A	H4C4A0040-ZX	4.60	2.4	1.02	
HSK100A	H6C4A0040-ZX	4.60	2.5	1.14	

XT40 Toolholders

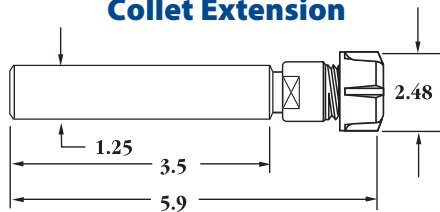
- Made to precise specifications for tool shank sizes .1181-1.0236" (3.00-26.00 mm).
- Increased flexibility for milling, drilling, and reaming.
- **IMPORTANT:** Maximum recommended torque is listed on page A-11. Do not overtighten nose assembly.

XT Precision® Collet System Benefits:

- Performance guaranteed with a combination of XT Precision® Collets and Chucks; Assembled concentricity of <.0002 (.005 mm or 5 microns) at the collet face.
- Improved gripping pressure throughout the entire collet collapse range with XT Precision® Collets.
- Less tool wear and replacement — less scrap.
- Precision closure nosepiece — generates accurate, rigid grip on tool.
- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Fully ground flange and V-groove — easy on tool changers for less spindle and changer maintenance.

Replacement Parts & Accessories

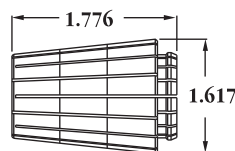
Straight Shank XT40 Collet Extension



Part No.
ERCE-0040-ZX
(Coolant through)

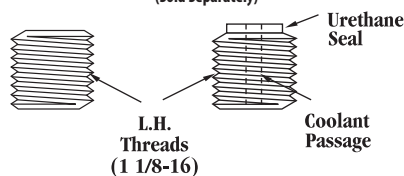
XT40 Series Collet

XT Precision® collets: metric & fractional, pages B-43 & B-44.



Stop Screws

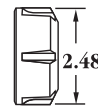
(Sold Separately)



Part No.
XCCS-1816

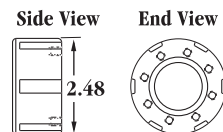
Part No.
XCCS-1816-C

Replacement Nosepiece Assemblies & Wrench



**Standard Balance
Part No.**

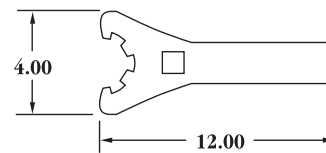
XCNA-T040
(M50 x 1.5)



**Fine Tune™
Part No.**

XCNA-TT40
(M50 x 1.5)
(Includes balance screws)

Wrench



Part No.

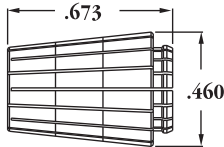
XCCW-0040
(1/2" Square in handle)

Notes

- Black oxide complete on toolholders, page A-2.
- High speed balance options, page A-6.
- Through-spindle coolant standard. Other coolant options, page A-12.
- XT Precision® collets: metric & fractional, pages B-43 & B-44.
- Blue Chip™ Coolant Containment System, page C-55.
- Collet chuck nosepiece torque values & wrenches, page A-11.
- Retention Knobs, pages D-76 & D-77.
- HSK Accessories & Setup Holding Fixtures, page D-79.
- HSK coolant hole plugs and coolant tubes sold separately, see page D-79.

XT Precision® Collets: Metric & Fractional

XT11



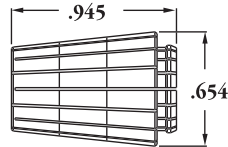
XT11 Series Metric Collets

Part No.	Range-inch	Range-mm
XT11-0060	.020 - .024	.500 - .600
XT11-0070	.024 - .028	.600 - .700
XT11-0080	.028 - .031	.700 - .800
XT11-0090	.031 - .035	.800 - .900
XT11-0100	.035 - .039	.900 - 1.00
XT11-0125	.039 - .049	1.00 - 1.25
XT11-0150	.049 - .059	1.25 - 1.50
XT11-0175	.059 - .069	1.50 - 1.75
XT11-0200	.069 - .079	1.75 - 2.00
XT11-0225	.079 - .089	2.00 - 2.25
XT11-0250	.089 - .098	2.25 - 2.50
XT11-0300	.098 - .118	2.50 - 3.00
XT11-0350	.118 - .138	3.00 - 3.50
XT11-0400	.138 - .157	3.50 - 4.00
XT11-0450	.157 - .177	4.00 - 4.50
XT11-0500	.177 - .197	4.50 - 5.00
XT11-0550	.197 - .217	5.00 - 5.50
XT11-0600	.217 - .236	5.50 - 6.00
XT11-0650	.236 - .256	6.00 - 6.50
XT11-0700	.256 - .276	6.50 - 7.00
XT11-20ST	SET	SET

XT20 Series Fractional Collets

Part No.	Range-inch
XT11-F125	.106 - .125
XT11-F187	.168 - .187
XT11-F250	.231 - .250
XT11-03ST	SET

XT16



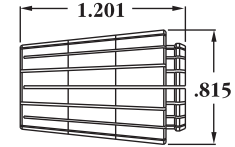
XT16 Series Metric Collets

Part No.	Range-inch	Range-mm
XT16-0100	.0295 - .0394	0.75 - 1.00
XT16-0125	.0394 - .0492	1.00 - 1.25
XT16-0150	.0492 - .0591	1.25 - 1.50
XT16-0175	.0591 - .0689	1.50 - 1.75
XT16-0200	.0689 - .0787	1.75 - 2.00
XT16-0225	.0787 - .0886	2.00 - 2.25
XT16-0250	.0886 - .0984	2.25 - 2.50
XT16-0300	.0984 - .1181	2.50 - 3.00
XT16-0350	.1181 - .1378	3.00 - 3.50
XT16-0400	.1378 - .1575	3.50 - 4.00
XT16-0500	.1575 - .1969	4.00 - 5.00
XT16-0600	.1969 - .2362	5.00 - 6.00
XT16-0700	.2362 - .2756	6.00 - 7.00
XT16-0800	.2756 - .3150	7.00 - 8.00
XT16-0900	.3150 - .3543	8.00 - 9.00
XT16-1000	.3543 - .3937	9.00-10.00
XT16-16ST	SET	SET

XT16 Series Fractional Collets

Part No.	Range-inch
XT16-F062	.043 - .062
XT16-F093	.054 - .093
XT16-F125	.086 - .125
XT16-F156	.117 - .156
XT16-F187	.148 - .187
XT16-F218	.179 - .218
XT16-F250	.211 - .250
XT16-F281	.242 - .281
XT16-F312	.273 - .312
XT16-F343	.304 - .343
XT16-F375	.336 - .375
XT16-11ST	SET

XT20



XT20 Series Metric Collets

Part No.	Range-inch	Range-mm
XT20-0200	.0689 - .0787	1.75 - 2.00
XT20-0225	.0787 - .0886	2.00 - 2.25
XT20-0250	.0886 - .0984	2.25 - 2.50
XT20-0300	.0984 - .1181	2.50 - 3.00
XT20-0350	.1181 - .1378	3.00 - 3.50
XT20-0400	.1378 - .1575	3.50 - 4.00
XT20-0500	.1575 - .1969	4.00 - 5.00
XT20-0600	.1969 - .2362	5.00 - 6.00
XT20-0700	.2362 - .2756	6.00 - 7.00
XT20-0800	.2756 - .3150	7.00 - 8.00
XT20-0900	.3150 - .3543	8.00 - 9.00
XT20-1000	.3543 - .3937	9.00 - 10.00
XT20-1100	.3937 - .4331	10.00 - 11.00
XT20-1200	.4331 - .4724	11.00 - 12.00
XT20-1300	.4724 - .5118	12.00 - 13.00
XT20-15ST	SET	SET

XT20 Series Fractional Collets

Part No.	Range-inch
XT20-F093	.054 - .093
XT20-F125	.086 - .125
XT20-F156	.117 - .156
XT20-F187	.148 - .187
XT20-F218	.179 - .218
XT20-F250	.211 - .250
XT20-F281	.242 - .281
XT20-F312	.273 - .312
XT20-F343	.303 - .343
XT20-F375	.336 - .375
XT20-F406	.367 - .406
XT20-F437	.398 - .437
XT20-F468	.429 - .468
XT20-F500	.461 - .500
XT20-14ST	SET

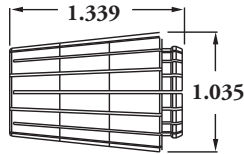
Notes

- Tool shanks must engage full length of collet ID bore. Failure to follow this practice will result in tool failure.
- For best results, use collet closest to the cutter shank size.
- Dimensions given in inches & millimeter.
- Blue Chip™ Coolant Containment System, page C-55.

XT Precision® Collets: Metric & Fractional



XT25



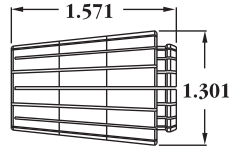
XT25 Series Metric Collets

Part No.	Range-inch	Range-mm
XT25-0300	.0984 - .1181	2.50 - 3.00
XT25-0350	.1181 - .1378	3.00 - 3.50
XT25-0400	.1378 - .1575	3.50 - 4.00
XT25-0500	.1575 - .1969	4.00 - 5.00
XT25-0600	.1969 - .2362	5.00 - 6.00
XT25-0700	.2362 - .2756	6.00 - 7.00
XT25-0800	.2756 - .3150	7.00 - 8.00
XT25-0900	.3150 - .3543	8.00 - 9.00
XT25-1000	.3543 - .3937	9.00 - 10.00
XT25-1100	.3937 - .4331	10.00 - 11.00
XT25-1200	.4331 - .4724	11.00 - 12.00
XT25-1300	.4724 - .5118	12.00 - 13.00
XT25-1400	.5118 - .5512	13.00 - 14.00
XT25-1500	.5512 - .5906	14.00 - 15.00
XT25-1600	.5906 - .6299	15.00 - 16.00
XT25-15ST	SET	SET

XT25 Series Fractional Collets

Part No.	Range-inch
XT25-F125	.086 - .125
XT25-F187	.148 - .187
XT25-F250	.211 - .250
XT25-F312	.273 - .312
XT25-F375	.336 - .375
XT25-F437	.398 - .437
XT25-F500	.461 - .500
XT25-F562	.523 - .562
XT25-F625	.586 - .625
XT25-09ST	SET

XT32



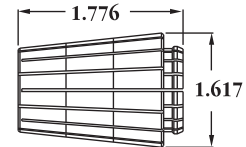
XT32 Series Metric Collets

Part No.	Range-inch	Range-mm
XT32-0300	.0984 - .1181	2.50 - 3.00
XT32-0350	.1181 - .1378	3.00 - 3.50
XT32-0400	.1378 - .1575	3.50 - 4.00
XT32-0500	.1575 - .1969	4.00 - 5.00
XT32-0600	.1969 - .2362	5.00 - 6.00
XT32-0700	.2362 - .2756	6.00 - 7.00
XT32-0800	.2756 - .3150	7.00 - 8.00
XT32-0900	.3150 - .3543	8.00 - 9.00
XT32-1000	.3543 - .3937	9.00 - 10.00
XT32-1100	.3937 - .4331	10.00 - 11.00
XT32-1200	.4331 - .4724	11.00 - 12.00
XT32-1300	.4724 - .5118	12.00 - 13.00
XT32-1400	.5118 - .5512	13.00 - 14.00
XT32-1500	.5512 - .5906	14.00 - 15.00
XT32-1600	.5906 - .6299	15.00 - 16.00
XT32-1700	.6299 - .6693	16.00 - 17.00
XT32-1800	.6693 - .7087	17.00 - 18.00
XT32-1900	.7087 - .7480	18.00 - 19.00
XT32-2000	.7480 - .7874	19.00 - 20.00
XT32-19ST	SET	SET

XT32 Series Fractional Collets

Part No.	Range-inch
XT32-F125	.086 - .125
XT32-F187	.148 - .187
XT32-F250	.211 - .250
XT32-F312	.273 - .312
XT32-F375	.336 - .375
XT32-F437	.398 - .437
XT32-F500	.461 - .500
XT32-F562	.523 - .562
XT32-F625	.586 - .625
XT32-F687	.648 - .687
XT32-F750	.711 - .750
XT32-11ST	SET

XT40



XT40 Series Metric Collets

Part No.	Range-inch	Range-mm
XT40-0400	.1181 - .1575	3.00 - 4.00
XT40-0500	.1575 - .1969	4.00 - 5.00
XT40-0600	.1969 - .2362	5.00 - 6.00
XT40-0700	.2362 - .2756	6.00 - 7.00
XT40-0800	.2756 - .3150	7.00 - 8.00
XT40-0900	.3150 - .3543	8.00 - 9.00
XT40-1000	.3543 - .3937	9.00 - 10.00
XT40-1100	.3937 - .4331	10.00 - 11.00
XT40-1200	.4331 - .4724	11.00 - 12.00
XT40-1300	.4724 - .5118	12.00 - 13.00
XT40-1400	.5118 - .5512	13.00 - 14.00
XT40-1500	.5512 - .5906	14.00 - 15.00
XT40-1600	.5906 - .6299	15.00 - 16.00
XT40-1700	.6299 - .6693	16.00 - 17.00
XT40-1800	.6693 - .7087	17.00 - 18.00
XT40-1900	.7087 - .7480	18.00 - 19.00
XT40-2000	.7480 - .7874	19.00 - 20.00
XT40-2100	.7874 - .8268	20.00 - 21.00
XT40-2200	.8268 - .8661	21.00 - 22.00
XT40-2300	.8661 - .9055	22.00 - 23.00
XT40-2400	.9055 - .9449	23.00 - 24.00
XT40-2500	.9449 - .9843	24.00 - 25.00
XT40-2600	.9843 - 1.0236	25.00 - 26.00
XT40-23ST	SET	SET

XT40 Series Fractional Collets

Part No.	Range-inch	Part No.	Range-inch
XT40-F125	.086 - .125	XT40-F625	.586 - .625
XT40-F187	.148 - .187	XT40-F687	.648 - .687
XT40-F250	.211 - .250	XT40-F750	.711 - .750
XT40-F312	.273 - .312	XT40-F812	.774 - .812
XT40-F375	.336 - .375	XT40-F875	.836 - .875
XT40-F437	.398 - .437	XT40-F937	.899 - .937
XT40-F500	.461 - .500	XT40-F100	.961 - 1.00
XT40-F562	.523 - .562	XT40-15ST	SET

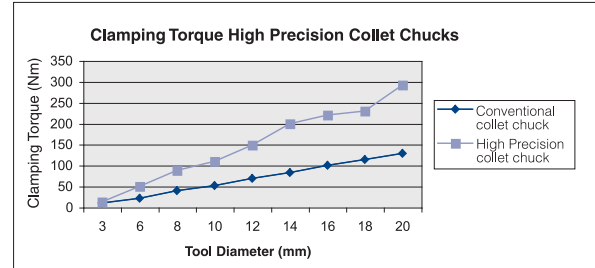
Quality, Innovation and Accuracy

Rigid!

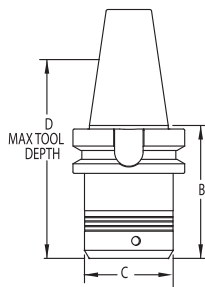
Command's High Precision Collet Chucks are designed and built to advanced specifications and minimize bending and compression loads. The extra reinforcement of the chuck body to the diameter of the clamping nut results in unequalled stability with maximum compactness.

Precise!

The ground trapezoidal thread reduces friction and together with the extra long, double length guide, ensures absolute centering of the clamping nut on the chuck, thus achieving optimum distribution of load and minimal imbalance. This results in extremely high concentricity and repeatability.

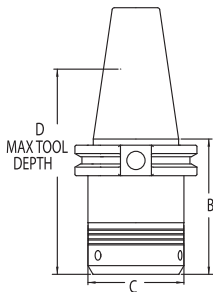


BT-Flange



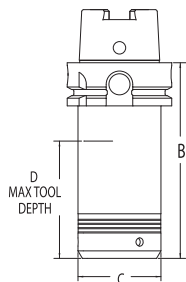
Taper	Part No.	B	C	D
BT 40	B4C3-HP16	2.75	1.18	4.25
BT 40	B4C3-HP32	2.75	1.97	4.25
BT 50	B6C3-HP32	3.94	1.97	5.90

V-Flange



Taper	Part No.	B	C	D
V 40	C4C3-HP16	2.50	1.18	4.00
V 40	C4C3-HP32	3.00	1.97	4.50
V 50	C6C3-HP16	3.50	1.18	4.00
V 50	C6C3-HP32	3.50	1.97	4.00

HSK

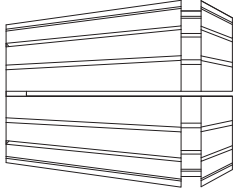


Taper	Part No.	B	C	D
HSK63A	H4C3AHP16	3.94	1.18	3.00
HSK63A	H4C3AHP32	3.94	1.97	3.00
HSK100A	H6C3AHP32	3.94	1.97	3.00

Notes

- Tool shanks must engage full length of collet ID bore. Failure to follow this practice may result in tool failure.
- Recommended for use with single end, round shank carbide tools (no flats), with h6 tolerances, page A-4.
- High Accuracy Collet Chucks available only with shiny shank; no black oxide.
- High speed balance options, page A-6.
- Coolant-through with flange coolant option (plugs included).
- HSK Accessories & Setup Holding Fixtures, page D-79.

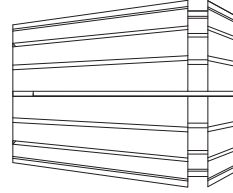
Runout Accuracy -3μ



ER16 High Precision Collets

NOTE: One seal disc is included with each collet

Part No.	Size	Replacement Seal Disc
ER16-0100HP	1mm	—
ER16-0200HP	2mm	CSER16-0200HP
ER16-0300HP	3mm	CSER16-0300HP
ER16-0400HP	4mm	CSER16-0400HP
ER16-0500HP	5mm	CSER16-0500HP
ER16-0600HP	6mm	CSER16-0600HP
ER16-0700HP	7mm	CSER16-0700HP
ER16-0800HP	8mm	CSER16-0800HP
ER16-0900HP	9mm	CSER16-0900HP
ER16-1000HP	10mm	CSER16-1000HP
ER16-F125HP	0.125"	CSER16-F125HP
ER16-F187HP	0.187"	CSER16-F187HP
ER16-F250HP	0.250"	CSER16-F250HP
ER16-F312HP	0.312"	CSER16-F312HP
ER16-F375HP	0.375"	CSER16-F375HP



ER32 High Precision Collets

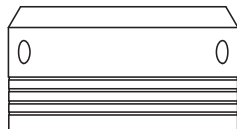
NOTE: One seal disc is included with each collet

Part No.	Size	Replacement Seal Disc	Part No.	Size	Replacement Seal Disc
ER32-0300HP	3mm	CSER32-0300HP	ER32-1700HP	17mm	CSER32-1700HP
ER32-0400HP	4mm	CSER32-0400HP	ER32-1800HP	18mm	CSER32-1800HP
ER32-0500HP	5mm	CSER32-0500HP	ER32-1900HP	19mm	CSER32-1900HP
ER32-0600HP	6mm	CSER32-0600HP	ER32-2000HP	20mm	CSER32-2000HP
ER32-0700HP	7mm	CSER32-0700HP	ER32-F125HP	0.125"	CSER32-F125HP
ER32-0800HP	8mm	CSER32-0800HP	ER32-F187HP	0.187"	CSER32-F187HP
ER32-0900HP	9mm	CSER32-0900HP	ER32-F250HP	0.250"	CSER32-F250HP
ER32-1000HP	10mm	CSER32-1000HP	ER32-F312HP	0.312"	CSER32-F312HP
ER32-1100HP	11mm	CSER32-1100HP	ER32-F375HP	0.375"	CSER32-F375HP
ER32-1200HP	12mm	CSER32-1200HP	ER32-F437HP	0.437"	CSER32-F437HP
ER32-1300HP	13mm	CSER32-1300HP	ER32-F500HP	0.500"	CSER32-F500HP
ER32-1400HP	14mm	CSER32-1400HP	ER32-F562HP	0.562"	CSER32-F562HP
ER32-1500HP	15mm	CSER32-1500HP	ER32-F625HP	0.625"	CSER32-F625HP
ER32-1600HP	16mm	CSER32-1600HP	ER32-F750HP	0.750"	CSER32-F750HP

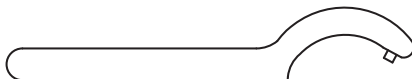
COLLET CHUCKS & ACCESSORIES

Replacement Parts & Accessories

ER16 High Precision Nosepiece & Wrench

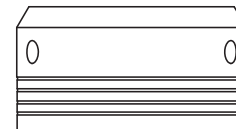


Part No.	Description
XFCN-0016	ER16 High Precision Nosepiece for Seals

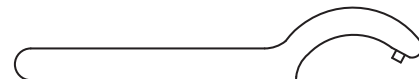


Part No.	Description
XCCW-HP16	ER16 High Precision Wrench

ER32 High Precision Nosepiece & Wrench



Part No.	Description
XFCN-0032	ER32 High Precision Nosepiece for Seals



Part No.	Description
XCCW-HP32	ER32 High Precision Wrench

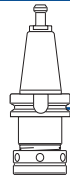
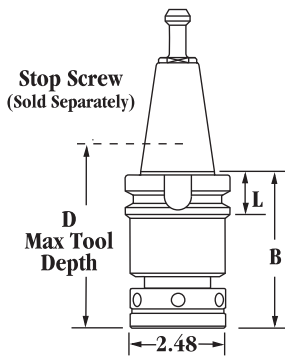
TG100 Complex® Collet Chucks:

- The key reason for the Complex® Collet Systems accuracy and gripping power is a unique flush nut design. It incorporates a rotating ball assembly producing a “radial float.” This, in effect, forces the collet to self-center for maximum grip, highest precision, and minimum tool wear..
- Collets range from .078”-1.000”.
- Flexibility to mill, drill, and ream.
- **IMPORTANT:** Maximum recommended torque is 60 Ft.-Lbs. Do not overtighten nose assembly.

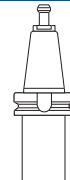
Complex® Collet Chuck Benefits:

- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Less tool wear and replacement — less scrap.
- Fully ground flange and V-groove — easy on the tool changers for less spindle and changer maintenance.

BT-Flange

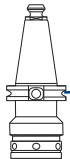
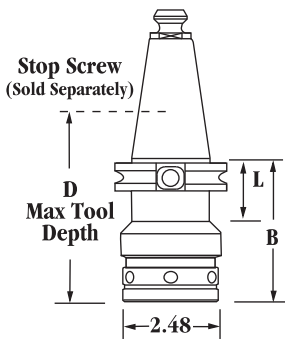


		Standard			
Taper	Part No.	B	D	L	
BT 30	B2C4-1000	4.00	2.6	.87	
BT 35	B3C4-1000	3.50	2.8	.87	
BT 40	B4C4-1000	3.50	2.8	1.06	
BT 45	B5C4-1000	3.50	4.1	1.31	
BT 50	B6C4-1000	3.50	3.5	1.50	

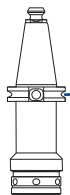


		Extended			
Taper	Part No.	B	D	L	
BT 35	B3C5-1000	5.47	4.6	.87	
BT 40	B4C5-1000	5.50	5.0	1.06	
BT 45	B5C5-1000	6.00	5.0	1.31	
BT 50	B6C5-1000	6.00	5.0	1.50	

V-Flange



		Stub			
Taper	Part No.	B	D	L	
V 40	C4C3-1000	2.75	3.1	N/A	
V 50	C6C3-1000	2.75	3.7	1.38	



		Standard			
Taper	Part No.	B	D	L	
V 30	C2C4-1000	4.34	2.6	1.44	
V 40	C4C4-1000	3.25	2.9	1.44	
V 45	C5C4-1000	3.75	4.3	N/A	
V 50	C6C4-1000	3.25	4.2	1.38	



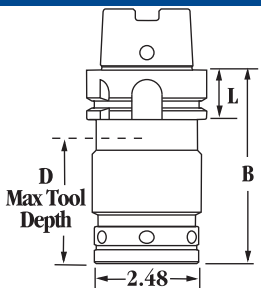
		Extended			
Taper	Part No.	B	D	L	
V 40	C4C5-1000	4.25	3.9	2.25	
V 45	C5C5-1000	5.75	5.0	N/A	
V 50	C6C5-1000	5.25	5.0	1.38	



		Extra Extended			
Taper	Part No.	B	D	L	
V 40	C4C6-1000	6.25	5.0	4.250	
V 45	C5C6-1000	7.75	5.0	N/A	
V 50	C6C6-1000	7.25	5.0	1.38	

TG75 Collet Chucks Available (Part No. C4C4-0750) Consult Command Customer Service.

HSK



		Stub			
Taper	Part No.	B	D	L	
HSK63A	H4C3A1000	4.00	2.6	1.02	
HSK100A	H6C3A1000	4.25	2.6	1.14	

No room for Stop Screws on HSK Stub length holders.

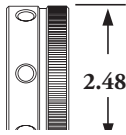


		Standard			
Taper	Part No.	B	D	L	
HSK63A	H4C4A1000	6.00	3.6	1.02	
HSK100A	H6C4A1000	6.25	3.0	1.14	

HSK Form A Illustrated

Replacement Parts

Replacement Nosepiece Assemblies and Wrenches



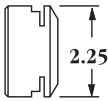
**Standard Style
Part No.**

XCNA-1000
(1 7/8 x 12 Acme)



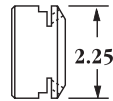
**Standard Wrench
Part No.**

XCCW-1000



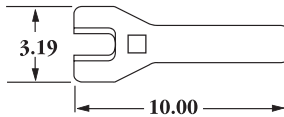
**Fine Balance Style
Part No.**

XCNA-FB10
(1 7/8-12 Acme)



**Fine Tune™ Style
Part No.**

XCNA-FT10
(1 7/8-12 Acme)
(Includes balance screws)



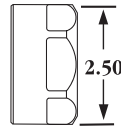
Part No.

XCCW-FT10
(3/8" Square in handle)

Complex®

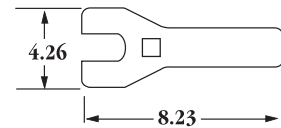


Non-Pull



**Hex Style
Part No.**

XCNA-H100
(1 7/8 x 12 Acme)
(2.25 inch Hex)

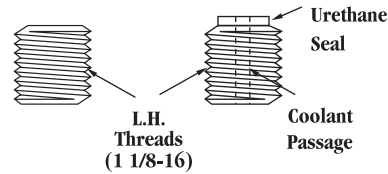


Part No.

XCCW-H100
(3/8" Square in handle)

Stop Screws

(Sold Separately)



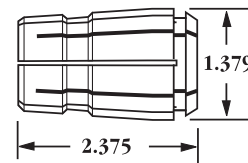
Part No.

XCCS-1816

Add -C at end of part number to specify stop screw with coolant passage.

TG100 Complex® Collets

Complex® TG standard, non-pull, and sealed collets, page C-51.



TG100 sizes range from 5/64" through 1".

Collet size (ID) is the last four digits of our part number. The ID will collapse 1/64".

Wide range collets—reduce collet and toolholder inventories.

Notes

- Black oxide complete on toolholders, page A-2.
- No room for Stop Screws on HSK Stub length holders.
- High speed balance options, page A-6.
- Through-spindle coolant standard. Other coolant options, page A-12.
- Complex® TG collets are interchangeable with Erickson-type collets.
- Complex® TG standard, non-pull, and sealed collets, page C-51.
- Blue Chip™ Coolant Containment System, page C-55.
- Collet chuck nosepiece torque values & wrenches, page A-11.
- Retention Knobs, pages D-76 & D-77.
- HSK Accessories & Setup Holding Fixtures, page D-79.
- HSK coolant hole plugs and coolant tubes sold separately, see page D-79.

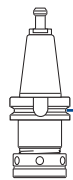
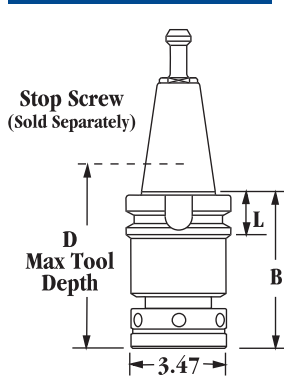
TG150 Complex® Collet Chucks:

- The key reason for the Complex® Collet Systems accuracy and gripping power is a unique flush nut design. It incorporates a rotating ball assembly producing a "radial float." This, in effect, forces the collet to self-center for maximum grip, highest precision, and minimum tool wear.
- Collets range from .484"-1.500"
- Flexibility to mill, drill, and ream.
- **IMPORTANT:** Maximum recommended torque is 100 Ft.-Lbs. Do not overtighten nose assembly

Complex® Collet Chuck Benefits:

- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Less tool wear and replacement — less scrap.
- Fully ground flange and V-groove — easy on the tool changers for less spindle and changer maintenance.
- All tapers and lengths ready to ship — get your tools fast!

BT-Flange

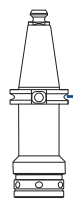
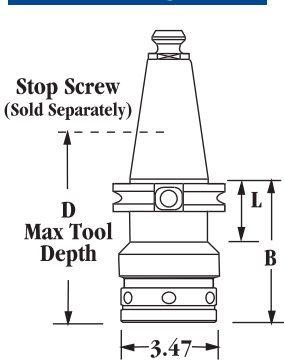


Standard					
Taper	Part No.	B	D	L	
BT 40	B4C4-1500	4.78	3.7	1.06	
BT 45	B5C4-1500	4.00	4.4	1.31	
BT 50	B6C4-1500	3.50	4.5	1.50	

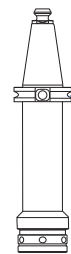


Extended					
Taper	Part No.	B	D	L	
BT 45	B5C5-1500	6.00	5.0	1.31	
BT 50	B6C5-1500	6.00	5.0	1.50	

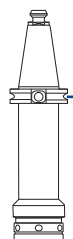
V-Flange



Standard					
Taper	Part No.	B	D	L	
V 40	C4C4-1500	4.88	3.8	1.44	
V 45	C5C4-1500	4.00	4.4	1.44	
V 50	C6C4-1500	3.50	4.8	N/A	

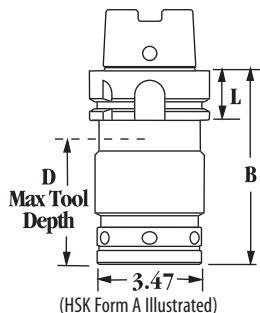


Extra Extended					
Taper	Part No.	B	D	L	
V 45	C5C6-1500	8.00	5.0	1.44	
V 50	C6C6-1500	7.50	5.0	N/A	

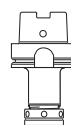


Extended					
Taper	Part No.	B	D	L	
V 45	C5C5-1500	6.00	5.0	1.44	
V 50	C6C5-1500	5.50	5.0	N/A	

HSK



Stub					
Taper	Part No.	B	D	L	
HSK63A	H4C3A1500	5.13	3.2	1.02	
HSK100A	H6C3A1500	4.88	3.2	1.14	



Standard					
Taper	Part No.	B	D	L	
HSK100A	H6C4A1500	6.88	4.0	1.14	

No room for Stop Screws on HSK Stub length holders.

Comflex®

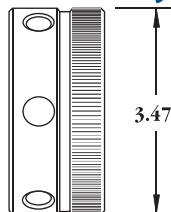


Non-Pull



Replacement Parts

Replacement Nosepiece Assembly



Part No.

XCNA-1500
(2 5/8 x 12)

Wrench

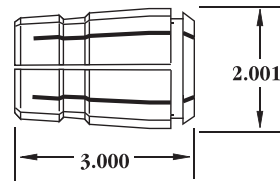


Part No.

XCCW-1500

TG150 Comflex® Collets

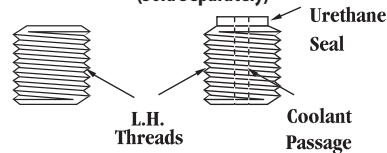
Comflex® TG standard, non-pull, and sealed collets, page C-52.



- TG150 sizes range from 1/2" through 1-1/2".
- Collet size (ID) is the last four digits of our part number. The ID will collapse 1/64".
- Wide range collets—reduce collet and toolholder inventories.

Stop Screws

(Sold Separately)



Taper	Standard Length Part No.	Ext. and Extra Ext. Part No.	Thread
40	XCCS-2212		1 3/8 x 12
45	XCCS-2212		1 3/8 x 12
45		XCCS-2612	1 5/8 x 12
50	XCCS-2612	XCCS-2612	1 5/8 x 12

Add **-C** at end of part number to specify stop screw with coolant passage.

COLLET CHUCKS & ACCESSORIES

Notes

- Black oxide complete on toolholders, page A-2.
- No room for Stop Screws on HSK Stub length holders.
- High speed balance options, page A-6.
- Through-spindle coolant standard. Other coolant options, page A-12.
- Comflex® TG collets are interchangeable with Erickson-type collets.
- Comflex® TG standard, non-pull, and sealed collets, page C-52.

- Blue Chip™ Coolant Containment System, page C-55.
- Collet chuck nosepiece torque values & wrenches, page A-11.
- Retention Knobs, pages D-76 & D-77 .
- HSK Accessories & Setup Holding Fixtures, page D-79.
- HSK coolant hole plugs and coolant tubes sold separately, see page D-79.

TG100 Collets: Standard & Sealed Fractional

Comflex®



Non-Pull

TG100 Collets

- The TG100 sizes range from 3/32" through 1"
- Collet size (ID) is the last four digits of our part number. The ID will collapse 1/64".
- Wide range collets — reduce collet and toolholder inventories.

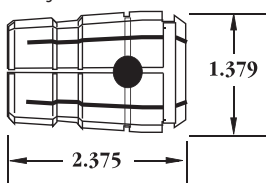
TG100 Comflex® Collet Sets

Part No.	No. of Collets	Range
TG10-21ST	21	3/8 to 1 (1/32 incr.)
TG10-30ST	30	3/32 to 1 (1/32 incr.)
TG10-41ST	41	3/8 to 1 (1/64 incr.)
TG10-59ST	59	3/32 to 1 (1/64 incr.)

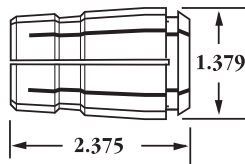
TG100 Non-Pull End Mill

Part No.	Size
TG10-0375NP	.375
TG10-0500NP	.500
TG10-0625NP	.625
TG10-0750NP	.750
TG10-0875NP	.875
TG10-1000NP	1.000

Designed for tools with Weldon flats.



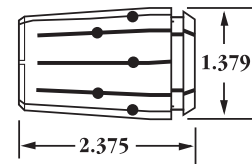
TG100



Comflex® Fractional Collets

Part No.	Size	Part No.	Size
TG10-0093	0.078 - 0.093	TG10-0562	0.547 - 0.562
TG10-0109	0.094 - 0.109	TG10-0578	0.563 - 0.578
TG10-0125	0.109 - 0.125	TG10-0593	0.578 - 0.593
TG10-0140	0.125 - 0.140	TG10-0609	0.594 - 0.609
TG10-0156	0.141 - 0.156	TG10-0625	0.609 - 0.625
TG10-0171	0.156 - 0.171	TG10-0640	0.625 - 0.640
TG10-0187	0.172 - 0.187	TG10-0656	0.641 - 0.656
TG10-0203	0.188 - 0.203	TG10-0671	0.656 - 0.671
TG10-0218	0.203 - 0.218	TG10-0687	0.672 - 0.687
TG10-0234	0.219 - 0.234	TG10-0703	0.688 - 0.703
TG10-0250	0.234 - 0.250	TG10-0718	0.703 - 0.718
TG10-0265	0.250 - 0.265	TG10-0734	0.719 - 0.734
TG10-0281	0.266 - 0.281	TG10-0750	0.734 - 0.750
TG10-0296	0.281 - 0.296	TG10-0765	0.750 - 0.765
TG10-0312	0.297 - 0.312	TG10-0781	0.766 - 0.781
TG10-0328	0.313 - 0.328	TG10-0796	0.781 - 0.796
TG10-0343	0.328 - 0.343	TG10-0812	0.797 - 0.812
TG10-0359	0.344 - 0.359	TG10-0828	0.813 - 0.828
TG10-0375	0.359 - 0.375	TG10-0843	0.828 - 0.843
TG10-0390	0.375 - 0.390	TG10-0859	0.844 - 0.859
TG10-0406	0.391 - 0.406	TG10-0875	0.859 - 0.875
TG10-0421	0.406 - 0.421	TG10-0890	0.875 - 0.890
TG10-0437	0.422 - 0.437	TG10-0906	0.891 - 0.906
TG10-0453	0.438 - 0.453	TG10-0921	0.906 - 0.921
TG10-0468	0.453 - 0.468	TG10-0937	0.922 - 0.937
TG10-0484	0.469 - 0.484	TG10-0953	0.938 - 0.953
TG10-0500	0.484 - 0.500	TG10-0968	0.953 - 0.968
TG10-0515	0.500 - 0.515	TG10-0984	0.969 - 0.984
TG10-0531	0.516 - 0.531	TG10-1000	0.984 - 1.000
TG10-0546	0.531 - 0.546		

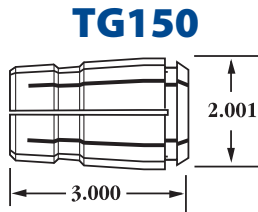
TG100



Sealed Complex® Fractional Collets

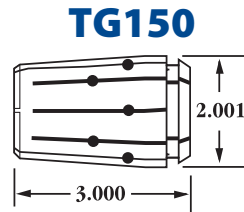
Part No.	Size	Part No.	Size
TG10-0093S	0.093	TG10-0609S	0.609
TG10-0109S	0.109	TG10-0625S	0.625
TG10-0125S	0.125	TG10-0640S	0.640
TG10-0140S	0.140	TG10-0656S	0.656
TG10-0156S	0.156	TG10-0671S	0.671
TG10-0171S	0.171	TG10-0687S	0.687
TG10-0187S	0.187	TG10-0703S	0.703
TG10-0203S	0.203	TG10-0718S	0.718
TG10-0218S	0.218	TG10-0734S	0.734
TG10-0234S	0.234	TG10-0750S	0.750
TG10-0250S	0.250	TG10-0765S	0.765
TG10-0265S	0.265	TG10-0781S	0.781
TG10-0281S	0.281	TG10-0796S	0.796
TG10-0296S	0.296	TG10-0812S	0.812
TG10-0312S	0.312	TG10-0828S	0.828
TG10-0328S	0.328	TG10-0843S	0.843
TG10-0343S	0.343	TG10-0859S	0.859
TG10-0359S	0.359	TG10-0875S	0.875
TG10-0375S	0.375	TG10-0890S	0.890
TG10-0390S	0.390	TG10-0906S	0.906
TG10-0406S	0.406	TG10-0921S	0.921
TG10-0421S	0.421	TG10-0937S	0.937
TG10-0437S	0.437	TG10-0953S	0.953
TG10-0453S	0.453	TG10-0968S	0.968
TG10-0468S	0.468	TG10-0984S	0.984
TG10-0484S	0.484	TG10-1000S	1.000
TG10-0500S	0.500		
TG10-0515S	0.515	Sealed Collets Sets	
TG10-0531S	0.531	TG10-21STS	SET of 21
TG10-0546S	0.546	TG10-30STS	SET of 30
TG10-0562S	0.56	TG10-41STS	SET of 41
TG10-0578S	0.578	TG10-59STS	SET of 59
TG10-0593S	0.593		

TG150 Collets: Standard & Sealed Fractional



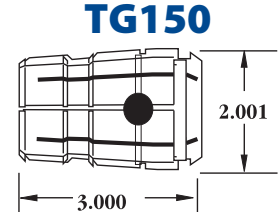
Complex® Fractional Collets

Part No.	Size	Part No.	Size
TG15-0500	0.484 - 0.500	TG15-1015	1.000 - 1.015
TG15-0515	0.500 - 0.515	TG15-1031	1.016 - 1.031
TG15-0531	0.516 - 0.531	TG15-1046	1.031 - 1.046
TG15-0546	0.531 - 0.546	TG15-1062	1.047 - 1.062
TG15-0562	0.547 - 0.562	TG15-1078	1.063 - 1.078
TG15-0578	0.563 - 0.578	TG15-1093	1.078 - 1.093
TG15-0593	0.578 - 0.593	TG15-1109	1.094 - 1.109
TG15-0609	0.594 - 0.609	TG15-1125	1.109 - 1.125
TG15-0625	0.609 - 0.625	TG15-1140	1.125 - 1.140
TG15-0640	0.625 - 0.640	TG15-1156	1.141 - 1.156
TG15-0656	0.641 - 0.656	TG15-1171	1.156 - 1.171
TG15-0671	0.656 - 0.671	TG15-1187	1.172 - 1.187
TG15-0687	0.672 - 0.687	TG15-1203	1.188 - 1.203
TG15-0703	0.688 - 0.703	TG15-1218	1.203 - 1.218
TG15-0718	0.703 - 0.718	TG15-1234	1.219 - 1.234
TG15-0734	0.719 - 0.734	TG15-1250	1.234 - 1.250
TG15-0750	0.734 - 0.750	TG15-1265	1.250 - 1.265
TG15-0765	0.750 - 0.765	TG15-1281	1.266 - 1.281
TG15-0781	0.766 - 0.781	TG15-1296	1.281 - 1.296
TG15-0796	0.781 - 0.796	TG15-1312	1.297 - 1.312
TG15-0812	0.797 - 0.812	TG15-1328	1.313 - 1.328
TG15-0828	0.813 - 0.828	TG15-1343	1.328 - 1.343
TG15-0843	0.828 - 0.843	TG15-1359	1.344 - 1.359
TG15-0859	0.844 - 0.859	TG15-1375	1.359 - 1.375
TG15-0875	0.859 - 0.875	TG15-1390	1.375 - 1.390
TG15-0890	0.875 - 0.890	TG15-1406	1.391 - 1.406
TG15-0906	0.891 - 0.906	TG15-1421	1.406 - 1.421
TG15-0921	0.906 - 0.921	TG15-1437	1.422 - 1.437
TG15-0937	0.922 - 0.937	TG15-1453	1.438 - 1.453
TG15-0953	0.938 - 0.953	TG15-1468	1.453 - 1.468
TG15-0968	0.953 - 0.968	TG15-1484	1.469 - 1.484
TG15-0984	0.969 - 0.984	TG15-1500	1.484 - 1.500
TG15-1000	0.984 - 1.000		



Sealed Complex® Fractional Collets

Part No.	Size	Part No.	Size
TG15-0500S	0.500	TG15-1062S	1.062
TG15-0515S	0.515	TG15-1078S	1.078
TG15-0531S	0.531	TG15-1093S	1.093
TG15-0546S	0.546	TG15-1109S	1.109
TG15-0562S	0.562	TG15-1125S	1.125
TG15-0578S	0.578	TG15-1140S	1.140
TG15-0593S	0.593	TG15-1156S	1.156
TG15-0609S	0.609	TG15-1171S	1.171
TG15-0625S	0.625	TG15-1187S	1.187
TG15-0640S	0.640	TG15-1203S	1.203
TG15-0656S	0.656	TG15-1218S	1.218
TG15-0671S	0.671	TG15-1234S	1.234
TG15-0687S	0.687	TG15-1250S	1.250
TG15-0703S	0.703	TG15-1265S	1.265
TG15-0718S	0.718	TG15-1281S	1.281
TG15-0734S	0.734	TG15-1296S	1.296
TG15-0750S	0.750	TG15-1312S	1.312
TG15-0765S	0.765	TG15-1328S	1.328
TG15-0781S	0.781	TG15-1343S	1.343
TG15-0796S	0.796	TG15-1359S	1.359
TG15-0812S	0.812	TG15-1375S	1.375
TG15-0828S	0.828	TG15-1390S	1.390
TG15-0843S	0.843	TG15-1406S	1.406
TG15-0859S	0.859	TG15-1421S	1.421
TG15-0875S	0.875	TG15-1437S	1.437
TG15-0890S	0.890	TG15-1453S	1.453
TG15-0906S	0.906	TG15-1468S	1.468
TG15-0921S	0.921	TG15-1484S	1.484
TG15-0937S	0.937	TG15-1500S	1.500
TG15-0953S	0.953		
TG15-0968S	0.968		
TG15-0984S	0.984		
TG15-1000S	1.000		
TG15-1015S	1.015		
TG15-1031S	1.031		
TG15-1046S	1.046		



Non-Pull End Mill Designed for tools with Weldon flats.

Part No.	Size
TG15-0500NP	0.500
TG15-0625NP	0.625
TG15-0750NP	0.750
TG15-0875NP	0.875
TG15-1000NP	1.000
TG15-1250NP	1.250
TG15-1500NP	1.500

TG150 Collets

- The TG150 sizes range from 1/2" through 1-1/2".
- Collet size (ID) is the last four digits of our part number. The ID will collapse 1/64".
- Wide range collets—reduce collet and toolholder inventories.

Sealed Collets Sets

TG15-33STS	SET of 33
TG15-65STS	SET of 65

TG150 Complex® Collet Sets

Part No.	No. of Collets	Range
TG15-33ST	33	1/2 to 1 1/2 (1/32 incr.)
TG15-65ST	65	1/2 to 1 1/2 (1/64 incr.)

Notes

- Tool shanks must engage full length of collet ID bore. Failure to follow this practice will result in tool failure.
- For best results, use collet closest to the cutter shank size.
- Dimensions given in inches.
- Complex® TG collets are interchangeable with Erickson-type collets.
- Blue Chip™ Coolant Containment System, page C-55.

DA30 & DA20 Double Angle Extensions & Collets

Double Angle Collet Extensions

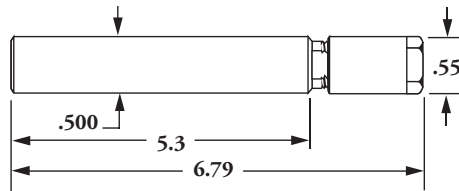
- Four different series to fit all needs.
- Different low profile nose diameters to solve clearance problems.
- Collets collapse 1/64".
- The last four digits of our collet part number are the ID size.

- Double Angle extensions are coolant through.
- Stop screw included.
- **IMPORTANT:** Maximum recommended torque is 25 Ft.-Lbs. Do not overtighten nose assembly.



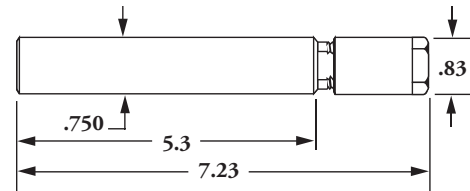
COLLET CHUCKS & ACCESSORIES

DA30



Part No.
DACE-0030
(Coolant Through)

DA20



Part No.
DACE-0020
(Coolant Through)

Replacement Nosepiece

Part No.

DACN-0030
(7/16-32)



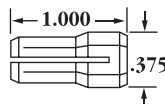
Replacement Nosepiece

Part No.

DACN-0020
(11/16-20)

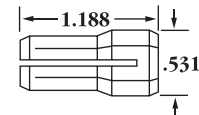


DA30 Double Angle Collet



Part No.	Range
DA30-0046	0.031 - 0.046
DA30-0062	0.047 - 0.062
DA30-0078	0.063 - 0.078
DA30-0093	0.078 - 0.093
DA30-0109	0.094 - 0.109
DA30-0125	0.109 - 0.125
DA30-0140	0.125 - 0.140
DA30-0156	0.141 - 0.156
DA30-0171	0.156 - 0.171
DA30-0187	0.172 - 0.187
DA30-0203	0.188 - 0.203
DA30-0218	0.203 - 0.218
DA30-0234	0.219 - 0.234
DA30-0250	0.234 - 0.250
DA30-0300	0.250 - 0.300
DA30-0350	0.300 - 0.350
DA30-0400	0.350 - 0.400
DA30-14ST	SET

DA20 Double Angle Collet

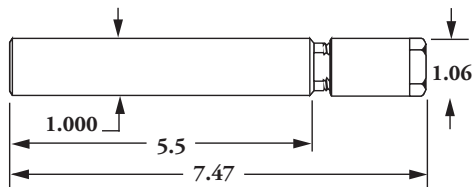


Part No.	Range
DA20-0062	0.047 - 0.062
DA20-0078	0.063 - 0.078
DA20-0093	0.078 - 0.093
DA20-0109	0.094 - 0.109
DA20-0125	0.109 - 0.125
DA20-0140	0.125 - 0.140
DA20-0156	0.141 - 0.156
DA20-0171	0.156 - 0.171
DA20-0187	0.172 - 0.187
DA20-0203	0.188 - 0.203
DA20-0218	0.203 - 0.218
DA20-0234	0.219 - 0.234
DA20-0250	0.234 - 0.250
DA20-0265	0.250 - 0.265
DA20-0281	0.266 - 0.281
DA20-0296	0.281 - 0.296
DA20-0312	0.297 - 0.312
DA20-0328	0.313 - 0.328
DA20-0343	0.328 - 0.343
DA20-0359	0.344 - 0.359
DA20-0375	0.359 - 0.375
DA20-21ST	SET

DA10 & DA18 Double Angle Extensions & Collets

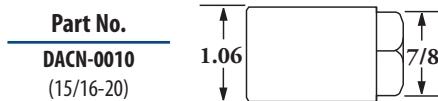


DA10

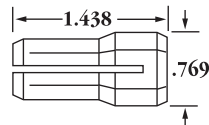


Part No.
DACE-0010
(Coolant Through)

Replacement Nosepiece

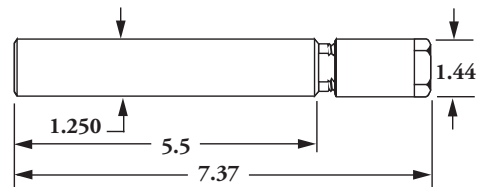


DA10 Double Angle Collet



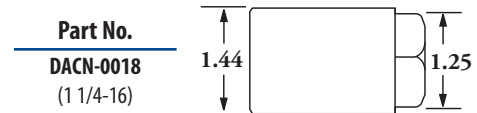
Part No.	Range	Part No.	Range
DA10-0125	0.109 - 0.125	DA10-0359	0.344 - 0.359
DA10-0140	0.125 - 0.140	DA10-0375	0.359 - 0.375
DA10-0156	0.141 - 0.156	DA10-0390	0.375 - 0.390
DA10-0171	0.156 - 0.171	DA10-0406	0.391 - 0.406
DA10-0187	0.172 - 0.187	DA10-0421	0.406 - 0.421
DA10-0203	0.188 - 0.203	DA10-0437	0.422 - 0.437
DA10-0218	0.203 - 0.218	DA10-0453	0.438 - 0.453
DA10-0234	0.219 - 0.234	DA10-0468	0.453 - 0.468
DA10-0250	0.234 - 0.250	DA10-0484	0.469 - 0.484
DA10-0265	0.250 - 0.265	DA10-0500	0.484 - 0.500
DA10-0281	0.266 - 0.281	DA10-0515	0.500 - 0.515
DA10-0296	0.281 - 0.296	DA10-0531	0.516 - 0.531
DA10-0312	0.297 - 0.312	DA10-0546	0.531 - 0.546
DA10-0328	0.313 - 0.328	DA10-0562	0.547 - 0.562
DA10-0343	0.328 - 0.343	DA10-29ST	SET

DA18

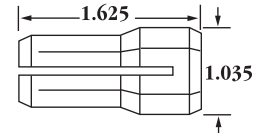


Part No.
DACE-0018
(Coolant Through)

Replacement Nosepiece



DA18 Double Angle Collet



Part No.	Range	Part No.	Range
DA18-0187	0.172 - 0.187	DA18-0515	0.500 - 0.515
DA18-0250	0.234 - 0.250	DA18-0531	0.516 - 0.531
DA18-0265	0.250 - 0.265	DA18-0546	0.531 - 0.546
DA18-0281	0.266 - 0.281	DA18-0562	0.547 - 0.562
DA18-0296	0.281 - 0.296	DA18-0578	0.563 - 0.578
DA18-0312	0.297 - 0.312	DA18-0593	0.578 - 0.593
DA18-0328	0.313 - 0.328	DA18-0609	0.594 - 0.609
DA18-0343	0.328 - 0.343	DA18-0625	0.609 - 0.625
DA18-0359	0.344 - 0.359	DA18-0640	0.625 - 0.640
DA18-0375	0.359 - 0.375	DA18-0656	0.641 - 0.656
DA18-0390	0.375 - 0.390	DA18-0671	0.656 - 0.671
DA18-0406	0.391 - 0.406	DA18-0687	0.672 - 0.687
DA18-0421	0.406 - 0.421	DA18-0703	0.688 - 0.703
DA18-0437	0.422 - 0.437	DA18-0718	0.703 - 0.718
DA18-0453	0.438 - 0.453	DA18-0734	0.719 - 0.734
DA18-0468	0.453 - 0.468	DA18-0750	0.734 - 0.750
DA18-0484	0.469 - 0.484	DA18-33ST	SET
DA18-0500	0.484 - 0.500		

COLLET CHUCKS & ACCESSORIES

Notes

- Tool shanks must engage full length of collet ID bore. Failure to follow this practice will result in tool failure.
- Double Angle (DA) collets are interchangeable with Erickson-type collets.



Blue Chip Coolant Containment System

Disk System fits Micro Precision® Command Holders regardless of age

Blue Chip™ Coolant Containment System consists of one disk with an inner and an outer seal. The disk assembly works in most Command Micro Precision® standard size collet chucks, regardless of age, new and used.

Contains and Directs Coolant to 800 PSI

Run tools at optimum speeds with maximum coolant flow and pressure. Direct coolant flow to the tip, where it's needed.

No loss of Toolholder Rigidity - Collet stays flush with Nosepiece

Blue Chip™ System won't compromise existing toolholder rigidity. Collet stays flush with nosepiece — gage length won't be increased using this system.

Uses Standard Collet Holder, Nosepiece, and Collets

Fast Setup

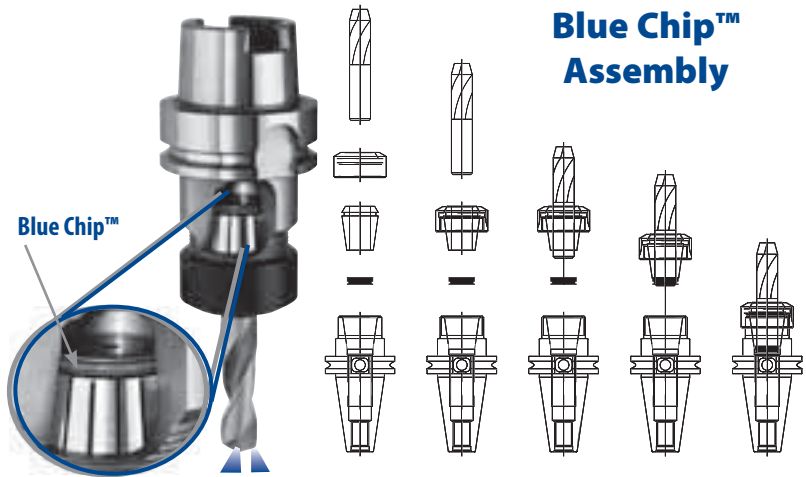
Identify toolholder collet size and cutting tool shank diameter. Then simply snap the collet into the nosepiece, push the tool through the collet, and engage the disk. Then assemble as normal and you're ready to go.

Interchangeable and Reusable Disks

Match correct size Blue Chip™ disks with any Command collet holder assembly as applications change. System uses standard seals for easy replacement.

Seals Coolant Tools from .12" (3.0 mm) through 1.02" (26 mm)

Seals will compress to hold a .020" (.5 mm) size range on the cutting tool shank. Each disk holds from its design size to minus .020".

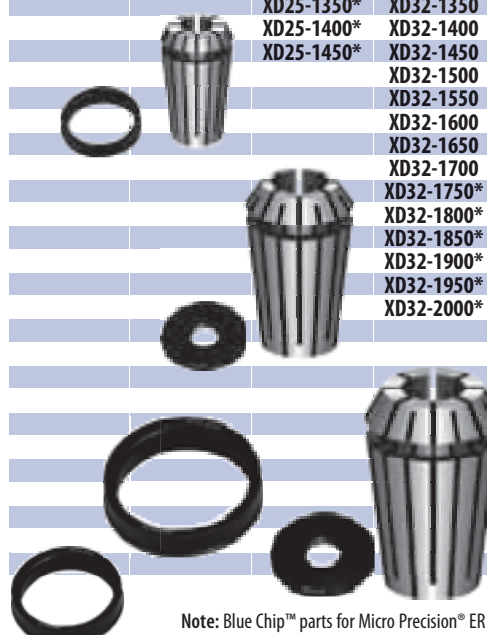


Blue Chip™ Assembly

COLLET CHUCKS & ACCESSORIES

Blue Chip™ Part No. ER16	Blue Chip™ Part No. ER20	Blue Chip™ Part No. ER25	Blue Chip™ Part No. ER32	Blue Chip™ Part No. ER40	Size Range (Inches)	Size Range (mm)
XD16-0350*	XD20-0350	XD25-0350	XD32-0350	XD40-0350	0.118 – 0.138	3.0 – 3.5
XD16-0400*	XD20-0400	XD25-0400	XD32-0400	XD40-0400	0.138 – 0.157	3.5 – 4.0
XD16-0450*	XD20-0450	XD25-0450	XD32-0450	XD40-0450	0.157 – 0.177	4.0 – 4.5
XD16-0500*	XD20-0500	XD25-0500	XD32-0500	XD40-0500	0.177 – 0.197	4.5 – 5.0
XD16-0550*	XD20-0550	XD25-0550	XD32-0550	XD40-0550	0.197 – 0.217	5.0 – 5.5
XD16-0600*	XD20-0600	XD25-0600	XD32-0600	XD40-0600	0.217 – 0.236	5.5 – 6.0
XD16-0650*	XD20-0650	XD25-0650	XD32-0650	XD40-0650	0.236 – 0.256	6.0 – 6.5
XD16-0700*	XD20-0700	XD25-0700	XD32-0700	XD40-0700	0.256 – 0.276	6.5 – 7.0
XD16-0750*	XD20-0750	XD25-0750	XD32-0750	XD40-0750	0.276 – 0.295	7.0 – 7.5
XD16-0800*	XD20-0800	XD25-0800	XD32-0800	XD40-0800	0.295 – 0.315	7.5 – 8.0
	XD20-0850*	XD25-0850	XD32-0850	XD40-0850	0.315 – 0.335	8.0 – 8.5
	XD20-0900*	XD25-0900	XD32-0900	XD40-0900	0.335 – 0.354	8.5 – 9.0
	XD20-0950*	XD25-0950	XD32-0950	XD40-0950	0.354 – 0.374	9.0 – 9.5
	XD20-1000*	XD25-1000	XD32-1000	XD40-1000	0.374 – 0.394	9.5 – 10.0
		XD25-1050	XD32-1050	XD40-1050	0.394 – 0.413	10.0 – 10.5
		XD25-1100	XD32-1100	XD40-1100	0.413 – 0.433	10.5 – 11.0
		XD25-1150	XD32-1150	XD40-1150	0.433 – 0.453	11.0 – 11.5
		XD25-1200	XD32-1200	XD40-1200	0.453 – 0.472	11.5 – 12.0
		XD25-1250*	XD32-1250	XD40-1250	0.472 – 0.492	12.0 – 12.5
		XD25-1300*	XD32-1300	XD40-1300	0.492 – 0.512	12.5 – 13.0
		XD25-1350*	XD32-1350	XD40-1350	0.512 – 0.531	13.0 – 13.5
		XD25-1400*	XD32-1400	XD40-1400	0.531 – 0.551	13.5 – 14.0
		XD25-1450*	XD32-1450	XD40-1450	0.551 – 0.571	14.0 – 14.5
			XD32-1500	XD40-1500	0.571 – 0.591	14.5 – 15.0
			XD32-1550	XD40-1550	0.591 – 0.610	15.0 – 15.5
			XD32-1600	XD40-1600	0.610 – 0.630	15.5 – 16.0
			XD32-1650	XD40-1650	0.630 – 0.650	16.0 – 16.5
			XD32-1700	XD40-1700	0.650 – 0.669	16.5 – 17.0
			XD32-1750*	XD40-1750	0.669 – 0.689	17.0 – 17.5
			XD32-1800*	XD40-1800	0.689 – 0.709	17.5 – 18.0
			XD32-1850*	XD40-1850	0.709 – 0.728	18.0 – 18.5
			XD32-1900*	XD40-1900	0.728 – 0.748	18.5 – 19.0
			XD32-1950*	XD40-1950	0.748 – 0.768	19.0 – 19.5
			XD32-2000*	XD40-2000	0.768 – 0.787	19.5 – 20.0
				XD40-2050	0.787 – 0.807	20.0 – 20.5
				XD40-2100	0.807 – 0.827	20.5 – 21.0
				XD40-2150	0.827 – 0.846	21.0 – 21.5
				XD40-2200	0.846 – 0.866	21.5 – 22.0
				XD40-2250	0.866 – 0.886	22.0 – 22.5
				XD40-2300	0.886 – 0.906	22.5 – 23.0
				XD40-2350	0.906 – 0.925	23.0 – 23.5
				XD40-2400	0.925 – 0.945	23.5 – 24.0
				XD40-2450*	0.945 – 0.965	24.0 – 24.5
				XD40-2500*	0.965 – 0.984	24.5 – 25.0
				XD40-2550*	0.984 – 1.004	25.0 – 25.5
				XD40-2600*	1.004 – 1.024	25.5 – 26.0

Blue Chip™ Part No. TG100	Size Range (Inches)	Blue Chip™ Part No. TG100	Size Range (Inches)
XD10-0250	0.234 – 0.250	XD10-0671	0.656 – 0.671
XD10-0312	0.297 – 0.312	XD10-0687	0.672 – 0.687
XD10-0359	0.344 – 0.359	XD10-0703	0.688 – 0.703
XD10-0375	0.359 – 0.375	XD10-0718	0.703 – 0.718
XD10-0390	0.375 – 0.390	XD10-0734	0.719 – 0.734
XD10-0406	0.391 – 0.406	XD10-0750	0.734 – 0.750
XD10-0421	0.406 – 0.421	XD10-0765	0.750 – 0.765
XD10-0437	0.422 – 0.437	XD10-0781	0.765 – 0.781
XD10-0453	0.438 – 0.453	XD10-0796	0.781 – 0.796
XD10-0468	0.453 – 0.468	XD10-0812	0.796 – 0.812
XD10-0484	0.469 – 0.484	XD10-0828	0.812 – 0.828
XD10-0500	0.484 – 0.500	XD10-0843	0.828 – 0.843
XD10-0515	0.500 – 0.515	XD10-0859	0.843 – 0.859
XD10-0531	0.515 – 0.531	XD10-0875	0.859 – 0.875
XD10-0546	0.531 – 0.546	XD10-0890	0.875 – 0.890
XD10-0562	0.547 – 0.562	XD10-0906	0.890 – 0.906
XD10-0578	0.563 – 0.578	XD10-0921	0.906 – 0.921
XD10-0593	0.578 – 0.593	XD10-0937	0.921 – 0.937
XD10-0609	0.594 – 0.609	XD10-0953	0.937 – 0.953
XD10-0625	0.609 – 0.625	XD10-0968	0.953 – 0.968
XD10-0640	0.625 – 0.640	XD10-0984	0.968 – 0.984
XD10-0656	0.641 – 0.656	XD10-1000	0.984 – 1.000



Notes

- Micro Precision® ER Collets, pages B-13 thru B-24.
- Comflex® TG100's Collets, pages C-47 & C-48.
- Sealed collets for Micro Precision® ER, pages B-27 & B-28.
- For best results, use collet closest to the cutter shank size.

Note: Blue Chip™ parts for Micro Precision® ER Collets also fit XT Precision® & Shorty (ER32) Collets except where indicated by *.

Blue Chip™ is not for High Precision Collet Chucks.

End Mill Holders: BT-Flange

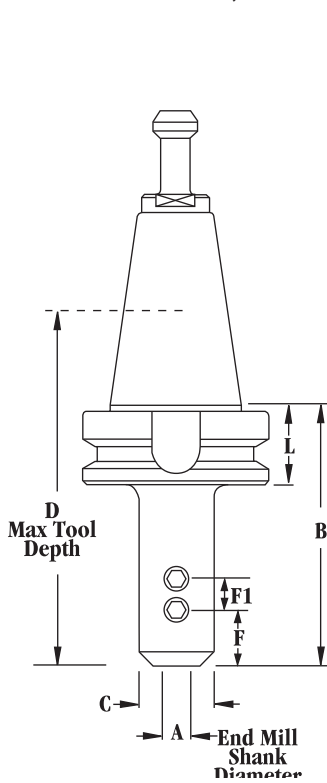


End Mill Holders:

- Holders through 1.000" accept double end cutters except as noted — save on tool costs.
- Fine thread screws match Weldon flats — lock tight, stay tight.
- **NOTE:** "A" diameter of 1" or less accepts single or double end mills — Stub holders accept single end mills only. "A" diameter of 1" and larger has 2 side lock screws except Stub which has 1 side lock screw. Side lock screw(s) [included] in line with drive slot for easy orientation.

Command End Mill Holder Benefits:

- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Less tool wear and replacement — less scrap.
- Fully ground flange and V-groove — easy on the tool changers for less spindle and changer maintenance.
- All tapers and lengths ready to ship — get your tools fast!



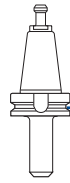
		Stub						
Taper	Part No.	A	B	C	D	F	F1	L
BT 40	B4E3-0500	0.500	1.25	1.25	2.6	0.88	—	1.06
BT 40	B4E3-0625	0.625	1.38	1.50	2.4	0.94	—	1.06
BT 40	B4E3-0750	0.750	1.44	1.75	2.5	1.00	—	1.06
BT 40	B4E3-1000	1.000	2.50	2.00	2.5	1.13	—	1.06
BT 40	B4E3-1250	1.250	2.50	2.49	2.4	1.13	—	1.06
		Standard						
Taper	Part No.	A	B	C	D	F	F1	L
BT 30	B2E4-0125	0.125	2.50	0.69	3.4	.28	—	0.87
BT 30	B2E4-0187	0.187	2.50	0.69	3.4	.41	—	0.87
BT 30	B2E4-0250	0.250	2.50	0.78	3.4	.53	—	0.87
BT 30	B2E4-0312	0.312	2.50	0.88	3.4	.66	—	0.87
BT 30	B2E4-0375	0.375	2.50	1.00	3.4	.75	—	0.87
BT 30	B2E4-0437	0.437	2.50	1.13	2.0	.81	—	0.87
BT 30	B2E4-0500	0.500	2.50	1.25	3.1	.88	—	0.87
BT 30	B2E4-0562	0.562	2.50	1.38	3.0	.91	—	0.87
BT 30	B2E4-0625	0.625	2.75	1.50	3.6	.94	—	0.87
BT 30	B2E4-0750	0.750	3.00	1.75	3.6	1.00	—	0.87
BT 35	B3E4-0187	0.187	2.50	0.69	3.6	0.41	—	0.87
BT 35	B3E4-0250	0.250	2.50	0.78	3.6	0.53	—	0.87
BT 35	B3E4-0375	0.375	2.50	1.00	3.6	0.75	—	0.87
BT 35	B3E4-0500	0.500	2.50	1.25	3.0	0.88	—	0.87
BT 35	B3E4-0625	0.625	2.50	1.50	3.6	0.94	—	0.87
BT 35	B3E4-0750	0.750	2.50	1.75	3.9	1.00	—	0.87
BT 35	B3E4-0875	0.875	3.50	1.88	4.2	1.00	—	0.87
BT 35	B3E4-1000	1.000	3.50	2.00	4.4	1.13	1.00	0.87
BT 35	B3E4-1250	1.250	4.00	2.50	3.8	1.13	1.00	0.87
BT 40	B4E4-0125	0.125	2.50	0.69	3.8	0.28	—	1.06
BT 40	B4E4-0187	0.187	2.50	0.69	3.8	0.41	—	1.06
BT 40	B4E4-0250	0.250	2.50	0.78	3.8	0.53	—	1.06
BT 40	B4E4-0312	0.312	2.50	0.88	3.8	0.66	—	1.06
BT 40	B4E4-0375	0.375	2.50	1.00	3.8	0.75	—	1.06
BT 40	B4E4-0437	0.437	2.50	1.13	3.8	0.81	—	1.06
BT 40	B4E4-0500	0.500	2.50	1.25	3.8	0.88	—	1.06
BT 40	B4E4-0562	0.562	2.50	1.38	3.0	0.91	—	1.06
BT 40	B4E4-0625	0.625	2.50	1.50	3.6	0.94	—	1.06
BT 40	B4E4-0750	0.750	2.50	1.75	3.9	1.00	—	1.06
BT 40	B4E4-0875	0.875	3.50	1.88	4.2	1.00	—	1.06
BT 40	B4E4-1000	1.000	3.75	2.00	4.4	1.13	1.00	1.06

continued on next page

Notes

- Black oxide complete is available upon request for standard toolholders, page A-2.
- High speed balance & nose piece options, page A-6.
- Through-spindle coolant standard. Other coolant options, page A-12.
- Side lock screw torque values, page A-10.
- Retention Knobs & Setup Holding Fixtures, pages D-76 & D-77, D-78.
- Replacement side lock screws, page C-61.

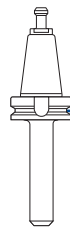
End Mill Holders: BT-Flange



Standard (Continued)

Taper	Part No.	A	B	C	D	F	F1	L
BT 40	B4E4-1250	1.250	3.75	2.50	4.0	1.13	1.00	1.06
BT 40	B4E4-1500	1.500	4.25	2.50	2.56	1.13	1.00	1.06
BT 45	B5E4-0375	0.375	3.00	1.00	3.2	0.75	—	1.31
BT 45	B5E4-0500	0.500	3.00	1.25	3.2	0.88	—	1.31
BT 45	B5E4-0625	0.625	3.00	1.50	3.2	0.94	—	1.31
BT 45	B5E4-0750	0.750	3.00	1.75	3.9	1.00	—	1.31
BT 45	B5E4-0875	0.875	4.00	1.88	4.2	1.00	—	1.31
BT 45	B5E4-1000	1.000	4.00	2.00	4.4	1.13	1.00	1.31
BT 45	B5E4-1250	1.250	4.00	2.50	4.0	1.13	1.00	1.31
BT 45	B5E4-1500	1.500	4.00	2.50	4.0	1.13	1.00	1.31
BT 50	B6E4-0375	0.375	3.00	1.00	3.7	0.75	—	1.50
BT 50	B6E4-0500	0.500	3.00	1.25	3.7	0.88	—	1.50
BT 50	B6E4-0625	0.625	3.00	1.50	3.7	0.94	—	1.50
BT 50	B6E4-0750	0.750	3.00	1.75	3.7	1.00	—	1.50
BT 50	B6E4-0875	0.875	4.00	1.88	4.2	1.00	—	1.50
BT 50	B6E4-1000	1.000	4.25	2.00	4.4	1.13	1.00	1.50
BT 50	B6E4-1250	1.250	4.25	2.50	4.0	1.13	1.00	1.50
BT 50	B6E4-1500	1.500	4.25	2.50	4.0	1.13	1.00	1.50
BT 50	B6E4-2000	2.000	5.00	3.75	5.0	1.41	1.50	1.50

Extended

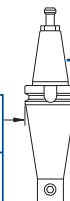


Taper	Part No.	A	B	C	D	F	F1	L
BT 40	B4E5-0125	0.125	4.00	0.69	5.3	0.38	—	1.06
BT 40	B4E5-0187	0.187	4.00	0.69	5.3	0.56	—	1.06
BT 40	B4E5-0250	0.250	4.00	0.78	5.3	0.63	—	1.06
BT 40	B4E5-0312	0.312	4.00	0.88	5.3	0.69	—	1.06
BT 40	B4E5-0375	0.375	4.00	1.00	3.9	0.75	—	1.06
BT 40	B4E5-0500	0.500	4.00	1.25	3.9	0.88	—	1.06
BT 40	B4E5-0625	0.625	4.00	1.50	3.6	0.94	—	1.06
BT 40	B4E5-0750	0.750	4.00	1.75	3.9	1.00	—	1.06
BT 40	B4E5-0875	0.875	5.00	1.88	4.2	1.00	—	1.06
BT 40	B4E5-1000	1.000	5.00	2.00	4.4	1.13	1.00	1.06
BT 40	B4E5-1250	1.250	5.00	2.50	4.0	1.13	1.00	1.06
BT 45	B5E5-0375	0.375	5.00	1.00	5.2	0.75	—	1.31
BT 45	B5E5-0500	0.500	5.00	1.25	5.2	0.88	—	1.31
BT 45	B5E5-0625	0.625	5.00	1.50	5.2	0.94	—	1.31
BT 45	B5E5-0750	0.750	5.00	1.75	5.2	1.00	—	1.31
BT 45	B5E5-0875	0.875	6.00	1.88	4.2	1.00	—	1.31
BT 45	B5E5-1000	1.000	6.00	2.00	4.4	1.13	1.00	1.31
BT 45	B5E5-1250	1.250	6.00	2.50	4.0	1.13	1.00	1.31
BT 45	B5E5-1500	1.500	6.00	2.50	4.0	1.13	1.00	1.31
BT 50	B6E5-0375	0.375	6.00	1.00	6.7	0.75	—	1.50
BT 50	B6E5-0500	0.500	6.00	1.25	6.7	0.88	—	1.50
BT 50	B6E5-0625	0.625	6.00	1.50	6.7	0.94	—	1.50
BT 50	B6E5-0750	0.750	6.00	1.75	6.7	1.00	—	1.50
BT 50	B6E5-0875	0.875	6.00	1.88	4.2	1.00	—	1.50
BT 50	B6E5-1000	1.000	6.00	2.00	4.4	1.13	1.00	1.50
BT 50	B6E5-1250	1.250	6.00	2.50	4.0	1.13	1.00	1.50
BT 50	B6E5-1500	1.500	6.00	2.50	4.0	1.13	1.00	1.50
BT 50	B6E5-2000	2.000	6.00	3.75	5.0	1.41	1.50	1.50

R&R™ (Reach & Rigidity)

Taper	Part No.	A	B	C	D	F	F1	L
BT 40	B4K5-0375	.375	6.00	1.00	7.3	.75	—	1.06
BT 40	B4K5-0500	.500	6.00	1.25	7.3	.88	—	1.06
BT 40	B4K5-0625	.625	6.00	1.50	3.6	.94	—	1.06
BT 40	B4K5-0750	.750	6.00	1.75	3.9	1.00	—	1.06

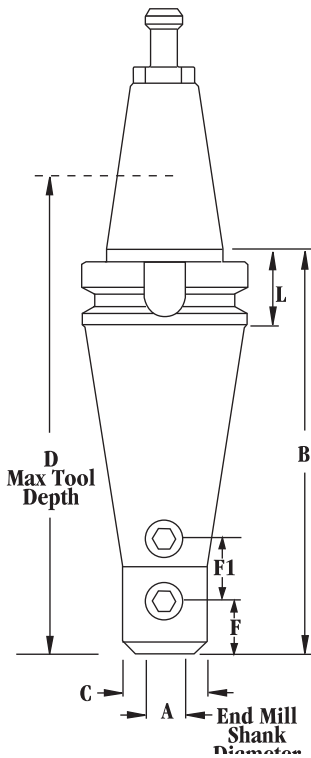
40 Taper
1.75 Dia
50 Taper
2.75 Dia



R&R™ (Reach & Rigidity) End Mill Holder shown

R&R™ (Reach & Rigidity)

- Extra strong shank steadies long tools so they cut smoother, faster and last longer — indispensable for high feed rates.
- End Mill Holders have fine thread screws that match Weldon flats — lock tight, stay tight.
- Holders accept double end cutters to save tool costs.
- Ideal for long reaches in horizontal machine.



End Mill Holders: V-Flange

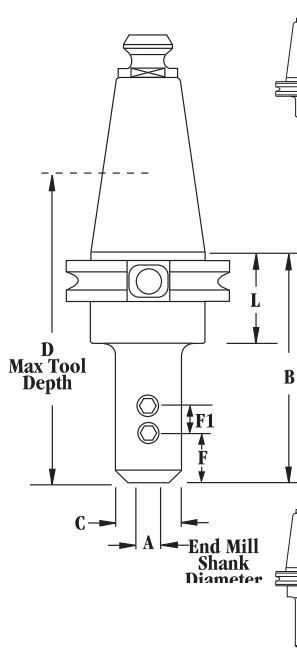


End Mill Holders:

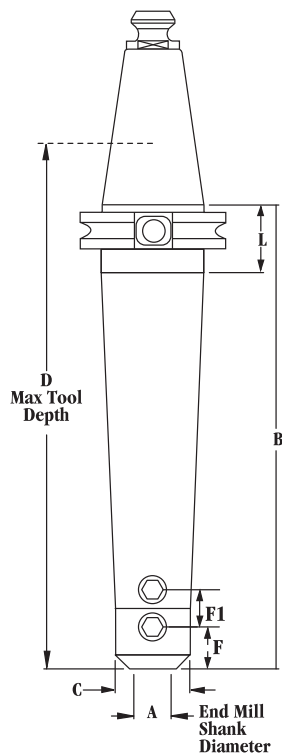
- Holders through 1.000" accept double end cutters except as noted — save on tool costs.
- Fine thread screws match Weldon flats — lock tight, stay tight.
- **NOTE:** "A" diameter of 1" or less accepts single or double end mills — Stub holders accept single end mills only. "A" diameter of 1" or larger has 2 side lock screws except Stub which has 1 side lockscrew & no safe area. Side lock screw(s) [included] in line with drive slot for easy line-ups.

End Mill Holder Benefits:

- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Less tool wear and replacement — less scrap.
- Fully ground flange and V-groove — easy on tool changers for less spindle and changer maintenance.
- All tapers and lengths ready to ship — get your tools fast!



Taper	Part No.	Stub							
		A	B	C	D	F	F1	L	
V 40	C4E3-0125	0.125	1.75	.69	3.3	0.28	---	1.38	
V 40	C4E3-0250	0.250	1.75	0.69	3.3	0.38	---	1.38	
V 40	C4E3-0375	0.375	1.75	1.00	3.3	0.75	---	1.38	
V 40	C4E3-0500	0.500	1.75	1.25	3.3	0.88	---	1.38	
V 40	C4E3-0625	0.625	1.75	1.50	2.3	0.94	---	1.38	
V 40	C4E3-0750	0.750	1.75	1.75	2.5	1.00	---	1.38	
V 40	C4E3-1000	1.000	1.75	1.75	2.5	1.13	---	1.38	
V 40	C4E3-1250*	1.250	2.00	2.25	2.3	1.13	---	0.75	
V 50	C6E3-0375	0.375	1.38	2.75	3.6	0.75	---	1.38	
V 50	C6E3-0500	0.500	1.38	2.75	3.6	0.88	---	1.38	
V 50	C6E3-0625	0.625	1.38	2.75	3.6	0.94	---	1.38	
V 50	C6E3-0750	0.750	1.63	2.75	3.8	1.00	---	1.38	
V 50	C6E3-0875	0.875	1.63	2.75	3.8	1.00	---	1.38	
V 50	C6E3-1000	1.000	1.63	2.75	3.8	1.13	---	1.38	
V 50	C6E3-1250	1.250	2.00	2.75	4.00	1.13	---	1.38	
V 50	C6E3-1500	1.500	2.25	2.75	4.00	1.13	---	1.38	



Taper	Part No.	Standard							
		A	B	C	D	F	F1	L	
V 40	C4E4-0125	0.125	2.50	0.69	4.0	0.28	---	1.38	
V 40	C4E4-0187	0.187	2.50	0.69	4.0	0.41	---	1.38	
V 40	C4E4-0250	0.250	2.50	0.78	4.0	0.53	---	1.38	
V 40	C4E4-0312	0.312	2.50	0.88	4.0	0.66	---	1.38	
V 40	C4E4-0375	0.375	2.50	1.00	4.0	0.75	---	1.38	
V 40	C4E4-0437	0.437	2.50	1.13	4.0	0.81	---	1.38	
V 40	C4E4-0500	0.500	2.63	1.25	4.0	0.88	---	1.38	
V 40	C4E4-0562	0.562	2.63	1.38	3.0	0.91	---	1.38	
V 40	C4E4-0625	0.625	3.75	1.50	3.6	0.94	---	1.38	
V 40	C4E4-0750	0.750	3.75	1.75	3.9	1.00	---	1.38	
V 40	C4E4-0875	0.875	4.00	1.88	4.2	1.00	---	1.38	
V 40	C4E4-1000	1.000	4.00	2.00	4.4	1.13	1.00	1.38	
V 40	C4E4-1250	1.250	4.25	2.50	4.0	1.13	1.00	1.38	
V 40	C4E4-1500	1.500	4.63	2.50	2.56	1.13	1.00	1.38	
V 45	C5E4-0375	0.375	2.50	1.00	4.2	0.75	---	1.38	
V 45	C5E4-0500	0.500	2.63	1.25	4.3	0.88	---	1.38	
V 45	C5E4-0625	0.625	3.75	1.50	5.2	0.94	---	1.38	
V 45	C5E4-0750	0.750	3.75	1.75	3.9	1.00	---	1.38	
V 45	C5E4-0875	0.875	3.75	1.88	4.1	1.00	---	1.38	
V 45	C5E4-1000	1.000	4.00	2.00	4.3	1.13	1.00	1.38	
V 45	C5E4-1250	1.250	4.00	2.50	4.0	1.13	1.00	1.38	
V 45	C5E4-1500	1.500	4.00	2.50	4.0	1.13	1.00	1.38	
V 45	C5E4-2000	2.000	5.25	3.75	3.5	1.41	1.50	1.38	
V 50	C6E4-0125	0.125	2.50	0.69	4.7	0.28	---	1.38	
V 50	C6E4-0187	0.187	2.50	0.69	4.7	0.41	---	1.38	
V 50	C6E4-0250	0.250	2.50	0.78	4.7	0.53	---	1.38	
V 50	C6E4-0312	0.312	2.50	0.88	4.7	0.66	---	1.38	
V 50	C6E4-0375	0.375	2.50	1.00	4.7	0.75	---	1.38	
V 50	C6E4-0437	0.437	2.63	1.13	4.8	0.81	---	1.38	
V 50	C6E4-0500	0.500	2.63	1.25	4.8	0.88	---	1.38	
V 50	C6E4-0562	0.562	2.63	1.38	4.8	0.91	---	1.38	
V 50	C6E4-0625	0.625	3.75	1.50	6.0	0.94	---	1.38	

R&R™ (Reach & Rigidity)

End Mill Holder shown

See page C-59 for R&R Toolholders

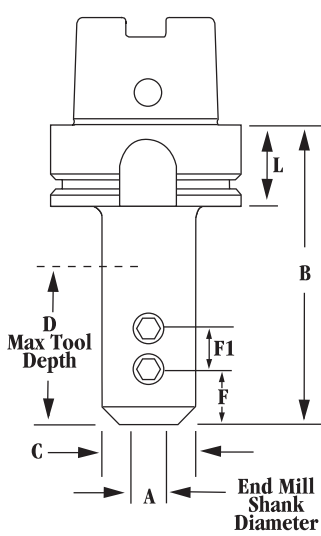
END MILL HOLDERS

End Mill Holders: HSK



Command HSK End Mill Holders:

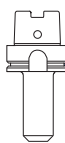
- HSK holders accept single end mills only.
- Fine thread screws match Weldon flats — lock tight, stay tight.
- **NOTE:** “A” diameter of 1” and larger has 2 side lock screws included in line with drive slot for easy line-ups.



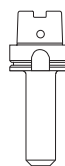
HSK Form A Illustrated



Taper	Part No.	Stub							
		A	B	C	D	F	F1	L	
HSK63A	H4E3A0250	0.250	2.13	0.78	1.2	0.53	---	1.02	
HSK63A	H4E3A0312	0.312	2.25	0.88	1.3	0.65	---	1.02	
HSK63A	H4E3A0375	0.375	2.88	1.00	1.7	0.75	---	1.02	
HSK63A	H4E3A0500	0.500	3.13	1.25	2.0	0.88	---	1.02	
HSK63A	H4E3A0625	0.625	3.38	1.50	2.1	0.94	---	1.02	
HSK63A	H4E3A0750	0.750	3.50	1.75	2.2	1.00	---	1.02	
HSK63A	H4E3A0875	0.875	3.50	1.88	2.2	1.00	---	1.02	
HSK63A	H4E3A1000	1.000	4.00	2.00	2.7	1.13	1.00	1.02	
HSK63A	H4E3A1250	1.250	4.50	2.50	3.1	1.13	1.00	1.02	
HSK63A	H4E3A1500	1.500	5.13	2.50	3.1	1.13	1.00	1.02	
HSK100A	H6E3A0250	0.250	2.38	0.78	1.2	0.53	---	1.14	
HSK100A	H6E3A0312	0.312	2.50	0.88	1.3	0.66	---	1.14	
HSK100A	H6E3A0375	0.375	2.63	1.00	1.5	0.75	---	1.14	
HSK100A	H6E3A0500	0.500	3.50	1.25	2.1	0.88	---	1.14	
HSK100A	H6E3A0625	0.625	3.50	1.50	2.1	0.94	---	1.14	
HSK100A	H6E3A0750	0.750	3.75	1.75	2.3	1.00	---	1.14	
HSK100A	H6E3A0875	0.875	3.75	1.88	2.2	1.00	---	1.14	
HSK100A	H6E3A1000	1.000	4.38	2.00	2.9	1.13	1.00	1.14	
HSK100A	H6E3A1250	1.250	4.75	2.50	3.2	1.13	1.00	1.14	
HSK100A	H6E3A1500	1.500	4.75	2.50	3.1	1.13	1.00	1.14	
HSK100A	H6E3A2000	2.000	5.75	3.75	4.0	1.41	1.50	1.14	



Taper	Part No.	Standard							
		A	B	C	D	F	F1	L	
HSK63A	H4E4A0250	0.250	4.13	0.78	3.2	0.53	---	1.02	
HSK63A	H4E4A0312	0.312	4.25	0.88	1.5	0.65	---	1.02	
HSK63A	H4E4A0375	0.375	4.88	1.00	1.5	0.75	---	1.02	
HSK63A	H4E4A0500	0.500	5.13	1.25	3.0	0.88	---	1.02	
HSK63A	H4E4A0625	0.625	5.38	1.50	3.5	0.94	---	1.02	
HSK63A	H4E4A0750	0.750	5.50	1.75	3.9	1.00	---	1.02	
HSK63A	H4E4A0875	0.875	5.50	1.88	4.1	1.00	---	1.02	
HSK63A	H4E4A1000	1.000	6.00	2.00	4.3	1.13	1.00	1.02	
HSK63A	H4E4A1250	1.250	6.50	2.50	4.0	1.13	1.00	1.02	
HSK63A	H4E4A1500	1.500	7.13	2.50	4.0	1.13	1.00	1.02	
HSK100A	H6E4A0250	0.250	4.38	0.78	3.2	0.53	---	1.14	
HSK100A	H6E4A0312	0.312	4.50	0.88	3.3	0.66	---	1.14	
HSK100A	H6E4A0375	0.375	4.63	1.00	3.5	0.75	---	1.14	
HSK100A	H6E4A0500	0.500	5.50	1.25	3.0	0.88	---	1.14	
HSK100A	H6E4A0625	0.625	5.50	1.50	3.5	0.94	---	1.14	
HSK100A	H6E4A0750	0.750	5.75	1.75	3.9	1.00	---	1.14	
HSK100A	H6E4A0875	0.875	5.75	1.88	4.1	1.00	---	1.14	
HSK100A	H6E4A1000	1.000	6.38	2.00	4.3	1.13	1.00	1.14	
HSK100A	H6E4A1250	1.250	6.75	2.50	4.0	1.13	1.00	1.14	
HSK100A	H6E4A1500	1.500	6.75	2.50	4.0	1.13	1.00	1.14	



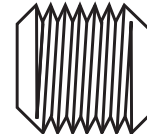
Taper	Part No.	Extended							
		A	B	C	D	F	F1	L	
HSK63A	H4E5A0250	0.250	6.13	0.78	6.5	0.53	---	1.02	
HSK63A	H4E5A0312	0.312	6.25	0.88	1.5	0.65	---	1.02	
HSK63A	H4E5A0375	0.375	6.88	1.00	1.5	0.75	---	1.02	
HSK63A	H4E5A0500	0.500	7.13	1.25	3.0	0.88	---	1.02	
HSK63A	H4E5A0625	0.625	7.38	1.50	3.5	0.94	---	1.02	
HSK63A	H4E5A0750	0.750	7.50	1.75	3.9	1.00	---	1.02	
HSK63A	H4E5A0875	0.875	7.50	1.88	4.1	1.00	---	1.02	
HSK100A	H6E5A0250	0.250	6.38	0.78	5.2	0.53	---	1.14	
HSK100A	H6E5A0312	0.312	6.50	0.88	5.3	0.66	---	1.14	
HSK100A	H6E5A0375	0.375	6.63	1.00	5.5	0.75	---	1.14	
HSK100A	H6E5A0500	0.500	7.50	1.25	3.0	0.88	---	1.14	
HSK100A	H6E5A0625	0.625	7.50	1.50	3.5	0.94	---	1.14	
HSK100A	H6E5A0750	0.750	7.75	1.75	3.9	1.00	---	1.14	
HSK100A	H6E5A0875	0.875	7.75	1.88	4.1	1.00	---	1.14	

END MILL HOLDERS

Notes

- High speed balance & nosepiece options, page A-6.
- Side lock screw torque values, page A-10.
- Through-spindle coolant standard. Other coolant options, page A-12.
- Retention Knobs, pages D-76 & D-77 .
- Replacement side lock screws, page C-61.
- HSK coolant hole plugs and coolant tubes sold separately, see page D-79.
- HSK Accessories & Setup Holding Fixtures, page D-79.

Replacement Parts



Replacement Side Lock Screws

End Mill Dia. Size	Part No.	Inch Thread Size	Length	Torque Inch-Lbs	End Mill Dia. Size	Part No.	Metric Thread Size	Length	Torque Inch-Lbs
0.125	XEML-0232	8-32	.25	18	6 mm	XEML-0610	M6-1.0	10	60
0.187	XEML-0332	10-32	.25	30	8 mm	XEML-0813	M8-1.25	10	120
0.250	XEML-0428	1/4-28	.25	60	10 mm	XEML-1015	M10-1.5	12	180
0.312	XEML-0524	5/16-24	.25	120	12 mm	XEML-1218	M12-1.75	16	250
0.375	XEML-0624	3/8-24	.30	200	14 mm	XEML-1218	M12-1.75	16	250
0.437	XEML-0624	3/8-24	.30	200	16 mm	XEML-1420	M14-2.0	16	450
0.500	XEML-0720	7/16-20	.36	220	18 mm	XEML-1420	M14-2.0	16	450
0.562	XEML-0720	7/16-20	.36	220	20 mm	XEML-1620	M16-2.0	16	840
0.625	XEML-0820	1/2-20	.42	500					
0.750	XEML-1018	5/8-18	.49	560					
0.875	XEML-1018	5/8-18	.49	560					
1.000	XEML-1216	3/4-16	.45	1150					
1.250	XEML-1216	3/4-16	.45	1150					
1.500	XEML-1216	3/4-16	.45	1150					
2.000	XEML-1614	1-14	.88	1500					

Powerful, Accurate Grip for Heavy Cuts and Fine Finish

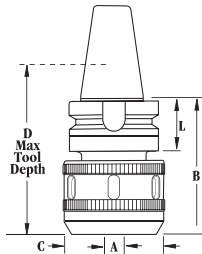


Features & Benefits:

- Extreme Gripping Power Eliminates Tool Slippage—Best tool grip of all collet chucks for heavy roughing performance.
- Excellent Accuracy— Results from the combination of concentricity and gripping power.
- Outstanding Concentricity— TIR of .0004" at 4" from nosepiece is predictable and repeatable.

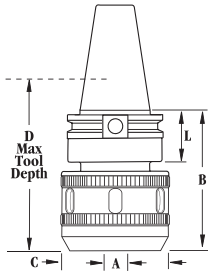
- Reduces Chatter— Nose geometry provides high stiffness for smooth, accurate finish cutting.
- Increased tool life—with balanced cutting forces and even chip load.
- Nosepiece design evenly distributes clamping force for maximum gripping pressures on the cutting tool.
- Shank Taper Tolerances of AT3 or better.
- Through-spindle coolant.

BT-Flange



Taper	Part No.	A	B	C	D Tool Depth Range	L	Gripping Torque (Ft-Lbs)	Maximum Tightening Torque (Ft-Lbs)
BT 40	B414-0750	.750	3.54	2.126 (54 mm)	2.0-2.4" (53-63 mm)	1.06	500	42
BT 40	B414-1250	1.250	3.54	2.835 (72 mm)	2.6-3.0" (67-77 mm)	1.06	2500	54

V-Flange

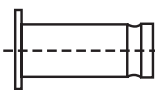


Taper	Part No.	A	B	C	D Tool Depth Range	L	Gripping Torque (Ft-Lbs)	Maximum Tightening Torque (Ft-Lbs)
V 40	C414-0750	.750	3.54	2.126 (54 mm)	2.0-2.4" (53-63 mm)	1.38	500	42
V 40	C414-1250*	1.250	3.54	2.835 (72 mm)	2.6-3.0" (67-77 mm)	1.38	2500	54
V 50	C614-0750	.750	4.13	2.126 (54 mm)	2.0-2.4" (53-63 mm)	1.38	500	42
V 50	C614-1250	1.250	4.13	2.835 (72 mm)	2.6-3.0" (67-77 mm)	1.38	2500	54

Replacement Parts

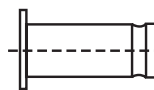
Milling Chuck Straight Collets For 0.750" Milling Chucks

Part No.	Collet ID
SC34-0375	0.375
SC34-0437	0.437
SC34-0500	0.500
SC34-0625	0.625



Milling Chuck Straight Collets For 1.250" Milling Chucks

Part No.	Collet ID
SC12-0375	0.375
SC12-0437	0.437
SC12-0500	0.500
SC12-0625	0.625
SC12-0750	0.750
SC12-0875	0.875
SC12-1000	1.000

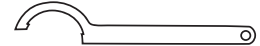


Stop Screws (Coolant Through)

Part No.	Thread
XIBS-1815-C	For 0.750" Milling Chucks M18 x 1.5
XIBS-2815-C	For 1.250" Milling Chucks M28 x 1.5

Wrenches

Part No.	
XSCW-0750	For 0.750" Milling Chucks
XSCW-1250	For 1.250" Milling Chucks



Notes

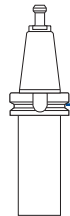
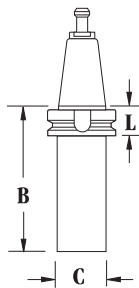
- * C414-1250 does not meet the safe zone dimensions of ANSI B5.50 1994 and may not work on all tool change mechanisms.
- Milling chucks available only with shiny shank; no black oxide.
- Through-spindle coolant standard. Other coolant options, page A-12.
- Retention Knobs & Setup Holding Fixtures, pages D-76 & D-77, D-78.
- Milling chucks can accept round shanks (no flats) cutting tools with h6 tolerances, see page A-4.

- Ideal for applications utilizing carbide tooling.
- Over-collapse will cause unreparable damage to the milling chuck.
- Never over-tighten the milling chuck nosepiece. Hand tighten nosepiece with wrench. Follow maximum recommended nosepiece tightening torques listed.
- Never tighten nosepiece without the proper collet and tool installed.
- Verify indexable cutter body shank size before use.

Blank Bars:

- Shank taper and flange on BT/V-Flange and HSK100A are case hardened and precision ground.
Nose is unhardened 8620 alloy steel machinable for making custom and emergency holders.
- Precision internal center eases alignment.
- HSK40, HSK63 and Beta Modul® are thru hardened (4340 material).

BT-Flange

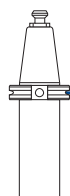
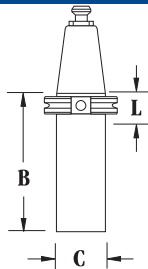


		Stub			
Taper	Part No.	B	C	L	
BT 30	B2X3-0002	6.00	1.750	0.85	
BT 35	B3X3-0003	6.00	2.375	0.87	
BT 40	B4X3-0004	6.00	2.500	1.06	
BT 45	B5X3-0005	6.00	3.250	1.31	
BT 50	B6X3-0006	6.00	3.875	1.50	



		Standard			
Taper	Part No.	B	C	L	
BT 35	B3X4-0003	11	2.375	0.87	
BT 40	B4X4-0004	11	2.500	1.06	
BT 45	B5X4-0005	11	3.250	1.31	
BT 50	B6X4-0006	11	3.875	1.50	

V-Flange

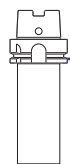
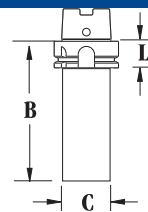


		Stub			
Taper	Part No.	B	C	L	
V 40	C4X3-0004	6.00	2.500	1.44	
V 45	C5X3-0005	6.00	3.250	1.44	
V 50	C6X3-0006	6.00	3.875	1.44	



		Standard			
Taper	Part No.	B	C	L	
V 40	C4X4-0004	11	2.500	1.44	
V 45	C5X4-0005	11	3.250	1.44	
V 50	C6X4-0006	11	3.875	1.44	

HSK



		Stub			
Taper	Part No.	B	C	L	
HSK40A	H2X3A0002	6.00	1.750	1.41	
HSK63A	H4X3A0004	6.00	2.500	1.66	
HSK100A	H6X3A0006	6.00	3.875	1.78	

BETA MODUL®



Beta	Part No.	B	C
25	U1X3B0001	2.75	1.13
32	U2X3B0002	3.25	1.38
40	U3X3B0003	4.00	1.63
50	U4X3B0004	6.00	2.75
63	U5X4B0005	10.00	3.25
80	U6X4B0006	7.00	3.25
100	U7X4B0007	8.00	4.00

Notes

- Black oxide complete on toolholders, page A-2.

- Retention Knobs, pages D-76 & D-77 .

- HSK Accessories & Setup Holding Fixtures, page D-79.

Shell Mill Holders



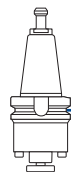
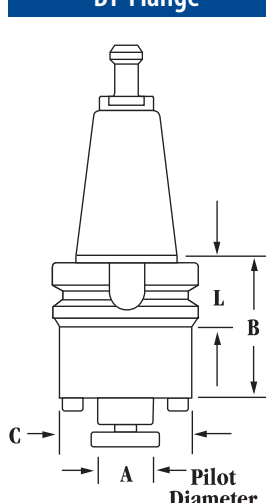
Shell Mill Holders:

- Pilot diameter is sized for precision fit with cutter.
- Face perpendicular to centerline within .0002".
- Removable/replaceable drive keys are standard.
- Fine thread locking screw is included.
- NOTE: Drive keys are in line with drive slot.

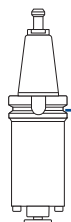
Command Shell Mill Holder Benefits:

- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Less tool wear and replacement — less scrap.
- Fully ground flange and V-groove — easy on the tool changers for less spindle and changer maintenance..
- All tapers and lengths ready to ship — get your tools fast!

BT-Flange

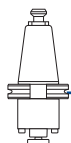
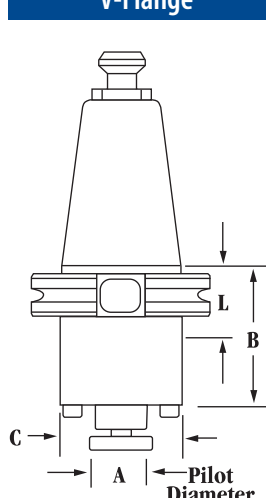


		Standard			
Taper	Part No.	A	B	C	L
BT 30	B2S4-0750	0.750	1.75	1.69	0.87
BT 30	B2S4-1000	1.000	2.00	2.19	0.87
BT 35	B3S4-0750	0.750	1.18	1.69	0.87
BT 35	B3S4-1000	1.000	1.26	2.19	0.87
BT 35	B3S4-1250	1.250	2.36	2.75	0.87
BT 40	B4S4-0750	0.750	1.77	1.69	1.06
BT 40	B4S4-1000	1.000	1.77	2.19	1.06
BT 40	B4S4-1250	1.250	1.81	2.75	1.06
BT 40	B4S4-1500	1.500	2.36	3.81	1.06
BT 45	B5S4-0750	0.750	1.77	1.69	1.31
BT 45	B5S4-1000	1.000	1.77	2.19	1.31
BT 45	B5S4-1250	1.250	1.77	2.75	1.31
BT 45	B5S4-1500	1.500	2.36	3.81	1.31
BT 45	B5S4-2000	2.000	2.76	4.88	1.31
BT 50	B6S4-1000	1.000	1.75	2.19	1.50
BT 50	B6S4-1250	1.250	1.75	2.75	1.50
BT 50	B6S4-1500	1.500	1.75	3.81	1.50
BT 50	B6S4-2000	2.000	3.00	4.88	1.50

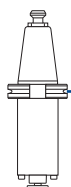


		Extended			
Taper	Part No.	A	B	C	L
BT 35	B3S5-0750	0.750	4.72	1.69	0.87
BT 35	B3S5-1000	1.000	4.72	2.19	0.87
BT 40	B4S5-0750	0.750	4.13	1.69	1.06
BT 40	B4S5-1000	1.000	4.13	2.19	1.06
BT 40	B4S5-1250	1.250	4.13	2.75	1.06
BT 40	B4S5-1500	1.500	4.72	3.81	1.06
BT 45	B5S5-0750	0.750	4.13	1.69	1.31
BT 45	B5S5-1000	1.000	4.13	2.19	1.31
BT 45	B5S5-1250	1.250	4.13	2.75	1.31
BT 45	B5S5-1500	1.500	4.13	3.81	1.31
BT 45	B5S5-2000	2.000	4.72	4.88	1.31
BT 50	B6S5-1000	1.000	4.00	2.19	1.50
BT 50	B6S5-1250	1.250	4.00	2.75	1.50
BT 50	B6S5-1500	1.500	4.00	3.81	1.50
BT 50	B6S5-2000	2.000	4.00	4.88	1.50

V-Flange

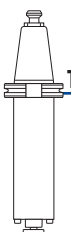


		Standard			
Taper	Part No.	A	B	C	L
V 40	C4S4-0500	0.500	1.50	1.44	1.38
V 40	C4S4-0750	0.750	1.50	1.69	1.38
V 40	C4S4-1000	1.000	2.06	2.19	1.44
V 40	C4S4-1250	1.250	2.63	2.75	1.44
V 40	C4S4-1500	1.500	3.00	3.81	1.44
V 45	C5S4-0500	0.500	1.50	1.44	1.38
V 45	C5S4-0750	0.750	1.50	1.69	1.38
V 45	C5S4-1000	1.000	2.00	2.19	1.38
V 45	C5S4-1250	1.250	2.38	2.75	1.44
V 45	C5S4-1500	1.500	2.75	3.81	1.44
V 45	C5S4-2000	2.000	3.31	4.88	1.44
V 50	C6S4-0500	0.500	1.50	1.44	1.38
V 50	C6S4-0750	0.750	1.50	1.69	1.38
V 50	C6S4-1000	1.000	2.00	2.19	1.38
V 50	C6S4-1250	1.250	1.50	2.75	N/A
V 50	C6S4-1500	1.500	2.50	3.81	1.44
V 50	C6S4-2000	2.000	3.00	4.88	1.44
V 50	C6S4-2500	2.500	2.40	4.88	1.44



		Extended			
Taper	Part No.	A	B	C	L
V 40	C4S5-0500	0.500	3.50	1.44	1.38
V 40	C4S5-0750	0.750	3.50	1.69	1.38
V 40	C4S5-1000	1.000	4.00	2.19	1.44
V 40	C4S5-1250	1.250	4.00	2.75	1.44
V 40	C4S5-1500	1.500	4.00	3.81	1.44

continued in next column



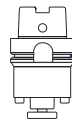
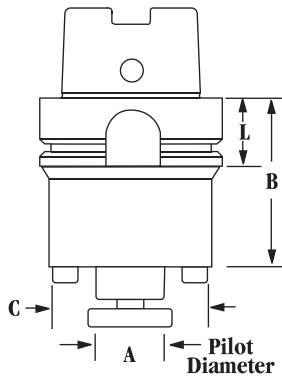
		Extended (continued)			
Taper	Part No.	A	B	C	L
V 45	C5S5-0500	0.500	3.50	1.44	1.38
V 45	C5S5-0750	0.750	3.50	1.69	1.38
V 45	C5S5-1000	1.000	4.00	2.19	1.38
V 45	C5S5-1250	1.250	4.00	2.75	1.44
V 45	C5S5-1500	1.500	4.00	3.81	1.44
V 45	C5S5-2000	2.000	4.00	4.88	1.44
V 50	C6S5-0500	0.500	3.50	1.44	1.38
V 50	C6S5-0750	0.750	3.50	1.69	1.38
V 50	C6S5-1000	1.000	4.00	2.19	1.38
V 50	C6S5-1250	1.250	3.50	2.75	N/A
V 50	C6S5-1500	1.500	4.00	3.81	1.44
V 50	C6S5-2000	2.000	4.00	4.88	1.44
V 50	C6S5-2500	2.500	4.00	4.88	1.44

		Extra Extended			
Taper	Part No.	A	B	C	L
V 45	C5S6-0500	0.500	5.50	1.44	1.38
V 45	C5S6-0750	0.750	5.50	1.69	1.38
V 45	C5S6-1000	1.000	6.00	2.19	1.38
V 45	C5S6-1250	1.250	6.00	2.75	1.44
V 45	C5S6-1500	1.500	6.00	3.81	1.44
V 45	C5S6-2000	2.000	6.00	4.88	1.44
V 50	C6S6-0500	0.500	5.50	1.44	1.38
V 50	C6S6-0750	0.750	5.50	1.69	1.38
V 50	C6S6-1000	1.000	6.00	2.19	1.38
V 50	C6S6-1250	1.250	5.50	2.75	N/A
V 50	C6S6-1500	1.500	6.00	3.81	1.44
V 50	C6S6-2000	2.000	6.00	4.88	1.44

Note: Shell Mill
Not Included

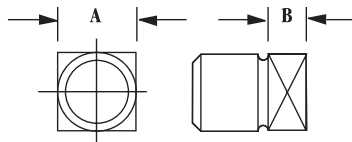


HSK



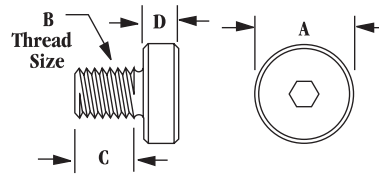
Taper	Part No.	Stub			
		A	B	C	L
HSK63A	H4S3A0750	0.750	1.75	1.69	1.02
HSK63F	H4S3F0750	0.750	1.75	1.69	1.02
HSK63F	H4S3F1000	1.000	1.88	2.06	1.02
HSK63A	H4S3A1000	1.000	1.88	2.06	1.02
HSK63A	H4S3A1250	1.250	2.50	2.75	1.02
HSK63A	H4S3A1500	1.500	2.75	3.81	1.02
HSK100A	H6S3A0750	0.750	1.88	1.69	1.14
HSK100A	H6S3A1000	1.000	2.00	2.19	1.14
HSK100A	H6S3A1250	1.250	2.25	2.75	1.14
HSK100A	H6S3A1500	1.500	2.50	3.81	1.14
HSK100A	H6S3A2000	2.000	3.50	4.88	1.14

Replacement Parts



Replacement Drive Keys

Part No.	A	B
XSDK-0500	0.250	0.125
XSDK-0750	0.313	0.156
XSDK-1000	0.375	0.187
XSDK-1250	0.500	0.250
XSDK-1500	0.625	0.312
XSDK-2000	0.750	0.375
XSDK-2500	1.000	0.500



Replacement Lock Screws
Lock screws are solid, not coolant through

Part No.	A	B	C	D
XSAS-0500	0.625	0.250-28	0.50	0.34
XSAS-0750	0.875	0.375-24	0.63	0.37
XSAS-1000	1.188	0.500-20	0.81	0.37
XSAS-1250	1.500	0.625-18	0.94	0.50
XSAS-1500	1.875	0.750-16	1.13	0.50
XSAS-2000	2.480	1.000-14	1.31	0.50
XSAS-2500	3.125	1.000-14	1.50	0.50

Notes

- Black oxide complete on toolholders, page A-2.
- Requires "Assemblies" balance option, see page A-6.
- Coolant option details for Shell Mill Holders, page A-12.
- 2" and 2.5" Shell Mill Holders also have (4) 5/8"-11 threaded holes on a 4" bolt circle.
- Retention Knobs, pages D-76 & D-77 .
- HSK coolant hole plugs and coolant tubes sold separately, see page D-79.
- HSK Accessories & Setup Holding Fixtures, page D-79.

Tension & Compression Tap Holders & Accessories



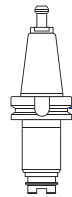
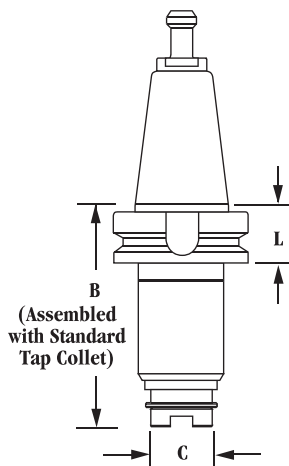
Tension & Compression Tap Holders:

- Tension & Compression style has axial float for precise thread pitch.
- Uses popular Bilz style quick change collet system.
- Holders travel in tension .75"/compression .37".



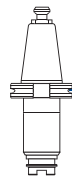
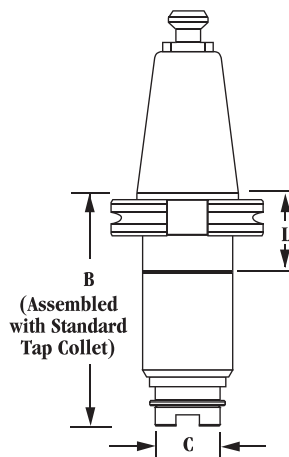
Note: Tap Collets sold separately

BT-Flange



Taper	Part No.	Standard			
		Collet #	B	C	L
BT 30	B2T4-0001	#1	4.95	1.75	0.87
BT 35	B3T4-0001	#1	4.68	1.75	0.87
BT 35	B3T4-0002	#2	6.72	2.25	0.87
BT 40	B4T4-0001	#1	4.53	1.75	1.06
BT 40	B4T4-0002	#2	6.72	2.25	1.06
BT 45	B5T4-0001	#1	4.53	1.75	1.31
BT 45	B5T4-0002	#2	6.72	2.25	1.31
BT 45	B5T4-0003	#3	8.33	3.25	1.31
BT 50	B6T4-0001	#1	4.64	1.75	1.50
BT 50	B6T4-0002	#2	6.72	2.25	1.50
BT 50	B6T4-0003	#3	8.33	3.25	1.50

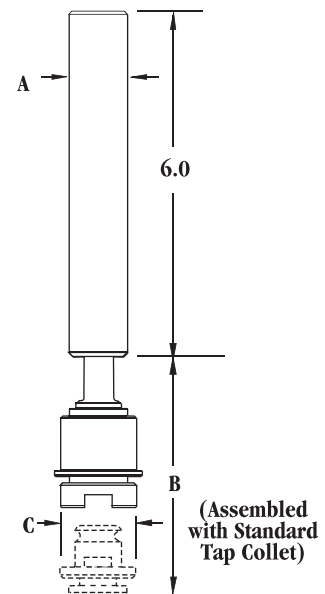
V-Flange



Taper	Part No.	Standard			
		Collet #	B	C	L
V 40	C4T4-0001	#1	4.56	1.75	1.38
V 40	C4T4-0002	#2	6.47	2.25	1.38
V 45	C5T4-0001	#1	4.56	1.75	1.38
V 45	C5T4-0002	#2	5.82	2.25	1.38
V 45	C5T4-0003	#3	8.33	3.25	1.38
V 50	C6T4-0001	#1	4.56	1.75	1.38
V 50	C6T4-0002	#2	5.82	2.25	1.38
V 50	C6T4-0003	#3	8.33	3.25	1.38

ACCESSORIES

Straight Shank



Part No.	Collet #	A	B	C
XSTH-0001	#1	1.00	2.50	1.50
XSTH-0002	#2	1.25	3.25	1.88

Notes

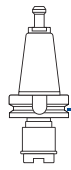
- Black oxide complete is available upon request for standard toolholders, page A-2.
- "B" dimension is the assembled length including standard tap collet.
- Quick-Change Tap Collets, page C-68.
- Retention Knobs, pages D-76 & D-77 .
- HSK Coolant hole plugs included, coolant tubes optional, page D-79.
- HSK Accessories & Setup Holding Fixtures, page D-79.

Synchronous (Rigid) Tap Holders & Accessories

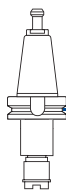
Synchronous (Rigid) Tap Holders:

- Rigid synchronous system for newer machine controls (machines with 32 bit microprocessors).
- Extended lengths available for horizontal machining centers.
- Uses popular Bilz style quick change collet system.

BT-Flange

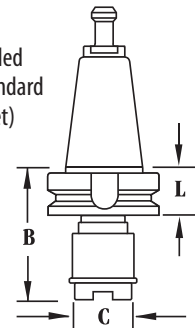


Standard						
Taper	Part No.	Collet #	B	C	L	
BT 30	B2P2-0001	#1	3.07	1.50	.87	
BT 35	B3P2-0001	#1	3.12	1.50	.87	
BT 35	B3P2-0002	#2	3.82	1.88	.87	
BT 40	B4P2-0001	#1	3.31	1.50	1.06	
BT 40	B4P2-0002	#2	4.01	1.88	1.06	
BT 45	B5P2-0001	#1	3.56	1.50	1.31	
BT 45	B5P2-0002	#2	4.26	1.88	1.31	
BT 50	B6P2-0001	#1	3.75	1.50	1.50	
BT 50	B6P2-0002	#2	4.45	1.88	1.50	

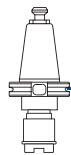


Extended						
Taper	Part No.	Collet #	B	C	L	
BT 40	B4P5-0001	#1	5.87	1.50	1.06	
BT 40	B4P5-0002	#2	6.57	1.88	1.06	
BT 45	B5P5-0001	#1	6.87	1.50	1.31	
BT 45	B5P5-0002	#2	7.57	1.88	1.31	
BT 45	B5P5-0003	#3	8.33	3.25	1.31	
BT 50	B6P5-0001	#1	7.87	1.50	1.50	
BT 50	B6P5-0002	#2	8.57	1.88	1.50	
BT 50	B6P5-0003	#3	8.33	3.25	1.50	

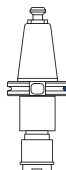
(Assembled with Standard Tap Collet)



SYNCHRONOUS TAP HOLDERS

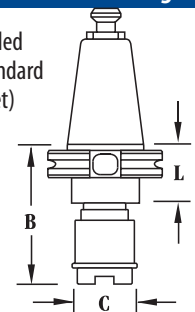


Standard						
Taper	Part No.	Collet #	B	C	L	
V 40	C4P2-0001	#1	3.58	1.50	1.38	
V 40	C4P2-0002	#2	4.22	1.88	1.38	
V 45	C5P2-0001	#1	3.58	1.50	1.38	
V 45	C5P2-0002	#2	4.22	1.88	1.38	
V 50	C6P2-0001	#1	3.58	1.50	1.38	
V 50	C6P2-0002	#2	4.22	1.88	1.38	



Extended						
Taper	Part No.	Collet #	B	C	L	
V 40	C4P5-0001	#1	5.58	1.50	1.38	
V 40	C4P5-0002	#2	6.22	1.88	1.38	
V 45	C5P5-0001	#1	5.58	1.50	1.38	
V 45	C5P5-0002	#2	6.22	1.88	1.38	
V 45	C5P5-0003	#3	8.33	3.25	1.38	
V 50	C6P5-0001	#1	5.58	1.50	1.38	
V 50	C6P5-0002	#2	6.22	1.88	1.38	
V 50	C6P5-0003	#3	8.33	3.25	1.38	

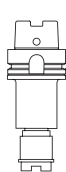
(Assembled with Standard Tap Collet)



HSK

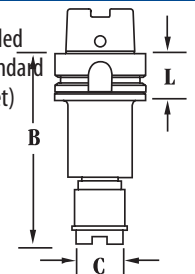


Note: Tap Collets sold separately.



Standard						
Taper	Part No.	Collet #	B	C	L	
HSK63A	H4P2A0001	#1	5.33	1.50	1.02	
HSK63A	H4P2A0002	#2	6.08	1.88	1.02	
HSK100A	H6P2A0001	#1	5.58	1.50	1.14	
HSK100A	H6P2A0002	#2	6.33	1.88	1.14	

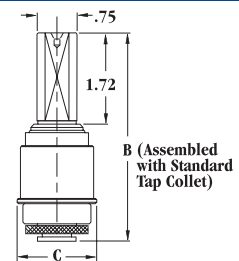
(Assembled with Standard Tap Collet)



Straight Shank



Straight Shank				
Part No.	Collet #	B	C	
XRTH-A100	#1	3.92	1.50	
XRTH-A200	#2	4.70	1.88	



Notes

- Black oxide complete is available upon request for standard toolholders, page A-2.
- "B" dimension is the assembled length including standard tap collet.
- Quick-Change Tap Collets, page C-68.
- Retention Knobs, pages D-76 & D-77 .
- HSK Coolant hole plugs included, coolant tubes optional, page D-79.
- HSK Accessories & Setup Holding Fixtures, page D-79.

Quick Change Tap Collets

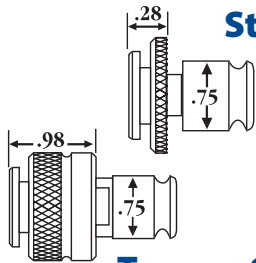


Quick Change Tap Collets:

- Bilz style quick change collet system allows tap and tap size to be changed without tools in seconds.
- For use with Command Tension & Compression Tap Holders (see page C-56) and Synchronous (Rigid) Tap Holders (see page C-57).

- Precision ground components provide smooth action.
- Metric tap collets manufactured to DIN 371 and 376.

Collet # 1



Standard

Torque Control

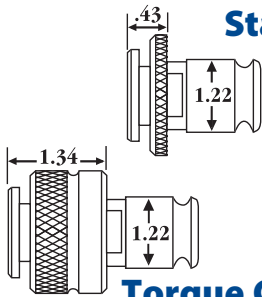
* Add -T at end of Part No. to specify Torque Control Collet.

Part No.	Inches (In)		
	Shank Dia.	Square	Tap Size
XTC1-0006	0.141	0.110	No. 0-6
XTC1-0008	0.168	0.131	No. 8
XTC1-0010	0.194	0.152	No. 10
XTC1-0012	0.220	0.165	No. 12
XTC1-0250	0.255	0.191	1/4
XTC1-0312	0.318	0.238	5/16
XTC1-0375	0.381	0.286	3/8
XTC1-0437	0.323	0.242	7/16
XTC1-0500	0.367	0.275	1/2
XTC1-0562	0.429	0.322	9/16
XTC1-P062	0.313	0.234	1/16 Pipe
XTC1-P125	0.437	0.328	1/8 Pipe
XTC1-12ST			Set of 12 Collets

Part No.	Metric (mm)		
	Shank Dia.	Square	Tap Size
XTC1-M035	3.5	2.7	M3
XTC1-M045	4.5	3.4	M4
XTC1-M060	6.0	4.9	M5, M6, M8
XTC1-M080	8.0	6.2	M8
XTC1-M100	10.0	8.0	M10
XTC1-M070	7.0	5.5	M10
XTC1-M090	9.0	7.0	M12
XTC1-M110	11.0	9.0	M14

* Add -T at end of Part No. to specify Torque Control Collet.

Collet # 2



Standard

Torque Control

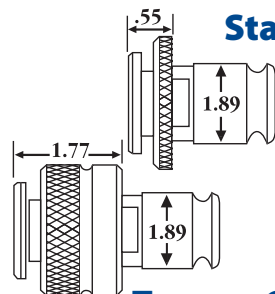
* Add -T at end of Part No. to specify Torque Control Collet.

XTC2-0312	0.318	0.238	5/16
XTC2-0375	0.381	0.286	3/8
XTC2-0437	0.323	0.242	7/16
XTC2-0500	0.367	0.275	1/2
XTC2-0562	0.429	0.322	9/16
XTC2-0625	0.480	0.360	5/8
XTC2-0687	0.542	0.406	11/16
XTC2-0750	0.590	0.442	3/4
XTC2-0812	0.652	0.489	13/16
XTC2-0875	0.697	0.523	7/8
XTC2-P250	0.562	0.421	1/4 Pipe
XTC2-P375	0.700	0.531	3/8 Pipe
XTC2-P500	0.687	0.515	1/2 Pipe
XTC2-13ST			Set of 13 Collets

XTC2-M060	6.0	4.9	M6, M8
XTC2-M080	8.0	6.2	M8
XTC2-M100	10.0	8.0	M10
XTC2-M070	7.0	5.5	M10
XTC2-M090	9.0	7.0	M12
XTC2-M110	11.0	9.0	M14
XTC2-M120	12.0	9.0	M16
XTC2-M140	14.0	11.0	M18
XTC2-M160	16.0	12.0	M20

* Add -T at end of Part No. to specify Torque Control Collet.

Collet # 3



Standard

Torque Control

* Add -T at end of Part No. to specify Torque Control Collet.

XTC3-0812	0.652	0.489	13/16
XTC3-0875	0.697	0.523	7/8
XTC3-0937	0.760	0.570	15/16
XTC3-1000	0.800	0.600	1
XTC3-1125	0.896	0.672	1 1/8
XTC3-1250	1.021	0.766	1 1/4
XTC3-1375	1.108	0.831	1 3/8
XTC3-P750	0.906	0.679	3/4 Pipe
XTC3-P100	1.125	0.843	1 Pipe
XTC3-09ST			Set of 9 Collets

XTC3-M110	11.0	9.0	M14
XTC3-M120	12.0	9.0	M16
XTC3-M140	14.0	11.0	M18
XTC3-M160	16.0	12.0	M20
XTC3-M180	18.0	14.5	M22, M24
XTC3-M200	20.0	16.0	M27
XTC3-M220	22.0	18.0	M30
XTC3-M250	25.0	20.0	M33

* Add -T at end of Part No. to specify Torque Control Collet.

QUICK CHANGE TAP COLLETS

Notes

- Check tap shank & square size before ordering Tap Collets.
- Torque-Control style tap collets not recommended for use with Synchronous (Rigid) Tap Holders.
- Metric Torque-Control Tap collets are non-stock, special order, contact Command Customer Service.

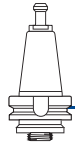
Command Toolholder Benefits:

- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Less tool wear and replacement — less scrap.
- Fully ground flange and V-groove — easy on the tool changers for less spindle and changer maintenance.
- All tapers and lengths ready to ship — get your tools fast!

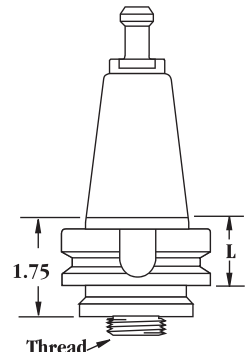


Note: Boring Head
Not Included

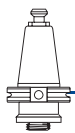
BT-Flange



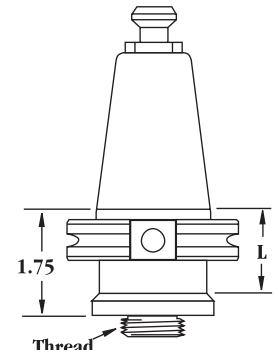
Taper	Part No.	Standard		Boring Heads
		Thread	L	
BT 30	B2H4-1018	5/8-18	.87	Erickson #37 & #50
BT 30	B2H4-1420	7/8-20	.87	SPI, Yuasa & Criterion
BT 35	B3H4-1018	5/8-18	.87	Erickson #37 & #50
BT 35	B3H4-1420	7/8-20	.87	SPI, Yuasa & Criterion
BT 40	B4H4-1018	5/8-18	1.06	Erickson #37 & #50
BT 40	B4H4-1420	7/8-20	1.06	SPI, Yuasa & Criterion
BT 40	B4H4-2418	11/2-18	1.06	SPI, Yuasa & Criterion
BT 45	B5H4-1018	5/8-18	1.31	Erickson #37 & #50
BT 45	B5H4-1420	7/8-20	1.31	SPI, Yuasa & Criterion
BT 45	B5H4-2418	11/2-18	1.31	SPI, Yuasa & Criterion
BT 50	B6H4-1018	5/8-18	1.50	Erickson #37 & #50
BT 50	B6H4-1420	7/8-20	1.50	SPI, Yuasa & Criterion
BT 50	B6H4-2418	11/2-18	1.50	SPI, Yuasa & Criterion



V-Flange



Taper	Part No.	Standard		Boring Heads
		Thread	L	
V 40	C4H4-1018	5/8-18	1.38	Erickson #37 & #50
V 40	C4H4-1420	7/8-20	1.38	SPI, Yuasa & Criterion
V 40	C4H4-2418	11/2-18	1.38	SPI, Yuasa & Criterion
V 45	C5H4-1018	5/8-18	1.38	Erickson #37 & #50
V 45	C5H4-1420	7/8-20	1.38	SPI, Yuasa & Criterion
V 45	C5H4-2418	11/2-18	1.38	SPI, Yuasa & Criterion
V 50	C6H4-1018	5/8-18	1.38	Erickson #37 & #50
V 50	C6H4-1420	7/8-20	1.38	SPI, Yuasa & Criterion
V 50	C6H4-2418	11/2-18	1.38	SPI, Yuasa & Criterion



Notes

- Black oxide complete is available upon request for standard toolholders, page A-2.
- Retention Knobs & Setup Holding Fixtures, pages D-76 & D-77, D-78.

Semi-Flush Slitting Saw Holders & Accessories

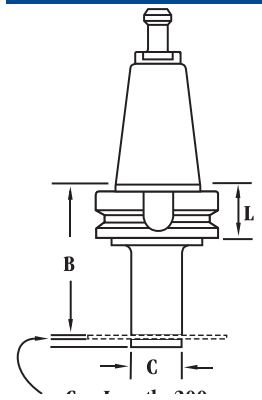


Semi-Flush Slitting Saw Holders:

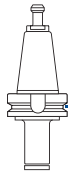
- Semi flush nose cap gets in tight areas.
- Change saw width without spacers.
- Face is held perpendicular to centerline within .0002".
- Pilot diameter is sized for precision fit with cutter and is keyed for positive drive.
- Designed for slitting saws up to 5/16" thick —wider cutters use Stub Arbor Holder.



BT-Flange

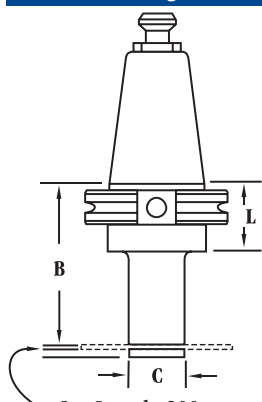


(Maximum slitting saw width—5/16")

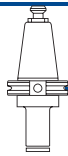


Taper	Part No.	Saw Size ID	B	C	L
BT 40	B4G4-1000	1.00	4.00	1.50	1.06
BT 40	B4G4-1250	1.25	4.00	2.00	1.06

V-Flange



(Maximum slitting saw width — 5/16")



Taper	Part No.	Saw Size ID	B	C	L
V 40	C4G4-1000	1.00	4.00	1.50	1.38
V 40	C4G4-1250	1.25	4.00	2.00	1.44
V 45	C5G4-1000	1.00	4.00	1.50	1.38
V 45	C5G4-1250	1.25	4.00	2.00	1.38
V 50	C6G4-1000	1.00	4.00	1.50	1.38
V 50	C6G5-1000	1.00	6.00	1.50	1.38
V 50	C6G4-1250	1.25	4.00	2.00	1.38
V 50	C6G5-1250	1.25	6.00	2.00	1.38

SPECIALTY TOOLHOLDERS

Replacement Parts

Part No.	Description	Part No.	Description
XSFC-1000	Cap For 1"	XSFC-1250	Cap For 1 1/4"
XSSK-1000	Drive Key For 1"	XSSK-1250	Drive Key For 1 1/4"

Notes

~ Black oxide complete is available upon request for standard toolholders, page A-2.

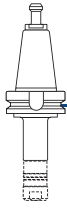
~ Retention Knobs & Setup Holding Fixtures, pages D-76 & D-77, D-78.

Stub Arbor Holders

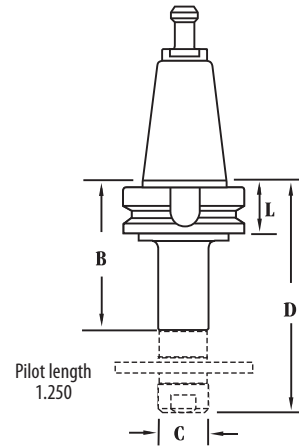
- Pilot thread is ground concentric to the tapered shank.
- Face is perpendicular to centerline within .0002".
- Pilot Diameter is sized for precision fit with cutter and is keyed for positive drive.
- Heavy duty locking nut and three arbor spacers are included - 1/4", 3/8", 3/4".



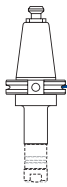
BT-Flange



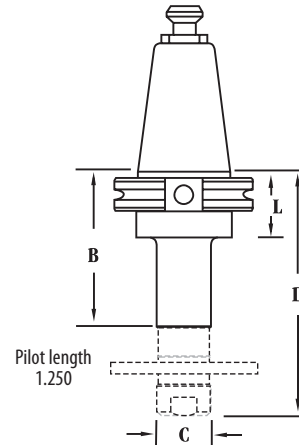
Taper	Part No.	Cutter Size ID	B	C	D	L
BT 40	B4F4-1000	1.00	4.00	1.56	6.25	1.06
BT 40	B4F4-1250	1.25	4.00	1.87	6.50	1.06
BT 45	B5F4-1000	1.00	4.00	1.56	6.25	1.31
BT 45	B5F4-1250	1.25	4.00	1.87	6.50	1.31
BT 50	B6F4-1000	1.00	4.00	1.56	6.25	1.50
BT 50	B6F5-1000	1.00	6.00	1.56	8.25	1.50
BT 50	B6F4-1250	1.25	4.00	1.87	6.50	1.50
BT 50	B6F5-1250	1.25	6.00	1.87	8.50	1.50



V-Flange



Taper	Part No.	Cutter Size ID	B	C	D	L
V 40	C4F4-1000	1.00	4.00	1.56	6.25	1.38
V 40	C4F4-1250	1.25	4.00	1.87	6.50	1.44
V 45	C5F4-1000	1.00	4.00	1.56	6.25	1.38
V 45	C5F4-1250	1.25	4.00	1.87	6.50	1.38
V 50	C6F4-1000	1.00	4.00	1.56	6.25	1.38
V 50	C6F5-1000	1.00	6.00	1.56	8.25	1.38
V 50	C6F4-1250	1.25	4.00	1.87	6.50	1.38
V 50	C6F5-1250	1.25	6.00	1.87	8.50	1.38



Replacement Parts

Part No.	Description	Part No.	Description
XSAN-1000	Nut For 1"	XSAN-1250	Nut For 1 1/4"
XKEY-1000	Key For 1" with 1/4" Square Key	XKEY-1250	Key For 1 1/4" with 5/16" Square Key
X100-0250	1/4" Spacer For 1"	X125-0250	1/4" Spacer For 1 1/4"
X100-0375	3/8" Spacer For 1"	X125-0375	3/8" Spacer For 1 1/4"
X100-0750	3/4" Spacer For 1"	X125-0750	3/4" Spacer For 1 1/4"

Notes

- Black oxide complete is available upon request for standard toolholders, page A-2.

- Retention Knobs & Setup Holding Fixtures, pages D-76 & D-77, D-78.

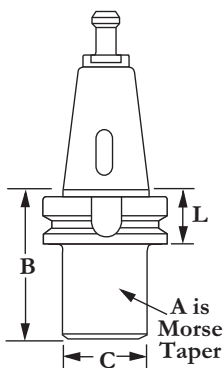
Morse Taper Holders Features:

- Precision ground Morse taper.
- Morse taper pocket held to .0002" accuracy for the best locking fit of the Morse shank.
- Not for high speed use.
- Must be cleaned before use and degreased for proper assembly.

Command Morse Taper Holder Benefits:

- AT3 or better shank taper — accurate, rigid toolholder-to-spindle mount.
- Less tool wear and replacement — less scrap.
- Fully ground flange and V-groove — easy on the tool changers for less spindle and changer maintenance.
- All tapers and lengths ready to ship — get your tools fast!

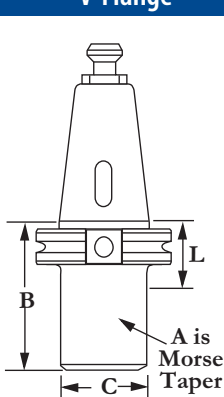
BT-Flange



		Standard				
Taper	Part No.	A	B	C	L	
BT 30	B2M4-0002	#2	2.50	1.26	.87	
BT 35	B3M4-0002	#2	2.36	1.26	.87	
BT 35	B3M4-0003	#3	2.95	1.58	.87	
BT 35	B3M4-0004	#4	3.85	1.97	.87	
BT 40	B4M4-0002	#2	2.36	1.26	1.06	
BT 40	B4M4-0003	#3	2.95	1.58	1.06	
BT 40	B4M4-0004	#4	3.74	1.97	1.06	

		Standard (continued)				
Taper	Part No.	A	B	C	L	
BT 45	B5M4-0002	#2	1.77	1.26	1.31	
BT 45	B5M4-0003	#3	2.36	1.58	1.31	
BT 45	B5M4-0004	#4	3.35	1.97	1.31	
BT 45	B5M4-0005	#5	4.72	2.56	1.31	
BT 50	B6M4-0002	#2	2.36	1.26	1.50	
BT 50	B6M4-0003	#3	2.95	1.58	1.50	
BT 50	B6M4-0004	#4	3.74	1.97	1.50	
BT 50	B6M4-0005	#5	4.13	2.56	1.50	

V-Flange



		Standard				
Taper	Part No.	A	B	C	L	
V 40	C4M4-0002	#2	2.00	1.75	N/A	
V 40	C4M4-0003	#3	2.75	1.75	N/A	
V 40	C4M4-0004	#4	3.63	1.75	N/A	
V 45	C5M4-0002	#2	1.81	2.25	N/A	
V 45	C5M4-0003	#3	2.44	2.25	N/A	
V 45	C5M4-0004	#4	3.31	2.25	N/A	
V 45	C5M4-0005	#5	4.63	2.63	1.38	
V 50	C6M4-0002	#2	1.38	2.75	1.38	
V 50	C6M4-0003	#3	1.88	2.75	1.38	
V 50	C6M4-0004	#4	2.75	2.75	1.38	
V 50	C6M4-0005	#5	4.06	2.75	1.38	

Notes

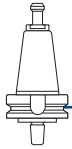
- Black oxide complete is available upon request for standard toolholders, page A-2.
- Retention Knobs & Setup Holding Fixtures, pages D-76 & D-77, D-78.

Jacobs Taper Holders:

- Precision ground Jacobs pilot.
- Jacobs taper held to better than .0002" accuracy for best mating with the drill chuck.

- Not for high speed use.
- For proper assembly, clean before use. Clean and degrease both ID and OD of Jacobs holder.

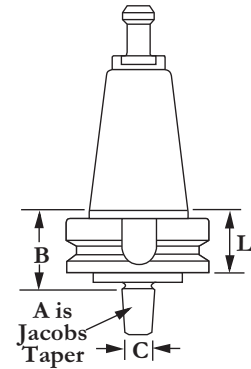
BT-Flange



Standard					
Taper	Part No.	A	B	C	L
BT 30	B2J4-0001	# 1	1.18	.384	.87
BT 30	B2J4-0033	#33	1.77	.624	.87
BT 35	B3J4-0001	# 1	1.18	.384	.87
BT 35	B3J4-0002	# 2	1.77	.559	.87
BT 35	B3J4-0003	# 3	1.77	.811	.87
BT 35	B3J4-0033	#33	1.77	.624	.87
BT 40	B4J4-0001	# 1	1.34	.384	1.06
BT 40	B4J4-0002	# 2	1.77	.559	1.06
BT 40	B4J4-0003	# 3	1.77	.811	1.06
BT 40	B4J4-0004	# 4	1.77	1.124	1.06
BT 40	B4J4-0033	#33	1.77	.624	1.06

continued in next column

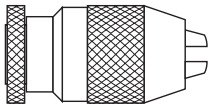
Standard (continued)					
Taper	Part No.	A	B	C	L
BT 45	B5J4-0001	# 1	1.77	.384	1.31
BT 45	B5J4-0002	# 2	1.77	.559	1.31
BT 45	B5J4-0003	# 3	1.77	.811	1.31
BT 45	B5J4-0004	# 4	1.77	1.124	1.31
BT 45	B5J4-0006	# 6	1.77	.676	1.31
BT 45	B5J4-0033	#33	1.77	.624	1.31
BT 50	B6J4-0001	# 1	1.81	.384	1.50
BT 50	B6J4-0002	# 2	1.77	.559	1.50
BT 50	B6J4-0003	# 3	1.77	.811	1.50
BT 50	B6J4-0004	# 4	1.77	1.124	1.50
BT 50	B6J4-0006	# 6	1.77	.676	1.50
BT 50	B6J4-0033	#33	1.77	.624	1.50



SPECIALTY TOOL HOLDERS

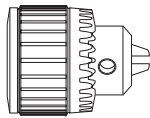
ACCESSORIES

Keyless Chuck



Part No.	Model	Capacity	Taper
X650-J100	65J1	0-1/4	#1
X800-J200	80J2	0-5/16	#2
X100-J330	100J33	0-3/8	#33
X130-J200	130J2	1/32-1/2	#2

Ball Bearing Key Type Super Chuck



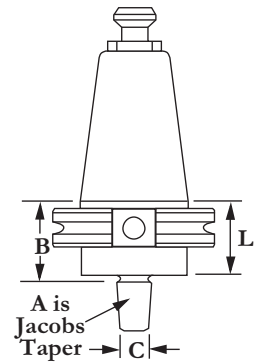
Replacement Key

Part No.	Model	Capacity	Taper	Part No.
X11N-J200	11N	0-3/8	#2	XK32-J000
X14N-J300	14N	0-1/2	#3	XK30-J000
X16N-J300	16N	1/8-5/8	#3	XK40-J000
X18N-J400	18N	1/8-3/4	#4	XK40-J000



Standard					
Taper	Part No.	A	B	C	L
V 40	C4J4-0001	# 1	1.50	.384	1.38
V 40	C4J4-0002	# 2	1.50	.559	1.38
V 40	C4J4-0003	# 3	1.50	.811	1.38
V 40	C4J4-0004	# 4	1.50	1.124	1.38
V 40	C4J4-0006	# 6	1.50	.676	1.38
V 40	C4J4-0033	#33	1.50	.624	1.38
V 45	C5J4-0001	# 1	1.50	.384	1.38
V 45	C5J4-0002	# 2	1.50	.559	1.38
V 45	C5J4-0003	# 3	1.50	.811	1.38
V 45	C5J4-0004	# 4	1.50	1.124	1.38
V 45	C5J4-0006	# 6	1.50	.676	1.38
V 45	C5J4-0033	#33	1.50	.624	1.38
V 50	C6J4-0001	# 1	1.50	.384	1.38
V 50	C6J4-0002	# 2	1.50	.559	1.38
V 50	C6J4-0003	# 3	1.50	.811	1.38
V 50	C6J4-0004	# 4	1.50	1.124	1.38
V 50	C6J4-0006	# 6	1.50	.676	1.38
V 50	C6J4-0033	#33	1.50	.624	1.38

V-Flange



Notes

- Black oxide complete is available upon request for standard toolholders, page A-2.
- Retention Knobs & Setup Holding Fixtures, pages D-76 & D-77, D-78.

Integral Shank Keyless Chuck & Replacement Parts

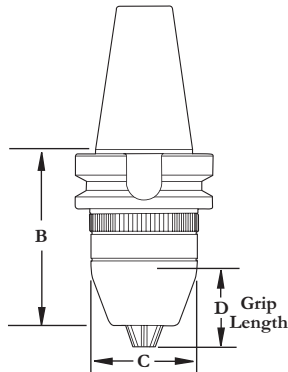


Tight Grip Throughout Wide Clamping Range with Guaranteed Concentricity

Features & Benefits:

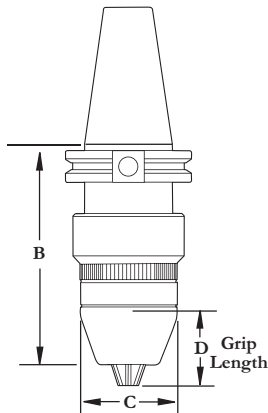
- Accurate — Maximum .0006" TIR at 1.5" from the end of the holder.
- Tight grip ensured with worm drive lateral clamping — even when spindles stop or change rotation.
- Performs at higher speeds (up to 10,000 RPM) than conventional taper/drill chucks.
- Designed for free directional rotation — no loss of gripping force with change in direction of spindle rotation.
- Higher metal removal capacity than conventional taper/drill chucks.
- Cost effective performance, reliable, maintenance-free, replaceable parts.
- Fast tool change for milling, drilling, reaming, or countersinking.
- Longer tool life for end mills, drills, thread mills, reamers.
- Short, compact design.
- Dimensions given in inches (mm).
- AT3 or better shank taper.
- Coolant through capability.

BT-Flange



Taper	Part No.	Clamping Range	B	C	D Grip Length	Holding Torque- Ft.-Lbs
BT 40	B4J4-X130	.020 - .512 (.5-13 mm)	4.331 (110 mm)	1.949	1.142	51

V-Flange



Taper	Part No.	Clamping Range (mm)	B (mm)	C	D Grip Length	Holding Torque- Ft.-Lbs
V 40	C4J4-X100	.020 - .394 (.5-10)	4.331 (110)	1.732	1.142	33
V 40	C4J4-X160	.118 - .630 (3-16)	4.331 (110)	2.047	1.142	59
V 50	C6J4-X130	.020 - .512 (.5-13)	4.331 (110)	1.949	1.142	51
V 50	C6J4-X160	.118 - .630 (3-16)	4.331 (110)	2.042	1.142	59

Replacement Parts

Part No.	Description	Part No.	Description	Part No.	Description
XJCW-04MM	Hex wrench replacement (4mm)	XJSK-0001	Coolant seal key	XJSS-0003	Seal sleeve set

Notes

- Integral Shank Keyless Drill Chucks available only with shiny shank; no black oxide.
- Tool Installation Wrench (4 mm) included.
- Compatible with solid carbide or high speed steel round shank tools (no flats).
- Retention Knobs & Setup Holding Fixtures, pages D-76 & D-77, D-78.

Command's Tooling Accessories

True Zero



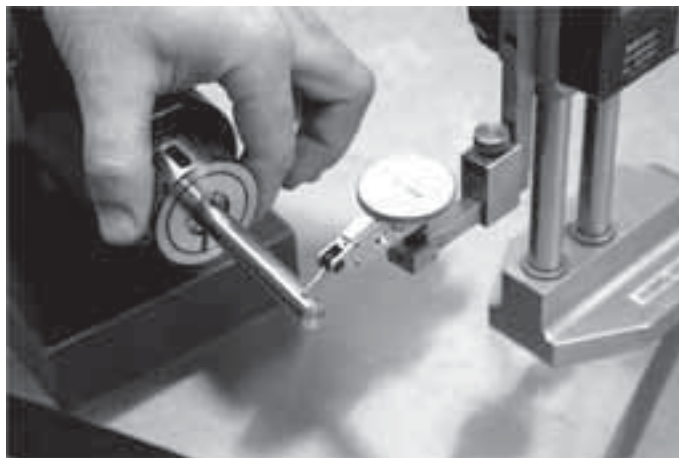
The True Zero Collet offers:

- 6 point fine tune adjustment.
- Eliminates the need for floating toolholders when reaming.
- Increased tool life.
- Improves surface finishes.
- Adjustments can be made on the spindle or the turret.
- Spindle concentricity errors can be compensated.

True Zero Part No.	True Zero Corresponding Wrench Part No.
XGZN-0016	30mm Hex
XGZN-0020	XCCW-D025
XGZN-0025	XCCW-D032
XGZN-0032	XCCW-0040
XGZN-0040	XCCW-0050



True Zero Setup Instructions



- Use collets with a standard capacity, no high precision collets.
- Use collets that are the closest fit to the shank of your tool, example: 8mm diameter shank you should use a 7-8mm collet.
- Back off the adjusting screws so they do not contact the adjusting surface.
- Torque the True-Zero nut to the appropriate specifications for the collet chuck, Do Not Over Tighten.
- Adjust the concentricity by using the 6 screws on the outside diameter of the collet nut.
- Take care that each screw is in contact with the clamped tool.
- Now you're ready to work.

Please find a live adjustment example in the category "video" on <http://www.ews-tools.de>

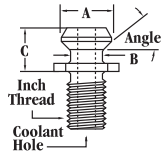
Retention Knobs



- Command retention knobs for CNC machining centers are made to industry standards.
- Top quality Command retention knobs are available for all popular domestic and imported machining centers.
- Knobs are finest quality steel specifically treated to give an excellent wear surface over a tough and shock resistant core.
- Many machines use their own special knobs. If you don't see what you need-just give us a call. We stock knobs for hundreds of machining centers.
- **Note:** Retention knobs are manufactured to the specifications of the machine tool builder and deviations from this could cause serious problems. If you are in doubt about a particular application, send us a print of the knob so that we may find the correct part. Please specify machine make and the toolholder shank style being used when ordering.

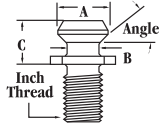
Recommended Installation Torque	
Taper	Torque (Ft-lbs)
30	8
35	12
40	30
45	50
50	75
60	120

V-Flange



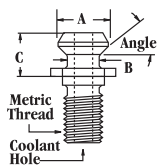
		U.S. ANSI				Thread Size	Retention Knob Wrench
Taper & Flange	Part No.	A	B	C	Angle		
With through-spindle coolant hole							
V 30	RC2E-0001	0.52	0.39	0.46	45	1/2-13	**
V 40	RC4E-0001	0.74	0.49	0.64	45	5/8-11	XRKW-0750
V 45	RC5E-0001	0.94	0.61	0.82	45	3/4-10	XRKW-1000
V 50	RC6E-0001	1.14	0.83	1.00	45	1-8	XRKW-1187

V-Flange



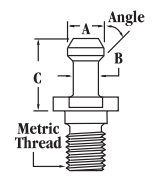
Taper & Flange	Part No.	A	B	C	Angle	Thread Size	Retention Knob Wrench
Without through-spindle coolant hole							
V 40	RC4E-0002	0.74	0.49	0.64	45	5/8-11	XRKW-0750
V 45	RC5E-0002	0.94	0.61	0.82	45	3/4-10	XRKW-1000
V 50	RC6E-0002	1.14	0.83	1.00	45	1-8	XRKW-1187

BT-Flange



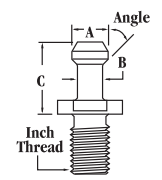
Taper & Flange	Part No.	A	B	C	Angle	Thread Size	Retention Knob Wrench
With through-spindle coolant hole and metric thread							
BT 40	RS4M-0105	0.74	0.49	0.64	45	M16-2	XRKW-0750
BT 40	RS4M-0115	0.74	0.49	0.75	45	M16-2	XRKW-0750
BT 45	RS5M-0106	0.94	0.61	0.82	45	M20-2.5	XRKW-1000
BT 50	RS6M-0105	1.14	0.83	1.00	45	M24-3.0	XRKW-1187

BT-Flange



		Mas Style				Thread Size	Retention Knob Wrench
Taper & Flange	Part No.	A	B	C	Angle		
Mas Style							
BT 30	RB2M-0001	0.43	0.27	0.90	45	M12-1.75	***
BT 30	RB2M-0001-C	0.43	0.27	0.90	45	M12-1.75	***
BT 30	RB2M-0002	0.43	0.27	0.90	60	M12-1.75	***
BT 35	RB3M-0001	0.51	0.33	1.10	45	M12-1.75	***
BT 35	RB3M-0002	0.51	0.33	1.10	60	M12-1.75	***
BT 40	RB4M-0001	0.59	0.39	1.38	45	M16-2.0	XRKW-0750
BT 40	RB4M-0001-C	0.59	0.39	1.38	45	M16-2.0	XRKW-0750
BT 40	RB4M-0002	0.59	0.39	1.38	60	M16-2.0	XRKW-0750
BT 40	RB4M-0002-C	0.59	0.39	1.38	60	M16-2.0	XRKW-0750
BT 40	RB4M-0003	0.59	0.39	1.38	90	M16-2.0	XRKW-0750
BT 45	RB5M-0001	0.75	0.55	1.57	45	M20-2.5	XRKW-1000
BT 45	RB5M-0002	0.75	0.55	1.57	60	M20-2.5	XRKW-1000
BT 45	RB5M-0003	0.75	0.55	1.57	90	M20-2.5	XRKW-1000
BT 50	RB6M-0001	0.91	0.67	1.77	45	M24-3.0	XRKW-1187
BT 50	RB6M-0001-C	0.91	0.67	1.77	45	M24-3.0	XRKW-1187
BT 50	RB6M-0002	0.91	0.67	1.77	60	M24-3.0	XRKW-1187
BT 50	RB6M-0003	0.91	0.67	1.77	90	M24-3.0	XRKW-1187
BT 50	RB6M-0003-C	0.91	0.67	1.77	90	M24-3.0	XRKW-1187

V-Flange



Taper & Flange	Part No.	A	B	C	Angle	Thread Size	Retention Knob Wrench	
V 40	RB4E-0001	0.59	0.39	1.27	45	5/8-11	XRKW-0750	.124 Flange
V 40	RB4E-0001-C	0.59	0.39	1.27	45	5/8-11	XRKW-0750	.124 Flange
V 40	RS4E-0221	0.59	0.39	1.27	45	5/8-11	XRKW-0750	.234 Flange
V 40	RS4E-0221-C	0.59	0.39	1.27	45	5/8-11	XRKW-0750	.234 Flange
V 40	RB4E-0002	0.59	0.39	1.27	60	5/8-11	XRKW-0750	
V 40	RB4E-0002-C	0.59	0.39	1.27	60	5/8-11	XRKW-0750	
V 40	RB4E-0003	0.59	0.39	1.27	90	5/8-11	XRKW-0750	
V 40	RB4E-0003-C	0.59	0.39	1.27	90	5/8-11	XRKW-0750	
V 45	RB5E-0001	0.75	0.55	1.58	45	3/4-10	XRKW-1000	
V 45	RB5E-0003	0.75	0.55	1.58	90	3/4-10	XRKW-1000	
V 50	RB6E-0001	0.91	0.67	1.78	45	1-8	XRKW-1187	
V 50	RB6E-0001-C	0.91	0.67	1.78	45	1-8	XRKW-1187	
V 50	RB6E-0002	0.91	0.67	1.78	60	1-8	XRKW-1187	
V 50	RB6E-0002-C	0.91	0.67	1.78	60	1-8	XRKW-1187	
V 50	RB6E-0003	0.91	0.67	1.78	90	1-8	XRKW-1187	
V 50	RB6E-0003-C	0.91	0.67	1.78	90	1-8	XRKW-1187	

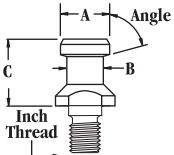
TOOLING ACCESSORIES

Notes

- At end of part no. "C" designates coolant hole; "H" designates O-Ring included.
- Retention knob wrench, page D-78. Retention knob wrench & torque wrench details, page D-78.
- Avoid cost of damaged holders and spindles from incorrectly torqued retention knobs.
- Special retention knob, page D-77.

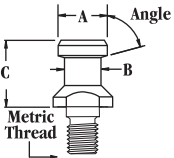
Retention Knobs

V-Flange



Taper & Flange	Part No.	A	B	C	Thread Angle	Retention Knob Size	Wrench
V 30	RS2E-0114-C	0.51	0.35	0.95	75	1/2-13	***
V 40	RS4E-0114	0.75	0.55	1.02	75	5/8-11	XRKW-0750
V 40	RS4E-0114-C	0.75	0.55	1.02	75	5/8-11	XRKW-0750
V 50	RS6E-0114	1.10	0.83	1.34	75	1-8	XRKW-1187
V 50	RS6E-0114-C	1.10	0.83	1.34	75	1-8	XRKW-1187

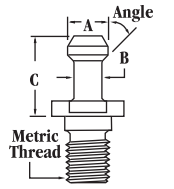
DIN-Flange



Taper & Flange	Part No.	A	B	C	Thread Angle	Retention Knob Size	Wrench
din 30	RS2M-0114	0.51	0.35	0.94	75	M12-1.75	***
din 40	RS4M-0114	0.75	0.55	1.02	75	M16-2.0	XRKW-0750
din 40	RS4M-0114-C	0.75	0.55	1.02	75	M16-2.0	XRKW-0750
din 50	RS6M-0114	1.10	0.83	1.34	75	M24-3.0	XRKW-1187
din 50	RS6M-0114-C	1.10	0.83	1.34	75	M24-3.0	XRKW-1187

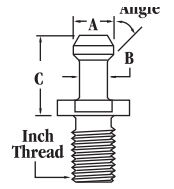
Other Retention Knobs for Domestic and Imported Machines

BT-Flange



Taper & Flange	Part No.	A	B	C	Angle	Thread Size	Retention Knob Wrench
BT 30	RB2M-0100	0.47	0.31	0.94	.16 R*	M12-1.75	***
BT 30	RS2M-0207-C	0.47	0.31	0.92	75	M12-1.75	***
BT 35	RB3M-0100	0.54	0.35	1.10	60	M12-1.75	***
BT 35	RB3M-0101	0.55	0.31	0.91	90	M12-1.75	***
BT 40	RS4M-0205	0.75	0.55	1.14	75	M16-2.0	XRKW-1250
BT 40	RS4M-0205-C	0.75	0.55	1.14	75	M16-2.0	XRKW-0750
BT 40	RS4M-0206	0.59	0.39	1.09	90	M16-2.0	XRKW-0750
BT 40	RS4M-0210	0.59	0.39	0.98	90	M16-2.0	XRKW-0750
BT 40	RS4M-0217-H	0.75	0.55	1.14	75	M16-2.0	XRKW-0750
BT 45	RS5M-0108-C	0.91	0.67	1.18	75	M20-2.5	XRKW-1000

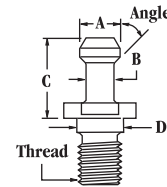
V-Flange



Taper & Flange	Part No.	A	B	C	Angle	Thread Size	Retention Knob Wrench
V 30	RS2E-0206	0.50	0.40	0.76	45	1/2-13	***
V 30	RS2E-0207	0.50	0.31	0.75	75	1/2-13	***
V 40	RB4E-0100	0.59	0.39	1.05	90	5/8-11	XRKW-0750
V 40	RB4E-0101	0.59	0.39	0.98	90	5/8-11	XRKW-0750
V 40	RS4E-0104	0.59	0.41	1.44	45	5/8-11	XRKW-0750
V 40	RS4E-0104-C	0.59	0.41	1.44	45	5/8-11	XRKW-0750
V 40	RS4E-0106	0.59	0.39	1.38	45	5/8-11	XRKW-0750
V 40	RS4E-0109	0.52	0.39	0.47	50	5/8-11	XRKW-0750
V 40	RS4E-0110	0.98	0.83	0.99	75	5/8-11	***
V 40	RS4E-0111	0.50	0.31	0.75	75	5/8-11	***
V 40	RS4E-0114-H	0.75	0.55	1.02	75	5/8-11	XRKW-0750
V 40	RS4E-0201	0.50	0.31	0.87	75	5/8-11	***
V 40	RS4E-0203	0.50	0.31	2.38	90	5/8-11	***
V 40	RS4E-0207	0.74	0.48	0.87	75	5/8-11	XRKW-0750
V 40	RS4E-0208-C	0.74	0.49	0.64	45	5/8-11	XRKW-0750
V 40	RS4E-0209-C	0.74	0.55	1.03	75	5/8-11	XRKW-0750
V 40	RS4E-0211-C	0.74	0.49	0.64	45	5/8-11	XRKW-0750
V 40	RS4E-0212	0.75	0.55	1.02	75	5/8-11	XRKW-0750
V 40	RS4E-0212-C	0.75	0.55	1.02	75	5/8-11	XRKW-0750
V 40	RS4E-0212-H	0.75	0.55	1.02	75	5/8-11	XRKW-0750
V 40	RS4E-0215-C	0.75	0.55	1.14	75	5/8-11	XRKW-0750
V 40	RS4E-0220-H	0.59	0.39	1.26	45	5/8-11	XRKW-0750
V 40	RS4E-0228-H	0.74	0.49	0.64	45	5/8-11	XRKW-0750
V 40	RS4E-0254-C	0.75	0.55	1.03	75	5/8-11	XRKW-0750
V 45	RS5E-0203	0.81	0.56	1.20	90	3/4-10	***
V 45	RS5E-0205	0.94	0.64	1.34	45	3/4-10	XRKW-1000
V 45	RS5E-0205-C	0.94	0.64	1.34	45	3/4-10	XRKW-1000
V 50	RB6E-0100**	0.91	0.67	1.78	90	1-8	XRKW-0750
V 50	RS6E-0101	0.94	0.71	1.23	90	1-8	XRKW-1187
V 50	RS6E-0101-C	0.94	0.71	1.23	90	1-8	XRKW-1187
V 50	RS6E-0102-C	0.95	0.70	2.48	.22 R*	1-8	XRKW-1250
V 50	RS6E-0103-C	0.95	0.70	3.48	.22 R*	1-8	XRKW-1250
V 50	RS6E-0204-C	1.14	0.82	1.00	45	1-8	XRKW-1187
V 50	RS6E-0214-H	0.75	0.67	1.78	60	1-8	XRKW-1187
V 50	RS6E-0232-H	0.90	0.66	1.78	45	1-8	XRKW-1187
V 50	RS6E-0242-H	0.90	0.66	1.78	60	1-8	XRKW-1187

Need A Special Retention Knob?

Just call or fax. We will assist you in selecting the proper retention knob.



For assistance, provide the following information:

Quantity _____
 Dimension A _____ in / mm
 Dimension B _____ in / mm
 Dimension C _____ in / mm
 Dimension D _____ in / mm
 Angle _____ degrees
 Thread Size _____
 Toolholder Shank Style _____
 Machine Make _____
 Machine Model _____

Coolant Hole? Yes / No
 Coolant Hole Diameter _____ in / mm
 O-Ring Required? Yes / No
 Send sketch of O-Ring position

Fax to: 1-800-555-7694 or 763-576-6911

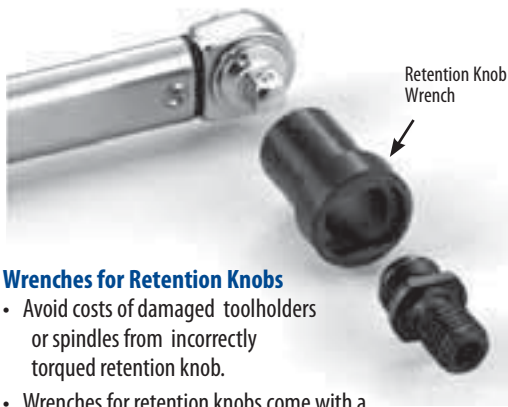
Recommended Installation Torque

Taper	Torque (Ft-lbs)
30	8
35	12
40	30
45	50
50	75
60	120

At end of part number

C designates coolant hole.
 H designates O-Ring included.
 * R designates radius.
 ** Wrench flats are on knob end.
 *** Consult Command Customer Service

Torque Wrenches for Nosepieces & Retention Knobs



Retention Knob Wrench

Wrenches for Retention Knobs

- Avoid costs of damaged toolholders or spindles from incorrectly torqued retention knob.
- Wrenches for retention knobs come with a drive square to adapt to torque wrench.
- See pages D-76 & D-77 for proper wrench for retention knobs.

Part No.	Drive Square	Distance Across Retention Knob Flats
XRKW-1250	1/2"	1.250"
XRKW-1187	1/2"	1.187"
XRKW-1000	1/2"	1.000"
XRKW-0750	3/8"	0.750"

Torque Wrenches

- Quick readings of torque setting.
- Accurate and repeatable torque readings.



Part No.	Drive Square	Torque Range Ft-Lbs.
XTQW-0045	3/8"	5-45
XTQW-0080	3/8"	15-80
XTQW-0150	1/2"	30-150

Wrenches for Collet Chuck Nosepieces

- Overtightening of collet chuck nosepieces commonly causes distortion of the collet chuck pocket and uneven compression of collets. This can result in excessive runout in the tool assembly.
- Gross overtightening can result in damage to the collet, tool body or nosepiece.
- Collet chuck nose piece wrenches come with a drive square to adapt to torque wrench.
- A torque wrench is required to accurately measure these values.



Setup Holding Fixtures

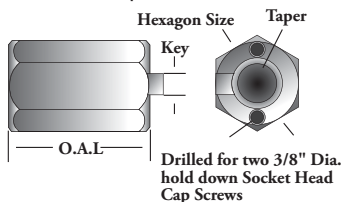
Setup Holding Fixtures

- Setup holding fixtures have precision machined internal bores that cradle flanges precisely.

- Ready to mount — drilled and counterbored for cap screws.
- Heavy-duty keylocks for tightening tools.

Bottom Mount

- Extra long—no need to remove retention knobs.
- Available in all tapers. Fits both BT and V-flanges.

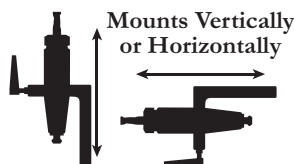


Bottom Mount

Taper	Part No.	Hex	O.A.L.	Key	Replacement Key
30	XHDF-0002	3.0	3.41	.625	XHDF-K004
35	XHDF-0003	3.0	3.42	.530	XHDF-K003
40	XHDF-0004	3.0	4.15	.625	XHDF-K004
45	XHDF-0005	3.5	4.90	.750	XHDF-K005
50	XHDF-0006	4.0	5.85	1.000	XHDF-K006
60	XHDF-0007	5.7	8.50	1.000	XHDF-K007

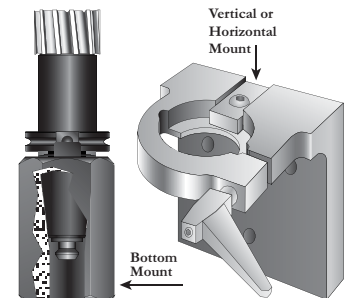
Vertical or Horizontal Mount

- Open design for easy access to retention knobs.
- Removable keylock for keyed or unkeyed use.
- High torque split clamp with ratchet handle, mar-free grip.
- Durable heat treated premium grade aircraft aluminum.



Vertical or Horizontal Mount

Taper	Part No.	Key	Replacement Key
BT 30	XFGF-00B2	.625	XFGF-K0B2
BT 35	XFGF-00B3	.531	XFGF-K0B2
BT 40	XFGF-00B4	.625	XFGF-K0B2



Taper	Part No.	Key	Replacement Key
V 40	XFGF-0004	.625	XFGF-K004
V 50	XFGF-0006	1.000	XFGF-K006

Taper	Part No.
HSK40	XFGF-00H2
HSK50	XFGF-00H3
HSK63	XFGF-00H4
HSK100	XFGF-00H6

Replacement Parts

Part No.	Description
XFGF-H000	Replacement handle for vertical or horizontal mount setup holding fixtures

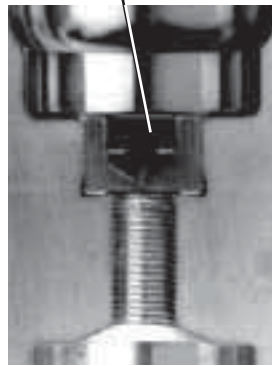
TOOLING ACCESSORIES

HSK Accessories & Setup Holding Fixtures

HSK Accessories

Taper	Part No.	Description
HSK40A/E	XSCCA0040	Compliant Coolant Tube
HSK40A/E	XCTWA0040	Coolant Tube Wrench
HSK40A/E	XCHPA0040	Coolant Hole Plug
HSK50 E/63F	XSCCA0050	Compliant Coolant Tube
HSK50 E/63F	XCTWA0050	Coolant Tube Wrench
HSK50 E/63F	XCHPA0050	Coolant Hole Plug
HSK63A	XSCCA0063	Compliant Coolant Tube
HSK63A	XCTWA0063	Coolant Tube Wrench
HSK63A	XCHPA0063	Coolant Hole Plug
HSK100A	XSCCA0100	Compliant Coolant Tube
HSK100A	XCTWA0100	Coolant Tube Wrench
HSK100A	XCHPA0100	Coolant Hole Plug

Coolant Hole Plug



Coolant Tube

Zero Master Edge Finder

For quick, precise workpiece location to eliminate errors

- Increases productivity by eliminating calculation errors.
- Can be used on any milling machine.
- Also for use on EDM machines (with insulated probe).
- Measures X, Y, or Z-axis.
- Locates workpiece edges (from spindle center) or workpiece length.
- Easy-to-read digital display in inch units.
- Splash-proof, dust-proof unit can be stored in the machine tool carousel; ready for use.
- Battery operated (3V Lithium) for up to 3000 hours continuous operation.
- Extended probe displacement range helps against damage.



Quick and easy to use—

- Clamp into machine spindle (or electrode head).
- Adjust TIR to zero.
- The digital readout indicates the distance between the spindle axis and workpiece edge.

Part No.	Description
XWEF-0001	Command Zero Master Edge Finder

Replacement Parts

Part No.	Description
XWEF-0001-5	Replacement probe
XWEF-0001-6	Optional probe

Specifications:

Measures in increments of	0.0004"
Smallest unit of measure	0.0004"
Repeatability	0.0004"
Measuring Accuracy	0.0004"
Display size	1.2" x 0.5"
Height of display numbers	0.3"
Length of probe tip	1"
Diameter of probe's ball tip	0.2"
Probe Range of Movement (Radial)	.120"
Probe Range of Movement (Axial)	.200"

Taper Check™

Features & Benefits:

- Detects toolholder shank wear in seconds.
- Combine with System II™ Drawbar Dynamometer to optimize the spindle-toolholder interface.
- Maximize tool life and spindle life.
- Ensure toolholder performance.
- Available for 30, 35, 40, 45, and 50 taper toolholders.
- Toolholder can be tested with components assembled, works with retention knob installed.
- Includes (A) and (B) indicators with .0001" resolution.
- Carbide locating pins for long life.
- Made with hardened tool steel body.
- Comes with setup taper/master shank (C).



Easy-to-use:

- Place the master shank (C) into the Taper Check™.
- Adjust the two indicators (A) and (B) so they both read zero with the master shank.
- Remove the setup taper/master shank.
- Place the toolholder to be tested into the Taper Check™.
- Simply take the reading from each indicator and find the difference between the two, (B) – (A), to detect shank wear.

Part No.	For Taper
XSIT-0030	30
XSIT-0035	35
XSIT-0040	40
XSIT-0045	45
XSIT-0050	50

Notes

- Combine with System II™ Drawbar Dynamometer to optimize spindle-toolholder interface, page D-80.

System II™ Adaptive Drawbar Dynamometer



- Detect inadequate retention force in seconds without disassembling drawbar.
- Modular components fit most machining centers.
- Ensure original machine performance.
- Maximize tool life, spindle life and system rigidity.
- Combat toolholder shank fretting.
- For all 30, 35, 40, 45 & 50 steep taper machining centers (requiring retention knobs) and HSK40A, HSK40E, HSK50A, HSK63A, HSK100A, and HSK63F.
- Not for use with screw type drawbar mechanisms.
- Includes carrying case.

Precision Maintenance Tool

Provides accurate drawbar force measurements on steep taper (CAT, BT, DIN, etc.) and HSK machining centers. Verifies the machine's drawbar performance against the manufacturers' specifications or from readings taken when the machine was new to ensure optimum cutting tool performance.

Fast Performance

Quickly identifies if retention force losses are at fault when poor surface finishes appear or when tool performance deteriorates.

Simple Operation

Operation is fast and easy. Simply attach the taper adapter and retention knob adapter, screw in a retention knob, and install it in your spindle like an ordinary toolholder. The load cell is stretched by the machine's drawbar. This stretch is measured electronically and is instantly displayed on the digital readout. Spring deterioration or maladjustment can be detected in no time. No costly disassembly. No machine downtime.



Services Entire Machine Shop

A compact load cell with an electronic display and a family of taper adapters combine to make a single measuring unit that can service an entire machine shop employing a variety of machining centers.

Convenient Display

Features standard 0-10,000 lb. range, large easy-to-read digital display, auto-off feature, and touch sensitive buttons sealed for dust-proof operation.

1000 Hours Operation

Operates on two 9 volt batteries for up to 1000 hours continuous operation. Calibration data is stored on a non-volatile memory chip — no programming to enter, no data to remember.

Custom Calibration Available

Standard calibration is 0-10,000 pounds. Can be custom calibrated. Call factory for quote.

Notes

- Only available in shiny shank; no black oxide.

- Retention Knobs & Setup Holding Fixtures, pages D-76 & D-77, D-78.

Modular Design

A simple three piece design allows you to quickly change tapers from BT30 up to CT50. The retention knob adapters accept standard retention knobs, allowing measurements to be taken on virtually any machining center. Reads pounds, kilonewtons, and kilograms.

Part No.	Description
GDKT-0001	System II™ Adaptive Drawbar Dynamometer Kit: Dynamometer, Case, 30, 40 & 50 taper sleeves. CT and BT retention knob adapters – excludes HSK & DIN Adapters
GDAT-0001	System II™ Adaptive Drawbar Dynamometer: Dynamometer & carrying case. Adapters sold separately

Replacement Parts

Part No.	Description	Part No.	Description
XDTA-0002	30 Taper adapter sleeve	XDBA-0002	BT 30 Retention knob adapter
XDTA-0003	35 Taper adapter sleeve	XDCA-0002	CT 30 Retention knob adapter
XDTA-0004	40 Taper adapter sleeve	XDBA-0003	BT 35 Retention knob adapter
XDTA-0005	45 Taper adapter sleeve	XDBA-0004	BT 40 Retention knob adapter
XDTA-0006	50 Taper adapter sleeve	XDCA-0004	CT 40 Retention knob adapter
XDFA-0040	HSK40A/E Flange adapter	XDBA-0005	BT 45 Retention knob adapter
XDTA-0040	HSK40A/E Drawbar adapter	XDCA-0005	CT 45 Retention knob adapter
XDFA-0050	HSK50A/HSK63F Flange adapter	XDBA-0006	BT 50 Retention knob adapter
XDTA-0050	HSK50A/HSK63F Drawbar adapter	XDCA-0006	CT 50 Retention knob adapter
XDFA-0063	HSK63A Flange adapter	XDDA-0002	DIN69872 30 Taper retention knob adapter
XDTA-0063	HSK63A Drawbar adapter	XDDA-0004	DIN69872 40 Taper retention knob adapter
XDFA-0100	HSK100A Flange adapter	XDDA-0006	DIN69872 50 Taper retention knob adapter
XDTA-0100	HSK100A Drawbar adapter	XDCS-0001	Replacement carrying case
XDNA-0006	NMTB50 adapter	XDRP-0001	Retention knob pallet (optional)-For holding retention knobs inside case



TOOLING ACCESSORIES

Notes

- Combine with Taper Check™ to optimize spindle-toolholder interface, page D-79.

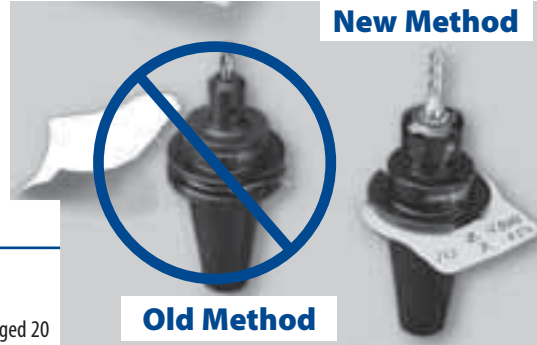
Reusable Tool Identification Reduce Setup Time Minimize Mistakes

- Stays in place by snapping onto the toolholder.
- Removable and easily cleaned with WD40 for new applications.
- No need for wire tags.
- Provides identification for stored toolholders.
- Patent Pending.
- Use grease pencil.

Mark the smooth rewritable surface with:

- Part Number
- Type of Holder
- Job Number
- Preset Length
- Preset Diameter
- Other Information

Part No.	For Flange Style
XCTT-0004	40 V-Flange; HSK63 Packaged 20 per bag
XCTT-0006	50 V-Flange; HSK100 Packaged 20 per bag

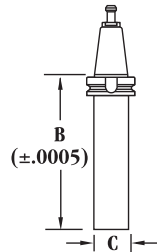


Precision Test Bars & Accessories

Precision Test Bars:

- Individually inspected and certified to assure accuracy in maintaining machines, tools and equipment.
- Calibrated, certified precision test bars accurately align workpieces and/or holding fixtures.
- Hardened, normalized, and ground for reliable, permanent accuracy.
- Wooden storage cases sold separately.
- Nose specifications:
 - Concentric to taper within .0002" TIR.
 - Diameter within .0002" over the entire length.

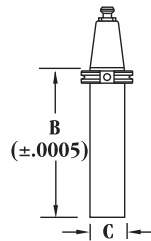
BT-Flange



Note: Shown with wooden storage case, sold separately.

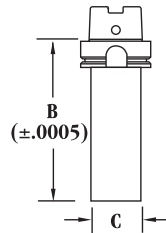
Taper	Standard Part No.	B	C
BT 35	B3W4-0003	8.0	2.0
BT 40	B4W4-0004	10.0	2.0
BT 45	B5W4-0005	12.0	2.0
BT 50	B6W4-0006	12.0	2.0

V-Flange



Taper	Standard Part No.	B	C
V 40	C4W4-0004	10.0	2.0
V 45	C5W4-0005	12.0	2.0
V 50	C6W4-0006	12.0	2.0

HSK



Taper	Standard Part No.	B	C
HSK40A/40E	H2W4A0002	8.0	1.5
HSK50A/63F	H3W4A0003	8.0	1.5
HSK63A	H4W4A0004	10.0	2.0
HSK100A	H6W4A0006	12.0	2.0

(HSK Form A Illustrated)

Accessories

Wooden Storage Cases

- Available to fit BT or V-Flange test bars.
- Premium Craftmanship.
- Not for shipping purposes.

Part No.	For Taper	Part No.	For Taper
XTBC-0002	HSK40A/40E	XTBC-0004	30/35/40/HSK63A
XTBC-0003	HSK50A/63F	XTBC-0006	45/50/HSK100A

Notes

- Only available in shiny shank; no black oxide.

- Retention Knobs & Setup Holding Fixtures, pages D-76 & D-77, D-78.

ToolScoot CNC V-Flange & HSK Tool Cart



- Quality and mobility at an affordable price.
- Durable nylon inserts on both shelves help protect toolholders.
- Lower shelf angled for quick, easy tool access from either side.
- Solid, interlocking side panel construction for maximum strength and stability.
- Two end storage trays with universal mounting holes for setup holding fixture.
- Heavy duty 5" x 1 1/4" casters load rated at 1,000 lbs.
- All steel painted with durable Ecolo-Clad in red and black.

ToolScoot Specifications: Dimensions: 18" W x 35.25" L x 35" H Weight: 75 lbs. Casters Load Rated at 1,000 lbs. See page D-78 for Setup Holding Fixtures

Part No.	Description
XCTH-S040	40 Taper, 48 Tool Capacity Cart, Standard Duty
XCTH-S050	50 Taper, 36 Tool Capacity Cart, Standard Duty
XCTH-S063	HSK63A, 48 Tool Capacity Cart, Standard Duty
XCTH-S010	HSK100A, 36 Tool Capacity Cart, Standard Duty

SuperScoot CNC V-Flange & HSK Tool Cart



- Constructed of prime 12 gauge steel for rugged heavy duty use.
- Almost twice the storage capacity for less!
- Heavier duty than others in its class.
- New outrigger base design for improved stability, easier maneuverability for a safe, smooth tool ride.
- Heavy duty, extra smooth rolling casters load rated to 1,600 lbs. for long caster life, with locking caster mechanism.
- Phosphate pretreatment undercoating for additional toughness.

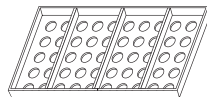
SuperScoot Specifications: Dimensions: 45.25" W x 17.5" L x 40" H (width includes handle & end tray) Weight: 132 lbs. Casters Load Rated at 1.600 lbs. See page D-78 for Setup Holding Fixtures

Part No.	Description
XCTH-L040	40 Taper, 90 Tool Capacity Cart, Heavy Duty
XCTH-L050	50 Taper, 52 Tool Capacity Cart, Heavy Duty
XCTH-L063	HSK63A, 90 Tool Capacity Cart, Heavy Duty
XCTH-L010	HSK100A, 52 Tool Capacity Cart, Heavy Duty

Econo-Kart™



- Heavy gauge steel construction — large ball bearing casters smooth rolling. Shown with optional organizer rack in middle position and optional tool tightening fixture.
- Total weight capacity 1000 lbs.



Same shelves used for stand alone shelving.

Taper	Part No.	Description	Optional tool tightening fixture	
			Taper	Part No.
30 & 35	XCRT-EK11	Holds 50 toolholders	50	XCRT-EK09
40/HSK63	XCRT-EK01	Holds 50 toolholders	40	XCRT-EK03
45	XCRT-EK45	Holds 32 toolholders		
50/HSK100	XCRT-EK07	Holds 32 toolholders		
	XCRT-EK10	Optional organizer racks		

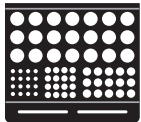
Econo-Kart and Stand Alone shelves are ten gauge steel with welded cross braces for strength. Order extra Econo-Kart shelves from Stand Alone list.

Collet Racks



Here's a tool handling and storage system that keeps frequently used tools organized and mobile for quicker setups, yet with full access to coordinated shelf storage of remaining tools. Toolholder and collet rack modules are available with receptacles sized for all toolholder tapers or collet shapes and made to fit in both the tool cart and tool shelves — tools can be organized by size and/or by job.

Collet Racks for Tool Carts



XCRT-CRMP - 12" x 10.625" x 2"
Holds 68 Micro Precision® collets
(4 complete sets; 16-ER11, 16-ER16, 16-ER20, 21-ER32)



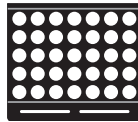
XCRT-CR01 - 6" x 8" x 1.375"
Holds 36 DA10 Double Angle collets



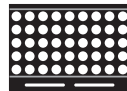
XCRT-CR02 - 7.25" x 6.625" x 1.375"
Holds 54 collets
(27 DA20, 18 DA30, 9 ER16)



XCRT-CR03 - 12.125" x 14" x 2.375"
Holds 25 TG150 Comflex® collets
(or #3 tap collets)



XCRT-CR04 - 12" x 10.625" x 2"
Holds 35 TG100 Comflex® collets
(or #2 tap collets)



XCRT-CR05 - 10.75" x 8" x 1.5"
Holds 45 DA18 collets
(or #1 tap collets)



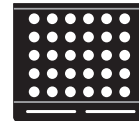
XCRT-CR11 - 6" x 8"
Holds 36 ER11 collets



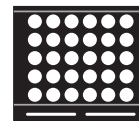
XCRT-CR16 - 6" x 8"
Holds 36 ER16 collets



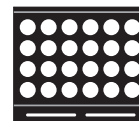
XCRT-CR20 - 6" x 8"
Holds 36 ER20 collets



XCRT-CR25 - 12" x 10.5"
Holds 30 ER25 collets



XCRT-CR32 - 12" x 10.5"
Holds 30 ER32 collets

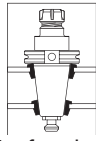


XCRT-CR40 - 12" x 10.5"
Holds 24 ER40 collets

Rack Modules, Workbench Storage, Tool Shelving

Toolholder Racks for Tool Carts

Optional handles available: Set of 2



Mar-free plastic inserts support toolholders, top and bottom.

Taper	Part No.	Holds	Rack Dimensions
30&35	XCRT-R030	6	15.5" x 4.375" x 4.5"
Optional Handle Set	XCRT-34HL		
40	XCRT-R040	5	15.5" x 4.375" x 4.5"
Optional Handle Set	XCRT-34HL		
45	XCRT-R045	4	17" x 6" x 6.625"
Optional Handle Set	XCRT-56HL		
50	XCRT-R050	4	17" x 6" x 6.625"
Optional Handle Set	XCRT-56HL		

Workbench Storage

- Shown with optional Collet Racks (sold separately).
- Comes with four plastic side bins
- 36" L x 12" W x 15" H.



Taper	Part No.	Holds
30&35	XCDY-17-1	30 toolholders
40	XCDY-17-2	30 toolholders
45	XCDY-17-3-45	24 toolholders
50	XCDY-17-3	24 toolholders

Stand Alone Shelving

- Steel shelving stores inactive tools organized by size and/or job — shelves available with receptacles for all toolholder tapers in both BT and V-Flange styles — plain shelves for storing loaded modules from tool cart.
- Sturdy construction — heavy ten gauge steel legs with floor-bolt tabs and shelves with welded steel cross braces.
- Shelves with toolholder receptacles include mar-free plastic inserts.
- Stand Alone Shelving is 7' H x 36" W x 18" — order leg sets and individual shelves separately from list below.
- All shelving comes disassembled (assembly required) — stand alone units must be bolted to floor.
- Replacement rings available, contact customer service.



Shelving with Assembly Hardware

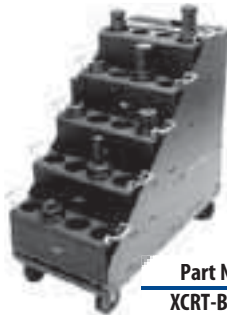
Taper	Part No.	Shelf Holds
30&35	XSHF-16-1	50 toolholders
40	XSHF-16-2	50 toolholders
45	XSHF-16-3-45	32 toolholders
50	XSHF-16-3	32 toolholders
	XSHF-16-4	Plain Shelf

Legs

Part No.	Description
XSHF-16-0	Set of 4 legs

Tool Caddy

- Each Tool Caddy comes with your choice of 6 shelves, specify the shelves you need using the chart below.
- Comes with large capacity 5" casters (casters are the only assembly required).
- Total weight capacity per unit: 2000 lbs.
- Overall Dimensions: 54" H x 29.125" W x 27.75" D.
- Interchangeable shelving will accept V-Flange, BT-Flange, or HSK toolholders.
- Shelves can be mounted on an angle or horizontally.
- Made of heavy steel with welded construction.



Part No.
XCRT-BASE

Tool Cart

- Tool carts hold up to five toolholder rack modules in the front, plus collet rack and setup tool storage in the back and on top — connecting shelves can join two carts to create a setup work station.
- Comes with six plastic bins, casters, and assembly hardware.
- Toolholder and Collet Rack Modules stack on the shelf bars.
- Order racks separately to suit your needs.
- 37" L x 17 1/2" W x 34" H.
- Shipped unassembled – assembly required.

Part No.	Description
XCTC-BASE	Tool Caddy Base Unit with wheels & 6 shelves
XCTC-RACK	Tool Rack Base Unit with 8 shelves



Tool Rack

Tool Rack comes with your choice of eight shelves. 62" H x 29.125" W x 27.75" D.

Shelf Options		
Part No.	Description	Holes per shelf
XCTC-SF30	30 taper shelf	32
XCTC-SF35	35 taper shelf	28
XCTC-SF40	40 taper shelf	18
XCTC-SF45	45 taper shelf	12
XCTC-SF50	50 taper shelf	10
XCTC-SF63	HSK63A shelf	18
XCTC-SH40	HSK40A shelf	32
XCTC-SH50	HSK50A/63F shelf	28
XCTC-S100	HSK100A shelf	10
XCTC-SFPN	Plain shelf with lip	0

Center Insert Options		
Part No.	Description	Holes per shelf
XCTC-IH40	HSK40A taper center insert	8
XCTC-IH50	HSK50A/63F taper center insert	7
XCTC-IN30	30 taper center insert	8
XCTC-IN35	35 taper center insert	7
XCTC-IN40	40 taper center insert	6
XCTC-IN45	45 taper center insert	6
XCTC-IN50	50 taper center insert	5
XCTC-IN63	HSK63A center insert	6
XCTC-I100	HSK100A center insert	5
XCTC-INPN	Plain shelf center insert	0

B		B3T4-0001	C-66	B4I4-0750	C-62	B5P2-0001	C-67	
	B2C3-0016	B-15	B3T4-0002	C-66	B4I4-1250	C-62	B5P2-0002	C-67
	B2C3-0016-ZX	B-33	B3W4-0003	D-81	B4J4-0001	C-73	B5P5-0001	C-67
	B2C3-0020	B-17	B3X3-0003	C-63	B4J4-0002	C-73	B5P5-0002	C-67
	B2C3-0020-ZX	B-35	B3X4-0003	C-63	B4J4-0003	C-73	B5P5-0003	C-67
	B2C3-0032	B-21	B4C1-0032	B-13	B4J4-0004	C-73	B5S4-0750	C-64
	B2C3-0032-ZX	B-39	B4C3-0020-ZX	B-35	B4J4-0033	C-73	B5S4-1000	C-64
	B2C4-0011	B-14	B4C3-0025	B-19	B4J4-X130	C-74	B5S4-1250	C-64
	B2C4-0011-ZX	B-32	B4C3-0025-ZX	B-37	B4K5-0020	B-17	B5S4-1500	C-64
	B2C4-0016	B-15	B4C3-0032	B-21	B4K5-0020-ZX	B-35	B5S4-2000	C-64
	B2C4-0016-ZX	B-33	B4C3-0032-ZX	B-39	B4K5-0032	B-21	B5S5-0750	C-64
	B2C4-0020	B-17	B4C3-0040	B-23	B4K5-0032-ZX	B-39	B5S5-1000	C-64
	B2C4-0020-ZX	B-35	B4C3-0040-ZX	B-41	B4K5-0375	C-57	B5S5-1250	C-64
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	B2C4-1000	C-47	B4C4-0011	B-14	B4K5-0750	C-57	B5T4-0001	C-66
	B2E4-0125	C-56	B4C4-0011-ZX	B-32	B4M4-0002	C-72	B5T4-0002	C-66
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	B2E4-0250	C-56	B4C4-0016-ZX	B-33	B4M4-0004	C-72	B5W4-0005	D-81
	B2E4-0312	C-56	B4C4-0020	B-17	B4P2-0001	C-67	B5X3-0005	C-63
	B2E4-0375	C-56	B4C4-0020-ZX	B-35	B4P2-0002	C-67	B5X4-0005	C-63
	B2E4-0437	C-56	B4C4-0025	B-19	B4P5-0001	C-67	B6C3-HP32	C-45
	B2E4-0500	C-56	B4C4-0025-ZX	B-37	B4P5-0002	C-67	B6C4-0016	B-15
	B2E4-0562	C-56	B4C4-0032	B-21	B4S4-0750	C-64	B6C4-0016-ZX	B-33
	B2E4-0625	C-56	B4C4-0032-ZX	B-39	B4S4-1000	C-64	B6C4-0020	B-17
	B2E4-0750	C-56	B4C4-0040	B-23	B4S4-1250	C-64	B6C4-0020-ZX	B-35
	B2H4-1018	C-69	B4C4-0040-ZX	B-41	B4S4-1500	C-64	B6C4-0032	B-21
	B2H4-1420	C-69	B4C4-1000	C-47	B4S5-0750	C-64	B6C4-0032-ZX	B-39
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	B2J4-0033	C-73	B4C5-0016	B-15	B4S5-1250	C-64	B6C4-0040-ZX	B-41
	B2M4-0002	C-72	B4C5-0016-ZX	B-33	B4S5-1500	C-64	B6C4-1000	C-47
	B2P2-0001	C-67	B4C5-0020	B-17	B4T4-0001	C-66	B6C4-1500	C-49
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	B2S4-1000	C-64	B4C5-0025	B-19	B4W4-0004	D-81	B6C5-1500	C-49
	B2T4-0001	C-66	B4C5-0025-ZX	B-37	B4X3-0004	C-63	B6E4-0375	C-57
	B2X3-0002	C-63	B4C5-0032	B-21	B4X4-0004	C-63	B6E4-0500	C-57
	B3C4-0011	B-14	B4C5-0032-ZX	B-39	B5C4-0016	B-15	B6E4-0625	C-57
	B3C4-0011-ZX	B-32	B4C5-0040	B-23	B5C4-0016-ZX	B-33	B6E4-0750	C-57
	B3C4-0016	B-15	B4C5-0040-ZX	B-41	B5C4-0020	B-17	B6E4-0875	C-57
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	B3C5-0020-ZX	B-35	B4E4-0312	C-56	B5E4-0625	C-57	B6E5-1000	C-57
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	B3E4-0250	C-56	B4E4-0625	C-56	B5E4-1500	C-57	B6F4-1250	C-71
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	B3E4-0875	C-56	B4E4-1500	C-57	B5E5-0875	C-57	B6H4-2418	C-69
	B3E4-1000	C-56	B4E5-0125	C-57	B5E5-1000	C-57	B6J4-0001	C-73
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	B3H4-1420	C-69	B4E5-0312	C-57	B5F4-1000	C-71	B6J4-0004	C-73
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	B3J4-0033	C-73	B4E5-0750	C-57	B5H4-2418	C-69	B6M4-0003	C-72
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	B3M4-0003	C-72	B4E5-1000	C-57	B5J4-0002	C-73	B6M4-0005	C-72
	B3M4-0004	C-72	B4E5-1250	C-57	B5J4-0003	C-73	B6P2-0001	C-67
	B3P2-0001	C-67	B4F4-1000	C-71	B5J4-0004	C-73	B6P2-0002	C-67
	B3P2-0002	C-67	B4F4-1250	C-71	B5J4-0006	C-73	B6P5-0001	C-67
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	B3S4-1250	C-64	B4H4-1018	C-69	B5M4-0003	C-72	B6S4-1000	C-64
	B3S5-0750	C-64	B4H4-1420	C-69	B5M4-0004	C-72	B6S4-1250	C-64
	B3S5-1000	C-64	B4H4-2418	C-69	B5M4-0005	C-72	B6S4-2000	C-64

DA18-33S	C-54	DACE-0020	C-53	ER16-1000SS	B-27	ER20-0800S	B-27
DA18-0187	C-54	DACE-0030	C-53	ER16-F062	B-25	ER20-0900	B-25
DA18-0250	C-54	DACN-0010	C-54	ER16-F093	B-25	ER20-0900EC	B-27
DA18-0265	C-54	DACN-0018	C-54	ER16-F125	B-25	ER20-0900S	B-27
DA18-0281	C-54	DACN-0020	C-53	ER16-F125EC	B-27	ER20-1000	B-25
DA18-0296	C-54	DACN-0030	C-53	ER16-F125HP	C-46	ER20-1000EC	B-27
DA18-0312	C-54			ER16-F125S	B-27	ER20-1000S	B-27
DA18-0328	C-54	E		ER16-F125SS	B-27	ER20-1100	B-25
DA18-0343	C-54	ER11-03ST	B-25	ER16-F156	B-25	ER20-1100EC	B-27
DA18-0359	C-54	ER11-13ST	B-25	ER16-F156EC	B-27	ER20-1100S	B-27
DA18-0375	C-54	ER11-0100	B-25	ER16-F156S	B-27	ER20-1200	B-25
DA18-0390	C-54	ER11-0150	B-25	ER16-F156SS	B-27	ER20-1200EC	B-27
DA18-0406	C-54	ER11-0200	B-25	ER16-F187	B-25	ER20-1200S	B-27
DA18-0421	C-54	ER11-0250	B-25	ER16-F187EC	B-27	ER20-1300	B-25
DA18-0437	C-54	ER11-0300	B-25	ER16-F187HP	C-46	ER20-1300EC	B-27
DA18-0453	C-54	ER11-0350	B-25	ER16-F187S	B-27	ER20-1300S	B-27
DA18-0468	C-54	ER11-0400	B-25	ER16-F187SS	B-27	ER20-F062	B-25
DA18-0484	C-54	ER11-0450	B-25	ER16-F218	B-25	ER20-F093	B-25
DA18-0500	C-54	ER11-0500	B-25	ER16-F218EC	B-27	ER20-F125	B-25
DA18-0515	C-54	ER11-0550	B-25	ER16-F218HP	C-46	ER20-F125EC	B-27
DA18-0531	C-54	ER11-0600	B-25	ER16-F218S	B-27	ER20-F125S	B-27
DA18-0546	C-54	ER11-0650	B-25	ER16-F218SS	B-27	ER20-F156	B-25
DA18-0562	C-54	ER11-0700	B-25	ER16-F250	B-25	ER20-F156EC	B-27
DA18-0578	C-54	ER11-F125	B-25	ER16-F250EC	B-27	ER20-F156S	B-27
DA18-0593	C-54	ER11-F187	B-25	ER16-F250HP	C-46	ER20-F156SS	B-27
DA18-0609	C-54	ER11-F250	B-25	ER16-F250S	B-27	ER20-F187	B-25
DA18-0625	C-54	ER16-08STEC	B-27	ER16-F250SS	B-27	ER20-F187EC	B-27
DA18-0640	C-54	ER16-08STS	B-27	ER16-F281	B-25	ER20-F187S	B-27
DA18-0656	C-54	ER16-9FSTEC	B-27	ER16-F281EC	B-27	ER20-F187SS	B-27
DA18-0671	C-54	ER16-09STS	B-27	ER16-F281S	B-27	ER20-F218	B-25
DA18-0687	C-54	ER16-09STSS	B-27	ER16-F281SS	B-27	ER20-F218EC	B-27
DA18-0703	C-54	ER16-10ST	B-25	ER16-F312	B-25	ER20-F218S	B-27
DA18-0718	C-54	ER16-11ST	B-25	ER16-F312EC	B-27	ER20-F218SS	B-27
DA18-0734	C-54	ER16-0100	B-25	ER16-F312HP	C-46	ER20-F250	B-25
DA18-0750	C-54	ER16-0100HP	C-46	ER16-F312S	B-27	ER20-F250EC	B-27
DA20-215T	C-53	ER16-0150	B-25	ER16-F312SS	B-27	ER20-F250S	B-27
DA20-0062	C-53	ER16-0200	B-25	ER16-F343	B-25	ER20-F250SS	B-27
DA20-0078	C-53	ER16-0200HP	C-46	ER16-F343EC	B-27	ER20-F281	B-25
DA20-0093	C-53	ER16-0250	B-25	ER16-F343S	B-27	ER20-F281EC	B-27
DA20-0109	C-53	ER16-0300	B-25	ER16-F343SS	B-27	ER20-F281S	B-27
DA20-0125	C-53	ER16-0300EC	B-27	ER16-F375	B-25	ER20-F281SS	B-27
DA20-0140	C-53	ER16-0300HP	C-46	ER16-F375EC	B-27	ER20-F312	B-25
DA20-0156	C-53	ER16-0300S	B-27	ER16-F375HP	C-46	ER20-F312EC	B-27
DA20-0171	C-53	ER16-0300SS	B-27	ER16-F375S	B-27	ER20-F312S	B-27
DA20-0187	C-53	ER16-0400	B-25	ER16-F375SS	B-27	ER20-F312SS	B-27
DA20-0203	C-53	ER16-0400EC	B-27	ER16-T006	B-25	ER20-F343	B-25
DA20-0218	C-53	ER16-0400HP	C-46	ER16-T008	B-25	ER20-F343EC	B-27
DA20-0234	C-53	ER16-0400S	B-27	ER16-T010	B-25	ER20-F343S	B-27
DA20-0250	C-53	ER16-0400SS	B-27	ER16-T012	B-25	ER20-F343SS	B-27
DA20-0265	C-53	ER16-0500	B-25	ER16-T250	B-25	ER20-F375	B-25
DA20-0281	C-53	ER16-0500EC	B-27	ER20-11STEC	B-27	ER20-F375EC	B-27
DA20-0296	C-53	ER16-0500HP	C-46	ER20-11STS	B-27	ER20-F375S	B-27
DA20-0312	C-53	ER16-0500S	B-27	ER20-12ST	B-25	ER20-F375SS	B-27
DA20-0328	C-53	ER16-0500SS	B-27	ER20-12STS3	B-27	ER20-F406	B-25
DA20-0343	C-53	ER16-0600	B-25	ER20-13STEC	B-27	ER20-F406EC	B-27
DA20-0359	C-53	ER16-0600EC	B-27	ER20-13STS	B-27	ER20-F406S	B-27
DA20-0375	C-53	ER16-0600HP	C-46	ER20-15ST	B-25	ER20-F406SS	B-27
DA30-14ST	C-53	ER16-0600S	B-27	ER20-0150	B-25	ER20-F437	B-25
DA30-0046	C-53	ER16-0600SS	B-27	ER20-0200	B-25	ER20-F437EC	B-27
DA30-0062	C-53	ER16-0700	B-25	ER20-0250	B-25	ER20-F437S	B-27
DA30-0078	C-53	ER16-0700EC	B-27	ER20-0300	B-25	ER20-F437SS	B-27
DA30-0093	C-53	ER16-0700HP	C-46	ER20-0300EC	B-27	ER20-F468	B-25
DA30-0109	C-53	ER16-0700S	B-27	ER20-0300S	B-27	ER20-F468EC	B-27
DA30-0125	C-53	ER16-0700SS	B-27	ER20-0400	B-25	ER20-F468S	B-27
DA30-0140	C-53	ER16-0800	B-25	ER20-0400EC	B-27	ER20-F468SS	B-27
DA30-0156	C-53	ER16-0800EC	B-27	ER20-0400S	B-27	ER20-F500	B-25
DA30-0171	C-53	ER16-0800HP	C-46	ER20-0500	B-25	ER20-F500EC	B-27
DA30-0187	C-53	ER16-0800S	B-27	ER20-0500EC	B-27	ER20-F500S	B-27
DA30-0203	C-53	ER16-0800SS	B-27	ER20-0600	B-25	ER20-F500SS	B-27
DA30-0218	C-53	ER16-0900	B-25	ER20-0600EC	B-27	ER20-T008	B-25
DA30-0234	C-53	ER16-0900EC	B-27	ER20-0600S	B-27	ER20-T010	B-25
DA30-0250	C-53	ER16-0900HP	C-46	ER20-0600SS	B-27	ER20-T012	B-25
DA30-0300	C-53	ER16-0900S	B-27	ER20-0700	B-25	ER20-T250	B-25
DA30-0350	C-53	ER16-0900SS	B-27	ER20-0700EC	B-27	ER20-T312	B-25
DA30-0400	C-53	ER16-1000	B-25	ER20-0700HP	C-46	ER20-T375	B-25
DACE-0010	C-54	ER16-1000EC	B-27	ER20-0700S	B-27	ER20-T437	B-25
DACE-0018	C-54	ER16-1000HP	C-46	ER20-0800	B-25	ER20-T500	B-25
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ER25-09ST	B-26	ER25-F312EC	B-27	ER32-1000EC	B-28	ER32-F437	B-26
ER25-09STEC	B-27	ER25-F312S	B-27	ER32-1000HP	C-46	ER32-F437EC	B-28
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ER25-0150	B-26	ER25-F437	B-26	ER32-1100S	B-28	ER32-F500HP	C-46
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ER25-0300	B-26	ER25-F437SS	B-27	ER32-1200EC	B-28	ER32-F562	B-26
ER25-0300EC	B-27	ER25-F500	B-26	ER32-1200HP	C-46	ER32-F562EC	B-28
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ER25-0400S	B-27	ER25-F562EC	B-27	ER32-1300HP	C-46	ER32-F625EC	B-28
ER25-0400SS	B-27	ER25-F562S	B-27	ER32-1300S	B-28	ER32-F625HP	C-46
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ER25-0500EC	B-27	ER25-F625	B-26	ER32-1400	B-26	ER32-F625SS	B-28
ER25-0500S	B-27	ER25-F625EC	B-27	ER32-1400EC	B-28	ER32-F687	B-26
ER25-0500SS	B-27	ER25-F625S	B-27	ER32-1400HP	C-46	ER32-F687EC	B-28
ER25-0600	B-26	ER25-F625SS	B-27	ER32-1400S	B-28	ER32-F687S	B-28
ER25-0600EC	B-27	ER25-F625SS	B-27	ER32-1400SS	B-28	ER32-F687SS	B-28
ER25-0600S	B-27	ER25-P062	B-26	ER32-1500	B-26	ER32-F750	B-26
ER25-0600SS	B-27	ER25-P125	B-26	ER32-1500EC	B-28	ER32-F750EC	B-28
ER25-0700	B-26	ER25-T008	B-26	ER32-1500HP	C-46	ER32-F750HP	C-46
ER25-0700EC	B-27	ER25-T010	B-26	ER32-1500S	B-28	ER32-F750S	B-28
ER25-0700S	B-27	ER25-T012	B-26	ER32-1600	B-26	ER32-F750SS	B-28
ER25-0700SS	B-27	ER25-T250	B-26	ER32-1600EC	B-28	ER32-P062	B-26
ER25-0800	B-26	ER25-T312	B-26	ER32-1600HP	C-46	ER32-P125	B-26
ER25-0800EC	B-27	ER25-T375	B-26	ER32-1600S	B-28	ER32-P250	B-26
ER25-0800S	B-27	ER25-T437	B-26	ER32-1600SS	B-28	ER32-T008	B-26
ER25-0800SS	B-27	ER25-T500	B-26	ER32-1700	B-26	ER32-T010	B-26
ER25-0800SS	B-27	ER25-T562	B-26	ER32-1700EC	B-28	ER32-T012	B-26
ER25-0900	B-26	ER25-T625	B-26	ER32-1700HP	C-46	ER32-T250	B-26
ER25-0900EC	B-27	ER32-08STSS	B-28	ER32-1700S	B-28	ER32-T312	B-26
ER25-0900S	B-27	ER32-09STSS	B-28	ER32-1800	B-26	ER32-T375	B-26
ER25-0900SS	B-27	ER32-11ST	B-26	ER32-1800EC	B-28	ER32-T437	B-26
ER25-1000	B-26	ER32-11STEC	B-28	ER32-1800HP	C-46	ER32-T500	B-26
ER25-1000EC	B-27	ER32-11STS	B-28	ER32-1800S	B-28	ER32-T562	B-26
ER25-1000S	B-27	ER32-13STSS	B-28	ER32-1800SS	B-28	ER32-T625	B-26
ER25-1000SS	B-27	ER32-17STEC	B-28	ER32-1900	B-26	ER32-T687	B-26
ER25-1100	B-26	ER32-17STS	B-28	ER32-1900EC	B-28	ER32-T750	B-26
ER25-1100EC	B-27	ER32-18ST	B-26	ER32-1900HP	C-46	ER32-T812	B-26
ER25-1100S	B-27	ER32-0300	B-26	ER32-1900S	B-28	ER40-09STSS	B-28
ER25-1100SS	B-27	ER32-0300HP	C-46	ER32-2000	B-26	ER40-15ST	B-26
ER25-1200	B-26	ER32-0400	B-26	ER32-2000EC	B-28	ER40-15STEC	B-28
ER25-1200EC	B-27	ER32-0400EC	B-28	ER32-2000HP	C-46	ER40-15STS	B-28
ER25-1200S	B-27	ER32-0400HP	C-46	ER32-2000S	B-28	ER40-23ST	B-26
ER25-1200SS	B-27	ER32-0400S	B-28	ER32-2000SS	B-28	ER40-23STEC	B-28
ER25-1300	B-26	ER32-0400SS	B-28	ER32-2000SS	B-28	ER40-23STS	B-28
ER25-1300EC	B-27	ER32-0500	B-26	ER32-F125	B-26	ER40-0400	B-26
ER25-1300S	B-27	ER32-0500EC	B-28	ER32-F125EC	B-28	ER40-0400EC	B-28
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ER25-1400EC	B-27	ER32-0500SS	B-28	ER32-F187	B-26	ER40-0500EC	B-28
ER25-1400S	B-27	ER32-0600	B-26	ER32-F187EC	B-28	ER40-0500S	B-28
ER25-1400SS	B-27	ER32-0600EC	B-28	ER32-F187HP	C-46	ER40-0600	B-26
ER25-1500	B-26	ER32-0600HP	C-46	ER32-F187S	B-28	ER40-0600EC	B-28
ER25-1500EC	B-27	ER32-0600S	B-28	ER32-F250	B-26	ER40-0600S	B-28
ER25-1500S	B-27	ER32-0600SS	B-28	ER32-F250EC	B-28	ER40-0700	B-26
ER25-1500SS	B-27	ER32-0700	B-26	ER32-F250HP	C-46	ER40-0700EC	B-28
ER25-1600	B-26	ER32-0700EC	B-28	ER32-F250S	B-28	ER40-0700S	B-28
ER25-1600EC	B-27	ER32-0700HP	C-46	ER32-F250SS	B-28	ER40-0800	B-26
ER25-1600S	B-27	ER32-0700S	B-28	ER32-F281	B-26	ER40-0800EC	B-28
ER25-1600SS	B-27	ER32-0700SS	B-28	ER32-F281S	B-28	ER40-0800S	B-28
ER25-F125	B-26	ER32-0800	B-26	ER32-F281SS	B-28	ER40-0900	B-26
ER25-F125EC	B-27	ER32-0800EC	B-28	ER32-F312	B-26	ER40-0900EC	B-28
ER25-F125S	B-27	ER32-0800HP	C-46	ER32-F312EC	B-28	ER40-0900S	B-28
ER25-F187	B-26	ER32-0800S	B-28	ER32-F312HP	C-46	ER40-1000	B-26
ER25-F187EC	B-27	ER32-0800SS	B-28	ER32-F312S	B-28	ER40-1000EC	B-28
ER25-F187S	B-27	ER32-0900	B-26	ER32-F312SS	B-28	ER40-1000S	B-28
ER25-F250	B-26	ER32-0900EC	B-28	ER32-F375	B-26	ER40-1100	B-26
ER25-F250EC	B-27	ER32-0900HP	C-46	ER32-F375EC	B-28	ER40-1100EC	B-28
ER25-F250S	B-27	ER32-0900S	B-28	ER32-F375HP	C-46	ER40-1100S	B-28
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TG15-0843	C-52	TG15-1421	C-52	XCDY-17-3	D-83	XCCTC-IN35	D-83
TG15-0843S	C-52	TG15-1421S	C-52	XCDY-17-3-45	D-83	XCCTC-IN40	D-83
TG15-0859	C-52	TG15-1437	C-52	XCHPA0040	D-79	XCCTC-IN45	D-83
TG15-0859S	C-52	TG15-1437S	C-52	XCHPA0050	D-79	XCCTC-IN50	D-83
TG15-0875	C-52	TG15-1453	C-52	XCHPA0063	D-79	XCCTC-IN63	D-83
TG15-0875NP	C-52	TG15-1453S	C-52	XCHPA0100	D-79	XCCTC-INPN	D-83
TG15-0875S	C-52	TG15-1468	C-52	XCNA-0011	B-14	XCCTC-RACK	D-83
TG15-0890	C-52	TG15-1468S	C-52	XCNA-0016	B-16	XCCTC-S100	D-83
TG15-0890S	C-52	TG15-1484	C-52	XCNA-0020	B-18	XCCTC-SF30	D-83
TG15-0906	C-52	TG15-1484S	C-52	XCNA-0025	B-20	XCCTC-SF35	D-83
TG15-0906S	C-52	TG15-1500	C-52	XCNA-0032	B-22	XCCTC-SF40	D-83
TG15-0921	C-52	TG15-1500NP	C-52	XCNA-0040	B-24	XCCTC-SF45	D-83
TG15-0921S	C-52	TG15-1500S	C-52	XCNA-1000	C-48	XCCTC-SF50	D-83
TG15-0937	C-52	U		XCNA-1500	C-50	XCCTC-SF63	D-83
TG15-0937S	C-52	U1X3B0001	C-63	XCNA-BB25	B-20	XCCTC-SFPN	D-83
TG15-0953	C-52	U2X3B0002	C-63	XCNA-BB32	B-22	XCCTC-SH40	D-83
TG15-0953S	C-52	U3X3B0003	C-63	XCNA-FB10	C-48	XCCTC-SH50	D-83
TG15-0968	C-52	U4X3B0004	C-63	XCNA-FB16	B-16	XCTH-L010	D-82
TG15-0968S	C-52	U5X4B0005	C-63	XCNA-FB20	B-18	XCTH-L040	D-82
TG15-0984	C-52	U6X4B0006	C-63	XCNA-FB25	B-20	XCTH-L050	D-82
TG15-0984S	C-52	U7X4B0007	C-63	XCNA-FB32	B-22	XCTH-L063	D-82
TG15-1000	C-52	X		XCNA-FB40	B-24	XCTH-S010	D-82
TG15-1000NP	C-52	X11N-J200	C-73	XCNA-FT10	C-48	XCTH-S040	D-82
TG15-1000S	C-52	X14N-J300	C-73	XCNA-FT16	B-16	XCTH-S050	D-82
TG15-1015	C-52	X16N-J300	C-73	XCNA-FT20	B-18	XCTH-S063	D-82
TG15-1015S	C-52	X18N-J400	C-73	XCNA-FT25	B-20	XCTT-0004	D-81
TG15-1031	C-52	X100-0250	C-71	XCNA-FT32	B-22	XCTT-0006	D-81
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TG15-1046S	C-52	X100-J330	C-73	XCNA-H016	B-16	XCTWA0063	D-79
TG15-1062	C-52	X125-0250	C-71	XCNA-H020	B-18	XCTWA0100	D-79
TG15-1062S	C-52	X125-0375	C-71	XCNA-K016	B-16	XD10-0250	C-55
TG15-1078	C-52	X125-0750	C-71	XCNA-K020	B-18	XD10-0312	C-55
TG15-1078S	C-52	X130-J200	C-73	XCNA-K025	B-20	XD10-0359	C-55
TG15-1093	C-52	X650-J100	C-73	XCNA-K032	B-22	XD10-0375	C-55
TG15-1093S	C-52	X800-J200	C-73	XCNA-T011	B-32	XD10-0390	C-55
TG15-1109	C-52	XCCS-221	B-40	XCNA-T016	B-34	XD10-0406	C-55
TG15-1109S	C-52	XCCS-0720	B-16, B-34	XCNA-T020	B-36	XD10-0421	C-55
TG15-1125	C-52	XCCS-0720-C	B-16	XCNA-T025	B-38	XD10-0437	C-55
TG15-1125S	C-52	XCCS-1415	B-18, B-36	XCNA-T032	B-40	XD10-0453	C-55
TG15-1140	C-52	XCCS-1415-C	B-18, B-36	XCNA-T040	B-42	XD10-0468	C-55
TG15-1140S	C-52	XCCS-1815	B-20, B-38	XCNA-TT16	B-34	XD10-0484	C-55
TG15-1156	C-52	XCCS-1815-C	B-20, B-38	XCNA-TT20	B-36	XD10-0500	C-55
TG15-1156S	C-52	XCCS-1816	B-24, B-42, C-48	XCNA-TT25	B-38	XD10-0515	C-55
TG15-1171	C-52	XCCS-1816-C	B-24, B-42	XCNA-TT32	B-40	XD10-0515	C-55
TG15-1171S	C-52	XCCS-2212	C-50	XCNA-TT40	B-42	XD10-0531	C-55
TG15-1187	C-52	XCCS-2215	B-22	XCRT-34HL	D-83	XD10-0546	C-55
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TG15-1218S	C-52	XCCW-1000	A-11, C-48	XCRT-CR03	D-82	XD10-0625	C-55
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