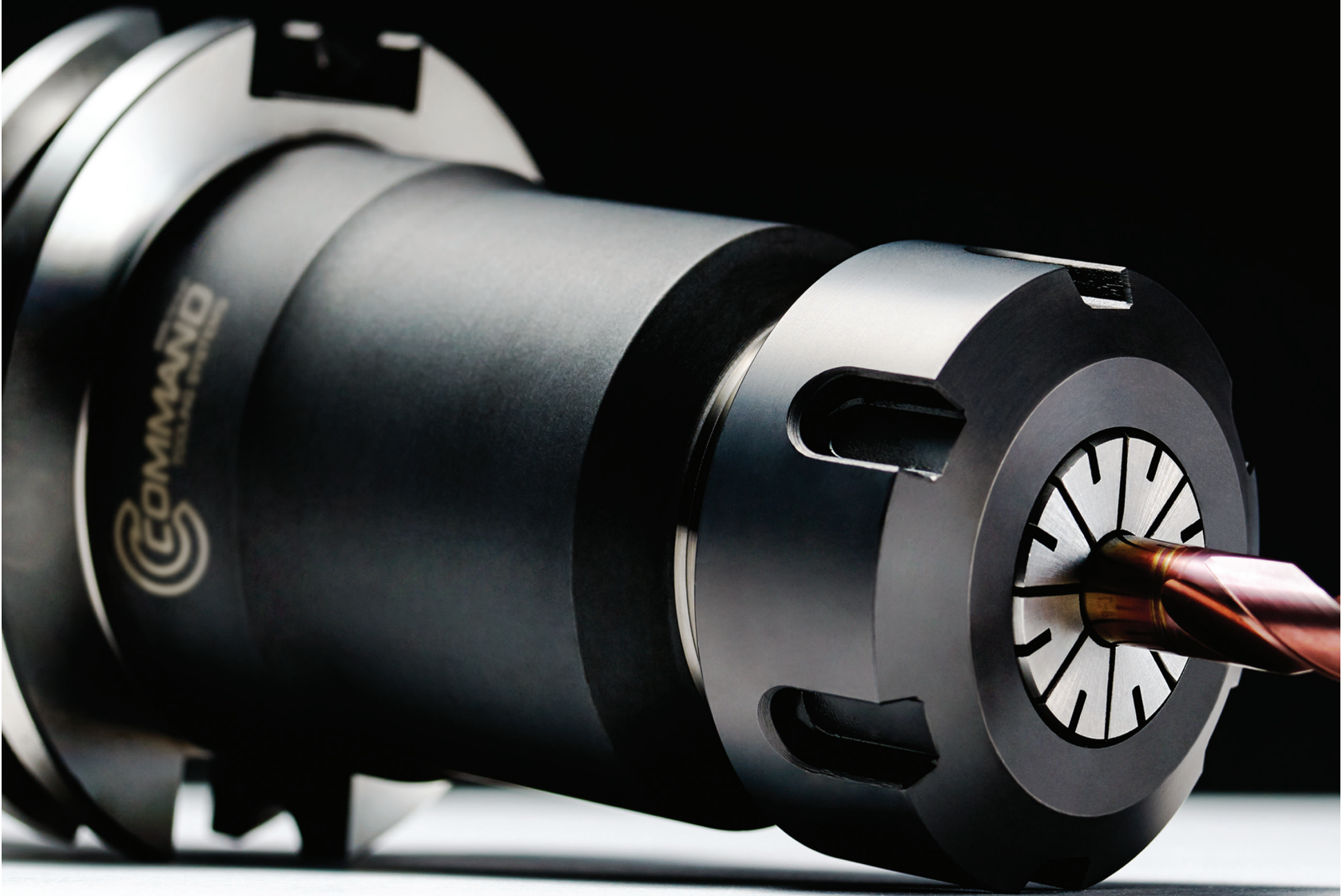




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Standard Product Offering
for **Milling Tools**

Performance
measured by you

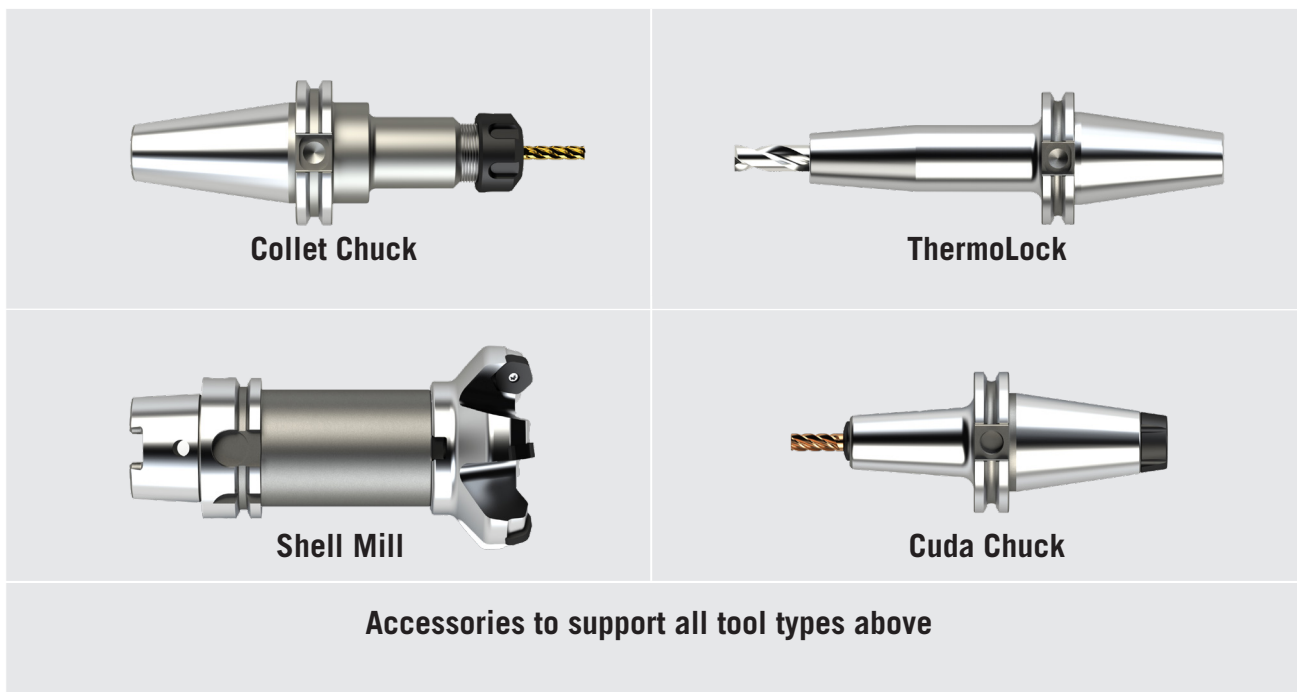


Why Command

At Command Tooling Systems we design and manufacture precision CNC toolholding products for any industry ranging from your basic job shop to the high precision needs of the medical field.

By combining our advanced technologies with our global network, we are able to continually present new, improved, and innovative tooling options for all the industries we serve.

Command Tooling Systems Standard Product Offering For Milling Machines



All tool types available for CT40, CT50, HSK63A, & HSK100A

Additional tool types and shank sizes available per request



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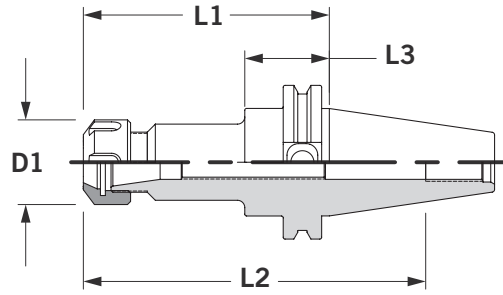
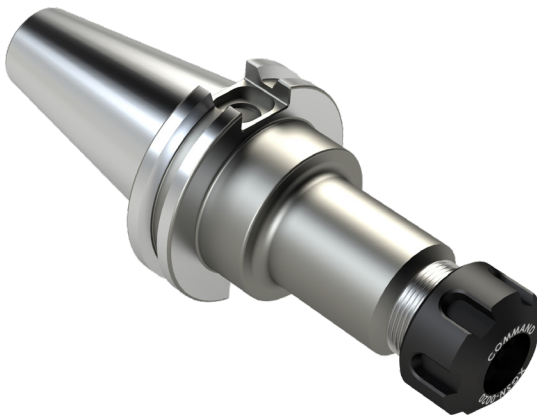
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ER Micro Precision® CT40

- ▶ ER Micro Precision® collet chucks have AT3 or better shank taper allowing accurate rigid toolholder-to-spindle mount. A wide range of collets are available: 0.020" - 1.023" (0.5 - 26 mm), reducing collet, and toolholder inventories. All ER Micro Precision® collet chuck tapers, lengths, and straight shank extensions are in stock and ready to ship.






Measurements are in inches unless noted (mm).

- + Has a flush precision closure nut that grips the tool close to the cutting edge providing accuracy and rigidity.
- + Concentric to 0.0002" T.I.R., which puts tool precisely on spindle centerline.
- + Has less tool wear and replacement resulting in less scrap.
- + Has a fully ground flange and V-groove reducing spindle and changer maintenance.
- + **NOTE:** No stop screws in ER11 holders.
- + **IMPORTANT:** Maximum recommended torque is listed on page 49. Do not overtighten collet nut assembly.

OPTIONS

BALANCE OPTIONS	COOLANT OPTIONS
Available	Available

ACCESSORIES

			SETUP HOLDING FIXTURES
10-11	49	50	51

ER Micro Precision® CT40

Shorty	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	C4C1-0032	ER32	1.97	0.83	1.90	0.75	XCCW-P032INT	-



Stub	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	C4C3-0011	ER11	0.63	2.00	3.50	-	XCCW-D011	-
	C4C3-0016	ER16	1.26	2.00	2.50	-	XCCW-D016	XCCS-0720
	C4C3-0020	ER20	1.38	2.55	2.90	1.38	XCCW-D020	XCCS-1415
	C4C3-0025	ER25	1.64	2.50	3.00	1.08	XCCW-D025	XCCS-1815
	C4C3-0032	ER32	1.97	2.70	3.30	1.38	XCCW-D032	XCCS-2215
	C4C3-0040	ER40	2.48	3.00	2.20	1.44	XCCW-0040	XCCS-1816



Standard	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	C4C4-0011	ER11	0.63	3.00	4.57	1.38	XCCW-D016	
	C4C4-0016	ER16	1.26	2.88	3.00	1.38	XCCW-D016	XCCS-0720
	C4C4-0020	ER20	1.38	4.00	3.50	1.38	XCCW-D020	XCCS-1415
	C4C4-0025	ER25	1.64	4.00	3.50	1.38	XCCW-D025	XCCS-1815
	C4C4-0032	ER32	1.97	4.00	4.00	1.44	XCCW-D032	XCCS-2215
	C4C4-0040	ER40	2.48	4.00	3.20	1.44	XCCW-0040	XCCS-1816



Extended	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	C4C5-0016	ER16	1.26	4.88	3.00	1.38	XCCW-D016	XCCS-0720
	C4C5-0020	ER20	1.38	6.00	3.50	1.38	XCCW-D020	XCCS-1415
	C4C5-0025	ER25	1.64	6.00	3.50	1.38	XCCW-D025	XCCS-1815
	C4C5-0032	ER32	1.97	6.00	4.00	1.38	XCCW-D032	XCCS-2215
	C4C5-0040	ER40	2.48	6.00	5.00	1.44	XCCW-0040	XCCS-1816



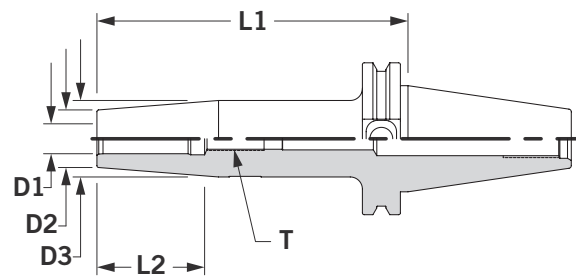
+ **IMPORTANT:** For Maximum recommended torque see page 49

+ ER32 shorty collet chucks use ER32 collets made to precise specifications for tool shank sizes 0.079-0.787" (2.0mm-20.0mm).

+ ER32 shorty collet chucks have the shortest gage length with recessed collet nut design. No stop screws. No safe area.

ThermoLock® CT40

- ▶ ThermoLock® toolholders offer excellent clamping ability by operating on the principle of thermal induced expansion and contraction. The holder is heated, expanding the nose I.D. to accept a cutting tool. When cooled, the nose I.D. shrinks resulting in incredible gripping power over the full length of the holder/cutting tool interface.



Measurements are in inches unless noted (mm).

- + Has a max T.I.R. of 0.0002" and are balanced at 25,000 RPM @ G2.5. ThermoLock® toolholders also include adjustable balance screws.
- + Excellent clamping and balance repeatability for higher speeds and superior cut duplication.
- + Comes ready for through-the-spindle coolant. This sealed system yields optimal coolant-fed tooling performance.
- + **IMPORTANT:** Once a ThermoLock® toolholder has been heated, it cannot be returned.
- + Engineered for minimized loss of accuracy across the holder/cutting tool interface.
- + Once a ThermoLock® holder is balanced, the only variable is the cutting tool.
- + Fully ground flange and V-groove—easy on tool changers for less spindle and changer maintenance.
- + Extended gage length toolholders have a parabolic profile to maximize rigidity.


OPTIONS


BALANCE OPTIONS	COOLANT OPTIONS
Available	Available


ACCESSORIES

	SETUP HOLDING FIXTURES	ThermoLock® EXTENSIONS
10-11	51	67-68

ThermoLock® CT40 Inch

Stub	Part Number	D1	D2	D3	L1	L3	T
	C4N3-0125	0.125	0.39	-	3.15	-	-
	C4N3-0187	0.187	0.39	-	3.15	-	-
	C4N3-0250	0.250	0.83	1.06	3.15	1.38	M5 X 1
	C4N3-0312	0.312	0.83	1.06	3.15	1.38	M6 X 1
	C4N3-0375	0.375	0.94	1.26	3.15	1.57	M8 X 1
	C4N3-0437	0.437	0.94	1.26	3.15	1.57	M8 X 1
	C4N3-0500	0.500	0.94	1.26	3.15	1.77	M10 X 1
	C4N3-0625	0.625	1.06	1.34	3.15	1.77	M12 X 1
	C4N3-0750	0.750	1.30	1.65	3.15	2.17	M16 X 1
	C4N3-1000	1.000	1.73	2.09	3.93	2.17	M16 X 1
	C4N3-1250	1.250	1.73	2.09	3.93	2.17	M16 X 1

Standard	Part Number	D1	D2	D3	L1	L2	T
	C4N4-0250	0.250	0.83	1.06	5.12	1.38	M5 X 1
	C4N4-0312	0.312	0.83	1.06	5.12	1.38	M6 X 1
	C4N4-0375	0.375	0.94	1.26	5.12	1.57	M8 X 1
	C4N4-0437	0.437	0.94	1.26	5.12	1.57	M8 X 1
	C4N4-0500	0.500	0.94	1.26	5.12	1.77	M10 X 1
	C4N4-0625	0.625	1.06	1.34	5.12	1.77	M12 X 1
	C4N4-0750	0.750	1.30	1.65	5.12	2.17	M16 X 1
	C4N4-1000	1.000	1.73	2.09	5.12	2.17	M16 X 1
	C4N4-1250	1.250	1.73	2.09	5.12	2.17	M16 X 1

Extended	Part Number	D1	D2	D3	L1	L2	T
	C4N5-0250	0.250	0.83	1.06	6.30	1.38	M5 X 1
	C4N5-0312	0.312	0.83	1.06	6.30	1.38	M6 X 1
	C4N5-0375	0.375	0.94	1.26	6.30	1.57	M8 X 1
	C4N5-0437	0.437	0.94	1.26	6.30	1.57	M8 X 1
	C4N5-0500	0.500	0.94	1.26	6.30	1.77	M10 X 1
	C4N5-0625	0.625	1.06	1.34	6.30	1.77	M12 X 1
	C4N5-0750	0.750	1.30	1.65	6.30	2.17	M16 X 1
	C4N5-1000	1.000	1.73	2.09	6.30	2.17	M16 X 1
	C4N5-1250	1.250	1.73	2.09	6.30	2.17	M16 X 1

OPTIONS


BALANCE OPTIONS	COOLANT OPTIONS
Available	Available


ACCESSORIES

	ThermoLock® EXTENSIONS
SETUP HOLDING FIXTURES	
10-11	51 67-68

ThermoLock® CT40 Metric

Stub	Part Number	D1	D2	D3	L1	L3	T
	C4N3-0006	6mm	21mm	27mm	80mm	35mm	M5 X 1
	C4N3-0008	8mm	21mm	27mm	80mm	35mm	M6 X 1
	C4N3-0010	10mm	24mm	32mm	80mm	40mm	M8 X 1
	C4N3-0012	12mm	24mm	32mm	80mm	40mm	M8 X 1
	C4N3-0016	16mm	27mm	34mm	80mm	45mm	M12 X 1
	C4N3-0020	20mm	33mm	42mm	80mm	55mm	M16 X 1
	C4N3-0025	25mm	44mm	53mm	100mm	55mm	M16 X 1

Standard	Part Number	D1	D2	D3	L1	L2	T
	C4N4-0006	6mm	21mm	27mm	130mm	35mm	M5 X 1
	C4N4-0008	8mm	21mm	27mm	130mm	35mm	M6 X 1
	C4N4-0010	10mm	24mm	32mm	130mm	40mm	M8 X 1
	C4N4-0012	12mm	24mm	32mm	130mm	40mm	M8 X 1
	C4N4-0016	16mm	27mm	34mm	130mm	45mm	M12 X 1
	C4N4-0020	20mm	33mm	42mm	130mm	55mm	M16 X 1
	C4N4-0025	25mm	44mm	53mm	130mm	55mm	M16 X 1

Extended	Part Number	D1	D2	D3	L1	L2	T
	C4N5-0006	6mm	21mm	27mm	160mm	35mm	M5 X 1
	C4N5-0008	8mm	21mm	27mm	160mm	35mm	M6 X 1
	C4N5-0010	10mm	24mm	32mm	160mm	40mm	M8 X 1
	C4N5-0012	12mm	24mm	32mm	160mm	40mm	M8 X 1
	C4N5-0016	16mm	27mm	34mm	160mm	45mm	M12 X 1
	C4N5-0020	20mm	33mm	42mm	160mm	55mm	M16 X 1
	C4N5-0025	25mm	44mm	53mm	160mm	55mm	M16 X 1

OPTIONS

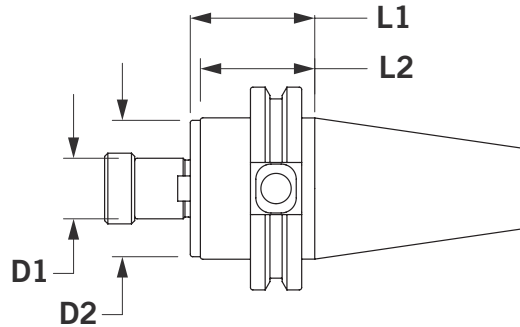
BALANCE OPTIONS	COOLANT OPTIONS
Available	Available

ACCESSORIES

	ThermoLock® EXTENSIONS
SETUP HOLDING FIXTURES	10-11
51	53

Shell Mill CT40

- ▶ Shell Mill holders' pilot diameter is sized for precision fit with cutter. Removable/replaceable drive keys included; fine thread locking screw included. All tapers and lengths are ready to ship. Get your tools fast!



Measurements are in inches unless noted (mm).

Standard	Part Number	D1	D2	L1	L2	Drive Key	Lock Screw
	C4S4-0500	0.500	1.44	1.50	1.38	XSDK-0500	XSAS-0500
	C4S4-0750	0.750	1.69	1.50	1.38	XSDK-0750	XSAS-0750
	C4S4-1000	1.000	2.19	2.06	1.44	XSDK-1000	XSAS-1000
	C4S4-1250	1.250	2.75	2.63	1.44	XSDK-1250	XSAS-1250
	C4S4-1500	1.500	3.81	3.00	1.44	XSDK-1500	XSAS-1500
	C4S5-0500	0.500	1.44	3.50	1.37	XSDK-0500	XSAS-0500
	C4S5-0750	0.750	1.69	3.50	1.38	XSDK-0750	XSAS-0750
	C4S5-1000	1.000	2.19	4.00	1.44	XSDK-1000	XSAS-1000
	C4S5-1250	1.250	2.75	4.00	1.44	XSDK-1250	XSAS-1250
	C4S5-1500	1.500	3.81	4.00	1.44	XSDK-1500	XSAS-1500



- + Face perpendicular to centerline within 0.0002".
- + Toolholder includes drive key and fine thread locking screw.
- + Part numbers for replacements listed in table at right and on page 52.
- + **NOTE:** Drive keys are in line with drive slot.
- + AT3 or better shank taper for 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.
- + 2" and 2.5" Shell Mill holders also have four (4) 5/8"-11 threaded holes on a 4" bolt circle.

OPTIONS

BALANCE OPTIONS	COOLANT OPTIONS
Available	Available

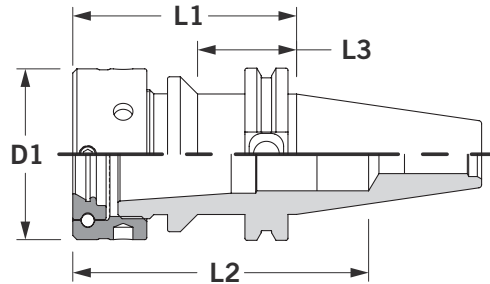
ACCESSORIES

	SETUP HOLDING FIXTURES	
10-11	51	52



TG100 Complex® CT40

- ▶ The key reason for the Complex® collet system's 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.



Measurements are in inches unless noted (mm).

TG100	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	C4C3-1000	TG100	2.48	2.75	3.14	N/A	XCCW-1000	XCCS-1816
	C4C4-1000	TG100	2.48	3.25	3.64	1.44	XCCW-1000	XCCS-1816
	C4C5-1000	TG100	2.48	4.25	4.64	2.25	XCCW-1000	XCCS-1816



- + TG100 Collets range from 0.109"-1.000".
- + Provides the flexibility to mill, drill, and ream.
- + AT3 or better shank taper providing accurate, rigid toolholder-to-spindle mount.
- + **IMPORTANT:** Maximum recommended torque is 60 ft-lb. Do not over tighten collet nut assembly
- + Results in less tool wear and replacement resulting in less scrap.
- + Fully ground flange and V-groove, reducing spindle and changer maintenance.
- + Add -C at end of part number to specify stop screw with coolant passage.
- + Interchangeable with Erickson type collets.

OPTIONS

BALANCE OPTIONS	COOLANT OPTIONS
Available	Available

ACCESSORIES

10-11	49	50	50	51

Retention Knobs Domestic & Import Machines CT40



Measurements are in inches unless noted (mm).

Domestic & Import Machines CT Taper	Part Number	Taper	D1	D2	L1	A	T	Thru Coolant	Wrench
	RB4E-0100	CT40	0.59	0.39	1.05	90	5/8-11	No	XRKW-0750
	RB4E-0101	CT40	0.59	0.39	0.98	90	5/8-11	No	XRKW-0750
	RS4E-0104	CT40	0.59	0.41	1.44	45	5/8-11	No	XRKW-0750
	RS4E-0104-C	CT40	0.59	0.41	1.44	45	5/8-11	Yes	XRKW-0750
	RS4E-0106	CT40	0.59	0.39	1.38	45	5/8-11	No	XRKW-0750
	RS4E-0109	CT40	0.52	0.39	0.47	50	5/8-11	No	XRKW-0750
	RS4E-0110	CT40	0.98	0.83	0.99	75	5/8-11	No	-
	RS4E-0111	CT40	0.50	0.31	0.75	75	5/8-11	No	-
	RS4E-0114-H	CT40	0.75	0.55	1.02	75	5/8-11	Yes	XRKW-0750
	RS4E-0201	CT40	0.50	0.31	0.87	75	5/8-11	No	-
	RS4E-0203	CT40	0.50	0.31	2.38	90	5/8-11	No	-
	RS4E-0207	CT40	0.74	0.48	0.87	75	5/8-11	No	XRKW-0750
	RS4E-0208-C	CT40	0.74	0.49	0.64	45	5/8-11	Yes	XRKW-0750
	RS4E-0209-C	CT40	0.74	0.55	1.03	75	5/8-11	Yes	XRKW-0750
	RS4E-0211-C	CT40	0.74	0.49	0.64	45	5/8-11	Yes	XRKW-0750
	RS4E-0212	CT40	0.75	0.55	1.02	75	5/8-11	No	XRKW-0750
	RS4E-0212-C	CT40	0.75	0.55	1.02	75	5/8-11	Yes	XRKW-0750
	RS4E-0212-H	CT40	0.75	0.55	1.02	75	5/8-11	Yes	XRKW-0750
	RS4E-0215-C	CT40	0.75	0.55	1.14	75	5/8-11	Yes	XRKW-0750
	RS4E-0220-H	CT40	0.59	0.39	1.26	45	5/8-11	Yes	XRKW-0750
RS4E-0228-H	CT40	0.74	0.49	0.64	45	5/8-11	Yes	XRKW-0750	
RS4E-0254-C	CT40	0.75	0.55	1.03	75	5/8-11	Yes	XRKW-0750	

+ **IMPORTANT:** Maximum recommended torque is 30

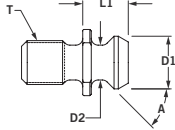
- + Avoid cost of damaged holder and spindles from incorrectly torqued retention knobs.
- + Retention knob wrench and torque wrench details, page 52.
- + For special retention knobs, contact Command Customer Service.

- + **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 an application, send us a print of the knob so that we may find the correct part. Please specify machine make and model and the toolholder shank being used when ordering.

Retention Knobs U.S. ANSI CT40



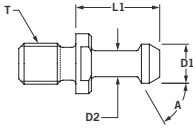
Measurements are in inches unless noted (mm).

U.S. ANSI CT Taper	Part Number	Taper	D1	D2	L1	A	T	Thru Coolant	Wrench
	RC4E-0002	CT40	0.74	0.49	0.64	45	5/8-11	No	XRKW-0750
	RC4E-0001	CT40	0.74	0.49	0.64	45	5/8-11	Yes	XRKW-0750

+ **IMPORTANT:** Maximum recommended torque is 30

Retention Knobs MAS Style CT40

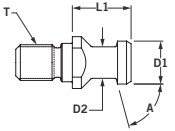


MAS Style CT Taper	Part Number	Taper	D1	D2	L1	A	T	Thru Coolant	Wrench
	RB4E-0001	CT40	0.59	0.39	1.27	45	5/8-11	No	XRKW-0750
	RB4E-0001-C	CT40	0.59	0.39	1.27	45	5/8-11	Yes	XRKW-0750
	RS4E-0221	CT40	0.59	0.39	1.27	45	5/8-11	No	XRKW-0750
	RS4E-0221-C	CT40	0.59	0.39	1.27	45	5/8-11	Yes	XRKW-0750
	RB4E-0002	CT40	0.59	0.39	1.27	60	5/8-11	No	XRKW-0750
	RB4E-0002-C	CT40	0.59	0.39	1.27	60	5/8-11	Yes	XRKW-0750
	RB4E-0003	CT40	0.59	0.39	1.27	90	5/8-11	No	XRKW-0750
	RB4E-0003-C	CT40	0.59	0.39	1.27	90	5/8-11	Yes	XRKW-0750

+ **IMPORTANT:** Maximum recommended torque is 30

Retention Knobs DIN/ISO CT40



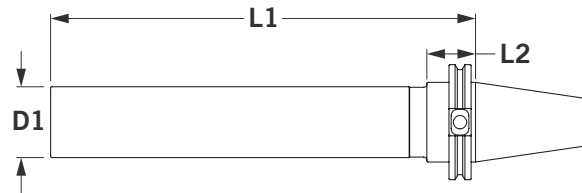
DIN/ISO CT Taper	Part Number	Taper	D1	D2	L1	A	T	Thru Coolant	Wrench
	RS4E-0114	CT40	0.75	0.55	1.02	75	5/8-11	No	XRKW-0750
	RS4E-0114-C	CT40	0.75	0.55	1.02	75	5/8-11	Yes	XRKW-0750

+ **IMPORTANT:** Maximum recommended torque is 30

Test Bars CT40

- ▶ Our calibrated and certified precision test bars accurately align workpieces and/or holding fixtures. Test bars are hardened, normalized, and ground for reliable permanent accuracy. Wooden storage case included with Test Bar.

Nose specifications: Concentric to taper within .002" T.I.R.; Diameter within .0002" over the entire length.



CT40	Part Number	Taper	D1	L1
	C4W4-0004	CT40	2.00	10.00



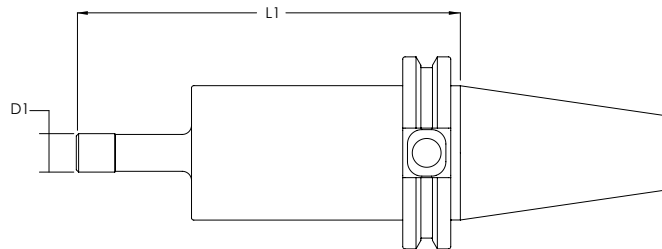
- + Wooden case with durable foam for maximum storage protection.
- + Includes an inspection certificate with measured dimensions for user reference.
- + Tapers are precision ground to AT3 (or better) for accurate spindle runout reading.

Calibration Kit CT40

- ▶ Our certified adapters are ready to be used to recalibrate any CT40 machines. These tools are precision ground for accurate readings to ensure best results. The kit includes a reusable foamed case, a certified ring gage, and a retention knob of your choice.



(Full Kit Shown)

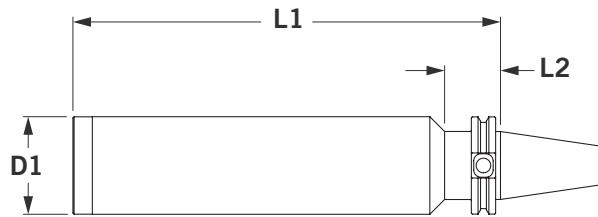


Calibration Adapter	Part Number	D1	L1
	C4A4-0500	0.500	5.00
	C4A4-0500-KIT1	0.500	5.00

- + Calibrate your table tool probe.
- + Available for CT40, CT50, HSK63A, and HSK100A.
- + Comes with carrying case.
- + Tools are laser marked with certified dimensions for quick setup.
- + Certification & Ring Gage included.
- + Comes with retention knob of your choice.
See page 10 - 11

Blank Bar CT40

- ▶ Blank Bars have a case hardened shank, taper, and flange. Nose is unhardened for custom milling. Have a toolholder design that doesn't meet any standard holders? Blank bars are perfect for your custom applications. The nose is left unhardened for any creation. You design it. You fabricate it.



Measurements are in inches unless noted (mm).

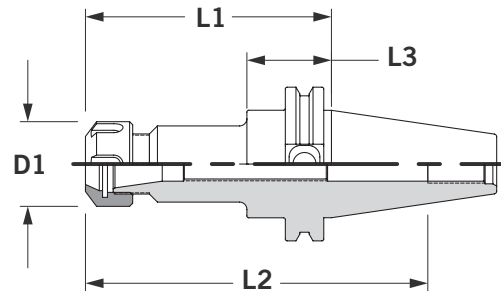
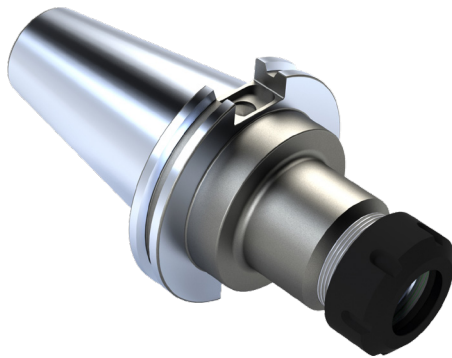
Stub	Part Number	D1	L1	L2
	C4X3-0004	2.500	6.00	1.44
	C4X4-0004	2.500	11.00	1.44



- + Shank taper and flange are case hardened and precision ground. Nose is unhardened 8620 alloy steel machinable for making custom and emergency holders.
- + Precision internal center eases alignment.
- + Nose includes an indicator band for users to reference for accurate machining profiles.

ER Micro Precision® CT50

- ▶ ER Micro Precision® collet chucks have AT3 or better shank taper allowing accurate rigid toolholder-to-spindle mount. A wide range of collets are available: 0.020" - 1.023" (0.5 - 26 mm), reducing collet, and toolholder inventories. All ER Micro Precision® collet chuck tapers, lengths, and straight shank extensions are in stock and ready to ship.



Measurements are in inches unless noted (mm).

- + Has a flush precision closure nut that grips the tool close to the cutting edge providing accuracy and rigidity.
- + Concentric to 0.0002" T.I.R., which puts tool precisely on spindle centerline.
- + Has less tool wear and replacement resulting in less scrap.
- + Has a fully ground flange and V-groove, reducing spindle and changer maintenance.
- + **NOTE:** No stop screws in ER11 holders.
- + **IMPORTANT:** Maximum recommended torque is listed on page 49. Do not overtighten collet nut assembly.

OPTIONS

BALANCE OPTIONS	COOLANT OPTIONS
Available	Available

ACCESSORIES

			SETUP HOLDING FIXTURES
22-23	49	50	51

ER Micro Precision® CT50

Shorty	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	C6C1-0032	ER32	1.97	0.75	3.00	0.75	XCCW-P032INT	-



Standard	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	C6C4-0016	ER16	1.26	4.88	7.13	1.38	XCCW-D016	XCCS-0720
	C6C4-0020	ER20	1.38	4.00	6.25	1.38	XCCW-D020	XCCS-1415
	C6C4-0025	ER25	1.64	4.00	6.25	1.38	XCCW-D025	XCCS-1815
	C6C4-0032	ER32	1.97	4.00	6.25	1.38	XCCW-D032	XCCS-2215
	C6C4-0040	ER40	2.48	4.00	6.25	1.38	XCCW-0040	XCCS-1816

Extended	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	C6C5-0016	ER16	1.26	6.88	9.13	1.38	XCCW-D016	XCCS-0720
	C6C5-0020	ER20	1.38	6.00	8.30	1.38	XCCW-D020	XCCS-1415
	C6C5-0025	ER25	1.64	6.00	8.25	1.38	XCCW-D025	XCCS-1815
	C6C5-0032	ER32	1.97	6.00	8.25	1.38	XCCW-D032	XCCS-2215
	C6C5-0040	ER40	2.48	6.00	8.25	1.38	XCCW-0040	XCCS-1816

Extra Extended	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	C6C6-0020	ER20	1.38	8.00	10.25	1.38	XCCW-D020	
	C6C6-0032	ER32	1.97	8.00	10.25	1.38	XCCW-D032	

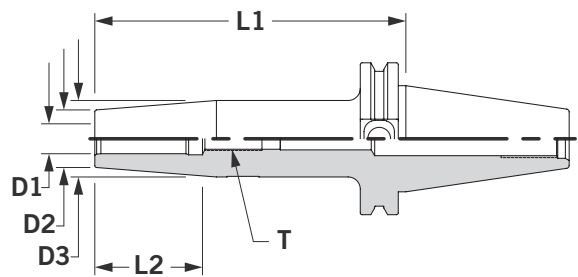
+ **IMPORTANT:** For Maximum recommended torque see page 49

+ ER32 shorty collet chucks use ER32 collets made to precise specifications for tool shank size 0.079-0.787" (2.0mm-20.0mm).

+ ER32 shorty collet chucks have the shortest gage length with recessed collet nut design. No stop screws. No safe area.

ThermoLock® CT50

- ▶ ThermoLock® toolholders offer excellent clamping ability by operating on the principle of thermal-induced expansion and contraction. The holder is heated, expanding the nose I.D. to accept a cutting tool. When cooled, the nose I.D. shrinks resulting in incredible gripping power over the full length of the holder/cutting tool interface.



Measurements are in inches unless noted (mm).

- + Has a max T.I.R of 0.0002" and are balanced at 25,000 RPM @ G2.5. ThermoLock® toolholders also include adjustable balance screws.
- + Excellent clamping and balance repeatability for higher speeds and superior cut duplication.
- + Comes ready for through-the-spindle coolant. This sealed system yields optimal coolant-fed tooling performance.
- + **IMPORTANT:** Once a ThermoLock® toolholder has been heated, it cannot be returned.
- + Engineered for minimized loss of accuracy across the holder/cutting tool interface.
- + Once a ThermoLock® holder is balanced, the only variable is the cutting tool.
- + Fully ground flange and V-groove—easy on tool changers for less spindle and changer maintenance.
- + Extended gage length toolholders have a parabolic profile to maximize rigidity.


OPTIONS


BALANCE OPTIONS	COOLANT OPTIONS
Available	Available


ACCESSORIES

	SETUP HOLDING FIXTURES	ThermoLock® EXTENSIONS
22-23	51	67-68

ThermoLock® CT50 Inch

Stub	Part Number	D1	D2	D3	L1	L3	T
	C6N3-0250	0.250	0.83	1.06	3.15	1.38	M5 X 1
	C6N3-0312	0.312	0.83	1.06	3.15	1.38	M6 X 1
	C6N3-0375	0.375	0.94	1.26	3.15	1.57	M8 X 1
	C6N3-0437	0.437	0.94	1.26	3.15	1.57	M8 X 1
	C6N3-0500	0.500	0.94	1.26	3.15	1.77	M10 X 1
	C6N3-0625	0.625	1.06	1.34	3.15	1.77	M12 X 1
	C6N3-0750	0.750	1.30	1.65	3.15	2.17	M16 X 1
	C6N3-1000	1.000	1.73	2.09	3.93	2.17	M16 X 1
	C6N3-1250	1.250	1.73	2.09	3.93	2.17	M16 X 1

Standard	Part Number	D1	D2	D3	L1	L2	T
	C6N4-0250	0.250	0.83	1.06	5.12	1.38	M5 X 1
	C6N4-0312	0.312	0.83	1.06	5.12	1.38	M6 X 1
	C6N4-0375	0.375	0.94	1.26	5.12	1.57	M8 X 1
	C6N4-0437	0.437	0.94	1.26	5.12	1.57	M8 X 1
	C6N4-0500	0.500	0.94	1.26	5.12	1.77	M10 X 1
	C6N4-0625	0.625	1.06	1.34	5.12	1.77	M12 X 1
	C6N4-0750	0.750	1.30	1.65	5.12	2.17	M16 X 1
	C6N4-1000	1.000	1.73	2.09	5.12	2.17	M16 X 1
	C6N4-1250	1.250	1.73	2.09	5.12	2.17	M16 X 1

Extended	Part Number	D1	D2	D3	L1	L2	T
	C6N5-0250	0.250	0.83	1.06	6.30	1.38	M5 X 1
	C6N5-0312	0.312	0.83	1.06	6.30	1.38	M6 X 1
	C6N5-0375	0.375	0.94	1.26	6.30	1.57	M8 X 1
	C6N5-0437	0.437	0.94	1.26	6.30	1.57	M8 X 1
	C6N5-0500	0.500	0.94	1.26	6.30	1.77	M10 X 1
	C6N5-0625	0.625	1.06	1.34	6.30	1.77	M12 X 1
	C6N5-0750	0.750	1.30	1.65	6.30	2.17	M16 X 1
	C6N5-1000	1.000	1.73	2.09	6.30	2.17	M16 X 1
	C6N5-1250	1.250	1.73	2.09	6.30	2.17	M16 X 1

OPTIONS


BALANCE OPTIONS	COOLANT OPTIONS
Available	Available


ACCESSORIES


	SETUP HOLDING FIXTURES	ThermoLock® EXTENSIONS
22-23	51	67-68

ThermoLock® CT50 Metric

CT50 // ThermoLock®

Stub	Part Number	D1	D2	D3	L1	L3	T
	C6N3-0006	6MM	21MM	27MM	80MM	35MM	M5 X 1
	C6N3-0008	8MM	21MM	27MM	80MM	35MM	M6 X 1
	C6N3-0010	10MM	24MM	32MM	80MM	40MM	M8 X 1
	C6N3-0012	12MM	24MM	32MM	80MM	40MM	M8 X 1
	C6N3-0016	16MM	27MM	34MM	80MM	45MM	M12 X 1
	C6N3-0020	20MM	33MM	42MM	80MM	55MM	M16 X 1
	C6N3-0025	25MM	44MM	53MM	100MM	55MM	M16 X 1
	C6N3-0032	32MM	44MM	53MM	100MM	55MM	M16 X 1

Standard	Part Number	D1	D2	D3	L1	L2	T
	C6N4-0006	6MM	21MM	27MM	130MM	35MM	M5 X 1
	C6N4-0008	8MM	21MM	27MM	130MM	35MM	M6 X 1
	C6N4-0010	10MM	24MM	32MM	130MM	40MM	M8 X 1
	C6N4-0012	12MM	24MM	32MM	130MM	40MM	M8 X 1
	C6N4-0016	16MM	27MM	34MM	130MM	45MM	M12 X 1
	C6N4-0020	20MM	33MM	42MM	130MM	55MM	M16 X 1
	C6N4-0025	25MM	44MM	53MM	130MM	55MM	M16 X 1
	C6N4-0032	32MM	44MM	53MM	130MM	55MM	M16 X 1

Extended	Part Number	D1	D2	D3	L1	L2	T
	C6N5-0006	6MM	21MM	27MM	160MM	35MM	M5 X 1
	C6N5-0008	8MM	21MM	27MM	160MM	35MM	M6 X 1
	C6N5-0010	10MM	24MM	32MM	160MM	40MM	M8 X 1
	C6N5-0012	12MM	24MM	32MM	160MM	40MM	M8 X 1
	C6N5-0016	16MM	27MM	34MM	160MM	45MM	M12 X 1
	C6N5-0020	20MM	33MM	42MM	160MM	55MM	M16 X 1
	C6N5-0025	25MM	44MM	53MM	160MM	55MM	M16 X 1
	C6N5-0032	32MM	44MM	53MM	160MM	55MM	M16 X 1

OPTIONS

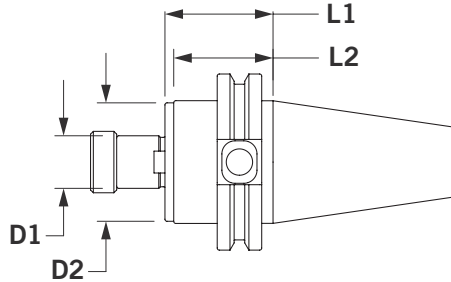
BALANCE OPTIONS	COOLANT OPTIONS
Available	Available

ACCESSORIES




	SETUP HOLDING FIXTURES	ThermoLock® EXTENSIONS
22-23	51	67-68

Shell Mill CT50

- ▶ Shell Mill holder's pilot diameter is sized for precision fit with cutter. Removable/replaceable drive keys included; fine thread locking screw included. All tapers and lengths are ready to ship. Get your tools fast!



Measurements are in inches unless noted (mm).

Standard	Part Number	D1	D2	L1	L2	Drive Key	Lock Screw
	C6S4-0500	0.500	1.44	1.50	1.38	XSDK-0500	XSAS-0500
	C6S4-0750	0.750	1.69	1.50	1.38	XSDK-0750	XSAS-0750
	C6S4-1000	1.000	2.19	2.00	1.38	XSDK-1000	XSAS-1000
	C6S4-1250	1.250	2.75	1.50	N/A	XSDK-1250	XSAS-1250
	C6S4-1500	1.500	3.81	2.50	1.44	XSDK-1500	XSAS-1500
	C6S4-2000	2.000	4.88	3.00	1.44	XSDK-2000	XSAS-2000
	C6S4-2500	2.500	4.88	2.40	1.44	XSDK-2500	XSAS-2500
Extended	Part Number	D1	D2	L1	L2	Drive Key	Lock Screw
	C6S5-0500	0.500	1.44	3.50	1.38	XSDK-0500	XSAS-0500
	C6S5-0750	0.750	1.69	3.50	1.38	XSDK-0750	XSAS-0750
	C6S5-1000	1.000	2.19	4.00	1.38	XSDK-1000	XSAS-1000
	C6S5-1250	1.250	2.75	3.50	N/A	XSDK-1250	XSAS-1250
	C6S5-1500	1.500	3.81	4.00	1.44	XSDK-1500	XSAS-1500
	C6S5-2000	2.000	4.88	4.00	1.44	XSDK-2000	XSAS-2000
	C6S5-2500	2.500	4.88	4.00	1.44	XSDK-2500	XSAS-2500
Extra Extended	Part Number	D1	D2	L1	L2	Drive Key	Lock Screw
	C6S6-0500	0.500	1.44	5.50	1.38	XSDK-0500	XSAS-0500
	C6S6-0750	0.750	1.69	5.50	1.38	XSDK-0750	XSAS-0750
	C6S6-1000	1.000	2.19	6.00	1.38	XSDK-1000	XSAS-1000
	C6S6-1250	1.250	2.75	5.50	N/A	XSDK-1250	XSAS-1250
	C6S6-1500	1.500	3.81	6.00	1.44	XSDK-1500	XSAS-1500
	C6S6-2000	2.000	4.88	6.00	1.44	XSDK-2000	XSAS-2000

- + Face perpendicular to centerline within 0.0002".
- + Toolholder includes drive key and fine thread locking screw.
- + Part numbers for replacements listed in table at right and on page 52.
- + **NOTE:** Drive keys are in line with drive slot.
- + AT3 or better shank taper for 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.
- + 2" and 2.5" Shell Mill holders also have four (4) 5/8"-11 threaded holes on a 4" bolt circle.

OPTIONS

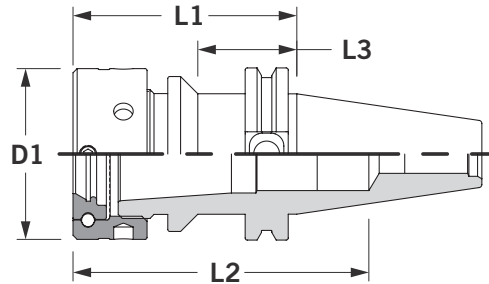
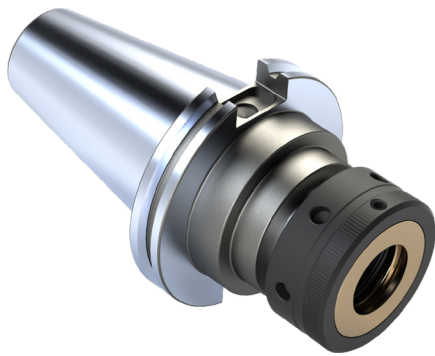
BALANCE OPTIONS	COOLANT OPTIONS
Available	Available

ACCESSORIES


	SETUP HOLDING FIXTURES	
22-23	51	52

TG100 & TG150 Comflex® CT50

- ▶ The key reason for the Comflex® collet system's 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.



Measurements are in inches unless noted (mm).


TG100 & 150	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	C6C3-1000	TG100	2.48	2.75	4.47	1.38	XCCW-1000	XCCS-1816
	C6C4-1000	TG100	2.48	3.25	5.00	1.38	XCCW-1000	XCCS-1816
	C6C5-1000	TG100	2.48	5.25	6.84	1.38	XCCW-1000	XCCS-1816
	C6C6-1000	TG100	2.48	7.25	7.00	1.38	XCCW-1000	XCCS-1816
	C6C4-1500	TG150	3.46	3.50	5.29	N/A	XCCW-1500	XCCS-2612
	C6C5-1500	TG150	3.46	5.54	7.00	N/A	XCCW-1500	XCCS-2612
	C6C6-1500	TG150	3.46	7.50	7.00	N/A	XCCW-1500	XCCS-2612

- + TG100 Collets range from 0.109"-1.500". TG150 Collets range from 1.234"-1.000".
- + Provide the flexibility to mill, drill, and ream.
- + Has an AT3 or better shank taper providing accurate, rigid toolholder-to-spindle mount.
- + **IMPORTANT:** Maximum recommended torque is 60 ft-lb. Do not overtighten collet nut assembly
- + Result in less tool wear and replacement resulting in less scrap.
- + Has a fully ground flange and V-groove, reducing spindle and changer maintenance.
- + Add -C at end of part number to specify stop screw with coolant passage.
- + Comflex® TG collets are interchangeable with Erickson-type collets.

OPTIONS

BALANCE OPTIONS	COOLANT OPTIONS
Available	Available

ACCESSORIES

				
22-23	49	50	50	51

Domestic & Import Machines CT50



Measurements are in inches unless noted (mm).

Domestic & Import Machines CT Taper	Part Number	Taper	D1	D2	L1	A	T	Thru Coolant	Wrench
	RB6E-0100	CT50	0.90	0.67	1.78	90	1-8	No	XRKW-0750
	RS6E-0101	CT50	0.94	0.71	1.23	90	1-8	No	XRKW-1187
	RS6E-0101-C	CT50	0.94	0.71	1.23	90	1-8	Yes	XRKW-1187
	RS6E-0102-C	CT50	0.95	0.70	2.49	0.22 R	1-8	Yes	XRKW-1250
	RS6E-0103-C	CT50	0.95	0.70	3.48	0.22 R	1-8	Yes	XRKW-1250
	RS6E-0204-C	CT50	1.14	0.82	1.00	45	1-8	Yes	XRKW-1187
	RS6E-0214-H	CT50	0.75	0.57	1.78	60	1-8	Yes	XRKW-0750
	RS6E-0232-H	CT50	0.90	0.66	1.78	45	1-8	Yes	XRKW-1187
	RS6E-0242-H	CT50	0.90	0.66	1.78	60	1-8	Yes	XRKW-1187

+ **IMPORTANT:** Maximum recommended torque is 30

Retention Knobs U.S. ANSI CT50



Measurements are in inches unless noted (mm).

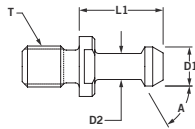
U.S. ANSI CT Taper	Part Number	Taper	D1	D2	L1	A	T	Thru Coolant	Wrench
	RC6E-0002	CT50	1.14	0.83	1.00	45	1-8	No	XRKW-1187
	RC6E-0001	CT50	1.14	0.83	1.00	45	1-8	Yes	XRKW-1187

+ **IMPORTANT:** Maximum recommended torque is 30

- + Avoid cost of damaged holder and spindles from incorrectly torqued retention knobs.
- + Retention knob wrench and torque wrench details, page 52.
- + For special retention knobs, contact Command Customer Service.

+ **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 an application, send us a print of the knob so that we may find the correct part. Please specify machine make and model and the toolholder shank being used when ordering.

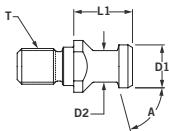
Retention Knobs MAS Style CT50



MAS Style CT Taper	Part Number	Taper	D1	D2	L1	A	T	Thru Coolant	Wrench
	RB6E-0001	CT50	0.91	0.67	1.78	45	1-8	No	XRKW-1187
	RB6E-0001-C	CT50	0.91	0.67	1.78	45	1-8	Yes	XRKW-1187
	RB6E-0002	CT50	0.91	0.67	1.78	60	1-8	No	XRKW-1187
	RB6E-0002-C	CT50	0.91	0.67	1.78	60	1-8	Yes	XRKW-1187
	RB6E-0003	CT50	0.91	0.67	1.78	90	1-8	No	XRKW-1187
	RB6E-0003-C	CT50	0.91	0.67	1.78	90	1-8	Yes	XRKW-1187

+ **IMPORTANT:** Maximum recommended torque is 30

Retention Knobs DIN/ISO CT50



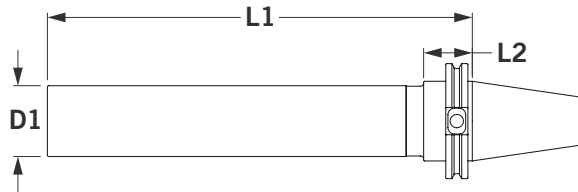
DIN/ISO CT Taper	Part Number	Taper	D1	D2	L1	A	T	Thru Coolant	Wrench
	RS6E-0114	CT50	1.10	0.83	1.34	75	1-8	No	XRKW-1187
	RS6E-0114-C	CT50	1.10	0.83	1.34	75	1-8	Yes	XRKW-1187

+ **IMPORTANT:** Maximum recommended torque is 30

Test Bars CT50

- ▶ Our calibrated and certified precision test bars accurately align workpieces and/or holding fixtures. Test bars are hardened, normalized, and ground for reliable permanent accuracy. Wooden storage case included with Test Bar.

Nose specifications: Concentric to taper within .002" T.I.R.; Diameter within .0002" over the entire length.



CT50	Part Number	Taper	D1	L1
	C6W4-0006	CT50	2.00	12.00



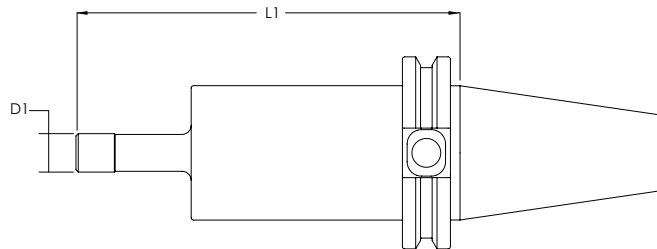
- + Wooden case with durable foam for maximum storage protection.
- + Includes an inspection certificate with measured dimensions for user reference.
- + Tapers are precision ground to AT3 (or better) for accurate spindle runout reading.


Calibration Kit CT50

- ▶ Our certified adapters are ready to be used to recalibrate any CT50 machines. These tools are precision ground for accurate readings to ensure best results. The kit includes a reusable foamed case, a certified ring gage, and a retention knob of your choice.



Full Kit Shown

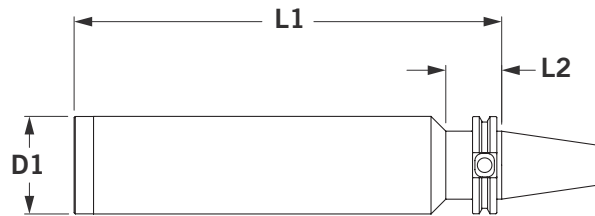


Calibration Adapter	Part Number	D1	L1
	C6A4-0500	0.500	5.00
	C6A4-0500-KIT1	0.500	5.00

- + Calibrate your table tool probe.
- + Available for CT40, CT50, HSK63A, and HSK100A.
- + Comes with carrying case.
- + Tools are laser marked with certified dimensions for quick setup.
- + Certification & Ring Gage included.
- + Comes with retention knob of your choice.
See page 22 - 23

Blank Bar CT50

- ▶ Blank Bars have a case hardened shank taper and flange. Nose is unhardened for custom milling. Have a toolholder design that doesn't meet any standard holders? Blank bars are perfect for your custom applications. These blanks have a case hardened shank taper and flange. The nose is left unhardened for any creation. You design it. You fabricate it.



Measurements are in inches unless noted (mm).

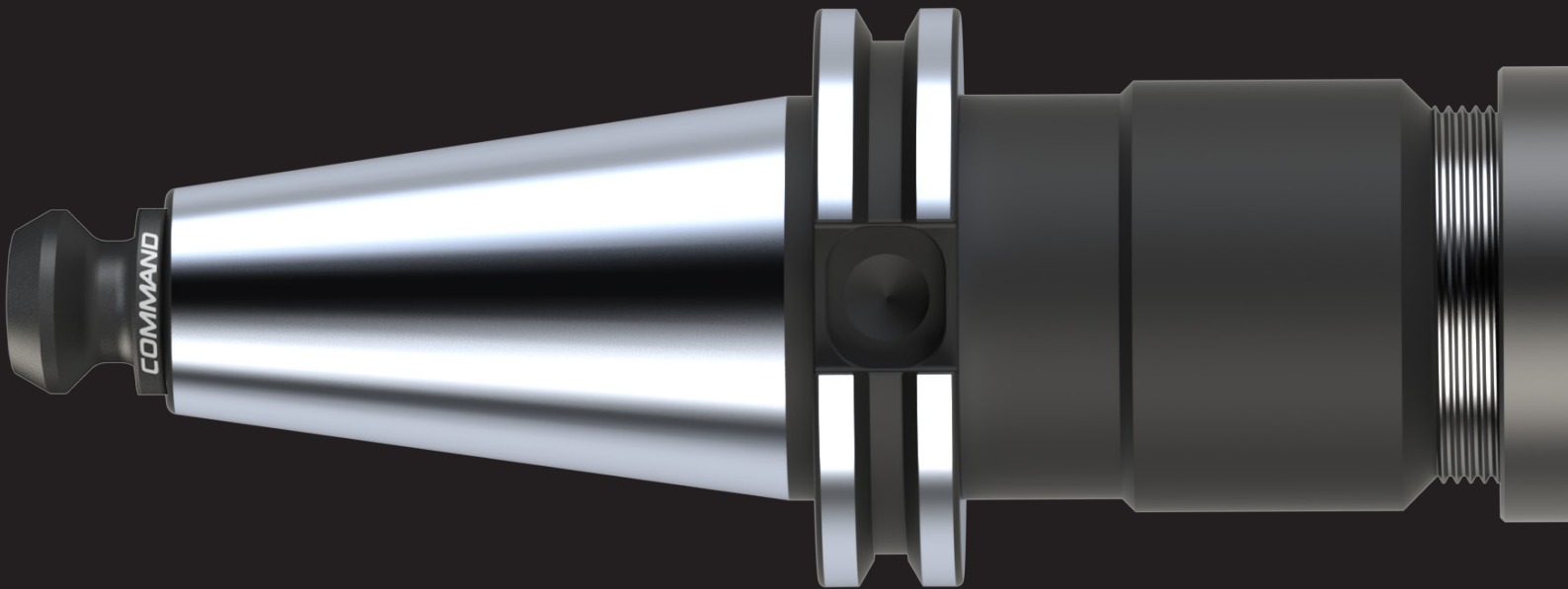
Stub	Part Number	D1	L1	L2
	C6X3-0006	3.875	6.00	1.44
	C6X4-0006	3.875	11.00	1.44



- + Shank taper and flange are case hardened and precision ground. Nose is unhardened 8620 alloy steel machinable for making custom and emergency holders.
- + Precision internal center eases alignment.
- + Nose includes an indicator band for users to reference for accurate machining profiles.



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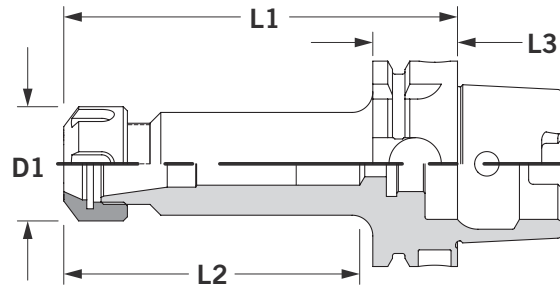
Email: support@commandtool.com

Web: www.commandtool.com

For details see page 67.

ER Micro Precision® HSK63A

- ▶ ER Micro Precision® collet chucks have AT3 or better shank taper allowing accurate rigid toolholder-to-spindle mount. A wide range of collets are available: 0.020" - 1.023" (0.5 - 26 mm), reducing collet, and toolholder inventories. All ER Micro Precision® collet chuck tapers, lengths, and straight shank extensions are in stock and ready to ship.





Measurements are in inches unless noted (mm).

- + Has a flush precision closure nut that grips the tool close to the cutting edge providing accuracy and rigidity.
- + Concentric to 0.0002" T.I.R., which puts tool precisely on spindle centerline.
- + Has less tool wear and replacement resulting in less scrap.
- + Has a fully ground flange and V-groove, reducing spindle and changer maintenance.
- + **NOTE:** No stop screws in ER11 holders.
- + **IMPORTANT:** Maximum recommended torque is listed on page 49. Do not overtighten collet nut assembly.


OPTIONS


BALANCE OPTIONS	COOLANT OPTIONS
Available	Available


ACCESSORIES

HSK Accessories			SETUP HOLDING FIXTURES
35	49	50	51

ER Micro Precision® HSK63A

Stub	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	H4C3A0011	ER11	0.63	2.00	1.10	1.02	XCCW-D011	-
	H4C3A0016	ER16	1.26	2.50	1.30	1.02	XCCW-D016	-
	H4C3A0020	ER20	1.38	2.75	1.40	1.02	XCCW-D020	-
	H4C3A0025	ER25	1.64	3.00	1.70	1.02	XCCW-D025	-
	H4C3A0032	ER32	1.97	3.25	1.80	1.02	XCCW-D032	-
	H4C3A0040	ER40	2.48	3.15	1.75	1.02	XCCW-0040	-

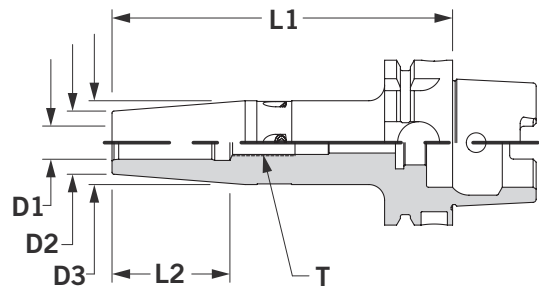
Standard	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	H4C4A0011	ER11	0.63	4.00	3.10	1.02	XCCW-D011	-
	H4C4A0016	ER16	1.26	4.50	2.00	1.02	XCCW-D016	XCCS-0720
	H4C4A0020	ER20	1.38	4.75	2.40	1.02	XCCW-D020	XCCS-1415
	H4C4A0025	ER25	1.64	5.00	2.80	1.02	XCCW-D025	XCCS-1815
	H4C4A0032	ER32	1.97	5.25	2.80	1.02	XCCW-D032	XCCS-2215
	H4C4A0040	ER40	2.48	4.72	2.50	1.02	XCCW-0040	XCCS-1816

Extended	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	H4C5A0016	ER16	1.26	4.88	3.00	1.38	XCCW-D016	XCCS-0720
	H4C5A0020	ER20	1.38	6.00	3.50	1.38	XCCW-D020	XCCS-1415
	H4C5A0025	ER25	1.64	6.00	3.50	1.38	XCCW-D025	XCCS-1815
	H4C5A0032	ER32	1.97	6.00	4.00	1.38	XCCW-D032	XCCS-2215

+ **IMPORTANT:** For Maximum recommended torque see page 49

ThermoLock® HSK63A

- ▶ ThermoLock® HP toolholders offer excellent clamping ability by operating on the principle of thermal induced expansion and contraction. The holder is heated, expanding the nose I.D. to accept a cutting tool. When cooled, the nose I.D. shrinks resulting in incredible gripping power over the full length of the holder/cutting tool interface.



Measurements are in inches unless noted (mm).

- + Has a max T.I.R. of 0.0002" and are balanced at 25,000 RPM @ G2.5. ThermoLock® toolholders also include adjustable balance screws.
- + Excellent clamping and balance repeatability for higher speeds and superior cut duplication.
- + Comes ready for through-the-spindle coolant. This sealed system yields optimal coolant-fed tooling performance.
- + **IMPORTANT:** Once a ThermoLock® toolholder has been heated, it cannot be returned.
- + Engineered for minimized loss of accuracy across the holder/cutting tool interface.
- + Once balanced, the only variable is the cutting tool.
- + Fully ground flange and V-groove—easy on tool changers for less spindle and changer maintenance.
- + Extended gage length toolholders have a parabolic profile to maximize rigidity.


OPTIONS


BALANCE OPTIONS	COOLANT OPTIONS
Available	Available


ACCESSORIES

HSK Accessories	SETUP HOLDING FIXTURES	ThermoLock® EXTENSIONS
35	51	67-68

ThermoLock® HSK63A Inch

Stub	Part Number	D1	D2	D3	L1	L3	T
	H4N3A0125	0.125	0.39	-	3.15	-	-
	H4N3A0187	0.187	0.39	-	3.15	-	-
	H4N3A0250	0.250	0.83	1.06	3.15	1.38	M5 X 1
	H4N3A0312	0.312	0.94	1.26	3.35	1.57	M6 X 1
	H4N3A0375	0.375	0.94	1.26	3.54	1.77	M8 X 1
	H4N3A0500	0.500	0.94	1.26	3.54	1.77	M8 X 1
	H4N3A0625	0.625	1.06	1.34	3.54	1.77	M10 X 1
	H4N3A0750	0.750	1.30	1.65	3.93	2.17	M12 X 1
	H4N3A1000	1.000	1.73	2.05	4.53	2.17	M16 X 1
	H4N3A1250	1.250	1.73	2.05	4.72	2.17	M16 X 1

Standard	Part Number	D1	D2	D3	L1	L2	T
	H4N4A0250	0.250	0.83	1.06	5.12	1.38	M5 X 1
	H4N4A0312	0.312	0.83	1.06	5.12	1.38	M6 X 1
	H4N4A0375	0.375	0.94	1.26	5.12	1.57	M8 X 1
	H4N4A0500	0.500	0.94	1.26	5.12	1.77	M10 X 1
	H4N4A0625	0.625	1.06	1.34	5.12	1.77	M12 X 1
	H4N4A0750	0.750	1.30	1.65	5.12	2.17	M16 X 1

Extended	Part Number	D1	D2	D3	L1	L2	T
	H4N5A0250	0.250	0.83	1.06	6.30	1.38	M5 X 1
	H4N5A0312	0.312	0.83	1.06	6.30	1.38	M6 X 1
	H4N5A0375	0.375	0.94	1.26	6.30	1.57	M8 X 1
	H4N5A0500	0.500	0.94	1.26	6.30	1.77	M10 X 1
	H4N5A0625	0.625	1.06	1.34	6.30	1.77	M12 X 1
	H4N5A0750	0.750	1.30	1.65	6.30	2.17	M16 X 1
	H4N5A1000	1.000	1.73	2.05	6.30	2.17	M16 X 1
	H4N5A1250	1.250	1.73	2.05	6.30	2.17	M16 X 1

OPTIONS

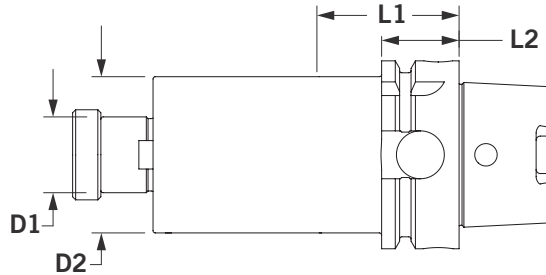
BALANCE OPTIONS	COOLANT OPTIONS
9	15

ACCESSORIES

HSK Accessories	SETUP HOLDING FIXTURES	ThermoLock® EXTENSIONS
35	51	67-68

Shell Mill HSK63A

- ▶ Shell Mill holder's pilot diameter is sized for precision fit with cutter. Removable/replaceable drive keys included; fine thread locking screw included. All tapers and lengths are ready to ship. Get your tools fast!



Measurements are in inches unless noted (mm).

Standard	Part Number	D1	D2	L1	L2	Drive Key	Lock Screw
	H4S3A0750	0.750	1.69	1.75	1.02	XSDK-0500	XSAS-0500
	H4S3A1000	1.000	2.06	1.88	1.02	XSDK-0750	XSAS-0750
	H4S3A1250	1.250	2.75	2.50	1.02	XSDK-1000	XSAS-1000
	H4S3A1500	1.500	3.81	2.75	1.02	XSDK-1250	XSAS-1250
	H4S4A0750	0.750	1.69	4.00	1.02	XSDK-1500	XSAS-1500
	H4S4A1000	1.000	2.06	4.00	1.02	XSDK-0500	XSAS-0500
	H4S4A1250	1.250	2.75	4.00	1.02	XSDK-0750	XSAS-0750
	H4S4A1500	1.500	3.81	4.00	1.02	XSDK-1000	XSAS-1000



- + Face perpendicular to centerline within 0.0002".
- + Toolholder includes drive key and fine thread locking screw.
- + Part numbers for replacements listed in table at right and on page 52.
- + **NOTE:** Drive keys are in line with drive slot.
- + AT3 or better shank taper for 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.
- + 2" and 2.5" Shell Mill holders also have four (4) 5/8"-11 threaded holes on a 4" bolt circle.

OPTIONS

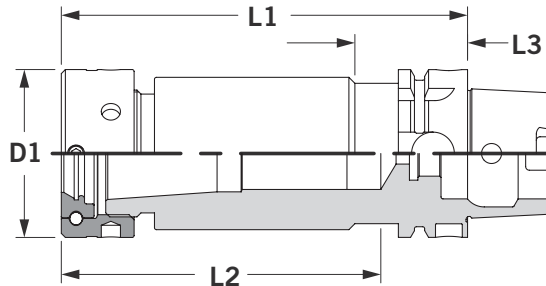
BALANCE OPTIONS	COOLANT OPTIONS
Available	Available

ACCESSORIES

HSK Accessories	SETUP HOLDING FIXTURES	
35	51	52

TG100 Comflex® HSK63A

- ▶ The key reason for the Comflex® collet system's 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.



Measurements are in inches unless noted (mm).

TG100	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	H4C3A1000	TG100	2.48	4.00	2.00	1.02	XCCW-1000	-
	H4C4A1000	TG100	2.48	6.00	4.06	1.02	XCCW-1000	XCCS-1816



- + TG100 Collets range from 0.109"-1.000".
- + Provide the flexibility to mill, drill, and ream.
- + Has an AT3 or better shank taper providing accurate rigid toolholder-to-spindle mount.
- + **IMPORTANT:** Maximum recommended torque is 60 ft-lb. Do not overtighten collet nut assembly.
- + Result in less tool wear and replacement resulting in less scrap.
- + Have a fully ground flange and V-groove, reducing spindle and changer maintenance.
- + Add -C at end of part number to specify stop screw with coolant passage.
- + Interchangeable with Erickson-type collets.

OPTIONS

BALANCE OPTIONS	COOLANT OPTIONS
Available	Available

ACCESSORIES

HSK Accessories				SETUP HOLDING FIXTURES
35	49	50	50	51

Coolant Tubes & Accessories HSK63A

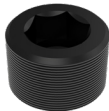
Coolant Tube	Part Number	Description
	XSCCA0063	Coolant Tube



Coolant Tube Wrench	Part Number	Description
	XCTWA0063	HSK63A Coolant Tube Wrench



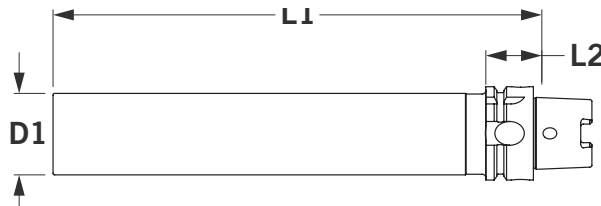
Coolant Hole Plug	Part Number	Description
	XCHPA0063	HSK63A Coolant Hole Plug



Test Bars HSK63A

- ▶ Our calibrated and certified precision test bars accurately align workpieces and/or holding fixtures. Test bars are hardened, normalized, and ground for reliable permanent accuracy. Wooden storage case included with Test Bar.

Nose specifications: Concentric to taper within .002" T.I.R.; Diameter within .0002" over the entire length.



HSK63A	Part Number	Taper	D1	L1
	H4W4A0004	HSK63A	2.00	10.00



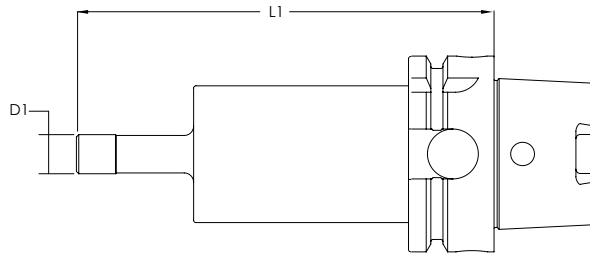
- + Wooden case with durable foam for maximum storage protection.
- + Includes an inspection certificate with measured dimensions for user reference.
- + Tapers are precision ground to AT3 (or better) for accurate spindle runout reading.


Calibration Kit HSK63A

- ▶ Our certified adapters are ready to be used to recalibrate any HSK63A machines. These tools are precision ground for accurate readings to ensure best results. The kit includes a reusable foamed case and a certified ring gage.



(Full Kit Shown)

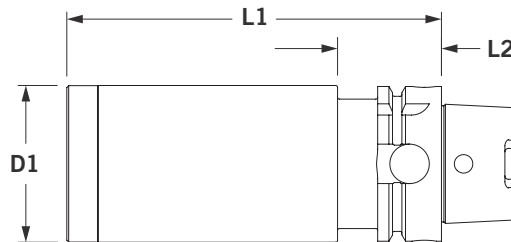


Calibration Adapter	Part Number	D1	L1
	H4A4A0500	.500	5.00
	H4A4A0500-KIT1	.500	5.00

- + Calibrate your table tool probe.
- + Available for CT40, CT50, HSK63A, and HSK100A.
- + Comes with carrying case.
- + Tools are laser marked with certified dimensions for quick setup.
- + Certification & Ring Gage included.

Blank Bar HSK63A

- ▶ Blank Bars have a case hardened shank taper and flange. Nose is unhardened for custom milling. Have a toolholder design that doesn't meet any standard holders? Blank bars are perfect for your custom applications. These blanks have a case hardened shank taper and flange. The nose is left unhardened for any creation. You design it. You fabricate it.



Measurements are in inches unless noted (mm).

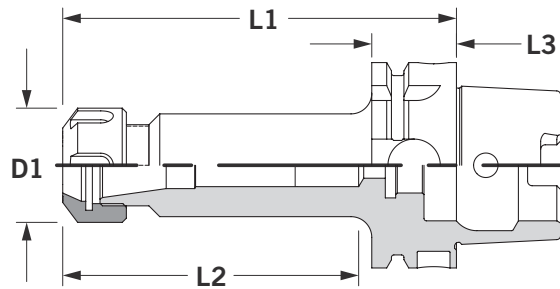
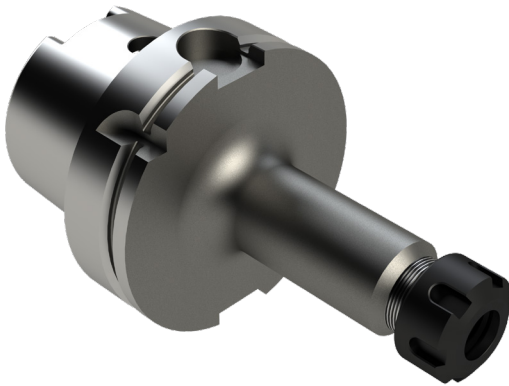
Stub	Part Number	D1	L1	L2
	H4X3A0004	2.500	6.00	1.66



- + Shank taper and flange are case hardened and precision ground. Nose is unhardened 8620 alloy steel machinable for making custom and emergency holders.
- + Precision internal center eases alignment.
- + Nose includes an indicator band for users to reference for accurate machining profiles.

ER Micro Precision® HSK100A

- ▶ ER Micro Precision® collet chucks have AT3 or better shank taper allowing accurate, rigid toolholder-to-spindle mount. A wide range of collets are available: 0.020" - 1.023" (0.5 - 26 mm), reducing collet, and toolholder inventories. All ER Micro Precision® collet chuck tapers, lengths, and straight shank extensions are in stock and ready to ship.





Measurements are in inches unless noted (mm).

- + Has a flush precision closure nut that grips the tool close to the cutting edge providing accuracy and rigidity.
- + Concentric to 0.0002" T.I.R., which puts tool precisely on spindle centerline.
- + Has less tool wear and replacement resulting in less scrap.
- + Has a fully ground flange and V-groove, reducing spindle and changer maintenance.
- + **NOTE:** No stop screws in ER11 holders.
- + **IMPORTANT:** Maximum recommended torque is listed on page 49. Do not overtighten collet nut assembly.


OPTIONS


BALANCE OPTIONS	COOLANT OPTIONS
Available	Available


ACCESSORIES

HSK Accessories			SETUP HOLDING FIXTURES
45	49	50	51

ER Micro Precision® HSK100A

Stub	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	H6C3A0016	ER16	1.26	2.50	1.30	1.14	XCCW-D011	-
	H6C3A0020	ER20	1.38	3.00	1.40	1.14	XCCW-D016	-
	H6C3A0025	ER25	1.64	3.25	1.70	1.14	XCCW-D020	-
	H6C3A0032	ER32	1.97	3.38	1.80	1.14	XCCW-D032	-

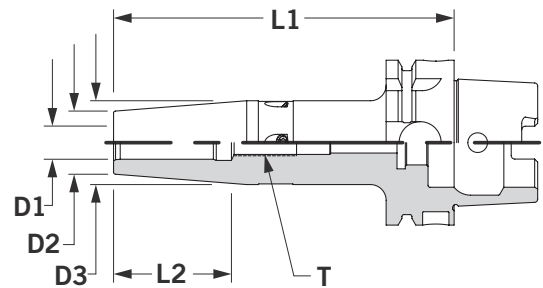
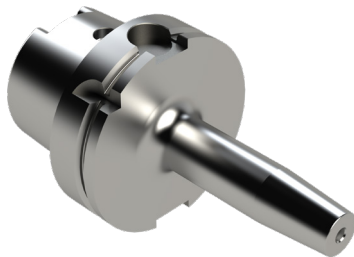
Standard	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	H6C4A0016	ER16	1.26	4.50	3.00	1.14	XCCW-D011	-
	H6C4A0020	ER20	1.38	5.00	2.40	1.14	XCCW-D016	XCCS-0720
	H6C4A0025	ER25	1.64	5.25	2.60	1.14	XCCW-D020	XCCS-1415
	H6C4A0032	ER32	1.97	5.38	2.90	1.14	XCCW-D025	XCCS-1815
	H6C4A0040	ER40	2.48	4.72	2.60	1.14	XCCW-D032	XCCS-2215

Extended	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	H6C5A0016	ER16	1.26	6.50	3.00	1.14	XCCW-D016	XCCS-0720
	H6C5A0020	ER20	1.38	7.00	3.50	1.14	XCCW-D020	XCCS-1415
	H6C5A0025	ER25	1.64	7.25	3.50	1.14	XCCW-D025	XCCS-1815
	H6C5A0032	ER32	1.97	7.38	4.00	1.14	XCCW-D032	XCCS-2215

+ **IMPORTANT:** For Maximum recommended torque see page 49

ThermoLock® HSK100A

- ▶ ThermoLock® HP toolholders offer excellent clamping ability by operating on the principle of thermal induced expansion and contraction. The holder is heated, expanding the nose I.D. to accept a cutting tool. When cooled, the nose I.D. shrinks resulting in incredible gripping power over the full length of the holder/cutting tool interface.



Measurements are in inches unless noted (mm).

- + Has a max T.I.R. of 0.0002" and are balanced at 25,000 RPM @ G2.5. ThermoLock® toolholders also include adjustable balance screws.
- + Excellent clamping and balance repeatability for higher speeds and superior cut duplication.
- + Comes ready for through-the-spindle coolant. This sealed system yields optimal coolant-fed tooling performance.
- + **IMPORTANT:** Once a ThermoLock® toolholder has been heated, it cannot be returned.
- + Engineered for minimized loss of accuracy across the holder/cutting tool interface.
- + Once a ThermoLock® holder is balanced, the only variable is the cutting tool.
- + Fully ground flange and V-groove—easy on tool changers for less spindle and changer maintenance.
- + ThermoLock® Extended gage length toolholders have a parabolic profile to maximize rigidity.


OPTIONS


BALANCE OPTIONS	COOLANT OPTIONS
Available	Available


ACCESSORIES

HSK Accessories	SETUP HOLDING FIXTURES	ThermoLock® EXTENSIONS
45	51	67-68

ThermoLock® HSK100A Inch

Stub		Part Number	D1	D2	D3	L1	L3	T
	H6N3A0250	0.250	0.83	1.06	3.35	1.38	M5 X 1	
	H6N3A0375	0.375	0.94	1.26	3.54	1.57	M8 X 1	
	H6N3A0500	0.500	0.94	1.26	3.74	1.77	M10 X 1	
	H6N3A0625	0.625	1.06	1.34	3.93	1.77	M12 X 1	
	H6N3A0750	0.750	1.3	1.65	4.13	2.17	M16 X 1	
	H6N3A1000	1.000	1.73	2.09	4.52	2.17	M16 X 1	
	H6N3A1250	1.250	1.73	2.09	6.3	2.17	M16 X 1	

Standard		Part Number	D1	D2	D3	L1	L2	T
	H6N4A0250	0.250	0.83	1.06	5.12	1.38	M5 X 1	
	H6N4A0375	0.375	0.94	1.26	5.12	1.57	M8 X 1	
	H6N4A0500	0.500	0.94	1.26	5.12	1.77	M10 X 1	
	H6N4A0625	0.625	1.06	1.34	5.12	1.77	M12 X 1	
	H6N4A0750	0.750	1.3	1.65	5.12	2.17	M16 X 1	
	H6N4A1000	1.000	1.73	2.09	5.12	2.17	M16 X 1	
	H6N4A1250	1.250	1.73	2.09	5.12	2.17	M16 X 1	

Extended		Part Number	D1	D2	D3	L1	L2	T
	H6N5A0250	0.250	0.83	1.06	6.30	1.38	M5 X 1	
	H6N5A0375	0.375	0.94	1.26	6.30	1.57	M6 X 1	
	H6N5A0500	0.500	0.94	1.26	6.30	1.77	M8 X 1	
	H6N5A0625	0.625	1.06	1.34	6.30	1.77	M10 X 1	
	H6N5A0750	0.750	1.3	1.65	6.30	2.17	M12 X 1	
	H6N5A1000	1.000	1.73	2.09	6.30	2.17	M16 X 1	
	H6N5A1250	1.250	1.73	2.09	6.30	2.17	M16 X 1	

OPTIONS

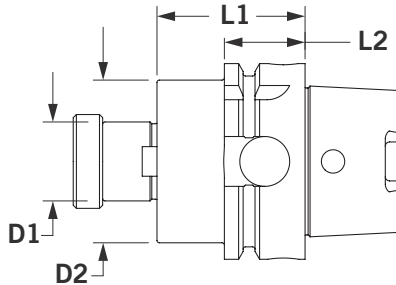
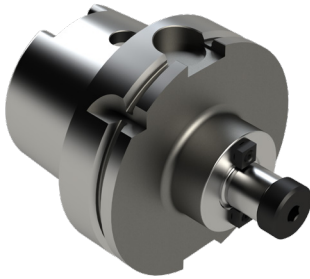
BALANCE OPTIONS	COOLANT OPTIONS
Available	Available

ACCESSORIES


HSK Accessories	SETUP HOLDING FIXTURES	ThermoLock® EXTENSIONS
45	51	67-68

Shell Mill HSK100A

- ▶ Shell Mill holder's pilot diameter is sized for precision fit with cutter. Removable/replaceable drive keys included; fine thread locking screw included. All tapers and lengths are ready to ship. Get your tools fast!



Measurements are in inches unless noted (mm).

Standard	Part Number	D1	D2	L1	L2	Drive Key	Lock Screw
	H6S3A0750	0.750	1.69	1.88	1.14	XSDK-0500	XSAS-0750
	H6S3A1000	1.000	2.19	2.00	1.14	XSDK-0750	XSAS-1000
	H6S3A1250	1.250	2.75	2.25	1.14	XSDK-1000	XSAS-1250
	H6S3A1500	1.500	3.81	2.50	1.14	XSDK-1250	XSAS-1500

- + Face perpendicular to centerline within 0.0002".
- + Toolholder includes drive key and fine thread locking screw.
- + Part numbers for replacements listed in table at right and on page 52.
- + **NOTE:** Drive keys are in line with drive slot.
- + AT3 or better shank taper for 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.
- + 2" and 2.5" Shell Mill holders also have four (4) 5/8"-11 threaded holes on a 4" bolt circle.

OPTIONS

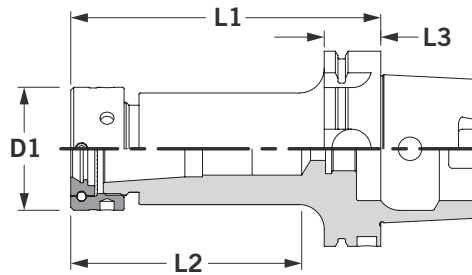
BALANCE OPTIONS	COOLANT OPTIONS
Available	Available

ACCESSORIES

HSK Accessories	SETUP HOLDING FIXTURES	
45	51	52

TG100 & TG150 Comflex® HSK100A

- ▶ The key reason for the Comflex® collet system's 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.



TG100 & TG150	Part Number	Size	D1	L1	L2	L3	Wrench	Stop Screw
	H6C3A1000	TG100	2.48	4.25	2.00	1.14	XCCW-1000	-
	H6C4A1000	TG100	2.48	6.25	4.00	1.14	XCCW-1000	XCCS-1816
	H6C3A1500	TG150	3.46	4.88	2.52	1.14	XCCW-1500	-
	H6C4A1500	TG150	3.46	6.88	4.55	1.14	XCCW-1500	-



Measurements are in inches unless noted (mm).

- + TG100 Collets range from 0.109"-1.000". TG150 Collets range from 1.234"-1.000".
- + Comflex® collet systems provide the flexibility to mill, drill, and ream.
- + Has an AT3 or better shank taper providing accurate rigid toolholder-to-spindle mount.
- + **IMPORTANT:** Maximum recommended torque is 60 ft-lb. Do not overtighten collet nut assembly
- + Result in less tool wear and replacement resulting in less scrap.
- + Have a fully ground flange and V-groove, reducing spindle and changer maintenance.
- + Add -C at end of part number to specify stop screw with coolant passage.
- + Comflex® TG collets are interchangeable with Erickson-type collets.

OPTIONS

BALANCE OPTIONS	COOLANT OPTIONS
Available	Available

ACCESSORIES

HSK Accessories				SETUP HOLDING FIXTURES
45	49	50	52	51w

Coolant Tubes & Accessories HSK100A

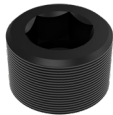
Coolant Tube	Part Number	Description
	XSCCA0100	Coolant Tube



Coolant Tube Wrench	Part Number	Description
	XCTWA0100	HSK100A Coolant Tube Wrench



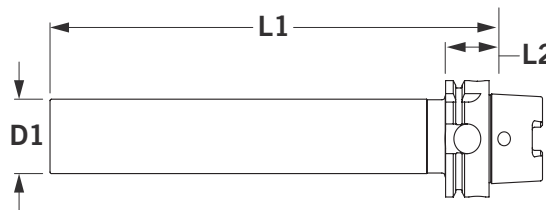
Coolant Hole Plug	Part Number	Description
	XCHPA0100	HSK100A Coolant Hole Plug



Test Bars HSK100A

- Our calibrated and certified precision test bars accurately align workpieces and/or holding fixtures. Test bars are hardened, normalized, and ground for reliable permanent accuracy. Wooden storage case included with Test Bar.

Nose specifications: Concentric to taper within .002" T.I.R.; Diameter within .0002" over the entire length.



HSK100A	Part Number	Taper	D1	L1
	H6W4A0006	HSK100A	2.00	12.00



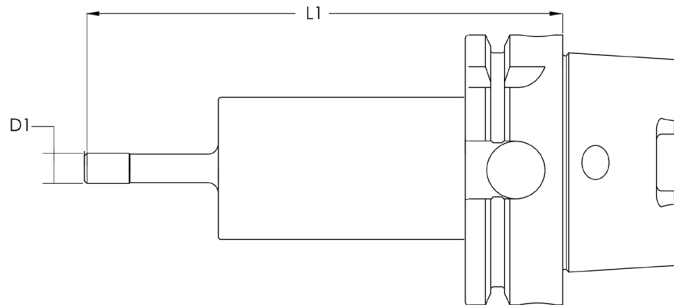
- + Wooden case with durable foam for maximum storage protection.
- + Includes an inspection certificate with measured dimensions for user reference.
- + Tapers are precision ground to AT3 (or better) for accurate spindle runout reading.

Calibration Kit HSK100A

- ▶ Our certified adapters are ready to be used to recalibrate any HSK100A machines. These tools are precision ground for accurate readings to ensure best results. The kit includes a reusable foamed case and a certified ring gage.



(Full Kit Shown)



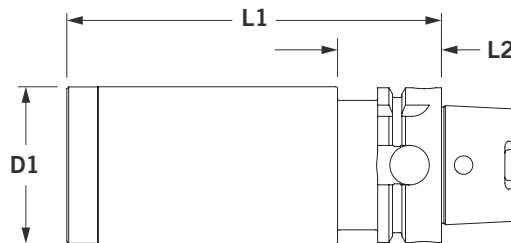
Calibration Adapter	Part Number	D1	L1
	H6A4A0500	0.500	5.00
	H6A4A0500-KIT1	0.500	5.00



- + Calibrate your table tool probe.
- + Available for CT40, CT50, HSK63A, and HSK100A.
- + Comes with carrying case.
- + Tools are laser marked with certified dimensions for quick setup.
- + Certification & Ring Gage included.

Blank Bar HSK100A

- ▶ Blank Bars have a case hardened shank taper and flange. Nose is unhardened for custom milling. Have a toolholder design that doesn't meet any standard holders? Blank bars are perfect for your custom applications. These blanks have a case hardened shank taper and flange. The nose is left unhardened for any creation. You design it. You fabricate it.



Measurements are in inches unless noted (mm).

Blank Bar	Part Number	D1	L1	L2
	H6X3A0006	3.875	6.00	1.78

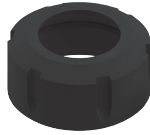


- + Shank taper and flange are case hardened and precision ground. Nose is unhardened 8620 alloy steel machinable for making custom and emergency holders.
- + Precision internal center eases alignment.
- + Nose includes an indicator band for users to reference for accurate machining profiles.

Collet Nuts



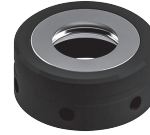
Standard



Classic



Shorty



TG100/150 Standard

Measurements are in inches unless noted (mm).


Standard Collet Nuts	Part Number	Description	Thread	D1	Maximum Recommended Torque (ft-lb)
	XGSN-0011	ER11 Standard Collet Nut	M13 X 0.75	0.630	8
	XGSN-0016	ER16 Standard Collet Nut	M22 X 1.50	1.259	40
	XGSN-0020	ER20 Standard Collet Nut	M25 X 1.50	1.380	60
	XGSN-0025	ER25 Standard Collet Nut	M32 X 1.50	1.640	70
	XGSN-0032	ER32 Standard Collet Nut	M40 X 1.50	1.970	80
	XGSN-0040	ER40 Standard Collet Nut	M50 X 1.50	2.480	72


Classic Collet Nuts	Part Number	Description	Thread	D1	Maximum Recommended Torque (ft-lb)
	XCNA-0011	ER11 Classic Collet Nut	M13 X 0.75	0.630	8
	XCNA-0016	ER16 Classic Collet Nut	M22 X 1.50	1.085	40
	XCNA-0020	ER20 Classic Collet Nut	M25 X 1.50	1.260	60
	XCNA-0025	ER25 Classic Collet Nut	M32 X 1.50	1.650	70
	XCNA-0032	ER32 Classic Collet Nut	M40 X 1.50	1.880	80
	XCNA-0040	ER40 Classic Collet Nut	M50 X 1.50	2.480	72


Shorty Collet Nuts	Part Number	Description	Thread	D1	Maximum Recommended Torque (ft-lb)
	XGCN-0032INT	ER32 Shorty Collet Nut	M40 x 1.50	N/A	80

TG100/150 Collet Nuts	Part Number	Description	Thread	D1	(Maximum Recommended Torque (ft-lb))
	XCNA-1000	TG100 Standard Collet Nut	1 7/8-12 ACME	2.480	60
	XCNA-1500	TG150 Standard Collet Nut	2 5/8-12 ACME	3.470	60

Collet Nut Wrenches Stop Screws & Collet Extractor Clips

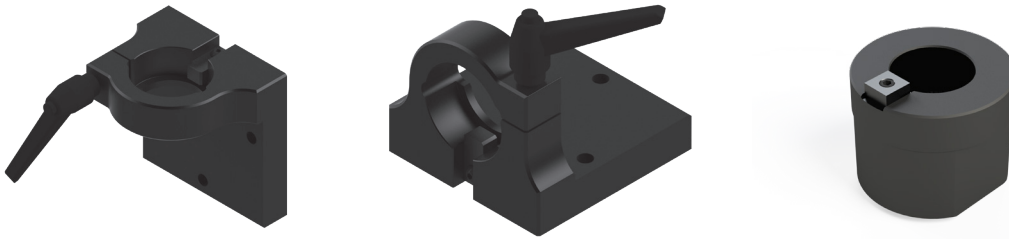
Collet Chuck Wrenches	Part Number	Description	1 st Compatible Nut	2 nd Compatible Nut
	XCCW-D011	ER11 Double-Ended Wrench	XGSN-0011	XCNA-0011
	XCCW-D016	ER16 Double-Ended Wrench	XGSN-0016	XCNA-0016
	XCCW-D020	ER20 Double-Ended Wrench	XGSN-0020	XCNA-0020
	XCCW-D025	ER25 Double-Ended Wrench	XGSN-0025	XCNA-0025
	XCCW-P032INT	ER32 Shorty Wrench	XGCN-0032INT	-
	XCCW-D032	ER32 Double-Ended Wrench	XGSN-0032	XCNA-0032
	XCCW-0040	ER40 Standard Collet Nut Wrench	XGSN-0040	XCNA-0040
	XCCW-1000	TG100 Standard Collet Nut Wrench	XCNA-1000	-

Collet Chuck Extension Stop Screws	Part Number	Description	Thread	
	XCCS-0720	Standard ER16 Stop Screw	7/16-20 LH	
	XCCS-0720-C	Coolant Thru ER16 Stop Screw	7/16-20 LH	
	XCCS-1415	Standard ER20 Stop Screw	M14 X 1.50 LH	
	XCCS-1415-C	Coolant Thru ER20 Stop Screw	M14 X 1.50 LH	
	XCCS-1815	Standard ER25 Stop Screw	M18 X 1.50 LH	
	XCCS-1815-C	Coolant Thru ER25 Stop Screw	M18 X 1.50 LH	
	XCCS-2215	Standard ER32 Stop Screw	M22 X 1.50 LH	
	XCCS-2215-C	Coolant Thru ER32 Stop Screw	M22 X 1.50 LH	
	XCCS-1816	Standard ER40 Stop Screw	1 1/8-16 LH	
	XCCS-1816-C	Coolant Thru ER40 Stop Screw	1 1/8-16 LH	
XCCS-2212	TG100 Standard Length	1 3/8-12 LH		

Collet Extractor Clip	Part Number	Description	Compatible Nut	Quantity
	XCNA-K016	ER16 Collet Extractor Clip	XCNA-0016	Pack of 10
	XCNA-K020	ER20 Collet Extractor Clip	XCNA-0020	Pack of 10
	XCNA-K025	ER25 Collet Extractor Clip	XCNA-0025	Pack of 10
	XCNA-K032	ER32 Collet Extractor Clip	XCNA-0032	Pack of 10


Setup Holding Fixtures


- ▶ Setup holding fixtures have precision machined internal bores that cradle flanges precisely. Vertical or horizontal mount fixtures have an open design for easy access to retention knobs, removable keylock for keyed or unkeyed use, and high torque split clamp with ratchet handle mar-free grip. Bottom mount setup holding fixtures are extra long to accommodate leaving retention knobs in place and are available in all tapers that fit both BT and CT flanges.



Setup holding fixture mounts either vertically or horizontally. Bottom mount fixture drilled for two 3/8" diameter hold down socket head cap screws.

Setup Holding Fixtures & Accessories


Bottom Mount	Part Number	Taper	Hex	OAL	Key	Replacement Key
	XHDF-0004	CT40	3.0	4.15	0.625	XHDF-K004
	XHDF-0006	CT50	4.0	5.85	1.000	XHDF-K006

Vertical or Horizontal Mount	Part Number	Taper	Key	Replacement Key
	XFGF-0004	CT40	0.625	XFGF-K004
	XFGF-0006	CT50	0.625	XFGF-K006


Replacement Parts	Part Number	Description
	XFGF-H000	Replacement handle for vertical or horizontal mount setup holding fixtures

Shell Mill Drive Keys

► Replacement drive keys and lock screws for Shell Mill holders.


Shell Mill Drive Keys	Part Number	Used with
	XSDK-0500	1/2" Shell Mill Holders
	XSDK-0750	3/4" Shell Mill Holders
	XSDK-1000	1" Shell Mill Holders
	XSDK-1250	1 1/4" Shell Mill Holders
	XSDK-1500	1 1/2" Shell Mill Holders
	XSDK-2000	2" Shell Mill Holders
	XSDK-2500	2 1/2" Shell Mill Holders


Shell Mill Lock Screws

Shell Mill Lock Screw	Part Number	Used with
	XSAS-0500	1/2" Shell Mill Holders
	XSAS-0750	3/4" Shell Mill Holders
	XSAS-1000	1" Shell Mill Holders
	XSAS-1250	1 1/4" Shell Mill Holders
	XSAS-1500	1 1/2" Shell Mill Holders
	XSAS-2000	2" Shell Mill Holders
	XSAS-2500	2 1/2" Shell Mill Holders

Retention Knob Socket & Torque Wrenches

► Retention knob wrenches come with a drive square to adapt to a torque wrench.
See retention knob part tables for proper wrench and retention knob torque values on pages 10-11 & 22-23.


Retention Knob Socket	Part Number	Drive Square	Distance Across Retention Knob Flats
	XRKW-0750	0.375	0.750
	XRKW-1187	0.500	1.187
	XRKW-1250	0.500	1.250

Torque Wrenches	Part Number	Drive Square	Torque Range (Ft-Lbs)
	XTQW-0080	0.375	15-80
	XTQW-0150	0.500	30-150

Tool Tags

- ▶ Reusable tool tags make toolholder labeling quick and easy. Tool tags stay in place by snapping onto the toolholder. Use a grease pencil to write on the tool tag and WD40 to remove writing for new application.



Tool Tags	Part Number	For Flange Style
	XCTT-0004	40 V-Flange & HSK63 - Packaged 20 per bag
	XCTT-0006	50 V-Flange & HSK100 - Packaged 20 per bag



ER11 Standard Collets

- ▶ ER Standard collets have a 0.0002" T.I.R. with a clamping range of 0.039". ER standard collets are compatible with DR, RD, ESX, AR, & BR collets.



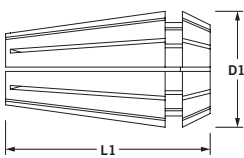
ER11 Standard Collets Inch

Standard	Part Number	Size Range	Ref. Size Range (mm)	L1	D1	Collet Set Part No.
	ER11-F125	0.106 - 0.125	2.7 - 3.2	0.709	0.461	ER11-03ST
	ER11-F187	0.168 - 0.187	4.3 - 4.8	0.709	0.461	ER11-03ST
	ER11-F250	0.231 - 0.250	5.9 - 6.4	0.709	0.461	ER11-03ST
	ER11-03ST	0.106 - 0.250	2.7 - 6.4			

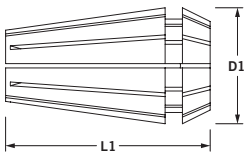
ER11 Standard Collets Metric

Standard (mm)	Part Number	Size Range (mm)	Ref. Size Range	L1	D1	Collet Set Part No.
	ER11-0100	0.5 - 1.0	0.020 - 0.039	0.709	0.461	ER11-13ST
	ER11-0150	1.0 - 1.5	0.020 - 0.039	0.709	0.461	ER11-13ST
	ER11-0200	1.5 - 2.0	0.059 - 0.079	0.709	0.461	ER11-13ST
	ER11-0250	2.0 - 2.5	0.079 - 0.098	0.709	0.461	ER11-13ST
	ER11-0300	2.5 - 3.0	0.098 - 0.118	0.709	0.461	ER11-13ST
	ER11-0350	3.0 - 3.5	0.118 - 0.138	0.709	0.461	ER11-13ST
	ER11-0400	3.5 - 4.0	0.138 - 0.157	0.709	0.461	ER11-13ST
	ER11-0450	4.0 - 4.5	0.157 - 0.177	0.709	0.461	ER11-13ST
	ER11-0500	4.5 - 5.0	0.177 - 0.197	0.709	0.461	ER11-13ST
	ER11-0550	5.0 - 5.5	0.197 - 0.217	0.709	0.461	ER11-13ST
	ER11-0600	5.5 - 6.0	0.217 - 0.236	0.709	0.461	ER11-13ST
	ER11-0650	6.0 - 6.5	0.236 - 0.256	0.709	0.461	ER11-13ST
	ER11-0700	6.5 - 7.0	0.256 - 0.276	0.709	0.461	ER11-13ST
	ER11-13ST	0.5 - 7.0	0.020 - 0.276			

ER16 Standard Collets Inch

Standard	Part Number	Size Range	Ref. Size Range (mm)	L1	D1	Collet Set Part No.
	ER16-F062	0.043 - 0.062	1.1 - 1.6	1.083	0.679	ER16-11ST
	ER16-F093	0.054 - 0.093	1.4 - 2.4	1.083	0.679	ER16-11ST
	ER16-F125	0.086 - 0.125	2.2 - 3.2	1.083	0.679	ER16-11ST
	ER16-F156	0.117 - 0.156	3.0 - 4.0	1.083	0.679	ER16-11ST
	ER16-F187	0.148 - 0.187	3.8 - 4.7	1.083	0.679	ER16-11ST
	ER16-F218	0.179 - 0.218	4.5 - 5.5	1.083	0.679	ER16-11ST
	ER16-F250	0.211 - 0.250	5.4 - 6.4	1.083	0.679	ER16-11ST
	ER16-F281	0.242 - 0.281	6.1 - 7.1	1.083	0.679	ER16-11ST
	ER16-F312	0.273 - 0.312	6.9 - 7.9	1.083	0.679	ER16-11ST
	ER16-F343	0.304 - 0.343	7.7 - 8.7	1.083	0.679	ER16-11ST
	ER16-F375	0.336 - 0.375	8.5 - 9.5	1.083	0.679	ER16-11ST
	ER16-11ST	0.043 - 0.375	1.1 - 9.5			

ER16 Standard Collets Metric

Standard (mm)	Part Number	Size Range (mm)	Ref. Size Range (mm)	L1	D1	Collet Set Part No.
	ER16-0100	0.5 - 1.0	0.020 - 0.039	1.083	0.679	ER16-10ST
	ER16-0150	1.0 - 1.5	0.039 - 0.059	1.083	0.679	-
	ER16-0200	1.0 - 2.0	0.039 - 0.079	1.083	0.679	ER16-10ST
	ER16-0250	2.0 - 2.5	0.079 - 0.098	1.083	0.679	-
	ER16-0300	2.0 - 3.0	0.079 - 0.118	1.083	0.679	ER16-10ST
	ER16-0400	3.0 - 4.0	0.118 - 0.157	1.083	0.679	ER16-10ST
	ER16-0500	4.0 - 5.0	0.157 - 0.197	1.083	0.679	ER16-10ST
	ER16-0600	5.0 - 6.0	0.197 - 0.236	1.083	0.679	ER16-10ST
	ER16-0700	6.0 - 7.0	0.236 - 0.276	1.083	0.679	ER16-10ST
	ER16-0800	7.0 - 8.0	0.276 - 0.315	1.083	0.679	ER16-10ST
	ER16-0900	8.0 - 9.0	0.315 - 0.354	1.083	0.679	ER16-10ST
	ER16-1000	9.0 - 10.0	0.354 - 0.394	1.083	0.679	ER16-10ST
	ER16-10ST	0.5 - 10.0	0.020 - 0.394			

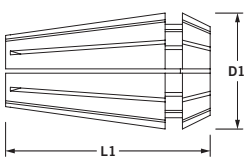
ER20 Standard Collets Inch

Standard	Part Number	Size Range	Ref. Size Range (mm)	L1	D1	Collet Set Part No.
	ER20-F062	0.043 - 0.062	1.1 - 1.6	1.240	0.839	ER20-15ST
	ER20-F093	0.054 - 0.093	1.4 - 2.4	1.240	0.839	ER20-15ST
	ER20-F125	0.086 - 0.125	2.2 - 3.2	1.240	0.839	ER20-15ST
	ER20-F156	0.117 - 0.156	3.0 - 4.0	1.240	0.839	ER20-15ST
	ER20-F187	0.148 - 0.187	3.8 - 4.7	1.240	0.839	ER20-15ST
	ER20-F218	0.179 - 0.218	4.5 - 5.5	1.240	0.839	ER20-15ST
	ER20-F250	0.211 - 0.250	5.4 - 6.4	1.240	0.839	ER20-15ST
	ER20-F281	0.242 - 0.281	6.1 - 7.1	1.240	0.839	ER20-15ST
	ER20-F312	0.273 - 0.312	6.9 - 7.9	1.240	0.839	ER20-15ST
	ER20-F343	0.304 - 0.343	7.7 - 8.7	1.240	0.839	ER20-15ST
	ER20-F375	0.336 - 0.375	8.5 - 9.5	1.240	0.839	ER20-15ST
	ER20-F406	0.367 - 0.406	9.3 - 10.3	1.240	0.839	ER20-15ST
	ER20-F437	0.398 - 0.437	10.1 - 11.1	1.240	0.839	ER20-15ST
	ER20-F468	0.429 - 0.468	10.9 - 11.9	1.240	0.839	ER20-15ST
	ER20-F500	0.461 - 0.500	11.7 - 12.7	1.240	0.839	ER20-15ST
	ER20-15ST	0.043 - 0.500	1.1 - 12.7			

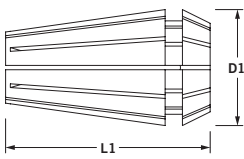
ER20 Standard Collets Metric

Standard (mm)	Part Number	Size Range (mm)	Ref. Size Range	L1	D1	Collet Set Part No.
	ER20-0150	1.0 - 1.5	0.039 - 0.059	1.240	0.839	-
	ER20-0200	1.0 - 2.0	0.039 - 0.079	1.240	0.839	ER20-12ST
	ER20-0250	2.0 - 2.5	0.079 - 0.098	1.240	0.839	-
	ER20-0300	2.0 - 3.0	0.079 - 0.118	1.240	0.839	ER20-12ST
	ER20-0400	3.0 - 4.0	0.118 - 0.157	1.240	0.839	ER20-12ST
	ER20-0500	4.0 - 5.0	0.157 - 0.197	1.240	0.839	ER20-12ST
	ER20-0600	5.0 - 6.0	0.197 - 0.236	1.240	0.839	ER20-12ST
	ER20-0700	6.0 - 7.0	0.236 - 0.276	1.240	0.839	ER20-12ST
	ER20-0800	7.0 - 8.0	0.276 - 0.315	1.240	0.839	ER20-12ST
	ER20-0900	8.0 - 9.0	0.315 - 0.354	1.240	0.839	ER20-12ST
	ER20-1000	9.0 - 10.0	0.354 - 0.394	1.240	0.839	ER20-12ST
	ER20-1100	10.0 - 11.0	0.394 - 0.433	1.240	0.839	ER20-12ST
	ER20-1200	11.0 - 12.0	0.433 - 0.472	1.240	0.839	ER20-12ST
	ER20-1300	12.0 - 13.0	0.472 - 0.512	1.240	0.839	ER20-12ST
	ER20-12ST	1.0 - 13.0	0.039 - 0.512			

ER25 Standard Collets Inch

Standard	Part Number	Size Range	Ref. Size Range (mm)	L1	D1	Collet Set Part No.
	ER25-F125	0.086 - 0.125	2.2 - 3.2	1.339	1.035	ER25-09ST
	ER25-F187	0.148 - 0.187	3.8 - 4.7	1.339	1.035	ER25-09ST
	ER25-F250	0.211 - 0.250	5.4 - 6.4	1.339	1.035	ER25-09ST
	ER25-F312	0.273 - 0.312	6.9 - 7.9	1.339	1.035	ER25-09ST
	ER25-F375	0.336 - 0.375	8.5 - 9.5	1.339	1.035	ER25-09ST
	ER25-F437	0.398 - 0.437	10.1 - 11.1	1.339	1.035	ER25-09ST
	ER25-F500	0.461 - 0.500	11.7 - 12.7	1.339	1.035	ER25-09ST
	ER25-F562	0.523 - 0.562	13.3 - 14.3	1.339	1.035	ER25-09ST
	ER25-F625	0.586 - 0.625	14.9 - 15.9	1.339	1.035	ER25-09ST
	ER25-09ST	0.086 - 0.625	2.2 - 15.9			

ER25 Standard Collets Metric

Standard (mm)	Part Number	Size Range (mm)	Ref. Size Range	L1	D1	Collet Set Part No.
	ER25-0150	1.0 - 1.5	0.039 - 0.059	1.339	1.035	-
	ER25-0200	1.0 - 2.0	0.039 - 0.079	1.339	1.035	ER25-15ST
	ER25-0250	2.0 - 2.5	0.079 - 0.098	1.339	1.035	-
	ER25-0300	2.0 - 3.0	0.079 - 0.118	1.339	1.035	ER25-15ST
	ER25-0400	3.0 - 4.0	0.118 - 0.157	1.339	1.035	ER25-15ST
	ER25-0500	4.0 - 5.0	0.157 - 0.197	1.339	1.035	ER25-15ST
	ER25-0600	5.0 - 6.0	0.197 - 0.236	1.339	1.035	ER25-15ST
	ER25-0700	6.0 - 7.0	0.236 - 0.276	1.339	1.035	ER25-15ST
	ER25-0800	7.0 - 8.0	0.276 - 0.315	1.339	1.035	ER25-15ST
	ER25-0900	8.0 - 9.0	0.315 - 0.354	1.339	1.035	ER25-15ST
	ER25-1000	9.0 - 10.0	0.354 - 0.394	1.339	1.035	ER25-15ST
	ER25-1100	10.0 - 11.0	0.394 - 0.433	1.339	1.035	ER25-15ST
	ER25-1200	11.0 - 12.0	0.433 - 0.472	1.339	1.035	ER25-15ST
	ER25-1300	12.0 - 13.0	0.472 - 0.512	1.339	1.035	ER25-15ST
	ER25-1400	13.0 - 14.0	0.512 - 0.551	1.339	1.035	ER25-15ST
	ER25-1500	14.0 - 15.0	0.551 - 0.591	1.339	1.035	ER25-15ST
	ER25-1600	15.0 - 16.0	0.591 - 0.630	1.339	1.035	ER25-15ST
	ER25-15ST	1.0 - 16.0	0.039 - 0.630			

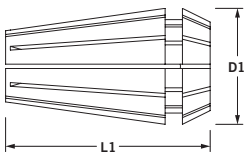
ER32 Standard Collets Inch

Standard	Part Number	Size Range	Ref. Size Range (mm)	L1	D1	Collet Set Part No.
	ER32-F125	0.086 - 0.125	2.2 - 3.2	1.575	1.313	ER32-11ST
	ER32-F187	0.148 - 0.187	3.8 - 4.7	1.575	1.313	ER32-11ST
	ER32-F250	0.211 - 0.250	5.4 - 6.4	1.575	1.313	ER32-11ST
	ER32-F312	0.273 - 0.312	6.9 - 7.9	1.575	1.313	ER32-11ST
	ER32-F375	0.336 - 0.375	8.5 - 9.5	1.575	1.313	ER32-11ST
	ER32-F437	0.398 - 0.437	10.1 - 11.1	1.575	1.313	ER32-11ST
	ER32-F500	0.461 - 0.500	11.7 - 12.7	1.575	1.313	ER32-11ST
	ER32-F562	0.523 - 0.562	13.3 - 14.3	1.575	1.313	ER32-11ST
	ER32-F625	0.586 - 0.625	14.9 - 15.9	1.575	1.313	ER32-11ST
	ER32-F687	0.648 - 0.687	16.5 - 17.4	1.575	1.313	ER32-11ST
	ER32-F750	0.711 - 0.750	18.0 - 19.0	1.575	1.313	ER32-11ST
	ER32-11ST	0.086 - 0.750	2.2 - 19.0			

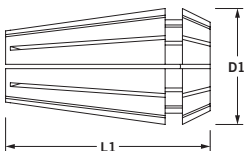
ER32 Standard Collets Metric

Standard (mm)	Part Number	Size Range (mm)	Ref. Size Range	L1	D1	Collet Set Part No.
	ER32-0300	2.0 - 3.0	0.079 - 0.118	1.575	1.313	ER32-18ST
	ER32-0400	3.0 - 4.0	0.118 - 0.157	1.575	1.313	ER32-18ST
	ER32-0500	4.0 - 5.0	0.157 - 0.197	1.575	1.313	ER32-18ST
	ER32-0600	5.0 - 6.0	0.197 - 0.236	1.575	1.313	ER32-18ST
	ER32-0700	6.0 - 7.0	0.236 - 0.276	1.575	1.313	ER32-18ST
	ER32-0800	7.0 - 8.0	0.276 - 0.315	1.575	1.313	ER32-18ST
	ER32-0900	8.0 - 9.0	0.315 - 0.354	1.575	1.313	ER32-18ST
	ER32-1000	9.0 - 10.0	0.354 - 0.394	1.575	1.313	ER32-18ST
	ER32-1100	10.0 - 11.0	0.394 - 0.433	1.575	1.313	ER32-18ST
	ER32-1200	11.0 - 12.0	0.433 - 0.472	1.575	1.313	ER32-18ST
	ER32-1300	12.0 - 13.0	0.472 - 0.512	1.575	1.313	ER32-18ST
	ER32-1400	13.0 - 14.0	0.512 - 0.551	1.575	1.313	ER32-18ST
	ER32-1500	14.0 - 15.0	0.551 - 0.591	1.575	1.313	ER32-18ST
	ER32-1600	15.0 - 16.0	0.591 - 0.630	1.575	1.313	ER32-18ST
	ER32-1700	16.0 - 17.0	0.630 - 0.669	1.575	1.313	ER32-18ST
	ER32-1800	17.0 - 18.0	0.669 - 0.709	1.575	1.313	ER32-18ST
	ER32-1900	18.0 - 19.0	0.709 - 0.748	1.575	1.313	ER32-18ST
	ER32-2000	19.0 - 20.0	0.748 - 0.787	1.575	1.313	ER32-18ST
	ER32-18ST	2.0 - 20.0	0.079 - 0.787			

ER40 Standard Collets Inch

Standard	Part Number	Size Range	Ref. Size Range (mm)	L1	D1	Collet Set Part No.
	ER40-F125	0.086 - 0.125	2.2 - 3.2	1.811	1.614	ER40-15ST
	ER40-F187	0.148 - 0.187	3.8 - 4.7	1.811	1.614	ER40-15ST
	ER40-F250	0.211 - 0.250	5.4 - 6.4	1.811	1.614	ER40-15ST
	ER40-F312	0.273 - 0.312	6.9 - 7.9	1.811	1.614	ER40-15ST
	ER40-F375	0.336 - 0.375	8.5 - 9.5	1.811	1.614	ER40-15ST
	ER40-F437	0.398 - 0.437	10.1 - 11.1	1.811	1.614	ER40-15ST
	ER40-F500	0.461 - 0.500	11.7 - 12.7	1.811	1.614	ER40-15ST
	ER40-F562	0.523 - 0.562	13.3 - 14.3	1.811	1.614	ER40-15ST
	ER40-F625	0.586 - 0.625	14.9 - 15.9	1.811	1.614	ER40-15ST
	ER40-F687	0.648 - 0.687	16.5 - 17.4	1.811	1.614	ER40-15ST
	ER40-F750	0.711 - 0.750	18.0 - 19.0	1.811	1.614	ER40-15ST
	ER40-F812	0.774 - 0.812	19.7 - 20.6	1.811	1.614	ER40-15ST
	ER40-F875	0.836 - 0.875	21.2 - 22.2	1.811	1.614	ER40-15ST
	ER40-F937	0.899 - 0.937	22.8 - 23.8	1.811	1.614	ER40-15ST
	ER40-F100	0.961 - 1.000	24.4 - 25.4	1.811	1.614	ER40-15ST
	ER40-15ST	0.961 - 1.000	2.2 - 25.4			

ER40 Standard Collets Metric

Standard (mm)	Part Number	Size Range (mm)	Ref. Size Range	L1	D1	Collet Set Part No.
	ER40-0400	3.0 - 4.0	0.118 - 0.157	1.811	1.614	ER40-23ST
	ER40-0500	4.0 - 5.0	0.157 - 0.197	1.811	1.614	ER40-23ST
	ER40-0600	5.0 - 6.0	0.197 - 0.236	1.811	1.614	ER40-23ST
	ER40-0700	6.0 - 7.0	0.236 - 0.276	1.811	1.614	ER40-23ST
	ER40-0800	7.0 - 8.0	0.276 - 0.315	1.811	1.614	ER40-23ST
	ER40-0900	8.0 - 9.0	0.315 - 0.354	1.811	1.614	ER40-23ST
	ER40-1000	9.0 - 10.0	0.354 - 0.394	1.811	1.614	ER40-23ST
	ER40-1100	10.0 - 11.0	0.394 - 0.433	1.811	1.614	ER40-23ST
	ER40-1200	11.0 - 12.0	0.433 - 0.472	1.811	1.614	ER40-23ST
	ER40-1300	12.0 - 13.0	0.472 - 0.512	1.811	1.614	ER40-23ST
	ER40-1400	13.0 - 14.0	0.512 - 0.551	1.811	1.614	ER40-23ST
	ER40-1500	14.0 - 15.0	0.551 - 0.591	1.811	1.614	ER40-23ST
	ER40-1600	15.0 - 16.0	0.591 - 0.630	1.811	1.614	ER40-23ST
	ER40-1700	16.0 - 17.0	0.630 - 0.669	1.811	1.614	ER40-23ST
	ER40-1800	17.0 - 18.0	0.669 - 0.709	1.811	1.614	ER40-23ST
	ER40-1900	18.0 - 19.0	0.709 - 0.748	1.811	1.614	ER40-23ST
	ER40-2000	19.0 - 20.0	0.748 - 0.787	1.811	1.614	ER40-23ST
	ER40-2100	20.0 - 21.0	0.787 - 0.827	1.811	1.614	ER40-23ST
	ER40-2200	21.0 - 22.0	0.827 - 0.866	1.811	1.614	ER40-23ST
	ER40-2300	22.0 - 23.0	0.866 - 0.906	1.811	1.614	ER40-23ST
	ER40-2400	23.0 - 24.0	0.906 - 0.945	1.811	1.614	ER40-23ST
	ER40-2500	24.0 - 25.0	0.945 - 0.984	1.811	1.614	ER40-23ST
	ER40-2600	25.0 - 26.0	0.984 - 1.023	1.811	1.614	ER40-23ST
	ER40-23ST	3.0 - 26.0	0.118 - 1.023			

TG100 Comflex® Collets

- ▶ For use with TG100 Comflex® collet chucks, collet nuts, and wrenches. TG100 Comflex® collets have a 0.0004" T.I.R. and a clamping range of 1/64".



Standard



Sealed

TG100 Comflex® Standard Collets

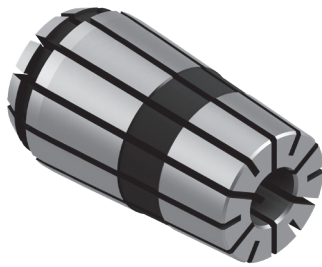
TG100 Standard	Part Number	Description	Size Range	L1	D1
	TG10-0125	Comflex® Standard Collet	0.109 - 0.125	2.375	1.379
	TG10-0187	Comflex® Standard Collet	0.172 - 0.187	2.375	1.379
	TG10-0203	Comflex® Standard Collet	0.188 - 0.203	2.375	1.379
	TG10-0250	Comflex® Standard Collet	0.234 - 0.250	2.375	1.379
	TG10-0265	Comflex® Standard Collet	0.250 - 0.265	2.375	1.379
	TG10-0312	Comflex® Standard Collet	0.297 - 0.312	2.375	1.379
	TG10-0375	Comflex® Standard Collet	0.359 - 0.375	2.375	1.379
	TG10-0406	Comflex® Standard Collet	0.391 - 0.406	2.375	1.379
	TG10-0437	Comflex® Standard Collet	0.422 - 0.437	2.375	1.379
	TG10-0500	Comflex® Standard Collet	0.484 - 0.500	2.375	1.379
	TG10-0562	Comflex® Standard Collet	0.547 - 0.562	2.375	1.379
	TG10-0593	Comflex® Standard Collet	0.578 - 0.593	2.375	1.379
	TG10-0625	Comflex® Standard Collet	0.609 - 0.625	2.375	1.379
	TG10-0656	Comflex® Standard Collet	0.641 - 0.656	2.375	1.379
	TG10-0687	Comflex® Standard Collet	0.672 - 0.687	2.375	1.379
	TG10-0718	Comflex® Standard Collet	0.703 - 0.718	2.375	1.379
	TG10-0750	Comflex® Standard Collet	0.734 - 0.750	2.375	1.379
	TG10-0765	Comflex® Standard Collet	0.750 - 0.765	2.375	1.379
	TG10-0796	Comflex® Standard Collet	0.781 - 0.796	2.375	1.379
	TG10-0875	Comflex® Standard Collet	0.859 - 0.875	2.375	1.379
TG10-1000	Comflex® Standard Collet	0.984 - 1.000	2.375	1.379	

TG100 Comflex® Sealed Collets

TG100 Sealed	Part Number	Description	Size Range	L1	D1
	TG10-0234S	Comflex® Sealed Collet	0.234	2.375	1.379
	TG10-0312S	Comflex® Sealed Collet	0.312	2.375	1.379
	TG10-0375S	Comflex® Sealed Collet	0.375	2.375	1.379
	TG10-0390S	Comflex® Sealed Collet	0.390	2.375	1.379
	TG10-0484S	Comflex® Sealed Collet	0.484	2.375	1.379
	TG10-0500S	Comflex® Sealed Collet	0.500	2.375	1.379
	TG10-0562S	Comflex® Sealed Collet	0.562	2.375	1.379
	TG10-0625S	Comflex® Sealed Collet	0.625	2.375	1.379
	TG10-0750S	Comflex® Sealed Collet	0.750	2.375	1.379
	TG10-1000S	Comflex® Sealed Collet	1.000	2.375	1.379

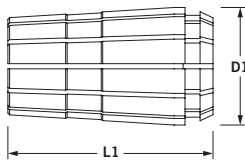
TG150 Complex® Collets

- ▶ For use with TG150 Complex® collet chucks, collet nuts, and wrenches. TG150 Complex® collets have a 0.0004" T.I.R. and a clamping range of 1/64".



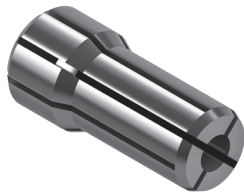
Standard

TG150 Complex® Standard Collets

TG150 Standard	Part Number	Description	Size Range	L1	D1
	TG15-1250	Complex® Standard Collet	1.234 - 1.250	3.000	2.001
	TG15-1500	Complex® Standard Collet	1.484 - 1.500	3.000	2.001

DA Double Angle Collets

► DA Double Angle collets have a collapse range of 0.0156" and are made from high-carbon steel.

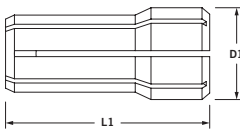


DA10 Double Angle Collets

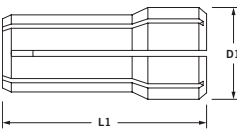
DA10	Part Number	Description	Size Range	L1	D1
	DA10-0125	Double Angle Collet	0.109 - 0.125	1.000	0.375
	DA10-0140	Double Angle Collet	0.125 - 0.140	1.000	0.375
	DA10-0156	Double Angle Collet	0.140 - 0.156	1.000	0.375
	DA10-0171	Double Angle Collet	0.156 - 0.171	1.000	0.375
	DA10-0187	Double Angle Collet	0.171 - 0.187	1.000	0.375
	DA10-0203	Double Angle Collet	0.187 - 0.203	1.000	0.375
	DA10-0218	Double Angle Collet	0.203 - 0.218	1.000	0.375
	DA10-0234	Double Angle Collet	0.218 - 0.234	1.000	0.375
	DA10-0250	Double Angle Collet	0.234 - 0.250	1.000	0.375
	DA10-0265	Double Angle Collet	0.250 - 0.265	1.000	0.375
	DA10-0281	Double Angle Collet	0.265 - 0.281	1.000	0.375
	DA10-0296	Double Angle Collet	0.281 - 0.296	1.000	0.375
	DA10-0312	Double Angle Collet	0.296 - 0.312	1.000	0.375
	DA10-0328	Double Angle Collet	0.312 - 0.328	1.000	0.375
	DA10-0343	Double Angle Collet	0.328 - 0.343	1.000	0.375
	DA10-0359	Double Angle Collet	0.343 - 0.359	1.000	0.375
	DA10-0375	Double Angle Collet	0.359 - 0.375	1.000	0.375
	DA10-0390	Double Angle Collet	0.375 - 0.390	1.000	0.375
	DA10-0406	Double Angle Collet	0.390 - 0.406	1.000	0.375
	DA10-0421	Double Angle Collet	0.406 - 0.421	1.000	0.375
	DA10-0437	Double Angle Collet	0.421 - 0.437	1.000	0.375
	DA10-0453	Double Angle Collet	0.437 - 0.453	1.000	0.375
	DA10-0468	Double Angle Collet	0.453 - 0.468	1.000	0.375
	DA10-0484	Double Angle Collet	0.468 - 0.484	1.000	0.375
	DA10-0500	Double Angle Collet	0.484 - 0.500	1.000	0.375
	DA10-0515	Double Angle Collet	0.500 - 0.515	1.000	0.375
	DA10-0531	Double Angle Collet	0.515 - 0.531	1.000	0.375
	DA10-0546	Double Angle Collet	0.531 - 0.546	1.000	0.375
	DA10-0562	Double Angle Collet	0.546 - 0.562	1.000	0.375
DA10-29ST	29 Piece Double Angle Collet Set	0.109 - 0.562	1.000	0.375	

DA18 Double Angle Collets

DA18	Part Number	Description	Size Range	L1	D1
	DA18-0187	Double Angle Collet	0.172 - 0.187	1.188	1.531
	DA18-0250	Double Angle Collet	0.234 - 0.250	1.188	1.531
	DA18-0265	Double Angle Collet	0.250 - 0.265	1.188	1.531
	DA18-0281	Double Angle Collet	0.265 - 0.281	1.188	1.531
	DA18-0296	Double Angle Collet	0.281 - 0.296	1.188	1.531
	DA18-0312	Double Angle Collet	0.296 - 0.312	1.188	1.531
	DA18-0328	Double Angle Collet	0.312 - 0.328	1.188	1.531
	DA18-0343	Double Angle Collet	0.328 - 0.343	1.188	1.531
	DA18-0359	Double Angle Collet	0.343 - 0.359	1.188	1.531
	DA18-0375	Double Angle Collet	0.359 - 0.375	1.188	1.531
	DA18-0390	Double Angle Collet	0.375 - 0.390	1.188	1.531
	DA18-0406	Double Angle Collet	0.390 - 0.406	1.188	1.531
	DA18-0421	Double Angle Collet	0.406 - 0.421	1.188	1.531
	DA18-0437	Double Angle Collet	0.421 - 0.437	1.188	1.531
	DA18-0453	Double Angle Collet	0.437 - 0.453	1.188	1.531
	DA18-0468	Double Angle Collet	0.453 - 0.468	1.188	1.531
	DA18-0484	Double Angle Collet	0.468 - 0.484	1.188	1.531
	DA18-0500	Double Angle Collet	0.484 - 0.500	1.188	1.531
	DA18-0515	Double Angle Collet	0.500 - 0.515	1.188	1.531
	DA18-0531	Double Angle Collet	0.515 - 0.531	1.188	1.531
	DA18-0546	Double Angle Collet	0.531 - 0.546	1.188	1.531
	DA18-0562	Double Angle Collet	0.546 - 0.562	1.188	1.531
	DA18-0578	Double Angle Collet	0.562 - 0.578	1.188	1.531
	DA18-0593	Double Angle Collet	0.578 - 0.593	1.188	1.531
	DA18-0609	Double Angle Collet	0.593 - 0.609	1.188	1.531
	DA18-0625	Double Angle Collet	0.609 - 0.625	1.188	1.531
	DA18-0640	Double Angle Collet	0.625 - 0.640	1.188	1.531
	DA18-0656	Double Angle Collet	0.640 - 0.656	1.188	1.531
	DA18-0671	Double Angle Collet	0.656 - 0.671	1.188	1.531
	DA18-0687	Double Angle Collet	0.671 - 0.687	1.188	1.531
	DA18-0703	Double Angle Collet	0.687 - 0.703	1.188	1.531
	DA18-0718	Double Angle Collet	0.703 - 0.718	1.188	1.531
	DA18-0734	Double Angle Collet	0.718 - 0.734	1.188	1.531
	DA18-0750	Double Angle Collet	0.734 - 0.750	1.188	1.531
	DA18-33ST	33 Piece Double Angle Collet Set	0.234 - 0.750	1.188	1.531

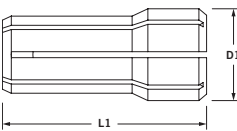


DA20 Double Angle Collets



DA20	Part Number	Description	Size Range	L1	D1
	DA20-0062	Double Angle Collet	0.046 - 0.062	1.438	0.769
	DA20-0078	Double Angle Collet	0.062 - 0.078	1.438	0.769
	DA20-0093	Double Angle Collet	0.078 - 0.093	1.438	0.769
	DA20-0109	Double Angle Collet	0.093 - 0.109	1.438	0.769
	DA20-0125	Double Angle Collet	0.109 - 0.125	1.438	0.769
	DA20-0140	Double Angle Collet	0.125 - 0.140	1.438	0.769
	DA20-0156	Double Angle Collet	0.140 - 0.156	1.438	0.769
	DA20-0171	Double Angle Collet	0.156 - 0.171	1.438	0.769
	DA20-0187	Double Angle Collet	0.171 - 0.187	1.438	0.769
	DA20-0203	Double Angle Collet	0.187 - 0.203	1.438	0.769
	DA20-0218	Double Angle Collet	0.203 - 0.218	1.438	0.769
	DA20-0234	Double Angle Collet	0.218 - 0.234	1.438	0.769
	DA20-0250	Double Angle Collet	0.234 - 0.250	1.438	0.769
	DA20-0265	Double Angle Collet	0.250 - 0.265	1.438	0.769
	DA20-0281	Double Angle Collet	0.265 - 0.281	1.438	0.769
	DA20-0296	Double Angle Collet	0.281 - 0.296	1.438	0.769
	DA20-0312	Double Angle Collet	0.296 - 0.312	1.438	0.769
	DA20-0328	Double Angle Collet	0.312 - 0.328	1.438	0.769
	DA20-0343	Double Angle Collet	0.328 - 0.343	1.438	0.769
	DA20-0359	Double Angle Collet	0.343 - 0.359	1.438	0.769
	DA20-0375	Double Angle Collet	0.359 - 0.375	1.438	0.769
	DA20-21ST	21 Piece Double Angle Collet Set	0.046 - 0.375	1.438	0.769

DA30 Double Angle Collets

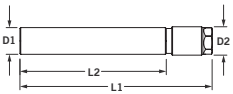


DA30	Part Number	Description	Size Range	L1	D1
	DA30-0046	Double Angle Collet	0.031 - 0.046	1.625	1.035
	DA30-0062	Double Angle Collet	0.046 - 0.062	1.625	1.035
	DA30-0078	Double Angle Collet	0.062 - 0.078	1.625	1.035
	DA30-0093	Double Angle Collet	0.078 - 0.093	1.625	1.035
	DA30-0109	Double Angle Collet	0.093 - 0.109	1.625	1.035
	DA30-0125	Double Angle Collet	0.109 - 0.125	1.625	1.035
	DA30-0140	Double Angle Collet	0.125 - 0.140	1.625	1.035
	DA30-0156	Double Angle Collet	0.140 - 0.156	1.625	1.035
	DA30-0171	Double Angle Collet	0.156 - 0.171	1.625	1.035
	DA30-0187	Double Angle Collet	0.171 - 0.187	1.625	1.035
	DA30-0203	Double Angle Collet	0.187 - 0.203	1.625	1.035
	DA30-0218	Double Angle Collet	0.203 - 0.218	1.625	1.035
	DA30-0234	Double Angle Collet	0.218 - 0.234	1.625	1.035
	DA30-0250	Double Angle Collet	0.234 - 0.250	1.625	1.035
	DA30-14ST	14 Piece Double Angle Collet Set	0.031 - 0.250	1.625	1.035

Double Angle Collet Extensions

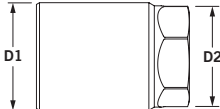
► Command's Double Angle collet extensions offer four different types to fit all tooling needs. Each type offers a unique low profile nose diameter making it easier to solve clearance problems.



Double Angle Collet Extensions	Part Number	Description	D1	D2	L1	L2
	DACE-0030	DA30 Double Angle Collet Extension	0.50	0.55	6.79	5.3
	DACE-0020	DA20 Double Angle Collet Extension	0.75	0.83	7.23	5.3
	DACE-0010	DA10 Double Angle Collet Extension	1.00	1.06	7.47	5.5
	DACE-0018	DA18 Double Angle Collet Extension	1.25	1.44	7.37	5.5

Replacement Collet Nut

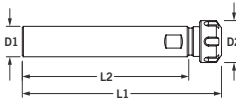


Double Angle Collet Extensions	Part Number	Description	D1	D2
	DACN-0030	DA30 Double Angle Replacement Nosepiece	0.560	0.500
	DACN-0020	DA20 Double Angle Replacement Nosepiece	0.860	0.750
	DACN-0010	DA10 Double Angle Replacement Nosepiece	1.060	0.875
	DACN-0018	DA18 Double Angle Replacement Nosepiece	1.440	1.250

ER Collet Extensions Inch Coolant Thru

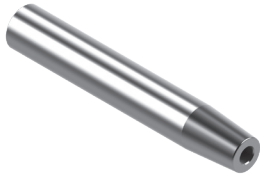
Extend the reach of your current toolholders with collet extensions.



ER Collet Extensions	Part Number	Description	D1	D2	L1	L2
	ERCE-0011	ER11 Collet Chuck Extension	0.50	0.62	6.60	5.80
	ERCE-0016	ER16 Collet Chuck Extension	0.75	1.26	7.00	5.90
	ERCE-0020	ER20 Collet Chuck Extension	1.00	1.38	7.00	5.80
	ERCE-0025	ER25 Collet Chuck Extension	1.00	1.64	7.50	5.50
	ERCE-0032	ER32 Collet Chuck Extension	1.25	1.97	7.50	5.50
	ERCE-0040	ER40 Collet Chuck Extension	1.25	2.48	6.00	3.50

ThermoLock® Extensions

- ▶ ThermoLock® extensions are ideal for small diameter tools. Extensions expand toolholder cutter range and extend tools for difficult to reach areas.



ThermoLock® 4.5" Extensions Inch

ThermoLock® Extensions	Part Number	D1	D2	D3	L1	L2	Angle
	SSL4-0802	0.125	0.31	0.50	6.3	1.18	4.5
	SSL4-0803	0.187	0.31	0.50	6.3	1.18	4.5
	SSL4-1002	0.125	0.39	0.63	6.3	1.47	4.5
	SSL4-1003	0.187	0.39	0.63	6.3	1.47	4.5
	SSL4-1004	0.250	0.39	0.63	6.3	1.47	4.5
	SSL4-1204	0.250	0.55	0.75	6.3	1.26	4.5
	SSL4-1206	0.375	0.55	0.08	6.3	1.26	4.5
	SSL4-1606	0.375	0.79	1.00	6.3	1.35	4.5
	SSL4-1608	0.500	0.79	1.00	6.3	1.35	4.5
	SSL4-1610	0.625	0.87	1.00	6.3	0.85	4.5
	SSL4-2006	0.375	0.94	1.25	6.3	1.94	4.5
	SSL4-2008	0.500	0.94	1.25	6.3	1.94	4.5
	SSL4-2010	0.625	1.06	1.25	6.3	1.19	4.5

ThermoLock® 4.5" Extensions Metric

ThermoLock® Extensions	Part Number	D1	D2	D3	L1	L2	Angle
	SSL4-1203M	3mm	8mm	12mm	160mm	25.4mm	4.5
	SSL4-1204M	4mm	8mm	12mm	160mm	25.4mm	4.5
	SSL4-1604M	4mm	10mm	16mm	160mm	38.1mm	4.5
	SSL4-1605M	5mm	10mm	16mm	160mm	38.1mm	4.5
	SSL4-1606M	6mm	10mm	16mm	160mm	38.1mm	4.5
	SSL4-2006M	6mm	14mm	20mm	160mm	38.1mm	4.5
	SSL4-2008M	8mm	14mm	20mm	160mm	38.1mm	4.5
	SSL4-2508M	8mm	19mm	25mm	160mm	38.1mm	4.5
	SSL4-2510M	10mm	20mm	25mm	160mm	31.8mm	4.5
	SSL4-2512M	12mm	20mm	25mm	160mm	31.8mm	4.5
	SSL4-2514M	14mm	20mm	25mm	160mm	31.8mm	4.5
	SSL4-2516M	16mm	22mm	25mm	160mm	19.1mm	4.5

Prodigy P1 Cleaning Fan

► Command's Prodigy P1 is the perfect complimentary tool for all CNC users, both big and small, short run or production. The Prodigy P1 has been engineered to provide you the best results possible when it comes to removing machined material chips, coolant, and other debris from your workpiece or fixture. The Prodigy P1 cleaning fan has a \varnothing 0.750 cylindrical shank that can be mounted into your collet chuck or endmill holder. Once your new Prodigy P1 cleaning fan is installed into your toolholder and mounted in the machine spindle, use your machine control to do the cleaning unattended between machining cycles. The Prodigy P1 eliminates chip accumulation without compromising labor and machine time.



Prodigy P1	Part Number	D1	D2	D3	L1	L2	L3	L4
	FS04-0254	0.75	2.66	10.00	2.75	4.53	5.56	7.33
	FSM4-0254	20MM	67.7MM	254MM	69.8MM	115MM	141.3MM	186.3MM

Replacement Blade	PART NUMBER	DESCRIPTION
	FKIT-0001	1 Blade Assembly Kit
	FKIT-0002	4 Blade Assembly Kit
	FKIT-0003	1 Hardware Kit (Inch)
	FKIT-0004	1 Plastic Body Kit
	FKIT-0005	1 Hardware Kit (Metric)



*Tool holder sold separately

*Replacement blade(s) comes with spring holding pin and positioning pin presassembled.

Steel Shank

+ The mounting cylindrical shank is made out of U.S. 4140 steel.

Easy Replacement

+ The Prodigy P1 is designed with an easy disassembly feature allowing quick replacement of the fan blades as needed.

Economical

+ Innovated and affordable automatic cleaning solution for all your CNC machining centers.

Through Coolant

+ Through coolant capable to clean workpiece prior to fan use.

Durable Fan Blades

+ The blades are manufactured utilizing glass fiber reinforced nylon for durability and abrasion resistance.

Weldon Flat

+ Shank manufactured with a weldon flat allows the utilization of a 3/4" endmill holder.

Zero Master Edge Finder

- ▶ The Zero Master Edge Finder helps increase productivity by eliminating calculation errors and minimizing costly down time.



Quick And Easy To Use

1. Clamp into machine spindle (or electrode head).
2. Adjust T.I.R. to zero.
3. The digital readout indicates the distance between the spindle Axis and workpiece edge.

Zero Master Edge Finder

1. Increases productivity by eliminating calculation errors.
2. Can be used on any milling machine.
3. Also for use on EDM machines (with insulated probe).
4. Measures X, Y, or Z-axis.
5. Locates workpiece edges (from spindle center) or workpiece length
6. Easy-to-read digital display in inch units.
7. Splash-proof, dust-proof unit can be stored in the machine tool carousel; ready for use.
8. Battery operated (3V Lithium) for up to 3,000 hours continuous operation.
9. Extended probe displacement range helps prevent damage.

Zero Master Edge Finder	Part Number	Description
	XWEF-0001	Command Zero Master Edge Finder



Zero Master Replacement Parts	Part Number	Description
	XWEF-0001-5	Replacement Probe 1.0" Length Tip
	XWEF-0001-6	Optional Probe 2.6" Length Tip





Milling Tools

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