



ER TOOLHOLDING SYSTEM



HISTORY

- 1948 Parlec is established in Rochester N.Y., as a job shop specializing in the manufacturing of Sulky Hubs.
- 1973 Parlec begins producing and distributing the Numertap and Autofacer product lines.
- 1977 Parlec expands its product line with the introduction of Toolholders, which are sold as Numertap and Autofacer accessories.
- 1980 The first Parsetter TMM is produced.
- 1985 Parlec builds a new 42,000 square-foot, state-of-the-art manufacturing facility just outside of Rochester in Fairport, N.Y.
- 1992 Parlec begins to manufacture and distribute its own line of Boring Tools.
- 1997 Parlec becomes ISO 9001 certified. Parlec's sales triple from 1992-1997.
- 1998 Parlec further enhances its product line to include Workholding. Construction of a 58,000 square-foot plant addition begins.
- 2003 Parlec enters the Asian market with the opening of a sales and service office in Nanjing China.
- 2004 Parlec acquires Bristol Tool. Driven and static tools are added to Parlec's extensive product line. A new sales, engineering and distribution facility opens in Bristol, England.
- 2006 Parlec continues to expand its world wide footprint by opening a Wholly Owned Foreign Enterprise in Nanjing. This gives the company full sales, engineering, customer support and distribution capabilities on 3 continents.
- 2009 Sales offices are opened in Tianjin, Xian, Wuxi, and Chengdu to expand the China presence.
- 2010 Parlec partners with Gerardi for distribution of Driven & Static Tooling in Europe. Parlec begins distribution of Right angle heads in China.
- 2012 Parlec successfully completes a \$5 million dollar capital investment campaign to automate and expand its manufacturing capabilities in the United States.
- 2014 Parlec partners with TDM Systems

Total Machining Solutions:

Ps

Tool Presetting, Measuring
and Inspection Systems

Tt

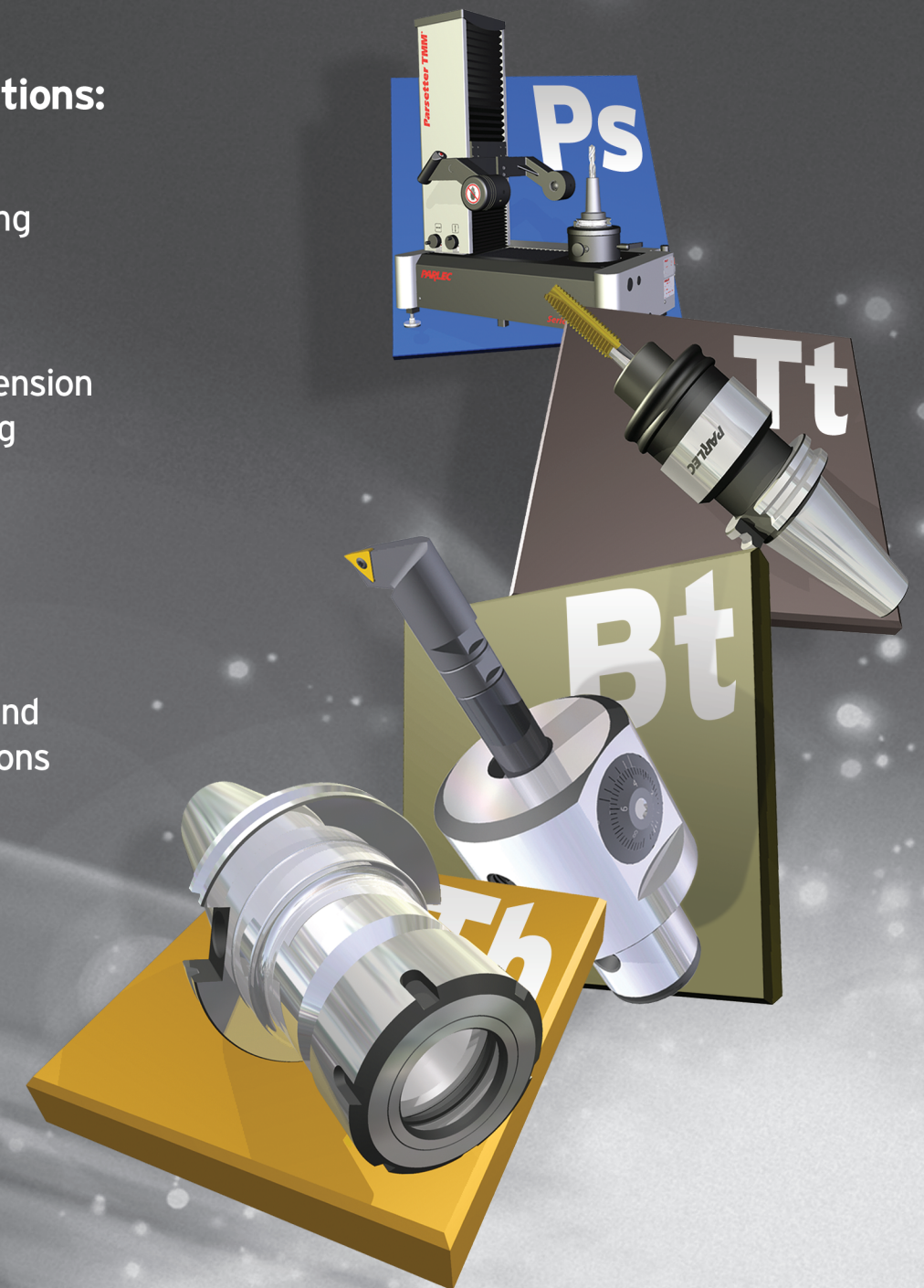
Widest Range of Rigid, Tension
and Compression Tapping

Bt

Precision Modular
Boring Systems

Th

Toolholding Production and
High Performance Solutions



Quality, Precision and Innovation





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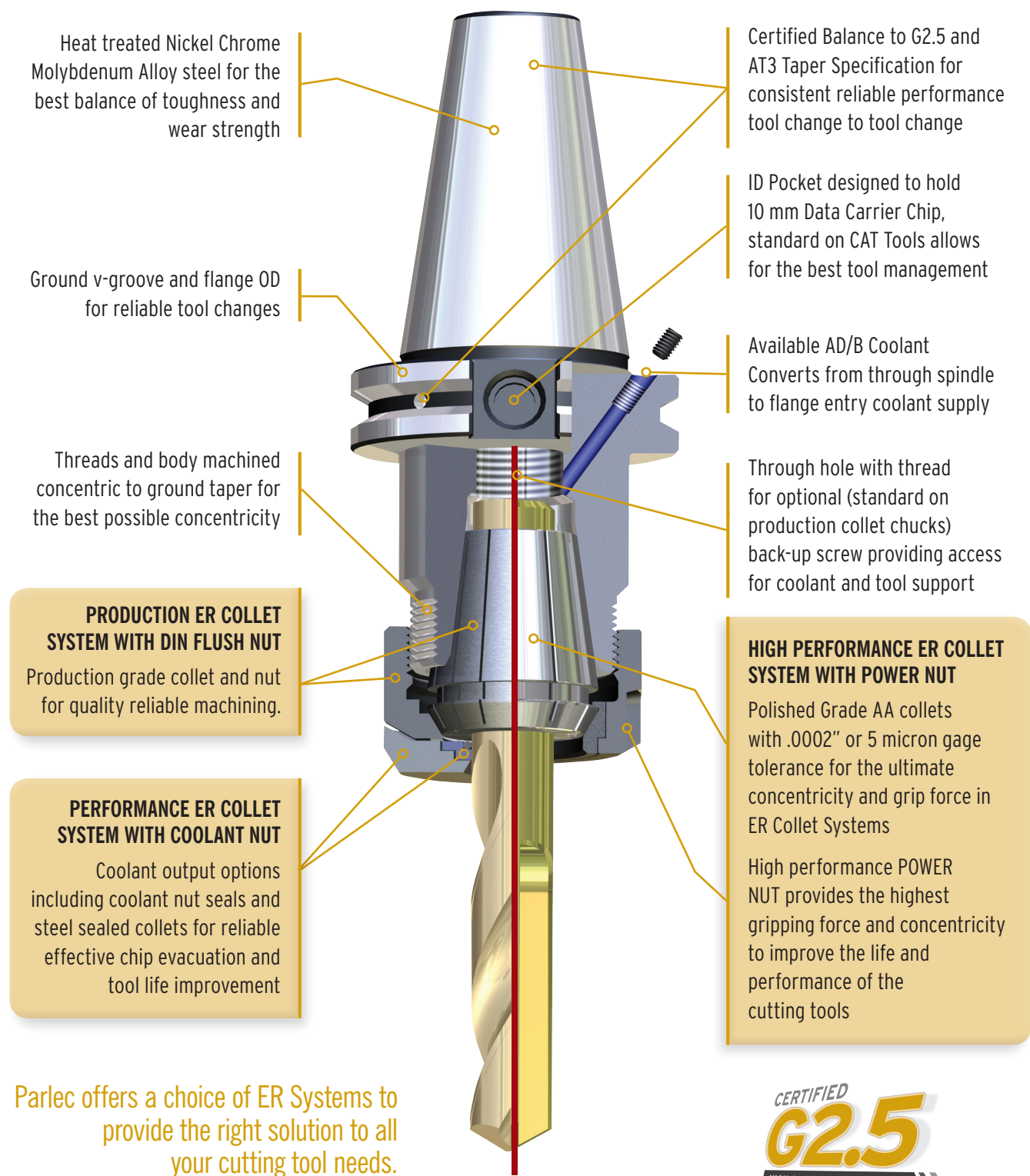
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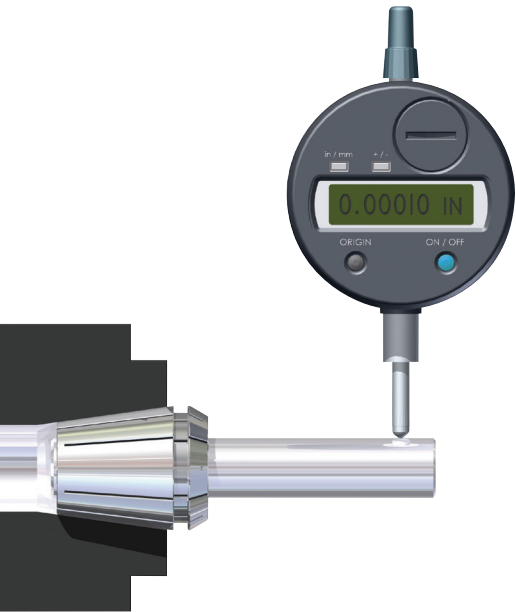
PARLEC ER SYSTEM FEATURES





Concentricity = Tool Life

Improve your systems performance and tool life by combining high performance collet chucks and high performance collets. Upgrade today for higher performance and operational cost savings!

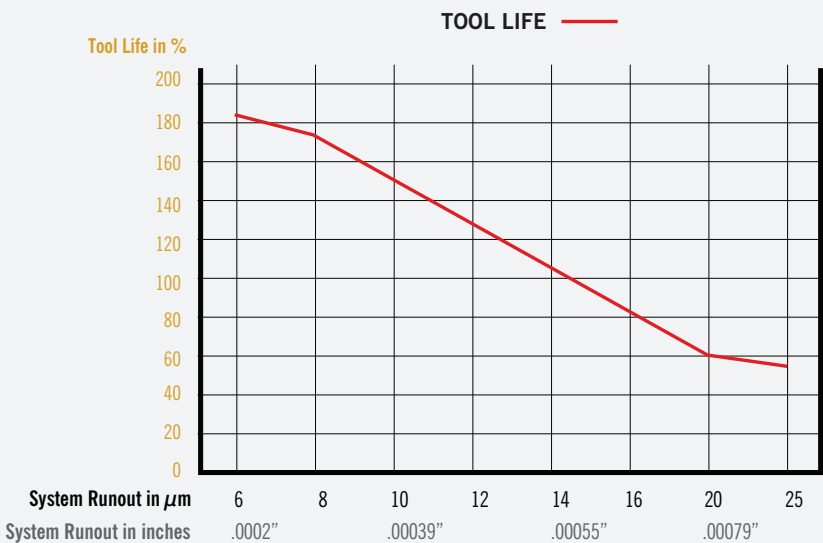


Technical Features

- Gage tolerance of a Class AA 5 micron collet is .0002" (.005 mm) runout at distance to the ISO 15488 per chart, measured as TIR
- Measured in gage with AT2 taper and maximum 1 micron runout of taper

Collet Diameter	Length at measurement	Class 1	Class 2	Parlec Class AA (5 Micron)
.039 - .063(1-1.6)	.098 (2.5)	.0006 (.015)	.0004 (.010)	.0002 (.005)
.063 - .118(1.6 - 3)	.393 (10)			
.118 - .280 (3 - 7)	.630 (20)			
.280 - .394 (7-10)	.984 (25)	.0008 (.020)	.0006 (.015)	
.394 - .708 (10-18)	1.57 (40)			
.708 - 1.08 (18-26)	1.97 (50)			
1.08 - 1.18 (26-30)	2.36 (60)	.0010 (.025)	.0008 (.020)	

Tool Life Prediction of Carbide Tools



Total Cost of Poor Runout

Tooling Cost

Utilizing Standard Production System

	Per Cutting Tool	TOTAL
Pieces	250	3000
Cost of Drill	\$100	\$1200
Standard Collet Cost	\$32	\$32
Total Cost		\$1232

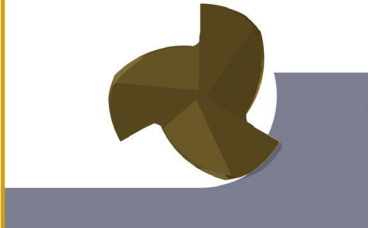
Utilizing Grade AA Performance System

	Per Cutting Tool	TOTAL
Pieces	681	3000
Cost of Drill	\$100	\$500
AA Grade Collet Cost	\$60	\$60
Total Cost		\$560

Effects of Runout on the Cutting Edges

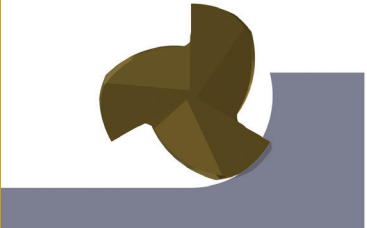
Flute 1

High runout flute takes a heavier than planned cut requiring slowing of planned feed.



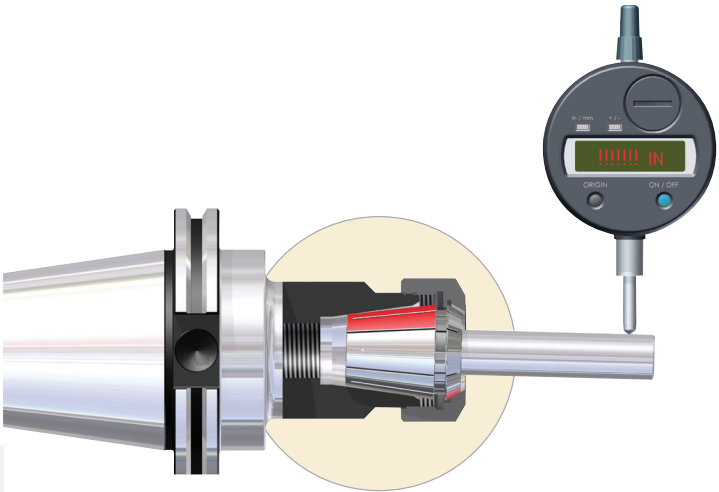
Flute 2

Middle runout flute performs as planned.



Flute 3

Low runout flute does not take enough chip to dissipate heat and wears prematurely.

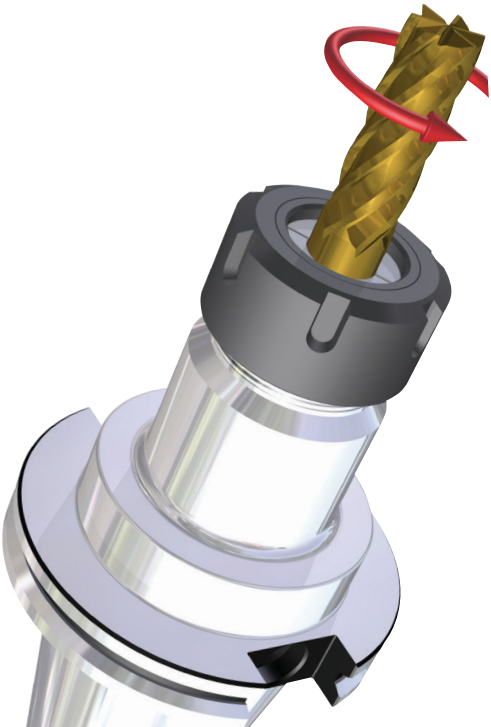


Technical Features

Solid nuts can restrict the uniform contact of the top angle of the collet creating uneven clamping. This will create runout in addition to the normal result of the collet seat and collet. Nuts with friction races are designed to increase grip force and decrease angular deflection. Use Collet Chucks with the Parlec Power Nut for best results.

Other AA Collet Design Features and Benefits

- 12 slots instead of 16 allows for more than enough collapse and increased the area of contact with less tendency to distort.
- All edges are deburred and rounded to promote good interface with the taper of the chuck without the tendency to damage it. This results in more consistent repeatability of the system.
- Collets are polished to eliminate minor blemishes that tend to promote corrosion. Better corrosion resistance will result in longer product life of both the collet and the holder.
- Highly polished OD surfaces reduce the amount of force absorbed by friction between the collet and the collet chuck seat, increasing the grip force on the cutting tool. The inside bore of the collet is intentionally left unpolished to increase the friction between the collet and the cutting tool shank.



The result of an improved AA collet in a quality chuck is increased gripping force, improved rigidity, decreased runout and an overall satisfaction in your collet chuck system.

COLLET CHUCK FEATURES

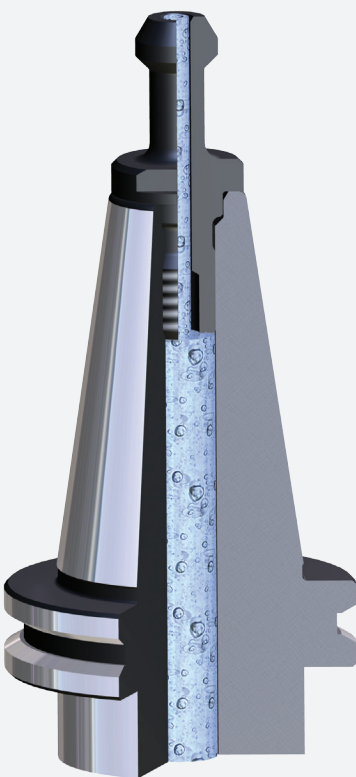
Collet Chuck Taper	Balance Up To
BT 30	25,000 RPM
BT 40	25,000 RPM
CAT 40	25,000 RPM
CAT 50	20,000 RPM
HSK 63A	25,000 RPM
HSK 100A	20,000 RPM



Many solutions for high velocity and extreme machining available upon request

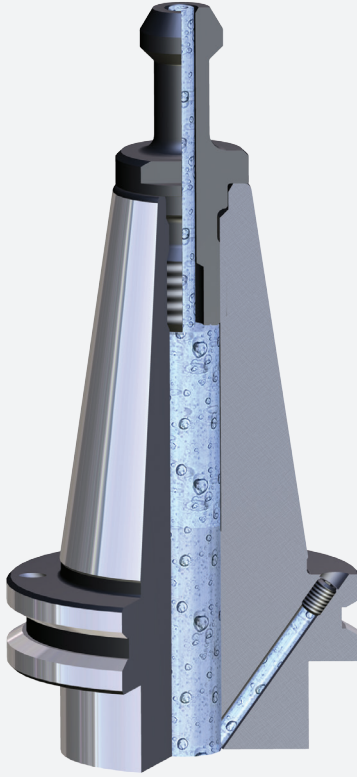
COLLET CHUCK FEATURES

Standard Thru Coolant

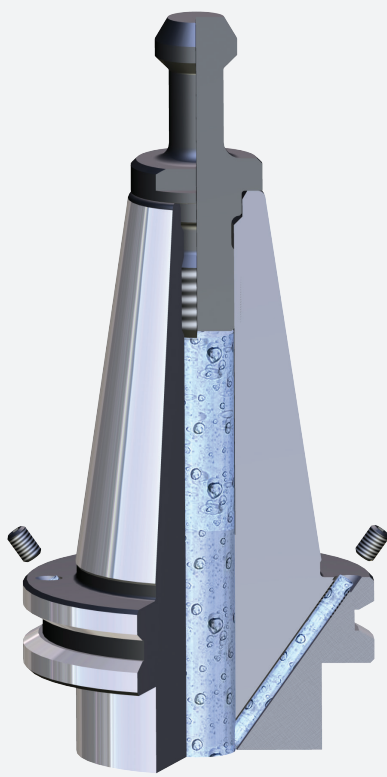


Coolant delivered from the spindle through the knob and exits through the cutting tool.

AD/B Convertible Coolant



With Screws: Coolant delivered from the spindle through the knob and exits through the cutting tool.

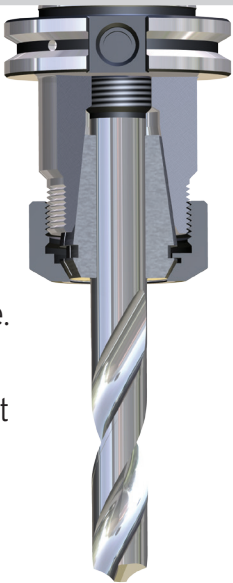


Without Screws: Coolant delivered from the spindle through the flange and exits through the cutting tool. Solid knob required.

PROPER USAGE OF COLLET CHUCK AND BACK UP SCREWS

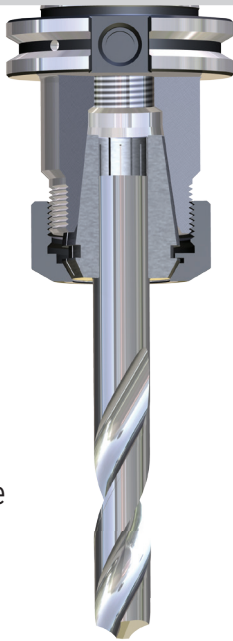
Proper Positioning

The proper position of tool in relationship to collet is shown here. The backup screw has been moved to “backup” the cutting tool after it has been torqued to proper specifications.



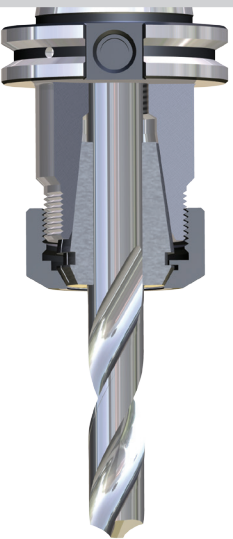
Improper Positioning

Shown here is an improper position of the tool shank in relation to collet. Short engagement will result in reduced clamping force, poor concentricity and possible damage to the collet.



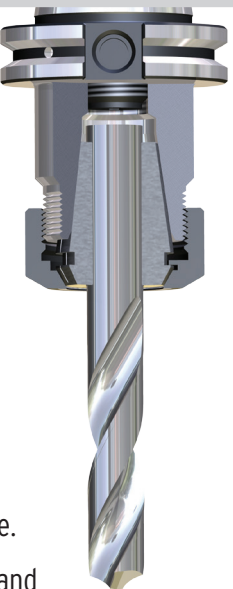
Improper Positioning

Shown here is an improper position of the tool shank in relation to the collet. Flutes extending into the collet will result in reduced clamping force, poor concentricity, possible damage to the collet, and poor chip evacuation.



Improper Positioning

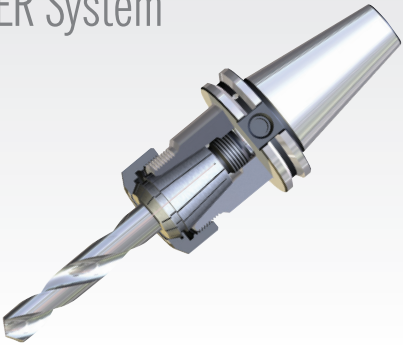
A tool should be properly positioned and then clamped to proper torque before a backup screw is used. Using a screw as a stop screw will result in reduced concentricity and limited grip force. The proper selection of collet nut and collet type will provide adequate drive force for most machining operations.



COLLET CHUCK PERFORMANCE CHOICES

> Performance Selection

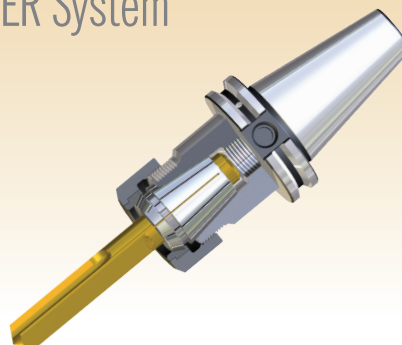
Production
ER System



High Performance
ER System



High Performance Plus
ER System



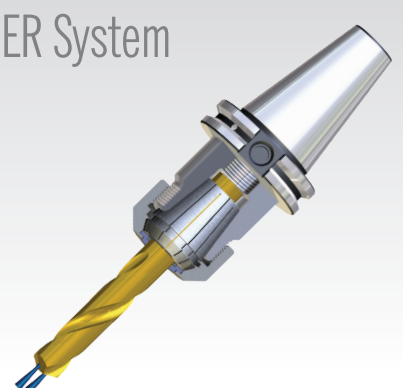
Performance Chuck with Standard Flush Nut, Balanced to G2.5 PART NUMBER: C40-16ERF300, pages 12-16 AD/B PART NUMBER: C40BC-16ERF300	Performance Chuck with Power Nut, Balanced to G2.5 PART NUMBER: C40-16ERP312, pages 17-21 AD/B PART NUMBER: C40BC-16ERP312	Performance Chuck with Power Nut, Balanced to G2.5 PART NUMBER: C40-16ERP312, pages 17-21 AD/B PART NUMBER: C40BC-16ERP312
Standard Grade Collet PART NUMBER: ER16-0250, pages 27-29	Standard Grade Collet PART NUMBER: ER16-0250, pages 27-29	Grade AA, 5 Micron Collet PART NUMBER: 5UMER16-0250, pages 31-33

> Performance Selection with Coolant Delivery Options

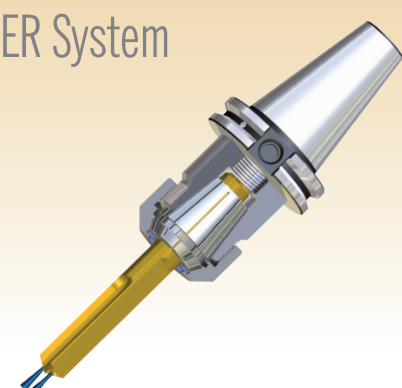
Production
ER System



Performance
ER System

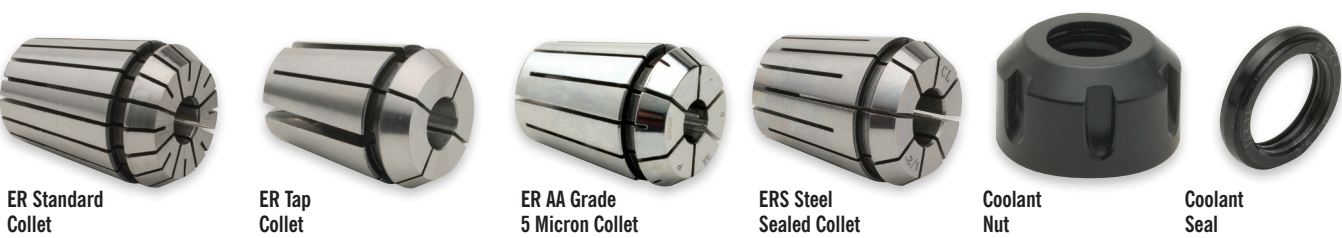


Performance Plus
ER System



Performance Chuck with Standard Flush Nut, Balanced to G2.5 PART NUMBER: C40-16ERF300, pages 12-16 AD/B PART NUMBER: C40BC-16ERF300	Performance Chuck with Coolant Seal Nut, Balanced to G2.5 PART NUMBER: C40-16ERC322, pages 22-26 AD/B PART NUMBER: C40BC-16ERC322	Performance Chuck with Coolant Seal Nut, Balanced to G2.5 PART NUMBER: C40-16ERC322, pages 22-26 AD/B PART NUMBER: C40BC-16ERC322
Standard Grade Collet PART NUMBER: ERS16-0250, pages 27-29	Standard Grade Collet and Nut Seal PART NUMBER: ER16-0250, pages 27-29 PART NUMBER: CS16-0255, page 36	Grade AA, 5 Micron Collet and Collet Nut Seal PART NUMBER: 5UMER16-0250, pages 31-33 PART NUMBER: CS16-0255, page 36

COLLET PERFORMANCE CHOICES



Collet Selection

ER STANDARD COLLET (ER Standard Collets see page 27-29)	■ For use in ER collet chucks for drilling, reaming, boring, tapping, and milling. ■ Meets DIN 6499-B industry standard. ■ Collapse range .0393" (1 mm) maximum. ■ Size 11 collapse range .020" (1/2 mm) maximum. ■ For higher runout tolerance use HIGH CONCENTRICITY AA GRADE 5 MICRON COLLETS
ER TAP COLLETS (ER Tap Collets see page 30)	■ Designed for use with production ER Tapping tools. ■ Provide maximum concentricity with positive driving force.
ER AA GRADE 5 MICRON COLLET <i>HIGH CONCENTRICITY</i> (ER AA Grade 5 Micron Collets see page 31-33)	■ Evenly distributed cutting edges for high performance machining. ■ .0002" (5 micron) gage tolerance. ■ Exceeds DIN requirements. ■ Recommended use on size. ■ 12 slots, deburred and polished. ■ Increased grip force with reduced friction to collet seat. ■ Improve system performance and lower cost per piece when used with a quality chuck.

Collet Selection with Coolant Options

ERS STEEL SEALED COLLET (ER Steel Sealed Collets see page 34-35)	■ For use with regular straight shank tools. ■ Withstands coolant pressure up to 1,800 psi. ■ Collet collapse is .005."
COOLANT NUT SEAL SYSTEM (Coolant Seals see page 36 & Coolant Nuts see page 38)	■ Allows full range of collet when used with standard collets. ■ Allows coolant seal with AA grade 5 micron collets. ■ Prevents abrasive machining dust of chips from contaminating collet system. ■ Seals up to 1, 200 psi.

TYPE	ER11	ER16	ER20	ER25	ER32	ER40
LENGTH (L)	0.708	1.082	1.240	1.338	1.574	1.811
DIAMETER (D)	0.452	0.669	0.827	1.023	1.300	1.614



PRODUCTION ER COLLET SYSTEM WITH DIN FLUSH NUT



Production ER Collet Chuck with Flush Nut



- Constructed of alloy steel for long, durable service life.
- Hardened to Rc: 52-56 to avoid damaging collet chuck threads.
- Collet seat taper T.I.R. $\leq .0002''$
- Accepts DIN 6499 collets.

Collet Chuck Taper	Balance Up To
BT 30	25,000 RPM
BT 40	25,000 RPM
CAT 40	25,000 RPM
CAT 50	20,000 RPM
HSK 63A	25,000 RPM
HSK 100A	20,000 RPM

Collet Choices



ER Standard Collet



ER Tap Collet



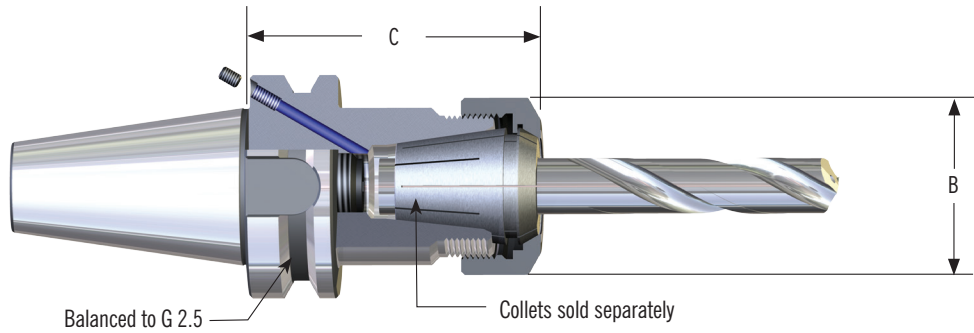
ER AA Grade 5 Micron Collet



ERS Steel Sealed Collet

COLLET RANGE SPECIFICATIONS

Collet Size	Range Inch	Range Metric	Collet Nut (Incl.)	Nut Torque	B/U Screw Not (Incl.)
ER11	.020" to .275"	.5 mm to 7 mm	11ERHN	22 ft. lbs.	029-909
ER16	.020" to .393"	1 mm to 13 mm	16ERHCN	52 ft. lbs.	BS-20
ER20	.039" to .511"	1 mm to 13 mm	20ERHN	74 ft. lbs.	BS-09
ER25	.039" to .630"	1 mm to 16 mm	25ERN	95 ft. lbs.	BS-11
ER32	.078" to .787"	2 mm to 20 mm	32ERN	125 ft. lbs.	BS-18
ER40	.118" to 1.181"	3 mm to 30 mm	40ERN	162 ft. lbs.	BS-10

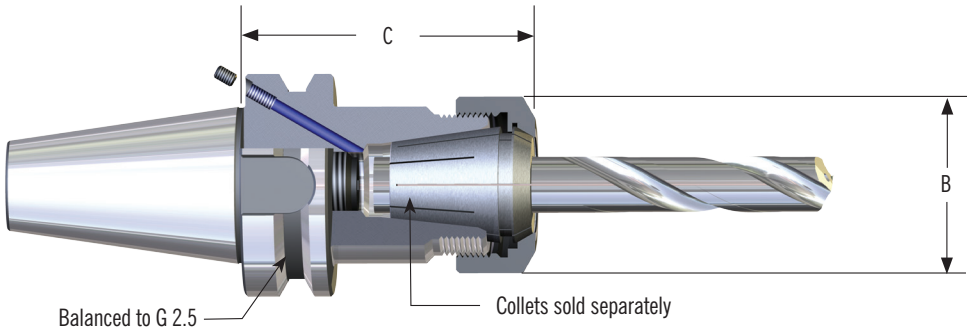


BT 30 BALANCED UP TO 25,000 RPM

Size	Part Number	Part Number with AD/B Coolant	Part Number with SimulFit®	B (Dia.)	C	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER16	B30-16ERF236	-	B30F-16ERF236	1.10	2.36	1.83	16ERHN	52 ft. lbs.	BS-20
ER20	B30-20ERF236	-	B30F-20ERF236	1.34	2.36	2.48	20ERHN	74 ft. lbs.	BS-09
ER32	B30-32ERF236	-	B30F-32ERF236	1.97	2.36	3.88	32ERN	125 ft. lbs.	BS-18

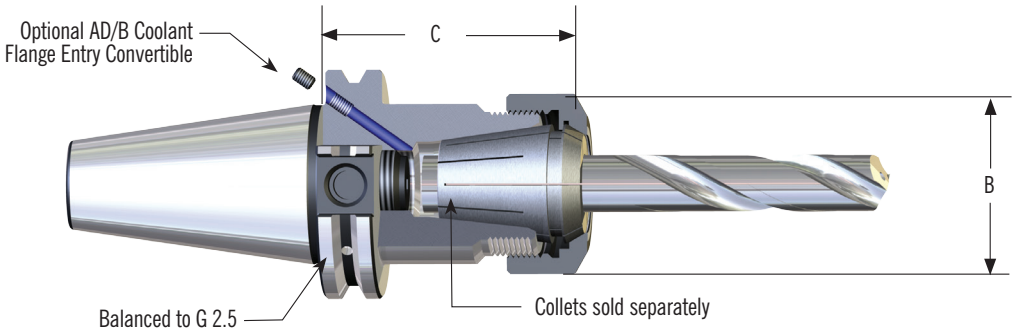
BT 40 BALANCED UP TO 25,000 RPM

Size	Part Number	Part Number with AD/B Coolant	Part Number with SimulFit®	B (Dia.)	C	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER11	B40-11ERF400	B40BC-11ERF400	-	0.75	4.00	2.25	11ERHN	22 ft. lbs.	029-909
ER16	B40-16ERF250	-	-	1.10	2.50	1.50	16ERHN	52 ft. lbs.	BS-20
	B40-16ERF300	B40BC-16ERF300	B40F-16ERF300		3.00	2.00			
	B40-16ERF400	B40BC-16ERF400	B40F-16ERF500		4.00	3.50			
	B40-16ERF500	B40BC-16ERF500	-		5.00	2.00			
ER20	B40-20ERF400	-	-	1.34	4.00	1.50	20ERHN	74 ft. lbs.	BS-09
	B40-20ERF600	-	-		6.00	2.00			
ER25	B40-25ERF400	-	-	1.64	4.00	1.50	25ERN	95 ft. lbs.	BS-11
	B40-25ERF600	-	-		6.00	2.00			
ER32	B40-32ERF400	B40BC-32ERF400	B40F-32ERF400	1.97	4.00	3.88	32ERN	125 ft. lbs.	BS-18
	B40-32ERF600	-	B40F-32ERF600		6.00				
ER40	B40-40ERF400	B40BC-40ERF400	-	2.47	4.00	4.10	40ERN	162 ft. lbs.	BS-10
	B40-40ERF600	-	-		6.00				



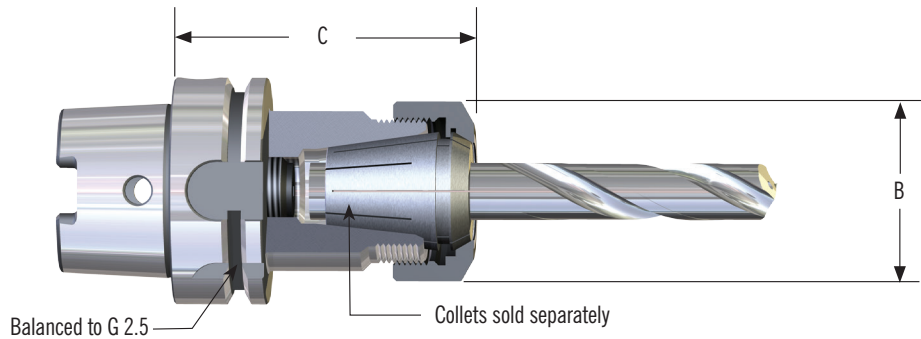
CAT 40 BALANCED UP TO 25,000 RPM

Size	Part Number	Part Number with AD/B Coolant	Part Number with SimulFit®	B (Dia.)	C	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER11	C40-11ERF250	-	-	0.75	2.50	2.25	11ERHN	22 ft. lbs.	029-909
	C40-11ERF400	-	-		4.00				
	C40-11ERF600	-	-		6.00				
ER16	C40-16ERF250	C40BC-16ERF250	C40F-16ERF250	1.10	2.50	2.43	16ERHN	52 ft. lbs.	BS-20
	C40-16ERF300	C40BC-16ERF300	-		3.00				
	C40-16ERF400	C40BC-16ERF400	C40F-16ERF400		4.00				
	C40-16ERF500	C40BC-16ERF500	-		5.00				
	C40-16ERF800	-	C40F-16ERF800		8.00				
ER20	C40-20ERF300	C40BC-20ERF300	-	1.34	3.00	2.43	20ERHN	74 ft. lbs.	BS-09
	C40-20ERF400	C40BC-20ERF400	-		4.00	3.88			
	C40-20ERF600	C40BC-20ERF600	C40F-20ERF600		6.00				
	C40-20ERF800	-	-		8.00				
ER25	C40-25ERF250	C40BC-25ERF250	-	1.64	2.50	2.50	25ERN	95 ft. lbs.	BS-11
	C40-25ERF400	C40BC-25ERF400	-		4.00	3.50			
	C40-25ERF600	C40BC-25ERF600	C40BC-25ERF600		6.00				
ER32	C40-32ERF236	-	-	1.97	2.36	3.88	32ERN	125 ft. lbs.	BS-18
	C40-32ERF300	C40BC-32ERF300	C40F-32ERF300		3.00				
	C40-32ERF400	C40BC-32ERF400	C40F-32ERF400		4.00				
	C40-32ERF600	C40BC-32ERF600	C40F-32ERF600		6.00				
	C40-32ERF800	-	-		8.00				
ER40	C40-40ERF400	C40BC-40ERF400	-	2.47	4.00	4.10	40ERN	162 ft. lbs.	BS-10
	C40-40ERF600	-	-		6.00				



CAT 50 BALANCED UP TO 20,000 RPM

Size	Part Number	Part Number with AD/B Coolant	Part Number with SimulFit®	B (Dia.)	C	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER16	C50-16ERF400	C50BC-16ERF400	C50F-16ERF400	1.10	4.00	2.50	16ERHN	52 ft. lbs.	BS-20
	C50-16ERF600	C50BC-16ERF600	C50F-16ERF600		6.00				
	C50-16ERF800	-	C50F-16ERF800		8.00				
	C50-16ERF1000	-	-		10.00				
ER20	C50-20ERF400	C50BC-20ERF400	-	1.34	4.00	3.88	20ERHN	74 ft. lbs.	BS-09
	C50-20ERF600	C50BC-20ERF600	-		6.00				
	C50-20ERF800	-	-		8.00				
ER25	C50-25ERF400	C50BC-25ERF400	-	1.64	4.00	4.00	25ERN	95 ft. lbs.	BS-11
	C50-25ERF600	C50BC-25ERF600	-		6.00				
	C50-25ERF800	-	-		8.00				
	C50-25ERF1000	-	-		10.00				
ER32	C50-32ERF400	C50BC-32ERF400	C50F-32ERF400	1.97	4.00	3.88	32ERN	125 ft. lbs.	BS-18
	C50-32ERF600	C50BC-32ERF600	C50F-32ERF600		6.00				
	C50-32ERF800	-	C50F-32ERF800		8.00				
	C50-32ERF1000	-	-		10.00				
ER40	C50-40ERF400	C50BC-40ERF400	C50F-40ERF400	2.47	4.00	4.10	40ERN	162 ft. lbs.	BS-10
	C50-40ERF600	C50BC-40ERF600	-		6.00				
	C50-40ERF800	-	-		8.00				
	C50-40ERF1000	-	-		10.00				



HSK 63 FORM A BALANCED UP TO 25,000 RPM

Size	Part Number	B (Dia.)	C	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER16	H63-16ERF394	1.10	3.94	2.10	16ERHN	52 ft. lbs.	BS-20
	H63-16ERF630		6.30	3.00			
ER20	H63-20ERF394	1.34	3.94	1.88	20ERHN	74 ft. lbs.	BS-09
ER25	H63-25ERF315	1.64	3.15	2.30	25ERN	95 ft. lbs.	BS-11
ER32	H63-32ERF315	1.97	3.15	1.80	32ERN	125 ft. lbs.	BS-18
	H63-32ERF394		3.94	2.50			
	H63-32ERF472		4.72				
ER40	H63-40ERF394	2.47	3.94	2.50	40ERN	162 ft. lbs.	BS-10

HSK 100 FORM A BALANCED UP TO 20,000 RPM

Size	Part Number	B (Dia.)	C	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER16	H100-16ERF394	1.10	3.94	2.10	16ERHN	52 ft. lbs.	BS-20
	H100-16ERF630		6.30	3.00			
ER20	H100-20ERF394	1.34	3.94	2.08	20ERHN	74 ft. lbs.	BS-09
	H100-20ERF630		6.30	3.38			
ER25	H100-25ERF394	1.64	3.94	2.30	25ERN	95 ft. lbs.	BS-11
ER32	H100-32ERF394	1.97	3.94	2.30	32ERN	125 ft. lbs.	BS-18
	H100-32ERF630		6.30	3.00			
ER40	H100-40ERF394	2.47	3.94	2.30	40ERN	162 ft. lbs.	BS-10
	H100-40ERF472		4.72	3.00			

HIGH PERFORMANCE ER COLLET CHUCK WITH POWER NUT



High Performance
ER Collet Chuck with Power Nut

- Constructed of alloy steel for long, durable service life.
- Hardened to Rc: 52-56 to avoid damaging collet chuck threads.
- Collet seat taper T.I.R. ≤.0002”.
- Accepts DIN 6499 collets.

Collet Chuck Taper	Balance Up To
BT 30	25,000 RPM
BT 40	25,000 RPM
CAT 40	25,000 RPM
CAT 50	20,000 RPM
HSK 63A	25,000 RPM
HSK 100A	20,000 RPM

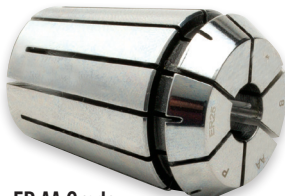
> Collet Choices



ER Standard
Collet



ER Tap
Collet



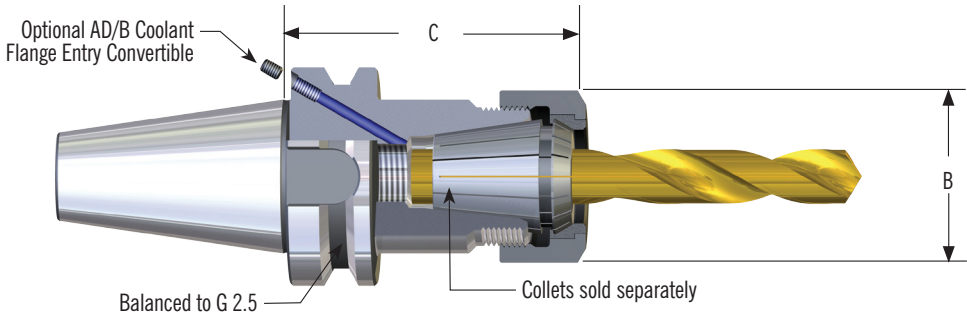
ER AA Grade
5 Micron Collet



ERS Steel
Sealed Collet

COLLET RANGE SPECIFICATIONS

Collet Size	Range Inch	Range Metric	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER16	.020” to .393”	.5 mm to 10 mm	16ERHPN	42 ft. lbs.	BS-20
ER20	.039” to .511”	1 mm to 13 mm	20ERHPN	60 ft. lbs.	BS-09
ER25	.039” to .630”	1 mm to 16 mm	25ERP	86 ft. lbs.	BS-11
ER32	.078” to .787”	2 mm to 20 mm	32ERP	100 ft. lbs.	BS-18
ER40	.118” to 1.181”	3 mm to 30 mm	40ERP	146 ft. lbs.	BS-10

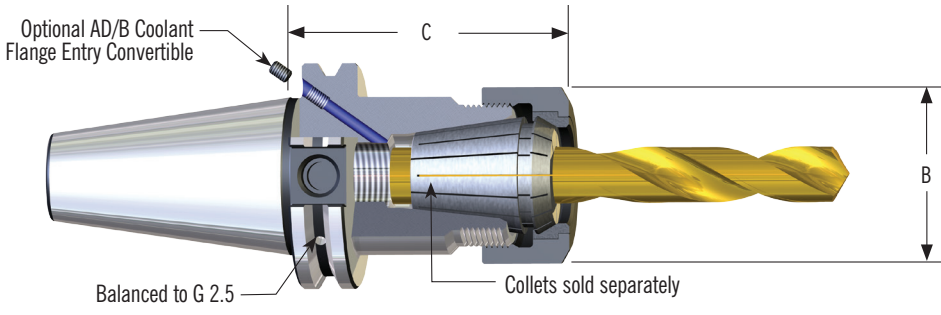


BT 30 BALANCED UP TO 25,000 RPM

Size	Part Number	Part Number with AD/B Coolant	Part Number with SimulFit®	B (Dia.)	C	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER16	B30-16ERP248	-	B30F-16ERP248	1.10	2.48	1.83	16ERHPN	42 ft. lbs.	BS-20
ER20	B30-20ERP248	-	B30F-20ERP248	1.34	2.48	2.48	20ERHPN	60 ft. lbs.	BS-09
ER32	B30-32ERP248	-	B30F-32ERP248	1.97	2.48	3.88	32ERP	100 ft. lbs.	BS-18

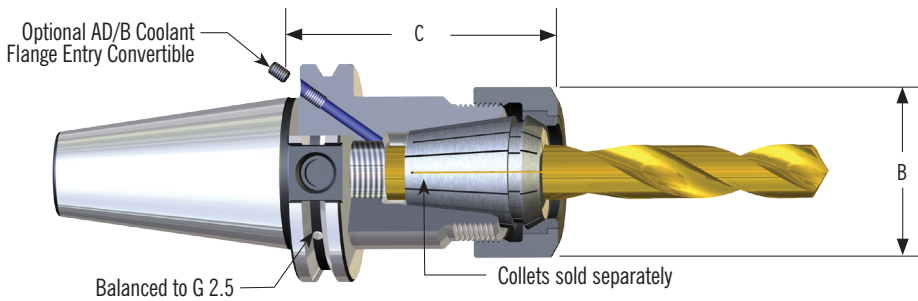
BT 40 BALANCED UP TO 25,000 RPM

Size	Part Number	Part Number with AD/B Coolant	Part Number with SimulFit®	B (Dia.)	C	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER16	B40-16ERP262	-	-	1.10	2.62	1.50	16ERHPN	42 ft. lbs.	BS-20
	B40-16ERP312	B40BC-16ERP312	B40F-16ERP312		3.12	2.00			
	B40-16ERP412	B40BC-16ERP412	-		4.00	3.50			
	B40-16ERP512	B40BC-16ERP512	B40F-16ERP512		5.00	2.00			
ER20	B40-20ERP412	-	-	1.34	4.12	1.50	20ERHPN	60 ft. lbs.	BS-09
	B40-20ERP612	-	-		6.12	2.00			
ER25	B40-25ERP412	-	-	1.64	4.12	1.50	25ERP	86 ft. lbs.	BS-11
	B40-25ERP612	-	-		6.12	2.00			
ER32	B40-32ERP412	B40BC-32ERP412	B40F-32ERP412	1.97	4.12	3.88	32ERP	100 ft. lbs.	BS-18
	B40-32ERP612	-	B40F-32ERP612		6.12				
ER40	B40-40ERP412	B40BC-40ERP412	-	2.47	4.12	4.10	40ERP	146 ft. lbs.	BS-10
	B40-40ERP612	-	-		6.12				



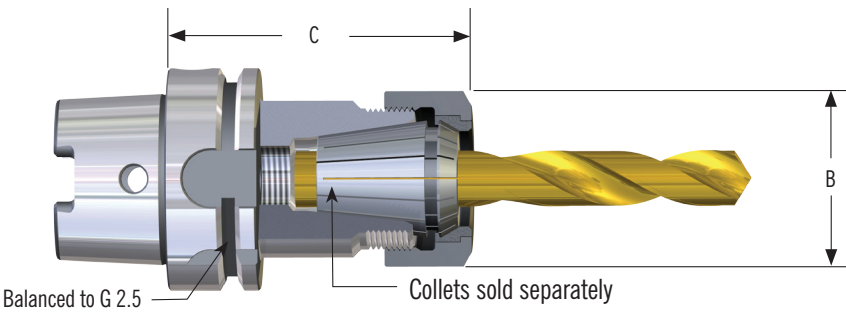
CAT 40 BALANCED UP TO 25,000 RPM

Size	Part Number	Part Number with AD/B Coolant	Part Number with SimulFit®	B (Dia.)	C	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER16	C40-16ERP262	C40BC-16ERP262	C40F-16ERP262	1.10	2.62	2.43	16ERHPN	42 ft. lbs.	BS-20
	C40-16ERP312	-	-		3.12				
	C40-16ERP412	C40BC-16ERP412	C40F-16ERP412		4.12				
	C40-16ERP512	C40BC-16ERP512	-	1.10	5.12				
	C40-16ERP812	-	C40F-16ERP812		8.12				
ER20	C40-20ERP312	C40BC-20ERP312	-	1.34	3.12	3.88	20ERHPN	60 ft. lbs.	BS-09
	C40-20ERP412	C40BC-20ERP412	-		4.12				
	C40-20ERP612	C40BC-20ERP612	C40F-20ERP612		6.12				
	C40-20ERP812	-	-		8.12				
ER25	C40-25ERP262	C40BC-25ERP262	-	1.64	2.62	3.50	25ERP	86 ft. lbs.	BS-11
	C40-25ERP412	C40BC-25ERP412	-		4.12				
	C40-25ERP612	C40BC-25ERP612	C40F-20ERP612		6.12				
ER32	C40-32ERP248	-	-	1.97	2.48	3.88	32ERP	100 ft. lbs.	BS-18
	C40-32ERP312	C40BC-32ERP312	C40F-32ERP312		3.12				
	C40-32ERP412	C40BC-32ERP412	C40F-32ERP412		4.12				
	C40-32ERP612	C40BC-32ERP612	C40F-32ERP612		5.12				
	C40-32ERP812	-	-		8.12				
ER40	C40-40ERP412	C40BC-40ERP412	-	2.47	4.12	4.1	40ERP	146 ft. lbs.	BS-10
	C40-40ERP612	-	-		6.12				



CAT 50 BALANCED UP TO 20,000 RPM

Size	Part Number	Part Number with AD/B Coolant	Part Number with SimulFit®	B (Dia.)	C	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER16	C50-16ERP412	C50BC-16ERP412	C50F-16ERP412	1.10	4.12	2.50	16ERHPN	42 ft. lbs.	BS-20
	C50-16ERP612	C50BC-16ERP612	C50F-16ERP612		6.12				
	C50-16ERP812	-	C50F-16ERP812		8.12				
	C50-16ERP1012	-	-		10.12				
ER20	C50-20ERP412	C50BC-20ERP412	-	1.34	4.12	3.88	20ERHPN	60 ft. lbs.	BS-09
	C50-20ERP612	C50BC-20ERP612	-		6.12				
	C50-20ERP812	-	-		8.12				
ER25	C50-25ERP412	C50BC-25ERP412	-	1.64	4.12	4.00	25ERP	86 ft. lbs.	BS-11
	C50-25ERP612	C50BC-25ERP612	-		6.12				
	C50-25ERP812	-	-		8.12				
	C50-25ERP1012	-	-		10.12				
ER32	C50-32ERP412	C50BC-32ERP412	C50F-32ERP412	1.97	4.12	3.88	32ERP	100 ft. lbs.	BS-18
	C50-32ERP612	C50BC-32ERP612	C50F-32ERP612		6.12				
	C50-32ERP812	-	C50F-32ERP812		8.12				
	C50-32ERP1012	-	-		10.12				
ER40	C50-40ERP412	C50BC-40ERP412	C50F-40ERP412	2.47	4.12	4.10	40ERP	146 ft. lbs.	BS-10
	C50-40ERP612	C50BC-40ERP612	-		6.12				
	C50-40ERP812	-	-		8.12				
	C50-40ERP1012	-	-		10.12				



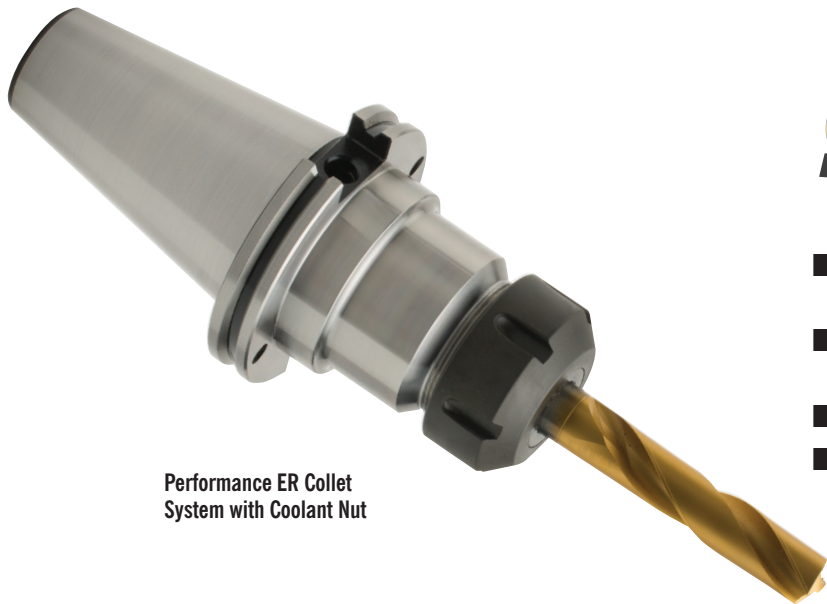
HSK 63 FORM A BALANCED UP TO 25,000 RPM

Size	Part Number	B (Dia.)	C	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER16	H63-16ERP406	1.10	4.06	2.10	16ERHPN	42 ft. lbs.	BS-20
	H63-16ERP642		6.42	3.00			
ER20	H63-20ERP406	1.34	4.06	1.88	20ERHPN	60 ft. lbs.	BS-09
ER25	H63-25ERP327	1.64	3.27	2.30	25ERP	86 ft. lbs.	BS-11
ER32	H63-32ERP327	1.97	3.27	1.80	32ERP	100 ft. lbs. 100 ft. lbs.	BS-18 BS-18
	H63-32ERP406		4.06	2.50			
	H63-32ERP484		4.84				
ER40	H63-40ERP406	2.47	4.06	2.50	40ERP	146 ft. lbs.	BS-10

HSK 100 FORM A BALANCED UP TO 20,000 RPM

Size	Part Number	B (Dia.)	C	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER16	H100-16ERP406	1.10	4.06	2.10	16ERHPN	42 ft. lbs.	BS-20
	H100-16ERP642		6.42	3.00			
ER20	H100-20ERP406	1.34	4.06	2.08	20ERHPN	60 ft. lbs.	BS-09
	H100-20ERP642		6.42	3.38			
ER25	H100-25ERP406	1.64	4.06	2.30	25ERP	86 ft. lbs.	BS-11
ER32	H100-32ERP406	1.97	4.06	2.30	32ERP	100 ft. lbs.	BS-18
	H100-32ERP642		6.42	3.00			
ER40	H100-40ERP406	2.47	4.06	2.30	40ERP	146 ft. lbs.	BS-10
	H100-40ERP484		4.84	3.00			

PERFORMANCE ER COLLET SYSTEM WITH COOLANT NUT



Performance ER Collet System with Coolant Nut



- Constructed of alloy steel for long, durable service life.
- Hardened to Rc: 52-56 to avoid damaging collet chuck threads.
- Collet seat taper T.I.R. $\leq .0002''$.
- Accepts DIN 6499 collets.

Collet Chuck Taper	Balance Up To
BT 30	25,000 RPM
BT 40	25,000 RPM
CAT 40	25,000 RPM
CAT 50	20,000 RPM
HSK 63A	25,000 RPM
HSK 100A	20,000 RPM

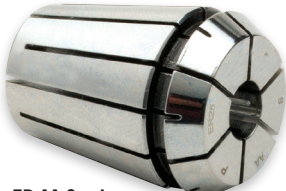
> Collet Choices
Coolant Nut Seals see page 82



ER Standard Collet



ER Tap Collet



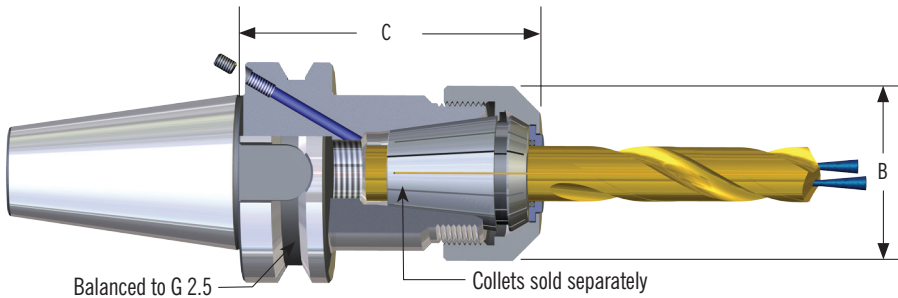
ER AA Grade 5 Micron Collet



ERS Steel Sealed Collet

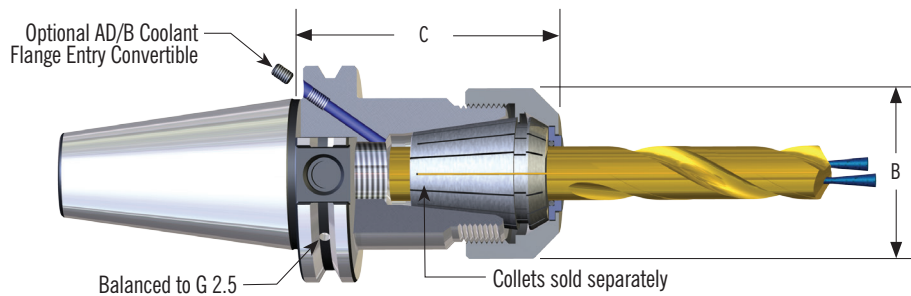
COLLET RANGE SPECIFICATIONS

Part Number	Range Inch	Range Metric	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER11	.020" to .275"	.5 mm to 7 mm	11ERHN	22 ft. lbs.	029-909
ER16	.020" to .393"	1 mm to 10 mm	16ERHCN	52 ft. lbs.	BS-20
ER20	.039" to .511"	1 mm to 13 mm	20ERHN	74 ft. lbs.	BS-09
ER25	.039" to .630"	1 mm to 16 mm	25ERN	95 ft. lbs.	BS-11
ER32	.078" to .787"	2 mm to 20 mm	32ERN	125 ft. lbs.	BS-18
ER40	.118" to 1.181"	3 mm to 30 mm	40ERN	162 ft. lbs.	BS-10



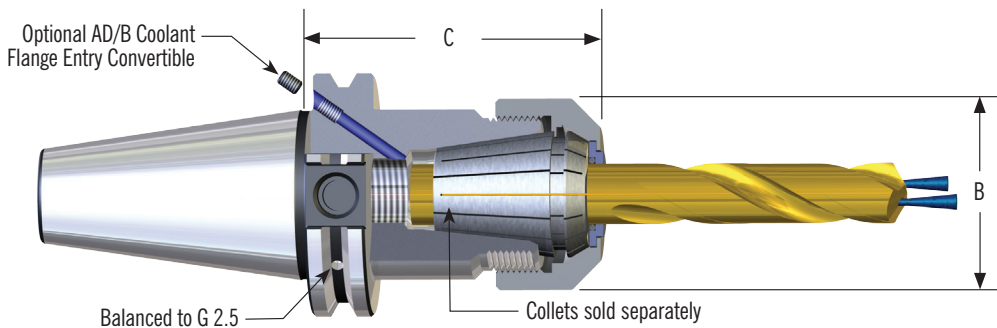
BT 40 BALANCED UP TO 25,000 RPM

Size	Part Number	Part Number with AD/B Coolant	Part Number with SimulFit®	C	B (Dia.)	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER16	B40-16ERC272	-	-	2.72	1.10	1.50	16ERHCN	52 ft. lbs.	BS-20
	B40-16ERC322	B40BC-16ERC322	B40F-16ERC322	3.22		2.00			
	B40-16ERC422	B40BC-16ERC422	-	4.22		3.50			
	B40-16ERC522	B40BC-16ERC522	B40F-16ERC522	5.22		2.00			
ER20	B40-20ERC422	-	-	4.22	1.34	1.50	20ERHCN	74 ft. lbs.	BS-09
	B40-20ERC622	-	-	6.22		2.00			
ER25	B40-25ERC422	-	-	4.22	1.64	1.50	25ERCN	95 ft. lbs.	BS-11
	B40-25ERC622	-	-	6.22		2.00			
ER32	B40-32ERC422	B40BC-32ERC422	B40F-32ERC422	4.22	1.97	3.88	32ERCN	125 ft. lbs.	BS-18
	B40-32ERC622	-	B40F-32ERC622	6.22					
ER40	B40-40ERC422	B40BC-40ERC422	-	4.22	2.47	4.10	40ERCN	162 ft. lbs.	BS-10
	B40-40ERC622	-	-	6.22					



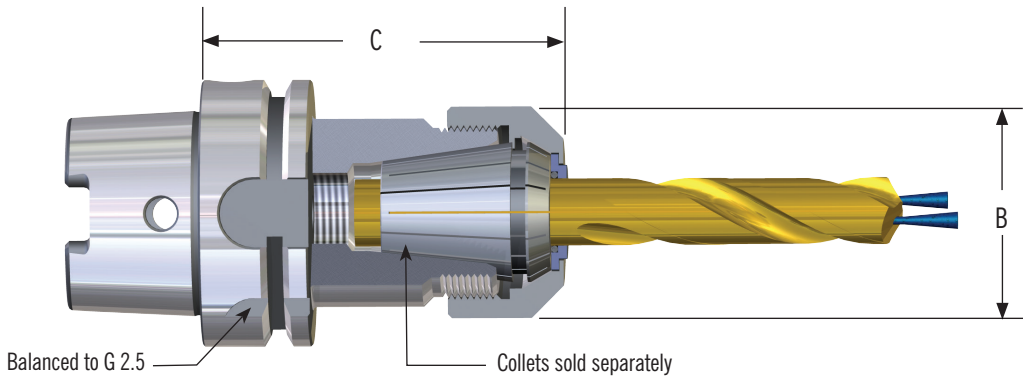
CAT 40 BALANCED UP TO 25,000 RPM

Size	Part Number	Part Number with AD/B Coolant	Part Number with SimulFit®	C	B (Dia.)	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER16	C40-16ERC272	C40BC-16ERC272	C40F-16ERC272	2.72	1.10	2.43	16ERHCN	52 ft. lbs.	BS-20
	C40-16ERC322	C40BC-16ERC322	-	3.22					
	C40-16ERC422	C40BC-16ERC422	C40F-16ERC422	4.22					
	C40-16ERC522	C40BC-16ERC522	C40F-16ERC522	5.22					
	C40-16ERC822	-	C40F-16ERC822	6.22					
ER20	C40-20ERC322	C40BC-20ERC322	-	3.22	1.34	2.43	20ERHCN	74 ft. lbs.	BS-09
	C40-20ERC422	C40BC-20ERC422	-	4.22		3.88			
	C40-20ERC622	C40BC-20ERC622	C40F-20ERC622	6.22					
	C40-20ERC822	-	-	8.22					
ER25	C40-25ERC272	C40BC-25ERC272	-	2.72	1.64	2.50	25ERCN	95 ft. lbs.	BS-11
	C40-25ERC422	C40BC-25ERC422	-	4.22		3.50			
	C40-25ERC622	C40BC-25ERC622	C40F-25ERC622	6.22					
ER32	C40-32ERC258	-	-	2.58	1.97	3.88	32ERCN	125 ft. lbs.	BS-18
	C40-32ERC322	C40BC-32ERC322	C40F-32ERC322	3.22					
	C40-32ERC422	C40BC-32ERC422	C40F-32ERC422	4.22					
	C40-32ERC622	C40BC-32ERC622	C40F-32ERC622	6.22					
	C40-32ERC822	-	-	8.22					
ER40	C40-40ERC422	C40BC-40ERC422	-	4.22	2.47	4.10	40ERCN	162 ft. lbs.	BS-10
	C40-40ERC622	-	-	6.22					



CAT 50 BALANCED UP TO 20,000 RPM

Size	Part Number	Part Number with AD/B Coolant	Part Number with SimulFit®	C	B (Dia.)	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER16	C50-16ERC422	C50BC-16ERC422	C50F-16ERC422	4.22	1.10	2.50	16ERHCN	52 ft. lbs.	BS-20
	C50-16ERC622	C50BC-16ERC622	C50F-16ERC622	6.22					
	C50-16ERC822	-	C50F-16ERC822	8.22					
	C50-16ERC1022	-	-	10.22					
ER20	C50-20ERC422	C50BC-20ERC422	-	4.22	1.34	3.88	20ERHCN	74 ft. lbs.	BS-09
	C50-20ERC622	C50BC-20ERC622	-	6.22					
	C50-20ERC822	-	-	8.22					
ER25	C50-25ERC422	C50BC-25ERC422	-	4.22	1.64	4.00	25ERCN	95 ft. lbs.	BS-11
	C50-25ERC622	C50BC-25ERC622	-	6.22					
	C50-25ERC822	-	-	8.22					
	C50-25ERC1022	-	-	10.22					
ER32	C50-32ERC422	C50BC-32ERC422	C50F-32ERC422	4.22	1.97	3.88	32ERCN	125 ft. lbs.	BS-18
	C50-32ERC622	C50BC-32ERC622	C50F-32ERC622	6.22					
	C50-32ERC822	-	C50F-32ERC822	8.22					
	C50-32ERC1022	-	-	10.22					
ER40	C50-40ERC422	C50BC-40ERC422	C50F-40ERC422	4.22	2.47	4.10	40ERCN	162 ft. lbs.	BS-10
	C50-40ERC622	C50BC-40ERC622	-	6.22					
	C50-40ERC822	-	-	8.22					
	C50-40ERC1022	-	-	10.22					



HSK 63 FORM A BALANCED UP TO 25,000 RPM

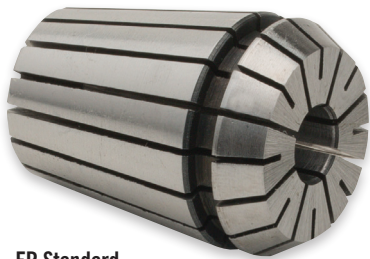
Size	Part Number	C	B (Dia.)	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER16	H63-16ERC416	4.16	1.10	2.10	16ERHCN	52 ft. lbs.	BS-20
	H63-16ERC652	6.52		3.00			
ER20	H63-20ERC416	4.16	1.34	1.88	20ERHCN	74 ft. lbs.	BS-09
ER25	H63-25ERC337	3.37	1.64	2.30	25ERCN	95 ft. lbs.	BS-11
ER32	H63-32ERC337	3.37	1.97	1.80	32ERCN	125 ft. lbs.	BS-18
	H63-32ERC416	4.16		2.50			
	H63-32ERC494	4.94					
ER40	H63-40ERC416	4.16	2.47	2.50	40ERCN	162 ft. lbs.	BS-10

HSK 100 FORM A BALANCED UP TO 20,000 RPM

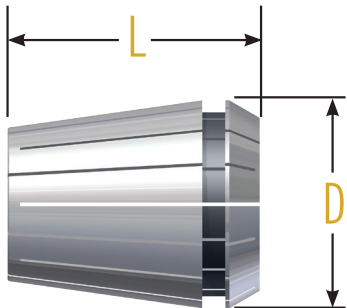
Size	Part Number	C	B (Dia.)	Socket Depth	Collet Nut (Incl.)	Nut Torque	B/U Screw (Not Incl.)
ER16	H100-16ERC416	4.16	1.10	2.10	16ERHCN	52 ft. lbs.	BS-20
	H100-16ERC652	6.52		3.00			
ER20	H100-20ERC416	4.16	1.34	2.08	20ERHCN	74 ft. lbs.	BS-09
	H100-20ERC652	6.52		3.38			
ER25	H100-25ERC416	4.16	1.64	2.30	25ERCN	95 ft. lbs.	BS-11
ER32	H100-32ERC416	4.16	1.97	2.30	32ERCN	125 ft. lbs.	BS-18
	H100-32ERC652	6.52		3.00			
ER40	H100-40ERC416	4.16	2.47	2.30	40ERCN	162 ft. lbs.	BS-10
	H100-40ERC494	4.94		3.00			



RELIABLE CLAMPING SYSTEM FOR PRODUCTION WORK



ER Standard Collet



* For specifications see page 11

ER11 STANDARD COLLETS - METRIC

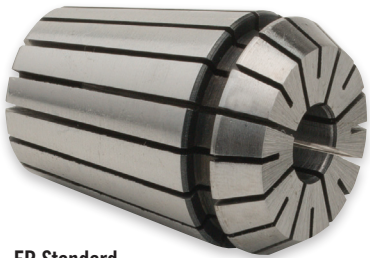
PART NUMBER	
ER11 Metric	Metric Range
ER11-0039	.5-1 mm
ER11-0059	1-1.5 mm
ER11-0078	1-2 mm
ER11-0098	1.5-2.5 mm
ER11-0118	2-3 mm
ER11-0137	2.5-3.5 mm
ER11-0157	3-4 mm
ER11-0177	4-4.5 mm
ER11-0196	4-5 mm
ER11-0216	4.5-5.5 mm
ER11-0236	5-6 mm
ER11-0255	5.5-6.5 mm
ER11-0275	6-7 mm

ER11 Metric Set	SETS
ER11-S013	PART NUMBER
13 Pieces	NUMBER OF PIECES
.5-7 mm	RANGE

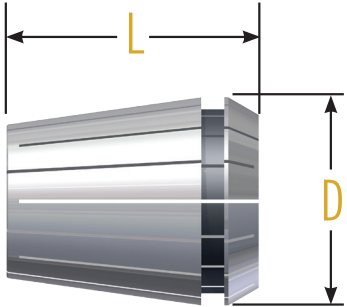
ER11 STANDARD COLLETS - INCH

PART NUMBER	
ER11 Inch	Inch Range
ER11-0062	.0428-.0625
ER11-0093	.0740-.0938
ER11-0125	.1053-.1250
ER11-0157	.1378-.1575
ER11-0187	.1678-.1875
ER11-0218	.1990-.2187
ER11-0250	.2303-.2500

ER11 Inch Set	SETS
ER11-S007	PART NUMBER
7 Pieces	NUMBER OF PIECES
1/16" - 1/4"	RANGE



ER Standard Collet



* For specifications see page 11

ER16-ER40 ER STANDARD COLLETS - INCH

PART NUMBER					
ER16 Inch	ER20 Inch	ER25 Inch	ER32 Inch	ER40 Inch	Inch Range
ER16-0062	ER20-0062	ER25-0062			.0400-.0620
ER16-0093	ER20-0093	ER25-0093	ER32-0093		.0540-.0930
ER16-0125	ER20-0125	ER25-0125	ER32-0125	ER40-0125	.0860-.1250
ER16-0156	ER20-0156	ER25-0156	ER32-0156		.1170-.1560
ER16-0187	ER20-0187	ER25-0187	ER32-0187	ER40-0187	.1480-.1870
ER16-0218	ER20-0218	ER25-0218	ER32-0218	ER40-0218	.1790-.2180
ER16-0250	ER20-0250	ER25-0250	ER32-0250	ER40-0250	.2110-.2500
ER16-0281	ER20-0281	ER25-0281	ER32-0281	ER40-0281	.2420-.2810
ER16-0312	ER20-0312	ER25-0312	ER32-0312	ER40-0312	.2730-.3120
ER16-0343	ER20-0343	ER25-0343	ER32-0343	ER40-0343	.3040-.3430
ER16-0375	ER20-0375	ER25-0375	ER32-0375	ER40-0375	.3360-.3750
ER16-0406	ER20-0406	ER25-0406	ER32-0406	ER40-0406	.3666-.4060
	ER20-0437	ER25-0437	ER32-0437	ER40-0437	.3980-.4370
	ER20-0468	ER25-0468	ER32-0468	ER40-0468	.4290-.4680
	ER20-0500	ER25-0500	ER32-0500	ER40-0500	.4610-.5000
		ER25-0531	ER32-0531	ER40-0531	.4920-.5310
		ER25-0562	ER32-0562	ER40-0562	.5230-.5620
		ER25-0593	ER32-0593	ER40-0593	.5544-.5937
		ER25-0625	ER32-0625	ER40-0625	.5860-.6250
			ER32-0656	ER40-0656	.6170-.6560
			ER32-0687	ER40-0687	.6480-.6870
			ER32-0718	ER40-0718	.6794-.7187
			ER32-0750	ER40-0750	.7110-.7500
			ER32-0781	ER40-0781	.7419-.7812
				ER40-0812	.7732-.8125
				ER40-0843	.8044-.8437
				ER40-0875	.8360-.8750
				ER40-0906	.8669-.9062
				ER40-0937	.8982-.9375
				ER40-0984	.9449-.9843
				ER40-1000	.9610-1.0000

ER16 Inch Set	ER20 Inch Set	ER25 Inch Set	ER32 Inch Set	ER40 Inch Set	SETS
ER16-S012	ER20-S014	ER25-S016	ER32-S022	ER40-S024	PART NUMBER
12 Pieces	14 Pieces	15 Pieces	22 Pieces	24 Pieces	NUMBER OF PIECES
1/16"-13/32"	3/32"-1/2"	3/16"-5/8"	3/32"-3/4"	9/32"-1"	RANGE

ER16-ER40 ER STANDARD COLLETS - METRIC

PART NUMBER					
ER16 Metric	ER20 Metric	ER25 Metric	ER32 Metric	ER40 Metric	Metric Range
ER16-0039					.5-1 mm
ER16-0078	ER20-0078	ER25-0078			1-2 mm
ER16-0098					2-2.5 mm
ER16-0118	ER20-0118	ER25-0118	ER32-0118	ER40-0118	2-3 mm
ER16-0137					2.5-3.5 mm
ER16-0157	ER20-0157	ER25-0157	ER32-0157	ER40-0157	3-4 mm
ER16-0177					3.5-4.5 mm
ER16-0196	ER20-0196	ER25-0196	ER32-0196	ER40-0196	4-5 mm
ER16-0216					4.5-5.5 mm
ER16-0236	ER20-0236	ER25-0236	ER32-0236	ER40-0236	5-6 mm
ER16-0255					5.5-6.5 mm
ER16-0275	ER20-0275	ER25-0275	ER32-0275	ER40-0275	6-7 mm
ER16-0295					6.5-7.5 mm
ER16-0315	ER20-0315	ER25-0315	ER32-0315	ER40-0315	7-8 mm
ER16-0334					7.5-8.5 mm
ER16-0354	ER20-0354	ER25-0354	ER32-0354	ER40-0354	8-9 mm
ER16-0393	ER20-0393	ER25-0393	ER32-0393	ER40-0393	9-10 mm
	ER20-0433	ER25-0433	ER32-0433	ER40-0433	10-11 mm
	ER20-0472	ER25-0472	ER32-0472	ER40-0472	11-12 mm
	ER20-0511	ER25-0511	ER32-0511	ER40-0511	12-13 mm
		ER25-0551	ER32-0551	ER40-0551	13-14 mm
		ER25-0590	ER32-0590	ER40-0590	14-15 mm
		ER25-0630	ER32-0630	ER40-0630	15-16 mm
			ER32-0669	ER40-0669	16-17 mm
			ER32-0708	ER40-0708	17-18 mm
			ER32-0748	ER40-0748	18-19 mm
			ER32-0787	ER40-0787	19-20 mm
				ER40-0826	20-21 mm
				ER40-0866	21-22 mm
				ER40-0905	22-23 mm
				ER40-0944	23-24 mm
				ER40-0984	24-25 mm
				ER40-1023	25-26 mm
				ER40-1063	26-27 mm
				ER40-1102	27-28 mm
				ER40-1141	28-29 mm
				ER40-1181	29-30 mm

ER16 Metric Set	ER20 Metric Set	ER25 Metric Set	ER32 Metric Set	ER40 Metric Set	SETS
ER16-S010	ER20-S012	ER25-S015	ER32-S018	ER40-S023	PART NUMBER
10 Pieces	12 Pieces	15 Pieces	18 Pieces	23 Pieces	NUMBER OF PIECES
1-10 mm x 1 mm	2-13 mm	2-16 mm	3-20 mm	4-26 mm	RANGE

PROVIDES MAXIMUM TAP CONCENTRICITY WITH POSITIVE DRIVE FORCE



ER16-ER40 ER TAP COLLETS INCH METRIC

PART NUMBER					Inch Range	ANSI Metric
ER16	ER20	ER25	ER32	ER40		
ERT16-#0-6	-	-	ERT32-#0-6	-	#0-#6	
ERT16-#8	ERT20-#8	ERT25-#8	ERT32-#8	-	#8	M4
ERT16-#10	ERT20-#10	ERT25-#10	ERT32-#10	-	#10	M4.5, M5
ERT16-#12	ERT20-#12	ERT25-#12	ERT32-#12	-	#12	
-	-	ERT25-012N	ERT32-012N	ERT40-012N	1/8" NPT	
ERT16-025	ERT20-025	ERT25-025	ERT32-025	ERT40-025	1/4"	M6,M6.5
-	-	-	ERT32-025N	ERT40-025N	1/4" NPT	
ERT16-031	ERT20-031	ERT25-031	ERT32-031	ERT40-031	5/16"	M7, M8
ERT16-037	ERT20-037	ERT25-037	ERT32-037	ERT40-037	3/8"	M10
-	-	-	-	ERT40-037N	3/8" NPT	
ERT16-043	ERT20-043	ERT25-043	ERT32-043	ERT40-043	7/16"	
ERT16-050	ERT20-050	ERT25-050	ERT32-050	ERT40-050	1/2"	M12,M12.5
-	-	-	-	ERT40-050N	1/2" NPT	
-	-	ERT25-056	ERT32-056	ERT40-056	9/16"	M14
-	-	ERT25-062	ERT32-062	ERT40-062	5/8"	M16
-	-	-	ERT32-068	ERT40-068	11/16"	M18
-	-	-	ERT32-075	ERT40-075	3/4"	
-	-	-	ERT32-081	ERT40-081	13/16"	M20
-	-	-	-	ERT40-087	7/8"	M22
-	-	-	-	ERT40-093	15/16"	M24
-	-	-	-	ERT40-100	1"	M25

ER16 Inch Set	ER20 Inch Set	ER25 Inch Set	ER32 Inch Set	ER40 Inch Set	SETS
ERT16-S009	ERT20-S008	ERT25-S011	ERT32-S016	ERT40-S017	PART NUMBER
9 Pieces	8 Pieces	11 Pieces	16 Pieces	17 Pieces	NUMBER OF PIECES

THE NEW STANDARD IN PERFORMANCE GRADE TOOL HOLDING

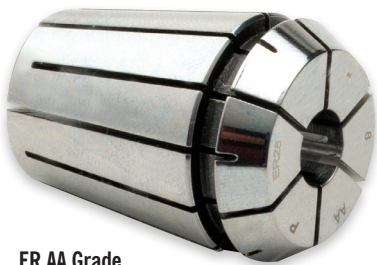


AA GRADE 5 MICRON ER PRECISION COLLETS - ER 11

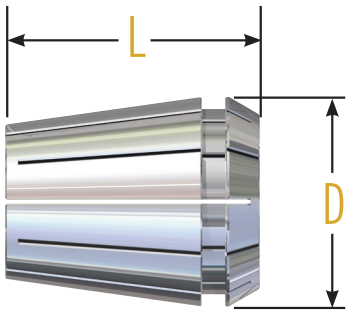
PART NUMBER		
ER11 METRIC	Recommended Usage $\pm .004"$ (.1 mm)	Maximum Collapse Range
5UMER11-0039	1 mm	0.5 mm
5UMER11-0059	1.5 mm	0.5 mm
5UMER11-0078	2 mm	0.5 mm
5UMER11-0098	2.5mm	0.5 mm
5UMER11-0118	3 mm	0.5 mm
5UMER11-0137	3.5 mm	0.5 mm
5UMER11-0157	4 mm	0.5 mm
5UMER11-0177	4.5 mm	0.5 mm
5UMER11-0196	5 mm	0.5 mm
5UMER11-0216	5.5 mm	0.5 mm
5UMER11-0236	6 mm	0.5 mm
5UMER11-0255	6.5 mm	0.5 mm
5UMER11-0275	7 mm	0.5 mm
PART NUMBER		
ER11 INCH	Recommended Usage $\pm .004"$ (.1 mm)	Maximum Collapse Range
5UMER11-0062	1/16"	0.5 mm
5UMER11-0093	3/32"	0.5 mm
5UMER11-0125	1/8"	0.5 mm
5UMER11-0156	5/32"	0.5 mm
5UMER11-0187	3/16"	0.5 mm
5UMER11-0218	7/32"	0.5 mm
5UMER11-0250	1/4"	0.5 mm

SETS

ER11 Metric Set		ER11 Inch Set
PART NUMBER	5UMER11-SM013	5UMER11-SI007
NUMBER OF PIECES	13 Pieces	13 Pieces
RANGE	1-7 mm	1/16"-1/4"



ER AA Grade,
5 Micron Collet

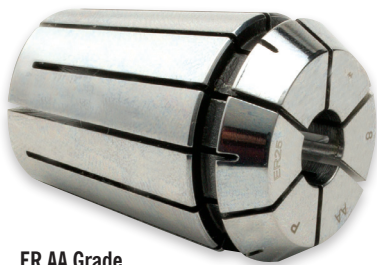


* For specifications see page 11

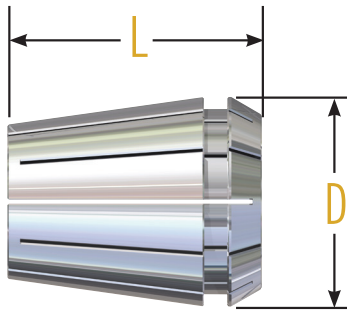
AA GRADE 5 MICRON ER PRECISION COLLETS - INCH

PART NUMBER					Recommended Usage =/.004" (.1 mm)	Maximum Collapse Range
ER16 Inch	ER20 Inch	ER25 Inch	ER32 Inch	ER40 Inch		
5UMER16-0062					1/16"	0.5 mm
5UMER16-0093					3/32"	0.5 mm
5UMER16-0125	5UMER20-0125	5UMER25-0125	5UMER32-0125	5UMER40-0125	1/8"	1 mm
5UMER16-0156	5UMER20-0157	5UMER25-0157	5UMER32-0157	5UMER40-0157	5/32"	1 mm
5UMER16-0187	5UMER20-0187	5UMER25-0187	5UMER32-0187	5UMER40-0187	3/16"	1 mm
5UMER16-0218					7/32"	1 mm
5UMER16-0250	5UMER20-0250	5UMER25-0250	5UMER32-0250	5UMER40-0250	1/4"	1 mm
5UMER16-0281					9/32"	1 mm
5UMER16-0312	5UMER20-0312	5UMER25-0312	5UMER32-0312	5UMER40-0312	5/16"	1 mm
5UMER16-0343					11/32"	1 mm
5UMER16-0375	5UMER20-0375	5UMER25-0375	5UMER32-0375	5UMER40-0375	3/8"	1 mm
5UMER16-0406					13/32"	1 mm
	5UMER20-0437	5UMER25-0437	5UMER32-0437	5UMER40-0437	7/16"	1 mm
	5UMER20-0472	5UMER25-0472	5UMER32-0472	5UMER40-0472	15/32"	1 mm
	5UMER20-0500	5UMER25-0500	5UMER32-0500	5UMER40-0500	1/2"	1 mm
		5UMER25-0562	5UMER32-0562	5UMER40-0562	9/16"	1 mm
		5UMER25-0625	5UMER32-0625	5UMER40-0625	5/8"	1 mm
			5UMER32-0687	5UMER40-0687	11/16"	1 mm
			5UMER32-0750	5UMER40-0750	3/4"	1 mm
			5UMER32-0812	5UMER40-0812	13/16"	1 mm
				5UMER40-0875	7/8"	1 mm
				5UMER40-1000	1"	1 mm

ER16 Inch Set	ER20 Inch Set	ER25 Inch Set	ER32 Inch Set	ER40 Inch Set	SETS
5UMER16-SI010	5UMER20-SI009	5UMER25-SI011	5UMER32-SI014	5UMER40-SI016	PART NUMBER
10 Pieces	9 Pieces	11 Pieces	14 Pieces	16 Pieces	NUMBER OF PIECES
3/32"-3/8" 1/16" and 13/32" not included in set	1/8"-1/2"	1/8"-5/8"	1/8"-13/16"	1/8"-1"	RANGE



ER AA Grade,
5 Micron Collet



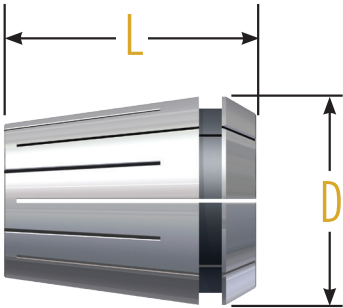
* For specifications see page 11

AA GRADE 5 MICRON ER PRECISION COLLETS - METRIC

PART NUMBER					Recommended Usage =/.004" (.1 mm)	Maximum Collapse Range
ER16 Metric	ER20 Metric	ER25 Metric	ER32 Metric	ER40 Metric		
5UMER16-0039					1 mm	0.5 mm
5UMER16-0078	5UMER20-0078	5UMER25-0078			2 mm	0.5 mm
5UMER16-0118	5UMER20-0118	5UMER25-0118	5UMER32-0118		3 mm	1 mm
5UMER16-0157	5UMER20-0157	5UMER25-0157	5UMER32-0157	5UMER40-0157	4 mm	1 mm
5UMER16-0196	5UMER20-0196	5UMER25-0196	5UMER32-0196	5UMER40-0196	5 mm	1 mm
5UMER16-0236	5UMER20-0236	5UMER25-0236	5UMER32-0236	5UMER40-0236	6 mm	1 mm
5UMER16-0275	5UMER20-0275	5UMER25-0275	5UMER32-0275	5UMER40-0275	7 mm	1 mm
5UMER16-0315	5UMER20-0315	5UMER25-0315	5UMER32-0315	5UMER40-0315	8 mm	1 mm
5UMER16-0354	5UMER20-0354	5UMER25-0354	5UMER32-0354	5UMER40-0354	9 mm	1 mm
5UMER16-0393	5UMER20-0393	5UMER25-0393	5UMER32-0393	5UMER40-0393	10 mm	1 mm
	5UMER20-0433	5UMER25-0433	5UMER32-0433	5UMER40-0433	11 mm	1 mm
	5UMER20-0472	5UMER25-0472	5UMER32-0472	5UMER40-0472	12 mm	1 mm
	5UMER20-0511	5UMER25-0511	5UMER32-0511	5UMER40-0511	13 mm	1 mm
		5UMER25-0551	5UMER32-0551	5UMER40-0551	14 mm	1 mm
		5UMER25-0590	5UMER32-0590	5UMER40-0590	15 mm	1 mm
		5UMER25-0630	5UMER32-0630	5UMER40-0630	16 mm	1 mm
			5UMER32-0669	5UMER40-0669	17 mm	1 mm
			5UMER32-0708	5UMER40-0708	18 mm	1 mm
			5UMER32-0748	5UMER40-0748	19 mm	1 mm
			5UMER32-0787	5UMER40-0787	20 mm	1 mm
				5UMER40-0826	21 mm	1 mm
				5UMER40-0866	22 mm	1 mm
				5UMER40-0905	23 mm	1 mm
				5UMER40-0944	24 mm	1 mm
				5UMER40-0984	25 mm	1 mm
				5UMER40-1023	26 mm	1 mm

ER16 Metric Set	ER20 Metric Set	ER25 Metric Set	ER32 Metric Set	ER40 Metric Set	SETS
5UMER16-SM010	5UMER20-SM012	5UMER25-SM015	5UMER32-SM018	5UMER40-SM023	PART NUMBER
10 Pieces	12 Pieces	15 Pieces	18 Pieces	23 Pieces	NUMBER OF PIECES
1-10 mm	2-13 mm	2-16 mm	3-20 mm	4-26 mm	RANGE

DESIGNED FOR ALL ER PRODUCTION AND PERFORMANCE COOLANT APPLICATIONS



* For specifications see page 11

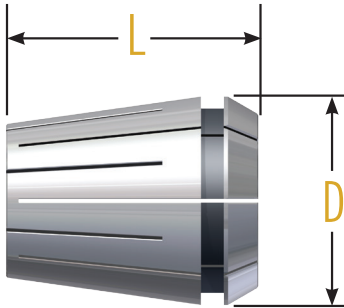


ERS Steel Sealed Collet

ER16-ER40 STEEL SEALED COLLETS - INCH

PART NUMBER					
ER16 Inch	ER20 Inch	ER25 Inch	ER32 Inch	ER40 Inch	Inch Range
ERS16-0125	ERS20-0125				0.1250
ERS16-0157	ERS20-0157	ERS25-0157	ERS32-0157		0.1562
ERS16-0187	ERS20-0187	ERS25-0187	ERS32-0187		0.1875
ERS16-0218	ERS20-0218	ERS25-0218	ERS32-0218		0.2188
ERS16-0250	ERS20-0250	ERS25-0250	ERS32-0250	ERS40-0250	0.2500
ERS16-0281	ERS20-0281	ERS25-0281	ERS32-0281	ERS40-0281	0.2813
ERS16-0312	ERS20-0312	ERS25-0312	ERS32-0312	ERS40-0312	0.3125
ERS16-0343	ERS20-0343	ERS25-0343	ERS32-0343	ERS40-0343	0.3438
ERS16-0375	ERS20-0375	ERS25-0375	ERS32-0375	ERS40-0375	0.3750
ERS16-0406	ERS20-0406	ERS25-0406	ERS32-0406	ERS40-0406	0.4063
	ERS20-0437	ERS25-0437	ERS32-0437	ERS40-0437	0.4375
		ERS25-0468	ERS32-0468	ERS40-0468	0.4688
	ERS20-0500	ERS25-0500	ERS32-0500	ERS40-0500	0.5000
		ERS25-0531	ERS32-0531	ERS40-0531	0.5313
		ERS25-0562	ERS32-0562	ERS40-0562	0.5625
		ERS25-0593	ERS32-0593	ERS40-0593	0.5938
		ERS25-0625	ERS32-0625	ERS40-0625	0.6250
			ERS32-0656	ERS40-0656	0.6563
			ERS32-0687	ERS40-0687	0.6875
			ERS32-0718	ERS40-0718	0.7188
			ERS32-0750	ERS40-0750	0.7500
			ERS32-0781	ERS40-0781	0.7183
				ERS40-0875	0.8750
				ERS40-1000	1.0000

ER16 Inch Set	ER20 Inch Set	ER25 Inch Set	ER32 Inch Set	ER40 Inch Set	SETS
ERS16-S010	ERS20-S011	ERS25-S016	ERS32-S021	ERS40-S020	PART NUMBER
10 Pieces	11 Pieces	16 Pieces	21 Pieces	20 Pieces	NUMBER OF PIECES
1/8"-13/32"	5/32"-1/2"	5/32"-5/8"	5/32"-17/32"	1/4"-1"	RANGE



* For specifications see page 11



ERS Steel Sealed Collet

ER16-ER40 STEEL SEALED COLLETS - METRIC

PART NUMBER					
ER16 Metric	ER20 Metric	ER25 Metric	ER32 Metric	ER40 Metric	Metric Range
ERS16-0157	ERS20-0157	ERS25-0157	ERS32-0157		4 mm
ERS16-0196	ERS20-0196	ERS25-0196	ERS32-0196		5 mm
ERS16-0236	ERS20-0236	ERS25-0236	ERS32-0236	ERS40-0236	6 mm
ERS16-0275	ERS20-0275	ERS25-0275	ERS32-0275	ERS40-0275	7 mm
ERS16-0315	ERS20-0315	ERS25-0315	ERS32-0315	ERS40-0315	8 mm
ERS16-0354	ERS20-0354	ERS25-0354	ERS32-0354	ERS40-0354	9 mm
ERS16-0393	ERS20-0393	ERS25-0393	ERS32-0393	ERS40-0493	10 mm
	ERS20-0433	ERS25-0433	ERS32-0433	ERS40-0433	11 mm
	ERS20-0472	ERS25-0472	ERS32-0472	ERS40-0472	12 mm
	ERS20-0511	ERS25-0511	ERS32-0511	ERS40-0511	13 mm
		ERS25-0551	ERS32-0551	ERS40-0551	14mm
		ERS25-0590	ERS32-0590	ERS40-0590	15mm
		ERS25-0630	ERS32-0630	ERS40-0630	16 mm
			ERS32-0669	ERS40-0669	17 mm
			ERS32-0708	ERS40-0708	18 mm
			ERS32-0748	ERS40-0748	19 mm
			ERS32-0787	ERS40-0787	20 mm
				ERS40-0826	21 mm
				ERS40-0866	22 mm
				ERS40-0905	23 mm
				ERS40-0944	24 mm
				ERS40-0984	25 mm
				ERS40-1003	25 mm
				ERS40-1023	26 mm

ER16 Metric Set	ER20 Metric Set	ER25 Metric Set	ER32 Metric Set	ER40 Metric Set	SETS
ERS16-S007	ERS20-S010	ERS25-S013	ERS32-S017	ERS40-S021	PART NUMBER
7 Pieces	10 Pieces	13 Pieces	17 Pieces	21 Pieces	NUMBER OF PIECES
4-10 mm	4-13 mm	4-16 mm	4-20 mm	6-26 mm	RANGE

ER16-ER40 COOLANT NUT SEALS

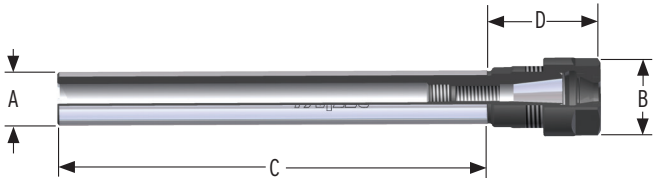
PART NUMBER					Metric Range	Inch Range
ER16 Metric/Inch	ER20 Metric/Inch	ER25 Metric/Inch	ER32 Metric/Inch	ER40 Metric/Inch		
CS16-0138	CS20-0138	CS25-0138	CS32-0138	CS40-0138	3-3.5 mm	.1181 – .1378
CS16-0157	CS20-0157	CS25-0157	CS32-0157	CS40-0157	3.5-4 mm	.1378 – .1575
CS16-0177	CS20-0177	CS25-0177	CS32-0177	CS40-0177	4-4.5 mm	.1575 – .1772
CS16-0197	CS20-0197	CS25-0197	CS32-0197	CS40-0197	4.5-5 mm	.1772 – .1969
CS16-0217	CS20-0217	CS25-0217	CS32-0217	CS40-0217	5-5.5 mm	.1969 – .2165
CS16-0236	CS20-0236	CS25-0236	CS32-0236	CS40-0236	5.5-6 mm	.2165 – .2362
CS16-0256	CS20-0256	CS25-0256	CS32-0256	CS40-0256	6-6.5 mm	.2362 – .2559
CS16-0276	CS20-0276	CS25-0276	CS32-0276	CS40-0276	6.5-7 mm	.2559 – .2756
CS16-0295	CS20-0295	CS25-0295	CS32-0295	CS40-0295	7-7.5 mm	.2756 – .2953
CS16-0315	CS20-0315	CS25-0315	CS32-0315	CS40-0315	7.5-8 mm	.2953 – .3150
CS16-0335	CS20-0335	CS25-0335	CS32-0335	CS40-0335	8-8.5 mm	.3150 – .3346
CS16-0354	CS20-0354	CS25-0354	CS32-0354	CS40-0354	8.5-9 mm	.3346 – .3543
CS16-0374	CS20-0374	CS25-0374	CS32-0374	CS40-0374	9-9.5 mm	.3543 – .3740
CS16-0394	CS20-0394	CS25-0394	CS32-0394	CS40-0394	9.5-10 mm	.3740 – .3937
	CS20-0413	CS25-0413	CS32-0413	CS40-0413	10-10.5 mm	.3937 – .4134
	CS20-0433	CS25-0433	CS32-0433	CS40-0433	10.5-11 mm	.4134 – .4331
	CS20-0453	CS25-0453	CS32-0453	CS40-0453	11-11.5 mm	.4331 – .4528
	CS20-0472	CS25-0472	CS32-0472	CS40-0472	11.5-12 mm	.4528 – .4724
	CS20-0492	CS25-0492	CS32-0492	CS40-0492	12-12.5 mm	.4724 – .4921
	CS20-0512	CS25-0512	CS32-0512	CS40-0512	12.5-13 mm	.4921 – .5118
		CS25-0531	CS32-0531	CS40-0531	13-13.5 mm	.5118 – .5315
		CS25-0551	CS32-0551	CS40-0551	13.5-14 mm	.5315 – .5512
		CS25-0571	CS32-0571	CS40-0571	14-14.5 mm	.5512 – .5709
		CS25-0591	CS32-0591	CS40-0591	14.5-15 mm	.5709 – .5906
		CS25-0610	CS32-0610	CS40-0610	15-15.5 mm	.5906 – .6102
		CS25-0630	CS32-0630	CS40-0630	15.5-16 mm	.6102 – .6299
			CS32-0650	CS40-0650	16-16.5 mm	.6299 – .6496
			CS32-0669	CS40-0669	16.5-17 mm	.6496 – .6693
			CS32-0689	CS40-0689	17-17.5 mm	.6693 – .6890
			CS32-0709	CS40-0709	17.5-18 mm	.6890 – .7087
			CS32-0728	CS40-0728	18-18.5 mm	.7087 – .7283
			CS32-0748	CS40-0748	18.5-19 mm	.7283 – .7480
			CS32-0768	CS40-0768	19-19.5 mm	.7480 – .7677
			CS32-0787	CS40-0787	19.5-20 mm	.7677 – .7874
				CS40-0807	20-20.5 mm	.7874 – .8071
				CS40-0826	20.5-21 mm	.8071 – .8268
				CS40-0846	21-21.5 mm	.8268 – .8465
				CS40-0866	21.5-22 mm	.8465 – .8661
				CS40-0885	22-22.5 mm	.8661 – .8858
				CS40-0905	22.5-23 mm	.8858 – .9055
				CS40-0925	23-23.5 mm	.9055 – .9252
				CS40-0944	23.5-24 mm	.9252 – .9449
				CS40-0964	24-24.5 mm	.9449 – .9646
				CS40-0984	24.5-25 mm	.9646 – .9843
				CS40-1003	25-25.5 mm	.9843 – 1.0039
				CS40-1023	25.5-26 mm	1.0039 – 1.0236



Coolant Nut Seal



ER Extension ER16-750-750



ER11 COLLET SERIES .020" TO .275" (.5MM TO 7MM)

Part Number	A (Dia.)	B (Dia.)	C	D	OAL	Comp Nut (Incl.)	Stop Screw (Incl.)	Nut Tightening Torque	Wrench
ER11-500-6H	.500	.615	5.50	2.90	6.75	LN-ER11	029-909	22 ft. lbs.	ECN56W
ER11-625-6H	.625	.615	5.51	1.65	6.75	LN-ER11	029-909	22 ft. lbs.	ECN56W
ER11-750-6H	.750	.750	6.00	2.00	6.75	11ERHN	029-088	22 ft. lbs.	300CNW

ER16 COLLET SERIES .020" TO .393" (.5MM TO 10MM)

Part Number	A (Dia.)	B (Dia.)	C	D	OAL	Comp Nut (Incl.)	Stop Screw (Incl.)	Nut Tightening Torque	Wrench
ER16-750-550	.750	1.100	4.00	2.00	5.50	16ERHPN	BS-20	42 ft. lbs.	ECN20W
ER16-750-750	.750	1.100	6.00	2.00	7.50	16ERHPN	BS-20	42 ft. lbs.	ECN20W
ER16-750-7H	.750	0.850	6.30	3.90	7.00	LN-ER16	BS-20	42 ft. lbs.	ECN78W

ER20 COLLET SERIES .039" TO .511" (1MM TO 13MM)

Part Number	A (Dia.)	B (Dia.)	C	D	OAL	Collet Nut (Incl.)	Stop Screw (Incl.)	Nut Tightening Torque	Wrench
ER20-100-7H	1.000	1.209	6.40	6.50	7.20	LN-ER20	BS-SF5818LH-.75	60 ft. lbs.	ENC20W
ER20-625-560H	.625	1.344	3.94	1.66	-	20ERN	029-E08	60 ft. lbs.	20ERENW
ER20-750-6H	.750	1.344	6.00	1.81	7.70	20ERHPN	029-E12	60 ft. lbs.	20ERHNW

ER25 COLLET SERIES .039" TO .630" (1MM TO 16MM)

Part Number	A (Dia.)	B (Dia.)	C	D	OAL	Comp Nut (Incl.)	Stop Screw (Incl.)	Nut Tightening Torque	Wrench
ER25-100-531	1.000	1.375	3.94	3.90	5.31	25EREN	029-E12	86 ft. lbs.	25ERENW
ER25-750-4	.750	1.660	4.00	1.81	6.10	25ERN	029-E12	86 ft. lbs.	25ERNW
ER25-750-531	.750	1.660	3.94	1.31	5.31	25ERP	029-E12	86 ft. lbs.	25ERNW

ER32 COLLET SERIES .078" TO .787" (2MM TO 20MM)

Part Number	A (Dia.)	B (Dia.)	C	D	OAL	Comp Nut (Incl.)	Stop Screw (Incl.)	Nut Tightening Torque	Wrench
ER32-100-425	1.000	1.970	2.00	3.63	4.25	32ERP	BS-11	100 ft. lbs.	32ERNW
ER32-125-6	1.250	1.970	5.75	3.00	8.00	32ERP	BS-11	100 ft. lbs.	32ERNW
ER32-750-425	.750	1.970	2.00	3.85	4.25	32ERP	BS-20	100 ft. lbs.	32ERNW

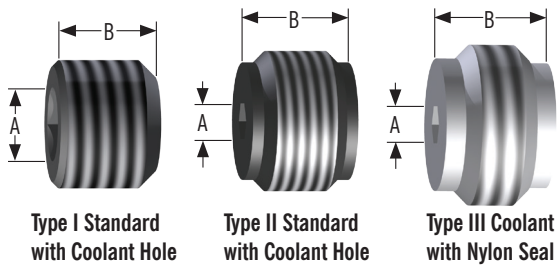
ER40 COLLET SERIES .118" TO 1.181" (3MM TO 30MM)

Part Number	A (Dia.)	B (Dia.)	C	D	OAL	Comp Nut (Incl.)	Stop Screw (Incl.)	Nut Tightening Torque	Wrench
ER40-125-2	1.250	2.359	2.37	3.75	4.75	40ERN	029-E18	146 ft. lbs.	40ERNW
ER40-125-413	1.250	2.359	1.70	1.77	4.13	40ERP	029-E18	146 ft. lbs.	40ERNW

Other sizes available upon request. Please call Parlec or your local Parlec representative for more information.

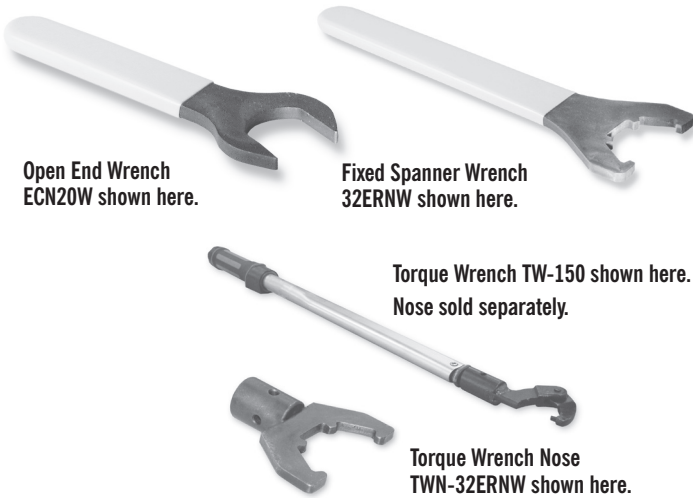
ER TYPE 1 & 2 BACKUP SCREWS

Type 1 Part Number	Type 2 Part Number	A	B	Thread Left Hand
029-909	-	5/32"	1/4"	5/16"-24
-	BS-09	3/16"	9/16"	9/16"-18
-	BS-10	3/16"	9/16"	1 1/8"-16
-	BS-11	5/16"	9/16"	11/16"-16
-	BS-18	3/16"	9/16"	13/16"-16
BS-20	-	7/32"	3/8"	7/16"-20



STANDARD WRENCHES

Part Number	Collet Series	Style
300CNW	ER11	Hex
ECN20W	ER16	Hex
20ERHNW	ER20	Hex
25ERNW	ER25	Spanner
32ERNW	ER32	Spanner
40ERNW	ER40	Spanner



TORQUE WRENCHES

Part Number	Range	Length
TW-45	5 - 45 ft. lbs.	12
TW-150	30 - 150 ft. lbs.	16.6
TW-220	45 - 220 ft. lbs.	22.2

POWER NUTS FOR MAXIMUM GRIP FORCE AND CONCENTRICITY

Part Number	ER Size	B	Size and Style	Standard Wrench	Torque Wrench Nose
16ERHPN	ER16	1.11	1" Hex	ECN20W	TWN-16ERHNW
20ERHPN	ER20	1.34	1 3/16" Hex	20ERHNW	TWN-20ERHNW
25ERP	ER25	1.67	Spanner	25ERNW	TWN-25ERNW
32ERP	ER32	1.97	Spanner	32ERNW	TWN-32ERNW
40ERP	ER40	2.47	Spanner	40ERNW	TWN-40ERNW



Power Nut

FLUSH NUTS FOR MINIMUM OVERHANG

Part Number	ER Size	B	Size and Style	Standard Wrench	Torque Wrench Nose
11ERHN	ER11	0.75	11/16" Hex	300CNW	-
16ERHN	ER16	1.11	1" Hex	ECN20W	TWN-16ERHNW
20ERHN	ER20	1.34	1 3/16" Hex	20ERHNW	TWN-20ERHNW
25ERN	ER25	1.67	Spanner	25ERNW	TWN-25ERNW
32ERN	ER32	1.97	Spanner	32ERNW	TWN-32ERNW
40ERN	ER40	2.47	Spanner	40ERNW	TWN-40ERNW



Flush Nut

COOLANT NUTS FOR USE WITH COOLANT NUT SEALS

Part Number	ER Size	B	Size and Style	Standard Wrench	Torque Wrench Nose
16ERHCN	ER16	1.11	1" Hex	ECN20W	TWN-16ERHNW
20ERHCN	ER20	1.34	1 3/16" Hex	20ERHNW	TWN-20ERHNW
25ERCN	ER25	1.67	Spanner	25ERNW	TWN-25ERNW
32ERCN	ER32	1.97	Spanner	32ERNW	TWN-32ERNW
40ERCN	ER40	2.47	Spanner	40ERNW	TWN-40ERNW



Coolant Nut

Other sizes available upon request. Please call Parlec or your local Parlec representative for more information.

Be sure to check out other solutions that Parlec offers.

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Tapping Solutions



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