FAHRION PRÄZISION

And all runs smoothly.

HORN

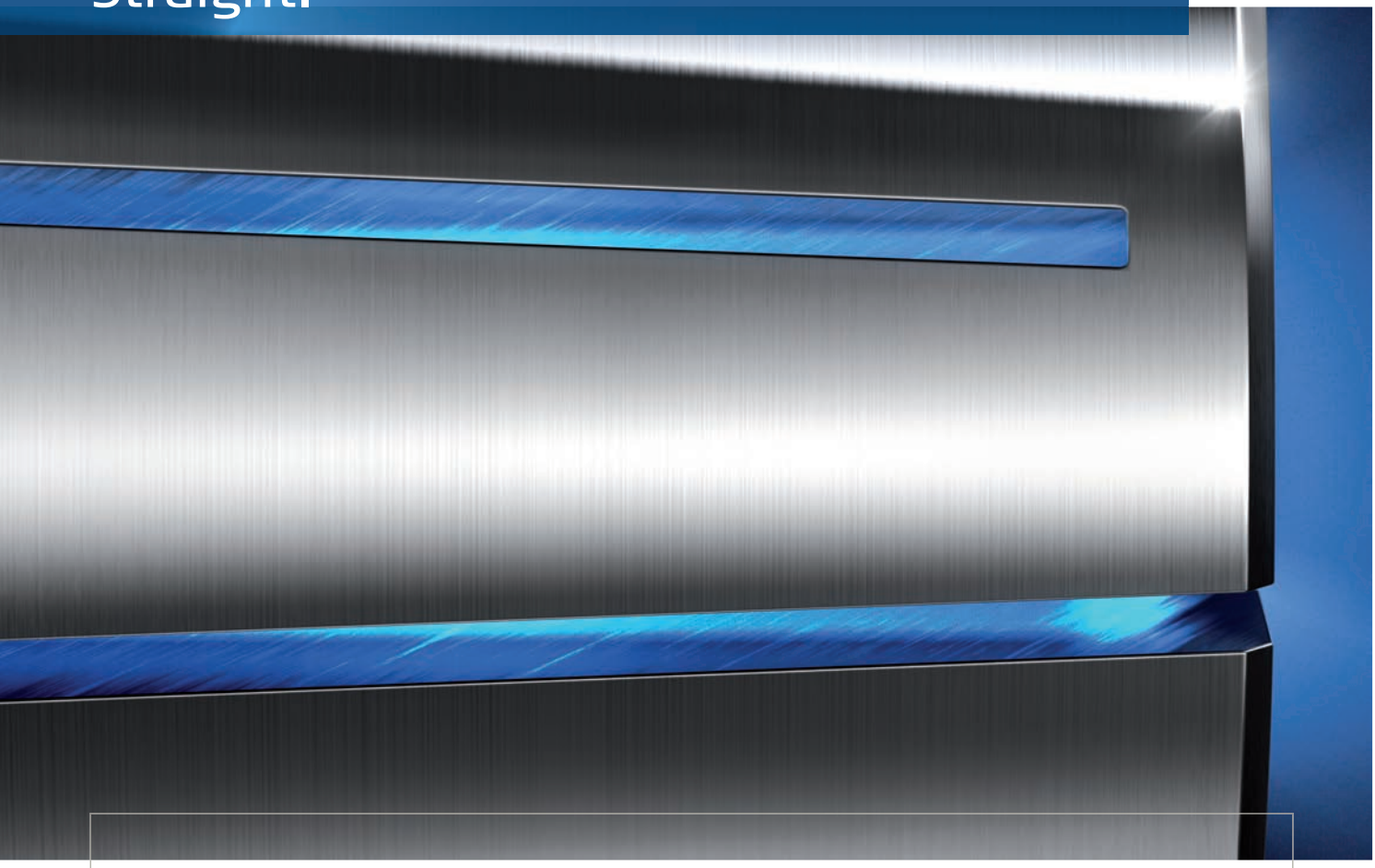
Excellence in Technology

Tool Clamping

Collets - Clamping Nuts
Wrenches

Overview of Contents

Straight.



The direct way to success: Due to a uniquely clear and specific design, supreme production quality and consistent service orientation, FAHRION makes your work easier, more efficient, faster and more precise with its comprehensive range of tool clamping systems. Just right for demanding production tasks.

For decades, FAHRION has been following an uncompromising line, when it comes to supporting your work: All FAHRION products and services are directed to convince with maximum functionality and application orientation – at an excellent price-performance ratio.

In terms of quality, FAHRION products offer performance values already in the standard product range which for other producers are limited to expensive premium series. Our DIN ISO 15488 (ER/ESX) and DIN ISO 10897 (OZ) based precision collets are produced with tolerance values which lie significantly below the required DIN norm.

Together with the patented FAHRION precision collet chuck CENTRO|P and other high performance system components, our collets form a perfectly integrated complete system which guarantees maximum precision, stability, flexibility, reliability and cost effectiveness.

At the same time FAHRION is a manufacturer which continuously and critically monitors and optimizes its product portfolio – therefore, FAHRION technology brings you the maximum possible benefit at any time and with every order.

Evident.

FAHRION clamping systems can manage highly complex challenges. At the same time we have done everything to ensure that our solutions remain conceivably uncomplicated and highly transparent for you. This way, you can assure a distinct advantage in terms of profitability.

Focused on the user
FAHRION user-friendliness starts with the product range. We provide exactly those solutions which you need in your daily work – and only technology which really provides functionality enters FAHRION's clamping systems.

In addition to the common models, we offer products which meet very special process requirements that are easily assembled and effectively used. We support you with all our expertise in finding and using your dedicated FAHRION solution – for example, in the FAHRION Technology Centre we convey broad know-how under real working conditions.

Smooth.

All runs smoothly – with excellent results: That is our promise to everyone who trusts in FAHRION clamping systems. Production processes with FAHRION solutions provide exactly those results which meet your specifications – with careful consideration of your valuable machinery.

Optimize your process
Excellent concentricity and repeatability, optimal balancing quality, perfectly matched and carefully tested system solutions: These are only a few of the technical features which assure that you can completely rely on FAHRION products.

Thanks to the smooth production processes in the highest quality, you can deliver the requested parts more quickly to your customers, while customer satisfaction ensures profitable follow-up orders. In addition, less process steps are required because the FAHRION precision reduces the number of faulty products – and thus the need for post processing work – to a minimum. Moreover, long service life of machine and tools is guaranteed with your own machine technology.

FAHRION|Protect

Rust on collets reduces the lifespan of your tools and leads to significant loss of precision. Therefore, we developed FAHRION|Protect: A pioneering new technology which protects collets from corrosion.

FAHRION
—
Protect

Collets with corrosion protection of the functional surfaces in the µ-range

FAHRION|Protect goes beyond all standards that you know in corrosion protection of clamping tools. Many clamping tools are not protected at all. With others, the corrosion protection is limited to the visible areas only. Or with cutting tools with insert pockets, only an accuracy of about 0.01 mm is required.

FAHRION is the first manufacturer to offer a coating of the functional surfaces in the µ-range – over its complete and finely tuned product range. FAHRION|Protect conserves FAHRION collets effectively from external influences and preserves their functionality and precision for a longer time. That is how FAHRION shows once again in an impressive way how advanced technology can be brought to the market as an integrated customer solution.

Two collets each after 4 months of use:
The left one without coating – the right one with FAHRION|Protect

FAHRION|Protect:
Stops corrosion. Solves the problems.
The comparison with conventional unprotected collets shows: Without a coating, the collet is affected by corrosion in a short time – whether by humidity, cooling lubricant, cleaning solutions, salts or gases. This does not only affect the collet but also your complete system.

Optimize your work in many ways:
Coated collets by FAHRION are corrosion protection, quality protection, investment protection and environmental protection all in one:

- The nominal geometry between the collet and the taper seat in the chuck is maintained for a long lasting permanent surface contact without corrosion-related irregularities.
- The parts in manufacturing stay longer in the specified tolerances. The number of faulty parts decreases.
- You can keep production processes longer on a high level, you can save time and you can also guarantee short terms of delivery.
- A higher concentricity extends the tool lives. Thus, you save time and money by reducing set up times.
- Collets have to be replaced less frequently or can be used longer for precision applications.
- Less imbalance on the tools relieves the machine spindle permanently – your maintenance costs will be reduced.
- Longer service life saves valuable resources.

The new technology is established in the FAHRION factory and integrated in the production process. This means: no matter in which field or which type of collets you use – you can benefit from the new technology in any case

Advantages of FAHRION Collets
DIN ISO 15488 - GERC-B and GERC-HP (ER/ESX)

FAHRION provides the largest range of forms and executions of collets DIN ISO 15488 (ER/ESX) for different applications

Precise
FAHRION collets DIN ISO 15488-B (ER/ESX) set the standard of concentricity and repeatability, which is 5 µm for the types GERC11-B up to GERC40-B and 2 µm for the types GERC11-HP up to GERC40-HP

Rigid
12 slots are sufficient in order to reach the required collapse to DIN ISO 15488. This is possible because of a special steel produced for us and a particular harmonized heat treatment. Compared to 16 slot collets, our collets have less tendency to distort

Saving
all edges are not only deburred, but additionally rounded, which is a prerequisite to protect the inner cone of the collet chuck from marks. This process is important to guarantee a consistent repeatable high accuracy

Increased rigidity and clamping forces, improved grip, higher precision and system concentricity, enhanced resistance to corrosion for GERC-B and GERC-HP due to super-finished execution with FAHRION|Protect!

In addition to slots being deburred, finish of operating surfaces ≤ 1,6 µm

Features of FAHRION Collets DIN ISO 15488 (ER/ESX)

Form/Application	GERC-B	GERC-BD	GERC-HP	GERC-HPD	GERC-HPDD	GERC-GBD	GERC-GBDD
							
DIN ISO 15488 - form	B	A[1]	B	A[1]	A[1]	A[1]	A[1]
Standard Collet Chucks	X	X	X	X	X	X	X
FAHRION Precision Collet Chucks CENTRO|P	X[2]	X[2]	X	X	X	X	X
FAHRION|Protect	X	X	X	X	X	X	X
Concentricity e.g. Ø 12,0 mm	5 µm	5 µm	2 µm	2 µm	2 µm	10 µm	10 µm
Repeatability	5 µm	5 µm	2 µm	2 µm	2 µm	6 µm	6 µm
Concentricity important	X	X	X	X	X	-	-
Concentricity very important for HSC	-	-	X	X	X	-	-
Concentricity/tool life unimportant	-	-	-	-	-	-	-
Collapse	0,5-1 mm	h8	h10[3]	h8	h8	h8	h8
Sealing for IC (inner coolant supply)	-	X	-	X	X	X	X
Jet holes for Inner Coolant Supply	-	-	-	-	X	-	X
For tapping with internal square drive	-	-	-	-	-	X	X
With incorporated axial compensation	-	-	-	-	-	-	-
Details to be found on page	11	12	13	14	15	16	17

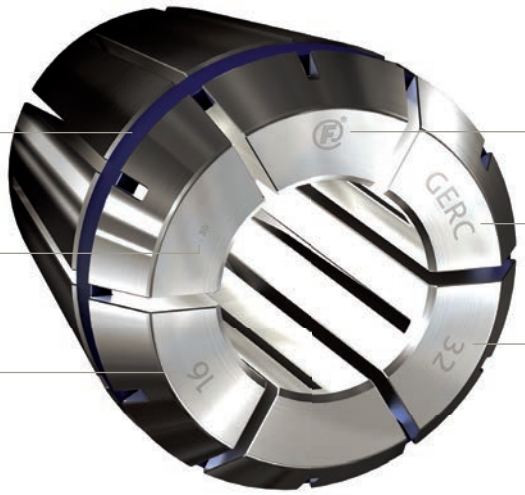
[1] similar to DIN ISO 15488 form A, fit in Standard Collet Chucks as well as in the Precision Collet Chucks CENTRO|P
[2] can be used, but the concentricity of the complete system is influenced
[3] highest concentricity of the complete system when clamping nominal size Ø h10, collapse 0,5-1 mm in standard collet chucks can be achieved (remove blue recognition ring)

Quality pays

Blue Ring = Quality
Official designation of 2µm collets

Series-No.

Diameter



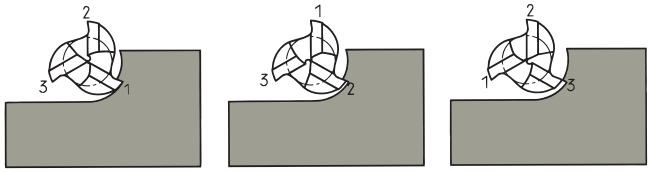
Made in Germany

Collet Size

FAHRION trademark for tested quality

Higher tool working life, lower tool costs, less setting up time
= Lower production costs
Better surface finishes and tighter production tolerances
= Improved quality

Effect of runout on the cutting edges

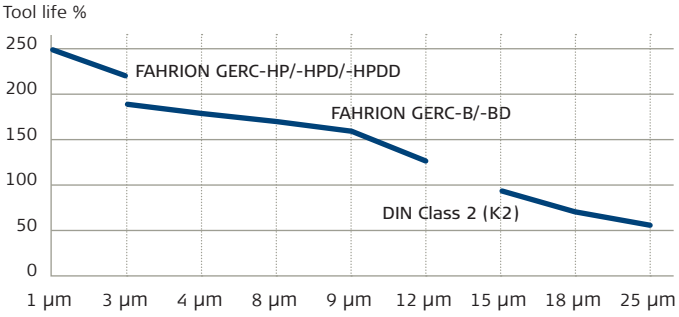


Irregular load on the cutting edges

Wear on tool increases, surface quality of the workpiece is getting worse

Feed has to be reduced

Influence of collet accuracy on the life of carbide cutting tools



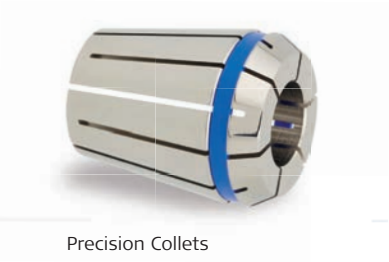
Cost example for a carbide drill Ø 12 mm with collet DIN ISO 15488 - form B, type 470 E

Example 1: system concentricity ≤ 10 µm	
Cost of a carbide drill	approx. 105,00 $
Cost FAHRION GERC32-B collet with concentricity 5 µm	approx. 20,50 $
Cost basis of tool life of approx. 150 %	**approx. 125,50 $**

Example 2: system concentricity ≤ 25 µm	
Cost of a carbide drill	approx. 105,00 $
Cost CER32-K2 collet DIN class 2 with concentricity 20 µm	approx. 13,20 $
Cost basis of tool life of approx. 55 %	**approx. 118,20 $**
Cost for similar tool life of appprox. 150 % More than two carbide drills necessary!	**approx. 322,00 $**

Result: Cheap collets almost triple the cost!

The FAHRION Product Range



Precision Collets

Precision Collet Chucks CENTRO|P

Tapping Chucks SYNCHRO|T

The FAHRION Precision Collet
The heart of the technology is the collet: For many years, the combination of a specially manufactured steel and our unique production technology has enabled FAHRION to manufacture top-quality collets according to DIN ISO15488 (ER/ESX) in an outstanding quality with a maximum accuracy of 2 µm.

The FAHRION CENTRO|P Precision Collet Chuck
The CENTRO|P's legendary reputation on the market is no coincidence. It is one of the best collet chucks that money can buy. Combined with the FAHRION collets, which are perfectly matched to this chuck, it achieves a system accuracy of 3 µm and avoids the need to use expensive hydraulic expansion and shrinking techniques.

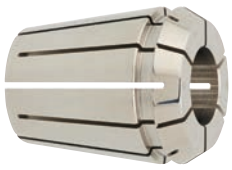
The FAHRION SYNCHRO|T Tapping Chuck
By compensating the pitch differences or tolerances of the tap and the synchronous spindle, the machining results can be optimised while maintaining quality and cost-effectiveness. A special tapping chuck with minimum length compensation is required for this.

Find more information about the complete FAHRION programme at www.fahrion.de

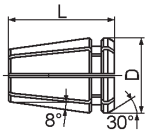
Precision Collets GERC-B
DIN ISO 15488-B (ER/ESX)

Concentricity and repeatability: Concentricity see (↗) in chart/repeatability 5 µm

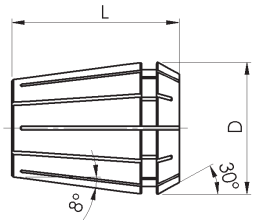
Application: For HSC and for high precision work
Collapse: Nominal size reduced by T



GERC8-B:



GERC11-B to GERC40-B:



Precision Collets GERC-B - 5 µm for types GERC11-B to GERC40-B

E-No. Description	Order-No.	↗	T	D	L	Profile	from-to	steps
4004E GERC8-B *	1371001	10 µm	-0,5	8,5	13,6	●	1,0-5,0	0,5
	1371004					●	1/16"•1/8"•3/16"	
4008E GERC11-B	1371101	5 µm	-0,5	11,3	18	●	1,0-7,0	0,5
	1371104					●	1/16"•3/32"•1/8"•5/32"•3/16"•7/32"•1/4"	
426E GERC16-B	1371301	5 µm	-0,5	17	27,5	●	1,0-2,0	0,5
			-1,0			●	2,5-10,0	0,5
	1371304		-0,5			●	1/16"•3/32"	
			-1,0			●	1/8"•5/32"•3/16"•7/32"•1/4"•9/32"•5/16"•11/32"•3/8"•13/32"	
428E GERC20-B	1371401	5 µm	-0,5	21	31,5	●	1,0-2,0	0,5
			-1,0			●	2,5-13,0	0,5
	1371404					●	1/8"•3/16"•1/4"•5/16"•3/8"•7/16"•1/2"	
430E GERC25-B	1371501	5 µm	-0,5	26	34	●	1,0-2,0	0,5
			-1,0			●	2,5-16,0	0,5
	1371504					●	1/8"•3/16"•1/4"•5/16"•3/8"•7/16"•1/2"•9/16"•5/8"	
470E GERC32-B	1371601	5 µm	-1,0	33	40	●	2,0-20,0	0,5
	1371604					●	1/8"•3/16"•1/4"•5/16"•3/8"•7/16"•1/2"•9/16"•5/8"•11/16"•3/4"•13/16"	
472E GERC40-B	1371701	5 µm	-1,0	41	46	●	3,0-26,0	0,5
	1371704					●	1/8"•3/16"•1/4"•5/16"•3/8"•7/16"•1/2"•9/16"•5/8"•11/16"•3/4"•13/16"•7/8"•1"	

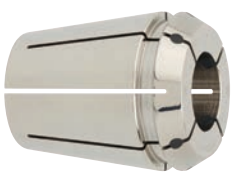
* GERC8-B is not included in the DIN/ISO-standard

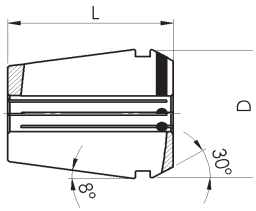
Ordering examples:
430E GERC25-B ● 6,0 mm = Order-No. 13715010600
Inch conversion table please see page 24!

Precision Collets GERC-BD similar to DIN ISO 15488-A

Concentricity and repeatability: Concentricity see (↗) in chart/repeatability 5 µm
Application: For inner coolant supply
Collapse: h8, i.e. only nominal size can be clamped

Special features: With seals for inner coolant supply (can be used up to 120 bar)
Remark: Shafts with lateral flat can be used under certain circumstances, i.e. the flat must be behind the rubber seals in order to reach a complete sealing

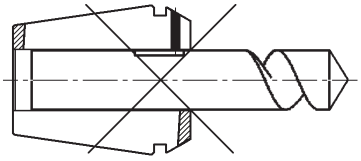




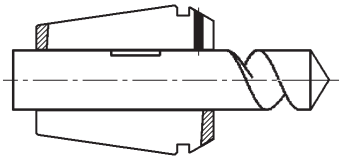
Precision Collets GERC-BD with Seals for IC (Inner Coolant Supply) - 5 µm

E-No. Description	Order-No.	↗	T	D	L	Profile	from-to	steps
4012E GERC11-BD	1372101	5 µm	h8	11,2	18	●	3,0-6,0	1,0
	1372104					●	1/8"•3/16"•1/4"	
425E GERC16-BD	1372301			16,7	27,5	●	3,0-10,0	1,0
	1372304					●	1/8"•3/16"•1/4"•5/16"•3/8"	
427E GERC20-BD	1372401			20,7	31,5	●	3,0-12,0	1,0
	1372404					●	1/8"•3/16"•1/4"•5/16"•3/8"•7/16"•1/2"	
429E GERC25-BD	1372501			25,7	34	●	3,0-16,0	1,0
	1372504					●	1/8"•3/16"•1/4"•5/16"•3/8"•7/16"•1/2"•9/16"•5/8"	
469E GERC32-BD	1372601			32,7	40	●	3,0-20,0	1,0
	1372604					●	1/8"•3/16"•1/4"•5/16"•3/8"•7/16"•1/2"•9/16"•5/8"•3/4"	
471E GERC40-BD	1372701			40,7	46	●	6,0•8,0•10,0•12,0•14,0•16,0•18,0•20,0•22,0•25,0	

Use of shanks with lateral flat with GERC-BD



Incorrect position!



Correct position!

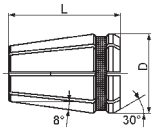
Ordering examples:
427E GERC20-BD ● 11,0 mm = Order-No. 13724011100
Inch conversion table please see page 24!

Precision Collets GERC-HP
DIN ISO 15488-B (ER/ESX)

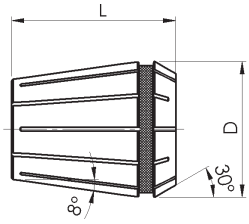
Concentricity and repeatability: Average of 3 µm (exception see chart (↗)) checked in the Precision Collet Chuck CENTRO|P at a distance of 3xD (max. 50 mm)
Application: For HSC and high precision work with FAHRION Precision Collets Chucks CENTRO|P

Collapse: h10 in CENTRO|P (no collapse as this has a negative effect on the concentricity) • Nominal size reduced by T in standard collet chucks
Special features: Colored ring only for identification (no sealing function)

GERC8-HP:



GERC11-HP to GERC40-HP:



Precision Collets GERC-HP - 2 µm for types GERC11-HP to GERC40-HP

E-No. Description	Order-No.	↗	T	D	L	Profile	from-to	steps
4004E GERC8-HP *	1361001	5 µm	-0,5	8,5	13,6	●	1,0-5,0	0,5
	1361004					●	1/16"•1/8"•3/16"	
4008E GERC11-HP	1361101	2 µm	-0,5	11,3	18	●	1,0-7,0	0,5
	1361104					●	1/16"•3/32"•1/8"•5/32"•3/16"•7/32"•1/4"	
426E GERC16-HP	1361301	2 µm	-0,5	17	27,5	●	1,0-2,0	0,5
						●	2,5-10,0	0,5
			-1,0			●	1,1-1,4 + 1,6-1,9 + 2,1-2,4 + 2,6-2,9 + 3,1-3,4 + 3,6-3,8	0,1
						●	5,6•6,3•7,1	
	1361304					●	1/16"•3/32"•1/8"•5/32"•3/16"•7/32"•1/4"•9/32"•5/16"•11/32"•3/8"	
428E GERC20-HP	1361401	2 µm	-0,5	21	31,5	●	1,0-2,0	0,5
						●	2,5-13,0	0,5
	1361404		-1,0			●	1/8"•3/16"•1/4"•5/16"•3/8"•7/16"•1/2"	
430E GERC25-HP	1361501	2 µm	-0,5	26	34	●	1,0-2,0	0,5
						●	2,5-16,0	0,5
	1361504		-1,0			●	1/8"•3/16"•1/4"•5/16"•3/8"•7/16"•1/2"•9/16"•5/8"	
470E GERC32-HP	1361601	2 µm	-1,0	33	40	●	2,0-20,0	0,5
	1361604					●	1/8"•3/16"•1/4"•5/16"•3/8"•7/16"•1/2"•9/16"•5/8"•11/16"•3/4"	
472E GERC40-HP	1361701	2 µm	-1,0	41	46	●	3,0-26,0	0,5
	1361704					●	1/8"•3/16"•1/4"•5/16"•3/8"•7/16"•1/2"•9/16"•5/8"•11/16"•3/4"•13/16"•7/8"•1"	

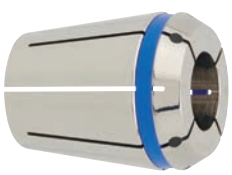
* GERC8-HP is not included in the DIN/ISO-standard

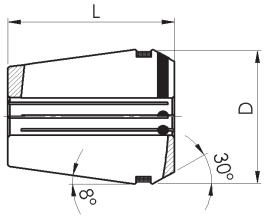
Ordering examples:
470E GERC32-HP ● 12,0 mm = Order-No. 13616011200
Inch conversion table please see page 24!

Precision Collets GERC-HPD similar to DIN ISO 15488-A

Concentricity and repeatability: Average of 3 µm in the Precision Collet Chucks CENTRO|P at a distance of 3xD (max. 50 mm)
Application: For inner coolant supply when HSC machining and high precision machining when used in CENTRO|P
Collapse: h8, i.e. only nominal size can be clamped

Special features: With seals for inner coolant supply (can be used up to 120 bar) • colored ring only for identification (no sealing function)
Remark: Shafts with lateral flat can be used under certain circumstances, i.e. the flat must be behind the rubber seals in order to achieve a complete sealing





Precision Collets GERC-HPD with Seals for IC (Inner Coolant Supply) - 2 µm

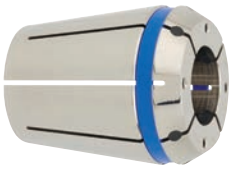
E-No. Description	Order-No.		T	D	L	Profile	from-to	steps
4012E GERC11-HPD	1362101	2 µm	h8	11,2	18	●	3,0-6,0	1,0
	1362104					●	1/8"•3/16"•1/4"	
425E GERC16-HPD	1362301			16,7	27,5	●	3,0-10,0	1,0
	1362304					●	1/8"•5/32"•3/16"•7/32"•1/4"•9/32"•5/16"•11/32"•3/8"•13/32"	
427E GERC20-HPD	1362401			20,7	31,5	●	3,0-12,0	1,0
	1362404					●	1/8"•5/32"•3/16"•7/32"•1/4"•9/32"•5/16"•11/32"•3/8"•13/32"•7/16" •15/32"•1/2"	
429E GERC25-HPD	1362501			25,7	34	●	3,0-16,0	1,0
	1362504					●	1/8"•3/16"•7/32"•1/4"•9/32"•5/16"•11/32"•3/8"•13/32"•7/16"•15/32"•1/2"•17/32"•9/16"•19/32"•5/8"	
469E GERC32-HPD	1362601			32,7	40	●	3,0-20,0	1,0
	1362604					●	1/8"•3/16"•1/4"•9/32"•5/16"•11/32"•3/8"•13/32"•7/16"•15/32"•1/2"•17/32"•9/16"•19/32"•5/8"•21/32"•11/16"•23/32"•3/4"	
471E GERC40-HPD	1362701			40,7	46	●	6,0•8,0•10,0•12,0•14,0•16,0•18,0•20,0•22,0•25,0	
	1362704						1/4"•3/8"•1/2"•5/8"•3/4"•1"	

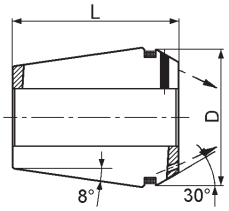
Ordering examples:
469E GERC32-HPD ● 16,0 mm = Order-No. 13626011600
Inch conversion table please see page 24!

Precision Collets GERC-HPDD similar to DIN ISO 15488-A

Concentricity and repeatability: Average of 3 µm in the Precision Collet Chucks CENTRO|P at a distance of 3xD (max. 50 mm)
Application: For inner coolant supply when HSC machining and high precision machining when used in CENTRO|P
Collapse: h8, i.e. only nominal size can be clamped

Special features: With seals for inner coolant supply (can be used up to 120 bar) and additional jet holes in order to bring the coolant to the cutting edge in tools without coolant channel • colored ring only for identification (no sealing function)
Remark: Shafts with lateral flat can be used under certain circumstances, i.e. the flat must be behind the rubber seals in order to achieve a complete sealing

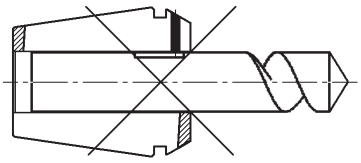




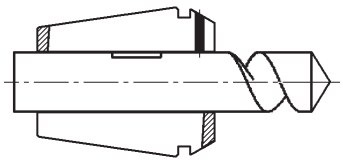
Precision Collets GERC-HPDD with Seals for IC (Inner Coolant Supply) and Jet Holes - 2 µm

E-No. Description	Order-No.		T	D	L	Profile	from-to
425E GERC16-HPDD	1363301	2 µm	h8	16,7	27,5	●	4,0•6,0•8,0
	1363304						1/8"•3/16"•1/4"
427E GERC20-HPDD	1363404			20,7	31,5	●	1/8"•3/16"•1/4"•5/16"•3/8"
429E GERC25-HPDD	1363501			25,7	34	●	4,0•6,0•8,0•10,0•12,0•14,0
	1363504						1/8"•3/16"•1/4"•5/16"•3/8"•7/16"•1/2"•9/16"
469E GERC32-HPDD	1363601			32,7	40	●	4,0•6,0•8,0•10,0•12,0•14,0•16,0•18,0•20,0
	1363604						1/8"•3/16"•1/4"•5/16"•3/8"•7/16"•1/2"•9/16"•5/8"•11/16"•3/4"
471E GERC40-HPDD	1363701			40,7	46	●	10,0•12,0•16,0•20,0•25,0
	1363704						1/2"•5/8"•3/4"•1"

Use of shanks with lateral flat with GERC-HPD/HPDD



Incorrect position!



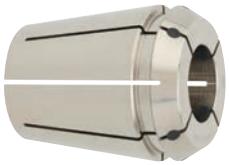
Correct position!

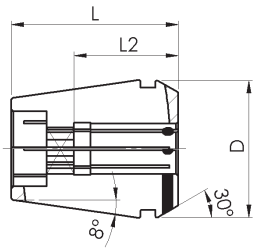
Ordering example:
469E GERC32-HPDD ● 8,0 mm = Order-No. 13636010800
Inch conversion table please see page 24!

Tap Collets GERC-GBD similar to DIN ISO 15488-A

Concentricity and repeatability: Concentricity see ↗ in chart/repeatability 6 µm
Application: For Tapping
Collapse: h8, i.e. only nominal size can be clamped

Special features: With internal square drive without axial compensation • with seals for inner coolant supply (can be used up to 120 bar)
Remark: Chart with tap shank dimensions DIN and ISO see pages 26 and 27 in the appendix • for the same shank-Ø the DIN as well as the ISO taps can be used





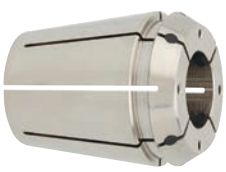
Tap Collets GERC-GBD with Internal Square Drive and Seals for IC (Inner Coolant Supply) - 10 µm

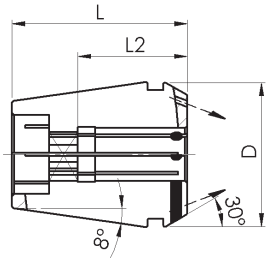
E-No. Description	Order-No.	↗	D	L	L2	Profile	Standard bore (shank-Ø/square)
Ⓕ 4031E GERC16-GBD	1382301	10 µm	16,7	27,5	18	●/■	2,8/2,1
						●/■	3,5/2,7•4,0/3,2•4,5/3,55•5,0/4,0•5,5/4,5•6,0/5,0•6,3/5,0•7,0/5,6•7,1/5,6
					22	●/■	8,0/6,3•9,0/7,1
Ⓕ 4276E GERC20-GBD	1382401	10 µm	20,7	31,5	18	●/■	3,5/2,7•4,0/3,2•4,5/3,55•5,0/4,0•5,5/4,5•6,0/5,0•6,3/5,0•7,0/5,6•7,1/5,6
					22	●/■	8,0/6,3•9,0/7,1
					25	●/■	10,0/8,0•11,0/9,0•11,2/9,0•12,0/9,0
Ⓕ 4282E GERC25-GBD	1382501	10 µm	25,7	34	18	●/■	3,5/2,7•4,0/3,2•4,5/3,55•5,0/4,0•5,5/4,5•6,0/5,0•6,3/5,0•7,0/5,6•7,1/5,6
					22	●/■	8,0/6,3•9,0/7,1
					25	●/■	10,0/8,0•11,0/9,0•11,2/9,0•12,0/9,0•12,5/10,0•14,0/11,2•16,0/12,5
Ⓕ 4537E GERC32-GBD	1382601	10 µm	32,7	40	18	●/■	4,0/3,2•4,5/3,55•5,0/4,0•5,5/4,5•6,0/5,0•6,3/5,0•7,0/5,6•7,1/5,6
					22	●/■	8,0/6,3•9,0/7,1
					25	●/■	10,0/8,0•11,0/9,0•11,2/9,0•12,0/9,0•12,5/10,0•14,0/11,2•16,0/12,5
					30	●/■	18,0/14,5•20,0/16,0
Ⓕ 4716E GERC40-GBD	1382701	10 µm	40,7	46	18	●/■	6,0/5,0•6,3/5,0•7,0/5,6•7,1/5,6
					22	●/■	8,0/6,3•9,0/7,1
					25	●/■	10,0/8,0•11,0/9,0•11,2/9,0•12,0/9,0•12,5/10,0•14,0/11,2•16,0/12,5
					33	●/■	18,0/14,5•20,0/16,0•22,0/18,0•25,0/20,0

Ordering example:
4276E GERC20-GBD ●/■ 4,0/3,2 mm = Order-No. 13824010400

Tap Collets GERC-GBDD similar to DIN ISO 15488-A

Concentricity and repeatability: Concentricity see ↗ in chart/repeatability 6 µm
Application: For Tapping
Collapse: h8, i.e. only nominal size can be clamped
Special features: With internal square drive without axial compensation • with seals for inner coolant supply (can be used up to 120 bar) and additional jet holes in order to bring the coolant to the cutting edge in tools without coolant channel
Remark: Chart with tap shank dimensions DIN and ISO see pages 26 and 27 in the appendix • for the same shank-Ø the DIN as well as the ISO taps can be used





Tap Collets GERC-GBDD with Internal Square Drive, Seals for IC (Inner Coolant Supply) and Jet Holes - 10 µm

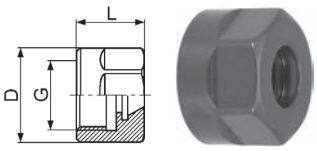
E-No. Description	Order-No.	↗	D	L	L2	Profile	Standard bore (shank-Ø/square)
4031E GERC16-GBDD	1383301	10 µm	16,7	27,5	18	●/■	3,5/2,7•4,5/3,55•6,0/5,0•7,0/5,6
					22	●/■	8,0/6,3
4276E GERC20-GBDD	1383401	10 µm	20,7	31,5	18	●/■	4,5/3,55•6,0/5,0•7,0/5,6
					22	●/■	8,0/6,3•9,0/7,1
					25	●/■	10,0/8,0
4282E GERC25-GBDD	1383501	10 µm	25,7	34	18	●/■	4,5/3,55•6,0/5,0•7,0/5,6
					22	●/■	8,0/6,3•9,0/7,1
					25	●/■	10,0/8,0•11,0/9,0•12,0/9,0•14,0/11,2
4537E GERC32-GBDD	1383601	10 µm	32,7	40	18	●/■	4,5/3,55•6,0/5,0•7,0/5,6
					22	●/■	8,0/6,3•9,0/7,1
					25	●/■	10,0/8,0•11,0/9,0•12,0/9,0•14,0/11,2•16,0/12,5
					30	●/■	18,0/14,5•20,0/16,0

Ordering example:
4537E GERC32-GBDD ●/■ 9,0/7,1 mm = Order-No. 13836010900

Clamping Nuts and Sealing Discs for Precision Collets DIN ISO 15488 (ER/ESX)

Concentricity and repeatability: Extremely high due to the fact that the thread and taper are ground in one operation
Application: For all collet chucks, collet holders and acceptances DIN ISO 15488 (ER/ESX)
Special features: Are indicated at every specific type
EasyClick: All types of clamping nuts with remark EasyClick are manufactured in this execution • offers better balance compensation for higher speed and an optical engaging feature (see also page 45)

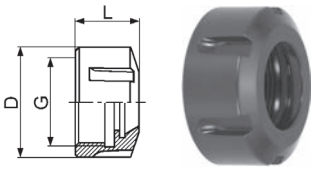
Execution type B: All Clamping Nuts with appendix B are more tenacious and harder because of a special heat treatment • unchanged mass, protection against corrosion and lower friction are additional advantages compared to the competition • the low friction takes effect in the thread as well as at the 30° cone of the collet and results in an approx. 50% higher clamping force
Remark: Other executions, e.g. Clamping Nuts with External Thread (also for Sealing Discs DI), are available on request



Clamping Nuts STMD with hexagon head

Description	Order-No.	max. torque	max. r.p.m	D	L	G
STM11D-B	2240100	25 Nm	40.000	19	12	M14x0,75
STM12D-B	2240900	25 Nm	40.000	19	12	M14x0,75
STM16D-B	2240200	50 Nm	40.000	28	18	M22x1,5
STM20D-B	2240300	75 Nm	40.000	34	19,5	M25x1,5

Execution: With EasyClick and hexagon head (form D) • case-hardened (660 HV10) and burnished
Special features: All collets with outside form DIN ISO 15488 can be clamped



Clamping Nuts STME with six slots

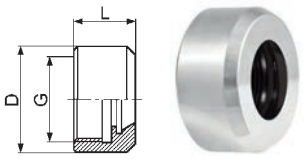
Description	Order-No.	max. torque	max. r.p.m	D	L	G
STM16E-B	2241200	50 Nm	40.000	32	18	M22x1,5
STM20E-B	2241300	75 Nm	40.000	35	19	M25x1,5
STM25E-B	2241400	85 Nm	35.000	42	21	M32x1,5
STM32E-B	2241500	105 Nm	35.000	50	23	M40x1,5
STM40E-B	2241600	150 Nm	25.000	63	26	M50x1,5
STM50E-B	2241700	200 Nm	15.000	78	35	M64x2

Execution: With EasyClick and six slots (form E) • case-hardened (660 HV10) and burnished
Special features: All collets with outside form DIN ISO 15488 can be clamped

Ordering example:
STM25E-G-B = Order-No. 2241400

Clamping Nuts and Sealing Discs for Precision Collets DIN ISO 15488 (ER/ESX)

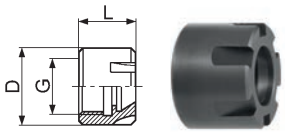
Clamping Nuts STM without slots



Description	Order-No.	max. torque	max. r.p.m	D	L	G
STM16-B	2244200	50 Nm	50.000	30	18	M22x1,5
STM20-B	2244300	75 Nm	45.000	35	19	M25x1,5
STM25-B	2244400	85 Nm	40.000	40	21	M32x1,5
STM32-B	2244500	105 Nm	40.000	50	23	M40x1,5
STM40-B	2244600	150 Nm	30.000	63	26	M50x1,5

Execution: With EasyClick without slots • case-hardened (660 HV10)
Special features: All collets with outside form DIN ISO 15488 can be clamped

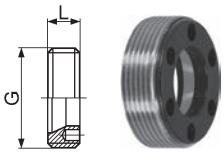
Mini Clamping Nuts STMM



Description	Order-No.	max. torque	max. r.p.m	D	L	G
STM8M-B	2245000	8 Nm	80.000	12	11	M10x0,75
STM11M-B	2245100	18 Nm	70.000	16	12	M13x0,75
STM16M-B	2245200	28 Nm	60.000	22	18	M19x1
STM20M-B	2245300	35 Nm	50.000	28	19,5	M24x1
STM25M-B	2245400	40 Nm	40.000	35	21	M30x1

Execution: Extremely small external dimensions • case-hardened (540 HV10)
Application: Mainly used in multi-spindle drilling heads and cylindrical collet holders
Special features: Ground all over • all collets with outside form DIN ISO 15488 can be clamped
Remark: Not interchangeable with clamping nuts DIN ISO 15488 (different thread)

Clamping Nuts STM-A with external thread

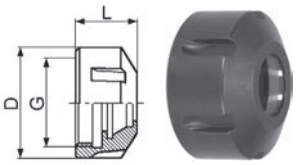


Description	Order-No.	max. torque	max. r.p.m	L	G
STM11A	2266100	24 Nm	30.000	6	M18x1
STM16A	2266200	35 Nm	30.000	8	M24x1
STM20A	2266300	40 Nm	25.000	11	M28x1,5
STM25A	2266400	46 Nm	25.000	12,5	M32x1,5
STM32A	2266500	60 Nm	20.000	14	M40x1,5

Execution: With External Thread • case-hardened (660 HV10) and burnished
Application: In recessed collet mounts, such as driven tools, floating bushes and all space saving constructions
Special features: All collets with outside form DIN ISO 15488 can be clamped
Remark: Not interchangeable with clamping nuts DIN ISO 15488 (external thread)

Ordering example:
STM20-B = Order-No. 2244300

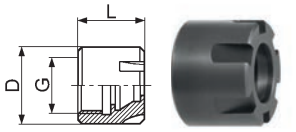
Clamping Nuts and Sealing Discs for Precision Collets DIN ISO 15488 (ER/ESX)



Clamping Nuts STME-DI with six slots for Sealing Discs DI

Description	Order-No.	max. torque	max. r.p.m	D	L	G
STM16E-DI-B	2242200	50 Nm	40.000	32	22	M22x1,5
STM20E-DI-B	2242300	75 Nm	40.000	35	23,2	M25x1,5
STM25E-DI-B	2242400	85 Nm	35.000	42	24,7	M32x1,5
STM32E-DI-B	2242500	105 Nm	35.000	50	27	M40x1,5
STM40E-DI-B	2242600	150 Nm	25.000	63	30,7	M50x1,5

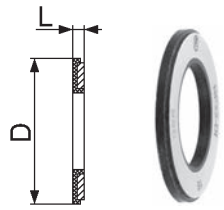
Execution: With EasyClick and six slots (form E) • case-hardened (660 HV10) and burnished
Special features: Can be used up to 80 bar with sealing discs DI • reasonable alternative compared to other sealing systems • all collets with outside form DIN ISO 15488 can be clamped



Mini Clamping Nuts STMM-DI for Sealing Discs DI

Description	Order-No.	max. torque	max. r.p.m	D	L	G
STM16M-DI-B	2246200	28 Nm	60.000	22	22	M19x1
STM20M-DI-B	2246300	35 Nm	50.000	28	23,2	M24x1
STM25M-DI-B	2246400	40 Nm	40.000	35	24,7	M30x1

Execution: Extremely small external dimensions • case-hardened (540 HV10)
Application: Mainly used in multi-spindle drilling heads and cylindrical collet holders
Special features: Can be used up to 80 bar with sealing discs DI • reasonable alternative compared to other sealing systems • ground all over • all collets with outside form DIN ISO 15488 can be clamped
Remark: Not interchangeable with clamping nuts DIN ISO 15488 (different thread)



Sealing Discs DI

Description	Order-No.	D	L	Profile	from-to	steps	range
DI16	2430301	12,6	2	●	1,0-10,0	0,5	+0,4/-0,1
	2430304			●	1/8"•3/16"•1/4"•5/16"•3/8"		
DI20	2440301	15,8	2	●	2,0-13,0	0,5	+0,4/-0,1
DI25	2450301	20,2	2	●	2,0-16,0	0,5	+0,4/-0,1
DI32	2460301	26,2	2	●	2,0-20,0	0,5	+0,4/-0,1
	2460304			●	1/8"•3/16"•1/4"•5/16"•3/8"•1/2"•5/8"•3/4"		
DI40	2470301	34,2	2	●	3,0-30,0	0,5	+0,4/-0,1
	2470304			●	1/8"•3/16"•1/4"•5/16"•3/8"•1/2"•5/8"•3/4"•7/8"•1"		

Execution: Sealing disc can be used up to 80 bar

Ordering examples:
STM20-M-DI = Order-No. 2246300
DI32 ● 12,0 mm = Order-No. 24603011200

Wrenches for Clamping Nuts
DIN ISO 15488 (ER/ESX)

Roller Bearing Wrenches RO with handle

Description	Order-No.	D	for Clamping Nuts
ROD10	4996200	10	HPC8M
RO16	4990400	16	STM11M•HPC11M+DI
RO22	4990500	22	STM16M+DI•HPC16MS+DI
RO24	4990600	24	HPC16M+DI•HPC16C+DI
RO30	4990800	30	STM16•HPC16+DI•CP16-HSS+DI
RO32	4991000	32	STM16E+DI•STM20•HPC20+DI•CP20-HSS+DI
RO35	4991200	35	STM20E+DI•STM25M+DI
RO40	4991400	40	STM25•HPC25+DI•CP25-HSS+DI
RO42	4991600	42	STM25E+DI
RO50	4991800	50	STM32•STM32E+DI•HPC32+DI•CP32-HSS+DI•HPC225+DIG
RO63	4992000	63	STM40•STM40E+DI•HPC40+DI•CP40-HSS+DI•HPC432+DIG

Special features: With standard handle
Remark: The OD of the clamping nuts must be produced within the DIN tolerances

Roller Bearing Heads DRO

Description	Order-No.	D	VKT	for Clamping Nuts
DRO16	4993400	16	9x12	STM11M•HPC11M+DI
DRO22	4993500	22	9x12	STM16M+DI•HPC16MS+DI
DRO24	4993600	24	9x12	HPC16M+DI•HPC16C+DI
DRO30	4993800	30	9x12	STM16•HPC16+DI•CP16-HSS+DI
DRO32	4994000	32	9x12	STM16E+DI•STM20•HPC20+DI•CP20-HSS+DI
DRO35	4994200	35	9x12	STM20E+DI•STM25M+DI
DRO40	4994400	40	14x18	STM25•HPC25+DI•CP25-HSS+DI
DRO42	4994600	42	14x18	STM25E+DI
DRO50	4994800	50	14x18	STM32•STM32E+DI•HPC32+DI•CP32-HSS+DI•HPC225+DIG
DRO63	4995000	63	14x18	STM40•STM40E+DI•HPC40+DI•CP40-HSS+DI•HPC432+DIG

Special features: With square drive adapter for a defined clamping of the Clamping Nut by means of a Torque Setting Wrench
Remark: The OD of the clamping nuts must be produced within the DIN tolerances

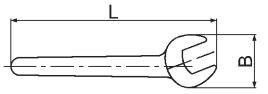
Torque Setting Wrenches DRMO

Description	Order-No.	VKT	Torque range	for Roller Bearing Heads
DRMO-10-100	4490400	9x12	10-100 Nm	DRO16•DRO22•DRO24•DRO30•DRO32•DRO35
DRMO-20-200	4490600	14x18	20-200 Nm	DRO40•DRO42•DRO50•DRO63
DRMO-60-300	4490800	14x18	60-300 Nm	DRO63 (for CP432DG)

Application: For a defined clamping of the Clamping Nut by a pre-set torque
Special features: Adjustable by clear scale on the handle • on reaching the set torque value the wrench triggers audibly and by touch

Ordering example:
DRMO-20-200 = Order-No. 4490600

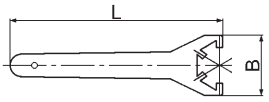
Wrenches for Clamping Nuts
DIN ISO 15488 (ER/ESX)



Wrenches SCHL-SW for Clamping Nuts with hexagon head

Description	Order-No.	L	B	for Clamping Nuts
SCHL-SW17	2280100	155	38	STM11D•STM12D
SCHL-SW25	2280200	218	53	STM16D
SCHL-SW30	2280300	265	61	STM20D

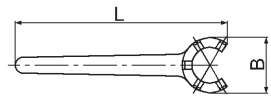
Application: For clamping nuts DIN ISO 15488-D with hexagon head (form D)



Wrenches SCHL-E for Clamping Nuts with six slots

Description	Order-No.	L	B	for Clamping Nuts
SCHL-STM16E	2281200	163	50	STM16E
SCHL-STM20E	2281300	180	60	STM20E
SCHL-STM25E	2280400	210	65	STM25E
SCHL-STM32E	2280500	253	75	STM32E
SCHL-STM40E	2280600	290	88	STM40E
SCHL-STM50E	2280700	350	110	STM50E

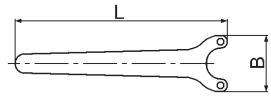
Application: For clamping nuts DIN ISO 15488-D and six slots (form E)



Wrenches SCHL-M for Mini Clamping Nuts

Description	Order-No.	L	B	for Clamping Nuts
SCHL-STM8M	2282000	76	13	STM8M
SCHL-STM11M	2282100	95,5	17	STM11M
SCHL-STM16M	2282200	117	22,5	STM16M
SCHL-STM20M	2282300	128	28	STM20M
SCHL-STM25M	2282400	145	36	STM25M

Application: For mini nuts



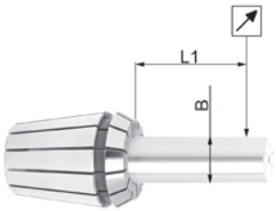
Wrenches SCHL-A for Clamping Nuts with external thread

Description	Order-No.	L	B	for Clamping Nuts
SCHL-STM11A	2284100	115	23	STM11A
SCHL-STM16A	2284200	140	26	STM16A
SCHL-STM20A	2284300	160	28	STM20A
SCHL-STM25A	2284400	160	32	STM25A
SCHL-STM32A	2284500	180	41	STM32A

Application: For clamping nuts with External Thread

Ordering example:
SCHL-STM11M = Order-No. 2282100

Concentricity Charts

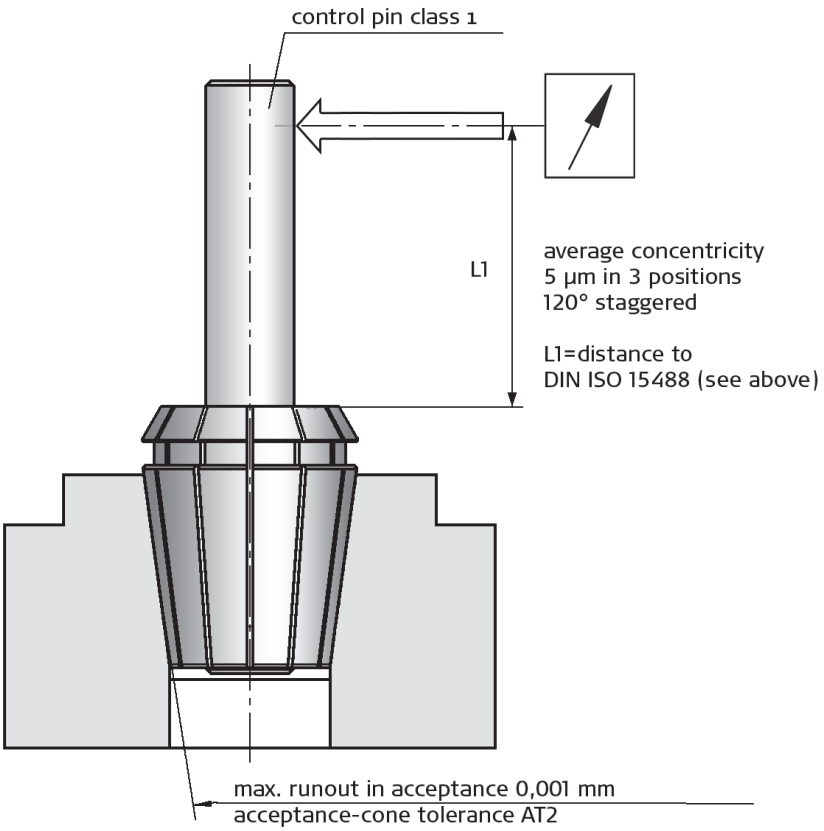


Concentricity DIN ISO 15488 (ER/ESX) resp. FAHRION Quality

B mm				L1 mm	DIN Class 2	DIN Class 1	FAHRION Quality B	FAHRION Quality HP*
from	1,0	to	1,6	2-3	0,015	0,010	0,005	0,002
	1,6		3,0	10				
	3,0		7,0	16				
	7,0		10,0	25				
	10,0		18,0	40	0,020	0,015		
	18,0		26,0	50				
	26,0		34,0	60	0,025	0,020	-	-

* checked with HPplus chuck in three equi-spaced positions (moved clockwise by 120°) at a distance of 3xD (max. 50 mm)

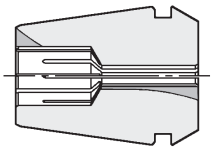
Concentricity for collets DIN ISO 15488 (ER/ESX) on pages 11 to 17.
The tolerances are classified to DIN into two classes:
= 10 µm (higher TIR) is our standard for GERC-GBD and GERC-GBDD (on pages 16 and 17)
= FAHRION quality is our standard (average concentricity with a repeatability of 5 µm resp. 2 µm) for GERC-B / -BD resp. GERC-HP / -HPD / -HPDD – details see ↗ at the respective description (on pages 11 and 15)
Test method (except for GERC-HP / -HPD /-HPDD) see below



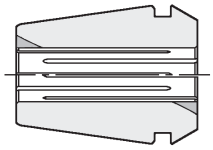
For applications which require highest concentricity, it is absolutely necessary to pay attention to the complete system (machine spindle, collet acceptance, clamping nut, collet and cutting tool).

Tightening Torque

Picture 1



Picture 2



Tightening Torque for Clamping Nuts DIN ISO 15488 (ER/ESX)

Collets type	Clamping Nuts	with short bore (Picture 1)		with through bore (Picture2)	
		Clamping-Ø	max. torque	Clamping-Ø	max. torque
GERC8	STM8M	1,0-2,5	5 Nm	3,0-5,0	8 Nm
GERC11	STM11D	1,0-2,5	13 Nm	3,0-7,0	25 Nm
	STM11M		11 Nm		18 Nm
	STM11A		13 Nm		24 Nm
GERC16	STM16D STM16E STM16E-DI	1,0-4,5	30 Nm	5,0-10,0	50 Nm
	STM16M STM16M-DI		18 Nm		28 Nm
	STM16A		22 Nm		35 Nm
GERC20	STM20D STM20E STM20E-DI	1,0-6,5	45 Nm	7,0-13,0	75 Nm
	STM20M STM20M-DI		22 Nm		35 Nm
	STM20A		24 Nm		40 Nm
GERC25	STM25E STM25E-DI	1,0-6,5	55 Nm	7,0-16,0	85 Nm
	STM25M STM25M-DI		24 Nm		40 Nm
	STM25A		28 Nm		46 Nm
GERC32	STM32E STM32E-DI	2,0-6,5	70 Nm	7,0-20,0	105 Nm
	STM32A		36 Nm		60 Nm
GERC40	STM40E STM40E-DI	3,0-7,5	100 Nm	8,0-26,0	150 Nm

Remark: The tables below show the maximum tightening torque values in relation to the clamping-Ø of the collet with short bore or through bore (see pictures 1 and 2) • the smaller the clamping-Ø the lower the necessary torque value • high torque leads to damage of clamping nut resp. collet closing taper

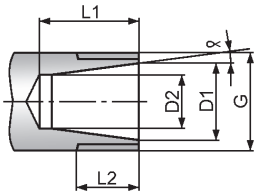
Conversion Table

Conversion of inch to metric, which is in accordance with the last 4 digits of the order number:

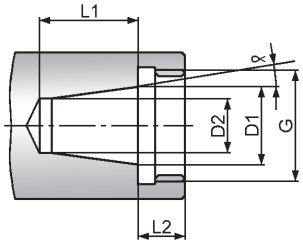
1/16" = 0159	3/32" = 0238	1/8" = 0318	5/32" = 0397	3/16" = 0476	7/32" = 0556	1/4" = 0635	9/32" = 0714
5/16" = 0794	11/32" = 0873	3/8" = 0953	13/32" = 1032	7/16" = 1111	1/2" = 1270	9/16" = 1429	5/8" = 1588
11/16" = 1746	3/4" = 1905	13/16" = 2064	7/8" = 2223	1" = 2540			

Build-in Dimensions

Picture 1



Picture 2



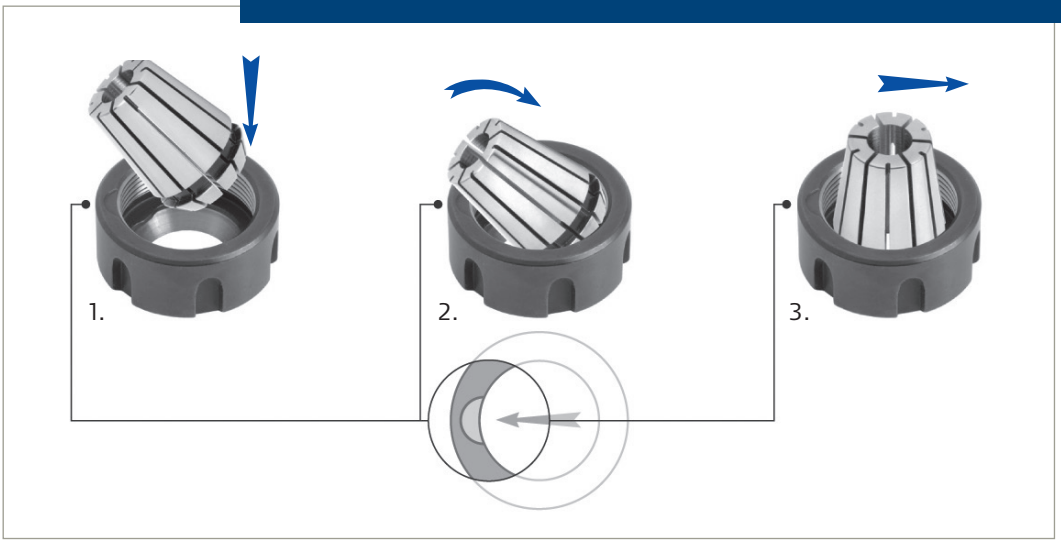
Precision Collets and Clamping Nuts DIN ISO 15488 (ER/ESX)

Description	Pic.	L1	L2	D1	D2	G	a	Collets	Range
STM11D	1	17	10	11	7,5	M14x0,75	8°	4008E	0,5-7,0
STM16D+E		22	13	16	10,5	M22x1,5		426E	0,5-10,0
STM20D+E		26,5	13,5	20	13,5	M25x1,5		428E	0,5-3,0
STM25E		30	14	25	17,5	M32x1,5		430E	0,5-16,0
STM32E		35	16	32	23,5	M40x1,5		470E	1,0-20,0
STM40E		40	17	40	30,5	M50x1,5		472E	2,0-26,0
STM50E		48	24	50	38	M64x2		477E	4,0-34,0
STM8M	1	13	7,5	8	5,2	M10x0,75	8°	4004E	0,5-5,0
STM11M		17	10	11	7,5	M13x0,75		4008E	0,5-7,0
STM16M		22	13	16	10,5	M19x1		426E	0,5-10,0
STM20M		26,5	13,5	20	13,5	M24x1		428E	0,5-13,0
STM25M		30	14	25	17,5	M30x1		430E	0,5-16,0
STM11A	2	23	7	11	7,5	M18x1	8°	4008E	0,5-7,0
STM16A		32	10	16	10,5	M24x1		426E	0,5-10,0
STM20A		37,5	11	20	13,5	M28x1,5		428E	0,5-13,0
STM25A		41	12	25	18	M32x1,5		430E	0,5-16,0
STM32A		48	14	32	23,5	M40x1,5		470E	1,0-20,0

Remark: The exact tolerances for the manufacture of your spindle are available upon request

Assembly

Assembly Instruction for Precision Collets DIN ISO 15488 (ER/ESX)



Assembly: For Clamping nuts with EasyClick: see photos • for Mini Clamping Nuts only: feed the collet into the nut and turn until the eccentric ring of the nut engages in the groove of the collet
Remark: Fit the assembly into the collet chuck or the machine spindle • do not clamp shanks larger than the nominal size indicated!

DIN Tap Shank Dimensions

DIN Tap Shank Dimensions

 Ø x □	DIN 352	DIN5156 DIN5157	DIN 371	DIN 374	DIN 376	BSW DIN 2183	BSW reinforce DIN 2182	UNC DIN 376	UNC reinforce DIN 371	UNF DIN 374	UNF reinforce DIN 371
2,5x2,1	M1		M1		M3,5		1/16“				
	M1,1		M1,1	M3,5							
	M1,2		M1,2								
	M1,4		M1,4								
	M1,6		M1,6								No.2-64
	M1,8		M1,8					No.6-32		No.6-40	No.3-56
2,8x2,1	M2		M2	M4	M4	5/32“	3/32“	No.8-32			
	M2,2		M2,2						No.2-56		
	M2,5		M2,5+M2,6						No.3-48	No.8-36	
3,5x2,7	M3		M3	M5	M5+M4,5		1/8“		No.5-40		No.5-44
4x3	M3,5		M3,5	M5,5			7/32“	No.12-24	No.6-32	No.12-28	No.6-40
4,5x3,4	M4		M4	M6	M6	1/4“	5/32“	1/4“-20	No.8-32	1/4“-28	No.8-36
5,5x4,5				M7	M7						
6x4,9	M5	G1/16“	M4,5					5/16“-18			No.10-32
	M6		M5						No.10-24		No.12-28
	M8		M6	M8	M8				No.12-28		
7x5,5	M10	G1/8“	M7	M9+M10	M9+M10	3/8“	1/4“	3/8“-16	1/4“-20	3/8“-24	1/4“-28
8x6,2			M8	M11		7/16“	5/16“		5/16“-18		5/16“-24
9x7	M12		M9	M12	M12	1/4“	3/8“	1/2“-13	3/8“-16	1/2“-20	3/8“-24
10x8			M10								
11x9	M14			M14	M14	G1/4“	9/16“				
12x9	M16	G3/8“	M12	M16	M16	5/8“		5/8“-11		5/8“-18	
14x11	M18			M18	M18	11/16“		3/4“-10		3/4“-16	
16x12	M20	G1/2“		M20	M20	13/16“					
18x14,5	M22	M5/8“		M22	M22	7/8“					
	M24			M24	M24	15/16“					
20x16	M27	G3/4“		M27	M27	1“					
22x18	M30	G7/8“		M30	M30	1.1/8“					
25x20	M33	G1“		M33	M33	1.1/4“					
28x22	M36	G1.1/8“		M36	M36	1.3/8“					
32x24	M39	G1.1/4“		M39	M39	1.1/2“					
	M42			M42	M42	1.5/8“					
36x29	M45	G1.3/8“		M45	M45	1.3/4“					
	M48	G1.1/2“		M48	M48	1.7/8“					
		G1.3/4“									
		G2“									
40x32	M52	G2.1/4“		M52	M52	2“					
45x35	M56	G2.1/2“			M56	2.1/4“					
	M60				M60						
50x39	M64	G2.3/4“			M64						
		G3“									
56x44	M68	G3.1/4“			M68	2.3/4“					
						3“					

ISO Tap Shank Dimensions

ISO Tap Shank Dimensions

Ø x □	ISO 529-1975											
	Metric	reinforce	UNC	reinforce	UNF	reinforce	BSW	reinforce	BSF	reinforce	BA	reinforce
2,24x1,8	M3		No.5-40		No.5-44		1/8“-40				No.5	
2,5x2,0	M3,5	M2	No.6-32	No.1-64	No.6-40	No.0-80						No.11
						No.1-72						No.10
												No.9
2,8x2,24		M2,2		No.2-56		No.2-64						No.8
		M2,5		No.3-48		No.3-56						No.7
												No.6
3,15x2,5	M4	M3		No.4-40		No.4-48						No.5
			No.8-32	No.5-40	No.8-36	No.5-44					No.3	
3,55x2,8	M4,5	M3,5	No.10-24	No.6-32	No.10-32	No.6-40	3/16“-24		3/16“-32		No.2	No.4
4x3,15	M5	M4	No.12-24		No.12-28				7/32“-24		No.1	
4,5x3,55	M6		1/4“-20	No.8-32	1/4“-28	No.3-36	1/4“-20		1/4“-26		No.0	No.3
5x4		M5		No.10-24		No.10-32		3/16“-24		3/16“-32		No.2
5,6x4,5				No.12-24		No.12-28			9/32“-26	7/32“-28		No.1
6,3x5	M8	M6	5/16“-18	1/4“-20	5/16“-24	1/4“-28	5/16“-18	1/4“-20	5/16“-32	1/4“-26		No.0
7,1x5,6			3/8“-16		3/8“-24		3/8“-16		3/8“-20	9/32“-26		
8x6,3	M10	M8	7/16“-14	5/16“-18	7/16“-20		3/8“-16	5/16“-18	7/16“-18	5/16“-22		
9x7,1	M12		1/2“-13		1/2“-20		1/2“-13		1/2“-12			
10x8		M10		3/8“-16		3/8“-24		3/8“-16		3/8“-20		
11,2x9	M14		9/16“-12		9/16“-18		9/16“-12		9/16“-16			
12,5x10	M16		5/8“-11		5/8“-18		5/8“-11		3/8“-14			
14x11,2	M18		3/4“-10		3/4“-16		11/16“-14		11/16“-14			
	M20						3/4“-10		3/4“-12			
16x12,5	M22		7/8“-9		7/8“-14		7/8“-9		7/8“-11			
18x14	M24		1“-8		1“-12		1“-8		1“-10			
20x16	M27		1.1/8“-7		1.1/8“-12		1.1/8“-7		1.1/8“-9			
	M30											
22,4x18	M33		1.1/4“-7		1.1/4“-12		1.1/4“-7		1.1/4“-9			
25x20	M36		1.3/8“-6		1.3/8“-12				1.3/8“-8			
28x22,4	M39		1.1/2“-6		1.1/2“-12		1.1/2“-6		1.1/2“-8			
	M42								1.5/8“-8			
31,5x25	M45		1.3/4“-5				1.3/4“-5		1.3/4“-7			
	M48											
35,5x28	M52		2“-4.1/2				2“-4.1/2		2“-7			
	M56											
40x31,5	M60		2.1/4“-4.1/2				2.1/4“-4		2.1/4“- 6			
	M64		2.1/2“-4				2.1/2“-4		2.1/2“-6			
45x35,5	M68		2.3/4“-4				2.3/4“-3.1/2		2.3/4“-6			
50x40			3“-4				3“-3.1/2		3“-5			
			3.1/4“-4				3.1/4“-3.1/4		3.1/4“-5			
			3.1/2“-4				3.1/2“-3.1/4		3.1/2“-4.1/2			
56x45			3.3/4“-4				3.3/4“-3		3.3/4“-4.1/2			
			4“-4				4“-3		4“-4.1/2			

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FAHRION offers a wide selection of precision collets, precision collet chucks as well as precision products for workpiece clamping which fulfill maximum requirements in terms of concentricity, service life and manufacuring quality. In doing so, FAHRION pays particular attention to user-friendly technology oriented towards the practical requirements of the users, which is constantly advanced.

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