FAHRION® PRÄZISION

And all runs smoothly.

HORN

Excellence in Technology

Tool clamping systems

Precision Collet Chucks CENTRO|P
Tapping Chucks SYNCHRO|T

Overview of Contents

Precision Collets and Tapping Chucks

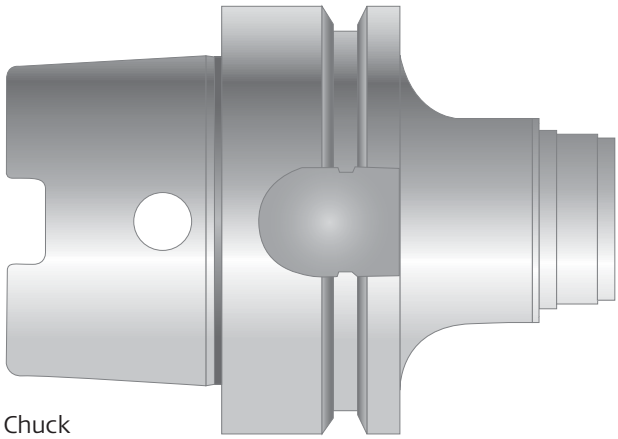
Precision Collet Chucks CENTRO|P — GER, GOZ

Tapping Chucks SYNCHRO|T — GB

GER GOZ GB

We reserve the right to change the design and specification of any product shown within this catalog, which does not result in the adverse function of the corresponding tools.

The FAHRION Precision Modular System



Chuck

Holder

For all common spindle holder types.

= DIN 69871
SK
30/40/50

= DIN 69893/ISO 12164
HSK-A
32/40/50/63/80/
100

= DIN 69893
HSK-E
25/32/40/50/63

= DIN 69893
HSK-F
50/63

= ISO 26623-1
C
3 /4 /5 / 6 /8

= JIS 6339
MAS/BT
30/40/50

= ANSI B5.50
CAT
40/50

= DIN 1835
Z
10/16/20/25/32

Version

The CENTRO|P Precision Collet Chuck is available in two versions for different collets. In addition there is an optimised Tapping Chuck: the SYNCHRO|T.

GER

CENTRO|P
- for collets according to DIN ISO 15488-B (ER/ESX) and FAHRION tap collets similar to DIN ISO 15488-A
- very high concentricity of ≤ 3 µm with FAHRION collets GERC-HP/HPD/HPDD

GOZ

CENTRO|P
- for collets according to DIN ISO 10897-B (OZ)
- extremely stable versions with holding forces of over 600 Nm with CP 432
- ideal for rough milling

GB

SYNCHRO|T
- for Tap collets similar to DIN ISO 15488-A with internal square drive
- with minimum length compensation

Chuck Form

The chuck is classified into three basic forms. Different chuck diameters and lengths give rise to 280 variants of the CENTRO|P. A unique variety of possible applications. Mixed forms such as Mini-Tapered and Tapered-Standard are possible.

MINI

- slim version for HPCM Mini Clamping Nuts
- small interference contour
- External diameter of clamping nuts 10/16/22 mm
- Clamping ranges 1 – 5 mm (GERC8), 1 – 7 mm (GERC11), 1 – 10 mm (GERC16)
- Standard projection lengths (dimension A) of 50/70/100/4"/130/6"/160 mm (type-dependent)

Application examples: HSC machining, die and mold making, medical and dental technology, drilling/reaming/finishing

TAPERED

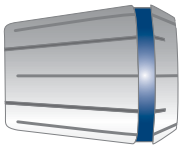
- tapered version for HPCC Special Clamping Nuts
- small interference contour with External diameter of clamping nuts 16/22/24 mm
- Clamping ranges 1 – 7 mm (GERC11), 1 – 10 mm (GERC16)
- Standard projection lengths (dimension A) of 45/55/60/100/4"/130/6"/160 mm (type-dependent)

Application examples: HSC machining, model, mold and tool making, drilling/reaming/finishing and roughing

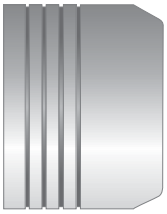
STANDARD

- rigid version for HPC Standard Clamping Nuts
- External diameter of clamping nuts 30/32/40/50/63 mm
- Clamping ranges 1 – 10 mm (GERC16), 1 – 13 mm (GERC20), 1 – 16 mm (GERC25), 2 – 20 mm (GERC32), 3 – 26 mm (GERC40), 2 – 25 mm (FM25DG), 4 – 32 mm (FM32DG)
- standard projection lengths (dimension A) of 40/48/50/60/2,5"/70/3"/80/85/90/100/4"/120/5"/130/6"/160/200 mm (type-dependent)

Application examples: HSC and HPC machining, model, mold and tool making, drilling/reaming/finishing/roughing, machining of wood



Collet



Clamping nut

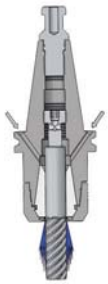
Cooling

Suitable for all possible methods of supplying cooling lubricant.

- central (AD)
- laterally via the collar (C)
- minimum-quantity lubrication (MQL)
- air cooling
- peripheral cooling along the shaft by means of larger sealing disc

Pull Stud
DIN 69872 Form A
Cooling lubricant supply through the centre
Form AD / BT

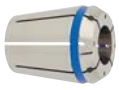
Pull Stud
DIN 69872 Form B
Cooling lubricant supply via the collar
Form B / BTB



The central component of the FAHRION modular kit, the collet, is available in several versions differing in accuracy, area of application and coolant application.

GERC-HP
Precision Collet 2 µm
DIN ISO 15488 - B (ER/ESX)

GERC-HPD
Precision Collet 2 µm
similar to DIN ISO 15488 - A
with Seals for IC (Inner Coolant Supply)



GERC-HPDD
Precision Collet 2 µm
similar to DIN ISO 15488 - A
with seals for IC (inner coolant supply) and jet holes

GERC-GBD
Tap Collet
similar to DIN ISO 15488 - A
with internal square drive and seals for IC (inner coolant supply)

GERC -GBDD
Tap Collet
similar to DIN ISO 15488 - A with internal square drive, seals for IC (inner coolant supply) and jet holes

GOZ-DG-HP
Precision Collet 3 µm
DIN ISO 10897 - B

Since the chuck body is supplied without clamping nuts, these must be ordered separately. You have the choice between the standard version and the version for sealing discs!

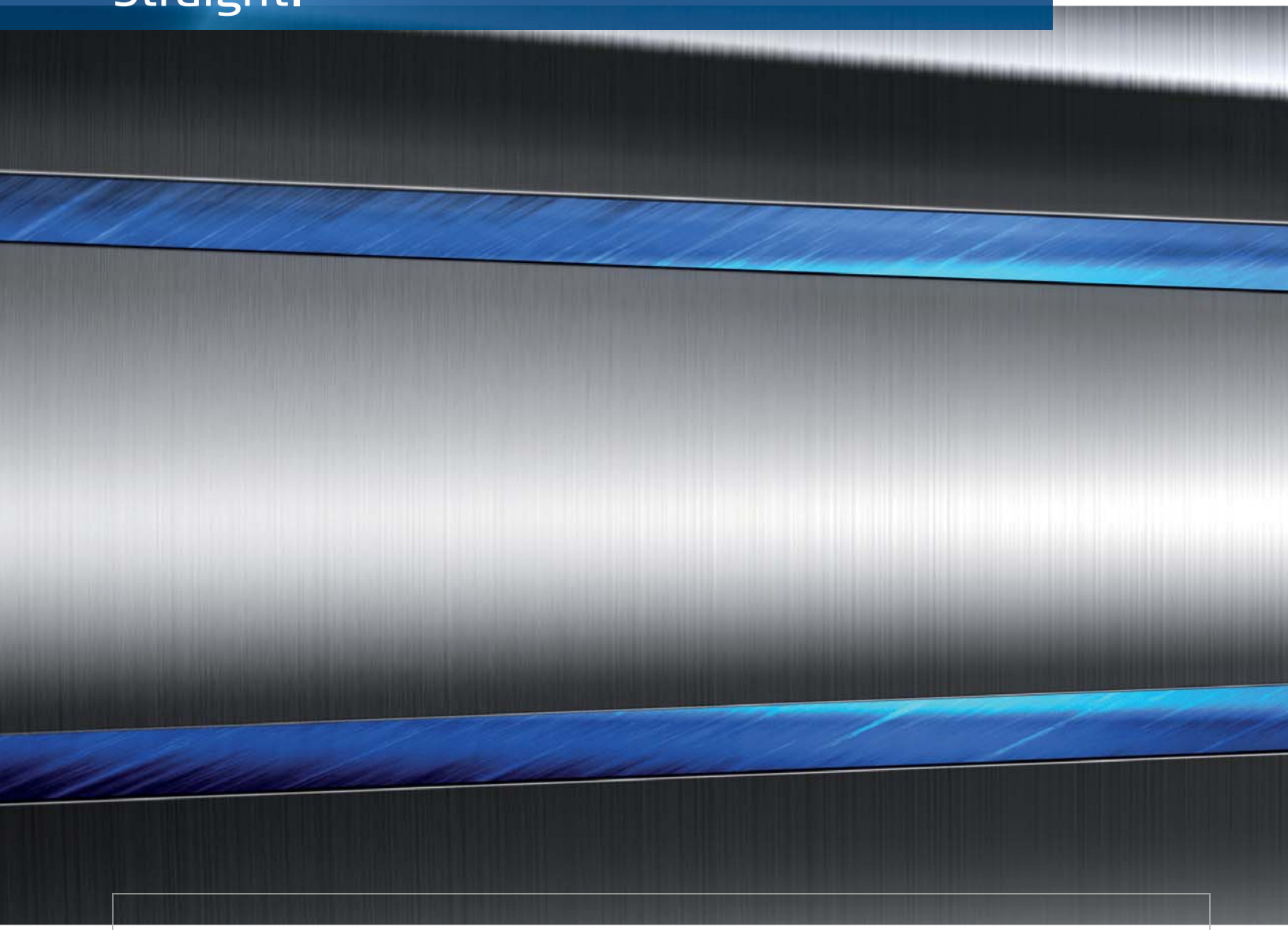
Technical Information

MQL

The chucks marked with MQL are suitable for minimum quantity lubrication. In MQL the required amount of lubricant for the cutting tool is reduced to a minimum by means of a dosing technique. This is supplied to the cutting point either directly or finely dispersed via an air stream. After clarification of all technical details we can convert MQL-compatible chucks.

Table for converting inches to mm
see page 79

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.

Close to your demands:
Every detail is optimized for maximum functionality.

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.

Focussed 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 do not only offer products which meet very special process requirements, but which can, nevertheless, be also 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, where 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 lifetime of your tools and leads to significant loss of precision. Therefore, we have now developed FAHRION|Protect: A pioneering new technology which protects collets from corrosion for the long term.

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 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.
- Maintain higher level production processes for a longer time, you can save time and you can also guarantee short terms of delivery.
- A higher concentricity extends the tool life. 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 reduces spindle stress and lowers your machine maintenance cost.
- 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 industry or type of collet you use – in any case you can benefit from the FAHRION|Protect technology.

CENTRO|P.WD – An innovation for a more secure process

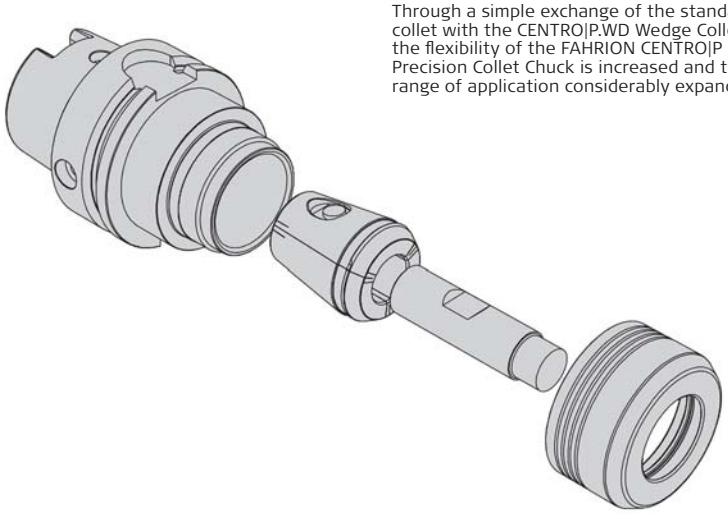
The danger of a micro creep is evident during roughing with high material removal rates or during cutting of difficult to machine materials, for example in the aircraft or in the mould making industry. High axial forces are resulting in a pull-out of the tool. Modern milling technologies as trochoidal milling necessitate either special cutting edge geometries or high holding torques of the tool holder.

If these requirements are not fulfilled, the cutting parameters needs to be lowered or the workpiece has to be re-worked or completely produced again.

The newly developed Wedge Collet CENTRO|P.WD offers a 100 % pull-out security and consequently the required process stability for demanding machining operations.

In connection with the Precision Collet Chuck CENTRO|P, an excellent concentricity of 6 µm within the system (at 3 x D) is reached at the same time as a high damping.

FAHRION CENTRO|P.WD Wedge Collet proves its positive effects by a fascinating straight, uncomplicated and easy-to-use technology.



Through a simple exchange of the standard collet with the CENTRO|P.WD Wedge Collet, the flexibility of the FAHRION CENTRO|P Precision Collet Chuck is increased and the range of application considerably expanded.

Easiest handling and maximum benefit
In combination with the Precision Collet Chuck CENTRO|P, the innovative Wedge Collet CENTRO|P.WD offers highest process security at minimal complexity.

The new Wedge Collet CENTRO|P.WD is an ER-collet based on DIN ISO 15488-B. This unique collet is designed for the use of standard cutting tools with Weldon shaft.

The functioning principle is easy to understand and the operator does not need further training. Additional investments in special devices, new chucks or special cutting tools are not needed.

The Wedge Collet FAHRION CENTRO|P.WD is compatible and can be used with all CENTRO|P Precision Collet Chucks.

FAHRION CENTRO|P.WD optimizes your work in multiple ways and offers
= Highest process safety and prevention of defective parts
= Low investment costs with utilization of standard chucks
= Reduced tooling costs due to longer life-time of the tools
= Use of standard tools with Weldon shaft

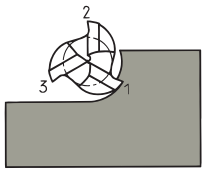
The FAHRION Quality Guarantee
Pull-out protection with positive fit
+ High **stiffness**
+ Highest **concentricity**
+ Maximum **damping**
+ High clamping **torque**
+ High balancing **quality**

= **FAHRION CENTRO|P Precision Collet Chuck with CENTRO|P.WD Wedge Collet**

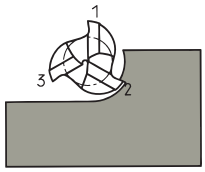
CENTRO|P –
Greater profitability through unique precision

Although it costs more than a standard collet chuck, a precision collet chuck wins by a mile in terms of cost-effectiveness. With maximum precision you achieve better machining results with considerably smaller manufacturing tolerances, thus saving expensive reworking.In addition, precision means that longer cutting tool life which results in extended spindle life even in very complex work.
There are convincing reasons that it pays off in a short time to purchase precision collet chucks. Due to the system accuracy of 3 µm the CENTRO|P does not only stand at the top of precision, but also for long-term cost savings.

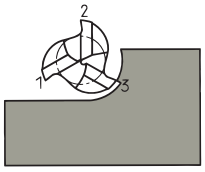
Effect of runout on the cutting edges



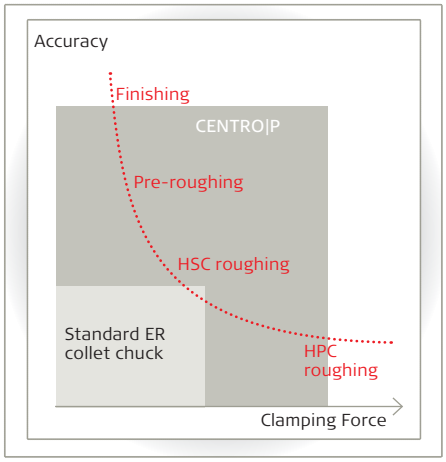
Irregular load on the cutting edges



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

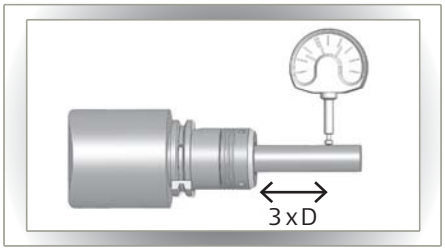


Feed has to be reduced



Accuracy and Holding Force
The FAHRION CENTRO|P belongs to the absolute top class of collet chucks. Unique, patented design features achieve a far higher accuracy than conventional ER collet chucks. Furthermore the system provides impressively higher holding forces. So the CENTRO|P can be used in a much wider field of applications.

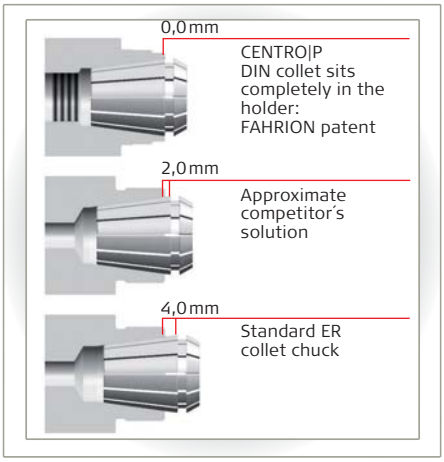
Optimum Design
Due to well-thought-out chuck design, we achieve maximum symmetry with minimum residual imbalance. Further design features are the ground 30° trapezoidal thread and the special coating of the nut, which reduce friction and, together with the dual guiding, ensure accurate centring of the nut on the chuck.

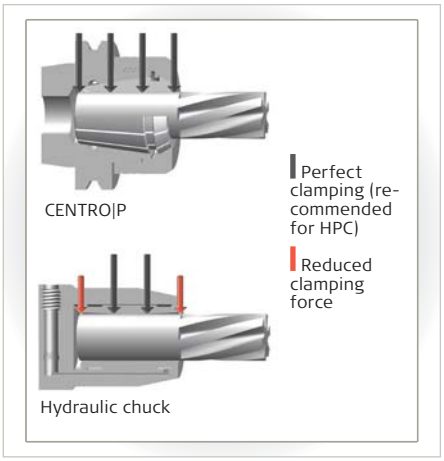


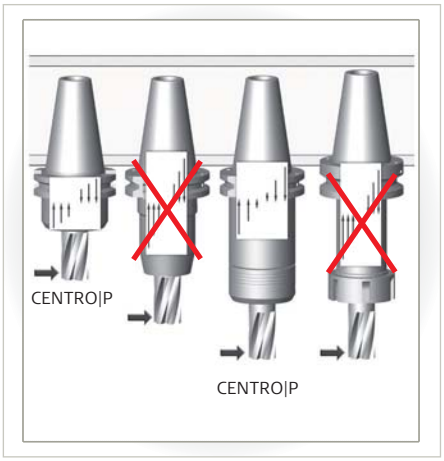
High Concentricity and Repeatability
Together with the FAHRION GERC-HP Precision Collets an outstanding system accuracy of 3 µm is reached (at 3 x D, max. 50 mm). Result: You achieve up to six times the precision of a conventional ER collet chuck.

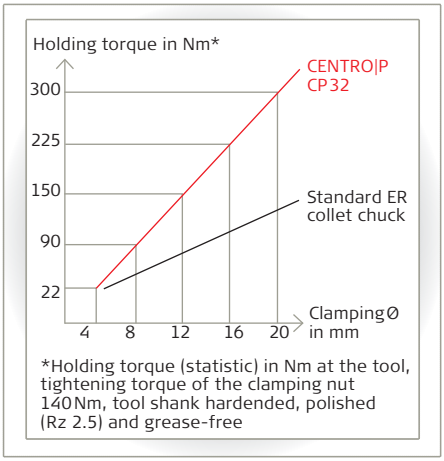
Maximum Balancing Quality
The chuck is a central element for vibration dampening in the system of machine spindle, tool holder and tool. For this reason great importance is attached to the balancing quality of CENTRO|P Precision Collet Chucks. They are finely balanced for speeds up to 60.000 rpm, thus achieving maximum dimensional accuracy, surface quality and tool service lives.

Technology with more gripping power.









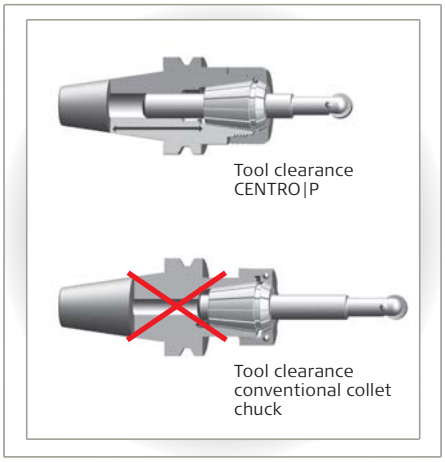
High Holding Force
In FAHRION's patented collet system the collet sits completely inside the collet closing taper. Due to the unique design it does not apply the usual bridging, thus enabling holding forces twice as high as those of conventional collet chucks. The ground trapezoidal thread, the polished surface of the collet and the finish in the bore of the collet further increase the holding forces. This ensures high security and enables rough machining with optimum results.

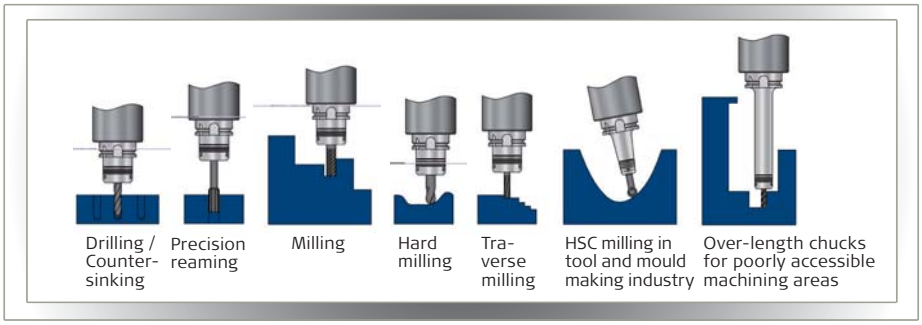
Immense Stability
The special design of the CENTRO|P achieves a better and more even distribution of the clamping forces over the entire cylindrical surface of the tool shank and the radial forces are optimally absorbed. So milling operations produce perfect surfaces.

High Stability
Stability is preserved by the reduction of bending and compression forces. This principle was used and put into practice by the construction of CENTRO|P. The chuck body is reinforced to the diameter of the clamping nut, leading to maximum rigidity and an optimum interference contour.

Strong and Insensitive
Even insensitivity is a strong point. The CENTRO|P is resistant to temperature fluctuations and is fully suitable for dry processes and hard milling up to 200° C.

System intelligence in every detail





Greatest Possible Dampening
The constructive principle of our collets absorbs vibrations. The mass of the chuck optimizes the damping even further. This conserves the machine and the spindle and extends the warranty.

Environmental Protection
Even when it comes to the economical use of energy and resources, FAHRION technologies are groundbreaking. Thanks to its perfect concentricity, CENTRO|P reduces the power consumption of the spindle. Workpieces can be machined in a shorter time, as a result of which, less electricity is used. Dry machining is possible, saving the costs for water, cooling units, and disposal. In addition, tool wear is reduced, and the tools don't need to be replaced so often.

Simple Handling
Despite its many technical advantages, an ingeniously simple, mechanical collet chuck requires no peripheral devices. It can be clamped simply, quickly, and securely, using the roller bearing wrench. Eliminating the high purchase costs for ancillary equipment.

Variable Cooling
CENTRO|P is suitable for all methods of cooling lubricant supply (central, laterally via the collar, minimum quantity lubrication, air cooling or peripheral cooling along the tool shank, jet-holes).

Largest Possible Tool Clearance
The CENTRO|P is designed in such a way that it offers the largest possible tool clearance and thus an extra-long length adjustment range. Hence, the tool can be clamped at the optimum tool projection length, whereby vibration is prevented, the tool is preserved, and the surface finish is optimised.

Universally Usable
The CENTRO|P is ideal for drilling, countersinking, reaming, milling, for HPC / HSC, and for tapping.

Intelligent Clamping System
The clamping nut of the CENTRO|P is tightened with a roller bearing wrench. The clamping nuts are marked with the maximum torques, which depend on the diameter to be clamped. In principle the maximum tightening torques can be used; for finish machining, however, we recommend tightening the clamping nut only to 50-70% of the maximum tightening torque in order to obtain the optimal machining results. This is due to a higher degree of dampening. The clamping nut is manufactured completely symmetrically and has no slots or holes.

On Request with Collapse
By means of a special clamping nut, a collapse up to 0.4 mm can be achieved with the GER-HP collet.

SYNCHRO|T – The Perfectly Optimised Tapping Chuck

The SYNCHRO|T Tapping Chuck compensates differences in pitch between the tap and the synchronous spindle as well as compensating the pitch tolerances of the tap. It provides for a cushioning effect between the tool and spindle during synchronized tapping (rigid tapping) on machining centres with synchronous spindles.

Versatile Properties

= minimum length compensation on compression/tension (±0.5 mm)
= high radial rigidity due to double bearing
= high concentricity
= high clamping force due to clamping by tap collets with internal square drive
= separate compression/tension mechanism
= defined adjustable compressive/tensile forces
= compact, wear-free design
= long service life
= internal coolant feed possible in all types
= no clamping nuts for sealing discs are required when using coolant, since the FAHRION GERC-GBD Tap Collets are generally supplied with seals (usable up to 120 bar)
= minimum quantity lubrication (MQL) possible on request

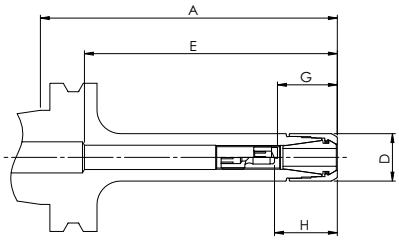
Advantages in Synchronous Tapping

= absolute process reliability due to minimum length compensation
= low risk of breakage
= high service lives of the taps (up to 150% higher than with a rigid collet chuck)
= improved thread quality
= fewer machine downtimes

Conclusion

In order to achieve the optimum cutting result, the FAHRION SYNCHRO|T Tapping Chuck should be used on machines with synchronous spindles even where the latest controllers are involved so as to extend service life and improve quality.

Collet Chucks with Taper Shanks DIN 69871 – AD30



GER

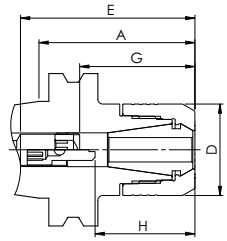
MINI

U≤1gmm max. 25.000 rpm[2]

CENTRO|P – Slim Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP11M-AD30-A=50	43213000500	AD	16	50	36	36	18	26	12	1,0–7,0 GERC11-HP/HPD	HPC11M• HPC11M-DI
CP11M-AD30-A=100	43213001000			100	85						

Accessories: Clamping Nuts page 58, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65, 66, Stop Screws page 73, Taper Wipers page 74



GER

STANDARD

U≤1gmm max. 25.000 rpm[2]

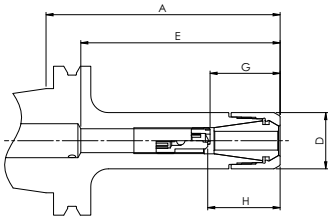
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP16-AD30-A=50	44313000500	AD	30	50	56	45	28	31	16	1,0–10,0 GERC16-HP/HPD/GBD	HPC16• HPC16-DI
CP16-AD30-A=100	44313001000			100	98						
CP25-AD30-A=70	44513000700		40	70	63	49	35	31	18	1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI
CP32-AD30-A=70	44613000700		50		75	56	45	40	29	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 58, 60 and 62
[2] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Taper Shanks DIN 69871 – AD40|AD/B40



GER

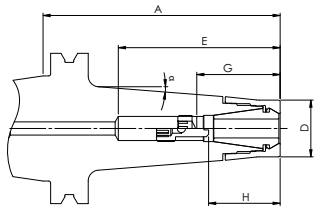
MINI

G 2,5
U≤1gmm max.
25.000 rpm²⁾

CENTRO|P – Slim Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	A¹⁾	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP11M-B40-A=70	43214000700	AD/B	16	70	54	32	15	22	7	1,0–7,0 GERC11-HP/HPD	HPC11M• HPC11M-DI
CP11M-B40-A=100	43214001000			100	84	36	18	26	12		
CP11M-B40-A=130	43214001300			130	114	32	15	22	7		
CP11M-B40-A=160	43214001600			160	144	36	18	26	12		
CP16M-B40-A=70	43314000700		22	70	54	50	28	36	14	1,0–10,0 GERC16-HP/HPD/GBD	HPC16MS• HPC16MS-DI
CP16M-B40-A=100	43314001000			100	84						
CP16M-B40-A=130	43314001300			130	114						
CP16M-B40-A=160	43314001600			160	144						

Accessories: Clamping Nuts pages 58, 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74



GER

TAPERED

G 2,5
U≤1gmm max.
25.000 rpm²⁾

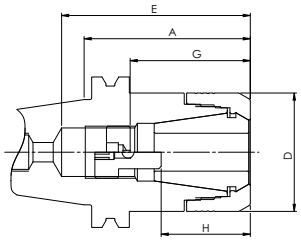
CENTRO|P – Tapered Version for HPCC Special Clamping Nuts

Description	Order-No.	Form	D	A¹⁾	□	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CPC16-B40-A=100	44314401000	AD/B	24	100	4,5	120	48	28	35	20	1,0–10,0 GERC16-HP/HPD/GBD	HPC16C• HPC16C-DI
CPC16-B40-A=160	44314401600			160	2,5	120						

Accessories: Clamping Nuts page 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74

¹⁾ Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A¹⁾ under Clamping Nuts on pages 58 and 59
²⁾ Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Taper Shanks DIN 69871 – AD40|AD/B40



GER

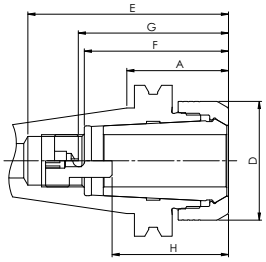
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP16-AD40-A=70	44315000700	AD	30	70	55	45	28	31	16	1,0–10,0 GERC16-HP/HPD/GBD	HPC16• HPC16-DI
CP16-B40-A=70	44314000700	AD/B									
CP16-AD40-A=100	44315001000	AD		100	85						
CP16-B40-A=100	44314001000	AD/B									
CP16-B40-A=130	44314001300			130	115	50		34	14		
CP16-B40-A=160	44314001600			160	117	45		31	16		
CP16-B40-A=200	44314002000			200	157						
CP20-B40-A=70	44414000700		32	70	103	48	31	-	-	1,0–13,0 GERC20-HP/HPD/GBD	HPC20• HPC20-DI
CP20-B40-A=130	44414001300			130	163						
CP25-B40-A=45	44514000450		40	45	87	60	35	42	20	1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI
CP25-AD40-A=70	44515000700	AD		70	114						
CP25-B40-A=70	44514000700	AD/B									
CP25-AD40-A=100	44515001000	AD/B		100							
CP25-B40-A=100	44514001000										
CP25-B40-A=130	44514001300			130	138	67	38	49	21		
CP25-B40-A=160	44514001600			160	118	60	35	42	20		
CP25-B40-A=200	44514002000			200	148						
CP32-AD40-A=50	44615000500	AD	50	50	84	70	52	52	26	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI
CP32-B40-A=50	44614000500	AD/B									
CP32-AD40-A=70	44615000700	AD		70	99	75	55	62	42		
CP32-B40-A=70	44614000700	AD/B									
CP32-AD40-A=100	44615001000	AD		100	114	70	52	52	32		
CP32-B40-A=100	44614001000	AD/B									
CP32-B40-A=130	44614001300			130		74	42	55	28		
CP32-B40-A=160	44614001600			160	135	70					
CP40-AD40-A=70 [2]	44715000700	AD	63	70	83	55	48	-	-	3,0–26,0 GERC40-HP/HPD/GBD	HPC40• HPC40-DI
CP40-AD40-A=100 [2]	44715001000			100		62					

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 60 and 62
[2] Without clearance to DIN 69871 in front of the tool change flange
[3] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Taper Shanks DIN 69871 – AD40|AD/B40



GOZ

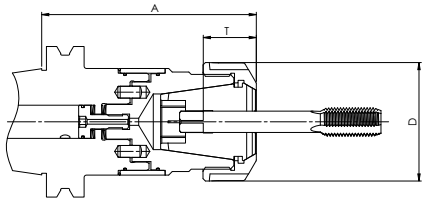
STANDARD

U≤1gmm max. 25.000 rpm[3]

CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop		Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
					E[2]	F[2]	G max.	G min.	H max.	H min.		
CP225DG-B40-A=40	48414000400	AD/B	50	40	80	59	65	53	48	37	2,0–25,0 FM25DG•HP	HPC225• HPC225-DIG

Accessories: Clamping Nuts page 61, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets page 70, Sealing Discs page 72, Stop Screws page 73



GB

G 6,3 12.000rpm or U≤1gmm[3]

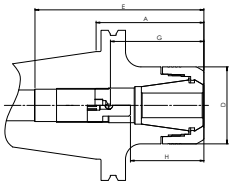
SYNCHRO|T

Description	Order-No.	Form	D	A	Tap insertion depth T				Cutting range	Collets
					Shank-ø 2,8–7,1	Shank-ø 8–9	Shank-ø 10–16	Shank-ø 18–25		
ST16-GB-B40-A=79	52314000790	AD/B	30	79	18	22	-	-	M3–M12	GERC16-GBD
ST20-GB-B40-A=80	52414000800		32	80			25		M3–M16	GERC20-GBD
ST25-GB-B40-A=84	52514000840		40	84					M3–M20	GERC25-GBD
ST32-GB-B40-A=95	52614000950		50	95				30	M4–M27	GERC32-GBD
ST40-GB-B40-A=120	52714001200		63	120				33	M4–M33	GERC40-GBD

Accessories: Wrenches pages 63, 64, Mounting Devices page 64, Tap Collets pages 68, 69, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on page 61
[2] Dimension E is for tool shanks ≤ 20 mm and dimension F is for tool shanks > 20 mm
[3] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Taper Shanks DIN 69871 – AD50|AD/B50



GER

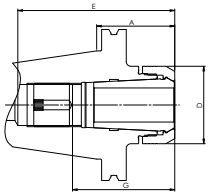
STANDARD

G 2,5 Us≤1gmm max. 25.000 rpm[2]

CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP16-AD50-A=70	44317000700	AD	30	70	90	45	28	35	16	1,0–10,0 GERC16-HP/HPD/GBD	HPC16• HPC16-DI
CP16-AD50-A=100	44317001000			100	120	55		41			
CP16-AD50-A=160	44317001600			160	180						
CP25-AD50-A=70	44517000700		40	70	90	64	35	48	20	1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI
CP25-AD50-A=100	44517001000			100	120						
CP25-AD50-A=160	44517001600			160	180						
CP32-B50-A=70	44616000700	AD/B	50	70	109	85	59	70	40	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI
CP32-B50-A=100	44616001000			100	120	81	53	63	35		
CP32-B50-A=160	44616001600			160	150	83		65			
CP40-AD50-A=70	44717000700	AD	63	70	93	60	48	-	-	3,0–26,0 GERC40-HP/HPD/GBD	HPC40• HPC40-DI
CP40-AD50-A=100	44717001000			100	96	70					

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74



GOZ

STANDARD

G 2,5 Us≤1gmm max. 25.000 rpm[2]

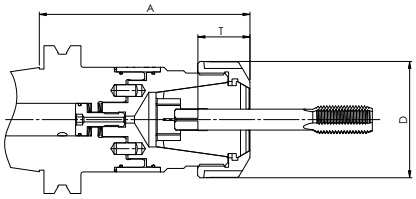
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP225DG-B50-A=50	48416000500	AD/B	50	50	110	66	55	-	-	2,0–25,0 FM25DG•HP	HPC225• HPC225-DIG
CP432DG-B50-A=50	48716000500		63			70	62	-	-	4,0–32,0 FM32DG	HPC432• HPC432-DIG

Accessories: Clamping Nuts page 61, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets page 70, Sealing Discs page 72, Stop Screws page 73

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 60, 61 and 62
[2] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Taper Shanks DIN 69871 – AD50 | AD/B50



GB

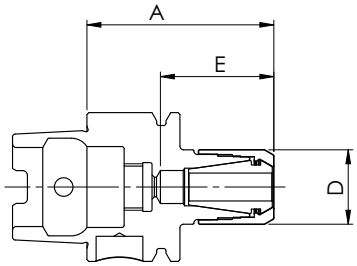
G 6,3
12.000rpm
or U ≤ 1 gmm[4]

SYNCHRO|T

Description	Order-No.	Form	D	A	Tap insertion depth T				Cutting range	Collets
					Shank-ø 2,8 – 7,1	Shank-ø 8 – 9	Shank-ø 10 – 16	Shank-ø 18 – 25		
ST16-GB-B50-A=79	52316000790	AD/B	30	79	18	22	-	-	M3–M12	GERC16-GBD
ST20-GB-B50-A=80	52416000800		32	80			25		M3–M16	GERC20-GBD
ST25-GB-B50-A=84	52516000840		40	84					M3–M20	GERC25-GBD
ST32-GB-B50-A=95	52616000950		50	95				30	M4–M27	GERC32-GBD
ST40-GB-B50-A=105	52716001050		63	105				33	M4–M33	GERC40-GBD

Accessories: Wrenches pages 63, 64, Mounting Devices page 64, Tap Collets pages 68, 69, Taper Wipers page 74

Collet Chucks with Hollow Tapers DIN 69893/ISO 12164 – HSK-A32



GER

MINI

MQL [1]

U ≤ 1gmm
max. 50.000
rpm[4]

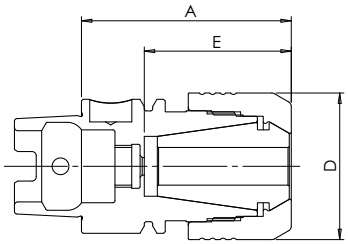
CENTRO|P – Slim Version for HPCM Mini Clamping Nuts

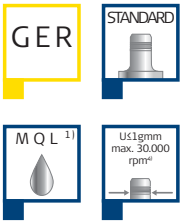
Description	Order-No.	Form	D	A [2]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP11M-HSK-A32-A=40[3]	43223000400	A	16	40	24	-		-		1,0–7,0 GERC11-HP/HPD	HPC11M• HPC11M-DI
CP16M-HSK-A32-A=50[3]	43323000500		22	50	32					1,0–10,0 GERC16-HP/HPD/GBD	HPC16MS• HPC16MS-DI
CP16M-HSK-A32-A=100	43323001000			100	67	44	27	30	14		

Accessories: Clamping Nuts pages 58, 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

[1] MQL (minimal quantity lubrication) see page 5
[2] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 58 and 59
[3] Extra short version, without stop screw
[4] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers
DIN 69893/ISO 12164 – HSK-A32



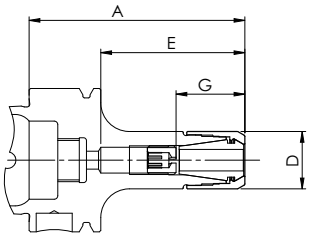


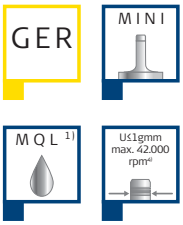
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A 2)	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP20-HSK-A32-A=50 3)	44423000500	A	32	50	35	-	-	-	-	1,0–13,0 GERC20-HP/HPD/GBD	HPC20• HPC20-DI

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

Collet Chucks with Hollow Tapers
DIN 69893/ISO 12164 – HSK-A40





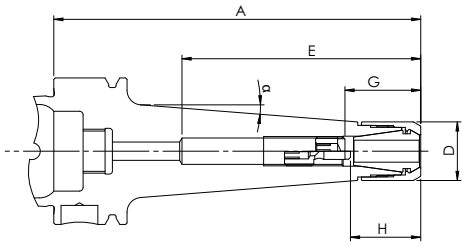
CENTRO|P – Slim Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	A 2)	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP11M-HSK-A40-A=60	43224000600	A	16	60	40	24	16	-	-	1,0–7,0 GERC11-HP/HPD	HPC11M• HPC11M-DI
CP11M-HSK-A40-A=130	43224001300			130	75	32		22	7		

Accessories: Clamping Nuts page 58, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65, 66, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

1) MQL (minimal quantity lubrication) see page 5
2) Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A1) under Clamping Nuts on pages 58, 60 and 62
3) Extra short version, without stop screw
4) Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers
DIN 69893/ISO 12164 – HSK-A40

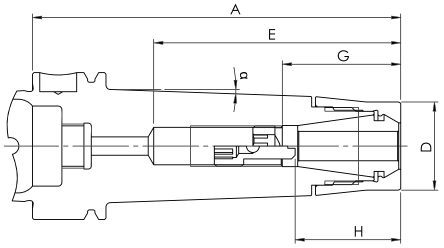


GER | MINI TAPERED | MQL [1] | Us≤1gmm max. 40.000 rpm[3]

CENTRO|P – Tapered Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	A [2]	□	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CPC11M-HSK-A40-A=100	43224401000	A	16	100	4,5	65	34	15	25	8	1,0–7,0 GERC11-HP/ HPD	HPC11M• HPC11M-DI

Accessories: Clamping Nuts page 58, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65, 66, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74



GER | TAPERED | MQL [1] | Us≤1gmm max. 42.000 rpm[3]

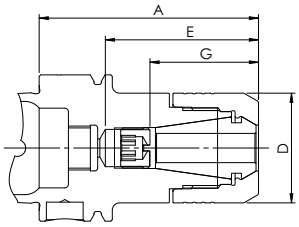
CENTRO|P – Tapered Version for HPCC Special Clamping Nuts

Description	Order-No.	Form	D	A [2]	□	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CPC16-HSK-A40-A=60	44324400600	A	24	60	2	43	30	26	-	-	1,0–10,0 GERC16-HP/ HPD/GBD	HPC16C• HPC16C-DI
CPC16-HSK-A40-A=100	44324401000			100		67	47		32	12		

Accessories: Clamping Nuts pages 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

[1] MQL (minimal quantity lubrication) see page 18
[2] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 58 and 59
[3] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers
DIN 69893/ISO 12164 – HSK-A40



GER

STANDARD

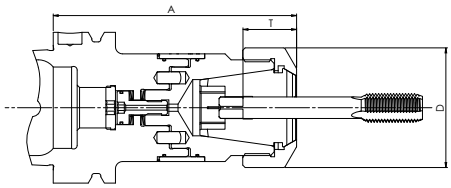
MQL [1]

Us≤1gmm
max. 35.000
rpm[4]

CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [2]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP16-HSK-A40-A=60	44324000600	A	30	60	40	32	28	-	-	1,0–10,0 GERC16-HP/HPD/GBD	HPC16• HPC16-DI
CP25-HSK-A40-A=60 [3]	44524000600		40	60		-	-	-	-	1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI
CP25-HSK-A40-A=100	44524001000			100	76	54	32	36	20		
CP32-HSK-A40-A=61 [3]	44624000610		50	61	45	-	-	-	-	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74



GB

MQL [1]

G 6,3
18.000rpm
orU≤1gmm[4]

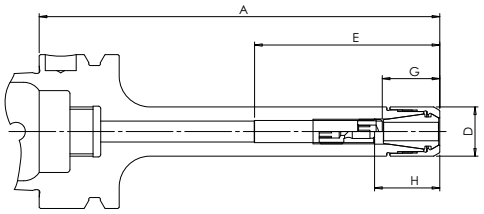
SYNCHRO|T

Description	Order-No.	Form	D	A	Tap insertion depth T				Cutting range	Collets
					Shank-ø 2,8 – 7,1	Shank-ø 8 – 9	Shank-ø 10 – 16	Shank-ø 18 – 25		
ST16-GB-HSK-A40-A=87	52324000870	A	30	87	18	22	-	-	M3–M12	GERC16-GBD
ST20-GB-HSK-A40-A=88	52424000880		32	88			25		M3–M16	GERC20-GBD

Accessories: Wrenches pages 63, 64, Mounting Devices page 64, Tap Collets pages 68, 69, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

[1] MQL (minimal quantity lubrication) see page 5
[2] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 60 and 62
[3] Extra short version, without stop screw
[4] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers
DIN 69893/ISO 12164 – HSK-A50

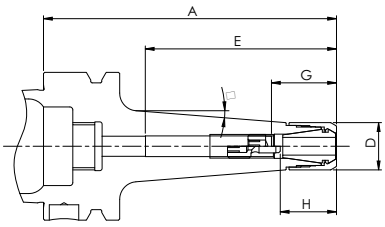


GER | MINI | MQL [1] | Ü≤1gmm max. 27.000 rpm[3]

CENTRO|P – Slim Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	A [2]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP11M-HSK-A50-A=130	43225001300	A	16	130	60	32	15	22	7	1,0–7,0 GERC11-HP/HPD	HPC11M• HPC11M-DI

Accessories: Clamping Nuts page 58 , Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65, 66, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74



GER | MINI TAPERED | MQL [1] | Ü≤1gmm max. 30.000 rpm[3]

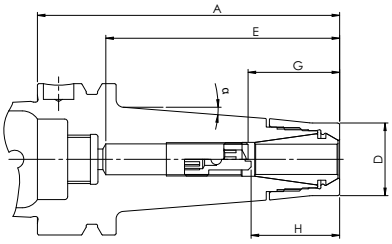
CENTRO|P – Tapered Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	A [2]	□	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CPC11M-HSK-A50-A=100	43225401000	A	16	100	4,5	65	34	15	25	8	1,0–7,0 GERC11-HP/HPD	HPC11M• HPC11M-DI

Accessories: Clamping Nuts page 58, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65, 66, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

[1] MQL (minimal quantity lubrication) see page 5
[2] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on page 58
[3] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers
DIN 69893/ISO 12164 – HSK-A50

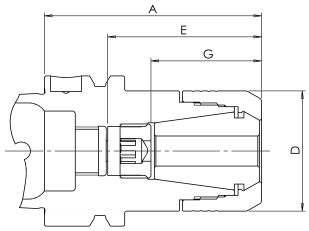


GER | TAPERED | MQL [1] | Us≤1gmm max. 30.000 rpm[4]

CENTRO|P – Tapered Version for HPCC Special Clamping Nuts

Description	Order-No.	Form	D	A [2]	□	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CPC16-HSK-A50-A=65	44325400650	A	24	65	4,5	44	32	28	-	-	1,0–10,0 GERC16-HP/ HPD/GBD	HPC16C• HPC16C-DI
CPC16-HSK-A50-A=100	44325401000			100		77	38					
CPC16-HSK-A50-A=130	44325401300			130		102			36	14		

Accessories: Clamping Nuts page 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74



GER | STANDARD | MQL [1] | Us≤1gmm max. 25.000 rpm[4]

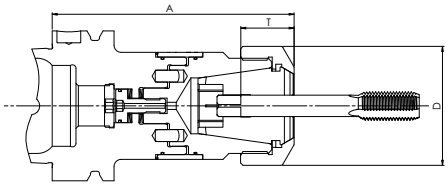
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [2]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP25-HSK-A50-A=60 [3]	44525000600	A	40	60	37	-	-	-	-	1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI
CP25-HSK-A50-A=70	44525000700			70	49	35	34	-	-		
CP25-HSK-A50-A=100	44525001000			100	75	53		35	20		
CP32-HSK-A50-A=70 [3]	44625000700		50	70	47	-	-	-	-	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

[1] MQL (minimal quantity lubrication) see page 5
[2] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 59, 60 and 62
[3] Extra short version, without stop screw
[4] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers
DIN 69893/ISO 12164 – HSK-A50



GB

MQL [1]

G 6,3
18.000rpm
or U ≤ 1gmm²

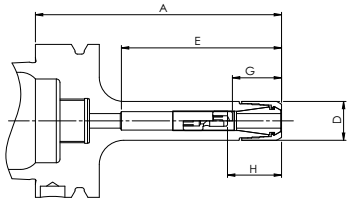
SYNCHRO|T

Description	Order-No.	Form	D	A	Tap insertion depth T				Cutting range	Collets
					Shank-ø 2,8 – 7,1	Shank-ø 8 – 9	Shank-ø 10 – 16	Shank-ø 18 – 25		
ST16-GB-HSK-A50-A=87	52325000870	A	30	87	18	22	-	-	M3–M12	GERC16-GBD
ST20-GB-HSK-A50-A=88	52425000880		32	88			25		M3–M16	GERC20-GBD
ST25-GB-HSK-A50-A=92	52525000920		40	92					M3–M20	GERC25-GBD
ST32-GB-HSK-A50-A=116	52625001160		50	116				30	M4–M27	GERC32-GBD

Accessories: Wrenches pages 63, 64, Mounting Devices page 64, Tap Collets pages 68, 69, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

[1] MQL (minimal quantity lubrication) see page 5
[2] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers
DIN 69893/ISO 12164 – HSK-A63

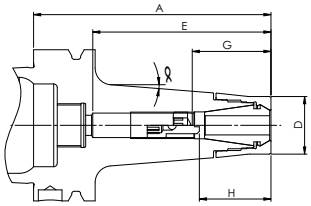


GER | MINI | MQL [1] | G 2,5 Us1gmm max. 25.000 rpm[3]

CENTRO|P – Slim Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	A [2]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP11M-HSK-A63-A=70	43226000700	A	16	70	48	32	15	22	7	1,0–7,0 GERC11-HP/HPD	HPC11M• HPC11M-DI
CP11M-HSK-A63-A=100	43226001000			100	78	36	18	26	12		
CP11M-HSK-A63-A=130	43226001300			130	108	32	15	22	7		
CP11M-HSK-A63-A=160	43226001600			160	138	36	18	26	12		
CP16M-HSK-A63-A=70	43326000700		22	70	46	34	27	20	14	1,0–10,0 GERC16-HP/HPD/GBD	HPC16MS• HPC16MS-DI
CP16M-HSK-A63-A=100	43326001000			100	71	44		30			
CP16M-HSK-A63-A=130	43326001300			130	87	52		38			
CP16M-HSK-A63-A=160	43326001600			160	97						

Accessories: Clamping Nuts pages 58, 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74



GER | TAPERED | MQL [1] | G 2,5 Us1gmm max. 25.000 rpm[3]

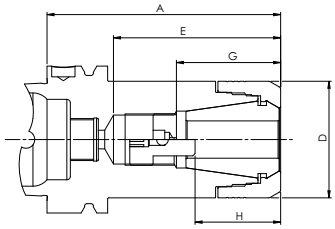
CENTRO|P – Tapered Version for HPCC Special Clamping Nuts

Description	Order-No.	Form	D	A [2]	□	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CPC16-HSK-A63-A=100	44326401000	A	24	100	4,5	75	48	28	35	20	1,0–10,0 GERC16-HP/ HPD/GBD	HPC16C• HPC16C-DI
CPC16-HSK-A63-A=160	44326401600			160	2,5	105						

Accessories: Clamping Nuts page 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

[1] MQL (minimal quantity lubrication) see page 5
[2] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 58 and 59
[3] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers
DIN 69893/ISO 12164 – HSK-A63



GER

STANDARD

MQL [1]

G 2,5
25.000rpm
or U ≤ 1 gmm [4]

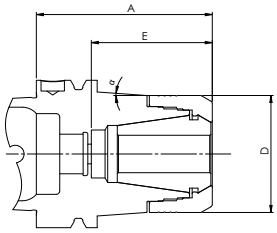
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [2]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP16-HSK-A63-A=55 [3]	44326000550	A	30	55	32	-	-	-	-	1,0–10,0 GERC16-HP/HPD/GBD	HPC16• HPC16-DI
CP16-HSK-A63-A=100	44326001000			100	71	45	28	31	16		
CP16-HSK-A63-A=130	44326001300			130	87	50	26	38	17		
CP16-HSK-A63-A=160	44326001600			160	106	45	28	31	16		
CP16-HSK-A63-A=200	44326002000			200	136						
CP20-HSK-A63-A=60 [3]	44426000600		32	60	35	-	-	-	-	1,0–13,0 GERC20-HP/HPD/GBD	HPC20• HPC20-DI
CP20-HSK-A63-A=100	44426001000			100	70	38	31				
CP25-HSK-A63-A=60 [3]	44526000600		40	60	37	-	-			1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI
CP25-HSK-A63-A=100	44526001000			100	70	55	35	37	24		
CP25-HSK-A63-A=130	44526001300			130	89	60	37	42	12		
CP25-HSK-A63-A=160	44526001600			160	128	60	35	42	24		
CP25-HSK-A63-A=200	44526002000			200	148						
CP32-HSK-A63-A=70 [3]	44626000700		50	70	46	-	-	-	-	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI
CP32-HSK-A63-A=100	44626001000			100	71	57	41	39	26		
CP32-HSK-A63-A=130	44626001300			130	101	69	42	41	18		
CP32-HSK-A63-A=160	44626001600			160	129	70	52	60	26		
CP40-HSK-A63-A=80 [3]	44726000800		63	80	56	-	-	-	-	3,0–26,0 GERC40-HP/HPD/GBD	HPC40• HPC40-DI
CP40-HSK-A63-A=160	44726001600			160	130	75	48				

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

[1] MQL (minimal quantity lubrication) see page 5
[2] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 60 and 62
[3] Extra short version, without stop screw
[4] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers
DIN 69893/ISO 12164 – HSK-A63

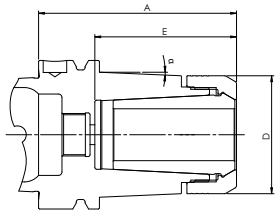


GER | TAPERED STANDARD | MQL [1] | U≤1gmm max. 25.000 rpm[4]

CENTRO|P – Tapered Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [2]	□	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CPC32-HSK-A63-A=75[3]	44626400750	A	50	75	4	51	-	-	-	-	2,0–20,0 GERC32-HP/ HPD/GBD	HPC32• HPC32-DI

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74



GOZ | TAPERED STANDARD | MQL [1] | G 2,5 25.000rpm or U≤1gmm[4]

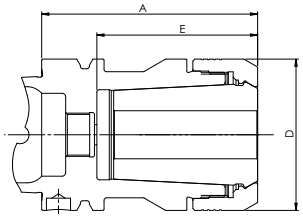
CENTRO|P – Tapered Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [2]	□	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CPC225DG-HSK-A63-A=85[3]	48426400850	A	50	85	2,5	60	-	-	-	-	2,0–25,0 FM25DG•HP	HPC225• HPC225-DIG

Accessories: Clamping Nuts page 61, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets page 70, Sealing Discs page 72, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

[1] MQL (minimal quantity lubrication) see page 5
[2] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 60, 61 and 62
[3] Extra short version, without stop screw
[4] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers
DIN 69893/ISO 12164 – HSK-A63



GOZ

STANDARD

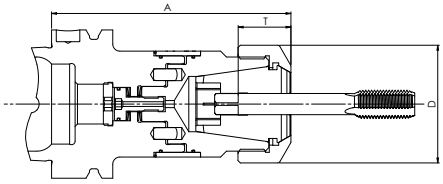
MQL [1]

G 2,5
25.000rpm
or U≤1 gmm⁴⁾

CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [2]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP432DG-HSK-A63-A=90 [3]	48726000900	A	63	90	67	-	-	-	-	4,0–32,0 FM32DG	HPC432• HPC432-DIG

Accessories: Clamping Nuts page 61, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets page 70, Sealing Discs page 72, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74



GB

MQL [1]

G 6,3
18.000rpm
or U≤1 gmm⁴⁾

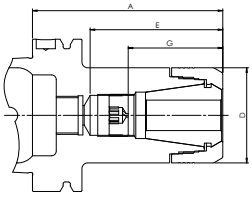
SYNCHRO|T

Description	Order-No.	Form	D	A	Tap insertion depth T				Cutting range	Collets
					Shank-ø 2,8–7,1	Shank-ø 8–9	Shank-ø 10–16	Shank-ø 18–25		
ST16-GB-HSK-A63-A=89	52326000890	A	30	89	18	22	-	-	M3–M12	GERC16-GBD
ST20-GB-HSK-A63-A=90	52426000900		32	90			25		M3–M16	GERC20-GBD
ST25-GB-HSK-A63-A=94	52526000940		40	94					M3–M20	GERC25-GBD
ST32-GB-HSK-A63-A=105	52626001050		50	105				30	M4–M27	GERC32-GBD
ST40-GB-HSK-A63-A=134	52726001340		63	134				33	M4–M33	GERC40-GBD

Accessories: Wrenches pages 63, 64, Mounting Devices page 64, Tap Collets pages 68, 69, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

[1] MQL (minimal quantity lubrication) see page 5
[2] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on page 61
[3] Extra short version, without stop screw
[4] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers
DIN 69893/ISO 12164 – HSK-A80



GER

STANDARD

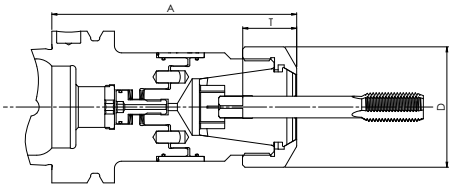
MQL [1]

G 2,5
25.000rpm
or U ≤ 1 gmm²

CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [2]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP32-HSK-A80-A=100	44627001000	A	50	100	70	55	48	-	-	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI
CP40-HSK-A80-A=120	44727001200		63	120	86	54	35			3,0–26,0 GERC40-HP/HPD/GBD	HPC40• HPC40-DI

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74



GB

MQL [1]

G 6,3
18.000rpm
or U ≤ 1 gmm²

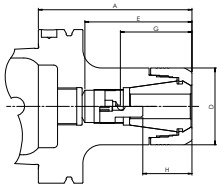
SYNCHRO|T

Description	Order-No.	Form	D	A	Tap insertion depth T				Cutting range	Collets
					Shank-ø 2,8–7,1	Shank-ø 8–9	Shank-ø 10–16	Shank-ø 18–25		
ST32-GB-HSK-A80-A=111	52627001110	A	50	111	18	22	25	30	M4–M27	GERC32-GBD
ST40-GB-HSK-A80-A=131	52727001310		63	131				33	M4–M33	GERC40-GBD

Accessories: Wrenches pages 63, 64, Mounting Devices page 64, Tap Collets pages 68, 69, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

[1] MQL (minimal quantity lubrication) see page 5
[2] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 60 and 62
[3] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers
DIN 69893/ISO 12164 – HSK-A100

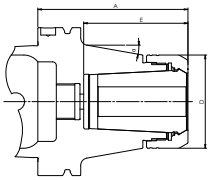


GER | STANDARD | MQL [1] | G 2,5 25.000rpm or U≤1 gmm [4]

CENTRO|P GER – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [2]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP16-HSK-A100-A=100	44328001000	A	30	100	70	48	28	35	16	1,0–10,0 GERC16-HP/HPD/GBD	HPC16• HPC16-DI
CP16-HSK-A100-A=160	44328001600			160	130						
CP25-HSK-A100-A=100	44528001000		40	100	71	56	38	40	20	1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI
CP25-HSK-A100-A=160	44528001600			160	105	68		50			
CP32-HSK-A100-A=100	44628001000		50	100	70	59	42	40	24	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI
CP32-HSK-A100-A=160	44628001600			160	99	70		52			
CP32-HSK-A100-A=200	44628002000			200	150	72	43	54	28		
CP40-HSK-A100-A=100 [3]	44728001000		63	100	65	-	-	-	-	3,0–26,0 GERC40-HP/HPD/GBD	HPC40• HPC40-DI

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74



GOZ | TAPERED STANDARD | MQL [1] | G 2,5 25.000rpm or U≤1 gmm [4]

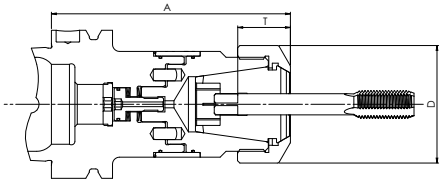
CENTRO|P – Tapered Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [2]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CPC225DG-HSK-A100-A=90 [3]	48428400900	A	50	90	60	-	-	-	-	2,0–25,0 FM25DG•HP	HPC225• HPC225-DIG
CPC432DG-HSK-A100-A=100 [3]	48728401000		63	100	69					4,0–32,0 FM32DG	HPC432• HPC432-DIG

Accessories: Clamping Nuts page 61, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets page 70, Sealing Discs page 72, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

[1] MQL (minimal quantity lubrication) see page 5
[2] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 60, 61 and 62
[3] Extra short version, without stop screw
[4] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers DIN 69893/ISO 12164 – HSK-A100



GB

MQL [1]

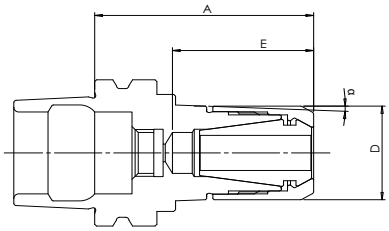
G 6,3
18.000rpm
orU≤1gmm[4]

SYNCHRO|T

Description	Order-No.	Form	D	A	Tap insertion depth T				Cutting range	Collets
					Shank-ø 2,8 – 7,1	Shank-ø 8 – 9	Shank-ø 10 – 16	Shank-ø 18 – 25		
ST16-GB-HSK-A100-A=95	52328000950	A	30	95	18	22	-	-	M3–M12	GERC16-GBD
ST20-GB-HSK-A100-A=97	52428000970		32	97			25		M3–M16	GERC20-GBD
ST25-GB-HSK-A100-A=101	52528001010		40	101					M3–M20	GERC25-GBD
ST32-GB-HSK-A100-A=110	52628001100		50	110				30	M4–M27	GERC32-GBD
ST40-GB-HSK-A100-A=133	52728001330		63	133				33	M4–M33	GERC40-GBD

Accessories: Wrenches pages 63, 64, Mounting Devices page 64, Tap Collets pages 68, 69, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

Collet Chucks with Hollow Tapers DIN 69893 – HSK-E25



GER

MINI TAPERED

U≤1gmm
max. 60.000
rpm[4]

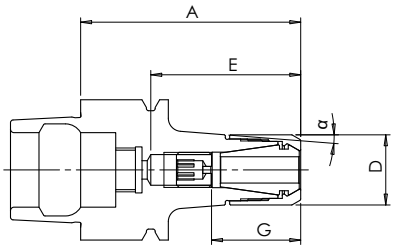
CENTRO|P – Tapered Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	A [2]	□	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CPC8M-HSK-E25-A=35 [3]	43142000350	E	10	35	-	16	-	-	-	-	1,0–5,0 GERC8-HP	HPC8M
CPC11M-HSK-E25-A=35 [3]	43242000350		16		2,5	22					1,0–7,0 GERC11-HP/ HPD	HPC11M• HPC11M-DI
CPC16M-HSK-E25-A=45 [3]	43342000450		22	45	-	30					1,0–10,0 GERC16-HP/ HPD/GBD	HPC16MS• HPC16MS-DI

Accessories: Clamping Nuts pages 58, 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

[1] MQL (minimal quantity lubrication) see page 5
[2] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 58 and 59
[3] Extra short version, without stop screw
[4] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers
DIN 69893 – HSK-E32



GER

MINI TAPERED

U≤1gmm
max. 50.000
rpm[4]

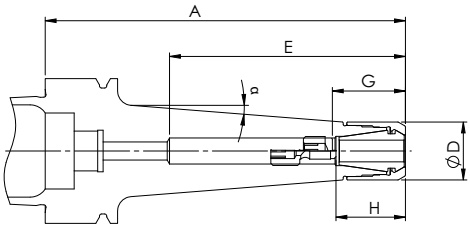
CENTRO|P – Tapered Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	A[2]	□	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CP8M-HSK-E32-A=50[3]	43143000500	E	10	50	-	30	-	-	-	-	1,0–5,0 GERC8-HP	HPC8M
CPC11M-HSK-E32-A=50	43243000500		16		4,5	31	20	18			1,0–7,0 GERC11-HP/ HPD	HPC11M• HPC11M-DI
CPC16M-HSK-E32-A=55	43343000550		22	55		40	32	28	22	12	1,0–10,0 GERC16-HP/ HPD/GBD	HPC16MS• HPC16MS-DI

Accessories: Clamping Nuts pages 58, 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

[1] MQL (minimal quantity lubrication) see page 5
[2] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 58 and 59
[3] Extra short version, without stop screw
[4] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers DIN 69893 – HSK-E40



GER

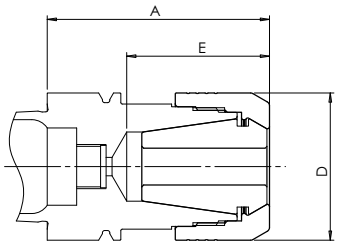
MINI TAPERED

U≤1gmm
max. 42.000 rpm[4]

CENTRO|P – Tapered Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	A [2]	□	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CPC11M-HSK-E40-A=50	43244000500	E	16	50	4,5	31	20	18	-	-	1,0–7,0 GERC11-HP/ HPD	HPC11M• HPC11M-DI
CPC11M-HSK-E40-A=100	43244001000			100		64	36		26	12		
CPC11M-HSK-E40-A=130	43244001300			130		65	33	19	23	13		
CPC11M-HSK-E40-A=160	43244001600			160								
CPC16M-HSK-E40-A=55	43344000550		22	55		38	30	28	20	12	1,0–10,0 GERC16-HP/ HPD/GBD	HPC16MS• HPC16MS-DI
CPC16M-HSK-E40-A=100	43344001000			100	2,5	66	48		38			

Accessories: Clamping Nuts pages 58, 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74



GER

STANDARD

U≤1gmm
max. 30.000 rpm[4]

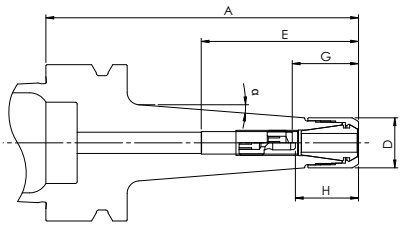
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [2]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP25-HSK-E40-A=60[3]	44544000600	E	40	60	39	-	-	-	-	1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

[1] MQL (minimal quantity lubrication) see page 5
[2] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 58, 59, 60 and 62
[3] Extra short version, without stop screw
[4] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers DIN 69893 – HSK-E50



GER

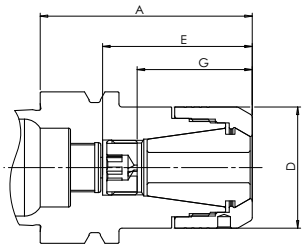
MINI TAPERED

U≤1gmm max. 30.000 rpm[5]

CENTRO|P – Tapered Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	A [2]	□	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CPC11M-HSK-E50-A=60	43245000600	E	16	60	4,5	37	23	15	-	-	1,0–7,0 GERC11-HP/HPD	HPC11M• HPC11M-DI
CPC11M-HSK-E50-A=100	43245001000			100		50	30		21	10		
CPC16M-HSK-E50-A=60	43345000600		22	60		39	31	28	21	12	1,0–10,0 GERC16-HP/HPD/GBD	HPC16MS• HPC16MS-DI
CPC16M-HSK-E50-A=100	43345001000			100	2,5	72	48		35			

Accessories: Clamping Nuts pages 58, 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74



GER

STANDARD

U≤1gmm max. 30.000 rpm[5]

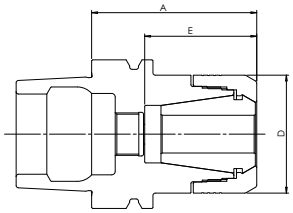
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [2]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP25-HSK-E50-A=70 [3]	44545000700	E	40	70	49	39	30	-	-	1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

[1] MQL (minimal quantity lubrication) see page 5
[2] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 58, 59, 60 and 62
[3] Only stop screw AS-CP16-U (thread M11x1) possible
[4] Extra short version, without stop screw
[5] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers DIN 69893 – HSK-E63



GER

STANDARD

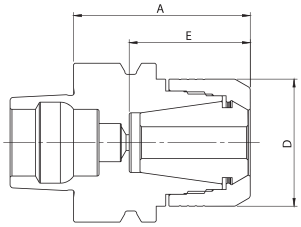
U≤1gmm
max. 30.000
rpm[4]

CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [2]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP32-HSK-E63-A=70[4]	44646000700	E	50	70	47	-	-	-	-	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Taper Wipers page 74, Coolant Supply Tubes and Wrenches page 74

Collet Chucks with Hollow Tapers DIN 69893 – HSK-F50



GER

STANDARD

U≤1gmm
max. 30.000
rpm[4]

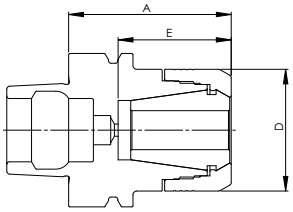
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [2]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP25-HSK-F50-A=55[3]	44585000550	F	40	55	38	-	-	-	-	1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Taper Wipers page 74

[1] MQL (minimal quantity lubrication) see page 5
[2] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 60 and 62
[3] Extra short version, without stop screw
[4] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Hollow Tapers DIN 69893 – HSK-F63



GER

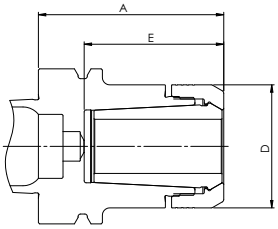
STANDARD

G 2,5
30.000rpm
or U≤1gmm[3]

CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP16-HSK-F63-A=100	44386001000	F	30	100	70	47	30	33	16	1,0–10,0 GERC16-HP/HPD/GBD	HPC16• HPC16-DI
CP25-HSK-F63-A=100	44586001000		40			52	38	34	20	1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI
CP32-HSK-F63-A=65[2]	44686000650		50	65	39	-	-	-	-	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI
CP32-HSK-F63-A=100	44686001000		50	100	70	54	41	36	22		

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Taper Wipers page 74



GOZ

STANDARD

U≤1gmm
max. 30.000
rpm[3]

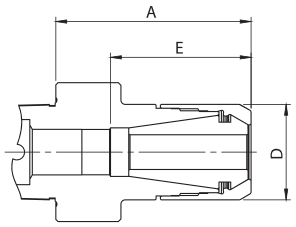
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP225DG-HSK-F63-A=75[2]	48486000750	F	50	75	56	-	-	-	-	2,0–25,0 FM25DG-HP	HPC225• HPC225-DIG

Accessories: Clamping Nuts pages 61, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets page 70, Sealing Discs page 72, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 60, 61 and 62
[2] Extra short version, without stop screw
[3] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Polygonal Shank ISO 26623-1 – C3 (AD)



GER

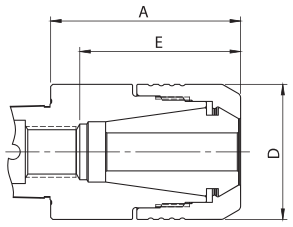
MINI

U≤1gmm
max. 25.000
rpm[4]

CENTRO|P – Slim Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E[3]	G max.	G min.	H max.	H min.		
CP16M-C3-A=45[2]	43353000450	AD	22	45	45	-	-	-	-	1,0-10,0 GERC16-HP/HPD/GBD	HPC16MS• HPC16MS-DI

Accessories: Clamping Nuts pages 58, 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Taper Wipers page 74



GER

STANDARD

U≤1gmm
max. 25.000
rpm[4]

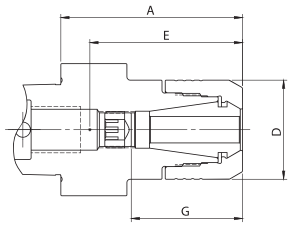
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E[3]	G max.	G min.	H max.	H min.		
CP20-C3-A=45[2]	44453000450	AD	32	45	36	-	-	-	-	1,0-13,0 GERC20-HP/HPD/GBD	HPC20• HPC20-DI

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 59, 60 and 62
[2] Extra short version, without stop screw
[3] With the thread M12x1,5 stated by the ISO standard 26613-1, cutting tools with shank diameters up to 10 mm can be inserted deeper in interface C3 as mentioned at dimension E in the chart.
[4] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Polygonal Shank ISO 26623-1 – C4 (AD)



GER

STANDARD

U≤1gmm
max. 25.000
rpm[4]

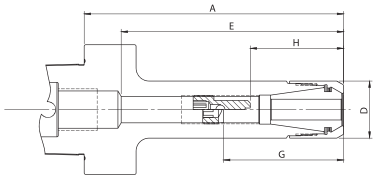
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E[3]	G max.	G min.	H max.	H min.		
CP16-C4-A=55	44354000550	AD	30	55	47	38	29	-	-	1,0–10,0 GERC16-HP/HPD/GBD	HPC16• HPC16-DI
CP20-C4-A=55[2]	44454000550		32		44	-	-	-	-	1,0–13,0 GERC20-HP/HPD/GBD	HPC20• HPC20-DI
CP25-C4-A=52[2]	44554000520		40	52	47	-	-	-	-	1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI
CP32-C4-A=54[2]	44654000540		50	54	50	-	-	-	-	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 60 and 62
[2] Extra short version, without stop screw
[3] With the thread M14x1,5 stated by the ISO standard 26613-1, cutting tools with shank diameters up to 12 mm can be inserted deeper in interface C4 as mentioned at dimension E in the chart.
[4] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Polygonal Shank ISO 26623-1 – C5 (AD)



GER

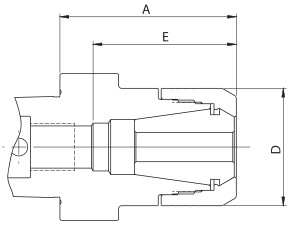
MINI

U≤1gmm
max. 25.000
rpm[4]

CENTRO|P – Slim Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E[3]	G max.	G min.	H max.	H min.		
CP16M-C5-A=100	43355001000	AD	22	100	87	50	30	36	30	1,0–10,0 GERC16-HP/HPD/GBD	HPC16MS• HPC16MS-DI

Accessories: Clamping Nuts pages 58, 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74



GER

STANDARD

U≤1gmm
max. 25.000
rpm[4]

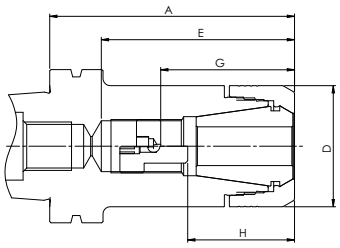
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E[3]	G max.	G min.	H max.	H min.		
CP16-C5-A=60	44355000600	AD	30	60	47	38	29	-	-	1,0–10,0 GERC16-HP/HPD/GBD	HPC16• HPC16-DI
CP16-C5-A=100	44355001000			100	87	51		37	29		
CP20-C5-A=60[2]	44455000600		32	60	47	-	-	-	-	1,0–13,0 GERC20-HP/HPD/GBD	HPC20• HPC20-DI
CP25-C5-A=60[2]	44555000600		40		48	-	-	-	-	1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI
CP32-C5-A=60[2]	44655000600		50		49	-	-	-	-	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 59, 60 and 62
[2] Extra short version, without stop screw
[3] With the thread M16x1,5 stated by the ISO standard 26613-1, cutting tools with shank diameters up to 14 mm can be inserted deeper in interface C5 as mentioned at dimension E in the chart.
[4] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Polygonal Shank ISO 26623-1 – C6 (AD)



GER

STANDARD

G 2,5
25.000rpm
or U ≤ 1 gmm[4]

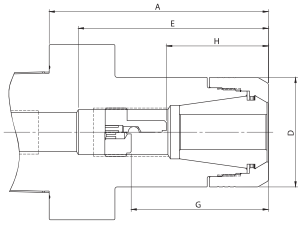
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E[3]	G max.	G min.	H max.	H min.		
CP16-C6-A=60[2]	44356000600	AD	30	60	44	-	-	-	-	1,0–10,0 GERC16-HP/HPD/GBD	HPC16• HPC16-DI
CP16-C6-A=100	44356001000			100	83	53	29	39	25		
CP20-C6-A=60[2]	44456000600		32	60	44	-	-	-	-	1,0–13,0 GERC20-HP/HPD/GBD	HPC20• HPC20-DI
CP20-C6-A=100	44456001000			100	84	59	33				
CP25-C6-A=60[2]	44556000600		40	60	38	-	-	-	-	1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI
CP25-C6-A=100	44556001000			100	78	62	36	45	30		
CP25-C6-A=130	44556001300			130	99	70	34	50			
CP25-C6-A=160	44556001600			160	118						
CP32-C6-A=60[2]	44656000600		50	60	42	-	-	-	-	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI
CP32-C6-A=100	44656001000			100	79	63	45	45	25		
CP32-C6-A=130	44656001300			130	99	65		53			
CP40-C6-A=65[2]	44756000650		63	65	51	-	-	-	-	3,0–26,0 GERC40-HP/HPD/GBD	HPC40• HPC40-DI
CP40-C6-A=100	44756001000			100	86	46	50				

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 60 and 62
[2] Extra short version, without stop screw
[3] With the thread M20x2 stated by the ISO standard 26613-1, cutting tools with shank diameters up to 18 mm can be inserted deeper in interface C6 as mentioned at dimension E in the chart.
[4] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Polygonal Shank ISO 26623-1 – C8 (AD)



GER

STANDARD

G 2,5
25.000rpm
or U≤1gmm²

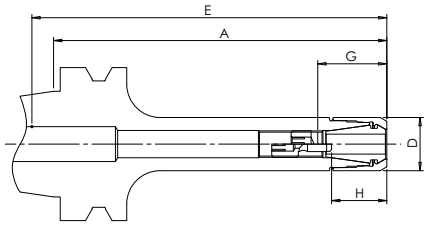
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [1)]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E [2)]	G max.	G min.	H max.	H min.		
CP32-C8-A=100	44658001000	AD	50	100	86	63	41	45	27	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI
CP40-C8-A=100	44758001000		63			55	47	-	-	3,0–26,0 GERC40-HP/HPD/GBD	HPC40• HPC40-DI

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74

[1)] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1)] under Clamping Nuts on pages 60 and 62
[2)] With the thread M20x2 stated by the ISO standard 26613-1, cutting tools with shank diameters up to 18 mm can be inserted deeper in interface C8 as mentioned at dimension E in the chart.
[3)] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Taper Shanks JIS B 6339 – MAS/BT30 (AD)



GER

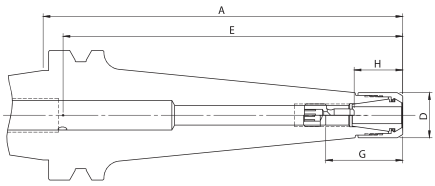
MINI

U≤1gmm
max. 25.000
rpm[2]

CENTRO|P – Slim Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP8M-BT30-A=75	43163000750	AD	10	75	75	-	-	-	-	1,0–5,0 GERC8-HP	HPC8M
CP11M-BT30-A=50	43263000500		16	50	68	32	18	22	12	1,0–7,0 GERC11-HP/HPD	HPC11M• HPC11M-DI
CP11M-BT30-A=100	43263001000			100		36		26			

Accessories: Clamping Nuts pages 58, 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65, 66, Stop Screws page 73, Taper Wipers page 74



GER

MINI TAPERED

U≤1gmm
max. 25.000
rpm[2]

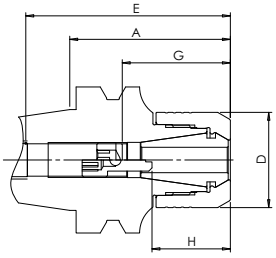
CENTRO|P – Tapered Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CPC11M-BT30-A=130	43263001300	AD	16	130	130	29	19	19	13	1,0–7,0 GERC11-HP/HPD	HPC11M• HPC11M-DI
CPC11M-BT30-A=160	43263001600			160	160						

Accessories: Clamping Nuts pages 58, 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65, 66, Stop Screws page 73, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on page 58
[3] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Taper Shanks JIS B 6339 – MAS/BT30 (AD)



GER

STANDARD

G 2,5
25.000rpm
or U≤1gmm²

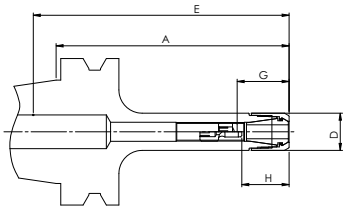
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP16-BT30-A=50	44363000500	AD	30	50	73	44	28	31	16	1,0–10,0 GERC16-HP/HPD/GBD	HPC16• HPC16-DI
CP16-BT30-A=60	44363000600			60	82	45	28	31	14		
CP16-BT30-A=75	44363000750			75	97						
CP16-BT30-A=90	44363000900			90	112						
CP16-BT30-A=100	44363001000			100	123	44			16		
CP16-BT30-A=120	44363001200			120	112	45			14		
CP20-BT30-A=75	44463000750		32	75	65	47	31	-	-	1,0–13,0 GERC20-HP/HPD/GBD	HPC20• HPC20-DI
CP25-BT30-A=60	44563000600		40	60	77	59	35	42	30	1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI
CP25-BT30-A=75	44563000750			75	72	56	38	39	23		
CP25-BT30-A=90	44563000900			90	87						
CP25-BT30-A=120	44563001200			120	115						
CP32-BT30-A=60	44663000600		50	60	69	52	42	-	-	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI
CP32-BT30-A=75	44663000750			75	84	62		45	24		
CP32-BT30-A=90	44663000900			90	94						

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on page 60 and 62
[2] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Taper Shanks JIS B 6339 – MAS/BT40 (AD|AD/B)



GER

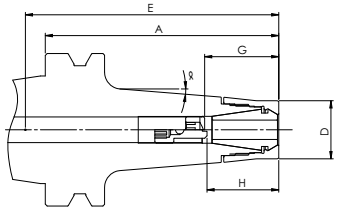
MINI

G 2,5
25.000rpm
or U ≤ 1 gmm²

CENTRO|P – Slim Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	A [1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP11M-BTB40-A=75	43264000750	AD/B	16	75	85	30	15	21	8	1,0–7,0 GERC11-HP/HPD	HPC11M• HPC11M-DI
CP11M-BTB40-A=100	43264001000			100	110	36	18	26	12		
CP11M-BTB40-A=120	43264001200			120	130	30	15	21	8		
CP11M-BTB40-A=160	43264001600			160	170	36	18	26	12		
CP16M-BTB40-A=75	43364000750		22	75	100	49	27	32	16	1,0–10,0 GERC16-HP/HPD/GBD	HPC16MS• HPC16MS-DI
CP16M-BTB40-A=90	43364000900			90	115						
CP16M-BTB40-A=120	43364001200			120	145						
CP16M-BTB40-A=150	43364001500			150	175						

Accessories: Clamping Nuts pages 58, 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74



GER

TAPERED

G 2,5
25.000rpm
or U ≤ 1 gmm²

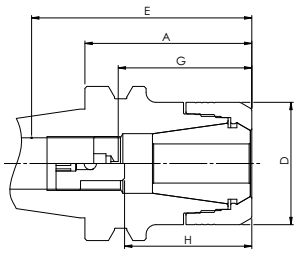
CENTRO|P – Tapered Version for HPCC Special Clamping Nuts

Description	Order-No.	Form	D	A [1]	□	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CPC16-BTB40-A=100	44364401000	AD/B	24	100	4,5	110	48	28	35	20	1,0–10,0 GERC16-HP/HPD/GBD	HPC16C• HPC16C-DI
CPC16-BTB40-A=160	44364401600			160		170						

Accessories: Clamping Nuts page 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 58 and 59
[2] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Taper Shanks JIS B 6339 – MAS/BT40 (AD|AD/B)



GER

STANDARD

G 2,5
25.000rpm
or U ≤ 1 gmm²

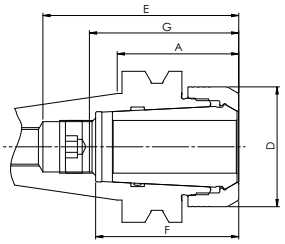
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP16-BT40-A=70	44365000700	AD	30	70	110	45	28	31	16	1,0–10,0 GERC16-HP/HPD/GBD	HPC16• HPC16-DI
CP16-BTB40-A=70	44364000700	AD/B									
CP16-BT40-A=100	44365001000	AD		100	138						
CP16-BTB40-A=100	44364001000	AD/B									
CP16-BTB40-A=120	44364001200			120	140						
CP16-BTB40-A=160	44364001600			160	198						
CP16-BTB40-A=200	44364002000			200	238						
CP20-BTB40-A=75	44464000750	AD/B	32	75	76	57	31	-	-	1,0–13,0 GERC20-HP/HPD/GBD	HPC20• HPC20-DI
CP20-BTB40-A=120	44464001200			120	105						
CP25-BTB40-A=55	44564000550	AD/B	40	55	93	60	44	42	24	1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI
CP25-BT40-A=70	44565000700	AD		70	110	60	35		20		
CP25-BTB40-A=70	44564000700	AD/B									
CP25-BT40-A=100	44565001000	AD		100	100						
CP25-BTB40-A=100	44564001000	AD/B									
CP25-BTB40-A=120	44564001200			120							
CP25-BTB40-A=160	44564001600			160	116						
CP25-BTB40-A=200	44564002000			200	146						
CP32-BTB40-A=55	44664000550	AD/B	50	55	90	70	52	61	35	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI
CP32-BT40-A=70	44665000700	AD		70	100	75	55	62	42		
CP32-BTB40-A=70	44664000700	AD/B									
CP32-BT40-A=100	44665001000	AD		100	113	70	42	52	32		
CP32-BTB40-A=100	44664001000	AD/B									
CP32-BTB40-A=120	44664001200			120	110						
CP32-BTB40-A=160	44664001600			160	129						
CP40-BT40-A=70	44765000700	AD	63	70	90	58	48	-	-	3,0–26,0 GERC40-HP/HPD/GBD	HPC40• HPC40-DI
CP40-BT40-A=100	44765001000			100	120	65					

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 60 and 62
[2] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Taper Shanks JIS B 6339 – MAS/BT40 (AD/B)



GOZ

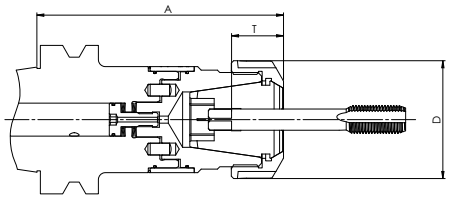
STANDARD

U≤1gmm max. 25.000 rpm[3]

CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop		Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
					E[2]	F[2]	G max.	G min.	H max.	H min.		
CP225DG-BTB40-A=48	48464000480	AD/B	50	48	89	59	62	56	-	-	2,0–25,0 FM25DG-HP	HPC225• HPC225-DIG

Accessories: Clamping Nuts page 61, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets page 70, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74



GB

G 6,3 12.000rpm or U≤1gmm[3]

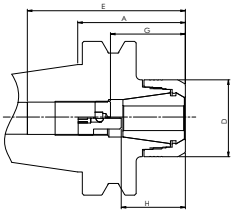
SYNCHRO|T

Description	Order-No.	Form	D	A	Tap insertion depth T				Cutting range	Collets
					Shank-ø 2,8-7,1	Shank-ø 8-9	Shank-ø 10-16	Shank-ø 18-25		
ST16-GB-BTB40-A=84	52364000840	AD/B	30	84	18	22	-	-	M3–M12	GERC16-GBD
ST20-GB-BTB40-A=85	52464000850		32	85			25		M3–M16	GERC20-GBD
ST25-GB-BTB40-A=89	52564000890		40	89					M3–M20	GERC25-GBD
ST32-GB-BTB40-A=110	52664001100		50	110				30	M4–M27	GERC32-GBD
ST40-GB-BTB40-A=115	52764001150		63	115				33	M4–M33	GERC40-GBD

Accessories: Wrenches pages 63, 64, Mounting Devices page 64, Tap Collets pages 68, 69, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on page 61
[2] Dimension E is for tool shanks ≤ 20 mm and dimension F is for tool shanks > 20 mm
[3] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Taper Shanks JIS B 6339 – MAS/BT50 (AD|AD/B)



GER

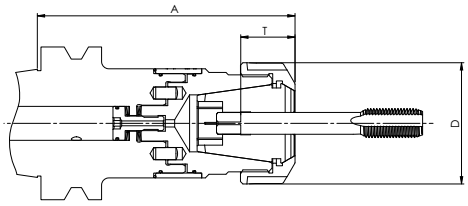
STANDARD

G 2,5
25.000rpm
or U≤1gmm²

CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A [1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP16-BT50-A=105	44367001050	AD	30	105	105	43	29	-	-	1,0–10,0 GERC16-HP/HPD/GBD	HPC16• HPC16-DI
CP16-BT50-A=135	44367001350			135	135						
CP25-BT50-A=105	44567001050		40	105	105	64	38	46	36	1,0–16,0 GERC25-HP/HPD/GBD	HPC25• HPC25-DI
CP25-BT50-A=135	44567001350			135	135						
CP25-BT50-A=165	44567001650			165	165						
CP32-BT50-A=70	44667000700		50	70	90	75	45	55	30	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI
CP32-BTB50-A=100	44666001000	AD/B		100	150	70	53	63	35		
CP32-BT50-A=135	44667001350	AD		135	135	70	45	52	42		
CP32-BTB50-A=160	44666001600	AD/B		160	200	80	53	60	35		
CP40-BT50-A=70	44767000700	AD	63	70	120	48	55	-	-	3,0–26,0 GERC40-HP/HPD/GBD	HPC40• HPC40-DI
CP40-BT50-A=100	44767001000			100	150		70				

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74



GB

G 6,3
12.000rpm
or U≤1gmm²

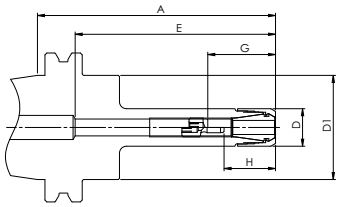
SYNCHRO|T

Description	Order-No.	Form	D	A	Tap insertion depth T				Cutting range	Collets
					Shank-ø 2,8 – 7,1	Shank-ø 8 – 9	Shank-ø 10 – 16	Shank-ø 18 – 25		
ST16-GB-BTB50-A=99	52366000990	AD/B	30	99	18	22	-	-	M3–M12	GERC16-GBD
ST20-GB-BTB50-A=100	52466001000		32	100			25		M3–M16	GERC20-GBD
ST25-GB-BTB50-A=104	52566001040		40	104					M3–M20	GERC25-GBD
ST32-GB-BTB50-A=120	52666001200		50	120				30	M4–M27	GERC32-GBD
ST40-GB-BTB50-A=120	52766001200		63	120				33	M4–M33	GERC40-GBD

Accessories: Wrenches pages 63, 64, Mounting Devices page 64, Tap Collets pages 68, 69, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 60 and 62
[2] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Taper Shanks ANSI B.50 – CAT40 (AD/B)



GER

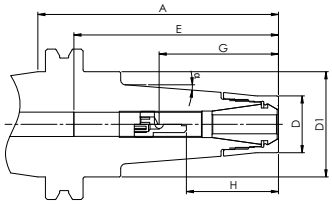
MINI

G 2,5
25.000rpm
orU≤1gmm³

CENTRO|P– Slim Version for HPCM Mini Clamping Nuts

Description	Order-No.	Form	D	D1	A [1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CP11M-CAT40-A=4" [2]	43275001016	AD/B	16	44,45	4"	130	43	19	32	10	1,0–7,0 GERC11-HP/ HPD	HPC11M• HPC11M-DI
CP11M-CAT40-A=5" [2]	43275001270				5"	150						

Accessories: Clamping Nuts pages 58, 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65, 66, Stop Screws page 73, Taper Wipers page 74



GER

TAPERED

G 2,5
25.000rpm
orU≤1gmm³

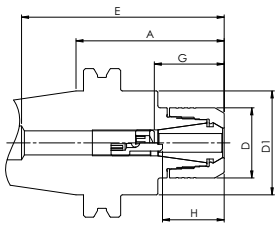
CENTRO|P – Tapered Version for HPCC Special Clamping Nuts

Description	Order-No.	Form	D	D1	A [1]	□	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
								Type U		Type W			
							E	G max.	G min.	H max.	H min.		
CPC16-CAT40-A=4" [2]	44375401016	AD/B	24	44,45	4"	4,5	125	56	29	42	18	1,0–10,0 GERC16-HP/ HPD/GBD	HPC16C• HPC16C-DI
CPC16-CAT40-A=6" [2]	44375401524				6"	2,5	175	66		47			

Accessories: Clamping Nuts page 59, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 58 and 59
[2] CAT40 is supplied with thread 5/8"-11 UNC complying with ANSI B5.50
[3] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Taper Shanks ANSI B.50 – CAT40 (AD/B)



GER

STANDARD

G 2,5
25.000rpm
or U ≤ 1 gmm³

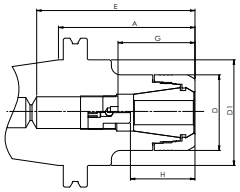
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	D1	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CP16-CAT40-A=2,5"[2]	44375000635	AD/B	30	44,45	2,5"	75	45	28	32	16	1,0–10,0 GERC16-HP/ HPD/GBD	HPC16• HPC16-DI
CP16-CAT40-A=4"[2]	44375001016				4"	125						
CP16-CAT40-A=5"[2]	44375001270				5"	150						
CP20-CAT40-A=3"[2]	44475000762		32		3"	63		33	-	-	1,0–13,0 GERC20-HP/ HPD/GBD	HPC20• HPC20DI
CP20-CAT40-A=4"[2]	44475001016				4"							
CP25-CAT40-A=3"[2]	44575000762		40		3"	80	58	35	45	35	1,0–16,0 GERC25-HP/ HPD/GBD	HPC25• HPC25-DI
CP25-CAT40-A=4"[2]	44575001016				4"	85	65			26		
CP32-CAT40-A=3"[2]	44675000762		50		3"	94	62	75	58	44	2,0–20,0 GERC32-HP/ HPD/GBD	HPC32• HPC32-DI
CP32-CAT40-A=4"[2]	44675001016				4"		65	41	48	27		
CP32-CAT40-A=5"[2]	44675001270				5"		51	75	58	26		
CP32-CAT40-A=6"[2]	44675001524				6"	134	65	41	48	27		
CP40-CAT40-A=4"[2]	44775001016		63		4"	74	-	-	-	-	3,0–26,0 GERC40-HP/ HPD/GBD	HPC40• HPC40-DI

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 60 and 62
[2] CAT40 is supplied with thread 5/8"-11 UNC complying with ANSI B5.50
[3] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Taper Shanks ANSI B.50 – CAT50 (AD/B)



GER

STANDARD

G 2,5
25.000rpm
or U ≤ 1 gmm

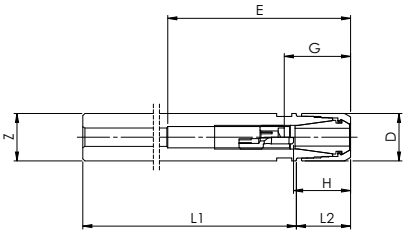
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	D1	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CP16-CAT50-A=4"[2]	44377001016	AD/B	30	69,85	4"	125	57	30	43	19	1,0–10,0 GERC16-HP/ HPD/GBD	HPC16• HPC16-DI
CP16-CAT50-A=6"[2]	44377001524				6"	175						
CP20-CAT50-A=4"[2]	44477001016		32		4"	87		32	-	-	1,0–13,0 GERC20-HP/ HPD/GBD	HPC20• HPC20-DI
CP20-CAT50-A=6"[2]	44477001524				6"	115						
CP25-CAT50-A=4"[2]	44577001016		40		4"	85	65	36	46	25	1,0–16,0 GERC25-HP/ HPD/GBD	HPC25• HPC25-DI
CP25-CAT50-A=6"[2]	44577001524				6"	115						
CP32-CAT50-A=4"[2]	44677001016		50		4"	95		41		27	2,0–20,0 GERC32-HP/ HPD/GBD	HPC32• HPC32-DI
CP32-CAT50-A=6"[2]	44677001524				6"	120						
CP40-CAT50-A=4"[2]	44777001016		63		4"	95	57	47	-	-	3,0–26,0 GERC40-HP/ HPD/GBD	HPC40• HPC40-DI
CP40-CAT50-A=6"[2]	44777001524				6"	120	67					

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 60 and 62
[2] CAT50 is supplied with thread 1"-8 UNC complying with ANSI B5.50
[3] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Collet Chucks with Cylindrical Shank (AD)

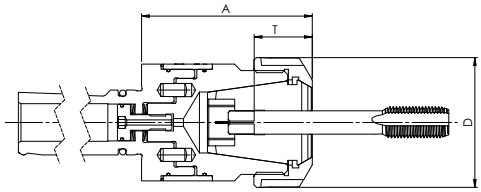


GER MINI

CENTRO|P – Tool Extension for HPCM Mini Clamping Nuts

Description	Order-No.	Z	D	L1	L2 [1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
						E	G max.	G min.	H max.	H min.		
CP8M-Z10-L=150	42110001500	10	10	138	12	16	-	-	-	-	1,0–5,0 GERC8-HP	HPC8M
CP8M-Z10-L=200	42110002000			188								
CP11M-Z16-L=150	42216001500	16	16	133	17	68	36	18	26	12	1,0–7,0 GERC11-HP/ HPD	HPC11M• HPC11M-DI
CP11M-Z16-L=200	42216002000			183								
CP16M-Z16-L=150	42316001500		22	117	33		48	28	35	16	1,0–10,0 GERC16-HP/ HPD/GBD	HPC16MS• HPC16MS-DI
CP16M-Z20-L=150	42320001500	20										
CP16M-Z20-L=200	42320002000			167								

Accessories: Clamping Nuts pages 58, 59, Wrenches pages 63, 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74



GB

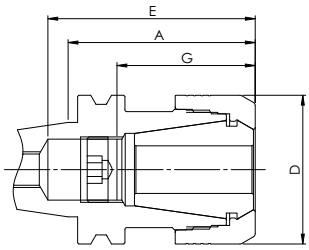
SYNCHRO|T – with Shank DIN 1835 B+E

Description	Order-No.	Z	D	A	Tap insertion depth T				Cutting range	Collets
					Shank-ø 2,8–7,1	Shank-ø 8–9	Shank-ø 10–16	Shank-ø 18–25		
ST16-GB-Z20-A=58	52304000580	20	30	58	18	22	-	-	M3–M12	GERC16-GBD
ST16-GB-Z25-A=58	52305000580	25								
ST20-GB-Z20-A=59	52404000590	20	32	59			25		M3–M16	GERC20-GBD
ST20-GB-Z25-A=61	52405000610	25		61						
ST25-GB-Z20-A=63	52504000630	20	40	63					M3–M20	GERC25-GBD
ST25-GB-Z25-A=65	52505000650	25		65						
ST32-GB-Z25-A=69	52605000690		50	69				30	M4–M27	GERC32-GBD
ST32-GB-Z25-A=87	52605000870			87						
ST32-GB-Z32-A=69	52606000690	32		69						
ST40-GB-Z25-A=109	52705001090	25	63	109				33	M4–M33	GERC40-GBD
ST40-GB-Z32-A=109	52706001090	32								

Accessories: Wrenches pages 63, 64, Tap Collets pages 68, 69, Taper Wipers page 74

[1] L2 applies to Clamping Nuts without Sealing Discs, for Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 58 and 59

Collet Chucks with Taper Shanks similar DIN 69871 – A30 (Wood Working)



GER

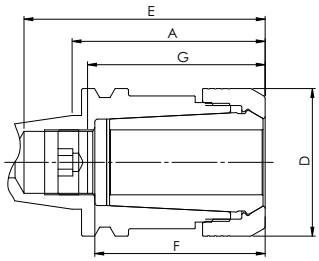
STANDARD

U≤1gmm max. 25.000 rpm[3]

CENTRO|P – Version for HPC Clamping Nuts (without driving and positioning slot)

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop	Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
						Type U		Type W			
					E	G max.	G min.	H max.	H min.		
CP32-A30H-A=50	44613000500	A	50	50	66	52	40	-	-	2,0–20,0 GERC32-HP/HPD/GBD	HPC32• HPC32-DI
CP32-A30H-A=70	44613000701			70	76						

Accessories: Clamping Nuts pages 60, 62, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets pages 65 - 67, Tap Collets pages 68, 69, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74



GOZ

STANDARD

U≤1gmm max. 25.000 rpm[3]

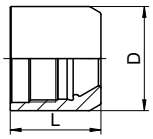
CENTRO|P – Version for HPC Clamping Nuts

Description	Order-No.	Form	D	A[1]	max. tool insertion depth without stop		Tool insertion depth with stop				Clamping Range / Collets	Clamping Nuts
							Type U		Type W			
					E[2]	F[2]	G max.	G min.	H max.	H min.		
CP225DG-A30-A=70	48413000700	A	50	70	81	57	61	53	-	-	2,0–25,0 FM25DG•HP	HPC225• HPC225-DIG

Accessories: Clamping Nuts page 61, Wrenches pages 63, 64, Mounting Devices page 64, Precision Collets page 70, Sealing Discs page 72, Stop Screws page 73, Taper Wipers page 74

[1] Dimension A applies to Clamping Nuts without Sealing Discs. For Clamping Nuts with Sealing Discs see dimension A[1] under Clamping Nuts on pages 60, 61 and 62
[2] Dimension E is for tool shanks ≤ 20 mm and dimension F is for tool shanks > 20 mm
[3] Please refer to page 76 onwards regarding the subject of balancing. The max. rpm is depending on the length and the weight of each chuck.

Accessories Clamping Nuts HPC

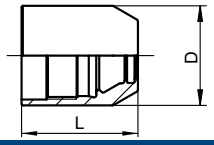


GER

Mini Clamping Nuts HPCM

Description	Order-No.	Clamping Range	D	L	for Collet Chucks	for Collets
HPC8M	4381000	1,0 – 5,0	10	12	CP8M	GERC8-HP
HPC11M	4381100	1,0 – 7,0	16	16,2	CP11M•CPC11M	GERC11-HP/HPD
HPC16MS	43812000010	1,0 – 10,0	22	20,9	CP16M•CPC16M	GERC16-HP/HPD/GBD
HPC16M	4381200		24			

= with extremely small dimensions and for high speeds
= only the nominal diameter can be clamped



GER

Mini Clamping Nuts HPCM-DI – sealed

Description	Order-No.	Clamping Diameter	D	L	A[1)]	for Collet Chucks	for Collets
HPC11M-DI Ø=3,0	43821010300	3,0	16	18,7	+2,5	CP11M•CPC11M	GERC11-HP
HPC11M-DI Ø=4,0	43821010400	4,0					
HPC11M-DI Ø=5,0	43821010500	5,0					
HPC11M-DI Ø=6,0	43821010600	6,0					
HPC11M-DI Ø=7,0	43821010700	7,0					

= with extremely small dimensions and for high speeds
= for direct sealing (for internal coolant supply or for sealing against any ingress of dirt)
= depending on tool shank Ø a Clamping Nut is required
= only the nominal diameter can be clamped

Due to their design DI Clamping Nuts are longer than standard Clamping Nuts (A-dimension see product pages 18 to 57 plus A[1)])

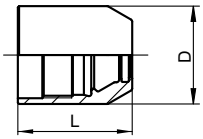
GER

Collet Extractor AZ-ER for Mini Clamping Nuts HPCM

Description	Order-No.	for Clamping Nut	for Collets
AZ-ER8	4499000	HPC8M	GERC8-HP
AZ-ER11	4499100	HPC11M•HPC11M-DI	GERC11-HP/HPD

= for extraction of the Collet out of the Clamping Nut

Accessories Clamping Nuts HPC



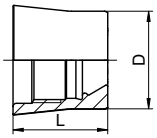
GER

Mini Clamping Nuts HPCM-DI for Sealing Discs

Description	Order-No.	Clamping Range	D	L	A[1)]	for Collet Chucks	for Collets
HPC16MS-DI	43822000010	1,0 – 10,0	22	23,9	+3	CP16M•CPC16M	GERC16-HP/HPD/GBD
HPC16M-DI	4382200		24				

= with extremely small dimensions and for high speeds
= for Sealing Discs (for internal coolant supply or for sealing against any ingress of dirt)
= only the nominal diameter can be clamped

Due to their design DI Clamping Nuts are longer than standard Clamping Nuts (A-dimension see product pages 18 to 57 plus A[1)])

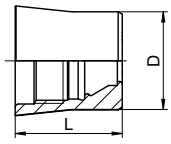


GER

Special Clamping Nuts HPCC (tapered)

Description	Order-No.	Clamping Range	D	L	for Collet Chucks	for Collets
HPC16C	4483200	1,0 – 10,0	24	23,2	CPC16	GERC16-HP/HPD/GBD

= tapered Clamping Nuts for mould-making industry
= only the nominal diameter can be clamped



GER

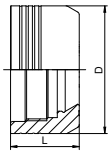
Special Clamping Nuts HPCC-DI (tapered) for Sealing Discs

Description	Order-No.	Clamping Range	D	L	A[1)]	for Collet Chucks	for Collets
HPC16C-DI	4484200	1,0 – 10,0	24	26,2	+3	CPC16	GERC16-HP/HPD/GBD

= tapered Clamping Nuts for mould-making industry
= for Sealing Discs (for internal coolant supply or for sealing against any ingress of dirt)
= only the nominal diameter can be clamped

Due to their design DI Clamping Nuts are longer than standard Clamping Nuts (A-dimension see product pages 18 to 57 plus A[1)])

Accessories Clamping Nuts HPC

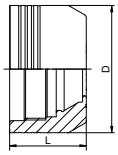


GER

Clamping Nuts HPC

Description	Order-No.	Clamping Range	D	L	for Collet Chucks	for Collets
HPC16	4481200	1,0 – 10,0	30	23,4	CP16	GERC16-HP/HPD/GBD
HPC20	4481300	1,0 – 13,0	32	24,6	CP20	GERC20-HP/HPD/GBD
HPC25	4481400	1,0 – 16,0	40	25,6	CP25	GERC25-HP/HPD/GBD
HPC32	4481500	2,0 – 20,0	50	26,9	CP32	GERC32-HP/HPD/GBD
HPC40	4481600	3,0 – 26,0	63	31,5	CP40	GERC40-HP/HPD/GBD

= for high speeds
= for very precise clamping of HPC tools
= only the nominal diameter can be clamped



GER

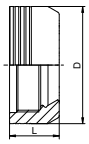
Clamping Nuts HPC-DI for Sealing Discs

Description	Order-No.	Clamping Range	D	L	A[1)]	for Collet Chucks	for Collets
HPC16-DI	4482200	1,0 – 10,0	30	26,4	+3	CP16	GERC16-HP/HPD/GBD
HPC20-DI	4482300	1,0 – 13,0	32	27,6	+3	CP20	GERC20-HP/HPD/GBD
HPC25-DI	4482400	1,0 – 16,0	40	28,9	+3,3	CP25	GERC25-HP/HPD/GBD
HPC32-DI	4482500	2,0 – 20,0	50	30,1	+3,2	CP32	GERC32-HP/HPD/GBD
HPC40-DI	4482600	3,0 – 26,0	63	34,8	+3,3	CP40	GERC40-HP/HPD/GBD

= for high speeds
= for very precise clamping of HPC tools
= for Sealing Discs (for internal coolant supply or for sealing against any ingress of dirt)
= only the nominal diameter can be clamped

Due to their design DI Clamping Nuts are longer than standard Clamping Nuts (A-dimension see product pages 18 to 57 plus A[1)])

Accessories Clamping Nuts HPC

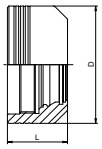


GOZ

Clamping Nuts HPC

Description	Order-No.	Clamping Range	D	L	for Collet Chucks	for Collets
HPC225	4881500	2,0 – 25,0	50	21,2	CP225DG	FM25DG•HP
HPC432	4881700	4,0 – 32,0	63	28	CP432DG	FM32DG

= for high speeds
= for very precise clamping of HPC tools
= only the nominal diameter can be clamped



GOZ

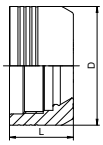
Clamping Nuts HPC-DIG for Sealing Discs

Description	Order-No.	Clamping Range	D	L	A[1)]	for Collet Chucks	for Collets
HPC225-DIG	4882400	2,0 – 25,0	50	25,2	+4	CP225DG	FM25DG•HP
HPC432-DIG	4882700	4,0 – 32,0	63	32	+4	CP432DG	FM32DG

= for high speeds
= for very precise clamping of HPC tools
= for Sealing Discs (for internal coolant supply or for sealing against any ingress of dirt)
= only the nominal diameter can be clamped

Due to their design DI Clamping Nuts are longer than standard Clamping Nuts (A-dimension see product pages 18 to 57 plus A[1)])

Accessories Clamping Nuts HSS

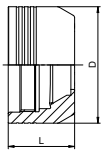


GER

Clamping Nuts HSS

Description	Order-No.	Clamping Range	D	L	for Collet Chucks	for Collets
CP16-HSS-Ø-0,4	4185200	1,0 – 10,0	30	21,3	CP16	GERC16-HP
CP20-HSS-Ø-0,4	4185300	1,0 – 13,0	32	22,8	CP20	GERC20-HP
CP25-HSS-Ø-0,4	4185400	1,0 – 16,0	40	23,8	CP25	GERC25-HP
CP32-HSS-Ø-0,4	4185500	2,0 – 20,0	50	24,9	CP32	GERC32-HP
CP40-HSS-Ø-0,4	4185600	3,0 – 26,0	63	31,6	CP40	GERC40-HP

= for clamping HSS tools
= limited speed (pre-balanced)
= with collapse (minus 0,4 mm)



GER

Clamping Nuts HSS-DI for Sealing Discs

Description	Order-No.	Clamping Range	D	L	A[1)]	for Collet Chucks	for Collets
CP16-HSS-DI-Ø-0,4	4186200	1,0 – 10,0	30	24,8	+2,5	CP16	GERC16-HP
CP20-HSS-DI-Ø-0,4	4186300	1,0 – 13,0	32	25,9	+3,1	CP20	GERC20-HP
CP25-HSS-DI-Ø-0,4	4186400	1,0 – 16,0	40	26,8	+3	CP25	GERC25-HP
CP32-HSS-DI-Ø-0,4	4186500	2,0 – 20,0	50	28,2	+3,3	CP32	GERC32-HP
CP40-HSS-DI-Ø-0,4	4186600	3,0 – 26,0	63	34,6	+3	CP40	GERC40-HP

= for clamping HSS tools
= limited speed (pre-balanced)
= for Sealing Discs (for internal coolant supply or for sealing against any ingress of dirt)
= with collapse (minus 0,4 mm)

Due to their design DI Clamping Nuts are longer than standard Clamping Nuts (A-dimension see product pages 18 to 57 plus A[1)])

Accessories Wrenches RO|DRO

GER GOZ GB

Ingeniously simple, simply ingenious!
ur Roller Bearing Wrenches are designed for safe, quick and simple clamping of tools without any risk of injury to the user, because they cannot slip off the clamping nuts. They are available in two versions:
with standard handle or with square drive adapter for defined clamping of tools using a torque wrench.

Our Roller Bearing Wrenches are suitable for:
- all CENTRO|P Clamping Nuts and all Clamping Nuts complying with DIN ISO 15488 (ER/ESX) with external diameters 10/16/22/24/30/32/35/40/42/50 and 63 mm
- all Clamping Nuts without grooves and drilling, which is more positive at high speeds because of improved weight properties and quiet running.

Roller Bearing Wrenches RO with Handle

Description	Order-No.	for Clamping Nutn
ROD10	4996200	HPC8M
RO16	4990400	HPC11M•HPC11M-DI
RO22	4990500	HPC16MS•HPC16MS-DI
RO24	4990600	HPC16M•HPC16M-DI•HPC16C•HPC16C-DI
RO30	4990800	HPC16•HPC16-DI•CP16-HSS-Ø-0,4•CP16-HSS-DI-Ø-0,4•ST16-GB
RO32	4991000	HPC20•HPC20-DI•CP20-HSS-Ø-0,4•CP20-HSS-DI-Ø-0,4•ST20-GB
RO40	4991400	HPC25•HPC25-DI•CP25-HSS-Ø-0,4•CP25-HSS-DI-Ø-0,4•ST25-GB
RO50	4991800	HPC32•HPC32-DI•CP32-HSS-Ø-0,4•CP32-HSS-DI-Ø-0,4•ST32-GB•HPC225•HPC225-DIG
RO63	4992000	HPC40•HPC40-DI•CP40-HSS-Ø-0,4•CP40-HSS-DI-Ø-0,4•ST40-GB•HPC432•HPC432-DIG

Roller Bearing Heads DRO

Description	Order-No.	VKT	for Clamping Nutn
DRO16	4993400	9x12	HPC11M•HPC11M-DI
DRO22	4993500		HPC16MS•HPC16MS-DI
DRO24	4993600		HPC16M•HPC16M-DI•HPC16C•HPC16C-DI
DRO30	4993800		HPC16•HPC16-DI•CP16-HSS-Ø-0,4•CP16-HSS-DI-Ø-0,4•ST16-GB
DRO32	4994000		HPC20•HPC20-DI•CP20-HSS-Ø-0,4•CP20-HSS-DI-Ø-0,4•ST20-GB
DRO40	4994400	14x18	HPC25•HPC25-DI•CP25-HSS-Ø-0,4•CP25-HSS-DI-Ø-0,4•ST25-GB
DRO50	4994800		HPC32•HPC32-DI•CP32-HSS-Ø-0,4•CP32-HSS-DI-Ø-0,4•ST32-GB•HPC225•HPC225-DIG
DRO63	4995000		HPC40•HPC40-DI•CP40-HSS-Ø-0,4•CP40-HSS-DI-Ø-0,4•ST40-GB•HPC432•HPC432-DIG

Accessories Wrenches DRMO

GER GOZ GB

Torque Setting Wrenches DRMO

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

Accessories Mounting Devices TBRS

GER GOZ GB

Mounting Devices TBRS with Roller Bearing

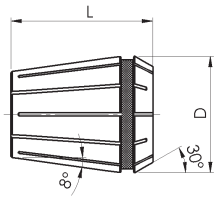
Description	Order-No.	D	for holder shanks
TBRS25	4980200	25	HSK25
TBRS32	4980400	32	HSK32•C3
TBRS40	4980600	40	HSK40•C4
TBRS46	4980800	46	MAS/BT30
TBRS50	4981000	50	SK30•HSK50•C5
TBRS63	4981200	63	SK40•HSK63•C6•MAS/BT40•CAT40
TBRS80	4981600	80	HSK80•C8
TBRS97	4981800	97,5	SK50
TBRS100	4982000	100	HSK100•MAS/BT50•CAT50

= for easy and safe clamping of holder shanks at the flange using rollers for mounting and removing cutting tools, therefore self clamping and ideal for HSK forms E and F as well as polygonal shanks

= for all common holder shanks such as SK (DIN 69871), HSK (DIN 69893 forms A, B, C, D, E, F), polygonal shanks (ISO 26623-1), MAS/BT (JIS B 6339) and CAT (ANSI B5.50)

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

Available starting Fall 2015!



GER

Precision Collets GERC-HP – 2 µm for GERC11-HP for GERC40-HP

Description	Order-No.	⊿	D	L	Pro-file	from-to	steps
4004E GERC8-HP	1361001	5 µm	8,5	13,6	●	1,0 – 5,0	0,5
	1361004				●	1/16“•1/8”•3/16”	
4008E GERC11-HP	1361101	2 µm	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	17	27,5	●	1,0 – 10,0	0,5
					●	1,1 – 1,4 + 1,6 – 1,9 + 2,1 – 2,4	0,1
					●	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	21	31,5	●	1,0 – 13,0	0,5
	1361404				●	1/8”•3/16”•1/4”•5/16”•3/8”•7/16“•1/2“	
430E GERC25-HP	1361501	2 µm	26	34	●	1,0 – 16,0	0,5
	1361504				●	1/8”•3/16”•1/4”•5/16”•3/8”•7/16“•1/2“•9/16“•5/8“	
470E GERC32-HP	1361601	2 µm	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	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“	

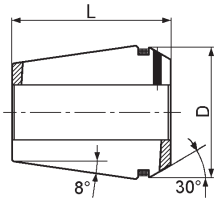
Ordering Example
Complete Order-No. with the diameter,
e.g. GERC32-HP Ø 6 mm = Order-No. 13616010600 and Ø 1/8“
= Order-No. 13616040318
Inch conversion table please see page 79!

Please note: Until the new version of precision collets is available, please place your order with the old order numbers according to the following conversion table:

New Description	New Order-No.	Old Description	Old Order-No.
GERC8-HP	13610	GER8-HP	13030
GERC11-HP	13611	GER11-HP	13020
GERC16-HP	13613	GER16-HP	13021
GERC20-HP	13614	GER20-HP	13022
GERC25-HP	13615	GER25-HP	13023
GERC32-HP	13616	GER32-HP	13024
GERC40-HP	13617	GER40-HP	13025

Accessories Precision Collets GERC-HPD
Similar DIN ISO 15488-A

FAHRION Protect — Available starting Fall 2015!



GER

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

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

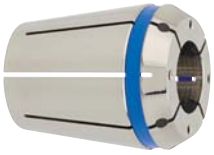
Ordering Example
Complete Order-No. with the diameter,
e.g. GERC20-HPD Ø 8 mm = Order-No. 13624010800
or Ø 3/16" = Order-No. 13624040476
Inch conversion table please see page 79!

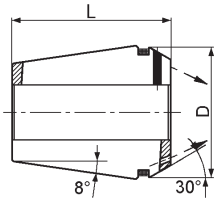
Please note: Until the new version of precision collets is available, please place your order with the old order numbers according to the following conversion table:

New Description	New Order-No.	Old Description	Old Order-No.
GERC11-HPD	13621	GER11-HPD	13420
GERC16-HPD	13623	GER16-HPD	13421
GERC20-HPD	13624	GER20-HPD	13422
GERC25-HPD	13625	GER25-HPD	13423
GERC32-HPD	13626	GER32-HPD	13424
GERC40-HPD	13627	GER40-HPD	13425

Accessories Precision Collets GERC-HPDD
Similar DIN ISO 15488-A

FAHRION Protect — Available starting Fall 2015!





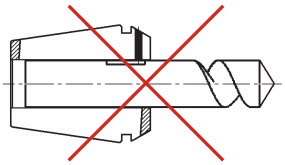
GER

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

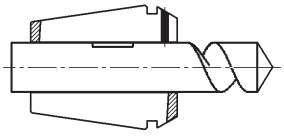
Description	Order-No.	⊿	D	L	Pro-file	Standard bore
425E GERC16-HPDD	1363301	2 µm	16,7	27,5	●	4,0•6,0•8,0
429E GERC25-HPDD	1363501	2 µm	25,7	34	●	4,0•6,0•8,0•10,0•12,0•14,0
469E GERC32-HPDD	1363601	2 µm	32,7	40	●	4,0•6,0•8,0•10,0•12,0•14,0•16,0•18,0•20,0
471E GERC40-HPDD	1363701	2 µm	40,7	46	●	10,0•12,0•16,0•20,0•25,0

Ordering Example
Complete Order-No. with the diameter,
e.g. GERC25-HPDD Ø 8 mm = Order-No. 13635010800

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



Incorrect Position!



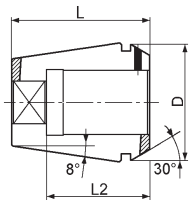
Correct Position!

Please note: Until the new version of precision collets is available, please place your order with the old order numbers according to the following conversion table:

New Description	New Order-No.	Old Description	Old Order-No.
GERC16-HPDD	13633	GER16-HPDD	13431
GERC25-HPDD	13635	GER25-HPDD	13433
GERC32-HPDD	13636	GER32-HPDD	13434
GERC40-HPDD	13637	GER40-HPDD	13435

Accessories Tap Collets GERC-GBD
Similar DIN ISO 15488-A

FAHRION Protect — Available starting Fall 2015!



GER GB

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

Description	Order-No.	☑	D	L	L2	Profile	Standard bore (Shank-Ø/Square)
4031E GERC16-GBD	1382301	10µm	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	10µm	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	10µm	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	10µm	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	10µm	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

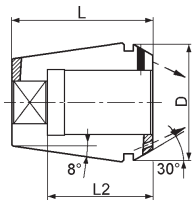
Ordering Example
Complete Order-No. with the diameter,
e.g. GERC40-GBD Ø 8,0/6,3 mm = Order-No. 13827010800

Please note: Until the new version of precision collets is available, please place your order with the old order numbers according to the following conversion table:

New Description	New Order-No.	Old Description	Old Order-No.
GERC16-GBD	13823	GER16-GBD	13321
GERC20-GBD	13611	GER20-GBD	13322
GERC25-GBD	13613	GER25-GBD	13323
GERC32-GBD	13614	GER32-GBD	13324
GERC40-GBD	13615	GER40-GBD	13325

Accessories Tap Collets GERC-GBDD
Similar DIN ISO 15488-A

Available starting Fall 2015!



GER GB

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

Description	Order-No.	☑	D	L	L2	Profile	Standard bore (Shank-Ø/Square)
4031E GERC16-GBDD	1383301	10µm	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	10µm	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	10µm	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	10µm	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
					30		18,0/14,5•20,0/16,0

Ordering Example
Complete Order-No. with the diameter,
e.g. GERC25-GBDD Ø 10,0/8,0 mm = Order-No. 13835011000

Please note: Until the new version of precision collets is available, please place your order with the old order numbers according to the following conversion table:

New Description	New Order-No.	Old Description	Old Order-No.
GERC16-GBDD	13833	GER16-GBDD	13331
GERC20-GBDD	13834	GER20-GBDD	13332
GERC25-GBDD	13835	GER25-GBDD	13333
GERC32-GBDD	13836	GER32-GBDD	13334

Accessories Precision Wedge Collets GER-WD

GER

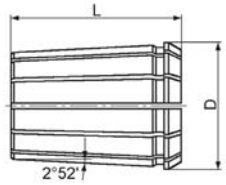
Precision Wedge Collets GER-WD – 5 µm

Description	Order-No.	⊿	D	L	Pro-file	Standard bore
470E GER32-WD	1391601	5µm	33	40	●	12,0•14,0•16,0•18,0
	1391604				●	1/2"•5/8"
470E GER40-WD	1391701	5µm	41	46	●	16,0•18,0•20,0
	1391704				●	5/8"•3/4"

Ordering Example
Complete Order-No. with the diameter,
e.g. GER32-WD Ø 5/8" = Order-No. 13916041588

CENTRO|P.WD – An innovation for a more secure process

Accessories Precision Collets GOZ-DG-HP DIN ISO 10897-B



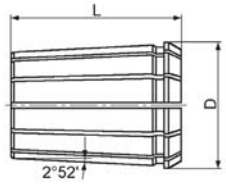
GOZ

Precision Collets GOZ-DG-HP (double slotted) – 3 µm

Description	Order-No.	⊿	D	L	Pro-file	Standard bore
462E FM25DG-HP	1224201	3µm	35,05	52	●	3,0•4,0•6,0•8,0•10,0•12,0•14,0•16,0•18,0•20,0•25,0

Ordering Example
Complete Order-No. with the diameter,
e.g. FM25DG-HP Ø 20 mm = Order-No. 12242012000

Accessories Precision Collets GOZ-DG DIN ISO 10897-B



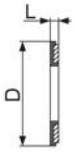
GOZ

Precision Collets GOZ-DG (double slotted) – 6 µm or 10 µm

Description	Order-No.	⊿	D	L	Pro-file	from-to	steps
462E FM25DG	1220201	6µm	35,05	52	●	2,0 – 25,0	0,5
	1220204				●	1/8"•1/4"•3/8"•1/2"•5/8"•3/4"•1"	
467E FM32DG	1220301	10µm	43,7	60	●	4,0 – 32,0	0,5

Ordering Example
Complete Order-No. with the diameter,
e.g. FM25DG Ø 16 mm = Order-No. 12202011600
or Ø 1/4" = Order-No. 12202040635
Inch conversion table please see page 79!

Accessories Sealing Discs DI|DIG

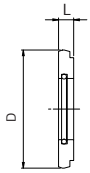


GER

Sealing Discs DI

Description	Order-No.	D	L	Pro-file	from-to	steps	range	for Clamping Nut	for Collets
DI16	2430301	12,6	2	●	1,0 – 10,0	0,5	+0,4/-0,1	HPC16MS-DI• HPC16M-DI• HPC16C-DI• HPC16-DI	GERC16-HP
	2430304			●	1/8"•3/16"•1/4"•5/16"•3/8"				
DI20	2440301	15,8		●	2,0 – 13,0	0,5		HPC20-DI	GERC20-HP
DI25	2450301	20,2		●	2,0 – 16,0			HPC25-DI	GERC25-HP
DI32	2460301	26,2		●	2,0 – 20,0			HPC32-DI	GERC32-HP
	2460304			●	1/8"•3/16"•1/4"•5/16"•3/8"• 1/2"•5/8"•3/4"				
DI40	2470301	34,2		●	3,0 – 26,0	0,5		HPC40-DI	GERC40-HP
	2470304			●	1/8"•3/16"•1/4"•5/16"•3/8"• 1/2"•5/8"•3/4"•7/8"•1"				

Ordering Example
Complete Order-No. with the diameter,
e.g. DI32 Ø 16 mm = Order-No. 24603011600 or Ø 1/2"
= Order-No. 24603041270
Inch conversion table please see page 79!



GOZ

Sealing Discs DIG

Description	Order-No.	D	L	Pro-file	from-to	steps	range	for Clamping Nut	for Collets
DIG225 (DS50)	2159201	31	4	●	4,0 – 25,0	1,0	-0,5	HPC225-DIG	FM25DG•HP
DIG432 (DS60)	2159301	40		●	4,0 – 32,0			HPC432-DIG	FM32DG

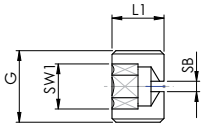
Accessories Data Carrier BIS

GER GOZ GB

Data Carrier BIS (BALLUFF)

Description	Order-No.	for Collet Chucks
BIS C-122-04/L	4499900	Alle HSK-A

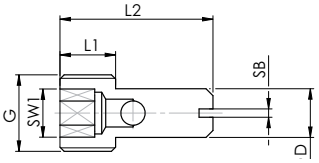
Accessories Adjustable Stop Screws AS-U|AS-W



GER GOZ

Adjustable Stop Screws AS-U

Description	Order-No.	G	SW1	SB	L1	for Collet Chucks
AS-CP11-U	44981000100	M8x1	4	1,6	8	CP11M•CPC11M
AS-CP16-U	44982000100	M11x1	6			CP16M•CPC16M•CP16•CPC16
AS-CP20-U	44983000100	M14x1	5	1,5	10	CP20
AS-CP25/32/225-U	44984000101	M18x2,5	6	1,6		CP25•CP32•CP225DG (for old chuck types)
AS-CP25-U	44984000102	M18x1,5				CP25
AS-CP32/225-U	44984000103	M22x1,5				CP32•CP225DG (for collet chuck series available fall 2011)
AS-CP40-U	44985000100	M28x1,5			25	CP40



GER GOZ

Adjustable Stop Screws AS-W

Description	Order-No.	G	SW1	SB	L1	L2	D	for Collet Chucks
AS-CP11-W	44981000200	M8x1	4	1,2	8	18	4,5	CP11M•CPC11M
AS-CP16-W	44982000200	M11x1	6			22	7	CP16M•CPC16M•CP16•CPC16
AS-CP25/32/225-W	44984000201	M18x2,5		1,6	10	28	10,5	CP25•CP32•CP225DG (for old chuck types)
AS-CP25-W	44984000202	M18x1,5						CP25
AS-CP32/225-W	44984000203	M22x1,5					14	CP32•CP225DG (for collet chuck series available fall 2011)

Accessories Taper Wipers KWK

GER GB

Taper Wipers KWK-ER

Description	Order-No.	for Chucks and Holders Type
KWK-ER11	2220100	CP11M•CPC11M
KWK-ER16	2220200	CP16•CPC16•CP16M•ST16-GB
KWK-ER20	2220300	CP20•ST20-GB
KWK-ER25	2220400	CP25•ST25-GB
KWK-ER32	2220500	CP32•ST32-GB

Accessories Coolant Supply Tubes and Wrenches IKR|SCHL-IKR

GER GOZ GB

Coolant Supply Tubes IKR

Description	Order-No.	for HSK	Form	G
IKR-HSK32	2490300	32	A and E	M10x1
IKR-HSK40	2490400	40		M12x1
IKR-HSK50	2490500	50		M16x1
IKR-HSK63	2490600	63		M18x1
IKR-HSK80	2490700	80		M20x1,5
IKR-HSK100	2490800	100		M24x1,5

GER GOZ GB

Wrenches SCHL-IKR for Coolant Supply Tubes

Description	Order-No.	for HSK
SCHL-IKR-HSK32	2492300	32
SCHL-IKR-HSK40	2492400	40
SCHL-IKR-HSK50	2492500	50
SCHL-IKR-HSK63	2492600	63
SCHL-IKR-HSK80	2492700	80
SCHL-IKR-HSK100	2492800	100

Information

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			

Ordering Example

Collet Chuck	e.g. CP32-AD40-A=100	e.g. CP32-B40-A=100
+Clamping Nut	e.g. HPC32	e.g. HPC32-DI
+Sealing Disc	none	e.g. DI32
+Collet	e.g. GERC32-HP e.g. GERC32-HPD e.g. GERC32-HPDD e.g. GERC32-GBD e.g. GERC32-GBDD	e.g. GERC32-HP
+Accessories	Wrenches, Adjustable Stop Screws, Taper Wipers, Coolant Supply Tubes, Mounting Devices	

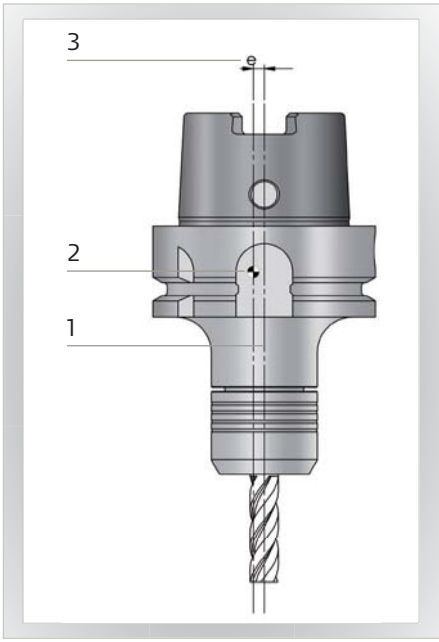
In order to guarantee the highest possible flexibility of the Precision Collet Chuck CENTRO|P, the Collet Chucks, Clamping Nuts, Collets and the accessories MUST be ordered separately.

Please do not hesitate to contact us if you require a version that is not included in this catalog.

Technical Information | Balancing

Imbalance

= Rotor centre of gravity **2** is outside its rotational axis **1** (=offset e e **3**)



Causes

= Unsymmetrical bores and milling at the tool holder (e.g. taper shanks DIN 69871 and DIN 69893 HSK form A and B)
= Unsymmetrical shape of the tool (e.g. clamping surface at the milling cutter)
= Production tolerances (runout)
= Spindle runout

Consequences

Centrifugal forces cause vibrations. These cause:

= Damage to the spindle bearings
= Mediocre surface quality
= Insufficient repeatability of accuracy
= Reduction in tool life
= Noise

Requirements

Balancing is necessary whenever optimum working conditions have to be achieved e.g.

= Surface quality
= Production accuracies
= Tool operational life
= or if prescribed by the machine tool manufacturer (warranty claims!)

However, it is only economically sensible to balance at speeds of 8,000 r.p.m. or higher. At speeds lower than this the cutting forces are as a rule greater than the imbalance forces.

Balancing means – determining the centre of gravity axis and moving it back to the axis of rotation.

What Balance Grade

Our CENTRO|P precision collet chucks are fine balanced as standard. Information regarding the balance quality (in relation to the rpm or the minimum residual imbalance) you can find on the respective product page.

r.p.m. limits – Fine balancing in special execution is possible

Adaptation	Speed (up to / r.p.m.)	U	Information
HSK-25*	to 80.000 r.p.m.	≤ 1gmm	The max. speeds (additional fine balancing necessary) were recommended as guideline values as limit speeds for the HSK interfaces within the framework of HSK standardisation, as the speed has the greatest influence and is also the limit for spindle and spindle bearings. The max. rpm, however, should be adapted to the specific cutting process.
HSK-32*	to 50.000 r.p.m.	≤ 1gmm	
HSK-40*	to 42.000 r.p.m.	≤ 1gmm	
HSK-50*	to 30.000 r.p.m.	≤ 1gmm	
HSK-63	to 25.000 r.p.m.		
HSK-80	to 20.000 r.p.m.		
HSK-100	to 16.000 r.p.m.		
SK30*	to 20.000 r.p.m.		The values for chucks with taper shanks are empirical values which should not be exceeded (the values depend to a very great extent on the respective machine spindle)
SK40	to 20.000 r.p.m.		
SK50	to 16.000 r.p.m.		

No liability can be accepted for these specifications.
* All collet chucks with a total weight below 1kg → minimum residual imbalance

Please mind:

CENTRO|P types with long gauge length and a high length/diameter ratio (L/D) should not be run at maximum rpm. Please refer to our specific recommendations.

Limits to Balancing Grade

According to ISO standard 1940, the balancing standard is described using G. The balancing standard G corresponds to g/mmkg or µm and is in relation to the speed.

As an explanation: At a speed of 9,500 r.p.m and a weight of 1 kg G2.5 means a permissible offset between the rotational axis and the centre of gravity axis of the spindle of 2.5 µm. At a speed of 19,000 r.p.m. it would be 1.25 µm and at 38,000 r.p.m. 0.625 µm. If the tool holder together with the tool weighs half the amount, i.e. 0.5 kg, the balance will also be halved.

Until now, so as to minimise guarantee claims the machine or spindle manufacturers demanded such excessively fine balancing that their demands could only be met by balancing the chuck and the cutter on the machine spindle.

In order to avoid the high economic costs this caused, draft standard DIN 69888 covering balancing requirements on rotating tool systems was agreed jointly by the machine, spindle, balancing machine and tool manufacturers. The standard is expected to be adopted officially in 2007, and it is a sensible solution in both technical and economic terms, since in that norm all residual imbalances are indicated in „gmm" and not assigned to a balance grade. Moreover, possible tool change faults are considered.

Grade steps to DIN ISO 1940-1

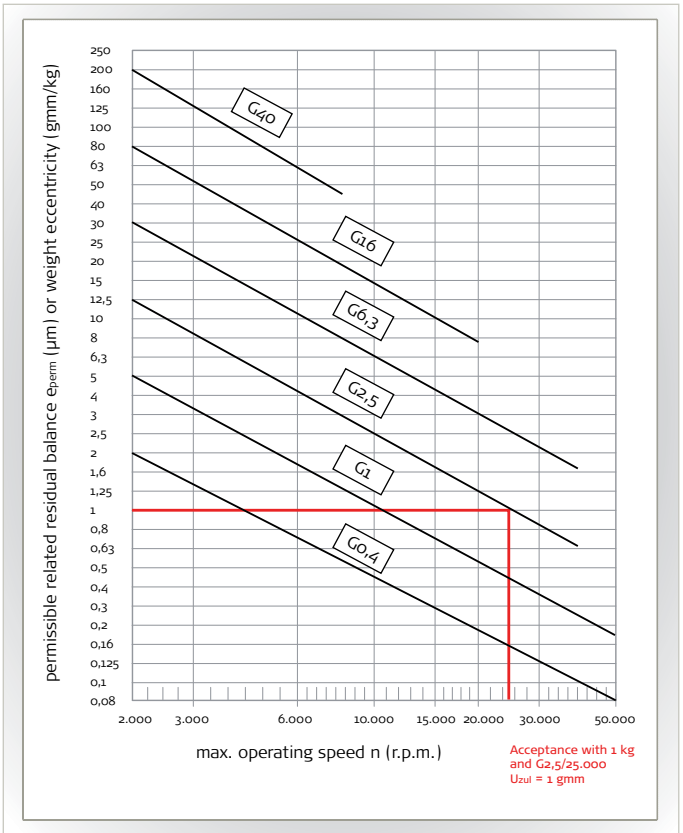
Permissible residual imbalances in relation to the balancing body weight for different grade steps G depending on the highest operating speed

General Formula

$$G = e \times \omega = \frac{U}{m_R} \times \frac{2 \times \pi \times n}{60} = \frac{U \times \pi \times n}{m_R \times 30}$$

then $$U = \frac{G \times m_R \times 30}{\pi \times n}$$

G = Balancing grade step	[mm/s]
e = Centre of gravity concentricity, related imbalance	[gmm/kg or µm]
n = Speed	[r.p.m.]
U = Imbalance	[gmm]
ω = Angular velocity	[1/sec]
m_R = Weight of the tool or the rotor	[g]



Technical Information | Balancing

Calculation of the total balancing grade of the assembled system (spindle • tool holder • tool)

Illustration of balancing grade total

$$U_{total} = U_{Spindle} + U_{Tool\ holder} + U_{Tool}$$

Example

$$U_{total} = U_{Spindle\ (G\ 0,4)} + U_{Tool\ holder\ (G2,5)} + U_{Tool\ (G6,3)}$$

Calculation of eccentricity

$$U = \frac{G \times 60}{2 \times \pi \times n} \times m$$

m in g U in gmm

$$U_{Spindle} = \frac{0,4 \times 60}{2 \times \pi \times 30.000} \times 15.000 = 1,910$$

$$U_{Tool\ holder} = \frac{2,5 \times 60}{2 \times \pi \times 30.000} \times 1.487 = 1,176$$

$$U_{Tool} = \frac{6,3 \times 60}{2 \times \pi \times 30.000} \times 230 = 0,461$$

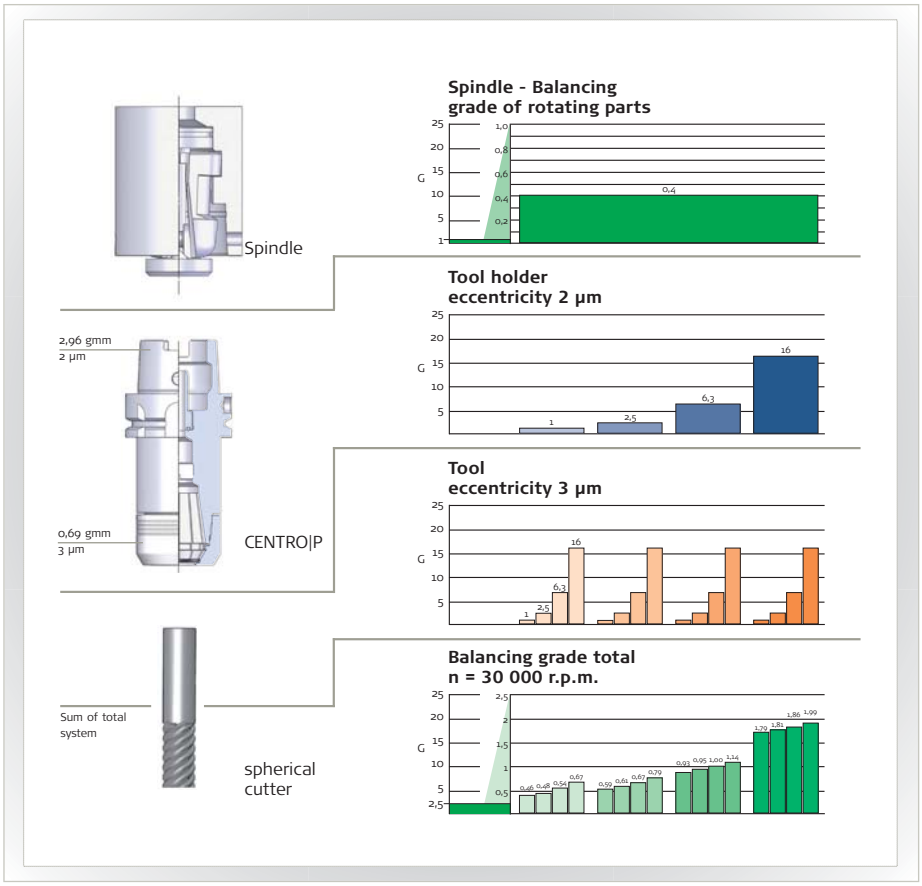
$m_{total\ in\ g} = 16.708$ $U_{total\ in\ gmm} = 3,547$

Balancing grade conversion of the total system

$$G = U_{total} \times 2 \times \pi \times \frac{n}{60 \times m_{total}}$$

Example

$$G = 3,547_{gmm} \times 2 \times \pi \times \frac{3.000 \times 1/min}{60s \times 16.708g} = 0,67$$



Calculation scheme with kind permission of Gühring oHG, Albstadt

Static or Dynamic Balancing

In practice balancing is very often carried out in one plane (Fig. 1). But the tool demonstrates only one centre of gravity error. The main axis of inertia and the rotational axis run in parallel to each other. This is known as "static" imbalance when the tool holder is relatively short in comparison with the diameter of the spindle holder.

In the case of long and thin tool holders balancing in two planes (Fig. 2) is sensible. In such cases, in addition to the existing centre of gravity error the main axis of inertia and the rotational axis no longer run in parallel to each other. This is known as a "dynamic" imbalance. The resulting imbalance moment generates a wobbling movement of the tool seat.

The following rule of thumb may act as a guide to whether the tool holder should be balanced as “static” or “dynamic”:

Static balancing applies to tool holders
= which have an operating speed of less than 20,000 r.p.m.
= whose length (A) is less than double the diameter (D2)

Dynamic balancing applies to tool holders
= which have an operating speed over 20,000 r.p.m.
= whose length (A) is more than double the diameter (D2)

All single-cutter drilling and boring tools should be balanced in two planes.

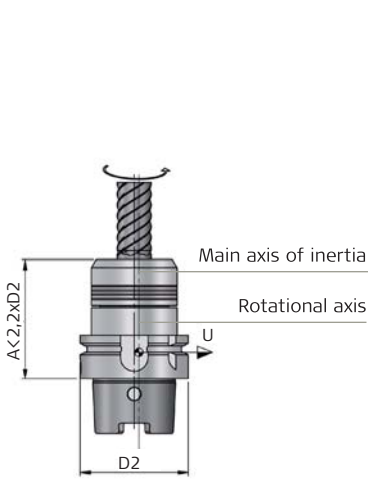


Fig. 1

„Static“ imbalance in one plane

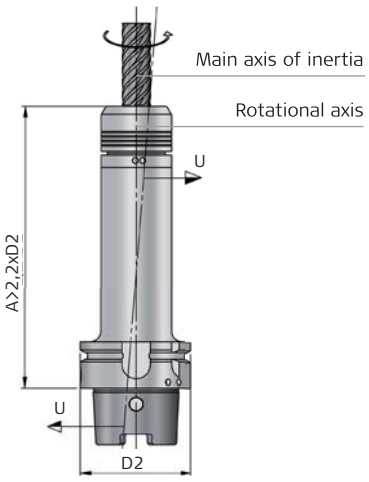


Fig. 2

„Dynamic“ imbalance in two planes

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FAHRION Vertriebs-GmbH
Forststraße 54
73667 Kaisersbach
Germany
Phone +49 7184 9282-0
Fax +49 7184 9282-92
info@fahrion.de
www.fahrion.de

Horn USA, Inc.
320 Premier Court, Suite 205
Franklin, TN 37067
USA
Phone +1 888 818-4676
Fax +1 615 771-4101
info@hornusa.com
www.hornusa.com

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