

**FAHRION®**  
PRAZISION  
*And all runs smoothly.*

FAHRION|HeavyDuty





## FAHRION|HeavyDuty: An Innovation, which makes your processes even more secure

Roughing with high material removal rates - cutting of difficult to machine materials- trochoidal milling: The newly developed wedge collet CENTRO|P.WD offers a 100% pull-out security and consequently the required process stability for demanding machining operations.

Modern milling technologies as trochoidal milling with high material removal rates necessitate either special cutting edge geometries and high holding torques of the tool holder. This implicates high technical challenges:

- = High axial and radial forces impact the tool while processing.
- = Excellent stability and high damping at the same time must be secured during the production.
- = Very high clamping forces are necessary in the tool holding device.
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**As an answer to these challenges, we have invented the new FAHRION|Heavy Duty System.**

Basis of this system is the ground-breaking wedge collet CENTRO|P.WD.

The FAHRION CENTRO|P.WD is based on the DIN ISO 15488-B standard, which is specifically designed for the use in the FAHRION precision collet chuck CENTRO|P and is suitable for the use of all the standard tools with a Weldon shank.

### Keeping the milling tool in place

The technological highlight of CENTRO|P.WD: a wedge is integrated into the collet. This wedge fits on the Weldon surface of the tool to the clamping slope. Thanks to this innovative construction, the FAHRION CENTRO|P.WD provides a 100% pull-out protection. In connection with the FAHRION Precision Collet Chuck CENTRO|P, an excellent concentricity within the system (at  $3 \times D$ ) is reached at the same time as a high damping. Consequence: The collet WD with an integral pull-out protection ensures the tool orientation in case of the Weldon shanks application, as well as the form-fit clamping that prevents the slipping out.

The also newly invented clamping nut CENTRO|P.HD amends the FAHRION|Heavy Duty System. A special coating of the trapezoidal thread ensures a minimum frictional resistance. This leads to significantly higher clamping forces with constant clamping torques and therefore transferable torques in the collet.



Made for high clamping forces: CENTRO|P.HD clamping nut.

## Great user-friendliness and extreme flexibility

FAHRION CENTRO|P.WD wedge collet proves its positive effects by a fascinating straight, uncomplicated and easy-to-use technology. 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 fits in all existing CENTRO|P Collet chucks. Through a simple exchange of the standard collet with the CENTRO|P.WD collet and the CENTRO|P.HD clamping nut, the flexibility of the FAHRION CENTRO|P Precision Collet Chuck is increased and the range of application considerably expanded.

## FAHRION|HeavyDuty: product range

CENTRO P.HD clamping nut			
Order-No.	Description	D	L
4785600	HD ER 32	50	26,9
4785700	HD ER 40	63	31,5

  

CENTRO P.WD wedge collet			
Order-No.	Description	D	L
13916011200	GERC32-WD / ø 12	33	40
13916011600	GERC32-WD / ø 16	33	40
13917011600	GERC40-WD / ø 16	41	46
13917012000	GERC40-WD / ø 20	41	46

# FAHRION CENTRO|P: Greater profitability through unique precision



FAHRION offers you a complete well-engineered system: the Collet Chuck CENTRO|P that perfectly matches the collet

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.

- = Together with the FAHRION GERC-HP Precision Collets an outstanding system accuracy of 3 µm is reached (at 3 x D, max. 50 mm). Consequence: You achieve up to six times the precision of a conventional ER collet chuck.
- = Due to maximum balancing quality you are able to achieve maximum dimensional accuracy, surface quality and tool service lives.

- = Holding forces are twice as high as those of conventional collet chucks.
- = The reduction of bending and compressive forces creates an enormous stability.
- = 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.

The CENTRO|P is ideal for drilling, countersinking, reaming, milling, for HPC / HSC, and for tapping. 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. The high purchase costs for ancillary equipment can be dispensed with.



Due to well-thought-out chuck design, we achieve maximum symmetry with minimum residual imbalance.

# 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.

Therefore there is FAHRION|Protect: an innovative technology, which conserves collets effectively for a long-term.

## Ultra-thin. Highly effective.

FAHRION|Protect goes beyond all standards that you know in corrosion protection of clamping tools. FAHRION is the first manufacturer to offer a coating of the functional surfaces in the  $\mu$ -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.

## High precision in the long term

- = The nominal geometry between the collet and the taper seat in the chuck is maintained for a long lasting permanent surface contact.
- = The parts in manufacturing stay longer in the specified tolerances.
- = You can keep production processes longer on a high level, you can save time and you can also guarantee short terms of delivery.

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



## Longer life-time of your tools

- = A higher concentricity extends the tool lives. Thus, you save time and money by reducing set-up times.

## Longer life-time of the collets

- = Collets have to be replaced less frequently or can be used longer for precision applications.

## Longer service life of the machine spindles

- = Less imbalance on the tools relieves the machine spindle permanently – your maintenance costs will be reduced.

## Less environmental impact

- = Longer service life saves valuable resources.

For this reason, coated collets by FAHRION are corrosion protection, quality protection, investment protection and environmental protection all in one.

The latest catalogue information is available  
at any times at [www.fahrion.de](http://www.fahrion.de)

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