

micro technology

Clamping technology for the smallest workpieces

Clamping technology for the machining of filigree workpieces



→ Microcomponents

High-tech in a minimum compass is offered by RÖHM's individual clamping solutions. For the processing of delicate microcomponents like watch housings, bezels, cogwheels, pushers and many other clock and watch parts, we supply the tools that are needed.

One example is the new KFG-MT 90/8. With its 8 jaws, it is capable of exceedingly sensitive clamping without any risk of deformation – and with a diameter of just 90 mm.



→ Watches and Jewellery

And when it comes to medical technology, RÖHM also has exciting clamping solutions. Dental implants for example, as well as implants for hip and knee joints, are manufactured with RÖHM's clamping chucks, centric clamping units and micro clamping systems.

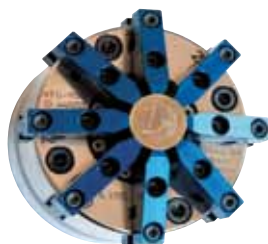
Take a look at the following examples. We are happy to find the right solution for you.



→ Medical technology



Contents



Power chucks

8-jaw-power chucks KFG-MT 90/8	Page 4
3-jaw-power chucks PKF-MT 100/3	Page 4
4-jaw-power chucks PKF-MT 100/4	Page 5
4-jaw-power chucks PKF-MT 100/2/2	Page 5
2-jaw-power chucks PKF-MT 100/2	Page 5



Mandrels

Cartridge mandrels KFR	Page 6
------------------------	--------



Gripping technology

Synthetic gripper RRMP	Page 7
------------------------	--------



Self-centering and precision vices

Air-operated centering vice KZS-P 100	Page 8
Precision vices	Page 9

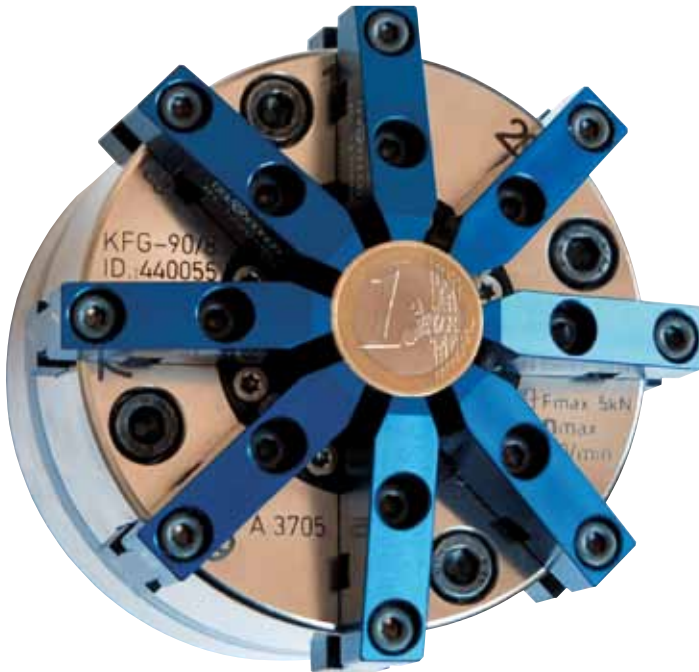


Tool clamping systems

SUPER LOCK Clamping unit	Page 10
Micro clamping systems	Page 11

8-jaw power chuck KFG-MT 90/8

Centric clamping. For sensitive, deformation-free and centric clamping of workpieces in the watch, jewellery or medical technology. Constant distribution of force across 8 clamping jaws.



High-tech power chuck KFG-MT 90/8 for luxurious jewellery from the hand of a master craftsman. Superbly suited for machining of rings.

Technical features:

- Large clamping range, therefore flexible application options
- High radial and axial run-out accuracy
- High load capacity
- Long service life
- Ideal for clamping deformation-sensitive parts due to centrifugal force compensation
- Also available as 2-, 3-, 4- or 6-jaw versions



3-jaw power chuck PKF-MT 100/3

Centric clamping. This 3-jaw chuck is extremely versatile for processing small workpieces. The PKF-MT can be perfectly customised to your workpiece with the optionally available form jaws.

Technical features:

- High radial and axial run-out accuracy
- High load capacity
- Long service life
- The special clamping piston construction with two-sided power transmission guarantees a very high clamping accuracy with an unusually long durability
- Self-locking, this provides high security in the case of pressure failure
- Centric, resp. compensating clamping possible
- Pneumatic or power actuated
- Chuck quick-change system possible



PKF-MT 100/3

4-jaw power chuck PKF-MT 100/4, PKF-MT 100/2/2 and PKF-MT 100/2

Our 4-jaw chucks PKF-MT 100/2/2 are perfectly suitable, for example, for clamping watch cases. The jaws are pairwise centrally clamping but mutually compensating. For very precise raw parts also the centrally clamping 4-jaw chuck PKF-MT 100/4 is suitable.

Technical features:

- High radial and axial run-out accuracy
- High load capacity
- Long service life
- The special clamping piston construction with two-sided power transmission guarantees a very high clamping accuracy with an unusually long idle time
- Self-locking, this provides high security in the case of pressure failure
- Pneumatic or power actuated
- Available with different interfaces
- Chuck quick-change system possible



PKF-MT 100/4



PKF-MT 100/2/2



PKF-MT 100/2

Cartridge mandrel KFR

Compact design for precise machining. No workpiece deformation through definable axial tightening. High repeating accuracy. Suitable for automatic charging.



Versatile applications for turning, grinding, cutting, toothcutting, balancing, measuring.

Special features:

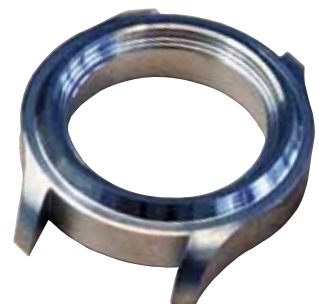
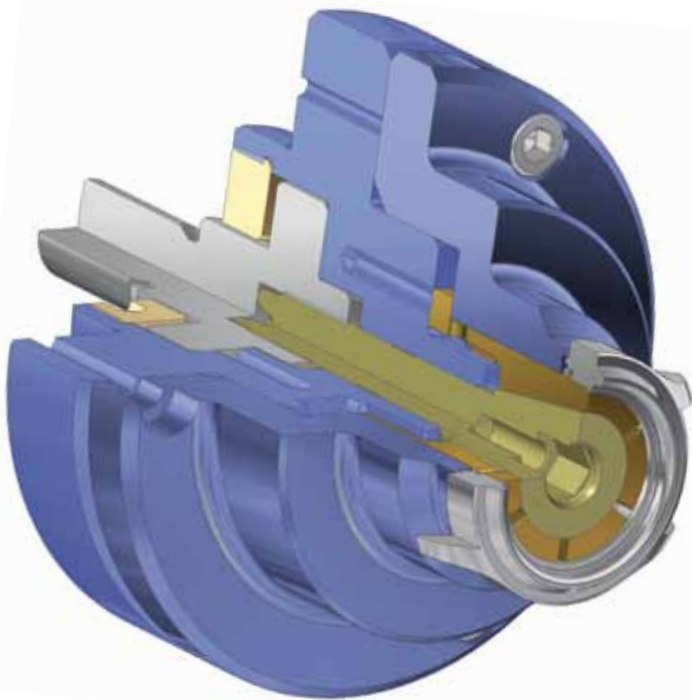
Solid, compact, design for precise machining. Without axial tightening, resp. with def. axial tightening (e.g. 0.5 mm) – as a result no deformation of the work piece. The draw-in of the work-pieces against the rigid work-stop takes place independently via the operation of the mandrel. Prepared for air sensing.

Technical features:

- Power operated or hand operated (optional)
- High axial and radial run-out accuracy
- High repeating accuracy
- Hardened low-wear construction
- Compatible with intermediate flange Type 255-9
- Deliverable with segmented sleeve (hardness >60HRC)
- Integrated manual lubrication
- Quick-change system possible

Customer advantages:

Low weight and low height through compact design, suitable for short span length, for example in „tapped blind hole situations“.



Synthetic gripper RRMP

Whether it is a matter of round materials, prismatic workpieces or free-form surfaces, the RÖHM RRMP synthetic gripper can be produced in very little time to meet the customer's individual requirements. Innovative manufacturing methods are what makes this possible.



To produce the gripper so it has a perfect fit, all we need is a 3D model of the workpiece and deliver quickly your individual gripper. In addition, the RRMP is totally maintenance free!

The ideal solution for light workpieces:

- Jaws can be designed with free-form surfaces
- Individually adapted to your workpiece
- Extremely light in weight
- Tested fatigue strength: More than eight million gripping cycles



Practical demonstration of the RRMP:
[youtube.com/user/RoehmTV](https://www.youtube.com/user/RoehmTV)

Air-operated centering vices KZS-P 100

Used as stationary centering vices on drilling, milling and special purposes machines.
Force transmission by the proven wedge system.



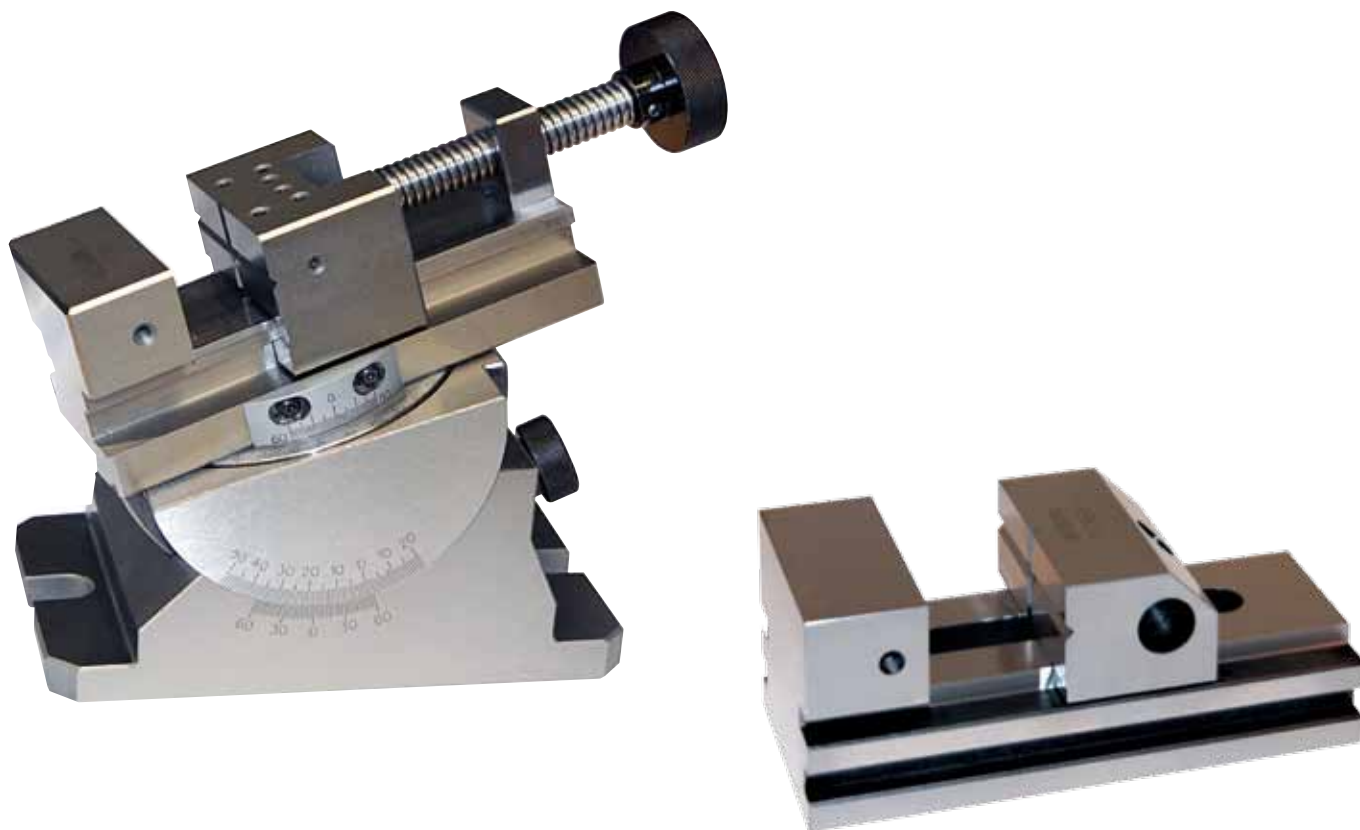
Technical features:

- Quick and efficient chucking
- Concentric gripping of round as well as angular parts
- Universal through use of different jaws
- Ideal for series production
- Suitable for use in automated work cycles
- Gripping force adjustable by changing the pressure
- High chucking accuracy thanks to constant gripping force at constant pressure
- Compact design, large jaw stroke
- High repeating accuracy
- For internal and external clamping
- Rigid, extra tight jaw guidings



Precision vices

Valuable firmly and without deformation under control. RÖHM precision vices convince in the variety of products, in performance and are highly reliable in their function.



The benefits of this clamping solutions are the space-saving design and the application and processing flexibility.

Equipped with different clamping jaws precision vices are perfect for demanding machining tasks.

- Predominant use of engraving, grinding and milling machines
- For measurement and control work and manufacturing processes which requires the highest clamping accuracy

SUPER LOCK Clamping unit

Space-saving and powerful: SUPER LOCK holds HSK totally without springs, but with a compact design



RÖHM presents a new and innovative clamping technique with a springless locking unit for hollow shank taper in machine tools: Self-locking without spring package. This trend-setting principle not only improves the working procedure, but also distinctly facilitates space saving designs.

Technical features:

- Clamping without springs and additional retention force
- Highest balancing quality
- Front mounting in short spindles
- Applicable to all HSK sizes, from HSK 25
- Secure clamping even with large HSK tolerances
- Continuous, secure and self-locking
- Optimised for use with high speeds
- Ideal for HSC machining
- Highly suitable for heavy-duty metal cutting
- High stiffness combined with the RÖHM HSK clamping unit

Micro clamping systems

HSK 25 still too large? Our micro clamping systems offer perfect clamping on even less installation space. For example, our micro clamping systems enable the production of implants for prosthetic dentistry.



Actual size shown

Clamping set version 1: Direct tool clamping

- no additional tool adapter necessary



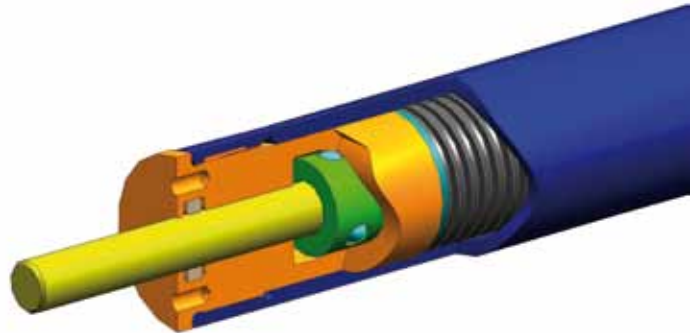
Actual size shown

Clamping set version 2: Tool clamping via a taper mount

- the most varied tool shapes can be clamped via an interface



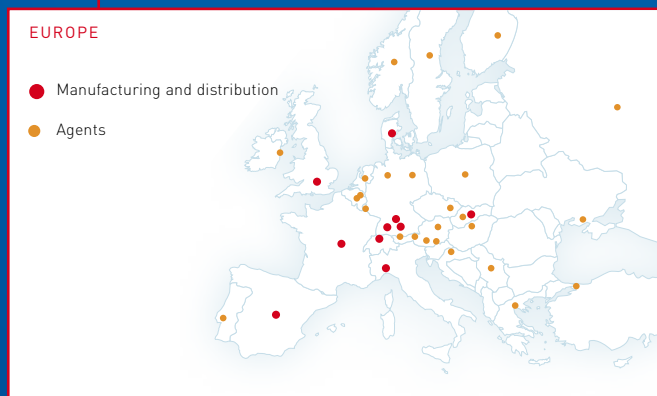
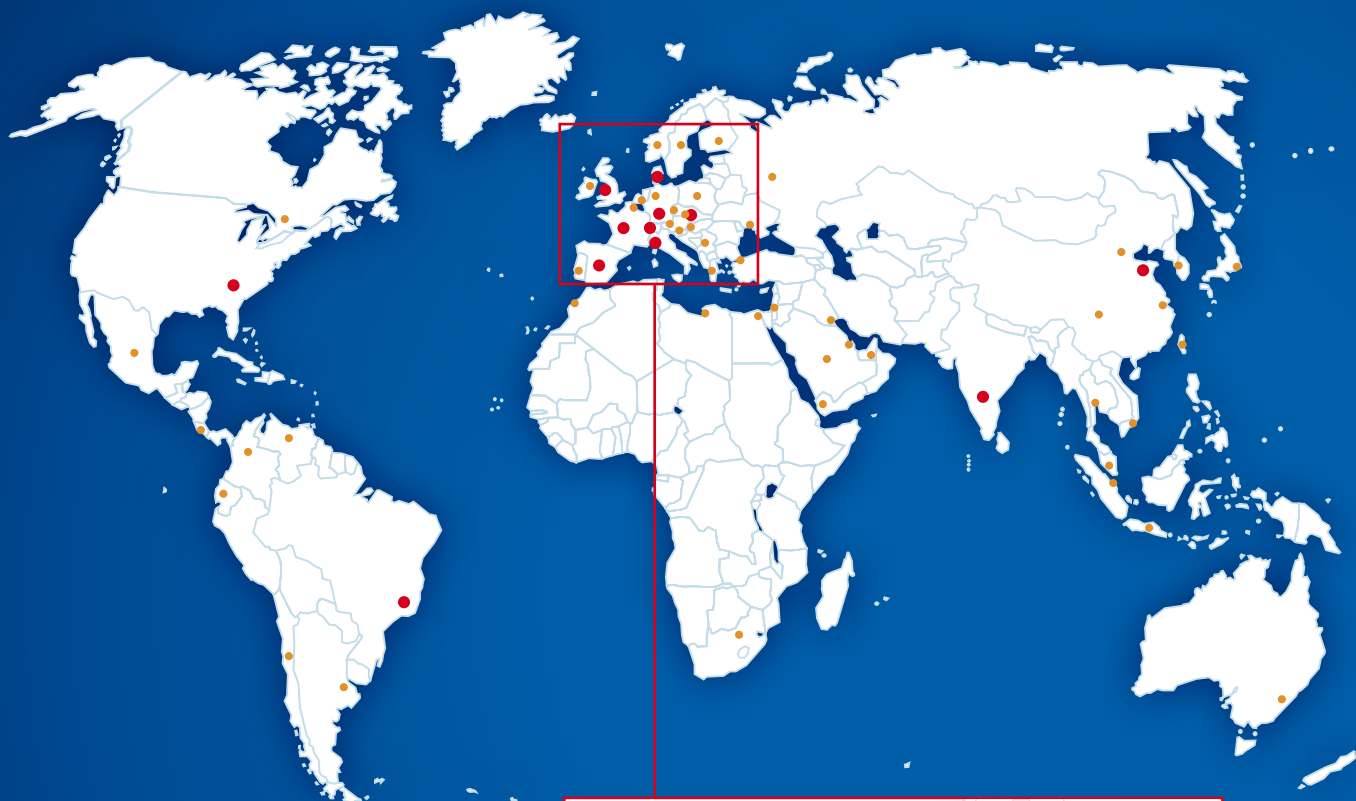
Small mandrels great in form:
Micro clamping systems from
RÖHM for the processing of dental
implants.



Technical features of both clamping set versions:

- Depending on the version of the clamping set, the tool can be clamped either directly or via a taper mount.
- Short design for limited installation space
- Smallest external mandrel diameter 10 mm
- Shortest mandrel length 40 mm
- Smallest tool diameter 3 mm
- Simple assembly of the clamping set from the front
- Complete clamping unit can be exchanged with a few manual steps

Releasing unit: The clamping set version can be combined with an optional releasing unit.



driven by technology

RÖHM GmbH
Heinrich-Röhm-Strasse 50 | 89567 Sontheim/Brenz | GERMANY
Tel 0049 73 25 – 16-0 | Fax 0049 73 25 – 16-510
info@roehm.biz | www.roehm.biz