



Machine elements

From unique single pieces to small batches



HANCHEN®

Our strength is your profit!

Years of experience in constructing and manufacturing for special purpose machinery have broadened our expertise in the field of machine elements. The products we offer aren't cookie-cutter parts off the shelf, but exactly the products you need.

Our production structure allows us to make unique single pieces or small batches. We can develop or design your individual machine elements for you, or manufacture them according to your engineering drawings.



Hänchen.
The engineering specialist.

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Machine elements from a reputable company.

Hanchen. A family business in its third generation.

The passion for precision, accuracy, and high-quality work is hereditary. At least with us it is. We are the third generation to continue the work of our grandfather Herbert Hanchen. With the same pioneering spirit, the same passion for first-class quality and the same enthusiasm for the smell of oil and metal.

Our business includes machine elements, hydraulic cylinders, and drive systems.

Everything started in 1925 with repairing motors: Since especially precise and robust products were required, we introduced surface honing. On this basis, Hanchen began to make hydraulic cylinders, and eventually became internationally renowned as a high-quality manufacturer with an excellent engineering team. Today, we're the go-to partner for everyone who needs a special solution.

These decades of experience in manufacturing special purpose machinery, combined with our knowledge about hydraulic cylinders, make Hanchen a specialist for machine elements in the field of precision rods, guides, sealing systems, and mounting elements.

Hanchen's success story is still running smoothly. The reason for this is that our customers can be sure that we always use solutions tailored exactly to their requirements. This mutual trust is based on our know-how that has been growing for three generations.

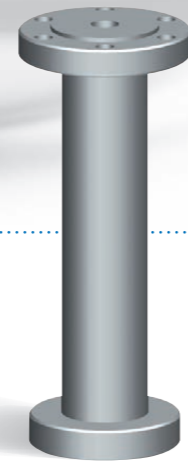
The original Hanchen headquarters in Ruit near Stuttgart. In our certified company we create sustainable and future-oriented products.



With more than 200 highly motivated employees, we have been developing, testing and manufacturing innovative solutions for our customers – in our own research and production departments in Germany. We are at home where durability, reliability and availability matter – and the whole world knows it.



Passion meets accuracy.



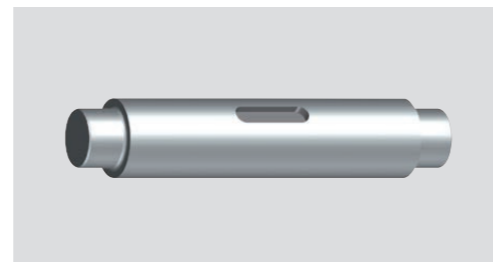
Passion for high-quality rods and shafts needs as a basis attention to detail. For our production, we make no compromises on quality, giving you every reason to choose Hänchen products. 80% vertical integration. 100% made in Germany. 100% quality.

+ Properties. Rods, shafts, axles.

We produce for you unique single pieces or small batches with diameters between 12 mm and 200 mm, and up to 6000 mm of length. We can design them for you, or manufacture them according to your engineering drawings.

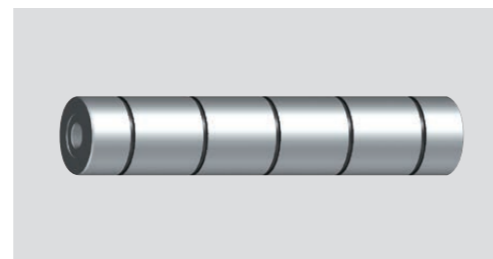
Material quality

High-quality steel materials such as 20MnV6, 42CrMo4V, 16MnCr5, stainless steels such as 1.4571 or 1.4462, and even aluminium alloys or non-ferrous metals – we use what you need.



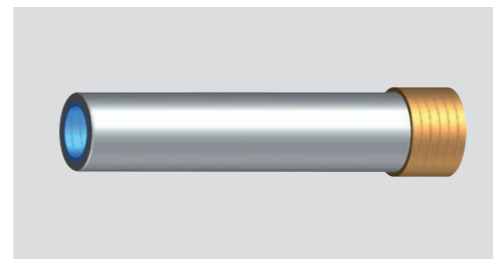
Processing

Machining with the latest turning, drilling, and milling centres. Fine machining by internal or external honing, grinding, finishing. Massive, as hollow shafts, or with deep-hole drilling – in all established ISO fits.



Coating

Anodised aluminium, hardened, hard-chrome plated, or nickel-plated steel – whatever your application requires. Thick bronze or synthetic layers can be applied to the in- or outsides as slide surfaces.

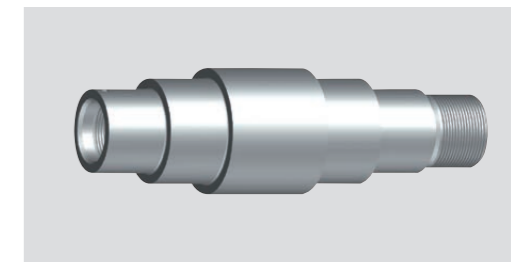


+ Design. We make the rod work.

Be it precision shafts, axles, guide pillars, or piston rods. Integrated holms, guide rods, or pressure-resistant distributors for fluid supply under high pressure.

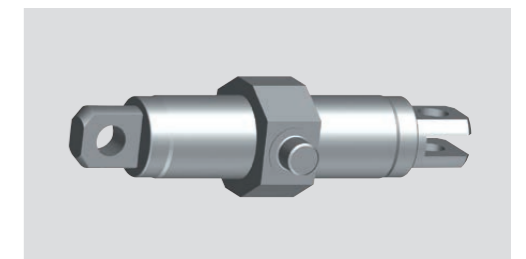
Precision shaft

No matter what type of ends you want for your shaft or rod – we have what you need: male threads, female threads, pins, cylindrical or cone-shaped shaft seats, radial bore or feather key groove, with wrench flats, square or hexagonal.



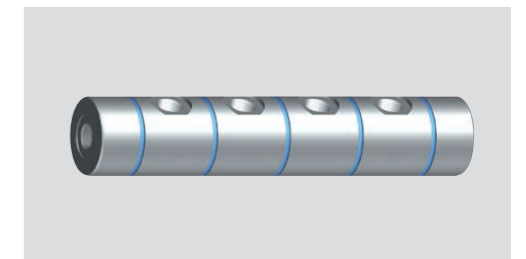
Functional rod

Connecting rods and piston rods with round or rectangular flanges, shafts with plates. One-piece, or welded in the middle or on the end. Even trunnion flanges with their special geometry are no problem for us.



Distributor axle

High-pressure resistant fluid distributors, with transverse and longitudinal bores. With pipe threads or cone-shaped threads for direct connection to the supply line. If necessary, they come with appropriate sealing elements for direct installation in your machine housing.





Special tasks? Individual solutions!

Exactly what you need: Our large engineering team is there for you – with decades of experience in the development and creation of special solutions.

+ Sealing systems

We'll find the best sealing system for you. With low stick-slip contact sealing elements, or contact- and wear-free.

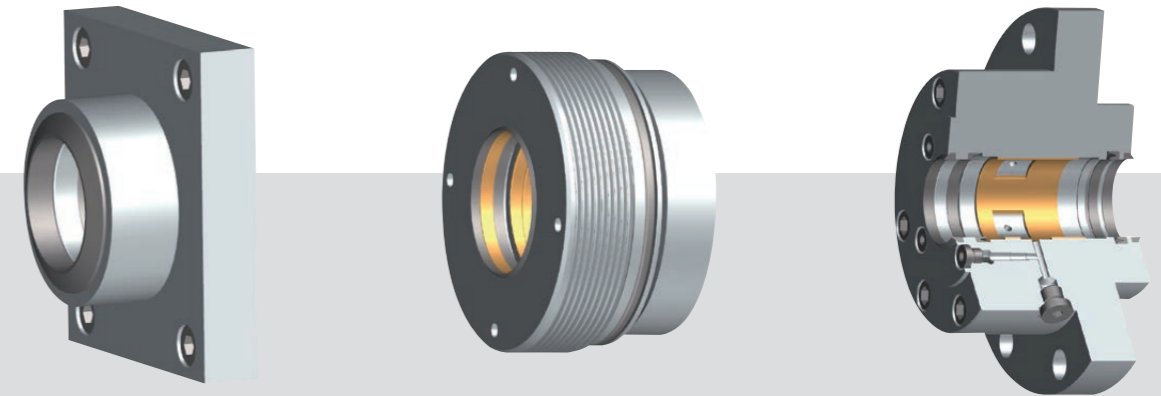
We seal everything:

- pressures of up to 2.000 bar
- temperatures from -40 °C to 200 °C
- fluids between moving or static parts
- mineral oils, synthetic, bio-degradable, and any other liquids

+ Guiding elements

Strong and accurate bearings are essential for a long service life and for the correct functioning of a machine. We design accurate plain and hydrostatic bearing. For all types of sliding surfaces:

- cast iron or non-ferrous metal
- with a bronze or synthetic layer, inseparably connected to the component part
- with wear rings or bearing bushings



+ Typical for Hänchen: We're at home with sealing and guidance technology.

From conventional sealing technology to hydrostatic bearings – we're happy to provide advice and assistance. Component part diameters from 12 mm to 200 mm.

Example 1:

Plain bearing flange

Flanges are fixed to the machine with screws to absorb forces from rods or shafts.

We develop bearing flanges with exact guiding systems as plain bearing, for example with our special Servoslide® synthetic coating. As an integral, inseparably applied part of the cover, this coating is suitable for operating temperatures of up to 80 °C. The slide surfaces of the synthetic guide act as vibration-dampers, prevent edge pressure and guarantee largely stick-slip-free movement.

Example 2:

Sealing and guide bushing

Sealing and guide bushings are used in machines where rods or shafts are led out of a pressure chamber.

Appropriate seals can withstand pressures of 300 bar and more, and keep a wide variety of liquids inside the machine space.

To give the rod or shaft a perfect bearing seat, we use plain bearings made of steel with high-precision bronze guides. These make it possible to realize rod or shaft feed-throughs for temperatures of up to 200 °C.

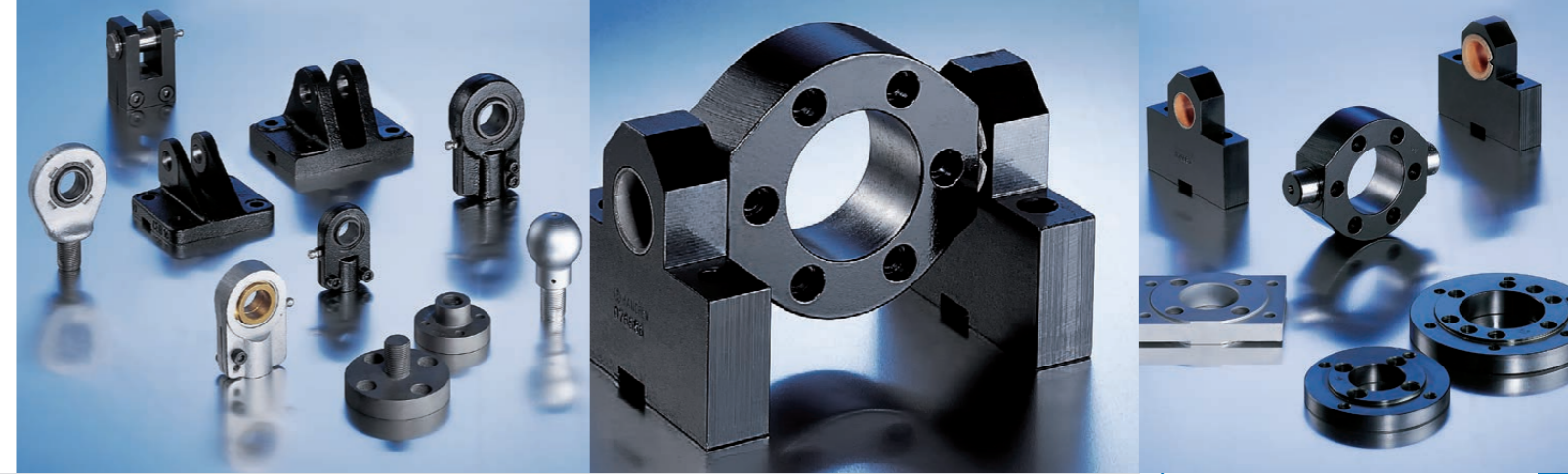
Example 3:

Hydrostatic bearing

A hydrostatic bearing is a no-contact guiding system with the rod or shaft "floating" on an oil film. This method allows creating linear or rotary bearings that feature extremely low friction forces while at the same time being able to bear very high bending loads.

The pressure for the bearing pockets of the hydrostatic bearing is supplied through active pressurization of the bearing pockets on the perimeter.

The corresponding rod or shaft will be adapted for your requirements.



Unlimited possibilities.
Accurate fitting combinations.



Just contact us, we will be pleased to help you! You can find our contact addresses on the back.

Since 1925, when we started designing hydraulic cylinders, Hänschen has been manufacturing precise mounting elements. Right from the beginning, we have made it a priority to realize individual solutions – whatever you need for your application.

For forces from 1 kN to 6,000 kN. Following DIN, ISO, or your own standards – we make products on the basis of your engineering drawings and handle the entire engineering part for you, including consultation.



+ Fixation parts and clevis brackets

For connecting pivoting elements such as gear or articulate rods, plain rod eyes with bronze bushings, rod balls, or rod clevises are suitable options. With the appropriate clevis brackets, they are easily mounted in the machine.

We select the best bearing material for your application: greased bronze bushings, or maintenance-free synthetic bearings.



+ Pivoted mounting elements

A radial plain bearing in a spherical rod eye compensates not only the rotary motion, but also lateral deflections and tilting. The bearings comply with DIN 12240-1 Type E, G, and Type W with an expanded inner ring.

They are designed as maintenance-free bearings with a low-friction and wear-resistant synthetic sliding film, or as spherical bearings that require maintenance, but are suited for high dynamic oscillations.



+ Mounting flanges

Mounting elements for installing component parts on a machine can be circular, rectangular, or trunnion flanges. A trunnion flange allows free, flexible movement around

the transverse axis and can transmit very high longitudinal forces. With the appropriate clevis brackets, pivot bearings are easily integrated into the machine.



+ Spherical bearing flanges

An especially space-saving option for transmitting high forces at very large tilt angles. Encased in the bearing bushings, the ball can be installed directly on shafts, rods,

or other machine elements. The bearing bushing itself is fixed with screws, thus enabling an ideal compensation for the offset of construction parts.

Herbert Hänchen GmbH & Co. KG
Brunnwiesenstr. 3, 73760 Ostfildern
Postfach 4140, 73744 Ostfildern
Fon +49 711 44139-0
Fax +49 711 44139-100
info@haenchen.de
www.haenchen.de



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