

Loslager

HFB – Technology in motion



The basis of our success: **Products of the highest quality – Made in Germany.**

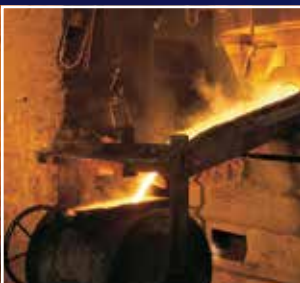
Founded in 1996, HFB Wälzlager-Gehäusetechnik GmbH has become a leading medium-sized company with branches and dealers in the main industrial countries of the world.

We regard high product quality as the basis for customer satisfaction, and above all for confidence. We place the highest demands on ourselves and use defined quality standards and inspections to guarantee our customers consistently high quality.

The careful selection of our foundries based on our quality and specifications agreements ensures that even the raw castings provided perfectly meet our requirements.

Housings for bearings and drive elements are manufactured using the latest technology: Our service starts with professional advice, and includes preliminary design, dimensioning and precision engineering and also quality-controlled manufacturing of customized speciality products for users of drive technology worldwide.

Naturally, our program also covers a broad range of first class standard products that can be despatched to our customers at very short notice.



Based on quality-tested raw materials, we use the most modern equipment for machining grey cast iron, nodular cast iron, cast steel, red brass, etc. – for operating ranges from -63 °C up to +350 °C. Low-temperature materials can be provided for extreme applications. These materials have defined mechanical properties at ambient temperatures from -20 °C and -40 °C as laid down in the standards.

For finishing we have several surface treatments available, e.g. CORROPROOF and nickel plating etc., and our high efficient stainless steel coating SSP (Stainless-Steel-Protection) which is a surface protection against climate influence, abrasive wear and corrosion. HFB housings can be provided with corrosion protection for corrosivity categories up to C5-M or C5-I.



A complete range: So that everything runs smoothly.

HFB is a leading manufacturer of bearing housings and drive components for a wide variety of applications. The comprehensive range extends from standard quality products to customer-specific individual special products based on the latest state of the art (for example: as regards resistance to acids, temperature resistance or the requirements of food processing applications).

Everything from a single source

As well as housings, drive elements etc., if requested by customers HFB can draw on partners in the fields of roller bearings and clamping sleeves to provide expertise for complete solutions, e.g. preassembled modules including bearings and shafts for advanced drive technology.

Products for conveyor technology

HFB products for conveyor technology are based on many years of experience with customers and operators in the conveyor industry. Our designs comply with the highest international quality standards and provide an optimal cost-benefit ratio in use.

The products are supplied as standard versions, but modifications for specific individual cases are also available. Emphasis should be placed on the extremely wide variety of housings, including aspects such as materials, sealings and condition monitoring requirements.

Our basic principle is: the best possible solution and consequently high reliability of HFB products for the application and demands (loads, environmental conditions etc.) in the widest possible areas of conveyor technology. This allows HFB to meet the increasing demands and requirements.

We offer high-quality split spherical roller bearings to minimise plant maintenance processes.



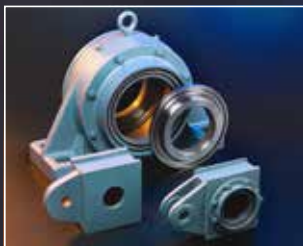
Split spherical roller bearings for more economic maintenance processes



Split plummer blocks designed for loads perpendicular to the mounting surface



SDI – Split plummer blocks for extremely highly loaded bearings



BTL, SLG and STL – plummer blocks and take-up units for maximum loads



SNI – Split plummer blocks for a wide range of different seals



SAF/SAW – Split plummer blocks in imperial dimensions



SDAF – Split plummer blocks in imperial dimensions for extremely highly-loaded bearings



Oil- and grease-lubricated bearing housings for the fan industry

Oil- and grease-lubricated HFB housings for the fan industry are based on the highest technical standards and meet the constantly increasing requirements as regards power, speed and service life. The wide variety of available fan bearing and unit versions is typical for our extensive product range.

Standard versions are subject to continuous improvement against the background of evermore stringent requirements, and special solutions are provided to give the best cost-benefit ratio.

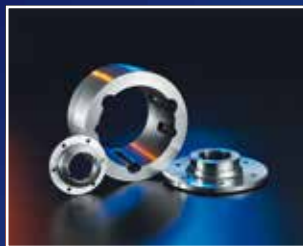
In addition to the various types of GOS/GOF housings, with the ZLGO and BL/PDNI series HFB also offer one of the leading ranges in terms of modification possibilities (particularly as regards bearing design).



Example of application of HFB housings in modern, highly-loaded industrial fans



Cutaway of a special fan bearing design



Bolt-on flanges for clamping bushes (e.g. Taper-Lock)



The particular strength of HFB is the design and manufacturing of complete individual solutions. Everything about drive technology from a single source.



GOS/GOF – plummer blocks for oil bath lubrication, designed for use in high-speed fans and capable of modification for elevated temperatures. Two different series, for use depending on the shaft design.



BL/PDNI – grease-lubricated fan bearing housings (special grease is also possible), available with standard shafts or with individual shaft dimensions and materials to meet customer specifications.



ZLGO – oil-lubricated fan bearing housing, available with various bearing pairings.



ZLF/ZLFB – grease-lubricated flanged double bearing



SBL – tension-bearing housings for grease-lubricated bearing inserts

Additional drive technology products

The drive technology product range complements the HFB housing range by the addition of sealed for life bearing housing units, housings for hardening wagon bearings, kiln car bearings and flanged bearing units, and special housings for individual customer requests. The series also includes flexible couplings, HFB self-aligning roller bearings as well as clamping and withdrawal sleeves.

Bearing housing units can be supplied in standard sizes (12-140 mm dia.) of all common versions (DIN, ISO and JIS) on the market, and also as special designs, including for foodstuffs and agriculture, and customer-specific designs.

Kiln car and hardening wagon bearings can be supplied as complete units (including lubricant). Special housings can be manufactured to customer specifications at short notice in cast or welded form irrespective of size, design and quantity.

HFB flexible couplings offer safe and reliable transmission of the drive power to ensure high reliability for all mechanical engineering purposes. HFB spherical roller bearings as well as clamping and withdrawal sleeves have been tried and tested over many years, and complement the HFB housing range for complete solutions. The product range is rounded off by flanged bearings for taper roller bearings with clamping sleeves.

This bearing (type UC 308 R3 2C AV12) is fitted with a P3C seal on both sides and therefore has particularly effective sealing properties. It is also coated with our CORROPROOF anti-corrosion protection.



Cutaway of the FUJ series with a special seal



Housings for hardening trolley and kiln car bearings, flanged bearing housings for spherical and taper roller bearings with clamping sleeve fitting



Special-design housings manufactured to customer's specifications



Flexible couplings for general engineering applications



Ball bearing housing units for shaft diameters 12-140 mm



Clamping sleeves in metric and imperial sizes.



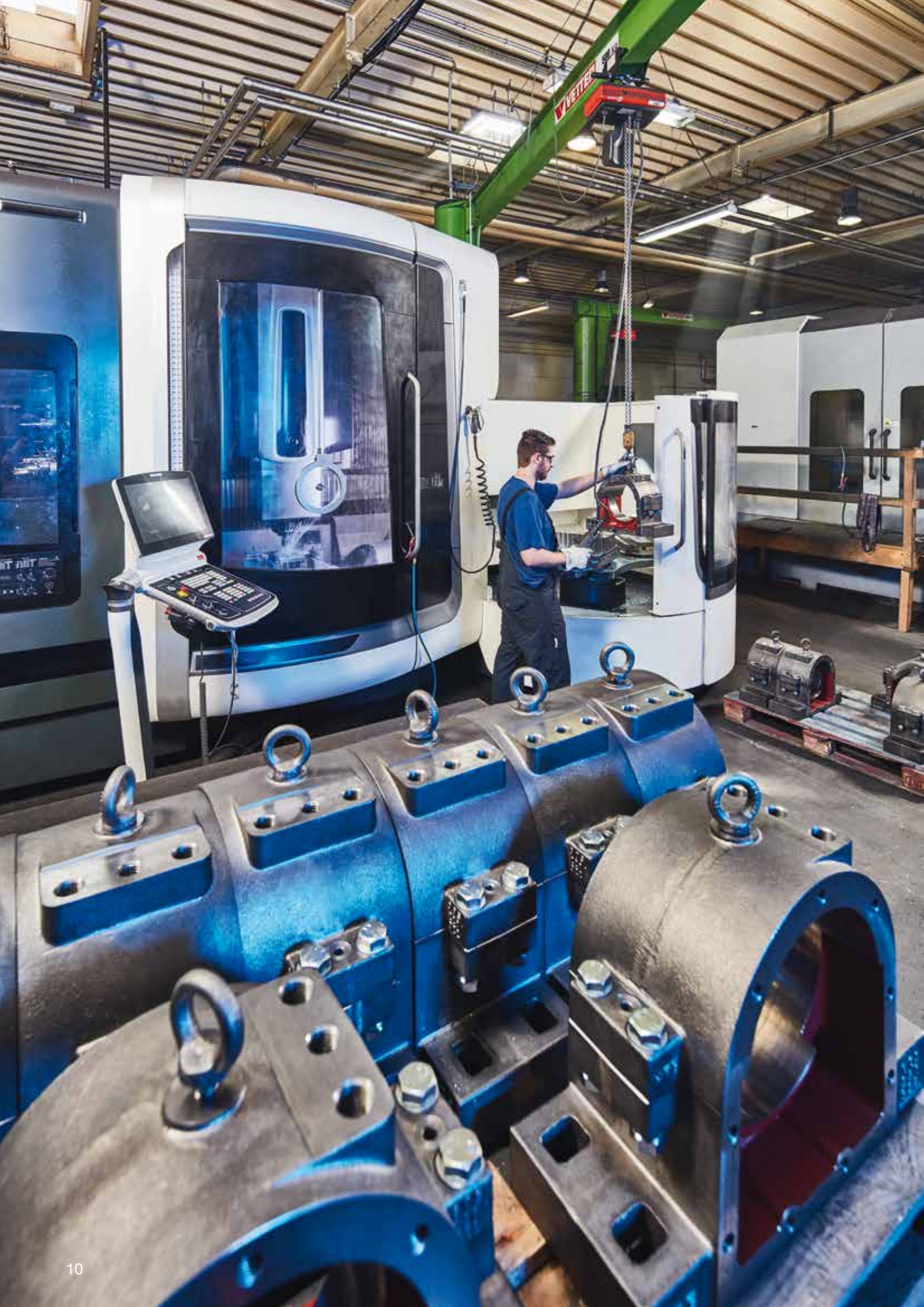
Grease-lubricated plain bearings



HFB spherical roller bearings with bore diameters of 200 mm upwards are dimensionally stable up to +200 °C. They are available in a wide range of designs as regards clearance, material (e.g. case hardened), lubrication etc.

Available versions (depending on the bearing series and the dimension of the inside bore):

- *CC: Two sheet metal cages with a guide ring centred at the inner ring*
- *CA: One-piece machined double pronged brass cage centred internally and with two shoulders at the inner ring*



From large housings to large-scale series production of housings: **Technology in motion.**

In recent years HFB has continuously invested in modernising its manufacturing facilities. The result is a state of the art machine park.

Our CNC machines allow us to turn parts with a circumference up to 1,800 mm in semi- or fully automatic operation.

Our high-performance CNC boring machines, turning centres and milling machines produce components from high-quality castings and steel efficiently and with the highest precision.



Machining a housing on a CNC turning centre



Expertise in manufacturing large bearing housings: components weighing over 4 t are machined with the greatest precision.



Quality production "round the clock": high-performance robots load the CNC turning centre with large-scale series parts.



Latest modern manufacturing on a 5-axis machining centre



From design to manufacture: **Our quality promise**

The use of our quality materials and our precision manufacturing define the design and manufacture of a product. In addition to checks by the operator, the manufacturing process is of course continuously monitored and supervised by our quality assurance department.

Series and random checks in our inspection room, equipped with complex measuring instruments, as part of continuous inspection of our products is an integral part of our high-quality manufacturing process to rule out any measurement uncertainty.

The use of 3D measuring instruments allows us to produce detailed measurement reports. Our quality assurance procedures include inspecting and documenting geometric dimensioning and tolerancing, as well as surface finish.

Certified to DIN ISO 9001, we are continuously searching for further improvements in order to continue our success on a sustained basis. These include statistical evaluations, measurement capability testing and risk analyses.

We can of course provide additional services, perform special tests and issue any required certificates.



Services

- Bearing housing dimensioning
- Life time calculation
- Recommended lubricants for individual applications (e.g. NSF-registered bearings with approved greases to ISO 21469 for the foodstuffs industry)
- Shaft dimensioning
- Tensile strength calculations and stress analysis in components
- Design and recommendation of sensors and electrical components (including sale if required)
- Breakdown analysis of bearing inserts and housings
- Materials analyses

Tests

Non-destructive testing available at the HFB factory by prior agreement after customer request:

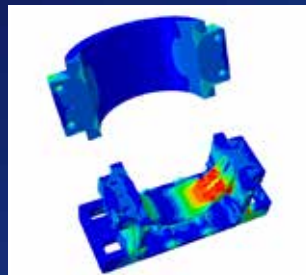
- Dye penetrant inspections
- Ultrasonic testing
- X-ray inspections
- Magnetic particle inspections

Certificates

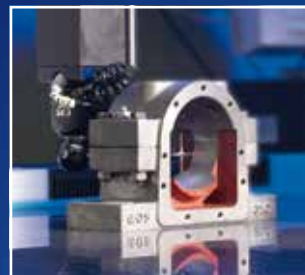
- Factory certificates 2.1, 2.2 and 3.1, and acceptance certificates 3.2 on request (DIN EN 10204)
- Certificates of conformity
- Certificates of origin



Design optimised for costs and manufacturing using modern CAD workstations



Calculations of loads, stresses in components, bending and buckling behaviour, fatigue strength, etc. performed using finite element methods (FEM)



Defined random sampling using 2D and 3D measurements and careful final inspection guarantee HFB's exceptional product quality



Logistics and service: **We set the wheels in motion**

HFB maintains very large stocks of its products in Buchen to be able to offer customers solutions at short notice. Whether standard off-the-shelf components or others built to order, in either case we can respond flexibly and quickly manufacture and deliver. Thanks to a fully-networked production planning and control system and a reliable logistics program, we are able to process incoming orders at once. Our sales companies and numerous representatives allow us to maintain an international presence and supply our products on all five continents.

To make sure that everything runs smoothly, our highly competent, service-focused engineers, technicians and sales employees will be happy to answer any technical questions you may have, and draw up solutions and develop improvements with you in order to provide help quickly and efficiently – even for the most complex problems.



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