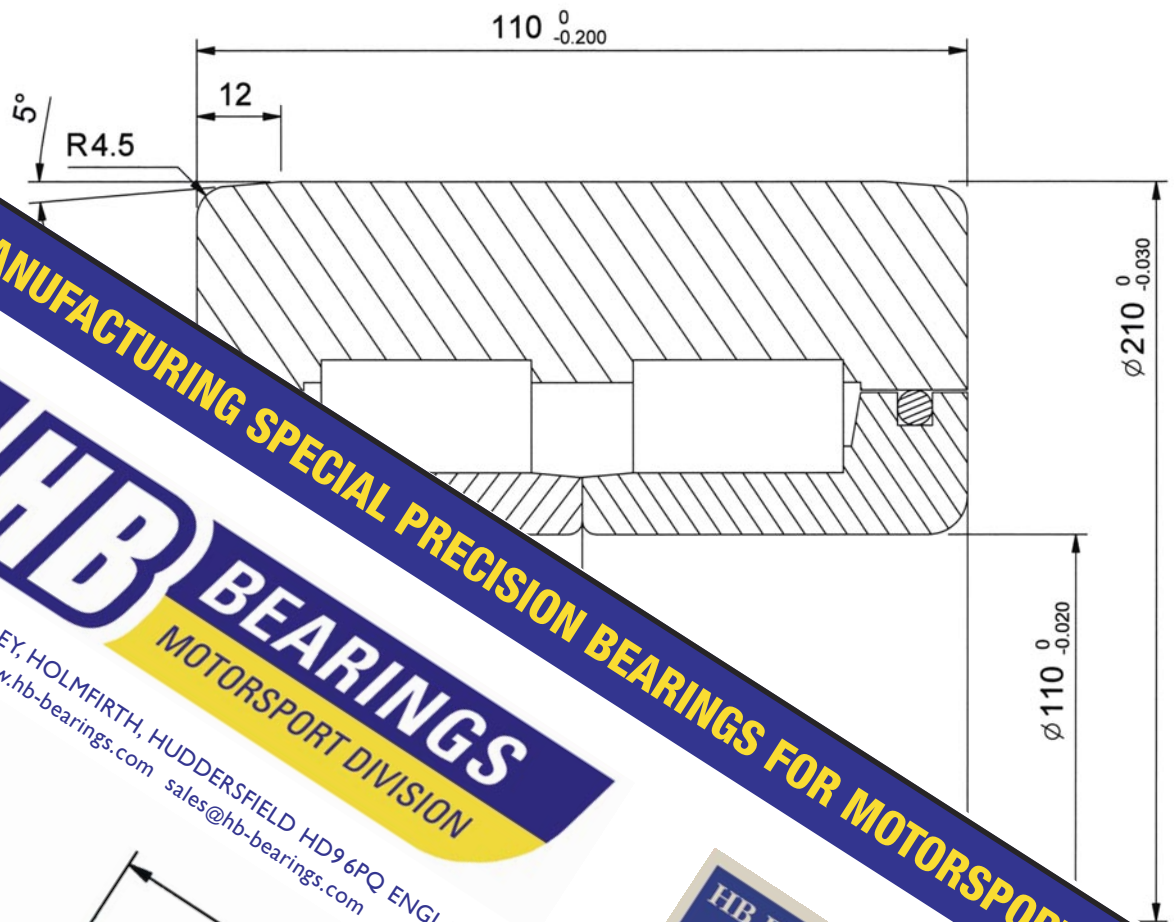


MANUFACTURING SPECIAL PRECISION BEARINGS FOR INDUSTRY





RIVERSIDE WORKS, HONLEY, HOLMFIRTH, HUDDERSFIELD HD9 6PQ ENGLAND
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HB BEARINGS
MOTORSPORT DIVISION
RIVERSIDE WORKS, HONLEY, HOLMFIRTH, HUDDERSFIELD HD9 6PQ ENGLAND
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 Herstellung von sonderlagern hoher qualität für die industrie und motorsport.

 Fabrication de roulements spéciaux de qualité supérieure pour l'industrie et le sport automobile.

 Produzione di cuscinetti speciali di alta qualità per l'industria ed il settore motorsport.


 Fabricamos cojinetes especiales de la más alta calidad para diversos sectores industriales y el sector del automovilismo.


MANUFACTURING SPECIAL PRECISION BEARINGS FOR INDUSTRY


"At HB Bearings we are very proud of our international reputation for manufacturing high quality, special precision bearings which are used in so many diverse industries.


This brochure has been designed to show just a small sample of these industries and bearing examples".

Statement from the Directors and Staff at HB Bearings.

 "Wir von HB Bearings sind sehr stolz auf unseren internationalen Ruf für die Herstellung hochwertiger, spezieller Präzisionslager, die in so vielen verschiedenen Branchen eingesetzt werden. Diese Broschüre wurde zusammengestellt, um nur einen kleinen Querschnitt dieser Branchen und Lagerbeispiele zu zeigen".
Aussage der Direktoren und Mitarbeiter von HB Bearings.

 "HB Bearings est fière de sa réputation internationale pour la fabrication de roulements de précision spéciaux, caractérisés par leur qualité supérieure et utilisés par les secteurs les plus divers. Le présente brochure a été conçue pour illustrer un échantillon de ces secteurs industriels, et des applications des roulements".
Déclaration des dirigeants et du personnel de HB Bearings.

 "Noi della HB Bearings siamo molto fieri della nostra reputazione internazionale di produttori di cuscinetti di precisione speciali di alta qualità che sono utilizzati da numerose industrie diverse. Questa brochure è stata progettata per mostrare un piccolo campione di queste industrie ed alcuni esempi di cuscinetti".
Dichiarazione dei Dirigenti e del personale di HB Bearings.

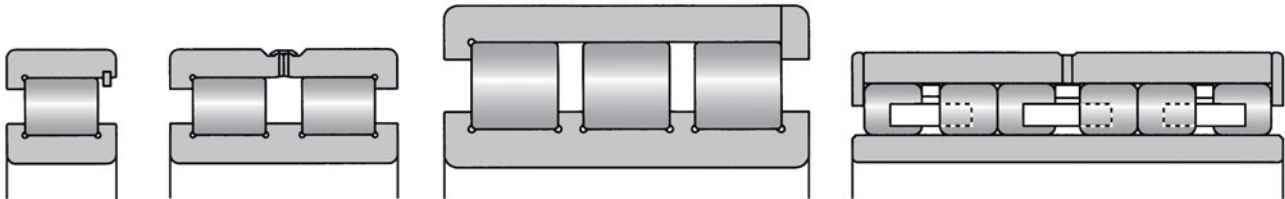
 "En HB Bearings nos sentimos muy orgullosos de la fama internacional que hemos adquirido por fabricar cojinetes de precisión especiales de la más alta calidad, utilizados en una amplia gama de sectores industriales. Este folleto muestra tan solo una pequeña muestra de estos sectores industriales y ejemplos de cojinetes".
Declaración de los Directores y Personal de HB Bearings.



Steel Industry

HB Bearings have the capacity to manufacture bearings up to 1m (39") outside diameter. We can manufacture most designs of roller or ball bearings and are frequently called upon to make bearings on tight lead times.

Multi row roller bearings and back up roller bearings are often asked for. We are also able to manufacture special bearings for new installations or obsolete bearings for older equipment.



EXAMPLES OF DIFFERENT TYPES OF BEARINGS MANUFACTURED

International Mining & Quarrying Industries

HB manufacture a large variety of bearings for the mining and quarrying industries. These include bearings for coal cutting machinery, crusher gearboxes and for fire proof motors.

Our bearings can be fitted with bronze riveted cages for strength. The races are machined from top grade materials with special internal geometry for reliability and strength.

Bearings for vibratory screens (including Niagra screens) can frequently be obtained from stock or on very short lead times.

Special oversize or undersize bearings are manufactured to keep worn equipment in operation.



STOCKISTS OF HARD TO SOURCE METRIC AND IMPERIAL BEARINGS

Machine Tool Industries

HB Bearings manufacture a number of bearings for machine tool applications. These can be roller bearings, ball bearings or angular contact ball bearings and are normally of a higher precision.

One of the most popular ranges is for the rebuilding or upgrading of multi-spindle turning machines. We also manufacture inch and metric special or obsolete bearings for older machines.

We also specialise in setting up preloads in sets of angular contact bearings for use in precision spindle assemblies and the addition of special lubrication features.

Taper roller bearing sets can also be set up with any required B.E.P.



Offshore, Marine, Oil & Gas Industries

The company has a long history of supplying bearings to the offshore, marine and oil industries. Bearings are specially manufactured to work in this difficult and demanding environment. This includes working in L. P. G.; sour gas, power generating equipment and in down hole conditions.

Special bearings and standard designs can be made in special materials such as corrosion resistant 440 ST ST. for items such as transmissions, winches and pumps. Difficult to source or obsolete replacement bearings can often be made on short lead times.

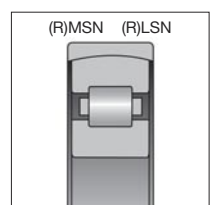
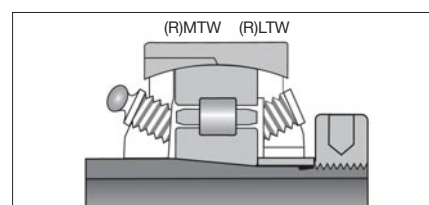
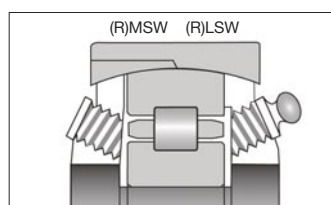
Development and prototype work is also a main area in which we specialise.



Textile Machinery

HB Bearings supply many different types of bearing to the Textile Industry many of which are obsolete lines. We can supply the full range of LTW; LSW; MTW and MSW type bearings, many being from stock and most others on short lead times.

We have also supplied bearings for the refurbishment of spinning spindles and the carpet yarn production industry. Often we can supply inch size bearings which are now difficult to obtain many times from stock. HB has an extensive archive of special references, also prefixes and suffixes for bearings with special features.



MANUFACTURING SPECIAL BEARINGS OF HIGH QUALITY FOR INDUSTRY

Accessories

We manufacture a wide range of accessories for use with bearings.

Made with the same care and attention to detail as our bearings, the accessories are available in both imperial and metric sizes. Sizes can be standard or non-standard, and a wide variety of materials can be specified to suit your requirements.

Many of the more popular items such as HJ rings and thrust bearing seating rings are already manufactured and held in stock.

Please contact us for details of our current stock-holding.

If your special project calls for an unusual bearing accessory design, our design department will be pleased to offer you assistance in this area.

Manufacture of spacers for taper roller bearings (and measurement of the bearings) is an efficient service we also provide.



SLEEVES



HJ RINGS



SEATING RINGS



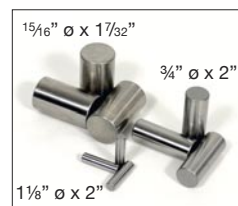
DB

DF

Special Cages & Rollers

At HB we specialise in manufacturing non-standard ball and roller cage assemblies. Existing bearings can be fitted with new cages in different materials or designs.

Or, only the cages can be supplied with no bearing races. Non standard size rollers are manufactured, both imperial and metric, fitted to cages or supplied loose.

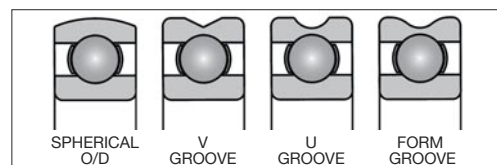
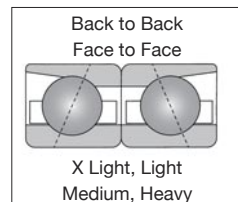


Modifications

Conversions of existing bearings with the addition of special features, for example alteration to clearance, adding U, V or circlip grooves; can make an existing bearing suitable for an application, thus saving on cost of a special bearing being manufactured.

Many modifications can be achieved on a more realistic delivery schedule than to manufacture complete. Whatever the modification, we will always do our utmost to meet your delivery requirements.

For more information on modifications and a comprehensive list please see our website; www.hb-bearings.com.



Manufacturing Tolerances

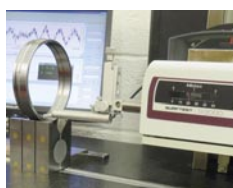
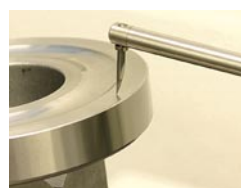
Bearings are manufactured to the following standards according to customer requirements. Special tolerances may be requested. Radial clearances are to ISO

5753-1991, but can be manufactured to customers requirements. Other aspects of bearing manufacture are to ISO standards where applicable.

- ISO 492-1986, Metric radial bearings
- ISO 199-1979, Metric thrust bearings
- BS 292-1969, Imperial bearings
- A.B.E.C. Standards

Quality Assurance and Inspection

Precision bearing manufacture demands the access to the very latest in inspection technology. Our inspection rooms contain state-of-the-art computerised (CNC) inspection equipment including the ability for hardness testing, surface finish, roundness testing, contour inspection and co-ordinate measuring machines.



Sourcing and stock

Our stores hold stocks of many bearings including, duplex, roller and angular contact, in inch and metric sizes.

Stock details can be found on our web site www.hb-bearings.com. If you are seeking off-the-shelf hard to

source bearings, contact us today for your requirements.

General Manufacturing Data

Materials

These are some of the materials used in the manufacture of our bearings. Other materials can be considered upon request.

Races and rolling elements:

- Carbon chrome - SAE 52100 type - heat treated to HRC60-64
- Stainless steel - AISI 440C
- Tool steel
- Case hardening steels
- Balls and rollers in silicon nitride

Cages:

- Bronze to SAE 660 or BS1400 - LB4
- Phenolic resin
- Aluminium
- PEEK
- Aluminium bronze
- Nylon
- Steel




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 Herstellung von Sonderlagern hoher Qualität und Präzision für den Motorsport.

 Fabrication de roulements spéciaux de qualité supérieure et de haute précision pour le sport automobile.

 Produzione di cuscinetti speciali di alta qualità e precisione per il settore motorsport.

 Fabricamos cojinetes de precisión especiales de la más alta calidad para el sector del automovilismo.



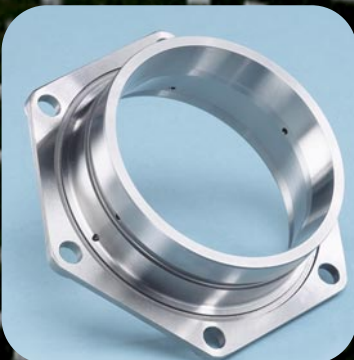
Our aim is to supply high quality bearings in a manner to satisfy the fast moving and ever changing motorsport industry. The design stage of a bearing is absolutely crucial. With our in-house technical department HB Bearings have the knowledge and the experience to assist in bearing design. Convention can be stretched at the design stage; there is great scope, and all types of bearings and materials can be considered.

Since 1972 HB Bearings have built up a talented team of bearing engineers & designers. We are able to manufacture state of the art motorsport bearings. We can design bearings on our solid modelling CAD system. Dynamic and static load ratings calculated to I.S.O. standards which can be used to calculate bearing life, also we can advise on speed capabilities and the anticipated effects on bearing life.

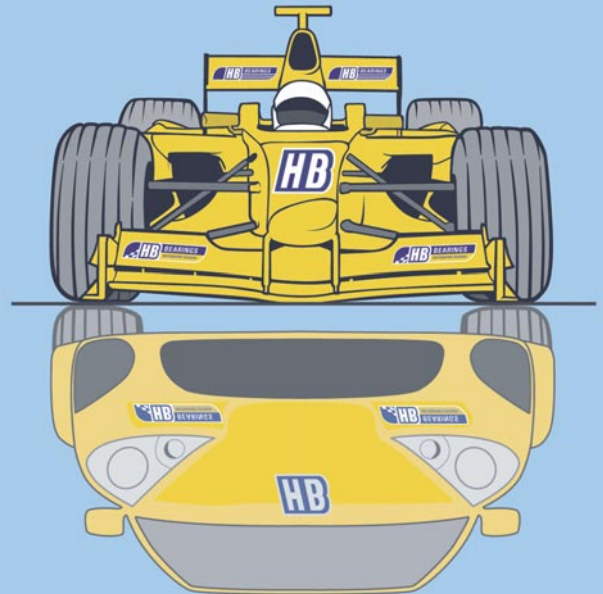
HB Bearings has gained a global reputation for leading the field in innovation, lead times and bearing quality. We know the motorsport industry well and can move very quickly through design processes and start manufacturing as we have a wide range of bearing steels and rolling elements in stock. We are flexible enough to manufacture anything from a one off to a quantity run in a time scale to suit your requirement.

Special Motorsport Bearings

A wide range of bearing types and functions



Bearings for Transmission, Steering Suspension, Clutch and Wheels



Materials

We manufacture from many current and new materials

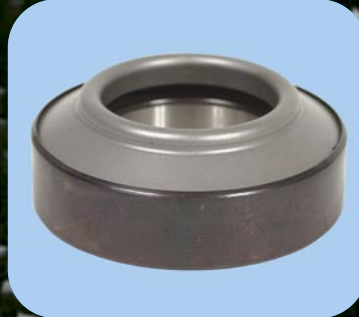
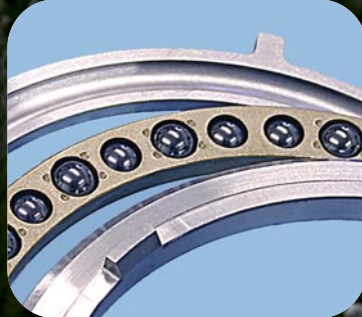
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- Stainless steel - AISI 440C
- Tool steel • Case hardening steels

Cages:

- Bronze to SAE 660 or BS1400 - LB4
- Phenolic resin • Aluminium
- Aluminium bronze
- PEEK • Nylon 66 • Steel



Bearing inspection

High quality inspection, measurement and traceability

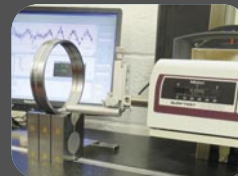
Two fully air conditioned inspection rooms contain some of the most up-to-date measuring equipment available.

The Mitutoyo Strato CNC co-ordinate measuring machine has a working capacity of up to 750mm diameter. This is a high precision CNC system with an accuracy of 1.2 μm and a resolution of 0.1 μm .

Amongst other inspection

equipment are the Mitutoyo C-3200 contour tracing machine and the Mitutoyo SV-2000 Surftest surface testing machine and roughness tester.

When manufacturing a precision bearing, full traceability is ensured due to our order processing system. Certificates of Conformity and similar documentation are available upon request.



Modification Service

A wide range of modifications can be made to existing bearings

Modifications to bearings are a cost effective solution. As a manufacturer we understand all the important aspects of modification such as tolerance, concentricity, cleanliness etc.

These are just a few examples of modifications:-

- Anti-rotation flats, holes and slots added to bearings
- Bores of bearings can be tapered

- Locating/circlip grooves added
- Clearances changed to C1, C2, C3, C4 and C5 or special
- New replacement cages made from 'PEEK', bronze, phenolic, aluminium etc.
- Bores outside diameters and widths can be altered
- Oil grooves and or oil holes added
- Bearings can be paired and pre-loaded
- Radii can be altered

Most of the special bearings manufactured as well as standard bearings, can be supplied with ceramic balls and rollers if required.



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