
Spend less, dig more.

Components beyond Liebherr

LIEBHERR

Mining



Our purpose

Our customers are pioneers in the mining sector. They produce a wide range of exceptional materials that provide many goods and services that consumers all over the world enjoy.

Iron ore is used for steel making. Aluminum for vehicles and information technology applications. Copper for wind turbines, housing supplies and electric cars.

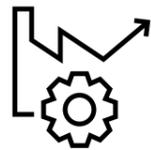
In order to perform at the highest of standards, our customers need machinery they can rely on 24/7. This is why they look to us for components that can match all their demands and needs.

We at Liebherr design, engineer and produce the majority of our components in-house. Using our extensive expertise in the field of mining applications, which reaches back decades, we manufacture outstanding components in the mining aftermarket, now also available for Non-Liebherr equipment.



Spend less on downtime

Your advantages at a glance



Continuous operation

Liebherr travel drives are designed for continuous operation under extremely harsh conditions. They require low maintenance and can easily be retrofitted into your Non-Liebherr equipment.



Available globally

If you need components and spare parts quickly, you can get them anywhere in the world from one of our warehouses near you.



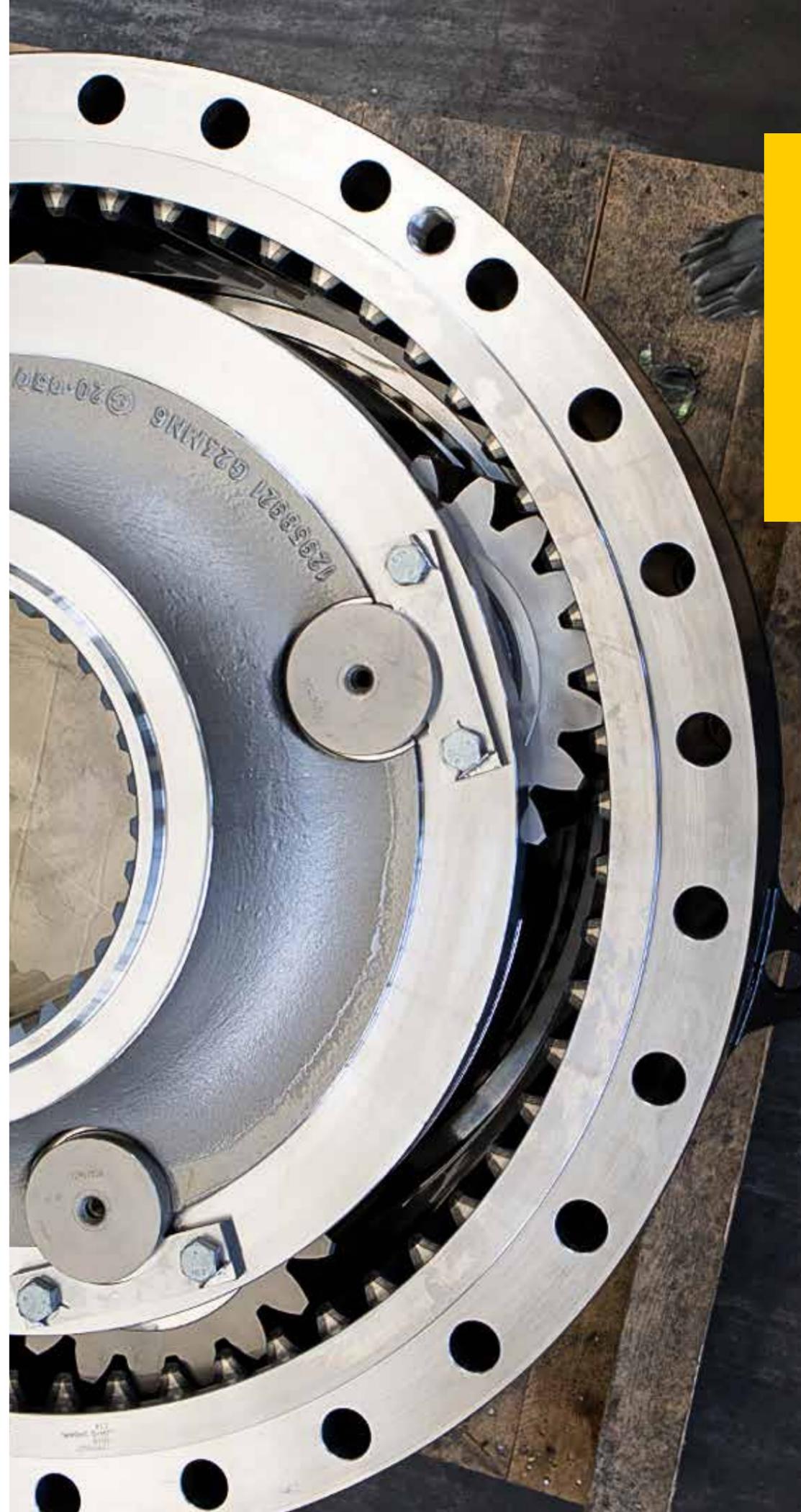
Helping you to help yourself

With the availability and quick supply of spare parts and individual kits, you'll always be able to repair and recondition machines independently.



Decades of heavy duty experience

Our engineering expertise for components is rooted in the design of our own applications. Liebherr mining excavators and mining haul trucks have been in continuous operation for decades. It is with good reason that Liebherr has made an excellent name for itself in this segment.



“We help our customers reduce downtime. With Liebherr travel drives, they get the best quality for their heavy duty machines which allows them to keep productivity high.”

Roman Maurer
Design engineer for drives

To have what it takes to get the job done

In order to successfully mine metals, gemstones and materials of high value for the industry sector, umpteen tons of rock and stone have to be moved. No wonder that a high degree of equipment reliability and therefore a reduced downtime is key to getting the job done.

In mining, reliable equipment is the be-all and end-all. For reliable continuous operation, applications such as mining excavators and haul trucks must have components designed to operate in the toughest and harshest conditions. With decades of experience in the development of travel and wheel drives for the mining sector, Liebherr Drive Technology offers companies an in-depth knowledge resources, also for their Non-Liebherr equipment.

A design improvement that ensures 100% interchangeability, an excellent running smoothness and low wear are just a few of the key attributes that Liebherr focuses on in the development of its travel drives. A rapid availability of spare parts and extensive local services round off the drive solutions for our customers.

For more productivity

Production know-how from field experience

Liebherr is a family owned group of companies, that manufactures its own mining equipment and at the same time produces the components that are vital to the machines's performance. The experience gained from the field thus flows directly back into the production of the components. As a result, Liebherr produces travel drives that are unique in terms of quality.

This is why Liebherr has always valued a high level of self-sufficiency in the production of components, using state-of-the-art production technologies in gear cutting, hardening and assembly. Some of the production equipment used, such as gear cutting machines and pallet handling systems, originate from within the Liebherr Group in order to meet Liebherr's demands for quality and production speed.



Quality assurance is carried out for the mill and quenched and tempered steels used by means of the Liebherr factory standard, which clearly exceeds the usual industry leading standards. Test beds and brake test rigs ensure that all travel drives leaving the factory are in perfect condition and ready to go for operation.

Your optional features

- **Spare parts:** Spare parts and spare part kits are available from one of our warehouses near you.

Compatibility

| | 100t | 200t | 250t | 350t | 500t | 600t | 800t |
|----------|------|------|-------------|-------------|-------------|------|------|
| Hitachi* | | | EX2500/2600 | EX3500/3600 | EX5500/5600 | | |

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Welcome to Biberach, Germany

German expertise from Biberach to the world

Liebherr-Components Biberach GmbH emerged in 2012 from a division of Liebherr's Biberach plant, which until then had manufactured construction cranes as well as components for drive and control technology. The final- and slew drives for hydraulic mining excavators as well as wheel drives for mining trucks are not only used in Liebherr's machines, but are also supplied to companies outside the group.



Established in

1957



3

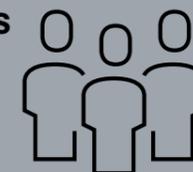
 international production facilities


200,000

 m² Factory premises

1,640

Employees



32,000

Gear boxes per year



Spend less nerves

Your advantages at a glance



Smart overhaul for a new life

To repair even the most extensive wear on functional surfaces, Liebherr cylinder barrels are made ready to be fully remanufactured on the inside, while others can only be slightly honed. This works in conjunction with Liebherr's spare part solutions such as oversize pistons and piston rod guidings.



Made by German experts

All our products are fully engineered and manufactured by Liebherr experts in Germany whilst applying highest quality standards throughout the entire processes.



Reduced costs

Design aspects such as friction minimization on functional surfaces ensure minimum wear. The resulting longer lifetime leads to reduced cost per ton. Efficient spare part solutions round off the portfolio.



Increased life & capacities

Innovative sealing design for longer life and less leakage, which is interchangeable with OEM spare parts. Forged piston rods withstand more force than welded ones, ensuring safety in overload situations and durability of your excavator. To avoid any scratches or cracks caused by rocks or dirt, a multi-layer chroming with high hardness grade is applied to Liebherr piston rods.



“Decades of cylinder experience for Liebherr mining excavators and our smart remanufacturing design ensure maximum reliability for customers.”

Christoph Guhl
Design engineer for hydraulic cylinders

Hydraulic cylinders that work

Your excavator is in continuous operation under the harshest of environmental circumstances. This is why you need your cylinders to be robust.

Liebherr-Components' aim is therefore to design, develop and produce outstanding mining cylinders for heavy duty use. Taking decades of customer feedback into consideration, the design process of the cylinders is supported by latest digital finite element methods. Any weak spots are eliminated whilst an excess in material on save areas is removed to reduce weight. All design aspects on barrel, piston rod and cylinder parts lead towards maximum durability in tough environments. Only materials of highest quality and durability are chosen to be processed for mining cylinders.

The entire manufacturing process is located in Liebherr's state-of-the-art cylinder factory in Germany.

Life cycle management

Liebherr cylinders for mining applications are designed in such a manner that they can be completely refurbished three times and still achieve outstanding performance, before having to be decommissioned.

Various design aspects ensure that the cylinders work like new after each of the three remanufacturing steps. Thus achieving a service life of up to 80,000 operating hours.

Welcome to Kirchdorf / Iller, Germany



German expertise from Kirchdorf to the world

Liebherr operates one cylinder factory in Germany, which is split up into two different manufacturing sites. One is for mechanical processing and the other for assembly, painting and testing. Certified to the latest standards, more than 75,000 cylinders for construction and mining are designed and manufactured completely in-house. With an extensive expertise in both OEM equipment and components, Liebherr knows the needs of its customers.

Liebherr-Components always strives to provide outstanding solutions.

Years of experience

50



2

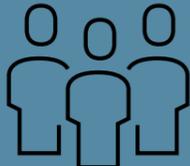
 international production facilities


155,000

 m²
Factory premises

470

Employees



75,000

Hydraulic cylinders per year



For more work under pressure

Heavy duty cylinders

The manufacturing and quality control processes in Liebherr's cylinder factory are specifically made for use in heavy mining applications. State-of-the-art machinery, quality control processes and employees with a passion for hydraulics lead to best standards in the industry.

Cylinder parts such as barrels and piston rods are all manufactured in-house. Functional surfaces are treated with latest honing processes to reduce wear. Piston rods are forged to be even stronger than welded. Chrome surfaces are applied in a special multi-layer coating to avoid any corrosion. Extensive quality management and highest standard in cleanliness ensure a perfectly working cylinder.



Piston rod assembly line
Assembly of piston to rod with automatized process inclusive torque control



Mining cylinder assembly line
Designed by Liebherr to assemble heavy duty cylinders in highest precision

Every single cylinder leaving Liebherr's factory is tested with more than 30% overpressure on test benches specifically developed for mining purposes.

After approval, the cylinders leave the factory to be made available on hand in Liebherr's sales and service affiliates in almost every part of the world.

- Your optional features
- **Smart overhaul:** Oversize pistons and piston rod guidings for remanufacturing processes
 - **Customization heavy duty:** Alternative heavy duty sealing concept, spherical or solid bearings on cylinders rod end

Compatibility

| | 100t | 200t | 250t | 350t | 500t | 600t | 800t |
|----------|------|------|-------------|-------------|-------------|------|------|
| Hitachi* | | | EX2500/2600 | EX3500/3600 | EX5500/5600 | | |

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Spend less slewing rings

Your advantages at a glance



Maximum Lifetime for reduced costs

Various design improvements guarantee longer lifetime of the slewing bearings even in tough surroundings. Deeper case depth and improved design of rollers and separators increase life. Result is lowest cost over lifetime.



Innovative options

Liebherr's bearing clearance measurement system enables you to have a digital wear status of your slewing ring bearing. Anytime from anywhere. Fast and save. For maximum usage and minimum downtime.



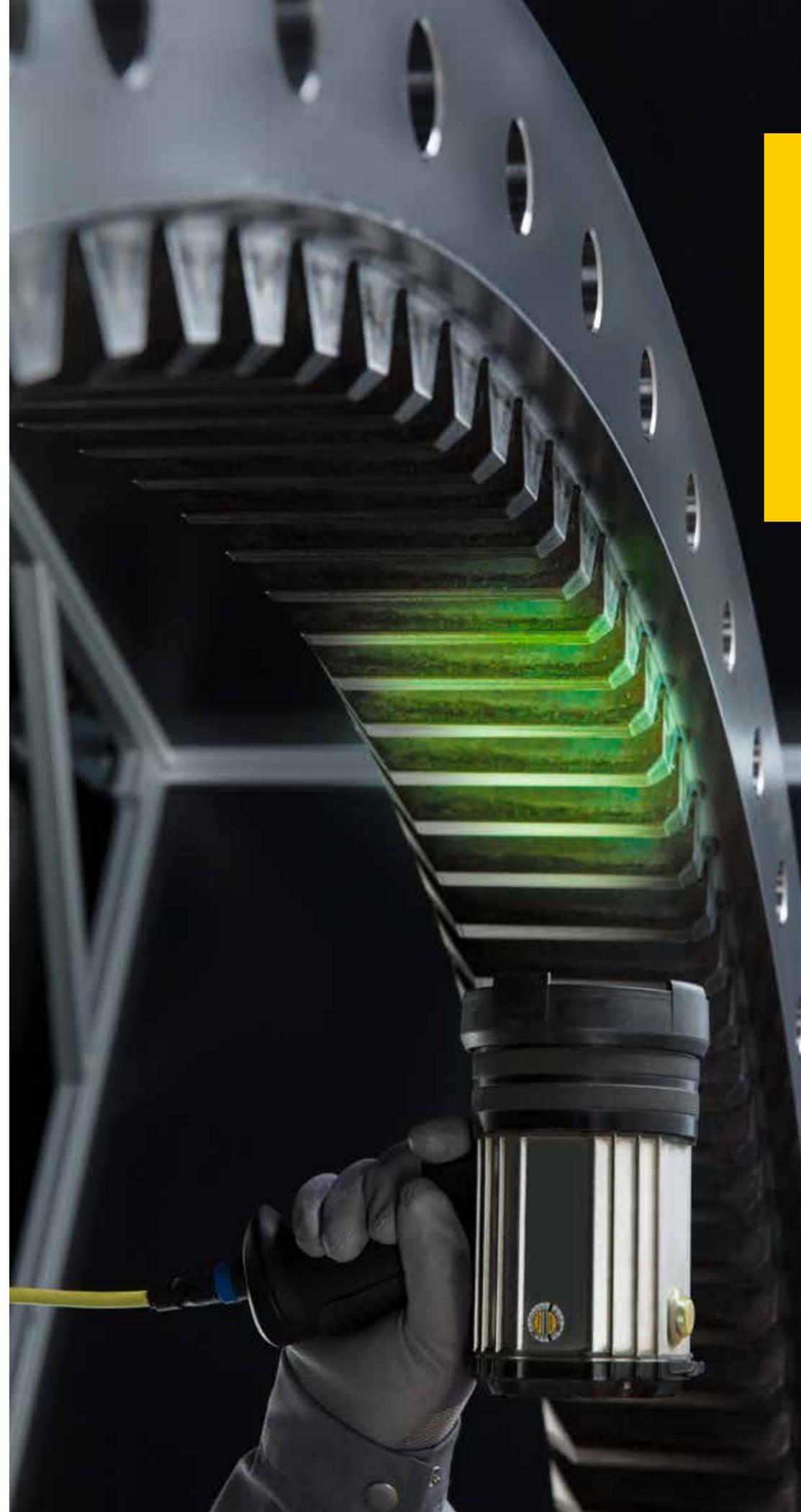
Easy and reduced maintenance

Design improvements lead to minimum wear and grease consumption. To speed up maintenance processes Liebherr offers improved accessibility of grease ports.



Increased static and dynamic capacities for overloads

If your mining equipment operates in tough environments we offer our components in heavy duty versions to resist overload situations and bring lifetime to a maximum.



“Availability is key for our customers, so in an emergency situation we can often have a slewing bearing on site within as little as 24 hours from time of placing the order.”

Stuart Goates
National Sales Manager Australia

Slewing bearings to keep your world turning

Slewing rings represent one of the most important moving parts in any mining excavator. It is therefore key that such bearings be closely monitored and taken care of.

But even with intensive care and proper maintenance you will sometimes have to replace a bearing. Whether you'll be able to predict the state of wear of your bearing, or you're facing a complete break down of the component on site, you'll be in need of an exchange bearing which fits your application, keeps on working for the longest period of time, is locally available and comes at a reasonable price.

Liebherr-Components' aims to combine all of these attributes and thereby revolutionize the aftermarket for mining components. Decades of experience with mining machines and components, state-of-the-art factories and a global sales- and service network allow us to do so.

Starting with above-standard engineering, Liebherr has implemented numerous innovative design improvements to enhance performance and provide increased uptime to machines. Liebherr bearings come with increased capacities for overload situations. Latest machine- and hardening technologies reduce wear and increase lifetime. In addition, an increased grease accessibility saves time in maintenance.

For more turns

Heavy Duty Slewing Bearings

Liebherr is spearheading innovations in the mining sector with a deep understanding for the needs of its customers.

This understanding helps not only to develop outstanding machinery, but also high performance components. Liebherr-Components design, engineer and manufacture over 30,000 slewing bearings per year, making it one of the biggest global players in the mining market.

To meet your expectation on the turn performance of your machine, Liebherr designed its mining slewing bearings with innovative sealings, roller and race way geometries, materials, surface protection systems and lubrications concepts. Able to fit various makes and models.



Quality Assurance
Every part of the slewing bearing is checked for its geometry, surface, cracks and hardness for zero failures.

To maintain 100 % control over quality and performance, all processes in production such as hard turning, gear cutting and induction hardening are performed in-house.

Manufactured in the Liebherr factory in Biberach, Germany, mining slewing bearings are shipped all over the world to support your mining equipment globally.

Your optional features

- Heavy-duty slewing bearings for tough application
- Smart condition monitoring



Induction hardening process
Hardening of raceways and gearing processing machine individually designed for slewing bearings in mining

Compatibility

| | 100t | 200t | 250t | 350t | 500t | 600t | 800t |
|---------------------|--------|----------------|-------------|-------------|-------------|------------|------------|
| Hitachi* | EX1200 | EX1800/1900 | EX2500/2600 | EX3500/3600 | EX5500/5600 | | EX8000 |
| Caterpillar* | RH40 | RH90/6015/6020 | RH120/6030 | RH170B/6040 | RH200/6050 | RH340/6060 | RH400/6090 |

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Welcome to Biberach, Germany

Welcome to the slewing bearing factory in Germany

Slewing Bearings are part of Liebherr-Components Biberach GmbH, which emerged in 2012 from a division of Liebherr's Biberach plant for cranes.

Slewing bearings are produced in four international locations in ball-, roller-, -tapered roller-, -segmented and custom designs. Liebherr's slewing bearings operate in a various range of industries and applications such as mining, construction, wind and maritime.



Years of experience

60



4

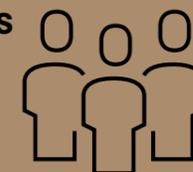
 international production facilities


180,000

 m²
Factory premises

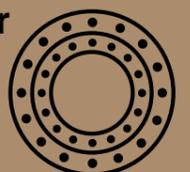
1,300

Employees



30,000

Slewing bearings per year



Spend less, dig more.

Components beyond Liebherr



Explore Liebherr's exchange components programm around the world



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