

Press release

Slewing bearings of the future: digital, electric and maintenance-free

- **Liebherr focuses on continuous innovation: The advanced slewing bearings and slew drives make operations more efficient, safer and environmentally friendly**
- **Bearing clearance monitoring (BCM), a digital solution for measuring wear in slewing bearings, does not only improve safety, but also speeds up the monitoring process and reduces downtimes**
- **Liebherr's slew drives can be powered electrically, offering clear advantages in terms of sustainability and efficiency**
- **Solid lubrication by Liebherr, Lifinity, ensures maintenance-free functioning of slewing bearings**

Upon the development and production of slewing bearings and slew drives, Liebherr's components product segment focuses on advanced technology to meet the growing demand for higher efficiency, sustainability and safety, which industries worldwide are facing nowadays. The possible solutions range from bearing clearance monitoring of slewing bearings, over to electrically powered slew drives and up to the innovative solid lubrication, each offering clear advantages to users.

Baden (Switzerland), January 16, 2025 - Industries worldwide are under pressure to reduce their environmental footprint, while becoming more efficient, sustainable and safer. But how can these goals be achieved? Often, the answer lies in the hidden champions of heavy industry: slewing bearings and slew drives. These components are at the heart of machines in a wide range of applications, including excavators, cranes, tunnel boring machines, antennas, offshore cranes, bridges and wind turbines. To meet the growing demands, Liebherr focuses on continuous innovation. The advanced slewing bearings and slew drives are designed to seamlessly adapt to modern standards, making operations more efficient, safer and environmentally friendly.

Digital wear monitoring for slewing bearings

Bearing clearance monitoring (BCM) provides a digital solution for measuring wear in slewing bearings. Built-in sensors allow precise measurements of axial and radial wear without requiring technicians to perform manual checks in hard-to-reach areas. This does not only improve safety, but also speeds up the monitoring process. Permanently installed sensors enable quick wear measurement via a web app, which can reduce downtime by up to 75%.

An upgrade to the BCM can be seamlessly integrated in the customers' system without the need for additional measuring devices or gateways, reducing system complexity and allowing users to analyse measurement data within your own systems.

Electrifying slew drives: efficient and environmentally friendly

Our slew drives can be powered electrically, offering clear advantages: They reduce noise emissions and do not require hydraulic oil, which prevents the risk of oil leaks. Electrically driven slew drives are ideal for applications, where no hydraulic systems are used. They offer a clean solution, especially in sensitive environments. The electric motors are also highly adaptable and can be combined with various gears. Thanks to intermediate flanges, motors can be easily integrated and installed in a space-saving manner. Electrically powered slew drives excel in precise positioning tasks, as their power control allows for accurate movements.

Lifinity solid lubrication: maintenance-free slewing bearings

Liebherr's innovative solid lubrication, Lifinity, eliminates the need for regular relubrication. In this process, a heated polymer-oil mixture is introduced into the heated bearing. As it cools, it forms a stable layer that provides long-term lubrication for the bearing. A major advantage is the significant reduction in maintenance, as regular relubrication is no longer necessary, leading to considerable savings in operating costs and time. This increases productivity, as equipment requires less downtime for maintenance, thus extending the lifespan of machines and boosting overall operational efficiency. Lifinity also reduces the risk of corrosion, enhancing the longevity of the bearing.

Additionally, Lifinity is environmentally friendly: Conventional greases and oils can leak and pollute the environment, but with Lifinity, there's no such risk. This technology also meets strict NSF/H1 standards, making it suitable for food-related environments.

By implementing digital measurement, electrification and maintenance-free technologies, Liebherr's component product segment offers advanced solutions for slewing bearings and slew drives that meet the rising demands across a variety of applications and industries. All the components are future-ready and play a vital role in making operations more efficient, safer and environmentally friendly.

About the Liebherr-Components AG

In this segment, the Liebherr Group specialises in the development, design, manufacturing of high-performance components in the fields of mechanical, hydraulic and electric drive and control technology. Liebherr-Component Technologies AG, based in Bulle (Switzerland), coordinates all activities in the components product segment.

The extensive product range includes combustion engines, injection systems, engine control units, axial piston pumps and motors, hydraulic cylinders, slewing bearings, gearboxes and winches, switchgear, electronic and power electronics components, and software. The high-quality components are used in cranes and earthmoving machinery, in the mining industry, maritime applications, wind turbines, automotive engineering or in aviation and transport technology. Synergy effects with other product segments of the Liebherr Group are used to drive continuous technological development.

About the Liebherr Group – 75 years of moving forward

The Liebherr Group is a family-run technology company with a highly diversified product programme. The company is one of the largest construction equipment manufacturers in the world. It also provides high-quality, user-oriented products and services in a wide range of other areas. The Liebherr Group includes over 150 companies across all continents. In 2023, it employed more than 50,000 staff and achieved combined revenues of over 14 billion euros. Liebherr was founded by Hans Liebherr in 1949 in the southern German town of Kirchdorf an der Iller. Since then, the employees have been pursuing the goal of achieving continuous technological innovation, and bringing industry-leading solutions to its customers. Under the slogan '75 years of moving forward', the Group celebrates its 75th anniversary in 2024.

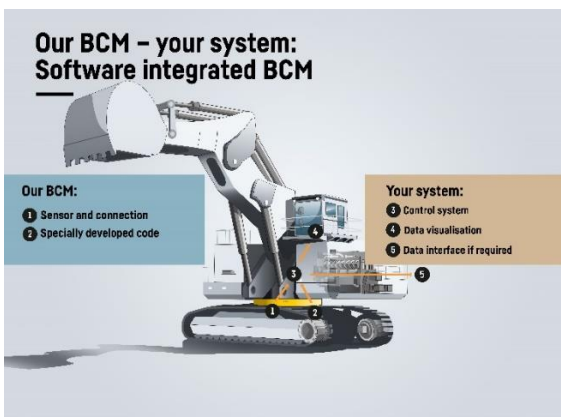
Images



liebherr-lifinity-solid-lubrication-slewing-bearings.jpg
Lifinity, solid lubrication, which ensures maintenance-free operation of slewing bearings.



liebherr-slew-drives.jpg
This slew drive by Liebherr is equipped with an electric motor.



liebherr-software-integrated-bcm_en.jpg
This is how our software-integrated wear measurement for slewing bearings works.

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