

Vertical crushers and vibrators in vibratory compaction equipment and in vibratory sheet pile drivers are modern vibratory machines that we can't do without. The bearing supports in these machines must



provide reliable support for high shock loads and radial acceleration in the smallest possible design space. Misaligned bearings and shaft deflections put an additional strain on the bearings. Ambient conditions are also often unfavorable ...

New X-life quality for high requirements

Because conventional cylindrical roller bearings cannot meet these high requirements in many cases, our engineers have been doing some advanced development on your behalf: The result is a new series of X-life premium quality bearings.

For example, FAG single row cylindrical roller bearings NJ with solid brass cages. Here X-life means: up to 18% more load carrying capacity, thereby, increasing the basic rating life by more than 70%.

... Or the low friction cylindrical roller bearings, series LSL (with disk cage) and ZSL (with plastic spacers) which represent a development that satisfies demanding requirements in terms of dynamics and load carrying capacity. In vibratory compaction equipment, for instance, where bearing speeds reach 2,500 rpm and accelerations up to 500 m/s², innovative INA bearings have been used successfully for years.



Dynamics required: Cylindrical roller bearings LSL can withstand high accelerations - important e.g. for vibrators in vibratory compaction equipment (photo: ThyssenKrupp)

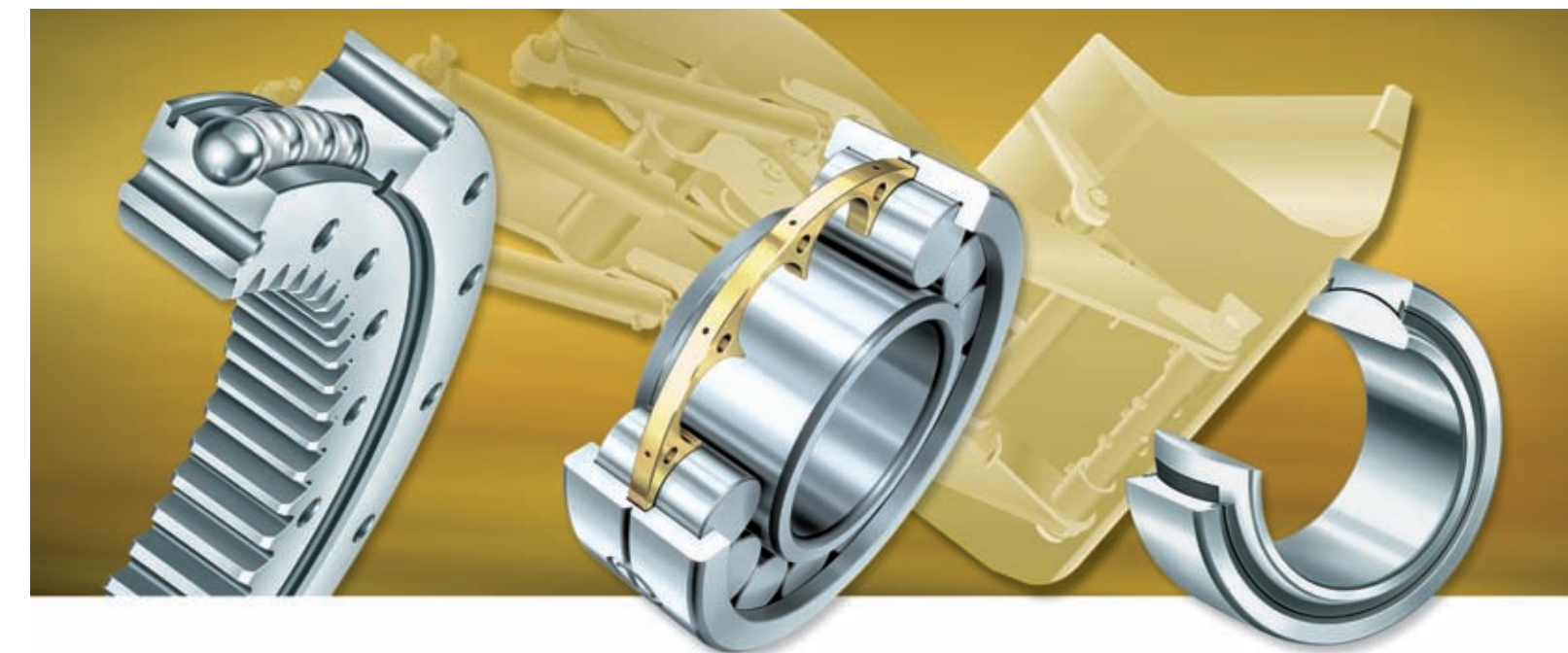


The eccentric shafts in vibratory rollers can be reliably supported with the new INA/FAG cylindrical roller bearings (photo: Ingersoll-Rand)

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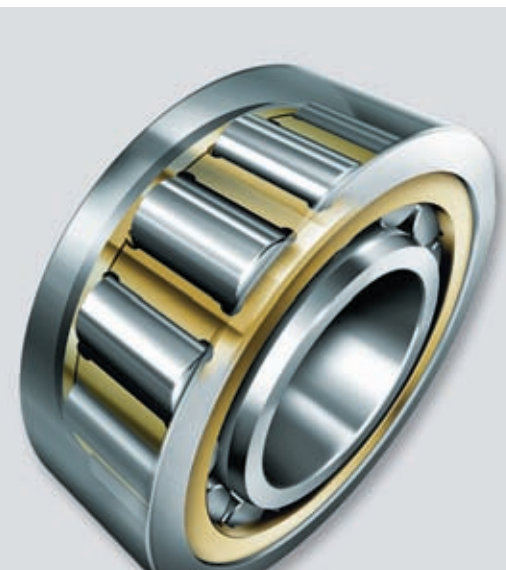


Expertise for Bearing Supports in Construction Equipment

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Extra long-lived: FAG cylindrical roller bearing NJ with solid brass cage MP1A in X-life quality



Strong and at the same time highly dynamic: INA cylindrical roller bearing LSL with brass disk cage

Maintenance-free ...



Wheel loader in action – Heavy loads for the bearings (photo: Ahlmann)



For construction equipment applications: Hydraulic cylinders with maintenance-free ELGES bearings



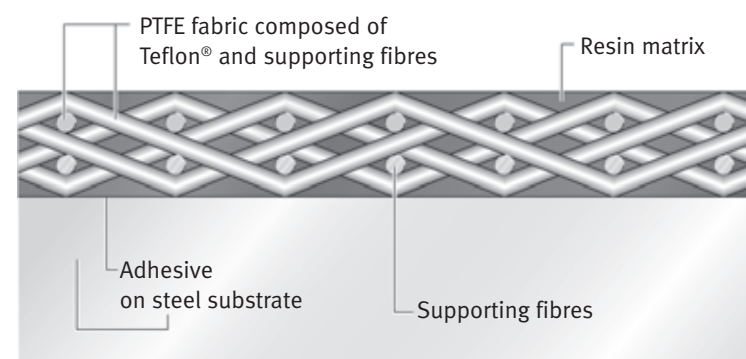
Maintenance-free bushings with high static load capacities are reliable components for extreme environments

Modern construction equipment is becoming more environmentally friendly. Engines now produce reduced emissions and noise levels ... Schaeffler Group Industrial is also helping to improve the environment with modern bearing solutions.

Our engineers have been investigating the highly emotive question: How to prevent the environmental pollution caused by lubricants? Our especially environmentally friendly solution is “not to lubricate at all!” and has the brand name ELGOGLIDE®.

Maintenance-free for life

All ELGES bearings which are coated with a sliding surface based on Teflon® fabric (see illustration) are absolutely maintenance-free. They require no additional lubricant supply; the PTFE in the slideway lining ensures functional reliability and enables maintenance-free operation for the life of the part. Oscillating motion such as the frequent swiveling motion present in construction equipment is ensured due to the solid and moisture resistant combination of the sliding layer and the steel support body. Overall, the



Composition of an ELGOGLIDE® sliding surface

customer receives a bearing solution that impresses with its well-balanced combination of high load capacity, excellent wear and frictional behavior as well as outstanding dry running characteristics.

ELGOGLIDE®: maintenance-free – cost-effective – environmentally friendly. Give it a try!

We would be happy to assist you in designing your application.



Maintenance-free ELGES spherical plain bearings are available in many different designs

...easy to mount and corrosion resistant

The maintenance work and also the time consuming mounting operations involved when installing bearings interrupt construction work unnecessarily. That's why we recommend ready-to-mount bearing support systems incorporating ELGOGLIDE® high-performance plain bearings to our customers from the construction and heavy equipment sector. These bearings are very easy to mount. Everything fits together “perfectly”, since all components – pins, tensioning system and high-performance plain bearings – are from a single source. The units are pressed into housings and frames and require no additional axial location. We were able to significantly reduce potential rust formation on exposed bearing components by implementing the appropriate surface treatment.

ELGOGLIDE®: Always a cost-effective solution. Just ask what we can do for you ...



Compact design and easy to mount: Bearing support systems with ELGOGLIDE® high-performance plain bearings

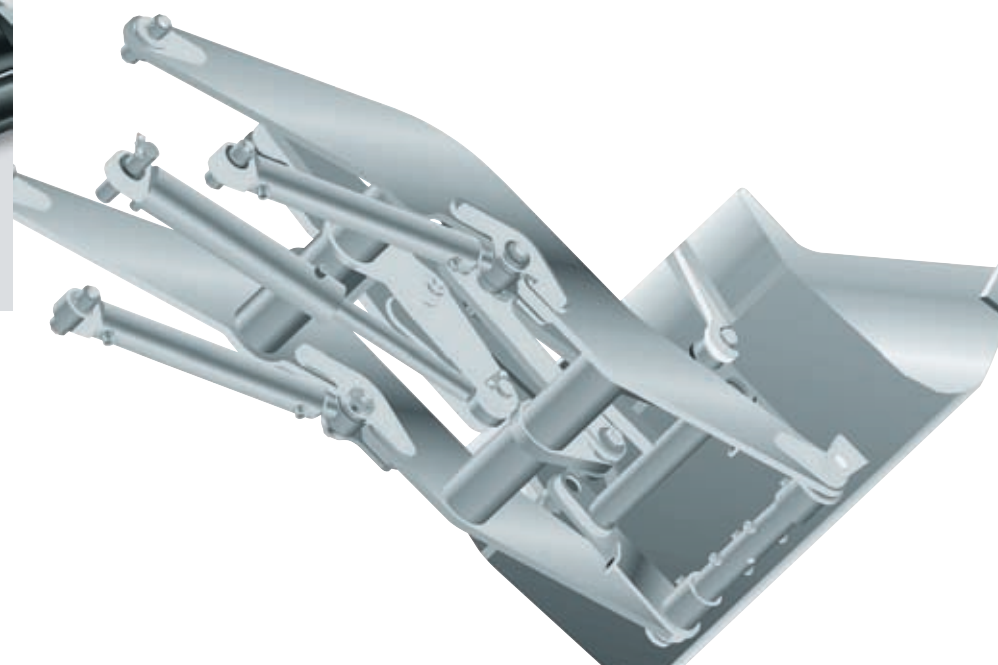


For the heaviest loads: Bearing supports with INA cylindrical roller bearings SLO4 for wire rope sheaves (photo: Liebherr)

... You may also want to consider the proven INA bearings SLO4.. RR, if you are looking for bearing solutions for wire rope sheaves in mobile cranes. These full complement cylindrical roller bearings are designed for high-load applications. Lip seals, special grease and a rust resistant surface provided by Corrotect® plating offer highly effective protection against contamination and water splash. The bearings can be easily mounted in wire rope sheaves. The outer rings are simply located with retaining rings thanks to the annular grooves.



INA double row cylindrical roller bearing SLO4.. RR with corrosion resistant Corrotect® plating



...and capable of supporting heavy loads

There's a proven Schaeffler system solution worth mentioning here that has been implemented in articulation/swivel joints and in fifth wheel hitches – the combination of a high load capacity four-point contact ball bearing and ELGES spherical plain bearings. A rugged and compact system for torsional and steering motion.

The four-point contact ball bearing has a high load rating, is particularly stiff and is easy to mount. With its clearance-free, preloaded raceway system, this bearing is more than a match for the high requirements in these types of applications.

The maintenance-free ELGES bearings in our system solutions are designed for high loads: contact pressure up to 300 N/mm² dynamic or 500 N/mm² static, high shock loads, alternating loads – no problem!



Vibratory roller with four-point contact ball bearing and maintenance-free ELGES spherical plain bearings in articulation/swivel joints (photo: BOMAG)

Regardless the design, be it radial, thrust or angular contact spherical plain bearings, the performance weight of our “maintenance-free” units is always unbeatable. Comparing the ratio of the dynamic load rating C to the bearing weight shows that maintenance-free ELGOGLIDE® bearing support systems provide savings in terms of weight, drive power and costs.

System solutions – fully customized

We offer a lot more that can be characterized by the feature “high load capacity”. For example, the four-point contact ball bearings used as bearing supports in different types of special construction machinery. A single slewing ring with versatile screw mounting supports axial, radial and tilting moment loads and there are only minimum requirements for the surrounding structure.

One of many cost-effective bearing solutions from Schaeffler. Contact us to find out more about Schaeffler bearing solutions.

We'll be pleased to help.



Articulation/swivel joint with ELGES spherical plain bearings



A rugged solution: Bearing support with INA four-point contact ball bearing for a hose reel (photo: Bauer AG)

