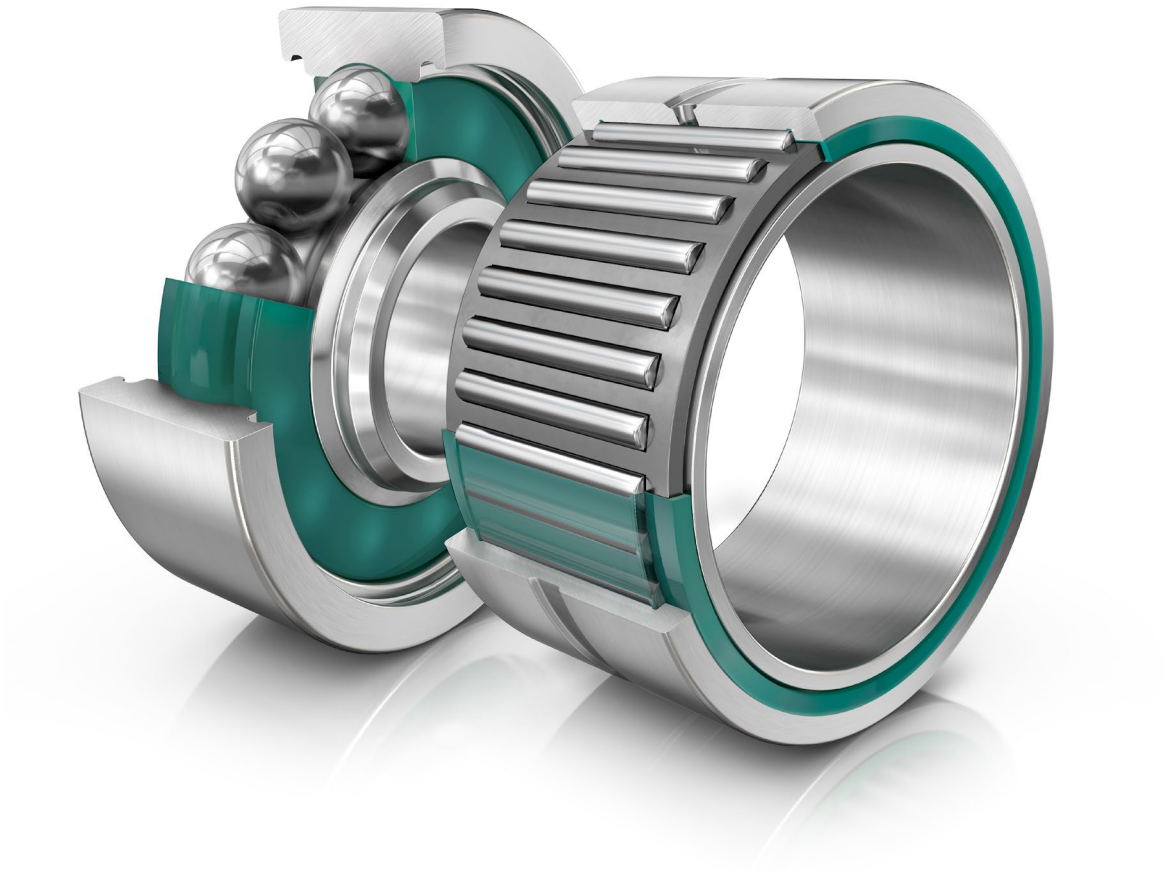
SCHAEFFLER



We pioneer motion

LUBTECT

Maintenance-free. Durable. Efficient.

A LUBRICANT THAT PROVIDES FULL AND CONTINUAL ROLLING ELEMENT ENVELOPMENT

THE SOLUTION: SCHAEFFLER LUBTECT

Installation situations and areas of application exist in which the lubricant is displaced from the raceway of the rolling bearing, potentially leading to unplanned, premature machine downtime. Schaeffler Lubtect has been developed to handle such instances: A porous but dimensionally stable polymer saturated with oil completely fills the free space in the rolling bearing. As the bearing rotates, the polymer releases a minimal quantity of oil. The process is also reversible. At rest, excess oil is reabsorbed by the polymer. Unlike conventional lubricating grease, the distinctive feature of this lubricant is that the polymer cannot be displaced, but instead continually envelops the entire rolling element set. The lubricant always finds its way onto the rolling elements and into the raceway, even under difficult conditions. As a result, lubrication starvation is reliably avoided.

Reduce maintenance costs – increase bearing operating life

The highly uniform and requirement-based distribution of the lubricant at the rolling contacts extends the operating life of rolling bearings considerably in difficult applications. Practical experience with Lubtect bearings has shown that the operating life is two to five times longer than for bearings lubricated with grease. Many bearing arrangements can be converted to a relubrication-free solution. Maintenance costs are reduced.

Use in practice

Oscillating movements

With short, repetitive swivel movements, there is a risk that the lubricating grease will be displaced from the rolling contact area. Most notably, in these applications, where the reversal point is subject to high load, Lubtect achieved an operating life several times that of identical bearings lubricated with grease or oil. By way of example, swivel brinelling was encountered in the oil-lubricated needle roller bearings of the sley in mechanical looms. Lubtect bearings were used to solve the problem. Even after three years, the bearings were in perfect condition with no signs of swivel brinelling.

Very high accelerations

High external accelerations can displace the lubricating grease to zones with lower kinematics and lead to lubricant starvation. In the heald frame bearing arrangements of mechanical looms, in crank drives, levers, and eccentrics, Lubtect bearings can achieve significantly higher operating lives than grease-lubricated bearings due to the excellent and reliable distribution of lubricant.

Very low speeds

Very low speeds at high loads hinder the formation of a separating lubricant film between the rolling elements and raceway. Once again, Lubtect provides an optimal and permanent solution here.

In sensitive areas

By storing the lubricant in the polymer, the risk of contamination from escaping lubricant is minimized, if not eliminated. Relubrication, and hence the potential unprotected use of grease guns in sensitive areas, is also no longer required. This contributes to the overall safety of the facility, which is important for the textile, pharmaceutical, food, and animal feed industries. Even at low temperatures, Lubtect ensures good lubricant distribution and leads to a longer bearing operating life.
Schaeffler received H1 approval from the US organization NSF International authorizing the use of Lubtect in sensitive areas. Lubtect is also halal and kosher certified.

Factsheet

- Lubtect is available for deep groove ball bearings, tapered roller bearings, spherical roller bearings, cylindrical roller bearings, and needle roller bearings
- High water, media, and dust resistance
- Extremely low frictional torques compared with similar systems on the market
- No condensation
- Cannot be washed out by cleaning processes
- Free from allergens

New design freedoms

Complex oil lubrication systems are no longer required

If multi-row bearings are installed in a vertical position, as encountered in plant engineering for example, the risk of the lubricant being gradually pushed out of the contact zone of the upper bearing into the lower bearing row, underneath the running zone of the rolling elements, and out of the bearing arrangement, no longer exists with this lubricant compound. The compound retains the lubricant in the bearing arrangement.

Additional security against contaminants

Extremely fine particles and fibers, for example from textiles or pulp, can be released in systems. Lubtect envelops the entire rolling element set, thus forming a further barrier against the ingress of such contaminants by way of addition to the recommended bearing seal on both sides.

Relubrication-free bearing arrangement – lower maintenance costs

A larger quantity of grease is stored in the polymer than in a conventionally grease-lubricated bearing, allowing Lubtect to offer conversion to relubrication-free and maintenance-free bearing arrangements as an option and thereby reduce maintenance costs. Lubtect presents an attractive alternative, particularly for bearing arrangements that are difficult to access, as the facility no longer has to be switched off for maintenance work. Furthermore, the risk of contamination in the facility caused by extruded lubricant no longer exists.

Areas of application for Lubtect:

- Machines in the food industry and packaging technology
- Machines in the textile and pulp industry
- Woodworking machines

Your online access to our offer

▷ Further information can be obtained here:
“Food, beverages and packaging”

▷ Further information can be obtained here:
“Printing machines”

▷ Further information can be obtained here:
“Textile machines”

Factsheet

- Operating temperature at outer ring:
  –40° C to +80° C
- Upper continuous limit temperature: +60° C
- Maximum speed parameter:
  Ball bearings:
  n × dm = 120,000
  Roller bearings:
  n × dm = 50,000
- Recommended minimum radial load:
  1 % of the dynamic load carrying capacity
- Lubtect bearings have the same basic load ratings as bearings with standard greasing

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