perma Lubrication systems for

Electric motors

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The Expert in Lubrication Solutions

perma

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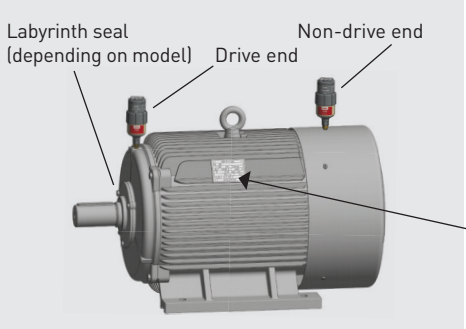
Electric motors

Electric motors are used in many different applications. An electric motor is designed to convert electrical into mechanical energy. Efficient lubrication and maintenance are essential for reliable operation of electric motors. Still, many of them are lubricated at irregular intervals as they are located in areas which are difficult to reach or dangerous. Failure to adhere to manufacturer specifications frequently leads to damage and breakdowns caused by bearing over-lubrication or lubrication starvation.

- → Gypsum, lime & cement plants
- → Quarrying industry
- → Power plants
- → Food industry
- → Recycling industry
- → Mining & heavy industry

Lubrication points

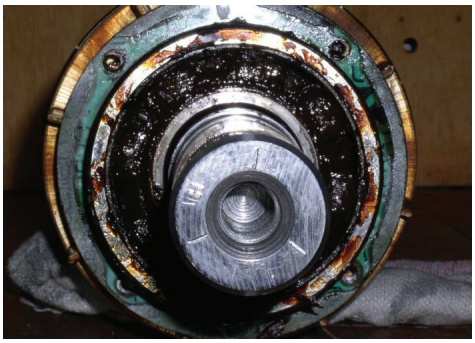


Lubrication points are located on the **drive** and **non-drive end of electric motors**. When relubricating, you must ensure that **excess grease is discharged** through the discharge openings, grease relief ports or grease traps. Bearings will overheat if grease cannot escape and / or if grease traps are filled up with used grease.

The correct lubricant
Information about fitted roller bearings, lubricant and lubricant amount is found on the motor nameplate.

Speed: high	=	**Base oil:** thinner	NLGI 0-2
Speed: low	=	**Base oil:** thicker	

Challenges



During manual lubrication, the grease is **applied in uneven amounts**. A large quantity of lubricant is introduced at one time. This leads to a temporary **over-lubrication of bearings**. Ignoring the recommended relubrication intervals leads to **lubrication starvation**.

- → **Bearing heating** and **possible fire hazard** since it takes hours to distribute excess grease
- → Possible **shut-off** with temperature monitoring
- → Bearing damage due to lubrication starvation results in unscheduled **machine downtimes** and higher production costs
- → **Increasing maintenance costs** caused by premature wear

Relubrication during **running operations** (manufacturer recommendations) jeopardises maintenance staff. The risk of accidents increases when people spend time in **dangerous** or **hard-to-reach areas**.

- → **High accident risk**
- → **Motor shut-down** when entering secured areas

HINT Manual for electric motor lubrication available on request.

Advantages of automatic lubrication

- **Relubrication during running operation** minimises overheating of bearings
- **Predictable exchange intervals** with reduced material and personnel expenditure
- **Increased workplace safety** due to automatic lubrication of hard-to-reach lubrication points
- Precise lubricant discharge **lowers** lubricant consumption and thereby **environmental impact**

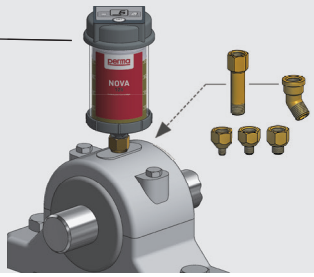
Reference

SALZGITTER FLACHSTAHL
Ein Unternehmen der Salzgitter Gruppe

Solutions

Direct mounting on the lubrication point: e.g. with perma NOVA
→ Easy, quick mounting
→ For lubrication points with little vibration / shocks
→ For easy-to-reach, safe lubrication points

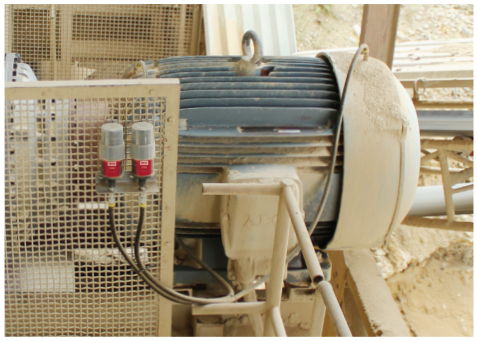
perma NOVA with LC 125



INSTALLATION KIT for perma NOVA
Use extensions, angles & reducers depending on the installation situation

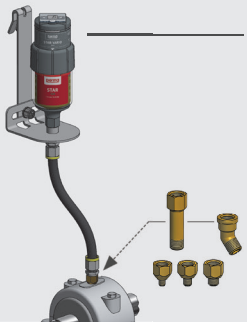
Art. No. 101476

Remote mounting at lubrication point: e.g. with perma STAR VARIO
→ For lubrication points with strong vibration / shocks (isolation of lubrication system)
→ For lubrication points which are unsafe to access: Mounting in safe areas
→ For hard-to-reach lubrication points



Cage hanger arm

Art. No. 109959



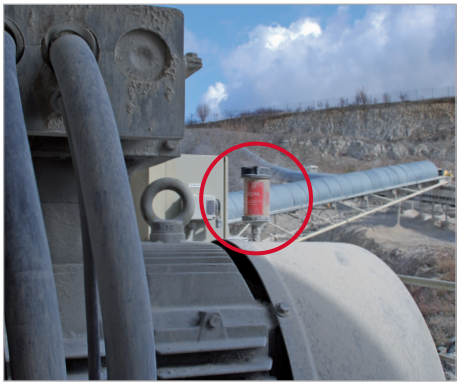
perma STAR VARIO with LC 120

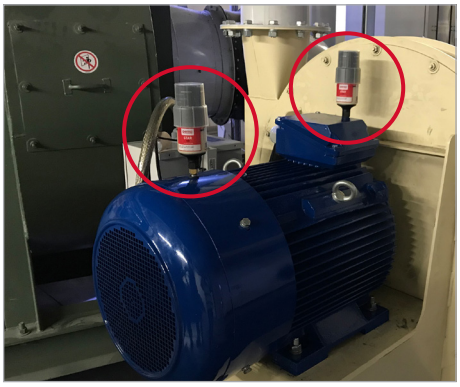
INSTALLATION KIT STAR with 3.0 m tube
Use extensions, angles & reducers depending on the installation situation

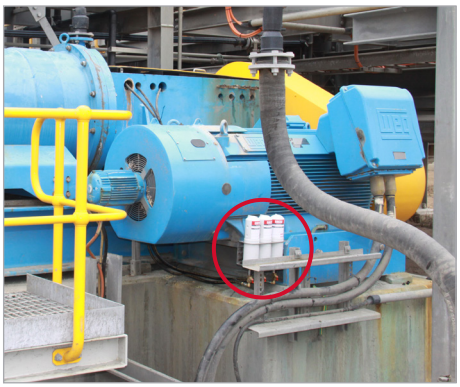
Art. No. 101482

Applications





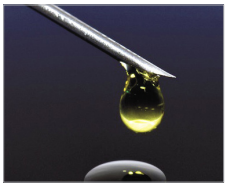



Individual solutions

perma Product portfolio

Solutions for all types of applications

perma Lubricants



Large selection of high quality lubricants to meet the requirements of your equipment

perma Accessories

Extensive range of accessories and connecting parts for your equipment

perma SERVICE

Project planning, installation and maintenance

perma SOFTWARE


Calculation of lubricant amount: • **perma SELECT**

Maintenance Lubrication Program: • **perma MLP**

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