perma lubrication systems for
Electric motors

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Electric motors are used for a variety of applications. An electric motor is designed to convert electrical into mechanical energy. Efficient lubrication and maintenance are essential for reliable operation of electric motors. Many motors are located in poorly accessible locations or in dangerous areas. They are therefore often only lubricated irregularly. Failure to adhere to manufacturer specifications frequently leads to damage and failures due to over-lubrication or lubrication starvation.

**Lubrication points**

Lubrication points are located on the drive and non-drive end of electric motors. Grease escape (grease drain hole, grease relief ports or grease trap) also has to be taken into consideration. Bearings will overheat if grease cannot escape and/or if grease traps are filled up with used grease.

**The correct lubricant**

Motors with relubrication fittings come with information plates specifying grease amounts and relubrication intervals.

**Challenges**

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

- Overheating of bearings and fire hazard, since distribution of excess grease takes hours; shut-off by 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 operation (manufacturer recommendation) jeopardises maintenance workers. Increased accident risk due to time spent in dangerous or difficult-to-access areas.

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

Solutions

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

**Remote mounting at lubrication point: e.g. with perma STAR VARIO**
- For lubrication points with strong vibration/shocks (isolation of lubrication system)
- When workers’ safety is at risk: Mounting in safe areas
- For hard-to-reach lubrication points
Applications

Industry: Power Generation  Industry: Mining  Industry: Cement

Industry: Automotive  Industry: Waste incineration  Industry: Wastewater

Industry: Wood  Industry: Power Generation  Industry: Blower

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