

A photograph of an industrial facility, likely a power plant or refinery, featuring several large electric motors and complex piping systems. The scene is brightly lit, showing various pipes, valves, and electrical components. Two red Perma automatic lubrication systems are mounted on the machinery. A red banner is at the bottom of the image.

perma Lubrication Systems for
Electric Motors

The World of Automatic Lubrication

perma[®]



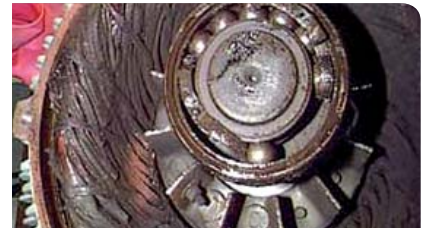
Trouble-free operation with automatic lubrication systems from perma

Improved reliability, reduced maintenance costs and less down-time are the keys to electric motor profitability. For electric motors to run reliably at high speeds in day-to-day operation, they must be adequately lubricated. Since many motors are located in remote, hard-to-access, and dangerous areas, they are not lubricated according to manufacturer's recommendations.

Automatic lubrication systems from perma reduce bearing wear by providing a continuous supply of fresh lubricant. This prevents over-lubrication, lubricant starvation and contamination. All over the world, perma lubrication systems are used on electric motors to prevent premature bearing failures.

→ Re-lubrication, why?

1. Lubricant oxidation causes lubricant quality to deteriorate
2. Consumption of lubricant caused by leaks and evaporation
3. Lubricant is washed out at the lubrication point
4. Lubricant is spun off by moving parts and must be replaced regularly for proper bearing lubrication.



→ Challenges

Common electric motor lubrication problems

There are two main problems associated with manual lubrication: Long, inconsistent lubrication intervals and too much lubricant added too quickly at one time.

- **Bearing failure and possible fire hazard caused by over-lubrication**
- **Insufficient lubrication leads to bearing damage**



Bearing failures due to poor manual lubrication practices lead to unplanned down-time and production losses.

- **Increased maintenance costs due to premature bearing failures**
- **Significant down-time costs where equipment redundancy is low**



Electric motor manufacturers generally recommend bearings to be re-lubricated while motors are running. But, motors are often located in dangerous and difficult to access places.

- **Work-place safety cannot be guaranteed**
- **High risk of accidents**



When to use which lubricant?

Manufacturer's guidelines for re-lubrication amounts and intervals can be found on the electric motor nameplate which can be found on most motors.

Speed	Base oil	Consistency	Oil discharge
high →	thinner	more solid	high
low →	thicker	softer	low

→ Solutions

perma STAR

Single-point lubrication systems perma STAR VARIO and perma STAR CONTROL TIME / IMPULSE are available in three different sizes (60 cm³, 120 cm³ or 250 cm³). They are recommended for the lubrication of different types of bearings requiring different lubricant amounts.



perma PRO MP-2

Lubrication systems perma PRO MP-2 and PRO C MP-2 are available in two different sizes (250 cm³ and 500 cm³). Each system can supply two lubrication points with the same amount of lubricant independent of counter pressure.



perma PRO MP-6

Lubrication systems perma PRO MP-6 and PRO C MP-6 are available in two different sizes (250 cm³ and 500 cm³). Each system can supply up to 6 lubrication points with the same amount of lubricant independent of counter pressure.



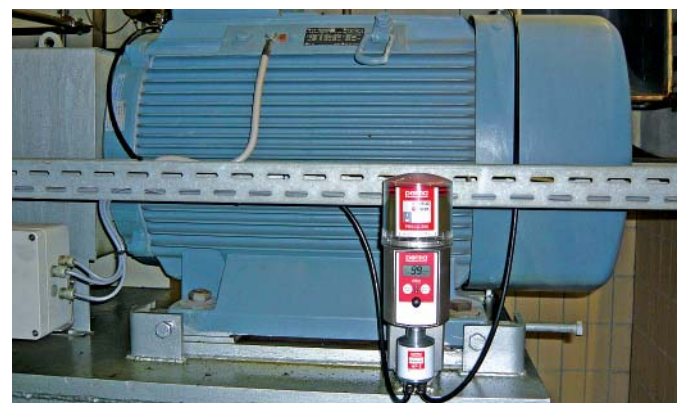
In order to select the most suitable lubrication system for your motor, please check your motor's re-lubrication fixtures. We will be happy to assist you in finding the best solution for your application.



(upper left)
Main equipment: Dairy industry
Lubrication system: 1 perma STAR VARIO 60 cm³ per lubrication point

(bottom left)
Main equipment: Gravel industry
Lubrication system: 1 perma STAR VARIO 60 cm³ per lubrication point

(bottom right)
Main equipment: Dairy industry
Lubrication system: 1 perma PRO MP-2 250 cm³



→ Benefits

- Permanent and constant lubrication while the machine is running, as recommended by manufacturer
- Optimal lubricant supply to lubrication point, resulting in less down-time
- Active contribution to environmental protection and work-place safety

Product characteristics	Advantages	Benefits
economical aspects		
Different discharge periods perma STAR product range: 1, 3, 6 or 12 months → perma PRO product range: 1 day up to 24 months	Precise and customized lubrication intervals and therefore also ideal for high grade lubricants	Optimized supply of lubrication points and minimized material / personnel costs at the same time
Electromechanical lubricator consisting of drive unit and LC unit →	Drive unit can be re-used several times	Short ROI through reduced follow-up costs
perma PRO MP-2 / PRO MP-6: Central supply of several lubrication points with one lubrication system →	Little maintenance work required due to simple exchange without tools	Saves time, minimizes operational errors, reduces costs
technical aspects		
perma STAR VARIO perma PRO MP-2 / PRO MP-6: Battery operated →	No cable laying necessary = faster and safer mounting at exposed positions	Lubrication of hard-to-access lubrication points. Easy to retro-fit.
perma STAR CONTROL IMPULSE / TIME perma PRO C MP-2 / PRO C MP-6: External power supply from the machine →	Automatic feedback signals from the lubrication system via connection to the machine control	High equipment availability through optimized lubrication control and prevention of machine down-time. Simple connection to a fault monitoring system
Automatic, permanent and continuous lubrication while motors are running →	Prevents over-lubrication, thus no excess lubricant entering motor compartment - fire hazard!	Reduces machine down-time caused by manual lubrication
work-place safety aspects		
perma lubrication systems cover a large range of applications →	Enables lubrication of hard-to-access lubrication points	Installation of lubrication systems at safe-to-access places improves work-place safety
Remote mounting of lubrication systems with tubes possible →	Installation of lubrication systems outside of dangerous areas	Minimizes the risk of work-place accidents

perma lubrication systems for electric motors

perma products are used on electric motors all over the world. They guarantee reliable, automatic re-lubrication of motor bearings and seals.

perma automatic lubrication systems - we meet your needs:

- 24 hour operation
- Simple installation
- Easy , tool-free exchange
- Requires little mounting space
- Tough systems – either battery operated or machine controlled
- Customized supply of fresh lubricants to lubrication points

perma is the most trusted partner worldwide for all industries:

- Global market leader for automatic single-point lubrication systems
- Largest product range in the market
- Many well-known satisfied customers
- Field-tested accessories for every perma lubrication system
- Product training, expert advice and consultation (please contact your local supplier)

Applications for perma products

Bagging equipment

Bearings

Belt pretensioners

Chain drives

Escalators

Linear drive systems

Mills / crushers

Open gears

Paint finishing systems

Presses

Pumps

Silos

Sliding guides

Storage equipment

Transport systems

Ventilation systems / blowers

Do you have any questions about perma products for electric motors?

Please visit our website or contact your local supplier. We will gladly send you our extensive catalog for more detailed information.



perma-tec GmbH & Co. KG
Hammelburger Straße 21
97717 EUERDORF
GERMANY

info@perma-tec.com
www.perma-tec.com