

perma Lubrication Systems for

Power Plants

perma-tec GmbH & Co. KG

Hammelburger Str. 21
97717 EUERDORF
GERMANY

sales@perma-tec.com
www.perma-tec.com



The Expert in Lubrication Solutions

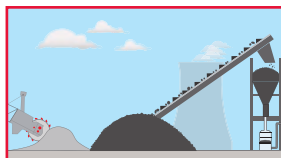
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perma Lubrication Systems for Power Plants

The exit from nuclear energy is demanding more flexibility from conventional power plant operators. Maintenance departments are constantly faced with new challenges like frequent load changes and longer shutdowns. Individual automatic lubrication systems meet these challenges and can increase the economic efficiency of the plant.

Lubrication points

① Roller bearings



Material transport

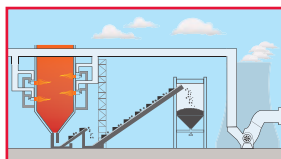
→ Transport

Portal scraper, belt conveyor



→ Loading

Ship unloader, crane



Processing

→ Crushing

Impact hammer, coal mill



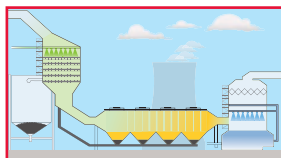
→ Dust removal

Fans, electric motors



→ Transport

Conveyor systems



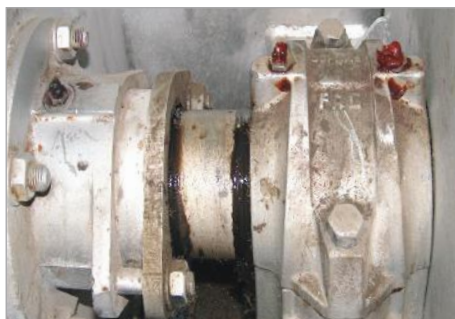
Post processing

→ Dust extracting

Fans, electric motors



Challenges



- Frequent load changes
- Longer shutdowns



- High maintenance costs
- Insufficient staff
- Spread out equipment with many different lubrication points



- Increased risk of workplace accidents at hard-to-reach lubrication points and due to high temperatures

Advantages of automatic lubrication

- ✔ **Continuous relubrication** at short intervals **reduces wear and seals** lubrication points even during longer shutdowns.
- ✔ **Reliable lubrication** for frequent load changes.
- ✔ **Scheduled exchanges** of lubrication systems while machines are running reduces staff- and material costs and **increases economic efficiency**.
- ✔ **Quick and easy installation** and exchange of lubrication systems outside of dangerous areas **increases workplace safety**.

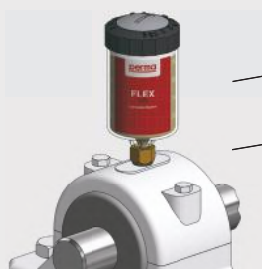
Reference



Solutions

Direct mounting on lubrication point: e.g. perma FLEX

- Easy, quick mounting
- For lube-points with little vibration / shocks
- For easy-to-access and safe lubrication points



perma FLEX 125

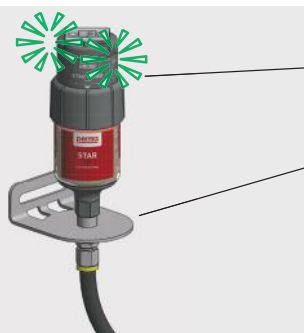
MOUNTING SET
Direct mounting

Art. No. 101476



Remote mounting to lubrication point: e.g. perma STAR VARIO

- For lube-points with strong vibration / shocks (isolation of lubrication system)
- When workers' safety is at risk: Mounting in safe areas
- For hard-to-access lubrication points



perma STAR VARIO
with LC 120

MOUNTING SET
Remote mounting
with low pressure tube

Art. No. 101482



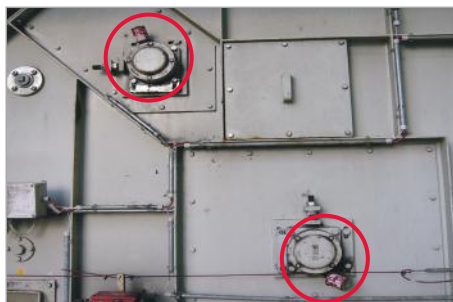
Would you like more information on perma products?

- Detailed product information in our **perma Catalogue**
- Visit our website **www.perma-tec.com**

Applications



Lubrication of flange bearing on support rollers



Lubrication of flange bearing on a bucket conveyor



Lubrication of pillow block bearing on a conveyor



Lubrication of pillow block bearing on a drive shaft



Lubrication of pillow block bearing on a fan



Lubrication of drive shaft on a fan



Lubrication of pillow block on fan



Lubrication of electric motor



Lubrication of electric motor and shaft on a secondary air fan.

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



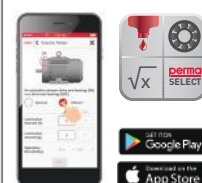
Extensive range of accessories and connecting parts for your equipment

perma SERVICE



Project planning, installation and maintenance

perma SOFTWARE



Calculation of lubricant amount: • **perma SELECT**
Maintenance Lubrication Program: • **perma MLP**