

# CEMENT, GYPSUM, LIME

perma lubrication systems in operation



## Challenges

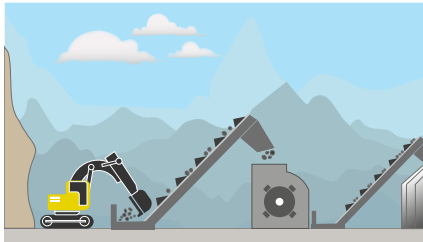
There are hundreds of rotating machine elements in gypsum, lime and cement plants. Equipment must function reliably under the most difficult operating conditions. Up to 80 % of machine failures are due to mechanical wear caused by dirt contamination. perma automatic lubrication systems prevent ingress of dirt particles and ensure optimum lubrication of the equipment.

- Dust, dirt & vibration
- High energy costs
- Hard-to-reach lubrication points
- High maintenance costs, staff shortage, spread out equipment and lubrication points
- High temperatures
- Safety hazards



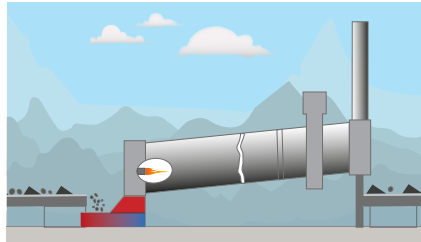
## Lubrication points

### 1 | RAW MATERIAL PROCESSING



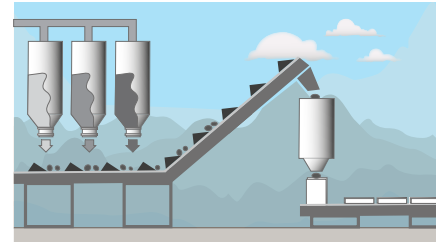
- **Crushing**  
Crushers
- **Transporting**  
Conveyors
- **Drying & grinding**  
Raw mills

### 2 | FINAL PROCESSING



- **Heating**  
Rotary kiln
- **Fine grinding**  
Cement mill & fine screen
- **Cleaning**  
Dust removal equipment

### 3 | STORAGE & PACKING



- **Storage**  
Conveyors
- **Packing**  
Palletiser



Lubrication of a raw mill



Lubrication of pillow block bearing on a rotary dryer



Bearing lubrication on a fan



Bearing lubrication on a fan



Bearing lubrication on a fan



Electric motor lubrication

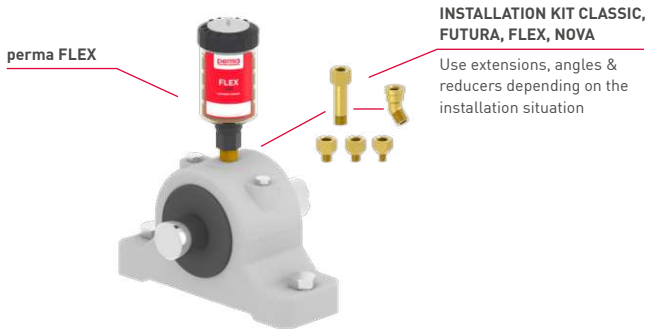


## Solutions

The selection of the ideal lubrication solution requires the consideration of various factors, including the specific type of application, operating speed and load of the machine, and the ambient temperature. Below are some proposed solutions:

### Direct mounting | e.g. with perma FLEX

- Easy, quick mounting
- For lubrication points with little vibration | shocks
- For easy-to-reach and safe lubrication points



### Remote mounting | 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



## perma SERVICES

You have questions about our products or need assistance with the survey, system installation and maintenance of your equipment? The perma Services team has answers and is happy to assist!



Visit the perma website for an overview of our offerings.



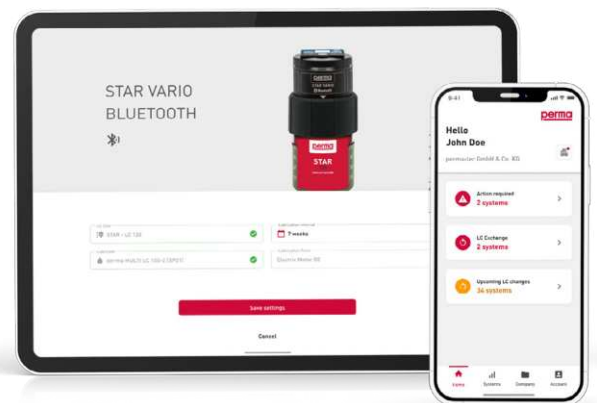
# EASY. SMART. CONNECTED.

Create your own network

- Current overview of all lubrication points
- Coordination of upcoming maintenance work
- Reminders for pending exchanges
- Central management of lubrication points in the web application
- Recording of all on site maintenance and exchange tasks via the app

Get perma CONNECT now!

Download the app to your smartphone or open the web application at <https://perma-connect.com>



Find a variety of videos on the perma YouTube channel to get a deeper understanding of the perma CONNECT app.





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