

# PULP & PAPER

perma lubrication systems in operation



## Challenges

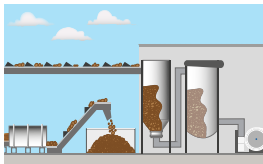
The paper industry is currently facing many new challenges: An increase in international competition, falling demand due to digital media, rising energy costs and stricter health-, workplace safety- and environmental constraints. In order to meet these challenges, operators must increase plant productivity and profitability and simultaneously reduce operating costs. perma lubrication systems help to provide a solution to these problems.

- Dust, dirt & moisture
- High speeds
- High maintenance costs
- Spread-out equipment with different lube-points
- Hard-to-reach lubrication points
- Rotating machine parts
- High temperatures



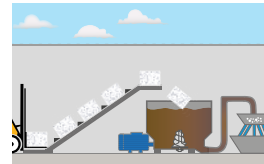
## Lubrication points

### 1 | PULP PRODUCTION



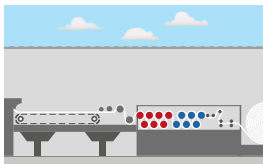
- **Chipping & storing**  
Belt conveyors, tumblers
- **Cooking & washing**  
Pumps, wash presses
- **Bleaching & drying**  
Electric motors, dryers

### 2 | PULP TREATMENT



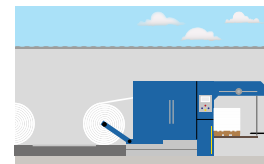
- **Defibration**  
Pulpers, electric motors
- **Grinding**  
Refiners, electric motors
- **Transportation & thickening**  
Pumps, electric motors

### 3 | PAPER PRODUCTION



- **Water removal & screening**  
Vacuum systems
- **Pressing & drying**  
Pulpers, dryers
- **Spreading**  
Dryers, roll conveying systems

### 4 | FINISHING AND REFINING



- **Transportation**  
Chain conveyors
- **Cutting**  
Length and cross cutters



Bearing lubrication at tree sorting system



Bearing lubrication of a belt thickener



Lubrication of a crane cable pulley bearing



Bearing lubrication on a pump



Lubrication of a pillow block bearing on a blower



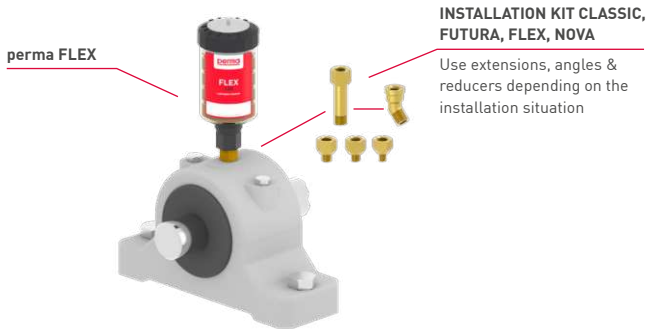
Lubrication of a pillow block bearing on a blower

## 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.



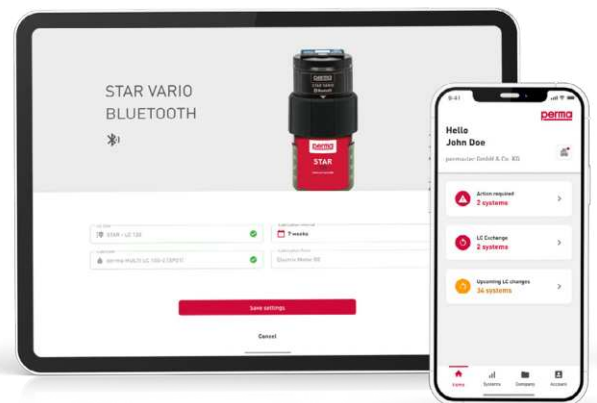
# EASY. SMART. CONNECTED.

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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