



perma lubrication systems for
Pulp and Paper

H-T-L perma USA LP
2129 Center Park Drive
CHARLOTTE, NC 28217 / USA
www.permausa.com

Tel.: +1 704 377 3100
Toll Free: +1 800 997 3762
Fax: +1 704 377 3106
info@permausa.com
www.permausa.com

The Expert in Lubrication Solutions

perma

perma lubrication systems for
Pulp and Paper

The pulp & paper industry is facing many new challenges: Increasing global competition, decreasing demand for certain types of paper due to digital media, rising energy costs, stricter health, safety and environmental policies. To meet these challenges, pulp & paper manufacturers must increase plant productivity and profitability by cutting operating costs. perma lubrication systems can help with some of these challenges.

Lubrication points

		1 Roller bearings	2 Shaft seals	3 Chains
	Pulp production			
	→ Chipping, storing	Belt conveyors, tumblers	✓	✓
	→ Cooking, washing	Pumps, wash presses	✓	✓
	→ Bleaching, drying	Electric motors, dryers	✓	
	Pulp treatment			
	→ Defibration	Pulpers, electric motors	✓	
	→ Grinding	Refiners, electric motors	✓	
	→ Transportation, Thickening	Pumps, electric motors	✓	
	Paper production			
	→ Water removal / screening	Vacuum systems	✓	
	→ Pressing, drying	Pulpers, dryers	✓	
	→ Spreading	Dryers, roll conveying systems	✓	✓
	Finishing / refining			
	→ Transportation	Chain conveyors		✓
	→ Cutting	Length and cross cutters	✓	

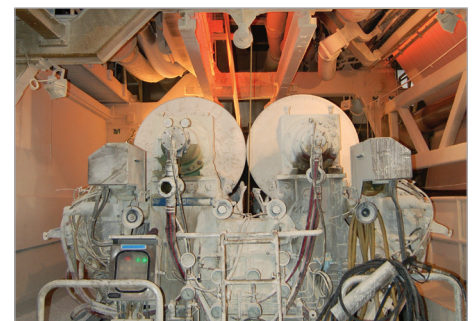
Challenges



- 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

Advantages of automatic lubrication

- ✔ **Continuous relubrication** at short intervals **reduces wear and seals** lubrication points to **prevent contamination** from dust, dirt and moisture.
- ✔ **Individual and optimized lubrication** of pulp & paper process equipment (lubricant, lubricant amount, lubrication interval).
- ✔ **Simple installation and exchange of lubrication systems outside of dangerous areas** increases workplace safety.)
- ✔ The use of automatic lubrication systems **reduces personnel- and material costs** and increases equipment service life.

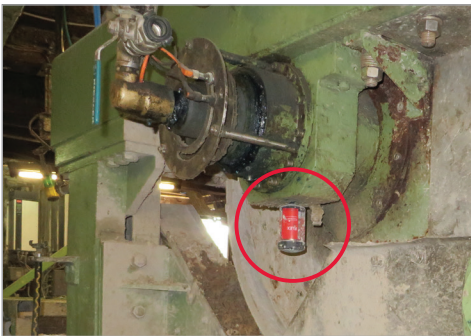
perma SELECT APP



Solutions

Direct mounting on lubrication point: e.g. perma CLASSIC / FUTURA / FLEX / NOVA

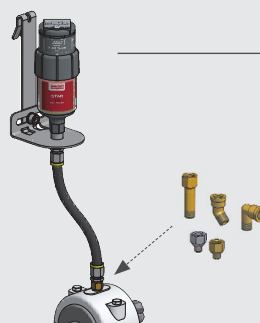
- Easy, quick mounting
- For lube-points with little vibration / shocks
- For easy-to-access and safe lubrication points



Direct Mounting Solution
Use extensions, angles & reducers depending on the installation situation

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**

Remote Mounting Solution
Use extensions, angles & reducers depending on the installation situation

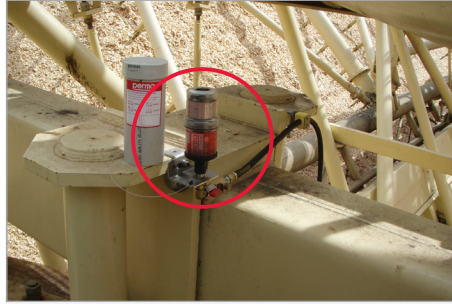
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- Detailed product information in our **perma catalog**
- Visit our website **www.permausa.com**

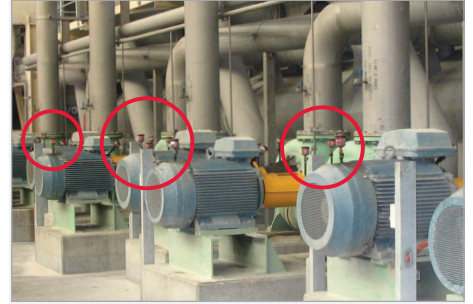
Applications



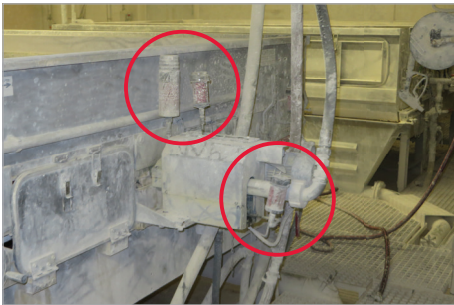
Bearing lubrication at tree sorting system



Bearing lubrication on a belt conveyor



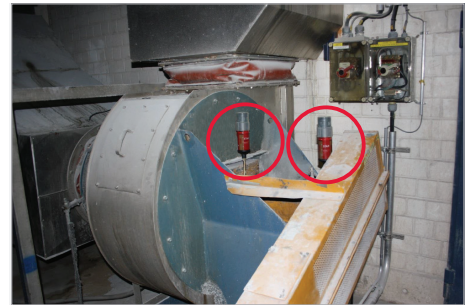
Electric motor lubrication



Motor lubrication on a vibrating screen



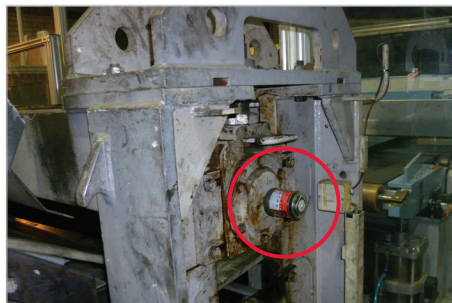
Bearing lubrication on a pump



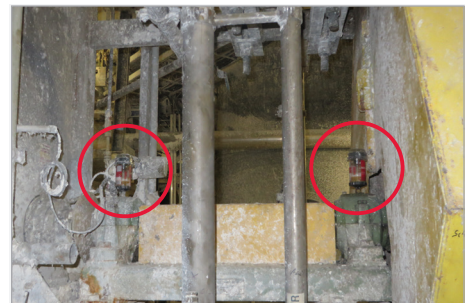
Lubrication of a pillow block bearing on a blower



Lubrication of bearing unit on a fan



Shaft lubrication on belt conveyor pulley



Lubrication of drive shaft on a mixer

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