

perma lubrication systems for

Quarrying

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The Expert in Lubrication Solutions

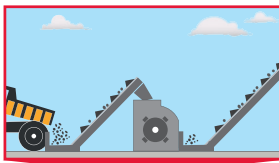
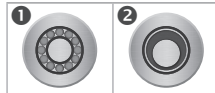
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perma lubrication systems for
Quarrying

The quarrying industry puts men and machines under enormous strain. Spread out equipment, insufficient staff, rough operating conditions and cost pressure continuously challenge quarrying operators and employees. Automatic lubrication with perma lubrication systems can tremendously increase equipment availability and safety.

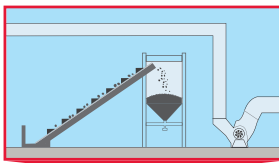
Lubrication points

❶ Roller bearings ❷ Sliding bearings / Sliding guides



Raw material processing

| | | | |
|--------------------|----------------------------|---|---|
| → Crushing | Jaw-, cone-, roll crushers | ✓ | ✓ |
| → Transport | Conveyor systems | ✓ | |



Endproduct processing

| | | | |
|-------------------------------|---------------------------|---|--|
| → Screening | Grit and sand screens | ✓ | |
| → Sorting and cleaning | Conveyor systems | ✓ | |
| → Dust removal | Dedusting equipment, fans | ✓ | |
| → Transport | Conveyor systems | ✓ | |



Storage and packing

| | | | |
|------------------|------------------|---|--|
| → Packing | Conveyor systems | ✓ | |
| → Filling | Silo discharge | ✓ | |

Challenges



→ Hard-to-reach and dangerous lubrication points



→ Extreme operating conditions (sludge, dust, dirt, temperature changes and vibrations)



→ High personnel costs from spread out and complex equipment

Advantages of automatic lubrication

- ✔ Remote installations of lubrication systems **reduce the time that workers have to spend in dangerous areas.**
- ✔ Continuous relubrication at short intervals **reduces wear** and **seals lubrication points against contamination.**
- ✔ **Scheduled exchanges** on running equipment **reduce personnel- and material costs** and increase economic efficiency.

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Solutions

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

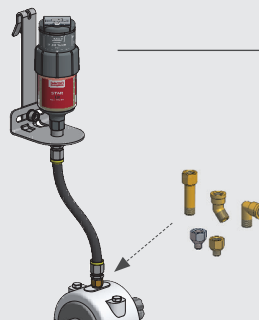
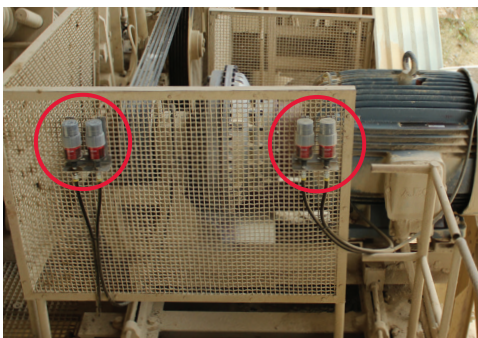
- Easy, quick mounting
- For lube-points with little vibration / shocks
- For easy-to-access and safe lubrication points



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

Would you like more information on perma products?

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

Applications



Lubrication of pillow block on a pressure pulley



Lubrication of pillow block on a drive pulley



Lubrication of pillow block on a tail pulley



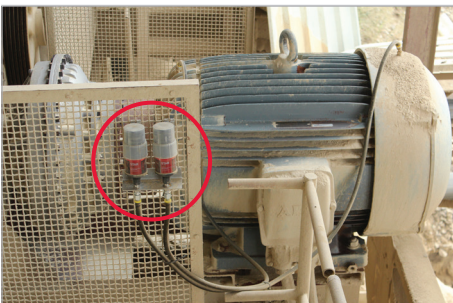
Lubrication of pillow block on a conveyor



Lubrication of pillow block on a belt weigher



Lubrication of pillow block on a conveyor



Remote lubrication of an electric motor



Lubrication of pillow block on a conveyor



Lubrication of pillow block on a tail pulley

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