

# Automatic lubrication in mining industry

## Why automatic lubrication?

### ...reduces your costs

- saves time
- fewer machine breakdowns due to decreased wear
- lower lubricant consumption
- increased service life of bearings

### ...protects the environment

- needs-based lubricant dosage
- low risk of impurities and contamination

### ...improves work safety

- ...enables monitoring and provides an overview

## Challenges

In the mining industry the access to many lubrication points is burdensome or dangerous. Manual lubrication is inconvenient due to spacious facilities and a large variety of different lubricants and applications. Contamination and rockfall lead to high exposure on guides, chains and bearings.

## Advantages of automatic lubrication



### Protection

- automatic lubrication lowers the risk of contamination
- accessories prevent contamination and rockfall damage



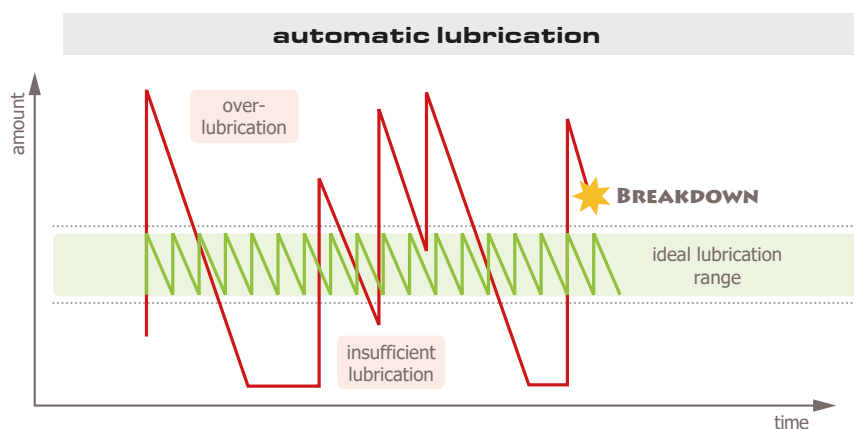
### Costs

- lower energy costs
- time saving
- sustainable by multiple refills
- increasing production efficiency



### Safety

- indirect installation possible
- central controlling and monitoring in a user-friendly environment



## Our solutions for automatic lubrication



|                                       | <b>G LUBE</b>             | <b>SOLOLUBE</b>           | <b>G LUBE EM OIL</b>     | <b>G LUBE EM B</b> | <b>G LUBE EM V</b><br><b>LUBE EM D</b> | <b>G LUBE VIB</b> | <b>LUB-S</b>                   | <b>LUBRICUS</b>                |
|---------------------------------------|---------------------------|---------------------------|--------------------------|--------------------|--|-------------------|--------------------------------|--------------------------------|
| <b>Multiple lubrication points</b>    | X                         | X                         | ✓                        | ✓                  | ✓                                      | ✓                 | ✓                              | ✓                              |
| <b>Reusable drive</b>                 | X                         | ✓                         | ✓                        | ✓                  | ✓                                      | ✓                 | ✓                              | ✓                              |
| <b>Working voltage</b>                | Battery                   | Battery / 24 VDC          | Battery / 24 VDC         | Battery            | 9-36 VDC                               | Battery           | Battery / 24 VDC               | Battery / 24 VDC               |
| <b>Max. operating pressure</b>        | 5 bar<br>73 psi           | 7,5 bar<br>109 bar        | 10 bar<br>145 psi        | 60 bar<br>870 psi  | 60 bar<br>870 psi                      | 60 bar<br>870 psi | 35/50 bar<br>508/725 psi       | 70 bar<br>1015 psi             |
| <b>Max. tube length*</b>              | Grease: 0,5 m<br>Oil: 3 m | Grease: 1,5 m<br>Oil: 5 m | Oil: 6 m                 | Grease: 6 m        | Grease: 6 m                            | Grease: 6 m       | Grease: 4 m<br>Oil: 7 m        | Grease: 6 m<br>Oil: 10 m       |
| <b>Max. run-time</b>                  | 12 months                 | 12 months                 | 24 months                | 12 months          | 12 months                              | 12 months         | 24 months                      | 36 months                      |
| <b>Lubricating intervals (months)</b> | 1/3/6/9/12                | 1-12 (stepless)           | 0,5/1/2/4/6/<br>12/18/24 | 1-12 (stepless)    | 1-12 (stepless)                        | 1-12 (stepless)   | 1-24 (stepless)                | 1-36 (stepless)                |
| <b>Operating temperature</b>          | -20 °C to +55 °C          | -20 °C to +60 °C          | +5 °C to +60 °C          | -5 °C to +60 °C    | -20 °C to +60 °C                       | +5 °C to +60 °C   | -15 °C to +60 °C               | -15 °C to +70 °C               |
| <b>Self-filling possible</b>          | ✓                         | ✓                         | ✓                        | X                  | X                                      | X                 | X                              | X                              |
| <b>Self-refilling</b>                 | X                         | X                         | ✓                        | X                  | X                                      | X                 | X                              | X                              |
| <b>Control</b>                        | Empty time                | Empty time                | Empty time, PLC          | Empty time         | Empty time, PLC                        | Empty time        | Empty time,<br>pause time, PLC | Empty time,<br>pause time, PLC |

\* depends on lubricant and application

### Scopes of application:

✓ Excavators   ✓ Roll crushers   ✓ Conveyors   ✓ Pumps   ✓ Fans