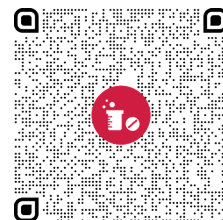


CHEMICAL & PHARMACEUTICAL

perma lubrication systems in operation



Challenges

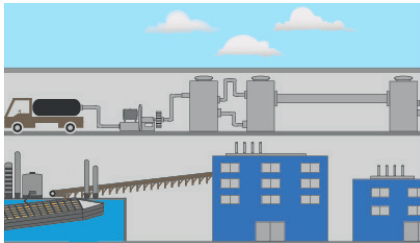
Almost no other industry features such a concentration of machines and automation. Maintenance is therefore one of the major controllable cost factors in both industries. perma automatic lubrication systems are reliable partners when it comes to correct lubrication of equipment and machine elements. They increase equipment and machine element availability significantly, thus having a sustainable positive effect on the net operating profit.

- Hard-to-reach and dangerous lubrication points
- Extreme operating conditions (temperature fluctuations)
- Stringent standards for hygiene and cleanliness, extending to cleanroom conditions, or production areas with limited accessibility
- High occupational safety requirements
- Precision and accuracy
- Lubricant compatibility with pharmaceuticals and chemicals



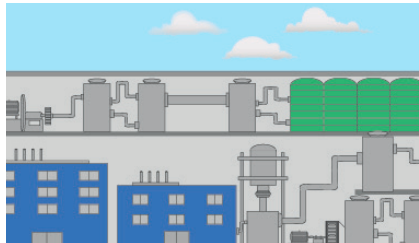
Lubrication points

1 | DELIVERY & DRYING



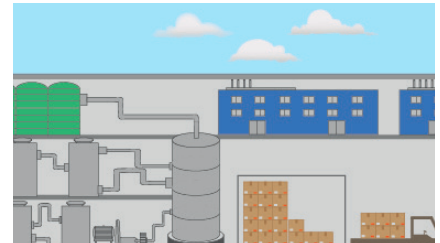
- **Transporting**
Conveyors & screw conveyors
- **Pumping**
Process pumps & electric motors
- **Unloading**
Blowers & fans, electric motors

2 | FINAL PROCESSING

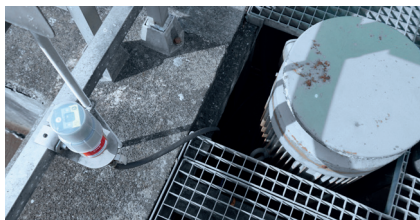


- **Drying**
Hot-air blowers & electric motors
- **Heating, mixing**
Batch mixers & process pumps
- **Cooling, transporting**
Blowers & fans, feed pumps

3 | PACKING, LOADING & DISPATCH



- **Packing**
Conveyors & palletisers
- **Loading**
Screw conveyors & pumps
- **Transporting**
Chain conveyors



Bearing lubrication for electric motors



Bearing lubrication on a pump



Bearing lubrication on Blowers & fans



Bearing lubrication for electric motors



Bearing lubrication on a pump



Bearing lubrication on Blowers & fans

Solutions

perma STAR VARIO

- + LCD display with push button displays discharge period, LC size and operating status
- + Easy to handle
- + Manual additional discharge via button on display (purge)
- + One drive for all LC sizes
- + Electromechanical reusable drive
- + Suitable for greases up to NLGI 2 | oils
- + LED (green | red) visible all round signals functioning and any errors
- + Pressure build-up to 7.5 bar allows remote mounting up to 5 m
- + Lubrication system operates reliably from -40 °C to +60 °C



perma STAR VARIO BLUETOOTH

- + Easy handling via perma CONNECT
- + Compatible with Gateway BLUETOOTH
- + Bluetooth function
- + Illuminated LCD display



perma STAR VARIO LONG RANGE

- + Easy handling via perma CONNECT
- + Long range thanks to LoRa® WAN technology
- + Certification for potentially explosive atmospheres (Zone 2 | Zone 22)
- + Gateway solution for up to 2,000 lubrication points
- + Illuminated LCD display

USE IN EX-ZONES

perma NOVA



Gas: Zone 1
Dust: Zone 21



perma FLEX



Gas: Zone 0 |
Class I Div 1
Dust: Zone 20 |
Class II/III Div 1



perma STAR VARIO LONG RANGE



Gas: Zone 2 |
Class I Div 2
Dust: Zone 22 |
Class II/III Div 2



MOUNTING

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.

Direct mounting | e.g. with perma STAR VARIO EX

- 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 BLUETOOTH EX

- 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? Your perma contact has answers and is happy to assist!



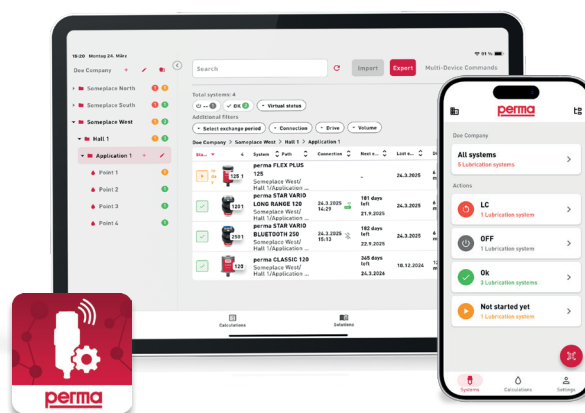
Visit the perma website for an overview of our offerings.



EASY. SMART. CONNECTED.

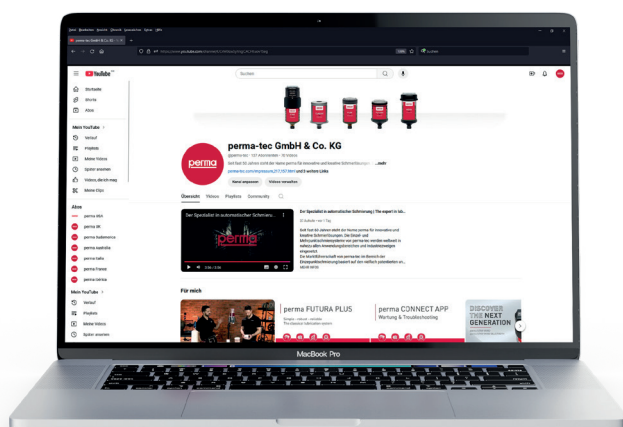
Simple and intuitive - configure and maintain all perma lubrication systems via mobile devices.

- Precise calculation of relubrication amounts and discharge periods
- Convenient remote control and configuration of your lubrication systems
- Comprehensive overview of all lubrication points
- Notifications allow for prompt responses
- Maximum efficiency through centralized control of your maintenance



Get perma CONNECT now!

Download it to your smartphone | tablet or open web application under: <https://perma-connect.com>



To quickly get started with perma CONNECT, a range of step-by-step tutorial videos are available.

Click here to visit the perma YouTube channel!



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