

# PUMPS

perma lubrication systems in operation



Pumps are the core of many industrial applications. A failing pump can often interrupt the entire work or production process. All sorts of pumps are used in many fields and applications. Appropriate lubrication, safeguarding the work and production process of the pump, is a decisive factor of smooth operation.

## Challenges

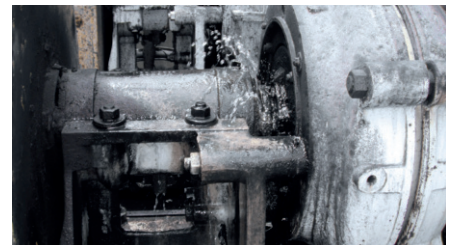
Pumps are normally operated under extreme conditions. These can include heavy contamination from slurry or dust and hazardous materials such as alkali solutions and weak acids.

→ Dirt, water or other contaminants must not enter the bearing points

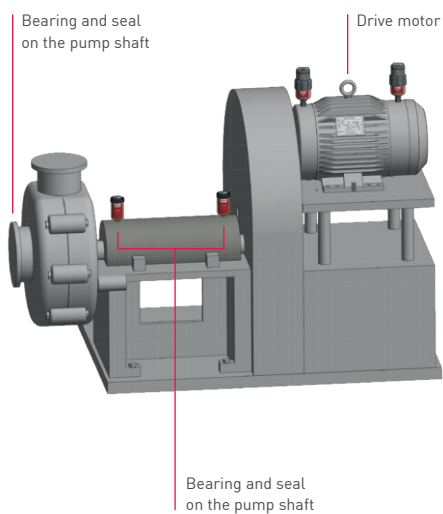
Many lubrication points can only be accessed with extreme protective measures (safety gloves and mask). This frequently leads to neglect of the prescribed lubrication.

Lubrication starvation results in wear and leads to failure of equipment components or pump leakages.

- Lubrication while the machine is in operation must be ensured
- Operation in potentially explosive areas
- Workplace safety must be ensured

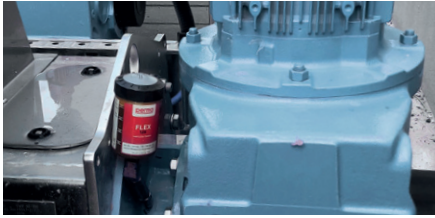


## Lubrication points



Lubrication points (roller bearings) are located on the drive shaft between drive motor and pump body or in the pump housing.

Lubrication of gland seal and labyrinth seal prevents the ingress of dirt and / or pumped media into the bearing. Seals of bearings and bearing housings must be permanently supplied with the specified amount of the right lubricant.



## Industries



Chemical & Pharmaceutical



Food & Beverage



Refineries



Power generation



Mining & Minerals processing



Environmental technology



Wastewater treatment



Pulp & Paper

## Solutions

The development of perfect lubrication solutions requires the consideration of various factors, such as application type, speed and load of the machine as well as ambient temperature.

perma has risen to this challenge, focusing on the development and production of automatic lubrication systems for use across a variety of industries. These solutions have been created in close cooperation with maintenance professionals from various global sectors, addressing the unique demands of each application. In adherence to the highest quality standards, premium-grade raw materials and lubricants are used in the manufacturing process. This ensures that perma products consistently deliver reliable lubrication across all applications, thereby increasing the equipment service life while at the same time minimising costs and operational effort.

### 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

