

# CHAINS

perma lubrication systems in operation



Trouble-free machine and plant operation is the utmost priority for maintenance staff and operators. Maintenance and lubrication pose numerous challenges. Installing and operating perma lubrication systems ensures dependable, precise lubrication of chain drives and allows equipment to be operated reliably.

## Challenges

In oil lubrication, it is extremely important to apply just the right amount of lubricant, because lubrication starvation can be just as bad as over-lubrication.

Lubrication starvation can lead to severe wear

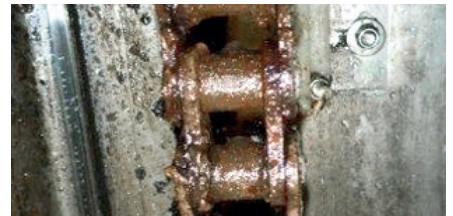
- Increased wear of chain pins and rollers
- Higher energy costs
- Unpleasant noise development
- Uneven chain movement (jerking)
- Possible equipment failure

Access for equipment lubrication or cleaning is time-consuming and not always possible or desired

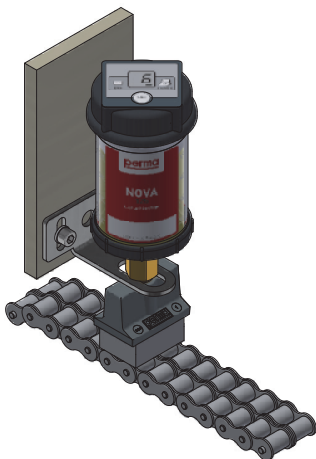
- Additional labour input and increased costs
- Equipment shut-down required

Over-lubrication - the following aspects must be considered:

- Over-lubrication of chains can lead to safety hazards
- Slipping hazard for persons in the direct vicinity of the lubrication point
- Contamination of environment, packaging or products

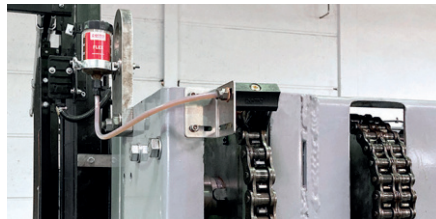


## Lubrication points



In order to extend the service life of chains, lubricant must be specifically applied to the wear points within the gaps of inner and outer lugs, as well as rollers, bushes, and pins.

The lubricant is applied to the chain via a lubrication brush or pinion. Make sure to use a suitable lubricant with appropriate creep properties.



## Industries



Food & Beverage



Recycling



Automotive



Pulp & Paper



Steel industry



Chain conveyors



Moving walkways &  
Escalators



Lifting stations



Drive systems

## 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 easy-to-reach, safe lubrication points
- Safe and reliable lubrication in explosive areas
- For lubrication points with little vibration | shocks
- Can be used in very moist and dusty environments

### Remote mounting | e.g. with perma STAR VARIO

- Precise settings according to requirements prevent lubrication starvation and over-lubrication
- Reliable, precise lubricant discharge independent of temperature and counter pressure
- Mounting outside of dangerous areas or at easy-to-reach locations increases workplace safety
- For lubrication points with strong vibration | shocks (isolation of lubrication system)

