

AIR²

Oil - Air lubrication system

ss.LUBAC®
engineered lubrication

AIR² CHAIN LUBRICATION

Lubrication of conveyor chains

ss.LUBAC AIR² oil / air chain lubrication systems have been specially designed to supply fast running conveyor chains with lubricating oil.

Of course, these systems are equally suitable for supplying other industrial plants in which similar requirements are placed on the precise and mist-free application of lubricating oil..

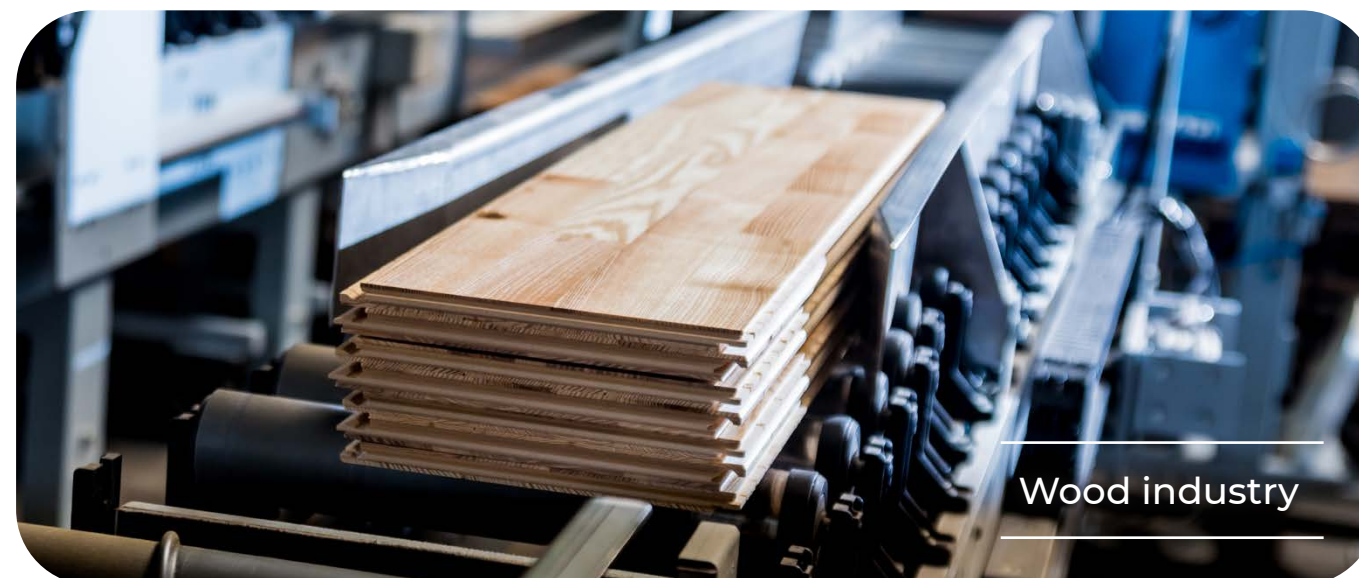
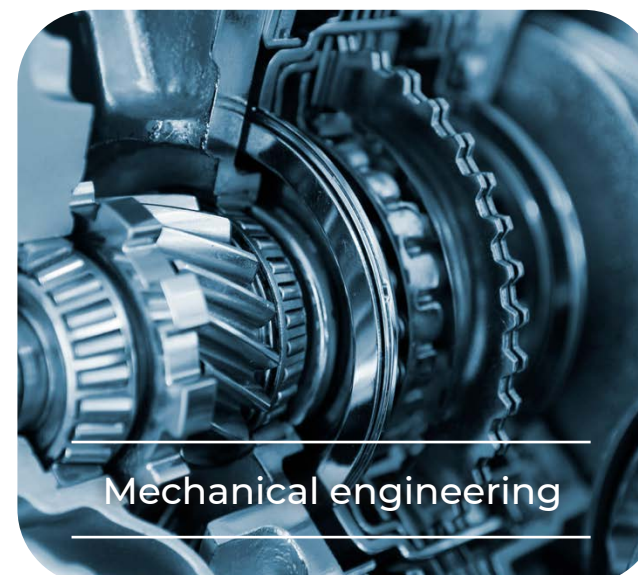
The two independently controllable air streams blow the oil into the free spaces, e.g. of the chain, and thus ensure the supply of lubricant to the inner workings of the chain without unnecessarily contaminating its surface.

Benefits

- › **Significant cost reduction** due to volumetric lubricant metering
- › **No fogging of the lubricant**, thus counteracting contamination of the production goods
- › **Application temperatures** up to well over 250°C
- › **Higher air pressures possible**, the chain is freed from contamination
- › Continuous lubricant application

Areas of application

- › Food industry
- › Textile industry
- › Mechanical engineering
- › Wood industry
- › Heavy industry
- › Steel and aluminium industry



developed and produced by

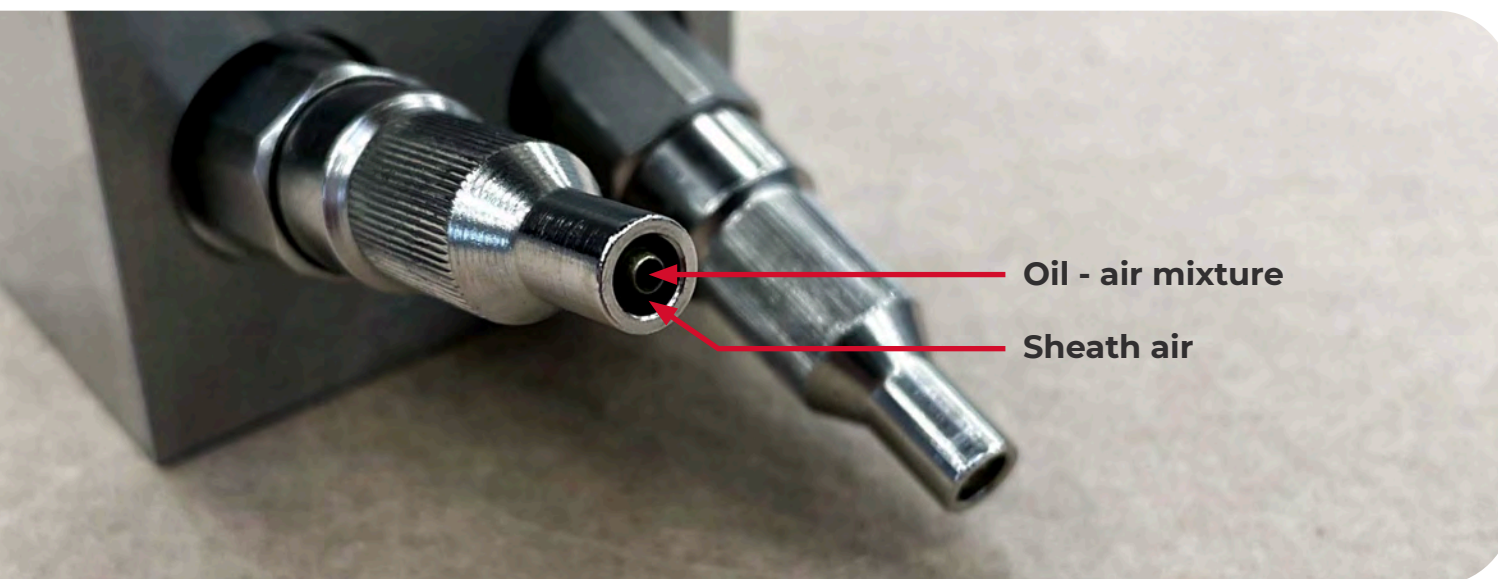


HOW IT WORKS

AIR² chain lubrication

The AIR² system developed by us works according to the basic principle of the sheath flow nozzle known from other areas of technology. A precise, very small and variable quantity of lubricating oil produced by metering elements is conveyed by means of compressed air from the metering valve inside a pipe to the nozzle. Compressed air is also fed to the nozzle in a parallel pipe without adding oil. This air flow alone

surrounds the oil/air outlet from the oil- and air-carrying opening at the tip of the nozzle and forms a very effective protective screen which prevents the oil from being nebulised and thus the production goods conveyed on the system and the surrounding components from becoming contaminated.



Easy integration:

When using a possibly already existing PLC control, the user can equally use our standard components. The components can also be supplied individually with or without standard components, such as air valves, pressure reducers and air filters/regulators, etc. We configure a pump/nozzle assembly designed for your specific application according to your specifications and wishes.

Fully configured and premounted ss.LUBAC AIR² systems including control (plug and play systems) are also available. These consist of control unit, pump, dosing valves, nozzles as well as hose and mounting material.



APPLICATION EXAMPLES

AIR² chain lubrication



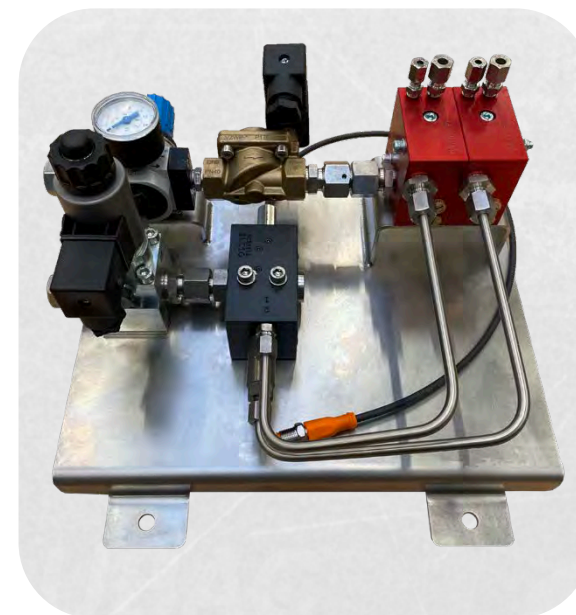
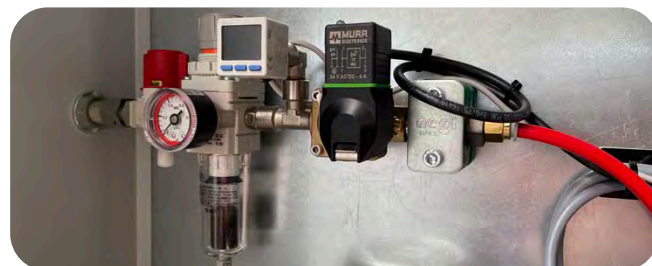
Box construction

The construction in the protective box prevents the main components and the integrated control from being affected by dirt or mechanical damage. The box design also offers the possibility of temperature management, so the system can be equipped with air cooling or heating if required. The media transitions are very easily accessible, which simplifies installation and connection considerably.



Panel construction

The AIR² oil - air system can also be mounted very compactly on a panel. This design offers easy integration into new or existing systems and machines with limited space. Due to the panel design, all components are optimally accessible for process optimisation and maintenance work.



APPLICATION EXAMPLES

AIR² chain lubrication



Mobile station

The mobile AIR² oil-air system offers maximum flexibility in operation. By means of the mobile construction, several plants that do not require a continuous lubrication supply can be supplied with only one plant. The system is also used as a test system to determine the effect of the AIR² oil - air lubrication on different systems in order to check the economic efficiency of later stationary systems.



PRACTICAL EXAMPLE

Conveyor chains in an industrial oven

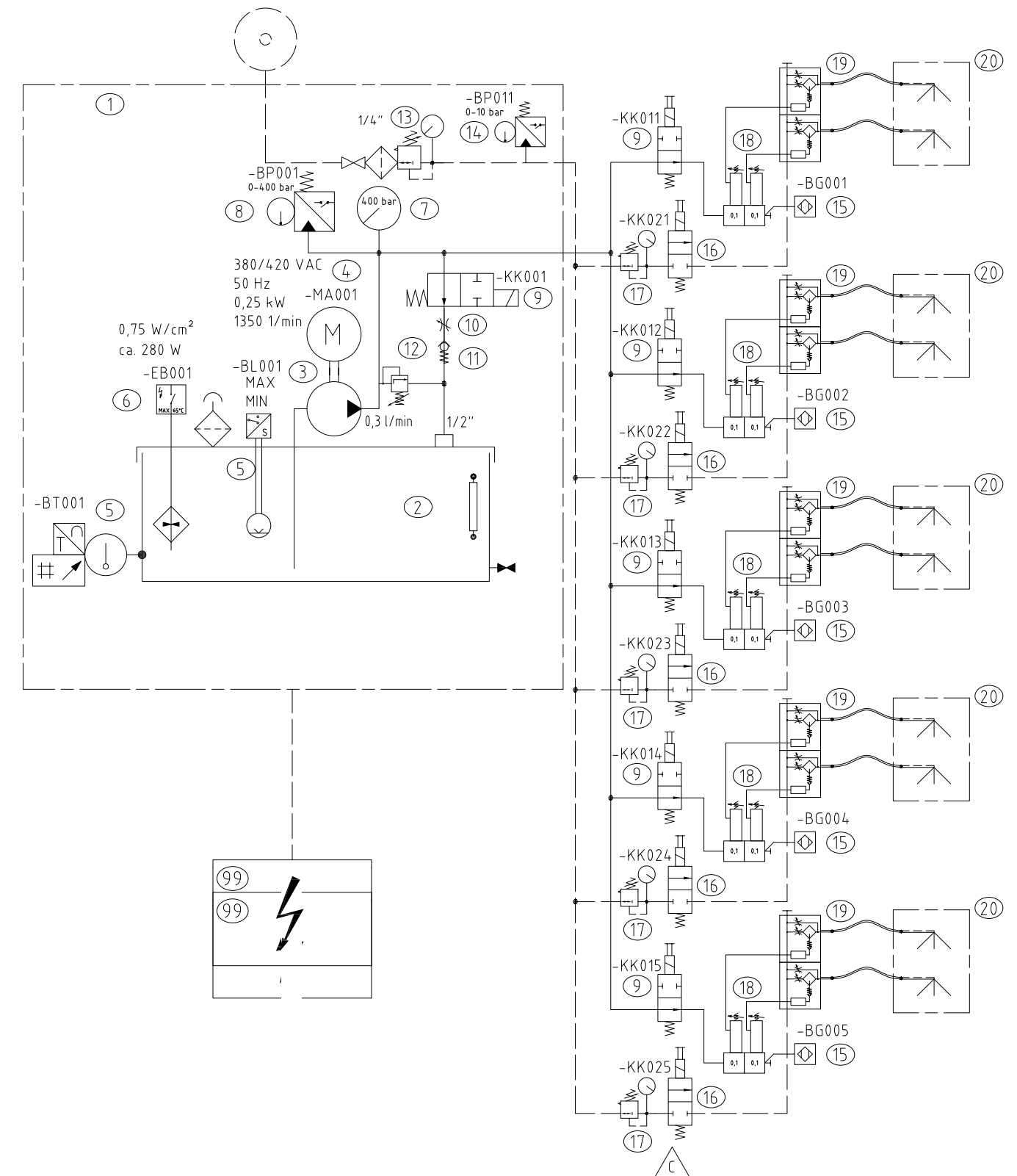
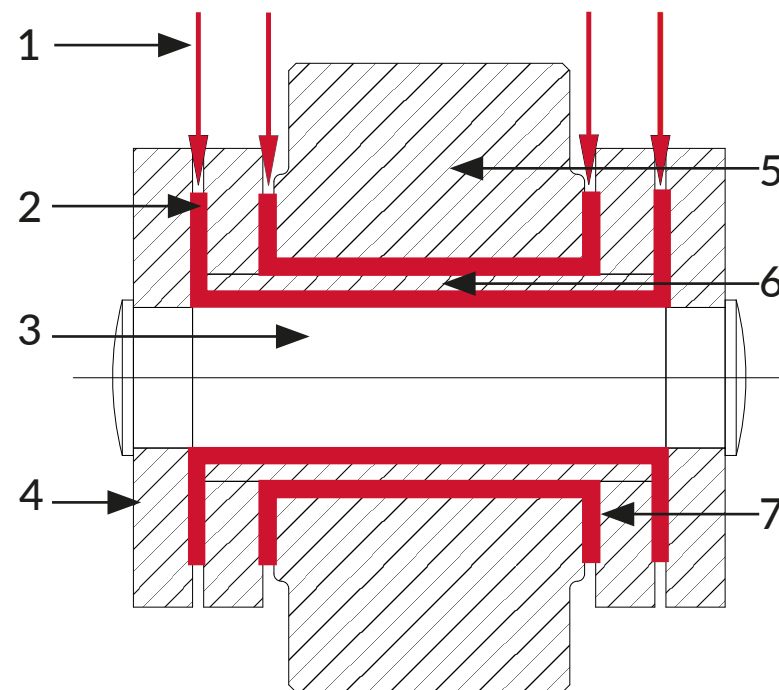
Requirements:

- › Oven temperature 220°C
- › Highly precise application of small quantities of oil
- › Adjustable dosing quantities and operating times
- › Fully automatic and low-maintenance operation of the unit
- › Stand alone unit

Execution:

- › ss.LUBAC AIR² System - **standard nozzle suitable for continuous use up to 250°C**
- › **Application area of <ø5 mm**
- › **No oil mist in the environment** due to the proven ss.LUBAC AIR² - sheath flow system
- › **Adjustable metering** from 0,3 to 4,2 cm³/min per nozzle
- › **Stainless steel design** of the pump station and fitting material
- › **Control system included**

- 1 Lubricant
- 2 Lubrication film
- 3 Axis
- 4 External axis
- 5 Barrel
- 6 Bearing bush
- 7 Inner plate



PRACTICAL EXAMPLE

Knife lubrication for trimming shear in rolling mill

Requirements:

- › Precise, continuous lubrication of the parallel cutting knives
- › Very small space requirement
- › Oil viscosity 220 cSt
- › Adjustable metering quantity
- › Central filling station for four independently operating ss.LUBAC AIR² lubrication systems
- › Pressure display and sensors can be connected to the local control system

Execution:

- › **Continuously operating ss.LUBAC AIR² lubrication system**
- › Use of specially manufactured ss.LUBAC AIR² sheathed **flow nozzles adapted in size**
- › Pressure switch and other sensors **wired up to a terminal box**
- › **Central filling station** with a delivery rate of 500 cm³/min
- › **Adjustable dosing rate** from 0.08 to 0.16 cm³/min per nozzle

