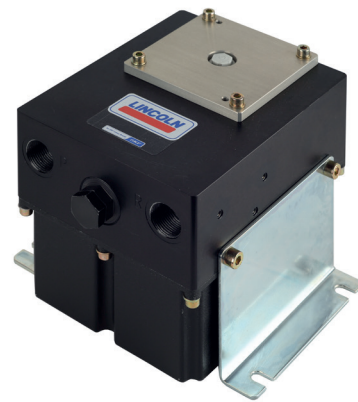


# Dual-line lubrication system

Pump models ZPU 08, ZPU 14, and ZPU 24  
EMU 3 change-over valve  
VSG metering devices



## System benefits

- Exactly metered amount of lubricant supplied to lubrication points
- Continued lubrication even in case of blockage at one point
- Highly reliable and long service life of components
- Suitable for harsh conditions -, such as dirty and dusty environment and low temperatures

## Features

- Simple, accurate and individual metering of lubricant volumes for each pair of outlets
- Up to 2 000 lubrication points over long distances
- Extension of lubrication system can be easily done
- Visual or electrical monitoring of each pair of outlets
- Intelligent control unit automatically applies minimum required system pressure thus increasing service life of individual components
- The metering devices are provided with lubricant from two main lines whereby the lubricant also serves as a means of control for the system
- The dual-line system can be combined with downstream progressive metering devices thus increasing the total number of lubrication points that can be provided with lubricant by the dual-line metering device.



ZPU 08 with 100 l reservoir

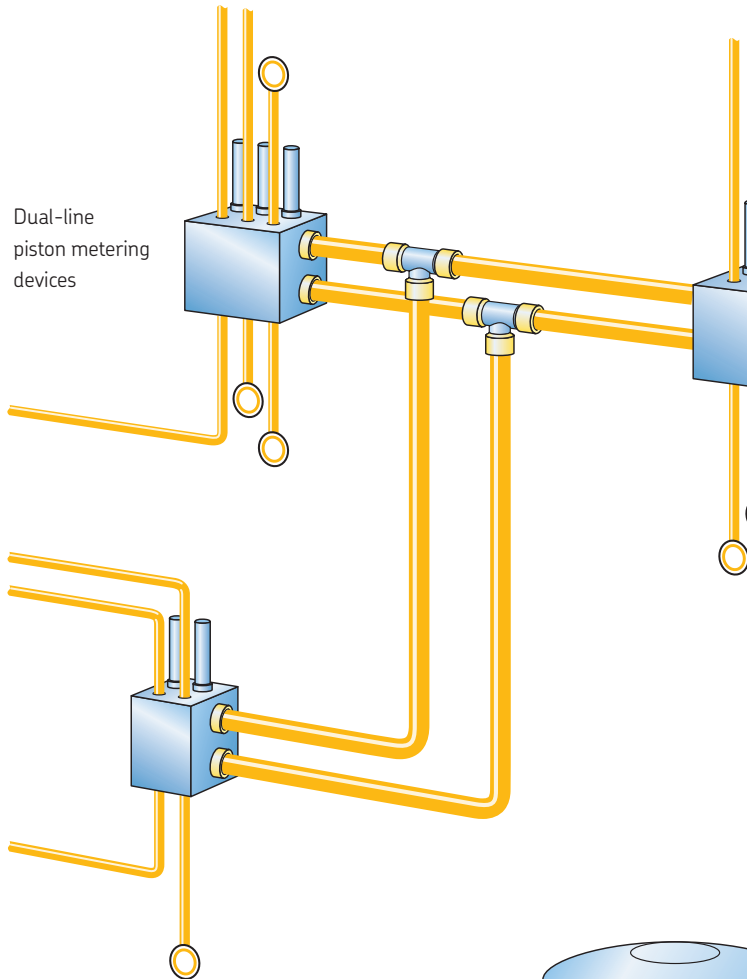
## ZPU 08 | 14 | 4

The electrically operated high-pressure pumps, type ZPU 08, ZPU 14, and ZPU 24, are standard supply pumps in dual-line systems. Thanks to their supply and pressure range, they suit also extended systems with line lengths of up to 120 m.

The pumps are state-of-the-art and very reliable with a particularly long service life. All main components are easily accessible. The pumps are equipped with a pressure relief valve, a check valve, a lubrication filter, and a pressure gauge as a standard.

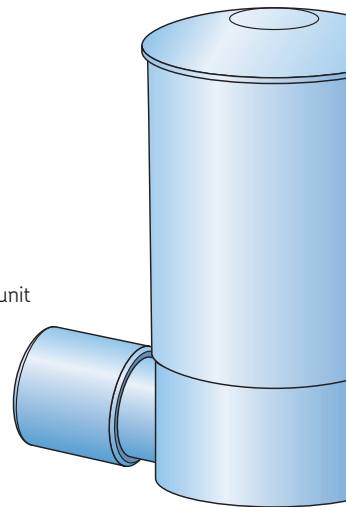
### Technical data

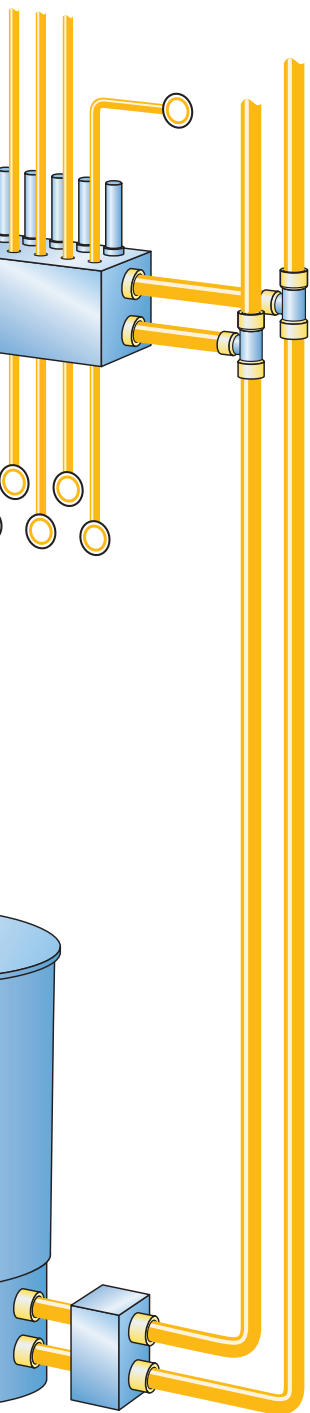
Flow rate	8/14/24 dm <sup>3</sup>
Operating pressure	max. 400 bar
Operating temperature	-20 to +80 °C
Reservoir capacity	40 l or 100 l



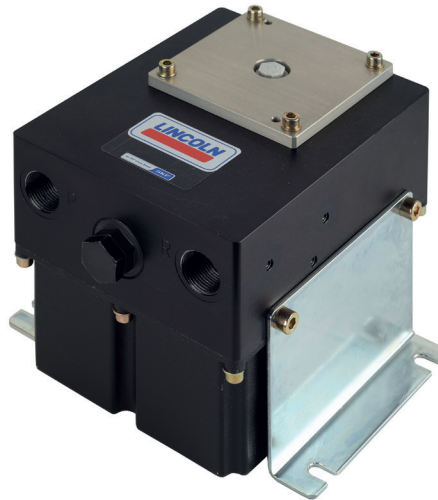
Dual-line piston metering devices

Pump piston unit





Change-over valve



EMU 3

## EMU 3 change-over valve

Electrically operated, for use with dual-line systems

### Applications

The EMU 3 change-over valve is particularly suitable for extended dual-line systems also in combination with pneumatically operated supply pumps with large flow rates.

### System benefits

The change-over valve has a mid position with the option to relieve both main lines (A and B) towards the pump reservoir (R) during the pause time.

As a consequence, the system components are pressurized for a shorter period of time and have a longer service life. Furthermore, the lubricant is not pressurized unnecessarily long. Thus, the risk of bleeding (separation of soap and oil) is smaller.

A large connection thread and the distances allow tubes to be connected with a larger diameters of up to 30 mm without any problem.

### Technical data

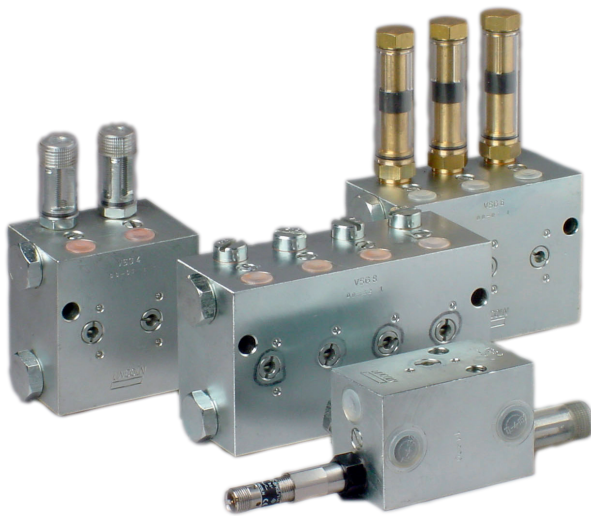
Flow rate for grease	400 dm <sup>3</sup> /h
Operating pressure	max. 400 bar
Operating temperature	-20 to + 80 °C
Connection thread	G 3/4"
Voltage	24 V DC
	100 – 230 V AC

## VSG Dual-line metering devices

These high-quality, galvanized steel metering devices are designed for high-pressure dual-line systems.

The metering devices of the VS family are available with up to 8 outlets. Each pair of outlets is equipped with an indicator pin for visual monitoring.

Additionally, the dual-line metering devices are available with electrical monitoring by means of low-wear proximity switches (piston detectors).



### Technical data

Number of outlets	1 – 8
Operating pressure	max. 400 bar
Operating temperature	-20 to +120 °C
Connecting thread	G 1/4" / G 3/8"



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