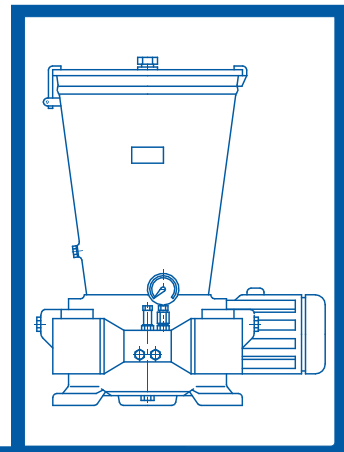
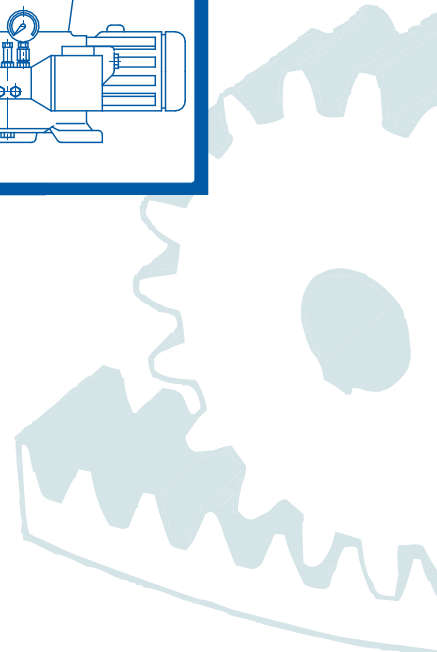


# CENTRAL LUBRICATION PUMP PD 20 & PD 30 Type

Central lubrication pump PD 20 & PD 30



Central lubrication pump PD 20 & PD 30



## Application

The pump is used for periodical plastic grease feeding to machine friction nodes through two-way feeders. It is recommended for use in high-load machines and devices, with a large number of lubrication points located at long distances and requiring intensive lubrication (e.g. in ironworks, steelworks, non-ferrous metal smelters, strip mines, cement mills, sugar factories etc.). Central lubricating system with the PD 20 pump (with an electromagnetic distributor) is recommended to serve machines and devices located in a line and at significant distances from each other. The central lubricating system with the PD 30 pump (with a hydraulic distributor) is recommended to serve machines and devices not located in a line and at short distances from each other.

## Construction

Central lubrication pump consists of the following basic assemblies:

- lubricator tank with a feed mechanism
- power unit comprising an electric motor, two gears: a roll and a worm one, as well as a connecting rod assembly with a crosshead all assembled in a common body,
- two forcing units comprising working pistons coupled with the crosshead assembly slide, return valves and filters,
- electromagnetic distributor with an overflow valve, manometer and connections (Fig. 3 Detail X) or hydraulic distributor (Fig. 3 Detail Y).

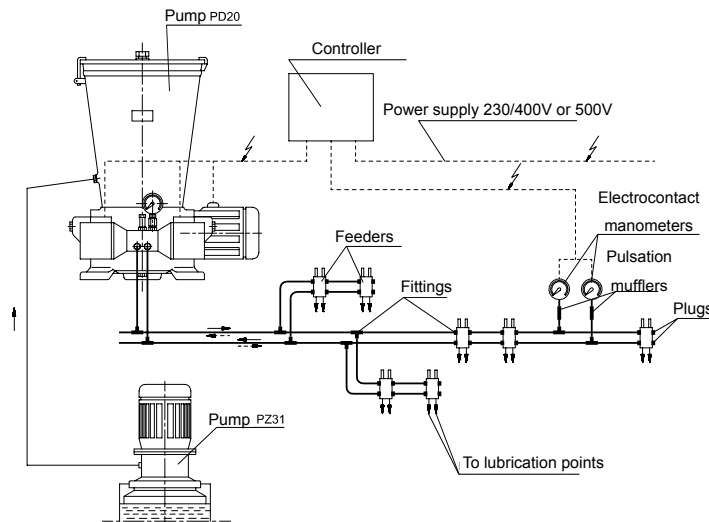


Fig. 1 Construction diagram of the central lubrication system with a PD 20 pump

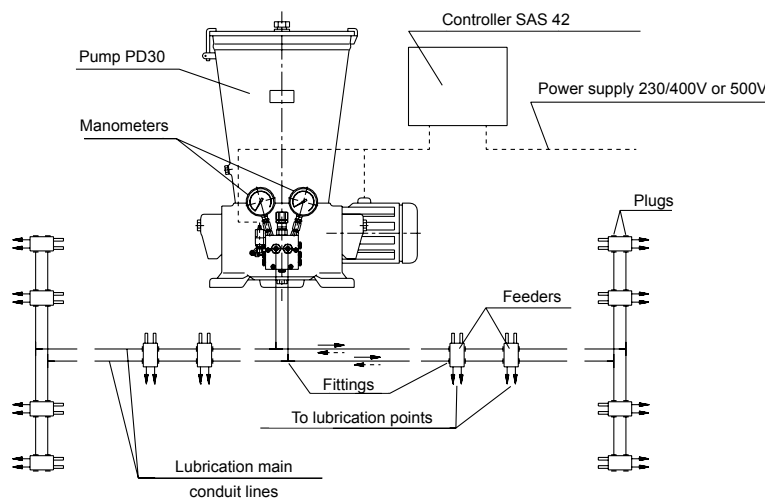


Fig. 2 Construction diagram of the central lubrication system with a PD 30 pump

## Operation

The pump is powered by an electric motor. The engine shaft rotation is transmitted through a clutch and reduction gear to the connecting rod assembly with a crosshead and grease feeding device. The feeding device drift fender separates the lubricant from the tank face, while the feeding screw of the device kneads it initially and passes to the sucking area of the forcing units.

Pistons of the forcing units, with a reciprocating movement induced by the connecting rod assembly with a crosshead, force the lubricant through filters to the distributor.

Depending on the position of slides in the distributor, the grease is directed to one of the two main lubrication conduit lines and then to the dosing feeders. After the grease is fed to the reception points by the dosing distributors and the lubricant pressure increases up to the preset value, the distributor is activated and directs the forced grease to the other line. At the moment the distributor is activated, the pump engine stops and starts again only after the preset time-lag passes, automatically or manually (if the lubrication system is not equipped with a control device).

The pump may also remain operating the moment the distributor is activated, without stopping the engine.

The pressure level in the main lines, at which the grease forcing direction switches is determined by pressure relays or electrocontact manometers installed at the ends of lubrication main conduit lines, while in the PD30 pump systems - by the overflow valve installed on the distributor.

The pump tank is filled with lubricant through the loading coupling by the filling pump of PZ 31 or PZ 40 type.

## Technical details

### Delivery

at the pressure up to 20 MPa

at the pressure up to 32 MPa

at the pressure up to 40 MPa

400 cm<sup>3</sup>/min

200 cm<sup>3</sup>/min

100 cm<sup>3</sup>/min

Nominal pressure

20, 32, 40 MPa

Power demand

1,1 kW

Rated voltage at 50 Hz

230/400 V or 3x500 V

Lubricants forced

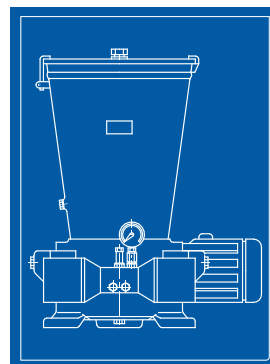
plastic grease of the consistence class  $\leq 2$   
acc. to PN/72 C-04095 (NLGI)

Ambient temperature

-10 ... 60°C

Tank capacity

70 dm<sup>3</sup>



## Placing orders

The order should include name and symbol of the pump according to the table.

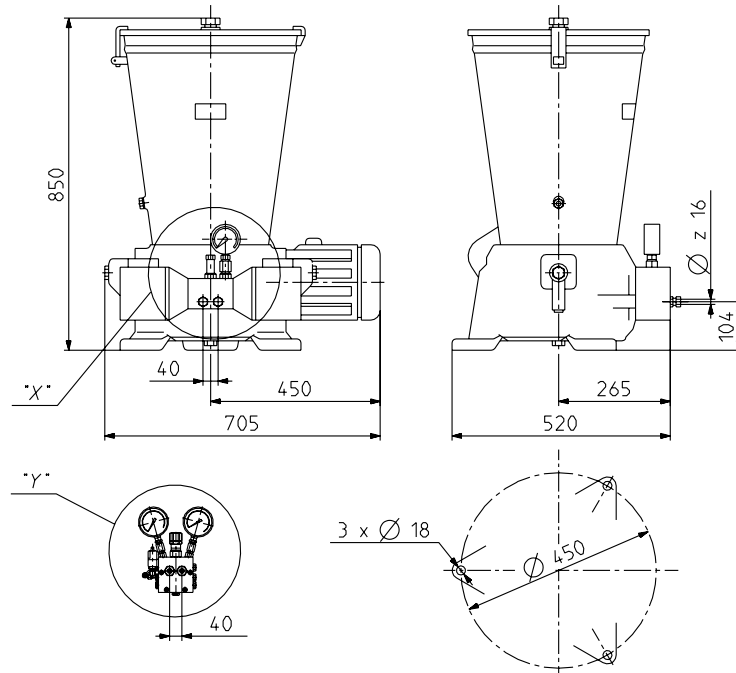


Fig. 3 Overall and linkage dimensions of the pump

## Execution

Central lubrication pump of PD type is made in construction varieties listed in the table and marked as follows:

- type of pump

PD 20 – central lubrication pump with an electromagnetic distributor

PD 30 – central lubrication pump with a hydraulic distributor

- nominal pressure

- 1 – up to 20 MPa
- 2 – up to 32 MPa
- 3 – up to 40 MPa

- rated voltage

- 1 - 230/400 V at 50 Hz
- 2 - 500 V at 50 Hz

- construction varieties of hydraulic distributor

- A – distributor without a limit switch
- B – distributor with a limit switch

### Delivery

Type of pump	Nominal pressure	Rated voltage	Construction variety of hydraulic distributor	
PD 20	1	1	NA	
		2		
	2	1		
		2		
PD 30	1	1	A	
		2	B	
		1	A	
		2	B	
	2	1	A	
		2	B	
		1	A	
		2	B	
	3	1	1	A
			2	B
		2	1	A
			2	B

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