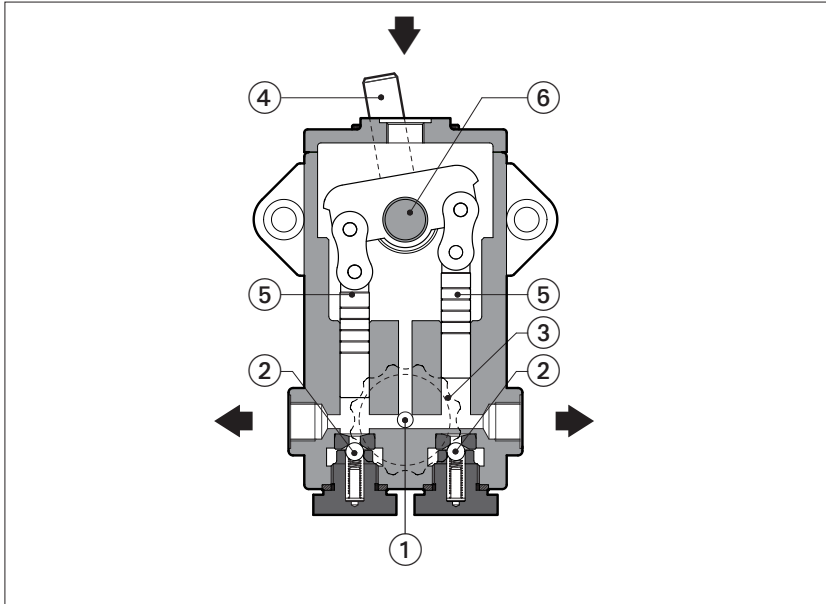


Hand pumps type PM

2-plunger



PM are double alternate-acting hand pumps with simple and rugged construction for minimum service and long operating life.

They are provided with one by-pass valve ① which connects directly the delivery ports with the inlet port through the delivery valves ②. The by-pass valve is operated by a handwheel ③. Pumping operation is made by alternative movement of the lever ④ and consequently movement of plungers ⑤, after having locked the by-pass valve by means of the handwheel.

The splined shaft attachment ⑥ permits to turn the lever shaft in the best position.

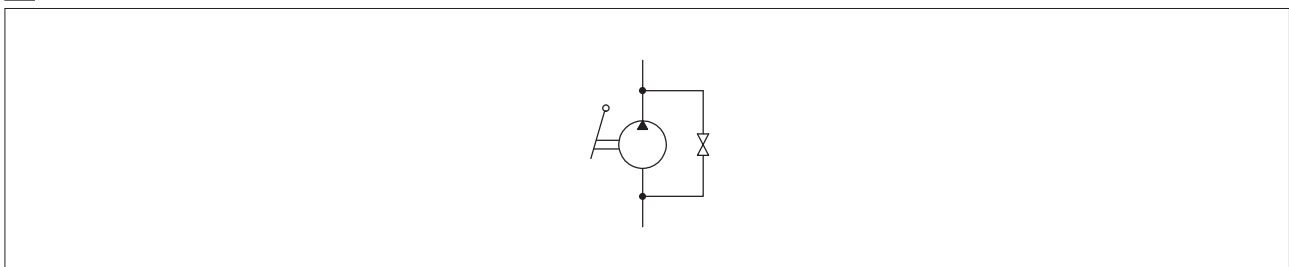
On the pump body are available two outlet ports (one supplied plugged). Suitable for hydraulic oils according to DIN 51524...535 or synthetic fluids having similar lubricating characteristics.

Displacements: from 6 to 20 cm³ for double stroke.
Max pressure 500 bar

1 MODEL CODE

PM	-	106	**	/*
2-plunger hand pump			Series number	Synthetic fluids: WG = water-glycol PE = phosphate ester
Displacement, see section 2				
106 = 6 cm ³ /double stroke				
112 = 12 cm ³ /double stroke				
120 = 20 cm ³ /double stroke				

2 OPERATING CHARACTERISTICS with hydraulic fluid having a viscosity of 24 mm²/s and 40°C

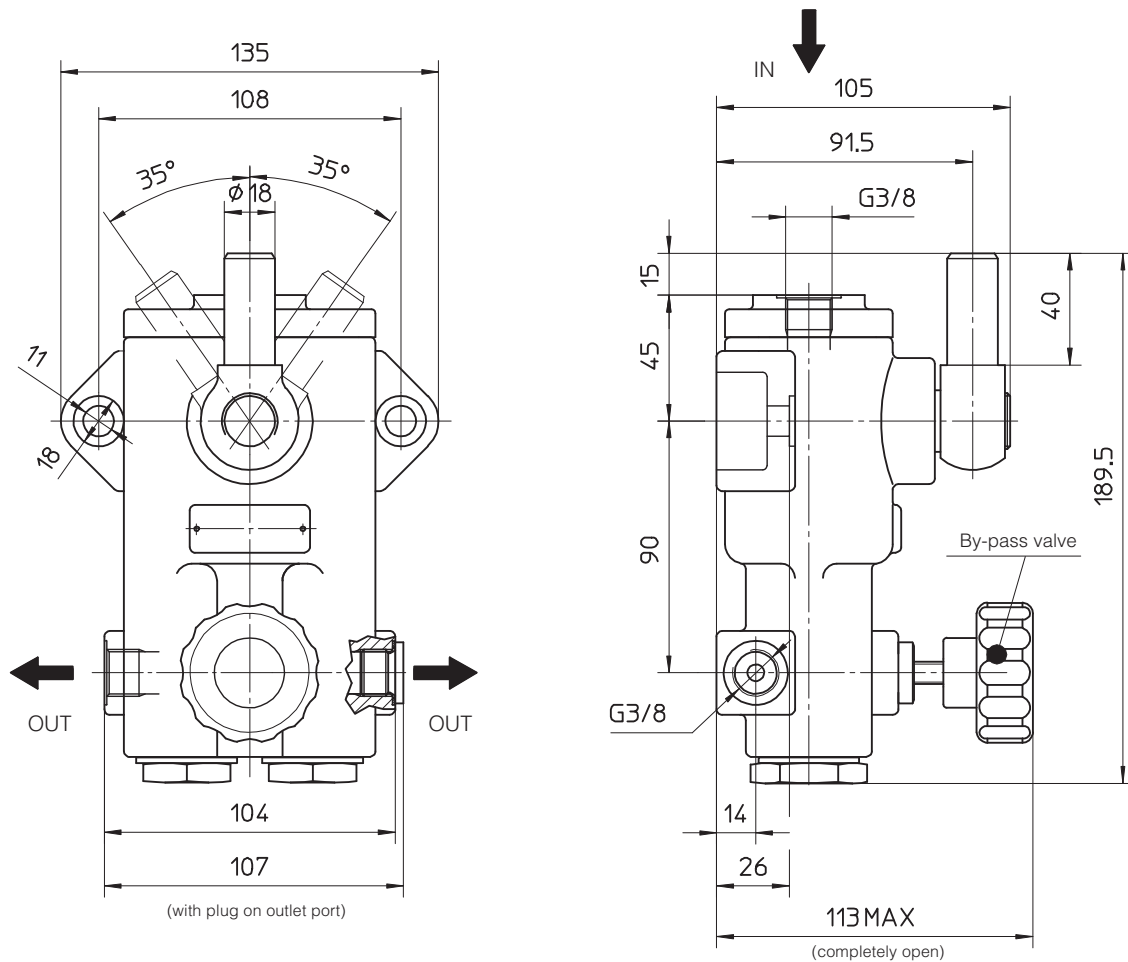


Model	Displacement for double stroke [cm ³]	Max pressure [bar]	Shaft rotation angle [degree]	Maximum torque required [Nm]
PM-106	6	500	± 35°	139
PM-112	12	250	± 35°	133
PM-120	20	120	± 35°	116

3 MAIN CHARACTERISTICS OF HAND PUMP TYPE PM

Installation position	Vertical position, with inlet port facing upward to ensure complete case filling
Commissioning	Pumping operation is made by alternative movement of the lever after closing by-pass valve. Note: the by-pass valve connects the delivery ports with inlet port and when locked it could allow some leakage from outlet ports. Two opposite outlet ports are available for pump delivery: one of these is supplied plugged. The pumps are supplied without lever arm that could be made by a simple tube with $\varnothing 18$ mm inside diameter. Usually a length of 500 to 600 mm is appropriate. Lever position can be selected by proper assembling of lever on splined shaft.
Ambient temperature	from -20°C to $+70^{\circ}\text{C}$
Fluid	Hydraulic oil as per DIN 51524...535; for other fluids see section I
Recommended viscosity	$10 \div 100$ mm ² /sec at 40°C (ISO VG 15 - 100)
Fluid contamination class	ISO 19/16 (filters at $25 \mu\text{m}$ value with $\beta_{25} \geq 75$ recommended)
Fluid temperature	$T < 70^{\circ}\text{C}$, if $T > 60^{\circ}\text{C}$ select /PE seals

4 DIMENSIONS [mm]



Mass: 4.6 Kg