LUBRICATION PUMP MMP

APPLICATION

The MMP lubrication pump is used as a source of pressurised lubricant for multi-line central lubrication systems. Considering the variable number of outlets (max. 8) and in combination with progressive distributor types PR and BVA, these are recommended for application in smaller circuits, i.e. for regular lubrication of machines and equipment. Furthermore, it may be used as a pressure source for central lubrication of mobile machines and equipment, mainly for the chassis of lorries, buses, trolley-buses, semi-trailers, trailers, building machines, agriculture and forestry equipment.

The MMP lubrication pump is supplied with variable lubricant reservoir volumes of 0.6, 0.8, 1.0, and 1.2 litres. The reservoirs are made from organic glass. The number of outputs is selectable, from 1 to 8. One pumping unit with a nominal charge volume of 2.5 cm^3 $min.^{-1}$ (must be always placed in position 1.) and another seven with a nominal charge volume of 1.5 cm^3 $min.^{-1}$ (placed in position 2-8). The working units are optionally equipped with a relief valve and a Ø 6 mm output pipe fitting. The supplied electric motor is equipped for 12 and 24 V DC connections. Optionally, the lubrication pump may be fitted with an AP3 control timer - see AP3 operating instructions.

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DESCRIPTION

The main part of the lubrication pump is the pump body made of aluminium alloy and the cam mechanism allowing for fitting the pump with 1 to 8 working dosing units. Each working unit is fitted with one threaded female G1/4" outlet for pipe with 6 or 8mm external diameters.
Working units with the safety valves are supplied with fittings for a pipe with an outside diameter 6 mm. Filling of lubrication pump can be the following variants. If the lubrication pump is equipped with the maximum number of the working units (eight working units), the filling is only possible via filling coupling ID 425 000 100 200 (only a top filling). If the lubrication pump is equipped with 1 up to 7 working units, the filling is possible via the filling coupling ID 425 000 100 200 (a top filling) or the filling nipple DIN 71412 placed on the body.
The lubricant reservoir with top cover is placed on the body vertically. Lubricant reservoirs are equipped with a scraper blade to improve pumping of the grease. The electric motor for the cam mechanism is located in the lower part of the pump body and protected with a cover. A connector for attaching to 12 or 24 V DC supplies is placed on the left side of the pump.

OPERATION

The lubrication pump operates on the piston pump principle. The electric motor drives the cam mechanism, controlling the pistons of working pumping units in straight reciprocating motion. A negative pressure inside the unit's working cylinder occurs when the piston slides out of the working pumping unit and when it is fully extended, the suction channel opens, which results in suction. When it is drawn back in, lubricant is pressed out and proceeds through a non-return valve to the lubrication pump's outlet. Simultaneously, with the rotation of the central shaft and cam, the scraper blade moves, separating the lubricant from the reservoir wall and pushing it into the suction area. Its motion provides a visual check over the lubrication pump operation.

SERVICE AND MAINTENANCE

Mount the lubrication pump horizontally through the two mounting holes with M8 bolts. Connect the lubrication pump's power connector according to the electrical connection diagram. Fill the pump's reservoir with the specified clean lubricant through the lubricating nipple. The lubrication pump should not be filled with unclean or otherwise contaminated lubricant. The pump is switched on by turning the machine's switch or the switch of the utility vehicle's drive; observe whether it runs smoothly and regularly. The lubricant remaining in the lubrication pump after pressure tests as a protective agent is emptied. Once the lubricant flows regularly and without air bubbles, the lubrication circuit piping can be connected to the outlet fitting.

TECHNICAL DATA

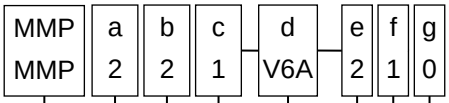
Maximum working pressure	350 bar
Operating pressure	280 bar
Lubricant reservoir capacity	0.6; 0.8; 1.0; 1.2 dm^3
Nominal fixed dose	2.5 cm^3 $min.^{-1}$ (outlet on position pos.1) 1.5 cm^3 $min.^{-1}$ (outlets on position pos. 2 - 8)
Number of outlets	1 to 8 (Top-fill reservoir) 1 to 7 (Also available without top-fill reservoir)
Outlet thread joint Outlet fitting with safety valve	G1/4” for tube outside dia. 6,8 and 10 mm For tube outside dia. 6mm
Electric motor	24 V DC, 2.5 A 12 V DC, 4 A
Grease	Max. NLGI - 2
Working environment temperature	−25 to 40 °C
Weight	7 kg (according to design)

The stated outputs refer to NLGI - 2 lubricating greases at an operating temperature of +20 °C and a backpressure of 250 bar.

NOTE:

The outlets are usually fitted with the dosing units in anticlockwise direction to ensure the smooth running of the lubricator. If the special outlets are required, it is necessary to send to the supplier a list of outlets which are fitted with dosing units (see the drawing). If it is required, the standard model of MMP lubrication pump can be fitted with a safety valve. The safety valve also serves as a protecting element preventing the lubricant pressure from exceeding the operating pressure in the lubricating circuit.

TYPE IDENTIFICATION KEY



Type designation

type of lubrication pump ---------- MMP

Lubricant pump cover

for grease with top filling ---------- 1
for grease without top filling ---------- 2

Filling coupling

filling coupling ID 425000100200 (only top filling) ---------- 1
filling nipple DIN 71412 (max 7. working units) ---------- 2
filling nipple DIN 71412+filling coupling ID 425000100200 ---- 3

Lubricant reservoir capacity

0,6 dm^3 ---------- 1
0,8 dm^3 ---------- 2
1,0 dm^3 ---------- 3
1,2 dm^3 ---------- 4

Working unit with dose 2,5 $cm^3 \cdot min^{-1}$ (pos. 1)

Plug ---------- X
1 ---------- V

Number of working units with dose 1,5 $cm^3 \cdot min^{-1}$ (pos. 2-8)

0 ---------- 0
1 ---------- 1
…
6 ---------- 6
7 (only top filling) ---------- 7

Safety valve without pressure gauge for tube Ø6 mm

none ---------- X
all ---------- A
selected outlets (specification in order) ---------- B

Operating voltage of electric motor

12 V DC ---------- 1
24 V DC ---------- 2

Wiring

connector ---------- 0
connector + cable 5 m ---------- 1
connector + cable 10 m ---------- 2

Control timer

without control timer ---------- 0
with external control timer AP3 ID:9 55 0816 ---------- 1

MODEL CODE EXAMPLE: MMP 221-V6A-210

Lubrication pump MMP, grease without top filling, standard filling connection DIN 71412, reservoir capacity 0,6 dm^3, 1+6 working units with safety valves, electric motor 24 V DC, the connector with cable 5 m, without the external control automatic.

DIMENSIONAL DRAWING

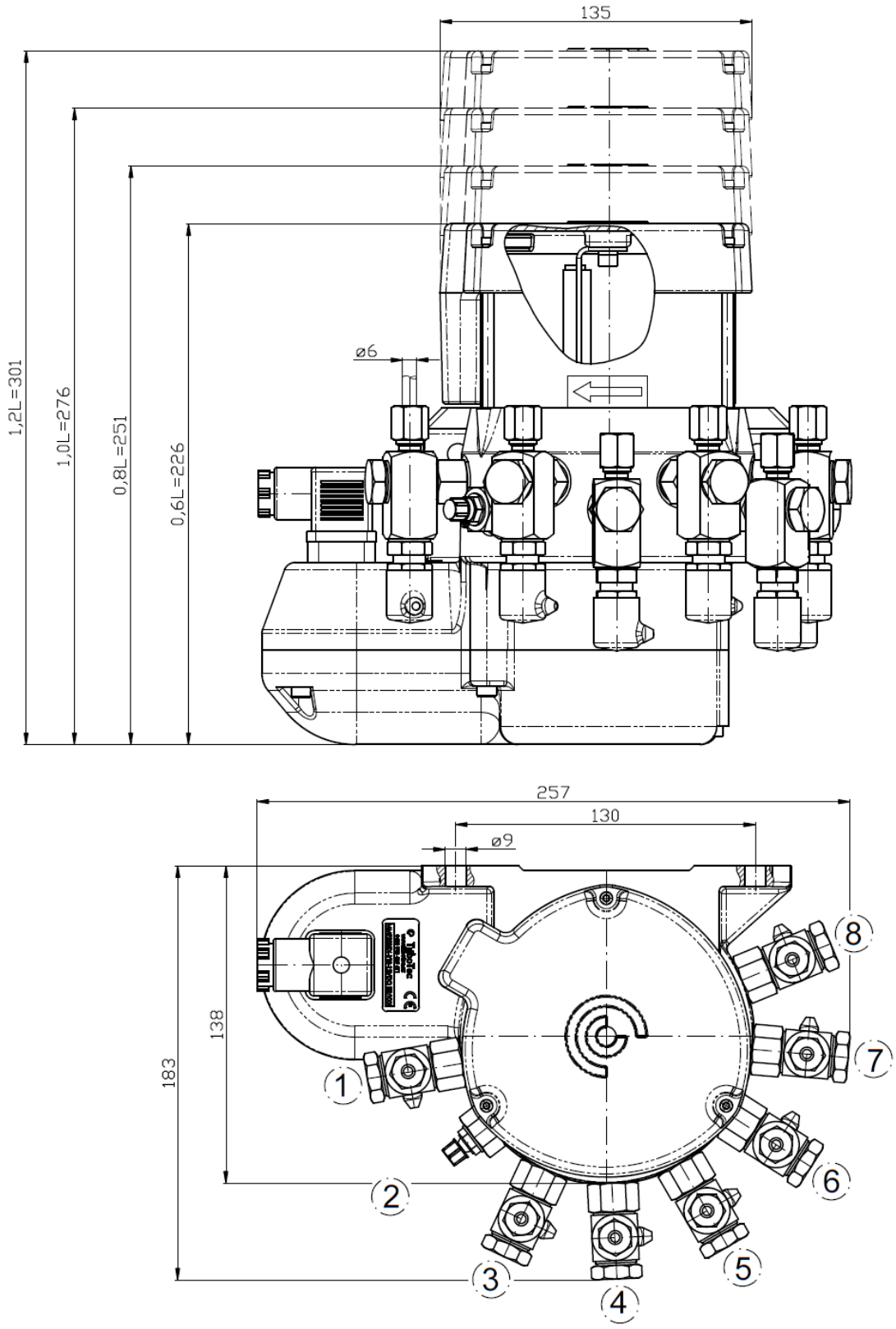


Figure 1 Dimensional drawing of MMP 221-V6A-200 lubrication pump

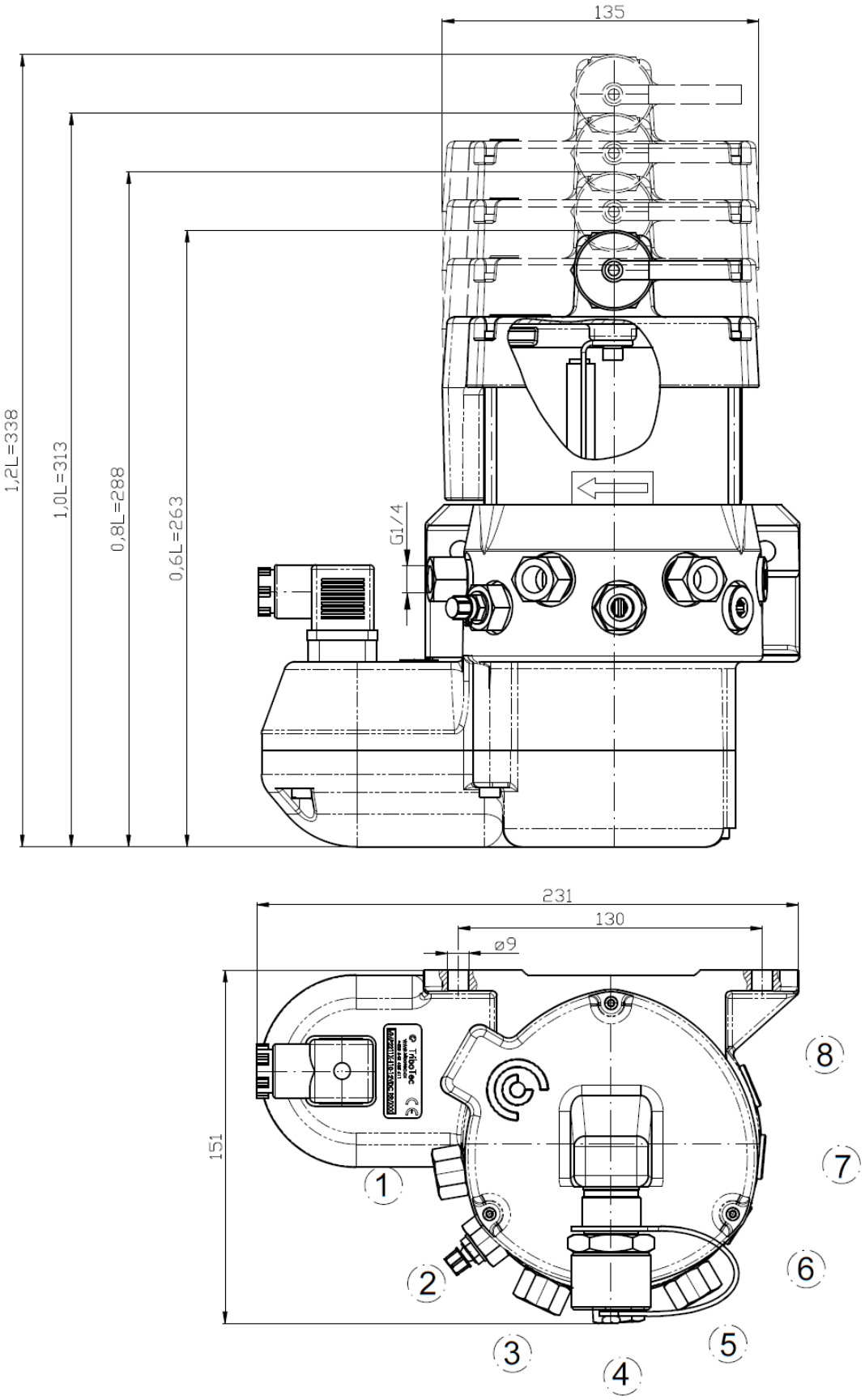


Figure 2 Dimensional drawing of MMP 131-V3X-200 lubrication pump