

LUBRICATION PUMP UCF

APPLICATION

Lubrication pumps UCF are used as a source of pressure lubricant for lubricating systems equipped with progressive distributors for permanent, regular lubrication of various machines, engineering technologies and equipment. They are also recommended to be used even in larger circuits, i.e. circuits with tens of lubricated points. Due to a selectable number of outlets, 1 to 3, lubrication pumps UCF can also be used as a direct source of pressure lubricant (multi-outlet lubricator). In combination with a hand-operated, pressure-operated or electrically-operated change-over valve the UCF lubrication pump can be used as a source of pressure lubricant in dual-line central lubrication circuits.

Lubrication pump UCF is available with lubricant reservoir capacity of 6, 12, 30 and 63 litres. The reservoirs are made of steel sheet. The number of outlets can be selected from 1 to 3; the same goes for nominal output. Nominal output can be regulated depending on the type of lubricator from 0.9 cm³/min. up to 20 cm³/min. Special types make it possible to achieve maximum nominal output of 75 cm³ min⁻¹ by connecting more working units into one outlet. Standard electric motors are 230/400V and 500V; for other voltages, consult the supplier.

DESCRIPTION

Lubrication pump UCF is composed of a cast-iron body with built-in worm gear. The lubricator can be provided with 1 up to 3 controllable working units. Each working unit has one outlet with outlet pipe union for a 10mm dia. tube, flow control screw and air-relief screw. The lubricator body carries electric motor and vertically positioned lubricant reservoir. Reservoirs of grease type lubricator are equipped with a scraper to facilitate delivery of grease and pressure rake. The lubricant reservoir can be provided with a signalling device of max. and min. level for oil and grease models. Lubricant reservoirs of 6 liter capacity are not normally provided with such a signalling device. The body is provided with two lugs with 10.5 mm dia. holes which are used for attaching the lubricator to the base. A filling hole for refilling the lubricant is also provided. On customer's request the lubricator may be provided with a screwdriver for flow control.

OPERATION

When turning the electric motor on, the eccentric shaft, which carries pistons of the working pumping units, is driven via the inner worm gear. Suction takes place when the piston moves in and lubricant is discharged when the piston moves out. The pumped lubricant forces off the regulating piston and proceeds through one-direction valve to the lubricator outlet. By changing the position of regulating piston, i.e. shifting it in or out (controlled by means of adjusting screw) we can adjust lubricator nominal dose. The scraper which moves simultaneously with eccentric shaft removes grease from reservoir walls and moves it to the suction space, pressure rake further improves the suction function of the lubricator. Its motion makes it possible to check the lubricator running. The lubricant level indicator can be used for automatic refilling through the filling hole positioned in the lubricator body.

SERVICE AND MAINTENANCE

The lubricator is mounted in horizontal position by two anchor holes of 10.5mm diameter. The electric motor is attached to the mains according to current standards. If necessary, the electric circuit is connected to the level indicator. Then fill the lubricator with the prescribed lubricant, set the lubricator in operation and check to see that its running is smooth and regular. The direction of the electric motor rotation is to the left (anti-clockwise), the direction of the scraper is to the right. Bleed the air out of the working units by releasing the air relief screw.

Remove the lubricant which remained in the lubricator as preservation means after the pressure test. When lubricant flows out of outlets regularly and without air bubbles, close off the outlet by connecting it to the lubricating circuit piping. Adjust the quantity of the supplied lubricant with the screwdriver. Unscrew the regulating plug to this end. By screwing in the regulating nut positioned under the plug, the output decreases, by screwing it out, the quantity increases. Screw out the nut only so as to fully tighten the regulating plug. The lubricator does not call for further servicing. Only refilling of lubricant in storage bin is necessary.

When refilling make sure that enough lubricant is supplied to the space of lubricator body. If this is not the case the proper function of lubricator cannot be guaranteed, especially maintaining the nominal dose due to non-homogeneity of the lubricant and air incursion into the operating unit.

Fill up lubricant through filling valve, which is positioned on the lubricator body. The lubricant can also be filled directly into the reservoir. Remove lid to do so. When doing this, make sure the lubricant is free from dirt. In case of permanent operation check the lubricating circuit piping for leakage once a month.

TECHNICAL DATA

Maximum working pressure		300 bar
Working pressure		250 bar
Nominal output		20 cm ³ /min./outlet
Regulating range of nominal dose		50 to 100%
Lubricant reservoir capacity		6, 8, 12, 30, 63 dm ³
Number of outlets		1 to 3
Outlet pipe union		M16x1.5 mm, tube outside dia. 10 mm
Electric motor		230/400V, 1.05 A, 500V, 0.84 A, 50 Hz, 0.37 kW
Alarm nominal voltage		24V DC, 2 A
Lubricant	grease	max. NLGI – 2
	oil	min. 50 mm ² s ⁻¹
Temperature of working environment		- 25 to 40 °C
Weight		30 kg

NOTE

Outlet X is the first, Y is the second and Z is the third outlet in clockwise direction counted from electric motor in top view of lubricator. There is a possibility of combination of grease doses marked as 1 and 3 (10 - 20 and 1,3 – 11 cm³/min) or doses marked as 2 and 4 (6,5 - 13 and 0,9 – 7,3 cm³/min).

If required, the standard model of lubrication pump UCF can be fitted with a safety valve allowing setting of the operating pressure, with the outlet of the waste lubricant discharging back to the lubrication pump body, and with a pressure gauge. The safety valve also serves as a protecting element preventing the lubricant pressure from exceeding the operating pressure in the lubricating circuit as set with the regulating screw. The set pressure value can be checked visually on the connected pressure gauge.

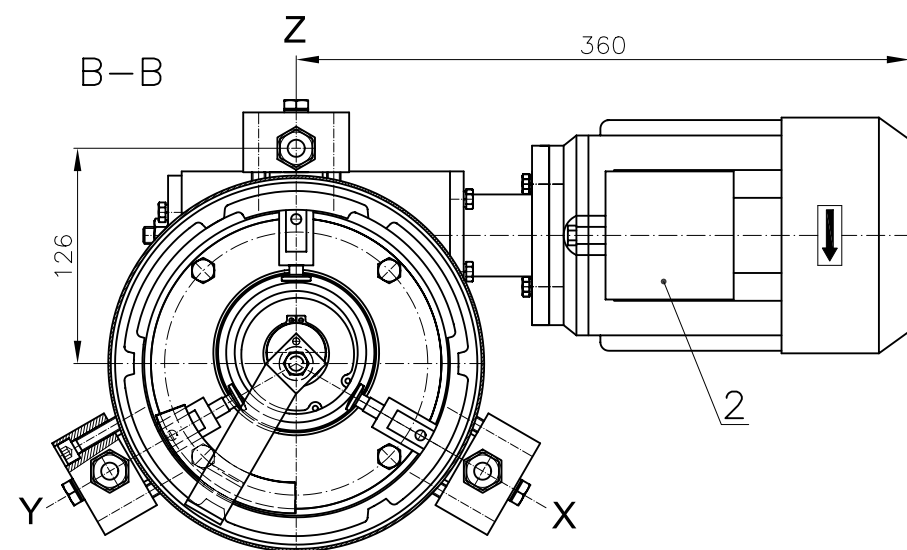
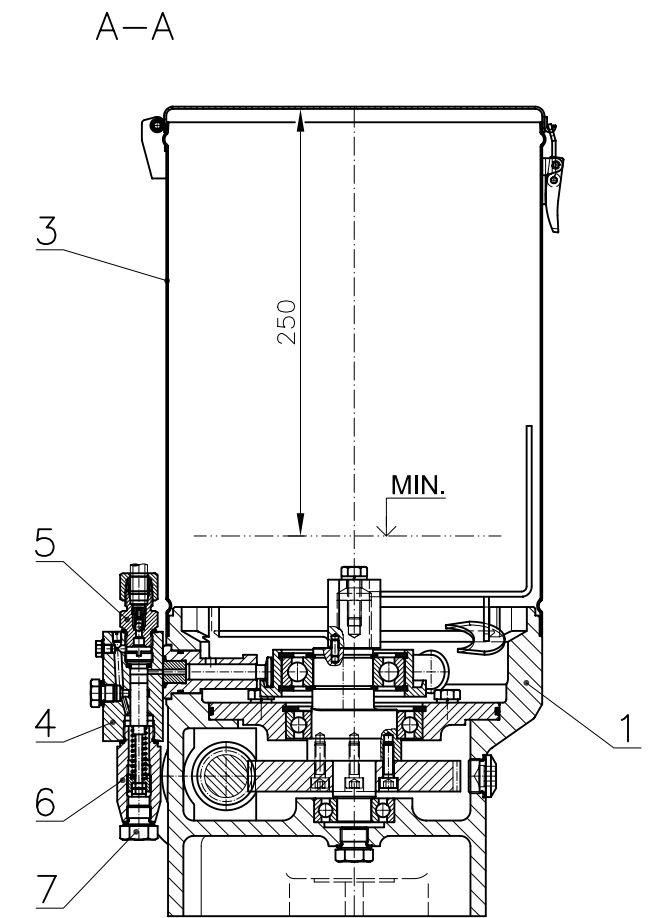
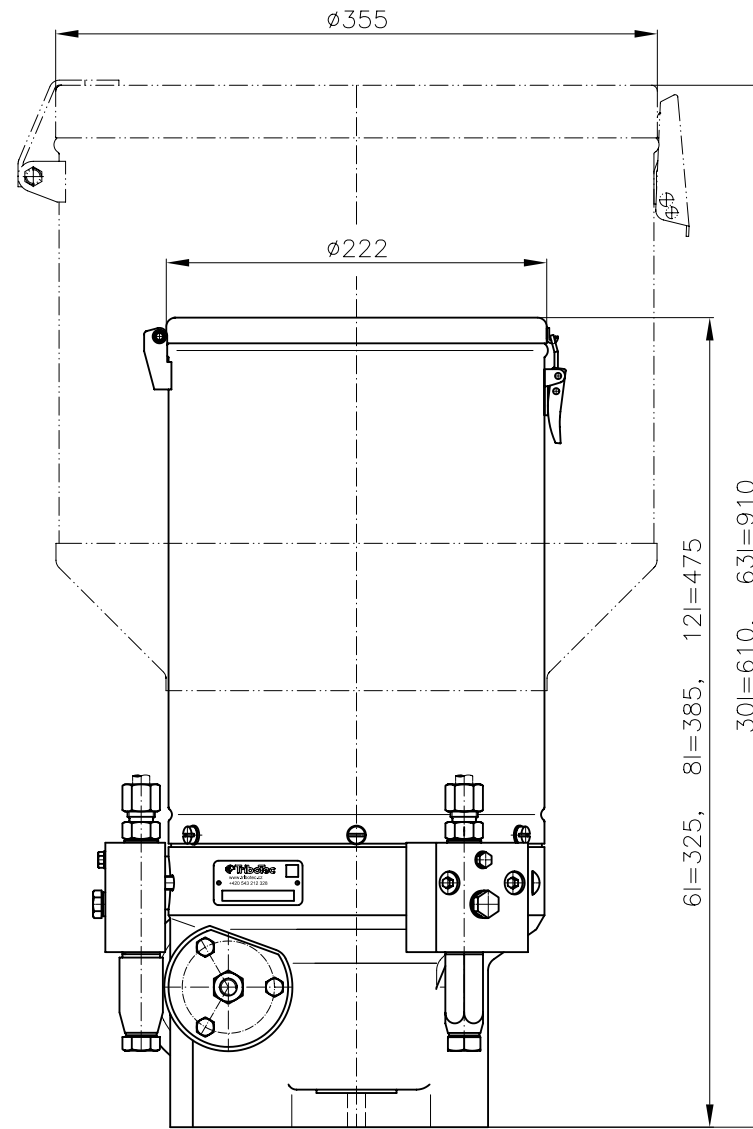
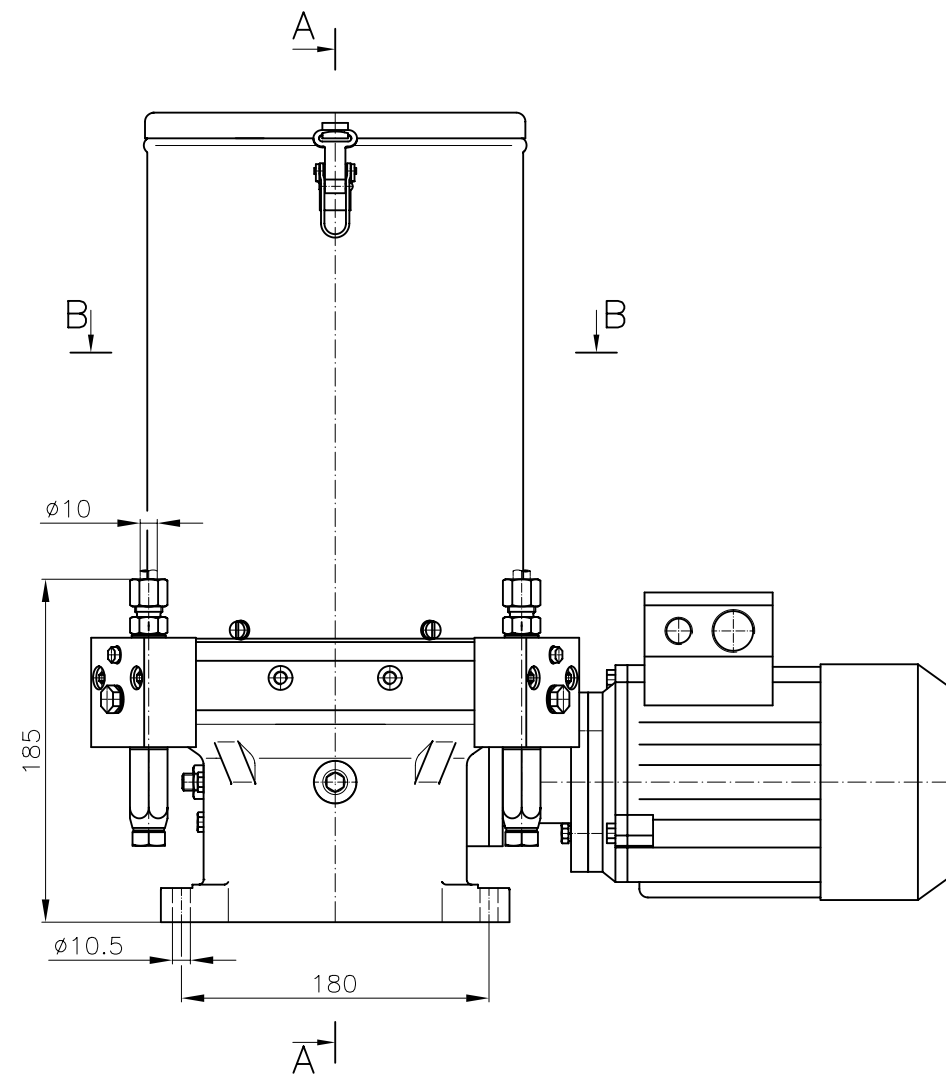
The smallest size of standard reservoir of the UCF lubrication pump is 6 dm³. If minimum level signalling is required, the installed dimensions and delivery of a lubrication pump with an 8 dm³ reservoir must be taken into account.

MODEL CODE EXAMPLE UCF 33131 - 7 - 100 – 0

Lubrication pump UCF with reservoir capacity 30 dm³, 3 outlets, 1st with dose 10 - 20 cm³/min, 2nd with dose 1,3 - 11 cm³/min, 3rd with dose 10 - 20 cm³/min, ultrasonic lubricant level signalling MIN and MAX for grease, electric motor 230/400V - 50 Hz, standard working environment, standard type of drive, without safety valve.

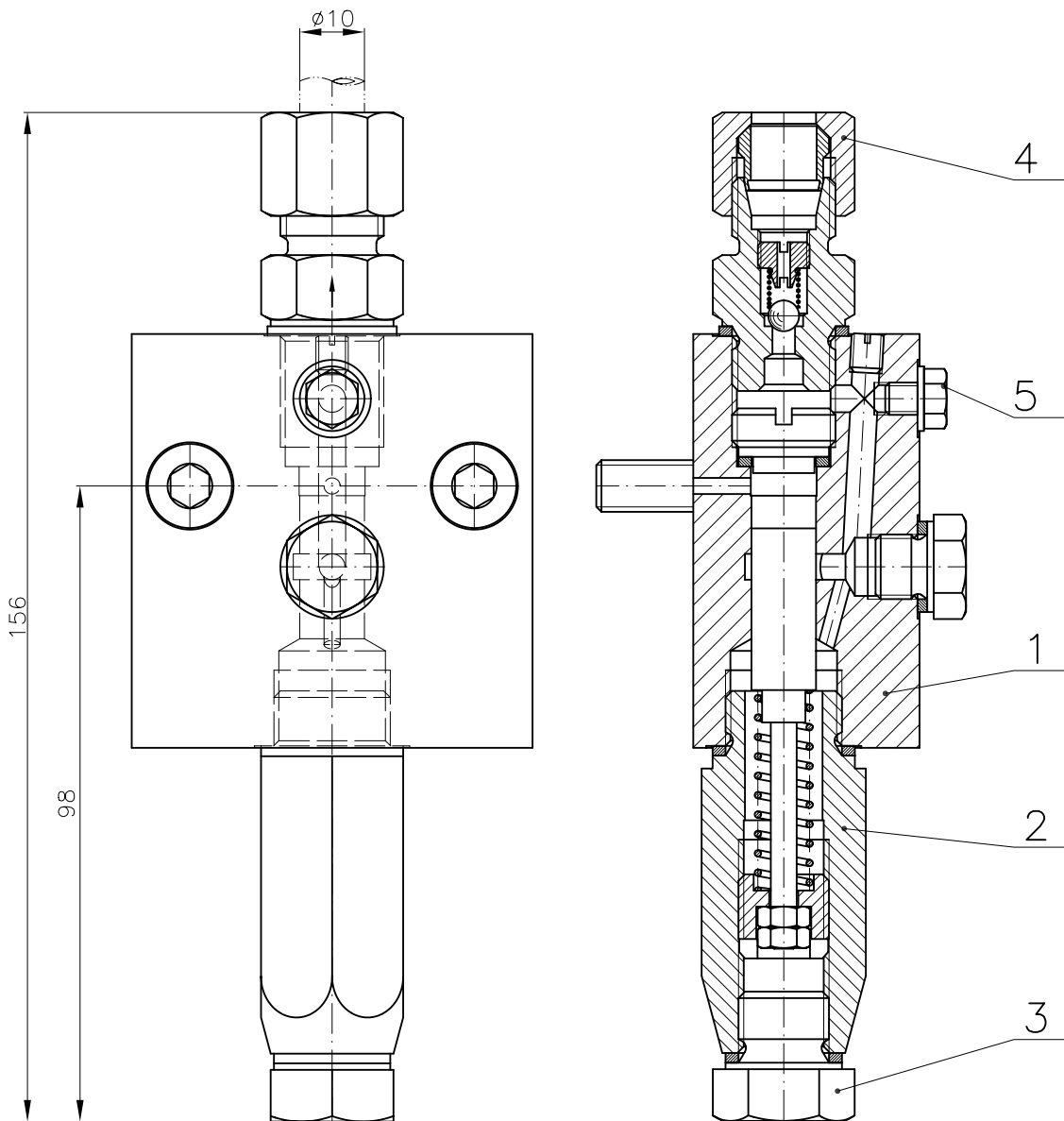
TYPE IDENTIFICATION KEY

	Model code	UCF	a	b	xyz	c	d	e	f	g
	Code example	UCF	3	3	131	7	1	0	0	0
Type designation										
type of lubrication pump -----	UCF									
Lubricant reservoir capacity										
6 dm ³ -----	1									
12 dm ³ -----	2									
30 dm ³ -----	3									
63 dm ³ -----	4									
8 dm ³ -----	5									
Number of outlets (working units)										
1 -----	1									
2 -----	2									
3 -----	3									
1 (2 interconnected into 1) -----	7									
1 (3 interconnected into 1) -----	8									
1 (3 interconnected into 1) -----	9									
Lubricant output and lay-out of working units (units position x, y, z – see drawing)										
10 - 20 cm ³ /min -----	1									
6,5 - 13 cm ³ /min -----	2									
1,3 - 11 cm ³ /min -----	3									
0,9 - 7,3 cm ³ /min -----	4									
20 - 30 cm ³ /min (2 interconnected into 1) -----	7									
30 - 60 cm ³ /min (3 interconnected into 1) -----	8									
75 cm ³ /min (3 interconnected into 1) -----	9									
Lubricant level signalling										
without signalling -----	0									
signalling MIN and MAX - oil -----	3									
signalling MIN and MAX - grease -----	7									
another variant (upon request) -----	9									
Operating voltage of electric motor										
230/400V, 50 Hz -----	1									
500V, 50 Hz -----	2									
415V, 50 Hz -----	4									
another variant (upon request) -----	9									
Working environment										
standard -----	0									
MWDr / Wda -----	1									
Type of drive										
standard -----	0									
non-explosive -----	1									
Safety valve with pressure gauge										
none -----	0									
one -----	1									
two -----	2									
three -----	3									



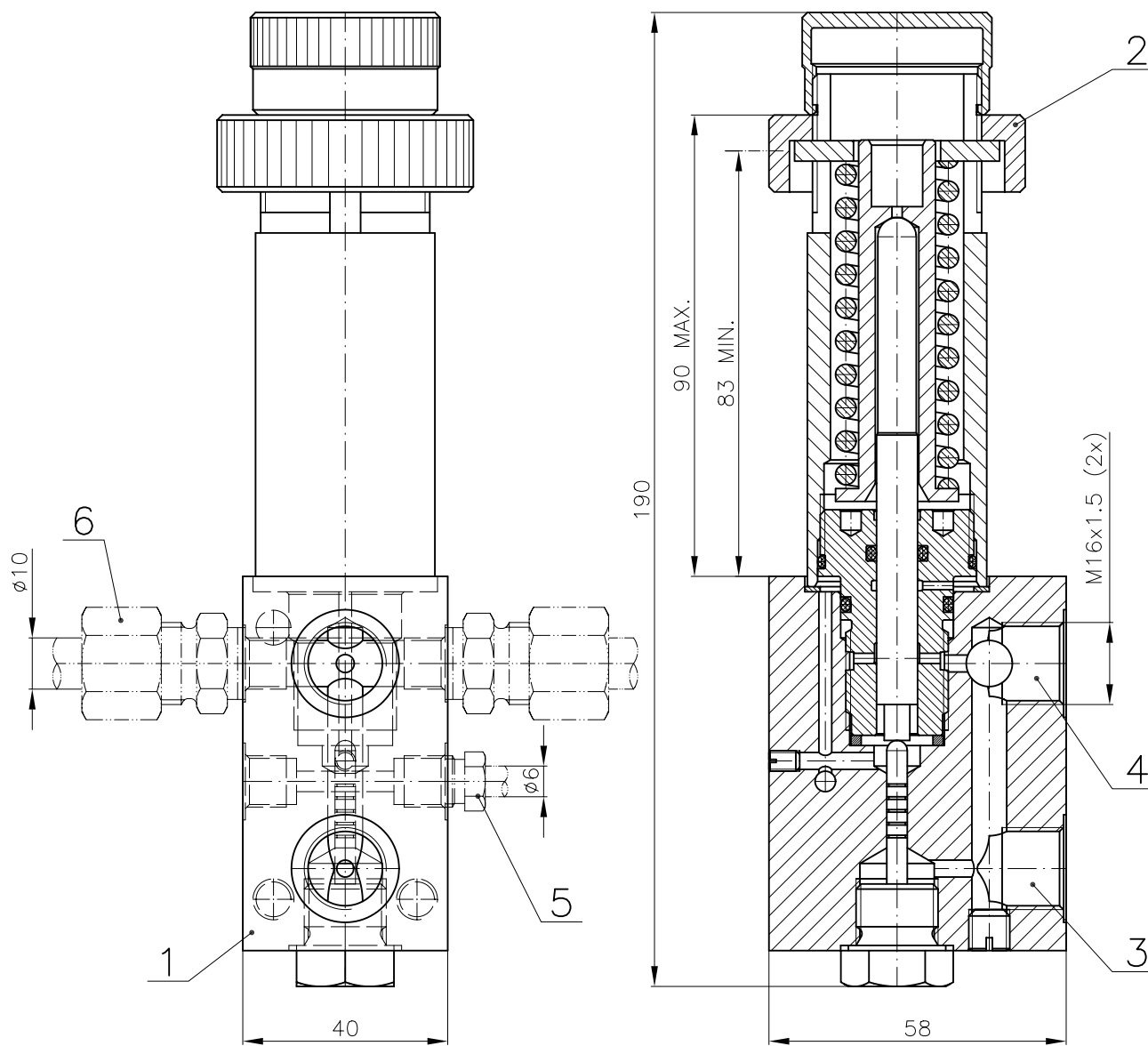
Pos	Name
1	Lubricator body
2	Electric motor
3	Lubricant tank
4	Regulating working unit
5	Outlet pipe union with check valve
6	Regulating unit
7	Regulating plug

Name	LUBRICATION PUMP	©Tribotec s.r.o. Košuličova 4 Brno www.tribotec.cz +420 543 425 611
Type	UCF 2 3 111 - 0 - 100 - 0	
Code		



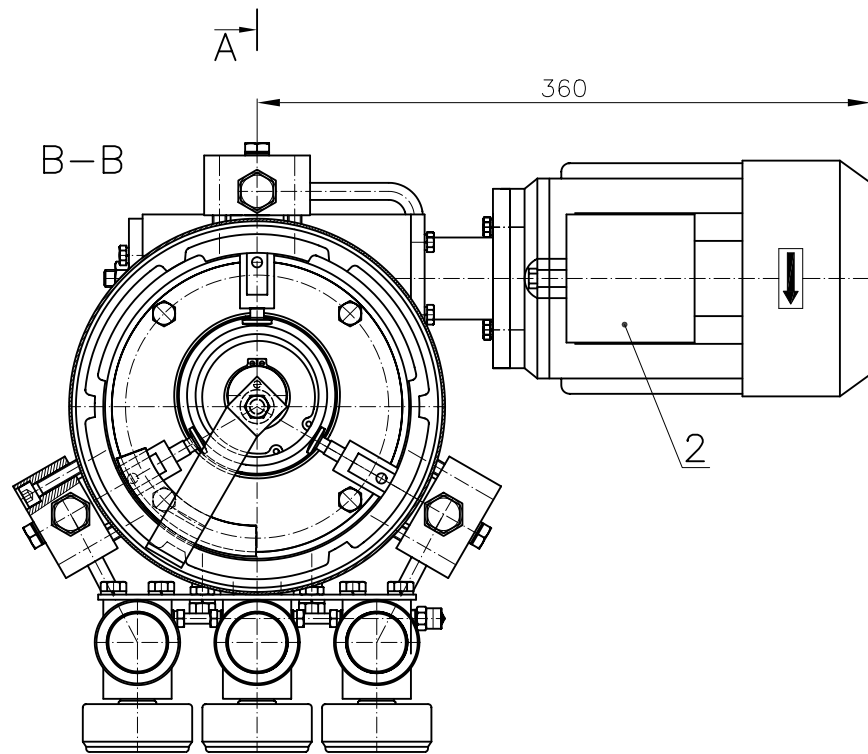
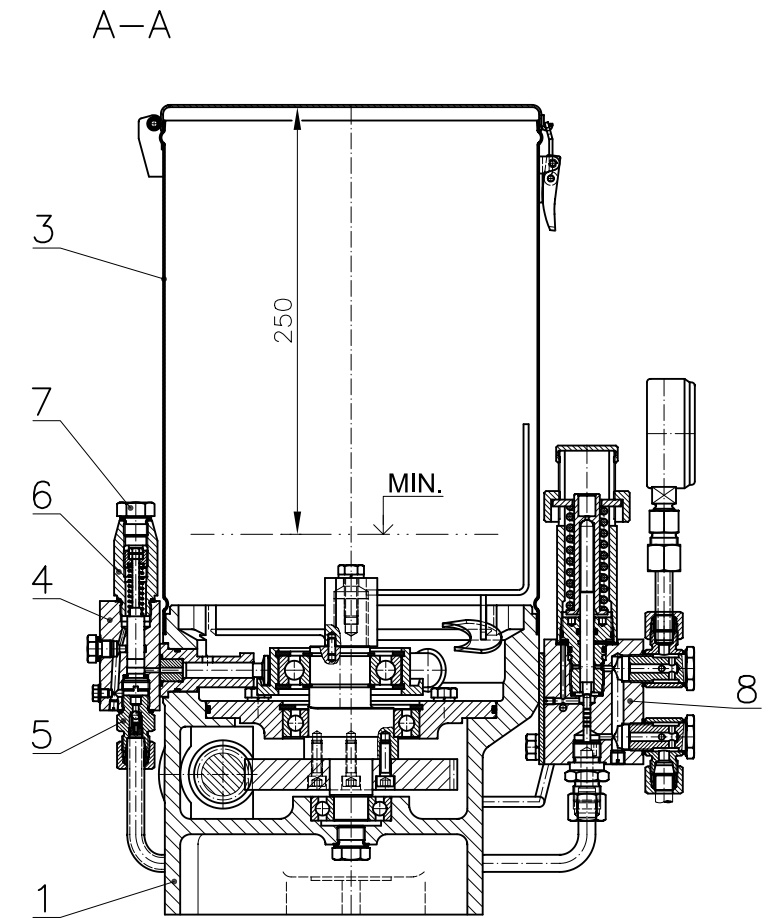
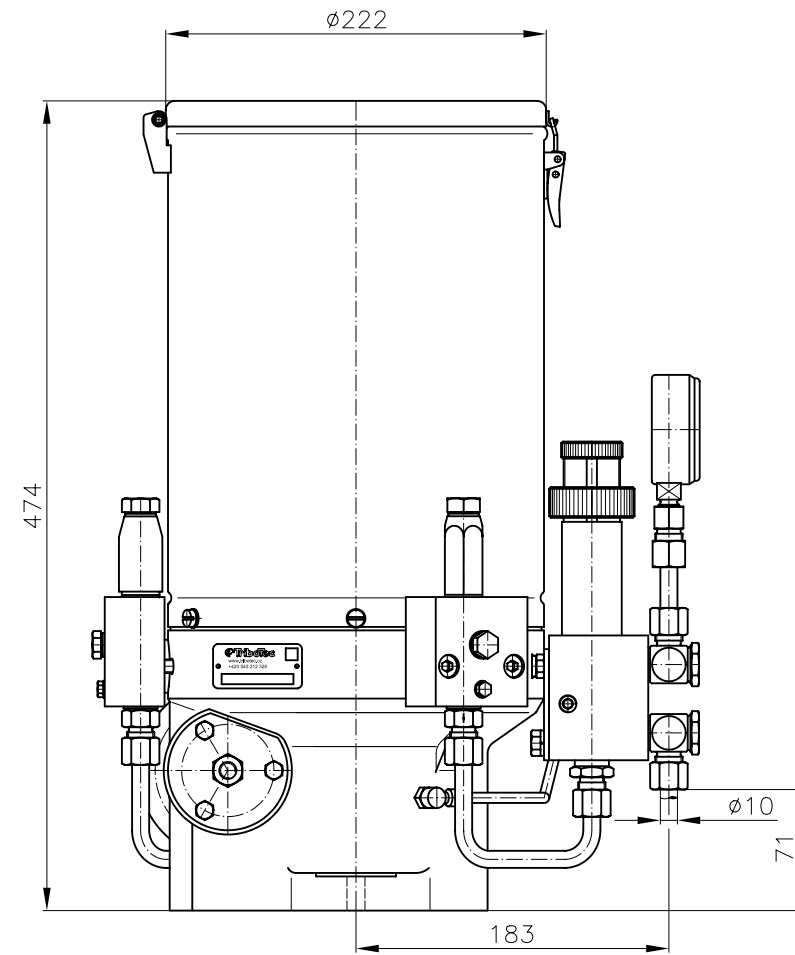
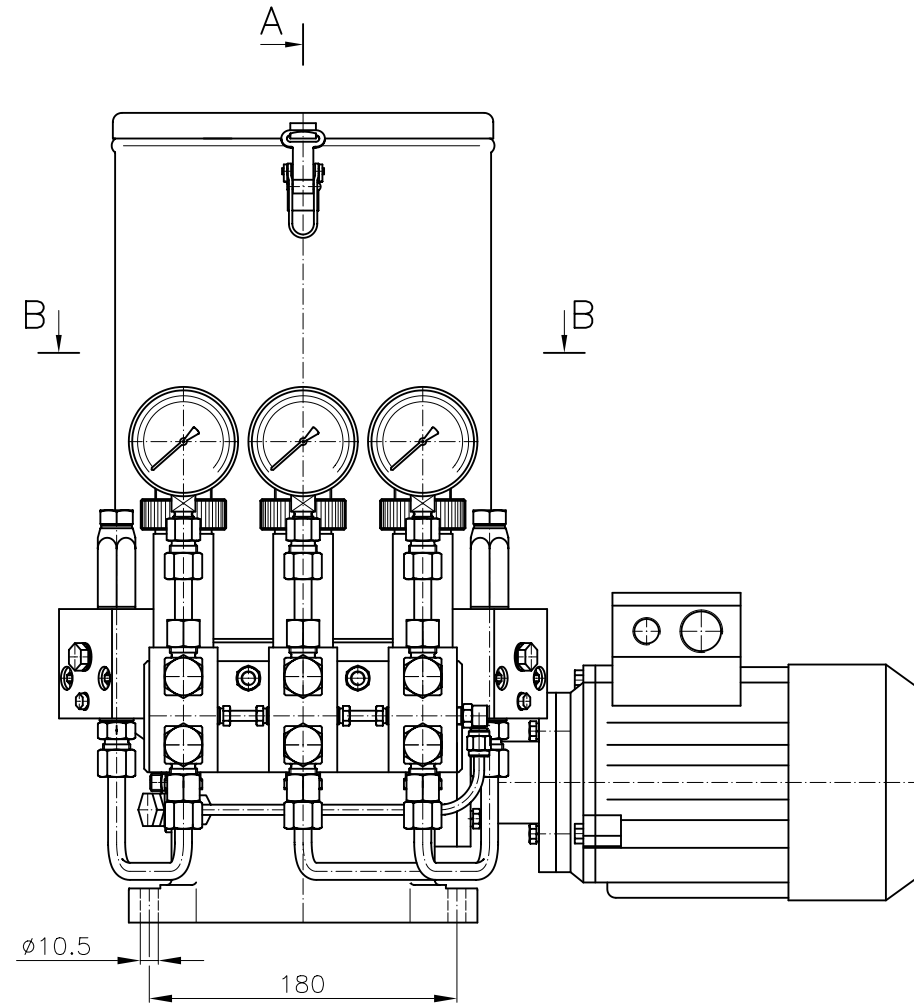
Pos	Name
1	Valve body
2	Regulating unit
3	Regulating plug
4	Outlet pipe union with check valve
5	Air - relief screw

Name	VALVE ASSEMBLY	©Tribotec s.r.o. Košuličova 4 Brno www.tribotec.cz +420 543 425 611
Type	LUBRICATION PUMP UCF	
Code	8 50 0602	



Pos	Name
1	Valve body
2	Adjusting female screw
3	Outlet pipe union
4	Connection of pressure gauge
5	Back drain to lubricator
6	Inlet of lubricant from working unit

Name	SAFETY VALVE		Tribotec s.r.o. Košuličova 4 Brno www.tribotec.cz +420 543 425 611
Type	LUBRICATION PUMP UCF		
Code	8 50 1638		



Pos	Name
1	Lubricator body
2	Electric motor
3	Lubricant tank
4	Regulating working unit
5	Outlet pipe union with check valve
6	Regulating unit
7	Regulating plug
8	By-pass valve

Name	LUBRICATION PUMP UCF	Tribotec s.r.o. Košuličova 4 Brno www.tribotec.cz +420 543 425 611
Type	CUSTOM LUBRICATION PACK	
Code		