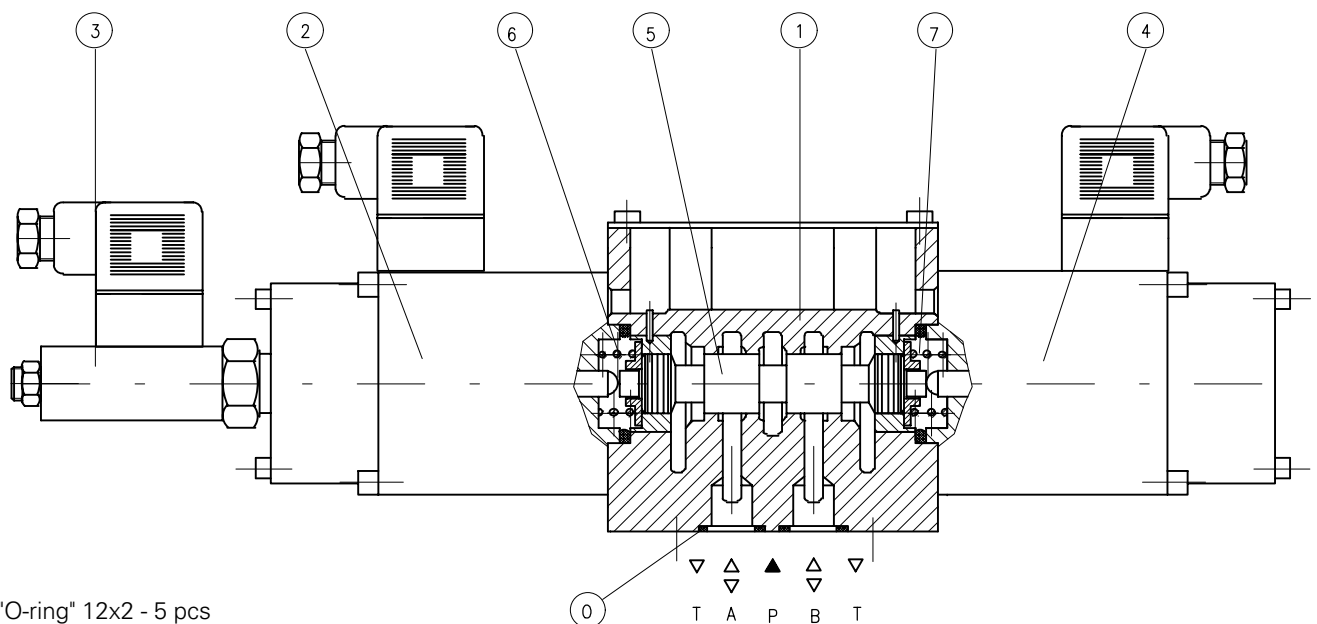
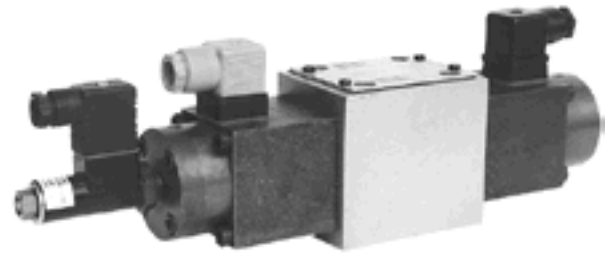


APPLICATION

Proportional directional valves type USEB 10 are used to control the direction and speed of a user movement. The output flow is proportional to electrical input signal.



"O-ring" 12x2 - 5 pcs

DESCRIPTION OF OPERATION

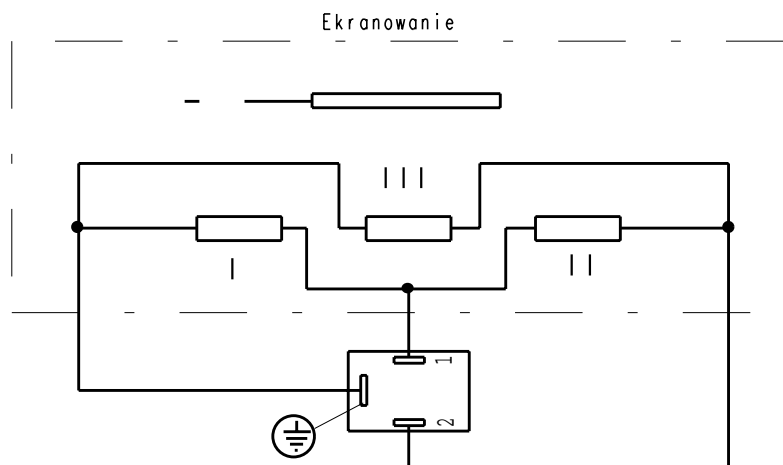
The proportional directional valve type USEB 6 comprises mainly the housing 1, solenoids 2 and 4, inductive offset detector 3, spool 5, springs 6 and 7. Electric regulator (30 RE ...) can be included with the valve. The regulator is applied to control proportional solenoids and receive the signals from offset detector. The proportional solenoid 2 or 4 pushes the spool from its neutral position. The neutral position is held by the springs 6 and 7. The inductive offset detector has double stroke. Its range allows to measure the offset of the spool from neutral position to the right or left. The offset of the spool 5 is transmitted electrically as initial data. It is held in the signal sent by the electronic

regulator in form of current with certain intensity that is changed by the solenoid 2 or 4 into force pushing the spool 5 against spring 6 or 7. Simultaneously the offset detector 3 determines actual position of the spool and in form of electrical signals sends as feedback to the electronic regulator. The both signals: initial data and actual value are compared in the electronic regulator, which sends a new signal correcting the position of the spool 5 in order to adjust it in conforming with the initial signal.

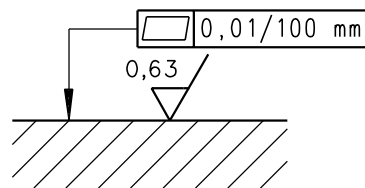
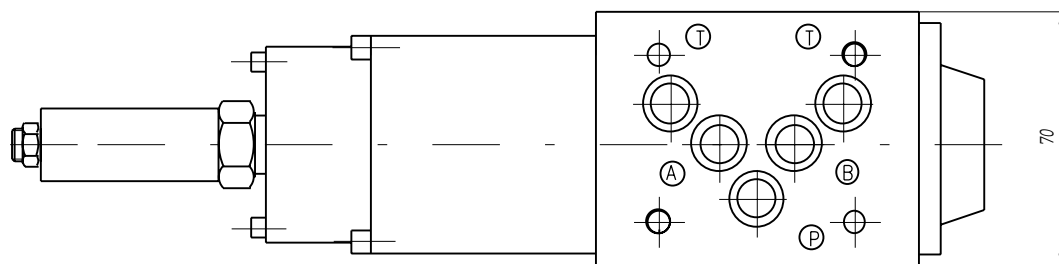
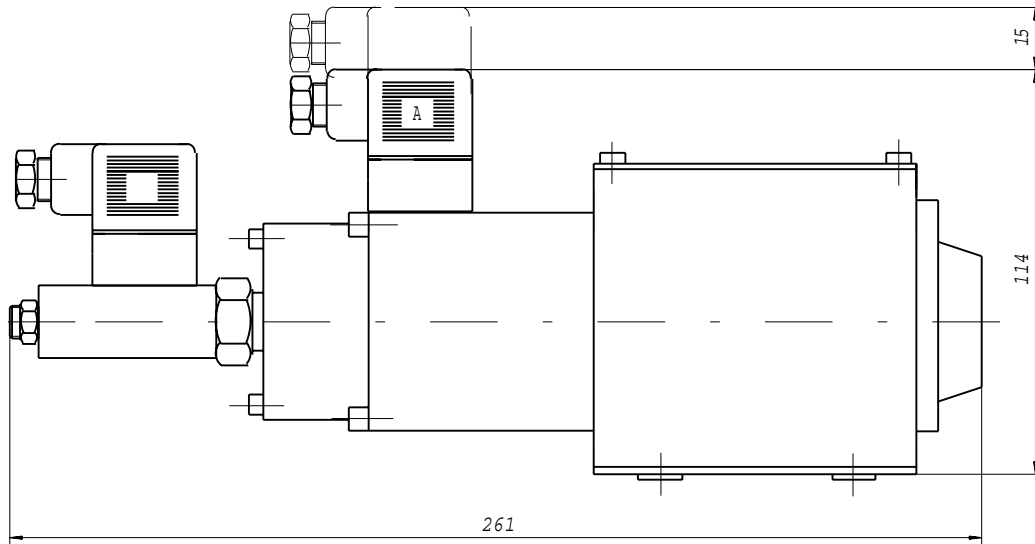
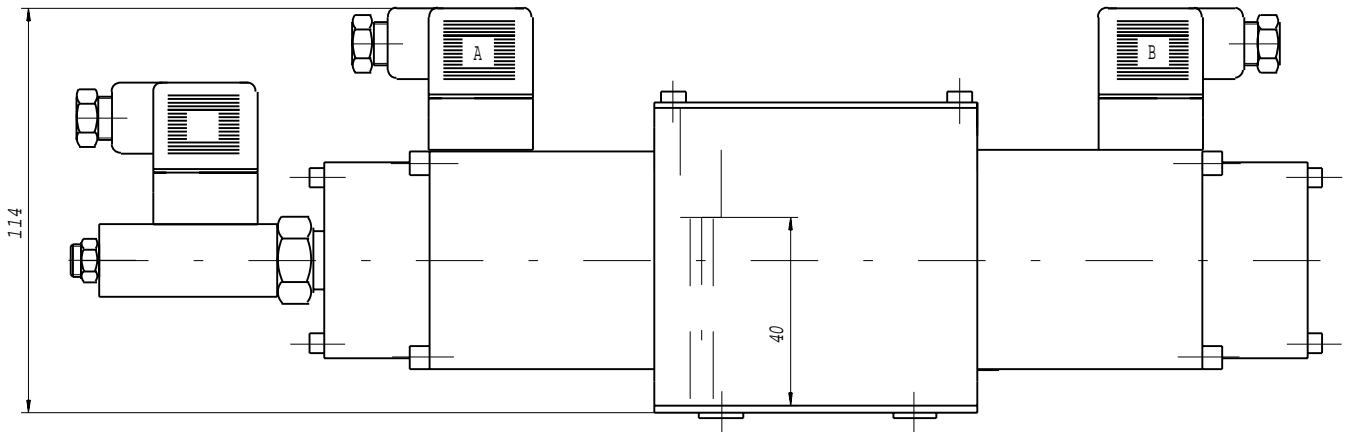
TECHNICAL DATA

Working medium	Mineral oil
Operating pressure at port P, A, B	up to 31,5 MPa
Operating pressure at port T	up to 16 MPa
Required filtration	16 μm
Recommended filtration	10 μm
Nominal fluid viscosity	37 mm^2/s at temp. 328 K
Viscosity range	2,8 to 380 mm^2/s
Working temperature (in tank)	313 to 328 K
Hysteresis	< 1 %
Repetition accuracy	< 1 %
Sensitivity	$\leq 0,5$ nominal signal
Zero offset	0,15% /K
Operating position	optional
Electrical characteristics	
Nominal solenoid power	~ 13 W
3-position valve weight	~ 3 kg
2-position valve weight	$\sim 1,8$ kg
Resistance of cold solenoid coil (293K)	5,4 Ω
Resistance of max hot solenoid coil	8,5 Ω
Inductive detector - adjustable stroke	+/- 4,5mm linear
Linearity tolerance	1%
Resistance of detector winding: turn 1	56 Ω
turns 2	56 Ω
turns 3	112 Ω
Electronic regulators	30 RE 21 - for USEB 6 - 3 -position, data card WK 495 774
	30 RE 11 - for USEB 6 - 2 -position , data card WK 495 772

CONNECTIONS OF WINDING IN OFFSET DETECTOR

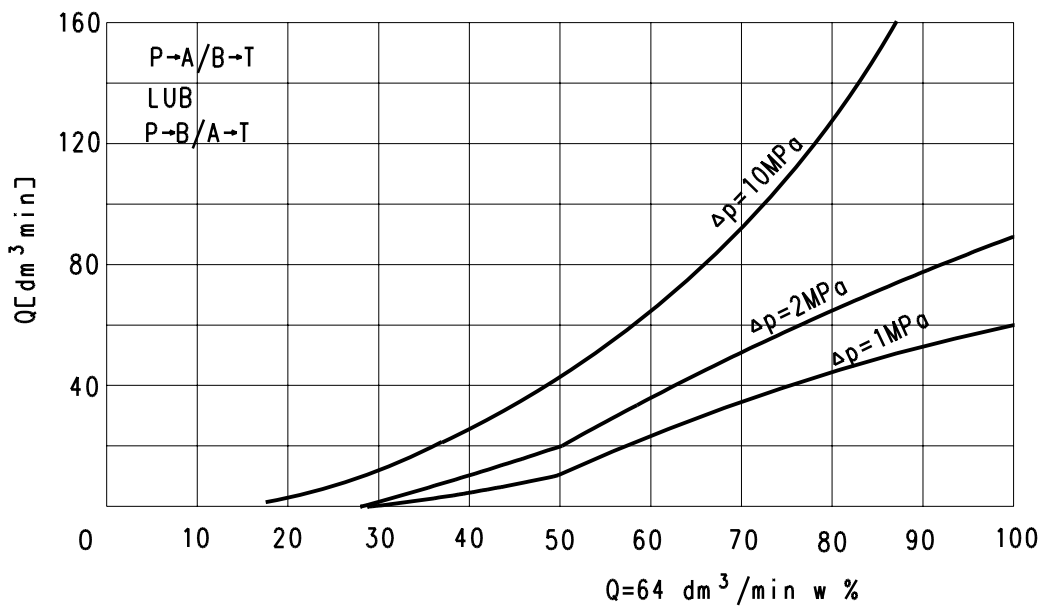
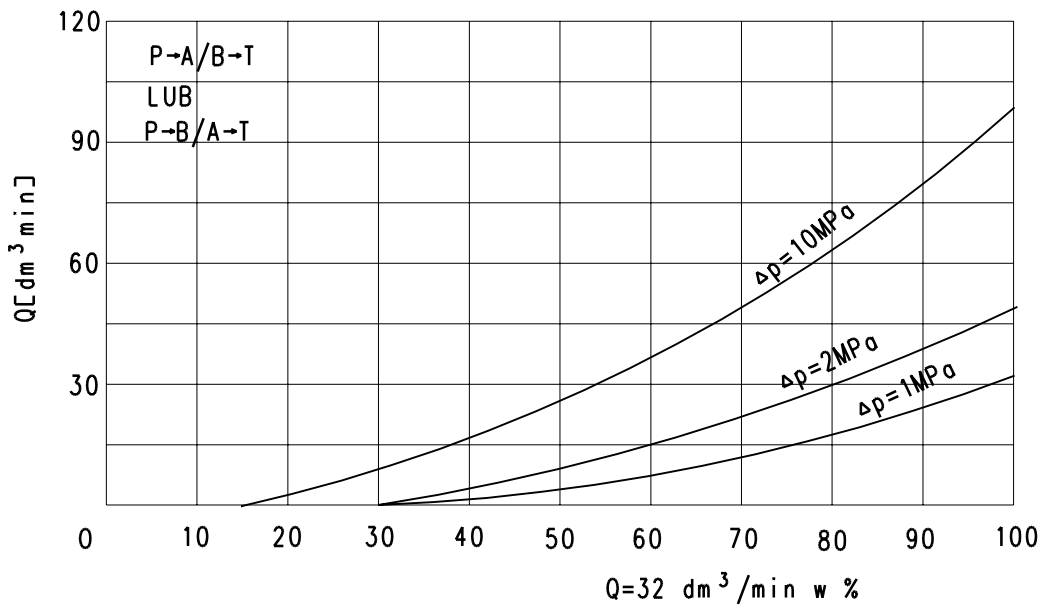
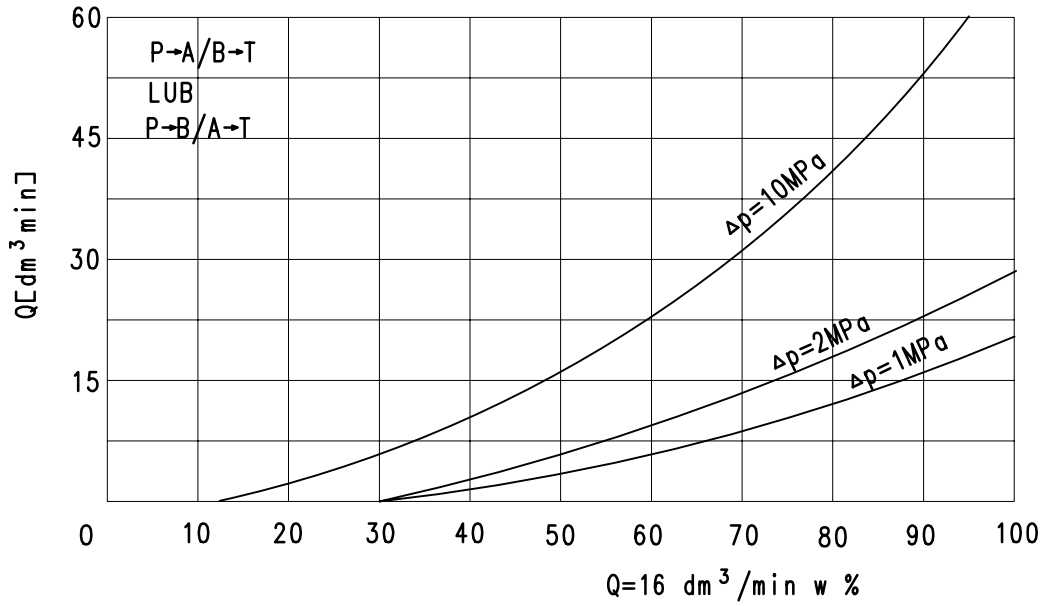


OVERALL AND CONNECTION DIMENSIONS



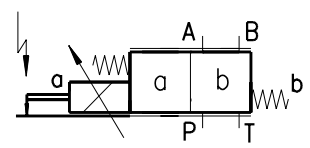
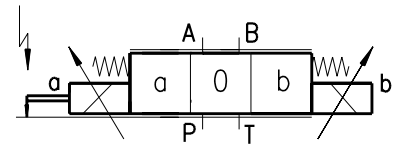
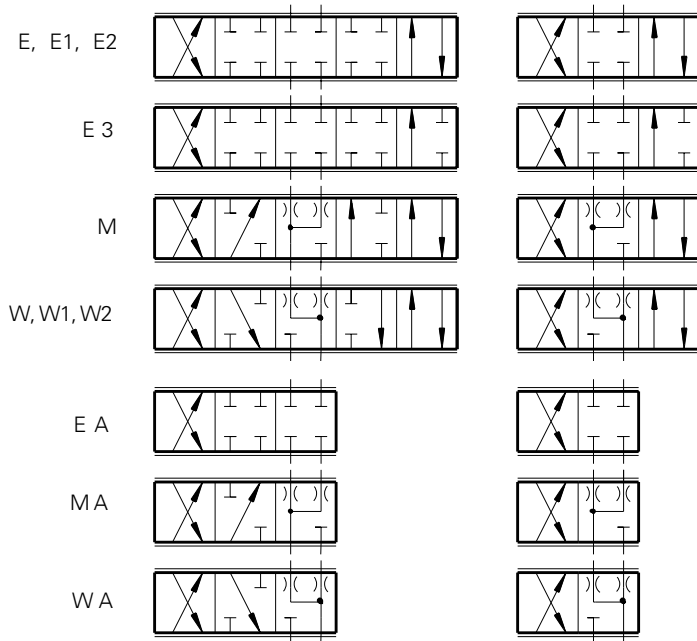
Admissible surface roughness and flatness deviation for a subplate face.

PERFORMANCE CURVES, measured at $v = 41 \text{ mm}^2/\text{s}$ and $T = 323 \text{ K}$



SPOOL SCHEMES

GRAPHICAL SYMBOL



For symbol E1 i W1:-

P → A: Q_{max}
P → B: $Q/2$

For symbol E2 i W2:-

P → A: $Q/2$
P → B: Q_{max}

B → T: $Q/2$

A → T: Q_{max}

B → T: Q_{max}

A → T: $Q/2$

For symbol E3 i W3:-

P → A: Q_{max}

P → B: $Q/2$

B → T: close

A → T: Q_{max}

HOW TO ORDER

Orders coded in the way showed below should be forwarded to the manufacturer.



Series number
10 = 10
(10 - 19) - installation and connection dimensions remain unchanged

Designation of connections to schemes on page 5.

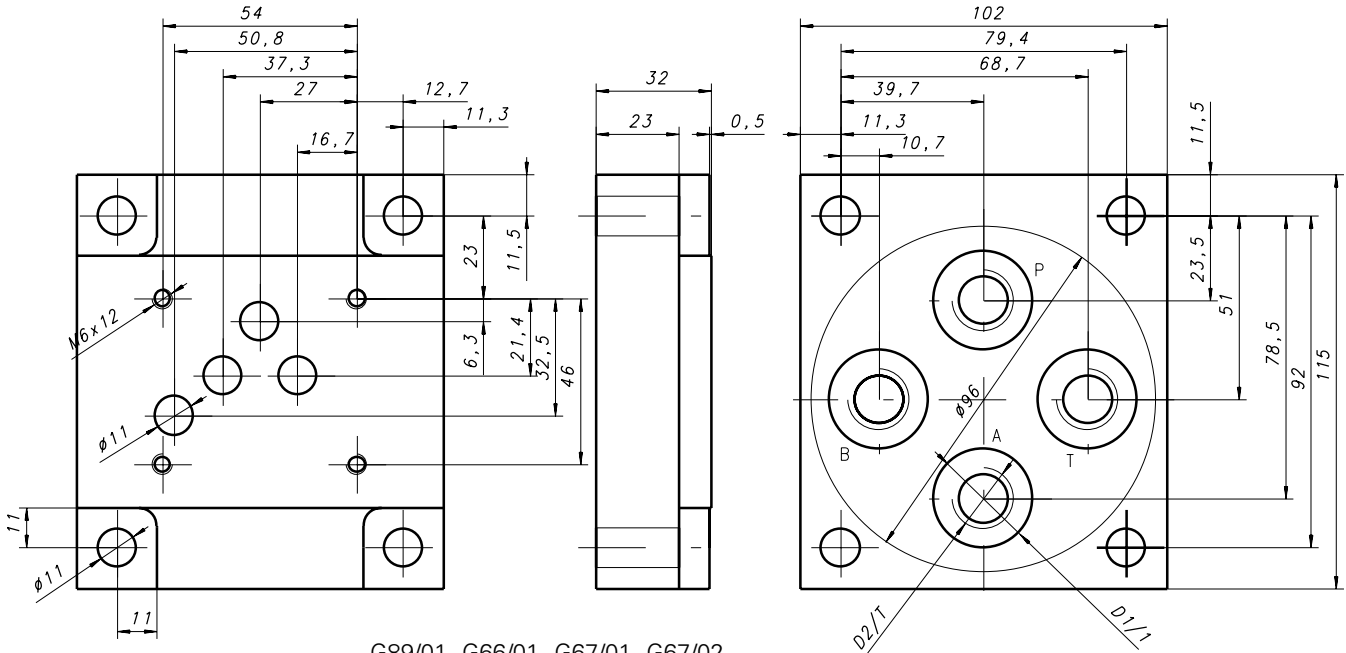
Nominal flow at Δp 1MPa
16dm³/min = 16
32dm³/min = 32
64dm³/min = 64

Sealing
Fluids on mineral oil base = with no code
Fluids on phosphate-ester base = V

Further requirements in clear text (to be agreed upon with the manufacturer)

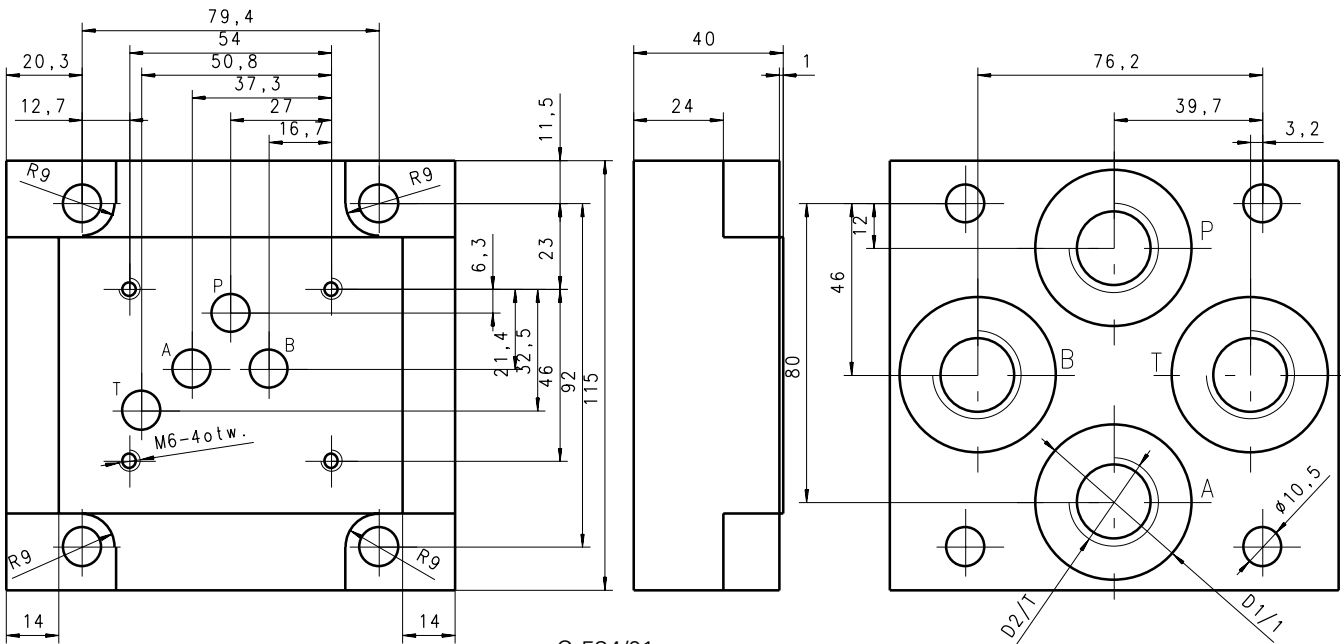
Coding example : USEB 10 / 10 E 16

Connection dimensions for subplate



G89/01, G66/01, G67/01, G67/02

Subplate	D1	D2	T	Weight	Bolts mounting the valve to subplate	Torque
G 89/01	25	G 1/4	12	2,3 kg	4 x M6x50-10.9 PN-87/M-82302(DIN 912)	15 Nm
G 66/01	28	G 3/8	12			
G 67/01	34	G 1/2	14			
G 67/02	36	M22 x 1,5	17			
G 534/01	42	G 3/4	16	2,5 kg		



G 534/01

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