PONAR wadowice

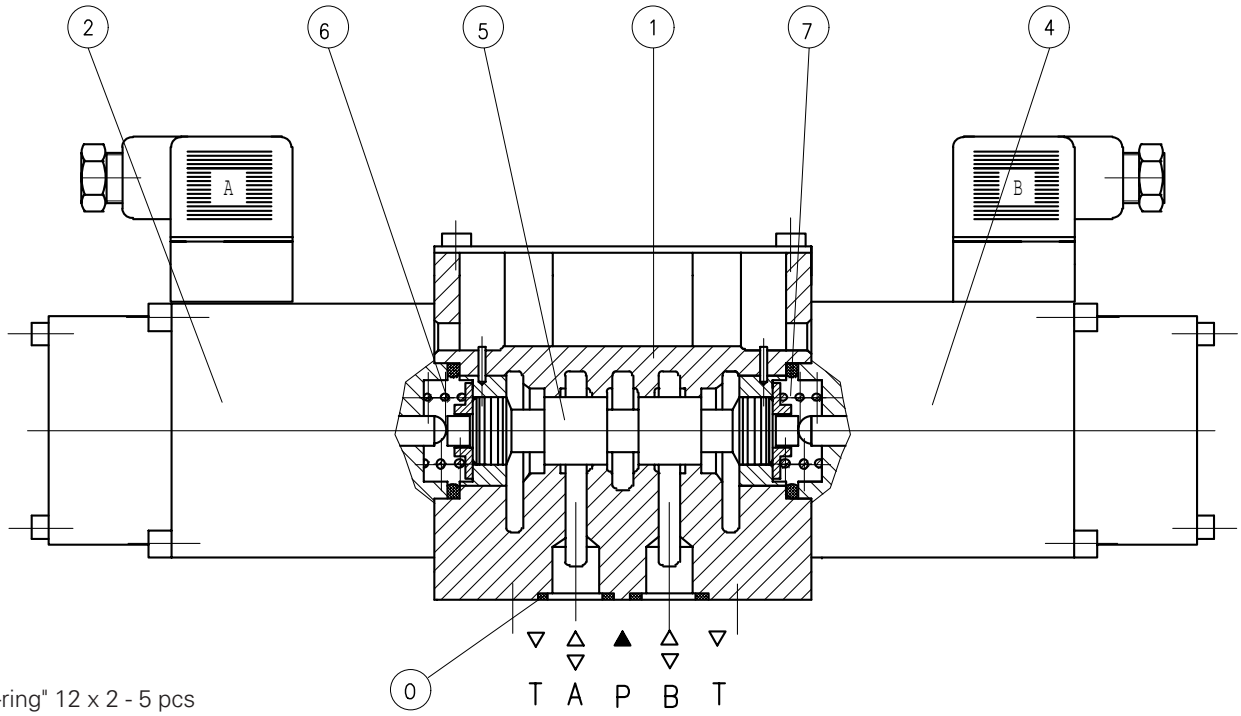
Proportional directional valve type USAB 10

Size 10	31,5 MPa	64 dm³/min.

WK 460 310
04.1999r.

APPLICATION

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



"O-ring" 12 x 2 - 5 pcs

DESCRIPTION OF OPERATION

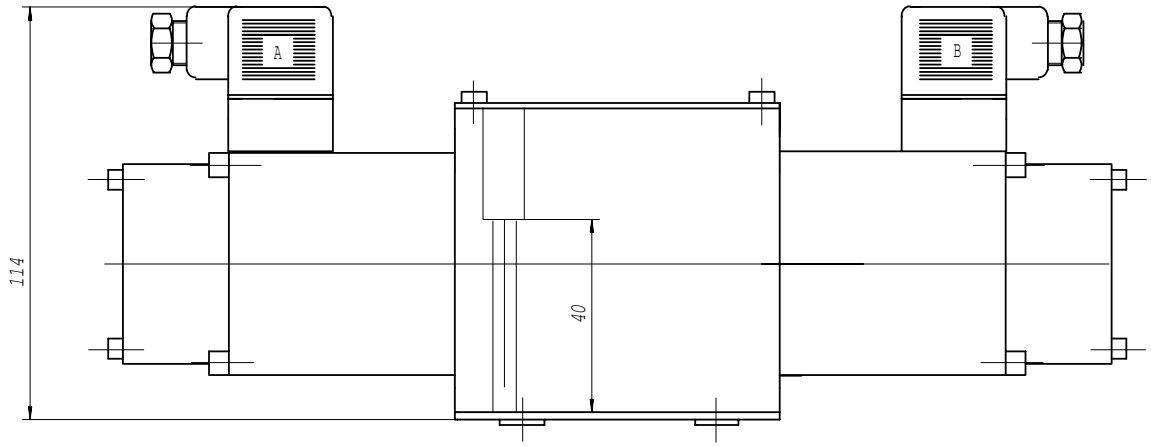
Proportional directional valve type USAB 10 comprises mainly the housing 1, solenoids 2 and 4, spool 5, springs 6 and 7.
Electronic regulator (30 RE ...) can be included with the valve.
It is used to control proportional solenoids of the valve.

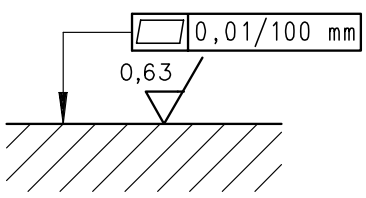
The proportional solenoid 2 or 4 moves the spool 5 from its neutral position. The neutral position is held by means of the springs 6 and 7. Current flowing through the solenoid 2 or 4 produces force pushing the spool 5 against the springs 6 or 7.

TECHNAICAL DATA

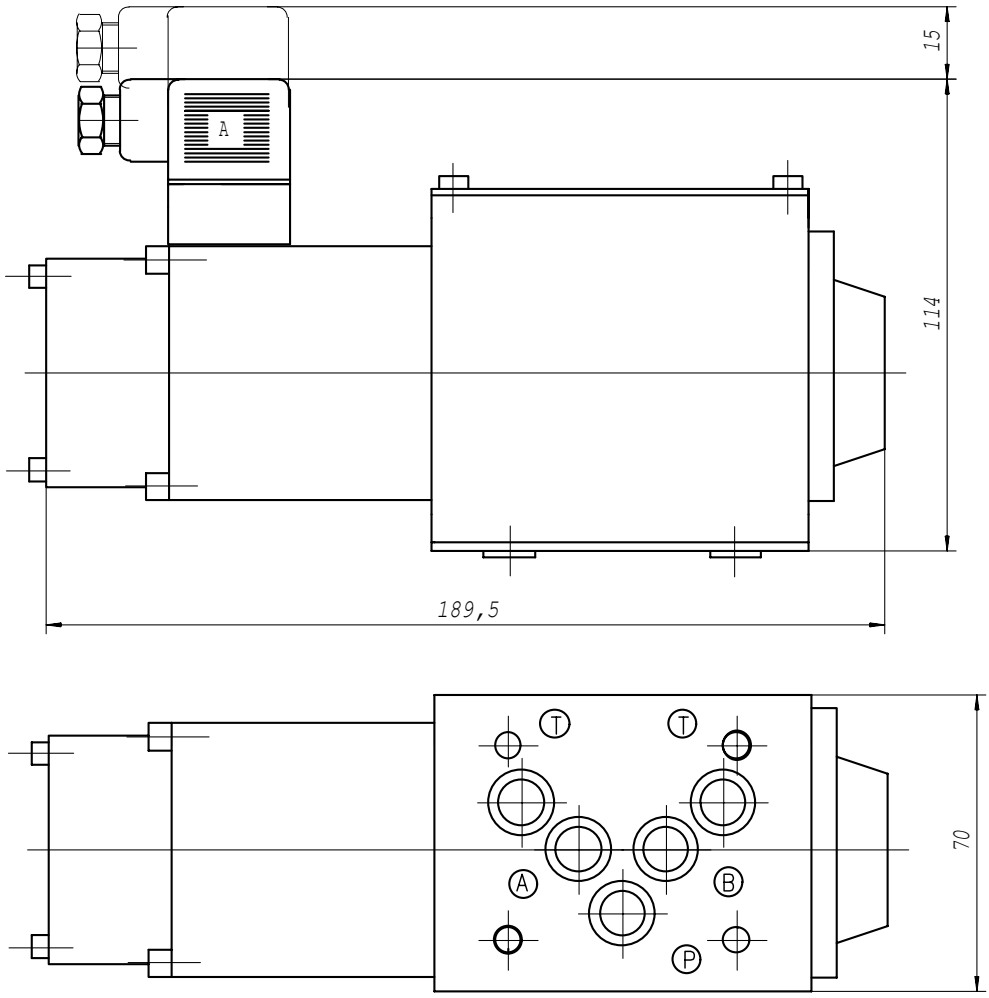
Working medium	Mineral oil
Operating pressure at port P, A, B	up to 31,5 MPa
Operating pressure at port T	up to 16 MPa
Required filtration	16 mm
Recommended filtration	10 mm
Nominal fluid viscosity	37 mm^2/s at temp. 328 K
Viscosity range	2,8 to 380 mm^2/s
Working temperature (in tank)	313 to 328 K
Hysteresis	< 6 %
Repetitation accuracy	< 3 %
Operating position	optional
3-position valve weight	~ 2,5 kg
2-position valve weight	~ 1,8 kg
Electrical characteristics	
Nominal solenoid power	~ 13 W
Resistance of cold solenoid coil (293K)	5,4W
Resistance of max hot solenoid coil	8,1W
Electronic regulators	30 RE 20 - for USE B6 - 3 and 2-position, data card WK 495 773

OVERALL DIMENSIONS

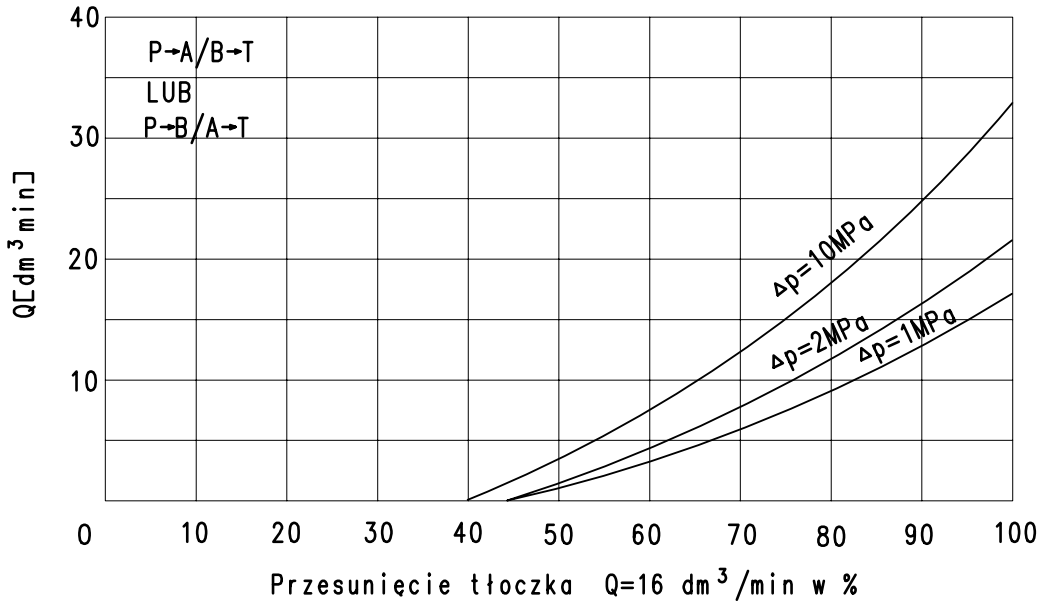


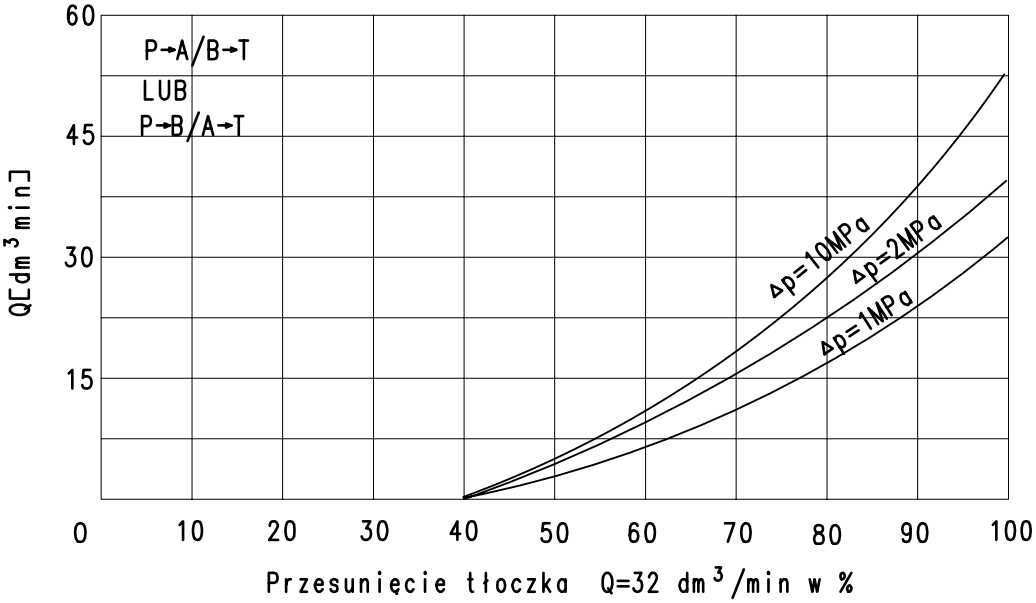


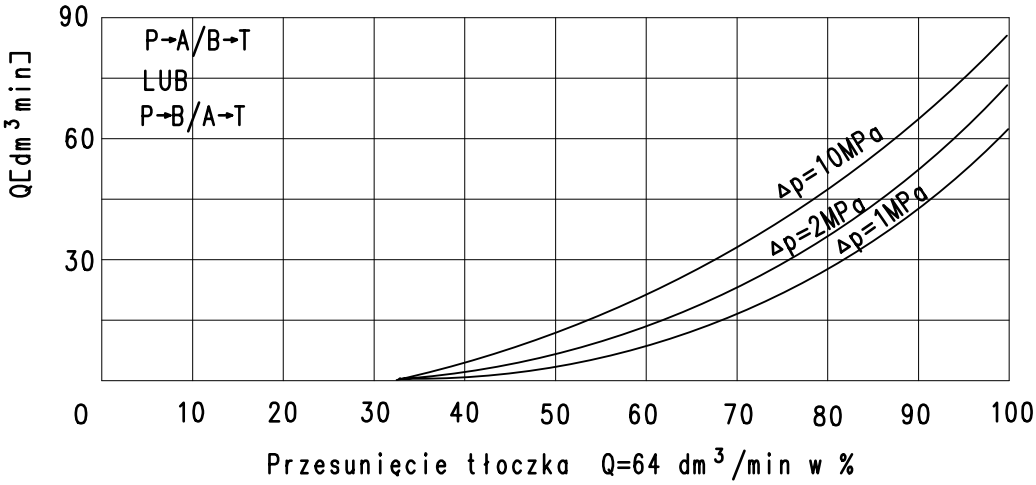
Admissible surface roughness and flatness deviation for a subplate face.



PERFORMANCE CURVES, measured at n = 41 mm²/s and T = 323 K







HOW TO ORDER

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

USAB 10					*

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

Designation of connections to schemes on page 5.

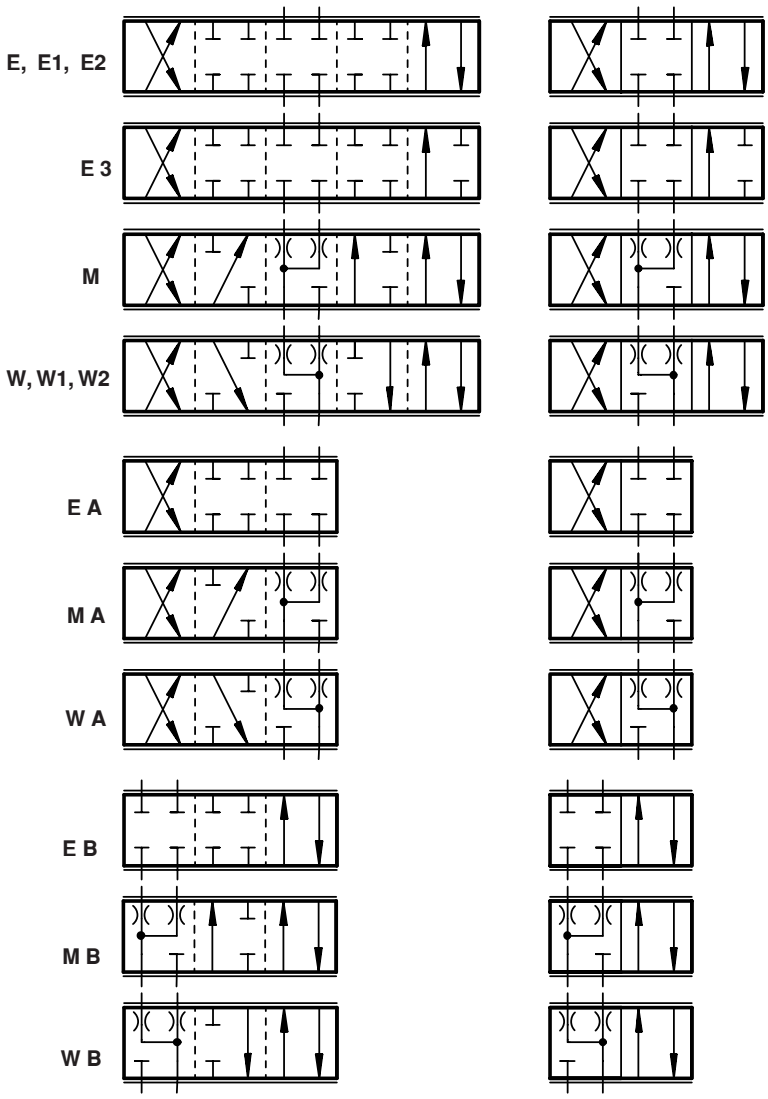
Nominal flow at Δp 1MPa
16dm³/min = 16
32dm³/min = 32
64dm³/min = 64

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

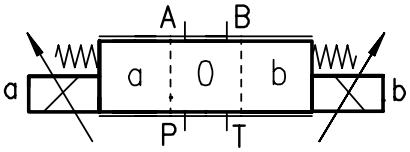
Further requirements in clear text (to be agreed upon with the manufacturer)

Coding example : USAB 10 / 10 E 64

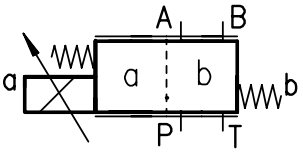
SPOOL SCHEMES



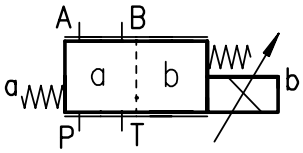
GRAPHICAL SYMBOL



USAB 6/ ...



USAB 6/ ... A



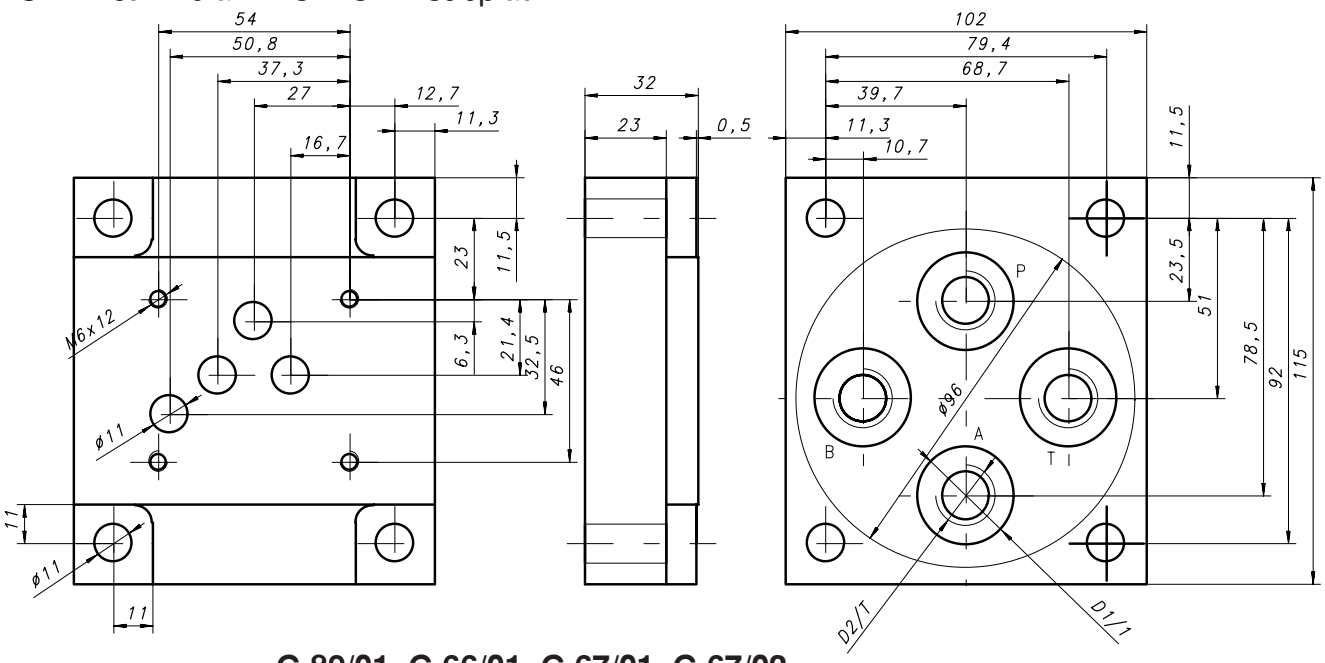
USA B 6/ ... B

For symbol **E1** i **W1**-:
P → A: Q_{max}
P → B: Q/2
B → T: Q/2
A → T: Q_{max}

For symbol **E2** i **W2**-:
P ® A: Q/2
P → B: 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}

Connection diamensions for subplate



G 89/01, G 66/01, G 67/01, G 67/02

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

PONAR WADOWICE S.A.
ul. Wojska Polskiego 29
34-100 Wadowice
tel. 033/ 823 39 43, 823 30 41
fax 033/ 873 48 80
e-mail: ponar@ponar-wadowice.pl