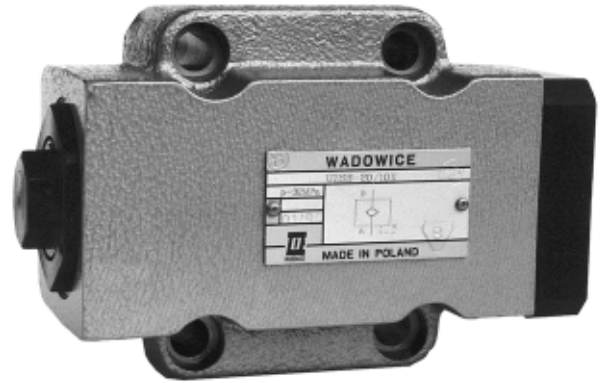
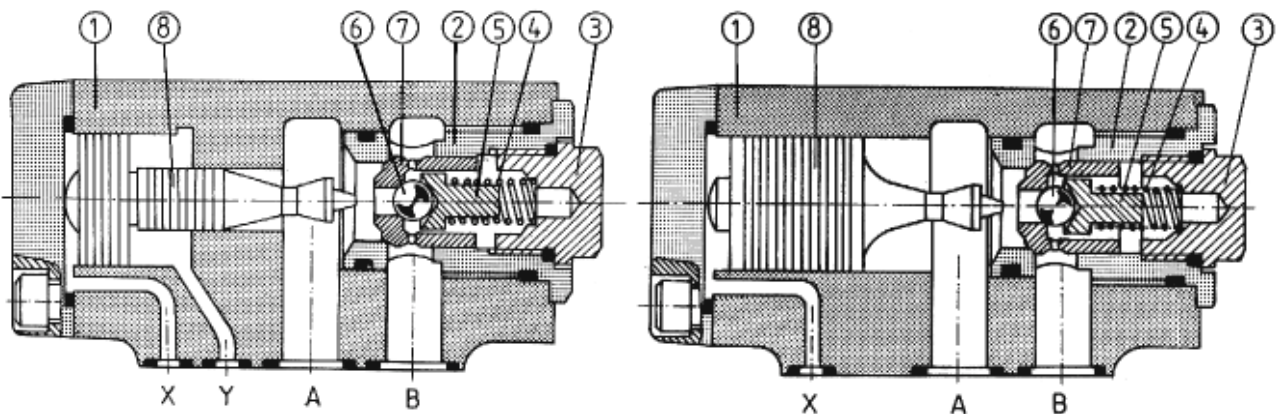


Pilot operated check valves for subplate mounting are used in the hydraulic systems when free flow in one direction and automatic closure in the opposite direction are required. There is a possibility of opening in the direction of closure. The valves can be mounted in any desired position together with a subplate. Sealing is achieved by fitting O-rings, which are included with the valve.



DESCRIPTION OF FUNCTION



The sleeve 2 with the inserted plug 3 is fitted in the housing 1. The plug 3 is a seat for the spring 4. The spring via the dished disk 5 pushes the ball 6 to the internal edge of the poppet 7 and holds the poppet closed. When pressure difference in port A exceeds cracking pressure determined by the spring, the poppet moves along the cylindrical sleeve and the connection from A to B is then open.

When pressure is applied to port X oil can also flow through the valve from B to A. Pressure at port X affects the surface of the pilot spool 8, which moves pushing the ball 6. It results in opening the connection from B to A. Fluid can flow from B to A as long as pilot pressure affects port X. Port Y is an optional external drain connection..

TECHNICAL DATA

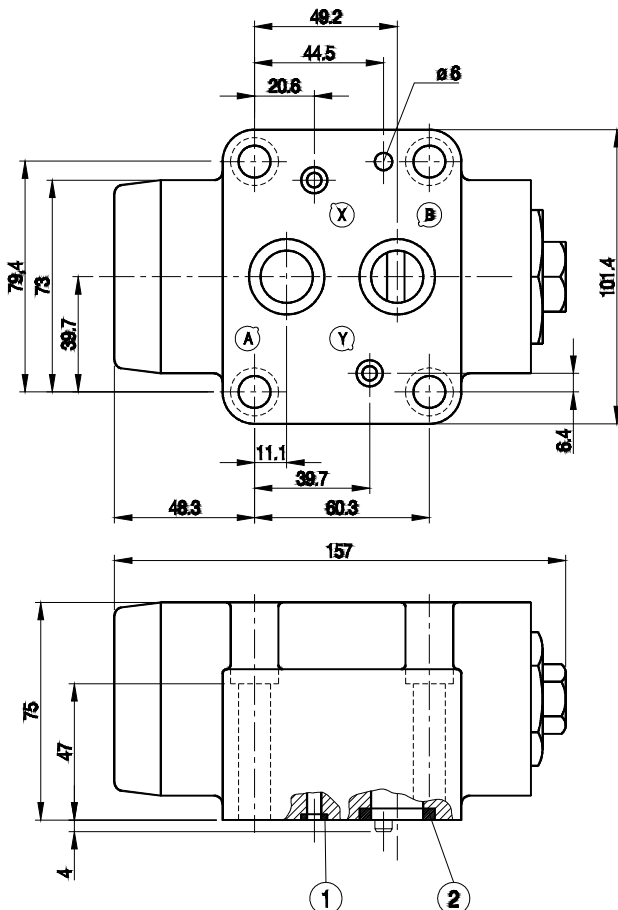
Hydraulic fluid	Mineral oil or phosphate ester
Nominal fluid viscosity	37 mm ² /s at the temperature of 328 K
Viscosity range	2.8 to 380 mm ² /s
Optimum working temperature(fluid in a tank)	313 - 328 K
Fluid temperature range	243 - 343 K
Required fluid filtration	16 μm
Recomended fluid filtration	10 μm
Maximum working pressure	32 MPa
Cracking pressure	0.05 MPa
Maximum pilot pressure	32 MPa
Weight	6 kg

CONTROL AREAS

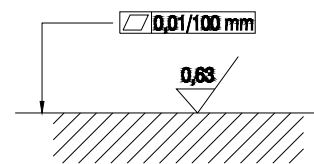
F_1 - surface area of the poppet 7
 F_2 - surface area of the pilot ball 6
 F_3 - surface area of the spool 8
 F_4 - surface area of the rod of the spool 8 inverse to F_3
 C - pressure affecting area F_3 required for exceeding the spring 4 force

Valve version	F_1 (cm ²)	F_2 (cm ²)	F_3 (cm ²)	F_4 (cm ²)	C(MPa)
UZSB 20...X	3.73	0.76	9.61	---	0.087
UZSB 20...Z	3.73	0.76	9.61	2.0	0.087

OVERALL DIMENSIONS

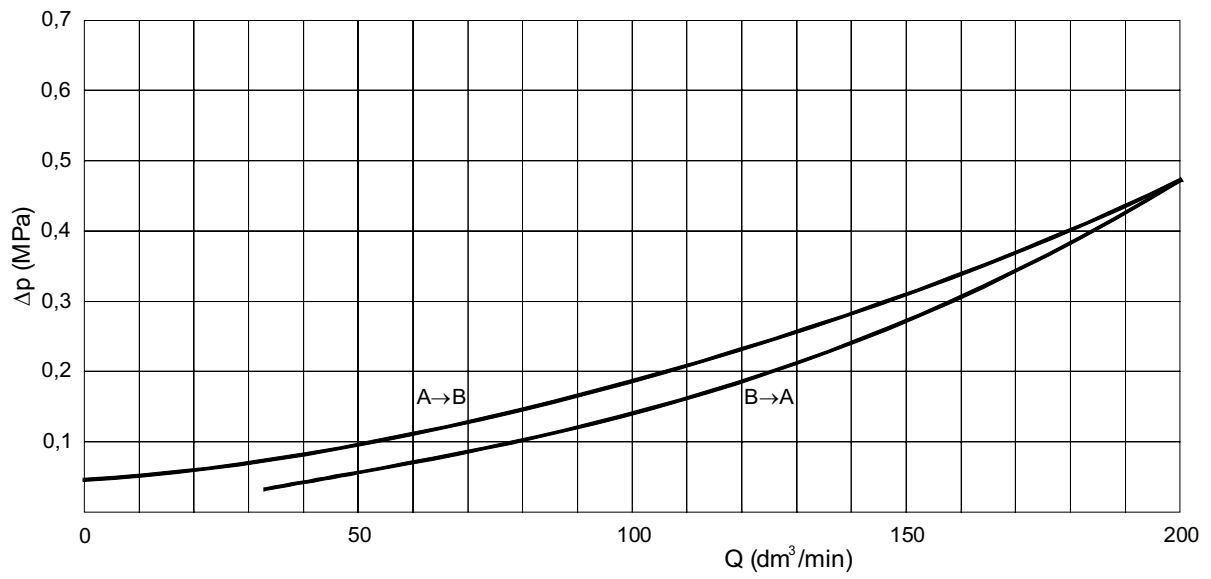


item 1 - O-ring 8,3 x 2,4 - 1 piece for version ...X... (port X)
 - 2 pieces for version ...Z... (ports: X, Y)
 item 2 - O-ring 25 x 3 - 2 pieces (ports: A, B)



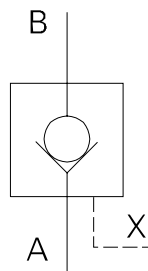
Admissible surface roughness and flatness deviation for a subplate face.

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

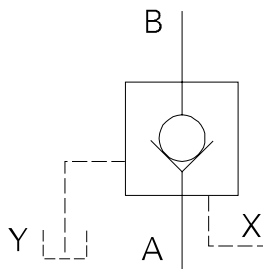


SCHEMES

Hydraulic scheme



for version X



for version Z

HOW TO ORDER

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

UZSB 20 - / *

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

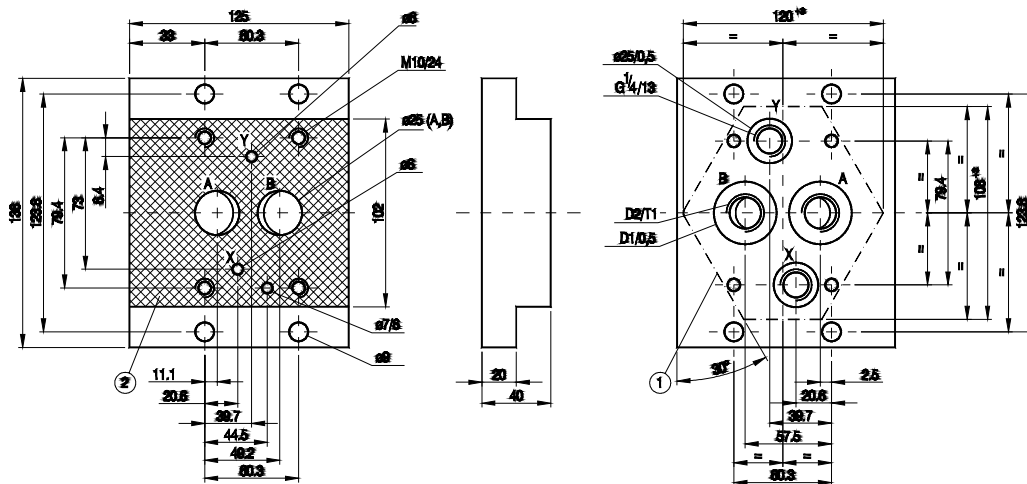
Additional requirements in clear text
 (to be agreed with the manufacturer)

Draining of leakage
 Internally drained (without drain port) = X
 Externally drained (with drain port) = Z

Sealing
 Fluid on mineral oil base - no designation
 Fluid on phosphate ester base - V

Coding example : UZSB 20 - 30/X

CONNECTION DIMENSIONS FOR SUBPLATE



item 1 - recess in subplate
 item 2 - interface

Valve	Subplate	D1	D2	T1	Bolts mounting the valve to subplate	Torque [Nm]	Weight [kg]
Size 20	G 412/01	42	G 3/4	17	4 x M10 x 60 - 10.9 PN - 87/M-82302 (DIN 912)	73	3.3
	G 413/01	47	G 1	20			

Note : Fixing bolts have to be ordered separately

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