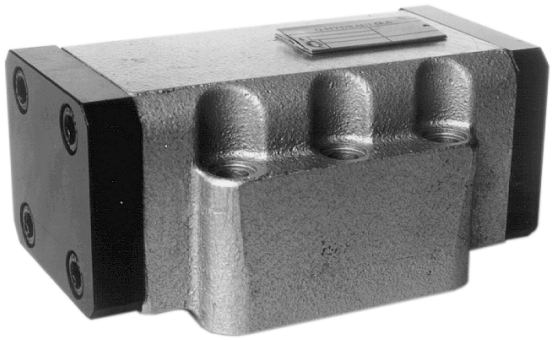
CHECK VALVE TYPE UZSB 32
PILOT OPERATED

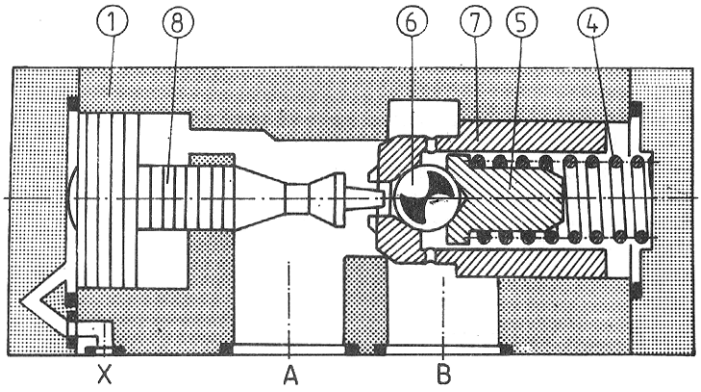
WK 450 630

Size 32	up to 32 MPa	360 dm^3/min	04.2000r.

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.

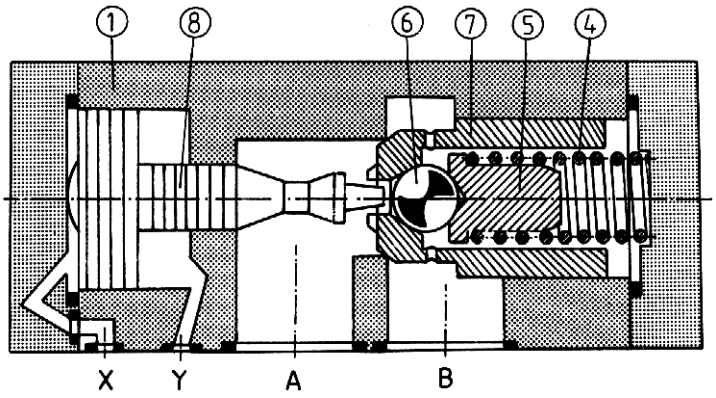


DESCRIPTION OF FUNCTION



The spring 4 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

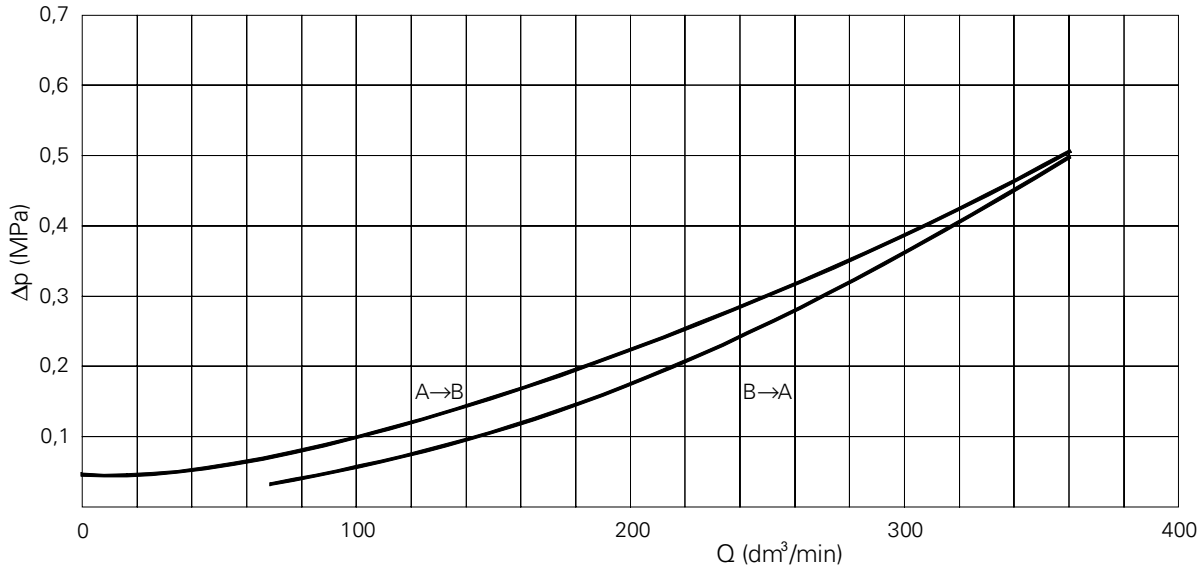
Hydraulic fluid	Mineral oil or phosphate ester
Nominal fluid viscosity	37 mm^2/s at the temperature of 328 K
Viscosity range	2.8 to 380 mm^2/s
Optimum working temperature(fluid in a tank)	313 - 328 K
Fluid temperature range	243 - 343 K
Required fluid filtration	16 μm
Recomended fluid filtration	10 μm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

CONTROL AREAS

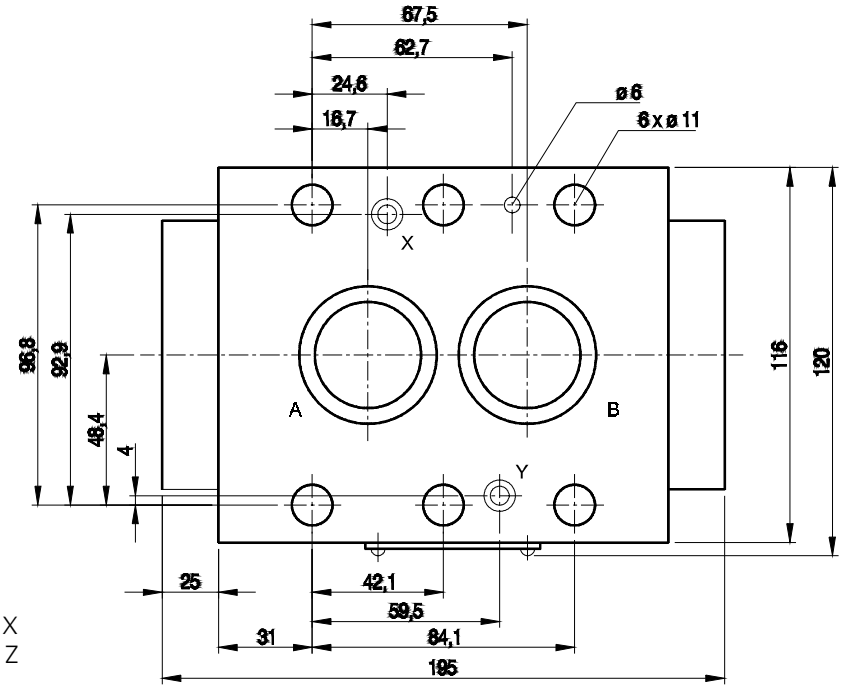
Valve version	$F_1(cm^2)$	$F_2(cm^2)$	$F_3(cm^2)$	$F_4(cm^2)$	C(MPa)
UZSB 32...X	7.06	1.51	18.87	---	0.022
UZSB 32...Z	7.06	1.51	18.87	3.14	0.022

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

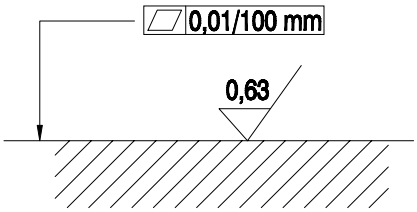
PERFORMANCE CURVES, measured at n = 41 mm^2/s and T = 323 K

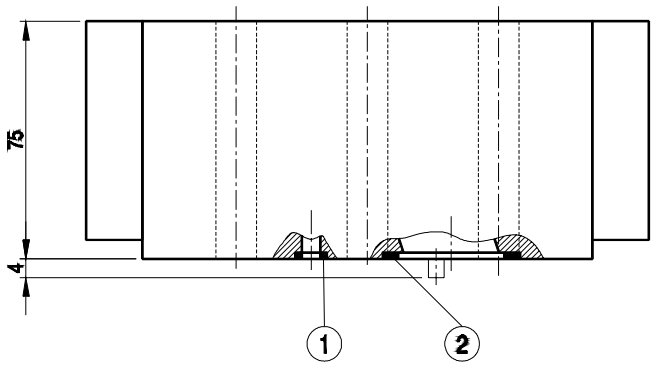


OVERALL DIMENSIONS



item 1 - O-ring 8.3 × 2.4 - 1 piece for version X
2 pieces for version Z
item 2 - O-ring 26 × 3 - 2 pieces

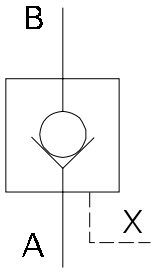




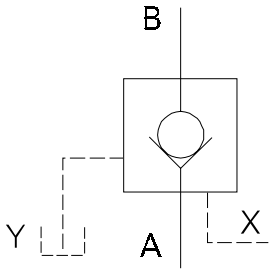
Admissible surface roughness and
flatness deviation for a subplate face.

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 32 – / | | *

Series number
30 = 30
(30 - 39) - installation and connection dimensions unchanged

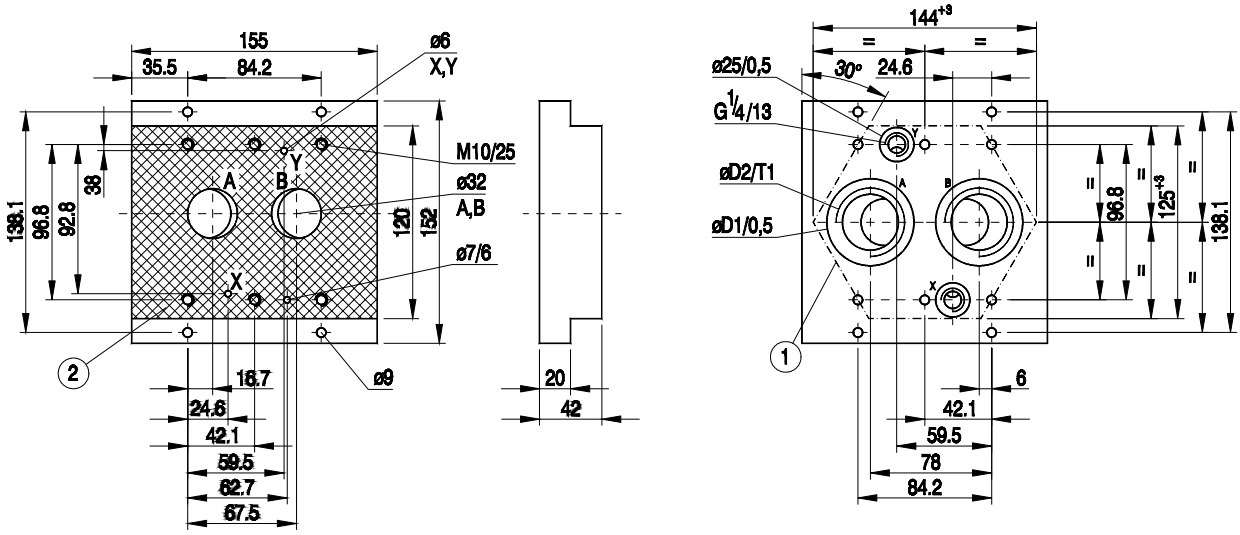
Additional requirements in clear text
(to be agreed with the manufacturer)

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 32 - 30/X

CONNECTION DIMENSIONS FOR SUBPLATE



item 1 - recess in subplate
item 2 - interface9

Valve	Subplate	D1	D2	T1	Bolts mounting the valve to subplate	Torque (Nm)	Weight (kg)
Size 30	G 414/01	56	G 1 1/4	21	6 x M10 x 90 - 10.9 PN - 87/M-82302 (DIN 912)	73	5
	G 415/01	61	G 1 1/2	23			

Note : Fixing bolts have to be ordered separately

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