

DATA SHEET - OPERATION MANUAL

APPLICATION

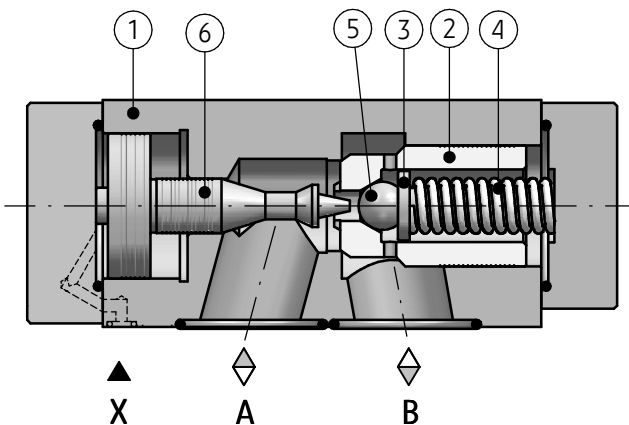
Pilot operated check valve type **UZSB32...** for subplate mounting is used in the hydraulic systems when free flow in one direction and automatic closure in the opposite direction are required. There is a possibility of opening in the direction of closure. The valves can be mounted in any desired position.



DESCRIPTION OF OPERATION

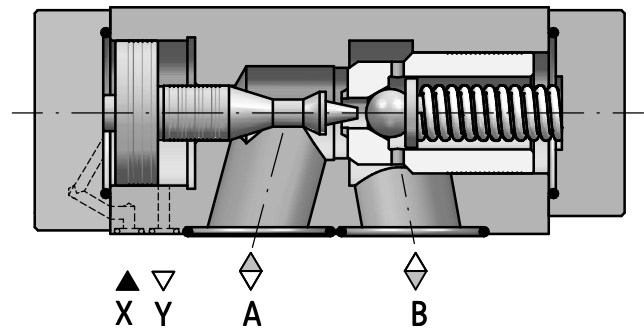
version UZSB32...X...

UZSB32 - 30/X



version UZSB32...Z...

UZSB32 - 30/Z



The spring (4) via the dished disk (3) pushes the ball (5) to the internal edge of the poppet (2) and holds the poppet (2) closed. When pressure difference in port **A** exceeds cracking pressure determined by the spring (4), the poppet (2) moves along the cylindrical sleeve in the body (1) 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 (6), which moves pushing the ball (5). 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 - only for version UZSB32...Z.

TECHNICAL DATA

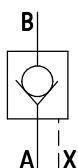
Hydraulic fluid	mineral oil	
Required fluid cleanliness class	ISO 4406 class 20/18/15	
Nominal fluid viscosity	37 mm ² /s at temperature 55 °C	
Viscosity range	2,8 up to 380 mm ² /s	
Fluid temperature range (in a tank)	recommended	40 °C up to 55 °C
	max	-20 °C up to +70 °C
Ambient temperature range	- 20 °C up to +70 °C	
Max operating pressure	35 MPa	
Max pilot pressure (line X)	35 MPa	
Cracking pressure	0,3 MPa	
Control areas	version UZSB32...X...	version UZSB32...Z...
F1 - surface area of the popppet (2)	7,06 cm ²	7,06 cm ²
F2 - surface area of the pilot ball (5)	1,51 cm ²	1,51 cm ²
F3 - surface area of the spool (6)	18,87 cm ²	18,87 cm ²
F4 - surface area of the rod of the spool (6) inverse to F3	-	3,14 cm ²
C - pressure affecting area F3 required for exceeding the spring (4) force	0,022 MPa	0,022 MPa
Weight	10 kg	

INSTALLATION AND OPERATION REQUIREMENTS

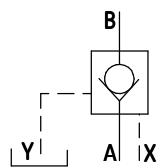
- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Only fully functional and operational valve must be used. 2. During the operation one must maintain the recommended fluid viscosity acc. to requirements defined in this Data Sheet - Operation Manual 3. In order to ensure failure free and safe operation the following must be systematically checked: <ul style="list-style-type: none"> • proper working of the valve • cleanliness of the hydraulic fluid 4. Due to heating of valve body to high temp., the valve shall be placed in such way to eliminate the risk of accidental contact with the valve body during | <ol style="list-style-type: none"> 5. operation or suitable covers shall be applied acc. to European standards PN - EN ISO 13732 - 1 and PN - EN 4413 6. In order to provide proper tightness of the valve connection to the hydraulic system, one should keep the dimensions of the sealing rings, tightening torques values and valve operation parameters, specified in this Data Sheet - Operation Manual. 7. A person that operates the valve must be thoroughly familiar with this Data Sheet - Operation Manual. |
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DIAGRAMS

Graphical symbol of the valve type UZSB32...



version UZSB32...X...

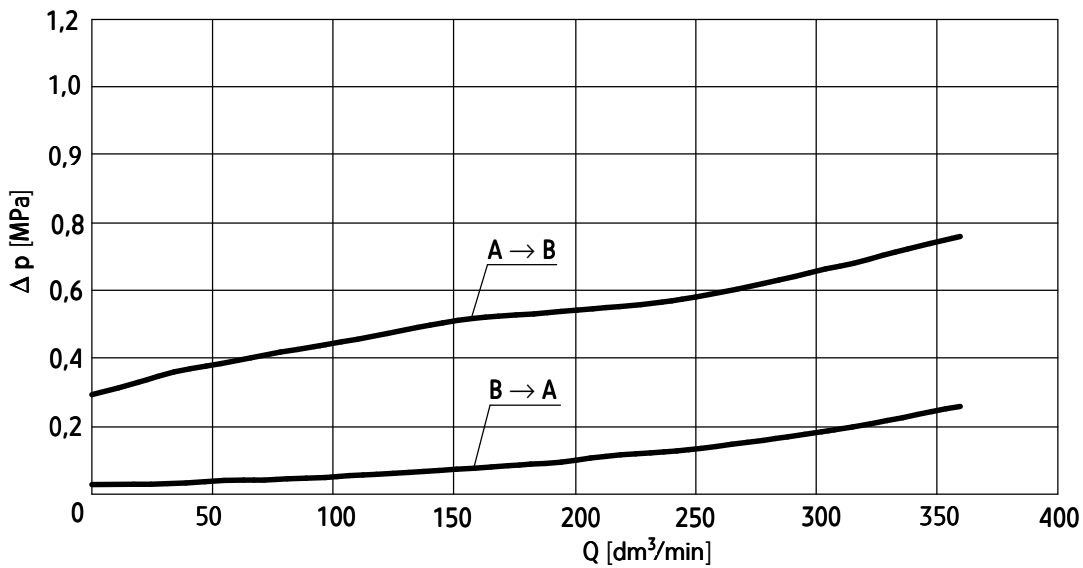


version UZSB32...Z...

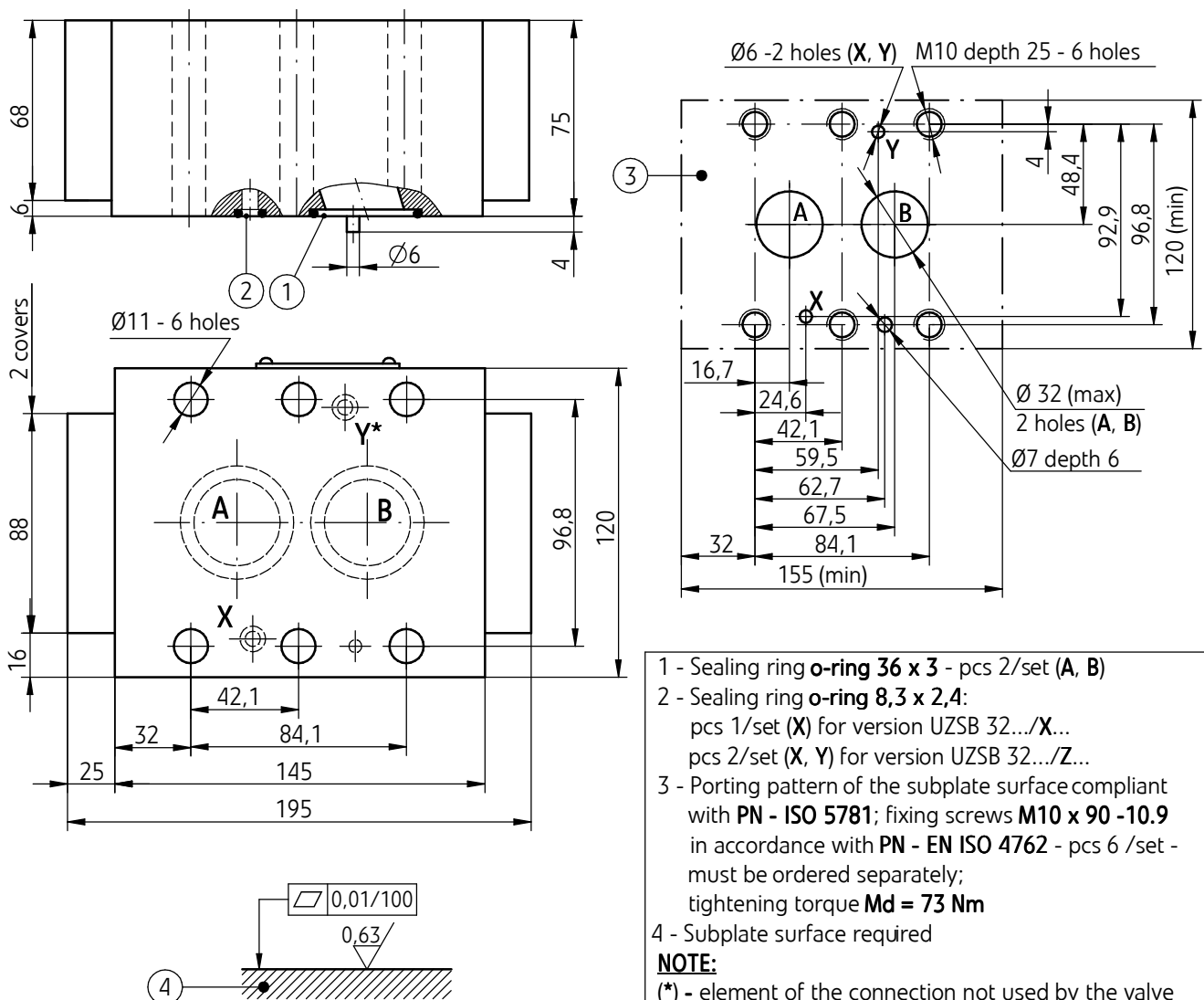
PERFORMANCE CURVES

measured at viscosity $\nu = 41 \text{ mm}^2/\text{s}$ and temperature $t = 50^\circ\text{C}$

Flow resistance curves



OVERALL AND CONNECTION DIMENSIONS



HOW TO ORDER

UZSB	32	+	/	+	*
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Nominal size (NS) NS32	= 32
Series number (30 - 39) - connection and installation dimensions unchanged	= 3X = 30
Draining of leakage internally drained (without drain port)	= X
externally drained (with drain port)	= Z
Sealing NBR (for fluids on mineral oil base)	= no designation
FKM (for fluids on phosphate ester base)	= V
Further requirements in dear text (to be agreed with the manufacturer)	

NOTES:

The valve should be ordered according to the above coding.

The symbols in bold are the preferred versions in short delivery time.

Coding example: UZSB32 - 30/X

SUBPLATES AND FIXING SCREWS

Subplates should be ordered according to plate type designation and pipe threaded connections dimensions.

Subplate symbols:

G 414/01 - threaded connections A, B - G 1 1/4
X, Y - G 1/4

G 415/01 - threaded connections A, B - **G 1 1/2**
X, Y - **G 1/4**

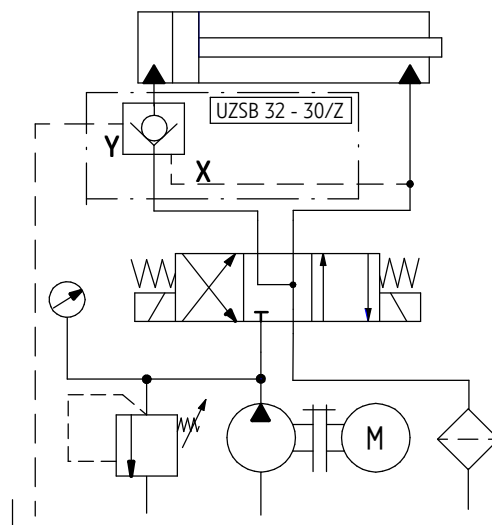
Subplates and fixing screws **M10 x 90 - 10,9** acc. to **PN - EN ISO 4762** - pcs 6/set must be ordered separately.

Tightening torque **Md = 73 Nm**

NOTE:

Subplate symbol in bold is the preferred version available in short delivery time.

EXAMPLE OF APPLICATION IN HYDRAULIC SYSTEM



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