

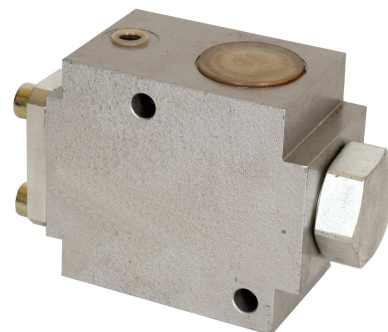
APPLICATION

Check valve type **UZSG16...** pilot operated are used in hydraulic systems in which free flow in one direction and automatic closure in the opposite direction are required.

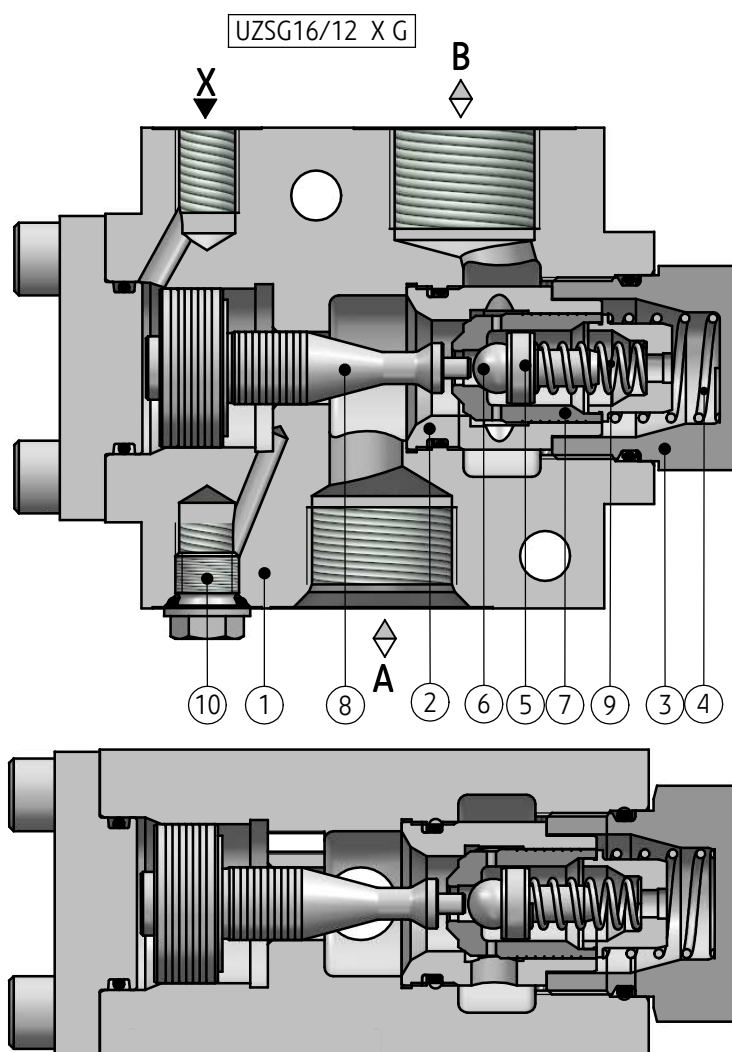
The valve can be opened in the direction of closure.

The valve type **UZSG16...** is intended for base-plate mounting with threaded connection for hydraulic pipes.

The valve can be mounted in any position.



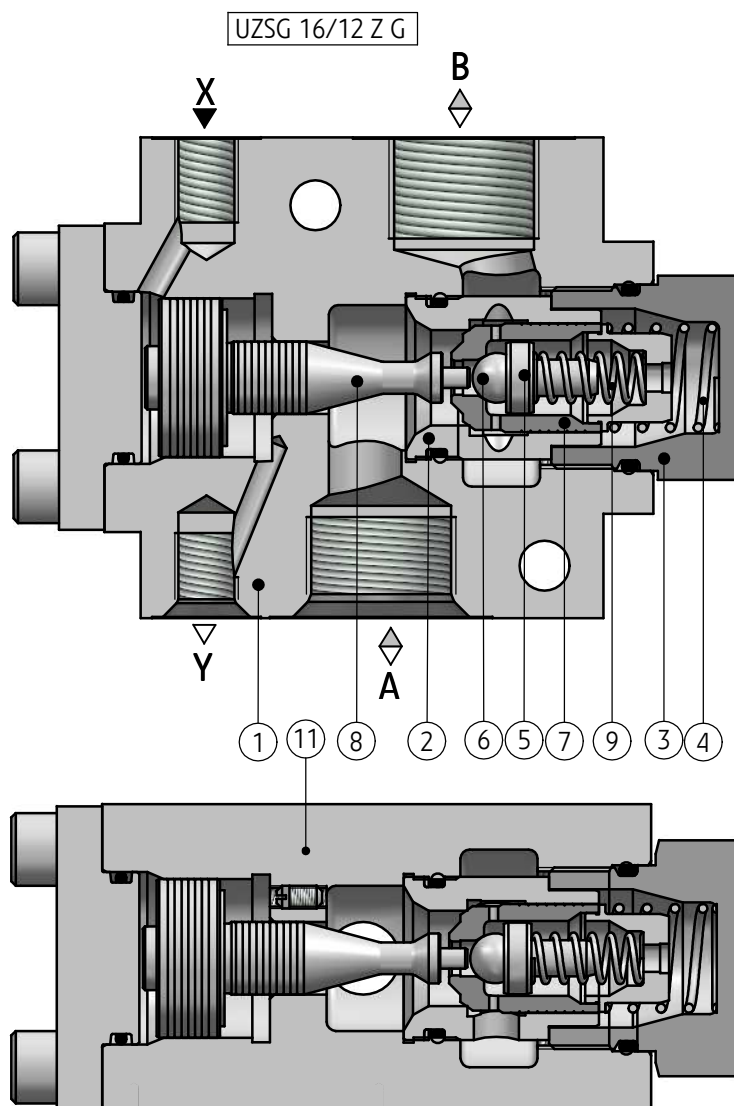
DESCRIPTION OF OPERATION



There is a sleeve (2) and a plug (3) with spring seat (4) in the housing (1). The spring (4) through the retainer (5) pushes the ball (6) to the internal edge of the poppet (7) and holds the poppet (7) closed. When the pressure in port **A** exceeds the cracking pressure determined by spring (4), then the poppet moves along the cylindrical sleeve (2) and the connection from port **A** to **B** is open. When pressure is applied to

port **X** oil can also flow through the valve from port **B** to **A**. The pressure in port **X** affects the surface of the pilot spool (8) which moves pushing the ball (6). When the pressure force in port **B** and the spring resistance is overcome then the connection from **B** to **A** is open. The fluid can flow from port **B** to **A** as long as the pilot pressure affects in port **X**.

DESCRIPTION OF OPERATION



In version UZSG/12 - **X**... - with internal drainage, there is a plug (10) in port **Y** and thus the leakage is drained via the hole after removing the bolt (11). In version

UZSG16/12 - **Z**...- external drainage, the bolt (11) is put into the hole and the leakage is drained via the port **Y**.

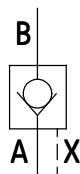
TECHNICAL DATA

Hydraulic fluid	mineral oil	
Required filtration	up to 16 µm	
Recommended filtration	up to 10 µm	
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	
Maximum operating pressure	31,5 MPa	
Maximum control pressure	31,5 MPa	
Minimum control pressure	3,0 MPa	
Cracking pressure	0,14 MPa	
Maximum flow rate	200 dm³/min	
Area ratio- valve poppet surface/piston surface	1 : 2,8	
Area ratio- pilot opening ball seat surface/piston surface	1 :12,2	
Weight	8,5 kg	

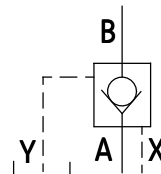
SCHEMES

Graphic symbol for the valve type UZSG16...

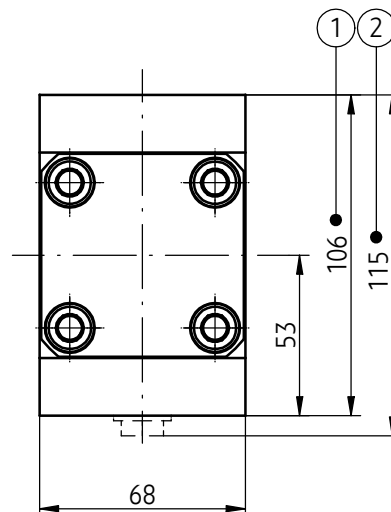
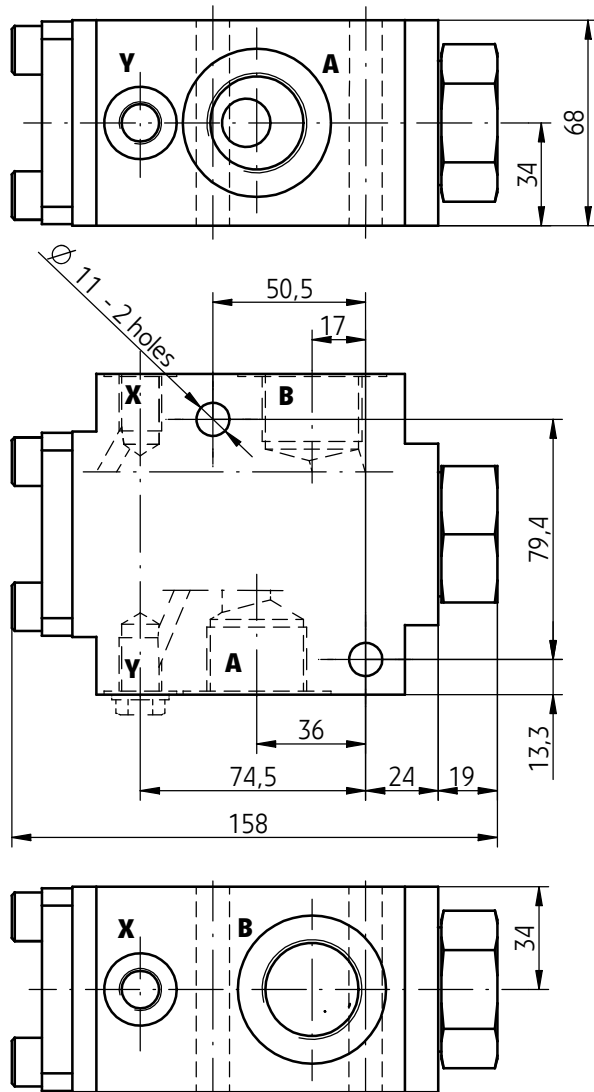
version UZSG16/12 X...



version UZSG16/12 Z...

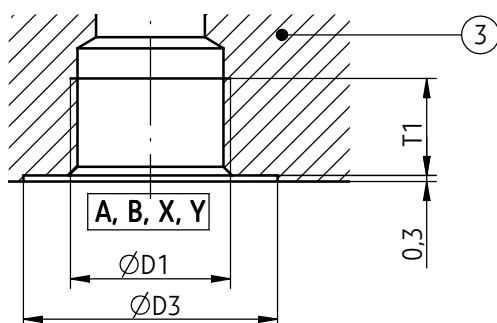


OVERALL AND CONNECTION DIMENSIONS

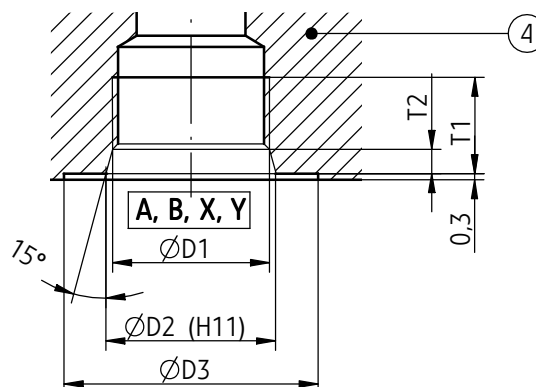


- 1 - Dimension for the valve with internal drainage - version UZSG16/12 X...
- 2 - Dimension for the valve with external drainage - version UZSG16/12 Z...
- 3 - Connections dimensions A, B, X, Y for version UZSG16/12...G...
- 4 - Connections dimensions A, B, X, Y for version UZSG16/12...M...

Version UZSG16/12...G...



Version UZSG16/12...M...

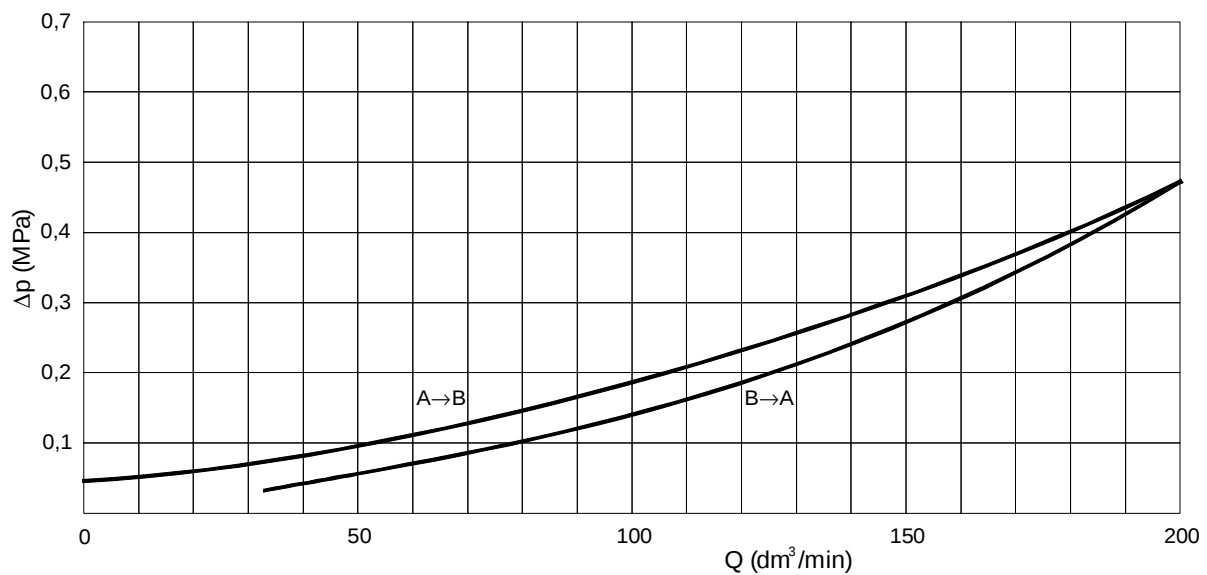


Version	$\phi D1$		T1		$\phi D2$		T2		$\phi D3$	
	A, B	X, Y	A, B	X, Y	A, B	X, Y	A, B	X, Y	A, B	X, Y
UZSG16/12...G...	G1	G1/4	20	13	-	-	-	-	$\phi 47$	$\phi 25$
UZSG16/12...M...	M33 x 2	M14 x 1,5	22	18	$\phi 35,5$	$\phi 16,2$	4	3,4	$\phi 49$	$\phi 24$

PERFORMANCE CURVES

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

Flow curves



HOW TO ORDER

UZSG	16	/				★
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Nominal size (NS)

NS16 = **16**

Series number

(10-19) - connection and installation dimensions unchanged = 1X
series 12 = **12**

Leakage drainage (according to page 1, 2)

internal drainage = **X**

external drainage = **Z**

Type of connection (according to page 4)

G 1 (A, B) ; **G 1/4** (X, Y) = **G**

M33 x 2 (A, B) ; M14 x 1,5 (X, Y) = **M**

Sealing

NBR (for fluids on mineral oil base) = **no designation**

FPM (for fluids on phosphate ester base) = **V**

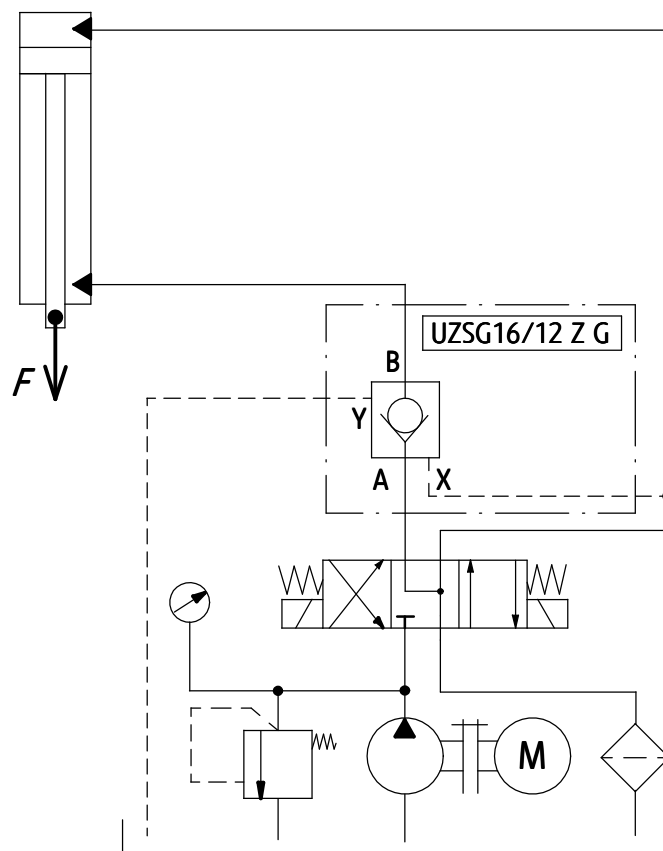
Further requirements in clear text (to be agreed with the manufacturer)

The valve should be ordered according to the above coding.

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

Coding example: UZSG16/12 XG

EXAMPLE OF APPLICATION IN HYDRAULIC SYSTEM



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