

APPLICATION

Double check valves type **2UZSG16...** are used to shut off oil flow in one direction and allow free flow in the opposite direction. They can also be opened in the direction of closure.

These valves are mostly used:

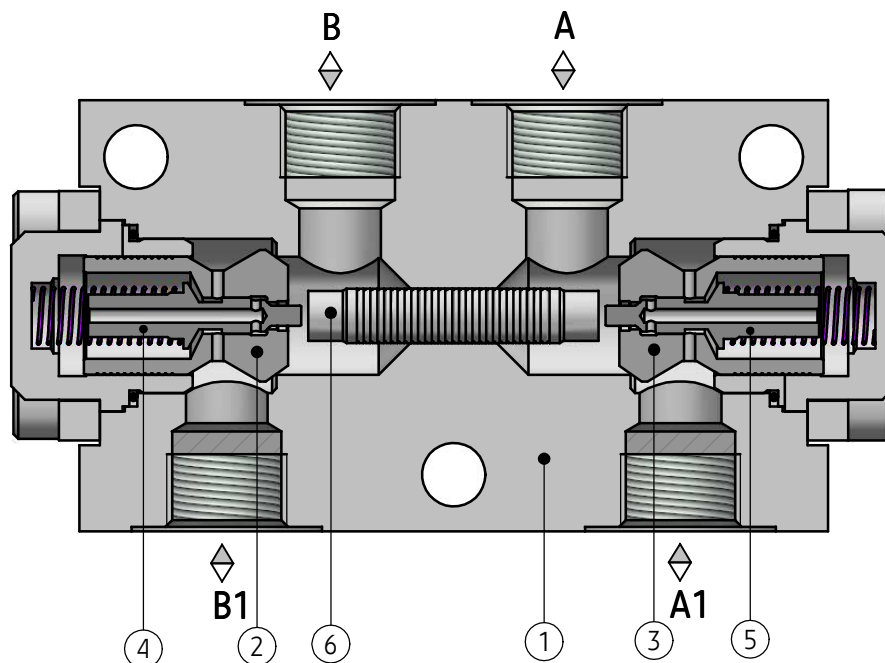
- to relieve a working circuit under pressure
- to prevent a load from falling in case of a line rupture
- to prevent creep movements of hydraulically stressed receivers.

The valve is intended for base-plate mounting with threaded connection of hydraulic pipes. It can be mounted in any position.



DESCRIPTION OF OPERATION

2UZSG16/12 G



Double check valve type **2UZSG16...** is assembled by fitting 2 check valves pilot operated (2) and (3) in one housing (1). Check valves are additionally equipped with pilot poppets (4) and (5). There is free flow from port **A** to port **A1** or/and from port **B** to port **B1** whereas the flow from port **A1** to port **A** or/and from port **B1** to port **B** is blocked. When, for example fluid flows through the valve from port **A** to port **A1**, the piston (6) is shifted to the left and pushes the poppet of the check valve (4) from its seat and then the

piston pushes the main spool (2). The connection from **B1** to **B** is open. The valve operates similarly when the fluid flows from port **B** to port **B1**. By using the pilot poppet the fluid under pressure is expanded and thus it prevents from impacts during the operation. Pressure dissipation in ports **A** or **B** causes both valves to be closed. In order to ensure safe and tight closing of valves, the both ports **A** and **B** should be connected with a return line.

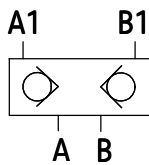
TECHNICAL DATA

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	
Cracking pressure	0,1 MPa	
Maximum flow rate	200 dm³/min	
Area ratio- valve surface/piston surface	4 : 1	
Area ratio- pilot opening ball seat/piston surface	1 : 4	
Weight	6,8 kg	

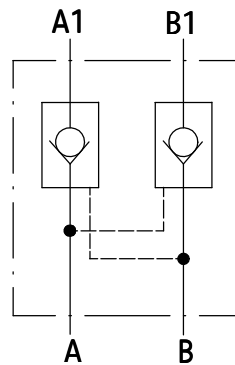
SCHEMES

Graphic symbol for the valve type 2UZSG16...

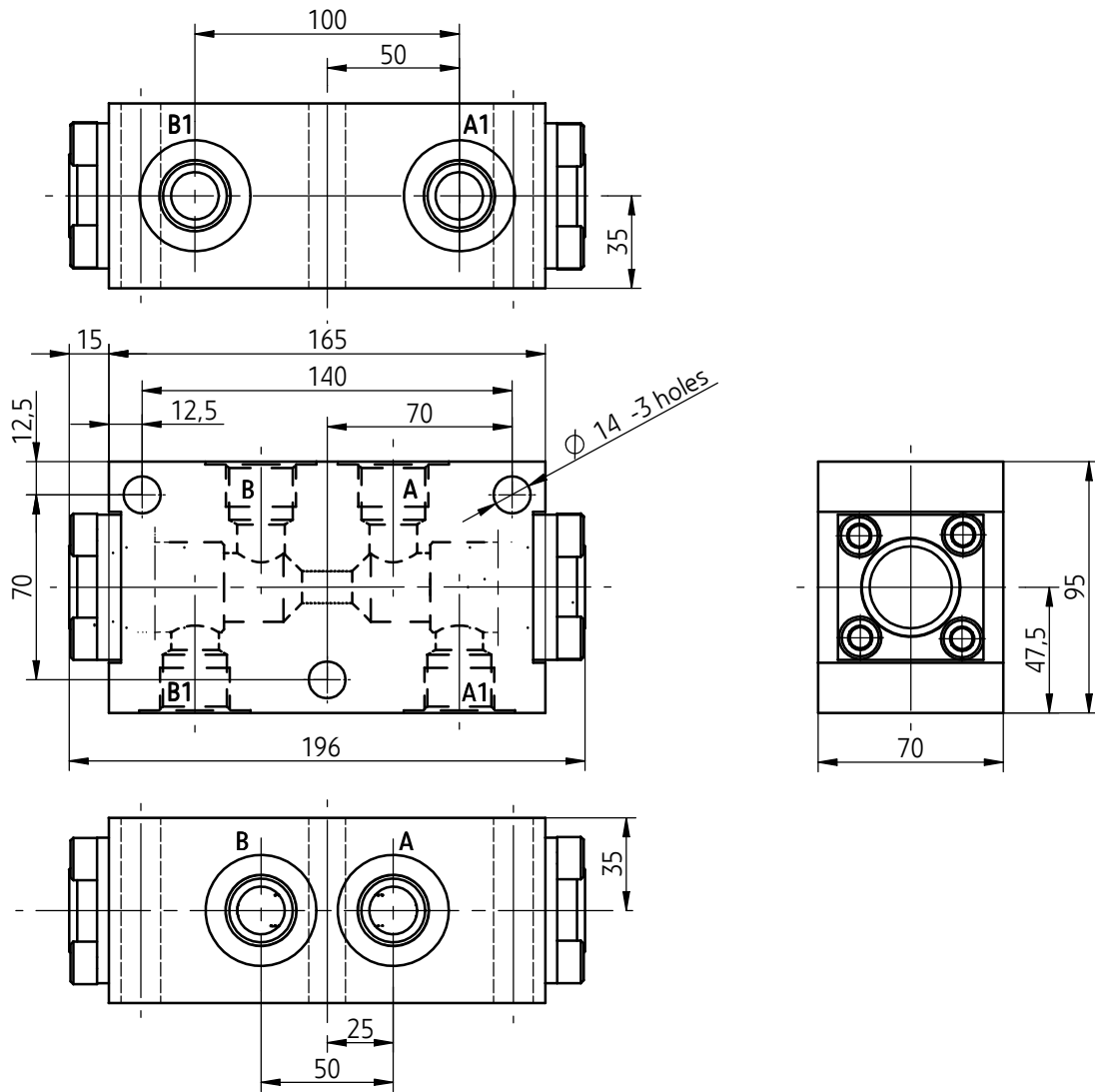
simplified symbol



detailed symbol

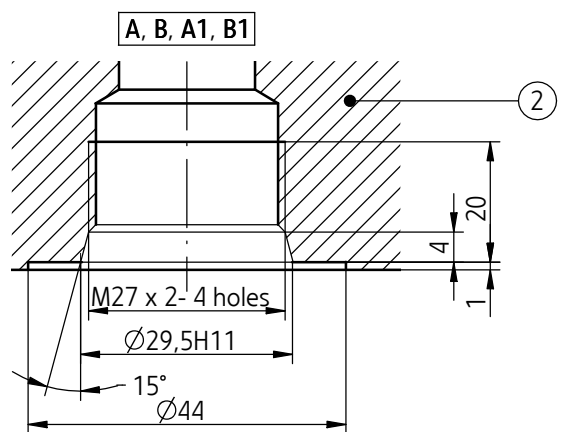
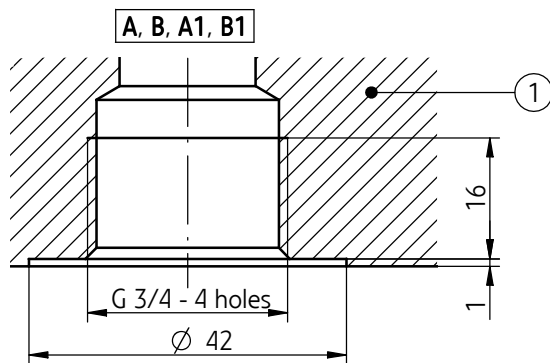


OVERALL AND CONNECTION DIMENSIONS



version 2UZSG16/12 G...

version 2UZSG16/12 M...

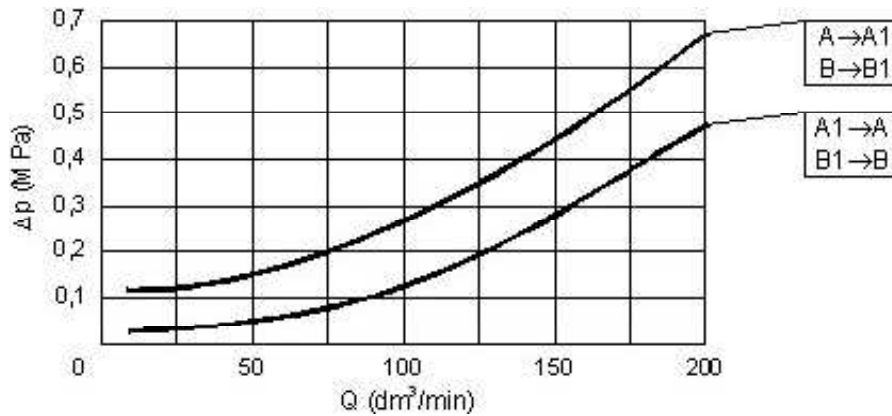


- 1 - Connection dimensions A, B, A1, B1
version 2UZSG16/12 G...
- 2 - Connection dimensions A, B, A1, B1
version 2UZSG16/12 M...

PERFORMANCE CURVES

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

Flow curves



HOW TO ORDER

2UZSG 16 / / / *

Nominal size (NS)

NS16 = 16

Series number

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

Type of connection (according to page 3)

G 3/4 (A, B, A1, B1) = **G**

M27 x 2 (A, B, A1, B1) = 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)

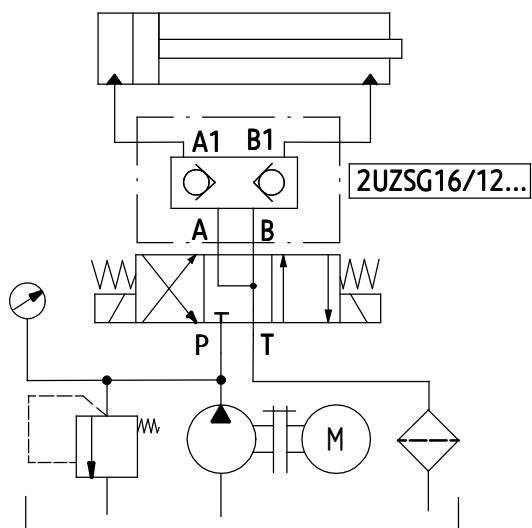
NOTES:

The valve should be ordered according to the above coding.

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

Coding example: 2UZSG16/12 G

**EXAMPLE OF APPLICATION
IN HYDRAULIC SYSTEM**



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