

Check valve, pilot operated UZSB 32

NS 32 | p_{max} 35 MPa | Q_{max} 360 dm³/min | WK 450 630



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 by pilot pressure. The valves can be mounted in any desired position.

DESCRIPTION OF OPERATION

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 PARAMETERS

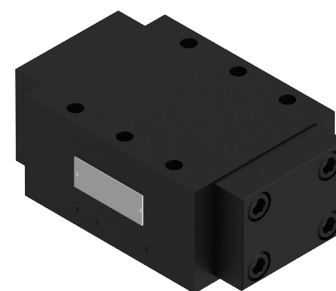
hydraulic fluid	mineral oil
required oil cleanliness class	ISO 4406 class 20/18/15
nominal fluid viscosity	37 mm ² /s at temperature 55 °C
viscosity range	2,8 ÷ 380 mm ² /s
temperature range (in tank)	max. -20 ÷ 70 °C; rec. 40 ÷ 55 °C
ambient temperature range	-20 ÷ 70 °C
max. working pressure	35 MPa
max. pilot pressure (port X)	35 MPa
cracking pressure	0,3 MPa
weight	10 kg

control areas

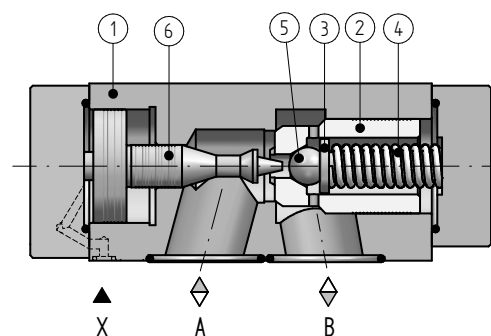
version	F ₁ [cm ²]	F ₂ [cm ²]	F ₃ [cm ²]	F ₄ [cm ²]	C [MPa]
UZSB32...X...	7,06	1,51	18,87	-	0,022
UZSB32...Z...	7,06	1,51	18,87	3,14	0,022

assembly and operation requirements at: www.operating-conditions.ponar.pl

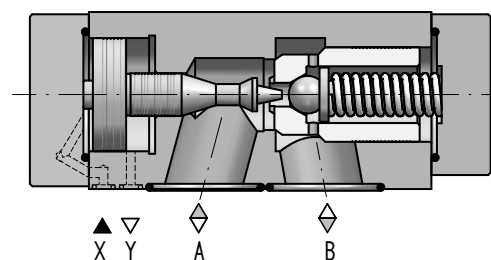
F₁ - surface area of the poppet **2**
 F₂ - surface area of the pilot ball **5**
 F₃ - surface area of the spool **6**
 F₄ - surface area of the rod of the spool **6** inverse to F₃
 C - pressure affecting area F₃ required for exceeding the spring **4** force



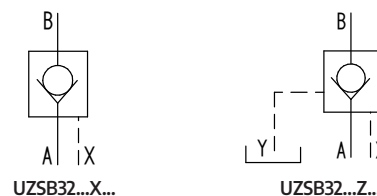
UZSB32-30/X



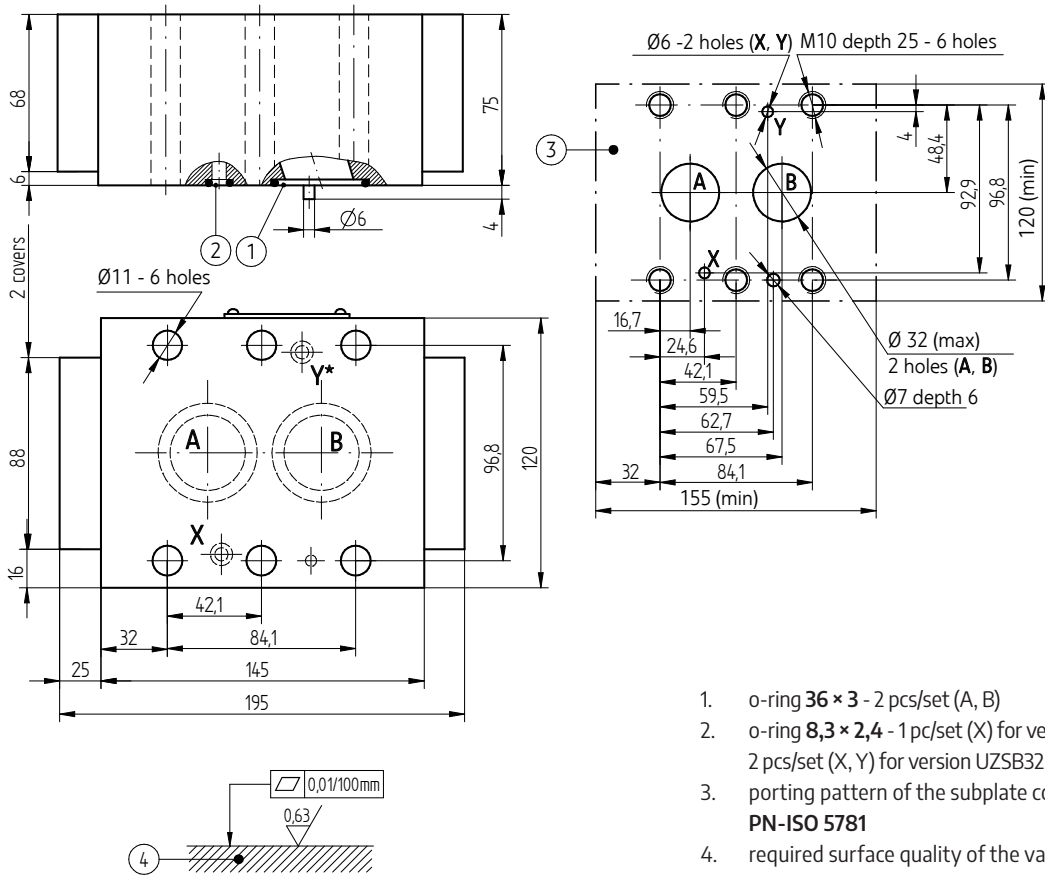
UZSB32-30/Z



HYDRAULIC DIAGRAM



OVERALL AND CONNECTION DIMENSIONS

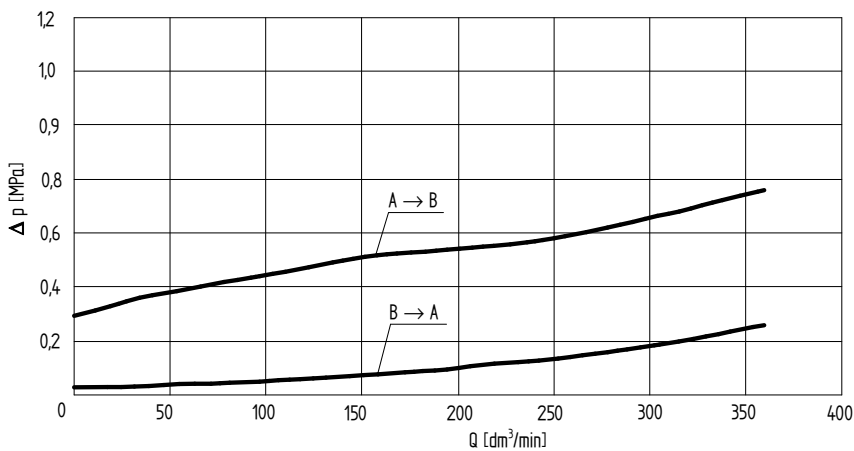


1. o-ring 36×3 - 2 pcs/set (A, B)
2. o-ring $8,3 \times 2,4$ - 1 pc/set (X) for version UZSB32.../X...; 2 pcs/set (X, Y) for version UZSB32.../Z...
3. porting pattern of the subplate compliant with standard **PN-ISO 5781**
4. required surface quality of the valve contact surface

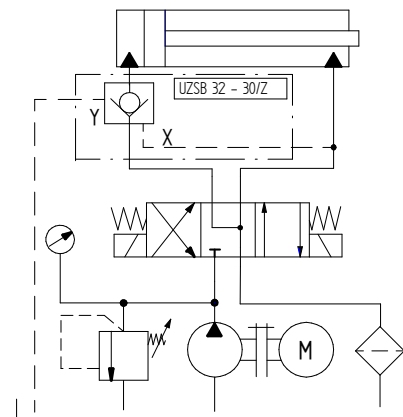
CHARACTERISTICS

for fluid viscosity $\nu = 41 \text{ mm}^2/\text{s}$ and temp. $t = 50 \text{ }^\circ\text{C}$

flow resistance curves



APPLICATION EXAMPLE



HOW TO ORDER

UZSB 32 - /

1 2 3 4 5

1 nominal size

NS32 = 32

2 series number

series 30 = 30

(30 ÷ 39) - connection and installation dimensions unchanged

3 draining of leakage

internally drained (without drain port) = X

externally drained (with drain port) = Z

4 sealing

NBR (for fluids on mineral oil base) = Ø

FKM (for fluids on phosphate ester base) = V

5 further requirements = *
(to be agreed upon with the Manufacturer)

Ø indicates that the box should be left blank.

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

Coding example: **UZSB32-30/X**

SUBPLATES AND MOUNTING SCREWS

Subplates should be ordered according to data sheet

WK 470 471:

G415/01 – threaded connection **A, B – G 1½; X, Y – G ¼**

Subplates and mounting screws for mounting the valve **M10 × 90 – 10.9** acc. to **PN – EN ISO 4762** (PN/M – 82302) – 6 pcs/set **delivered on separate order.**

Tightening torque of screws **M_d = 73 Nm.**

CONTACT

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