

## APPLICATION

Pressure reducing relief valves type UZCP10... pilot operated are used to hold constant pressure in the system irrespective of flow direction.

The valves are intended for subplate mounting in any position in hydraulic systems.

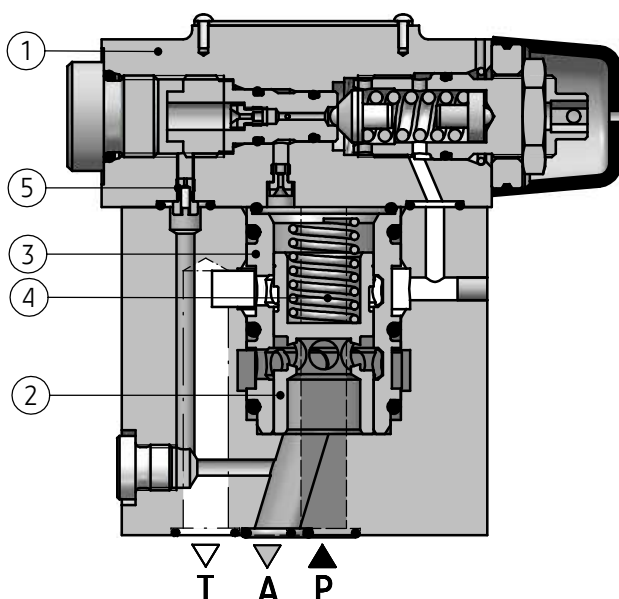


## DESCRIPTION OF OPERATION

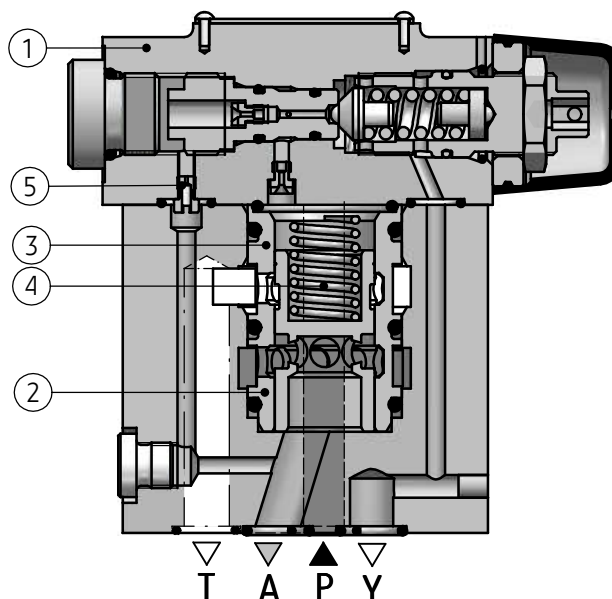
The pressure is set by means of the pilot valve (1). If the pilot valve is open then the fluid flows through it. The flow is branched out of the main flow reduced by hydraulic cascade (5) and affects the pilot valve and the spool (2) of the main valve which mates with the cylindrical surface of the sleeve (3). The spool movement is limited by the spring (4). If the pressure in line **A** exceeds the set pressure at the pilot valve, then it opens and allows the fluid to drain to the tank through the line **Y** (external drainage) – version UZCP10-32...Y... or through the line **T** (internal drainage) – version UZCP10-32/...W....

Opening the pilot valve disturbs the state of equilibrium at the main spool and causes a new throttle dumping is established so that the pressure behind it, is independent on flow rate. If the pressure increase in line **A** is so high, then the connection **P – A** is closed and the connection **A – T** is open, then the valve operates as a pressure relief valve. It prevents the system from excessive pressure increase in line **A**, and at the same time it stabilizes the pressure at a necessary level irrespective of flow direction.

UZCP10 - 32/...W...



UZCP10 - 32/...Y...

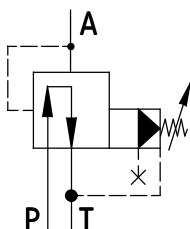


## TECHNICAL DATA

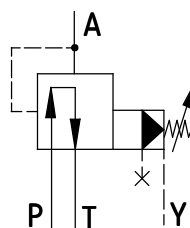
Hydraulic fluid	mineral oil	
<b>Required filtration</b>	<b>up to 16 µm</b>	
Recommended filtration	up to 10 µm	
Nominal fluid viscosity	37 mm <sup>2</sup> /s at temperature 55 °C	
Viscosity range	2,8 up to 380 mm <sup>2</sup> /s	
Fluid temperature range (in a tank)	recommended	40 °C up to 55 °C
	max	-20 °C up to +70 °C
Ambient temperature range	- 20 °C up to +70 °C	
<b>Operating pressure in lines P, A, B</b>	<b>31,5 MPa</b>	
<b>Average pilot fluid flow rate</b>	<b>0,55 dm<sup>3</sup>/min</b>	
Weight	4,3 kg	

## SCHEMES

Graphic symbol for the valve type UZCP10...



version UZCP10...W...



version UZCP10...Y...

Technical drawing of a mechanical component, likely a pump or valve assembly, showing a side view and a top view.

**Side View Dimensions:**

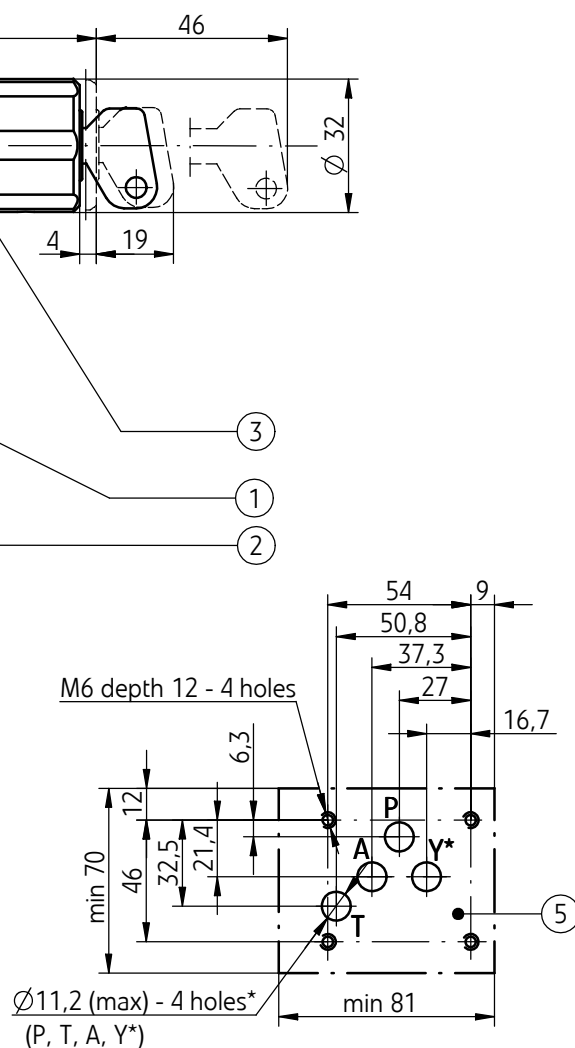
- Total width: 170
- Total height: 114
- Mounting flange diameter: 128.5
- Mounting flange thickness: 12
- Internal diameter: 80.5
- Internal diameter: 122
- Internal diameter: 62.3
- Internal diameter: 21
- Internal diameter: 7.5
- Internal diameter: 50.5
- Internal diameter: 32.3
- Internal diameter: 12
- Internal diameter: 80.5
- Internal diameter: 122
- Internal diameter: 128.5

**Top View Dimensions:**

- 4 depth holes
- 4 holes
- Internal diameter:  $\varnothing 11$
- Internal diameter:  $\varnothing 6.6$

**Detail View:**

- 4

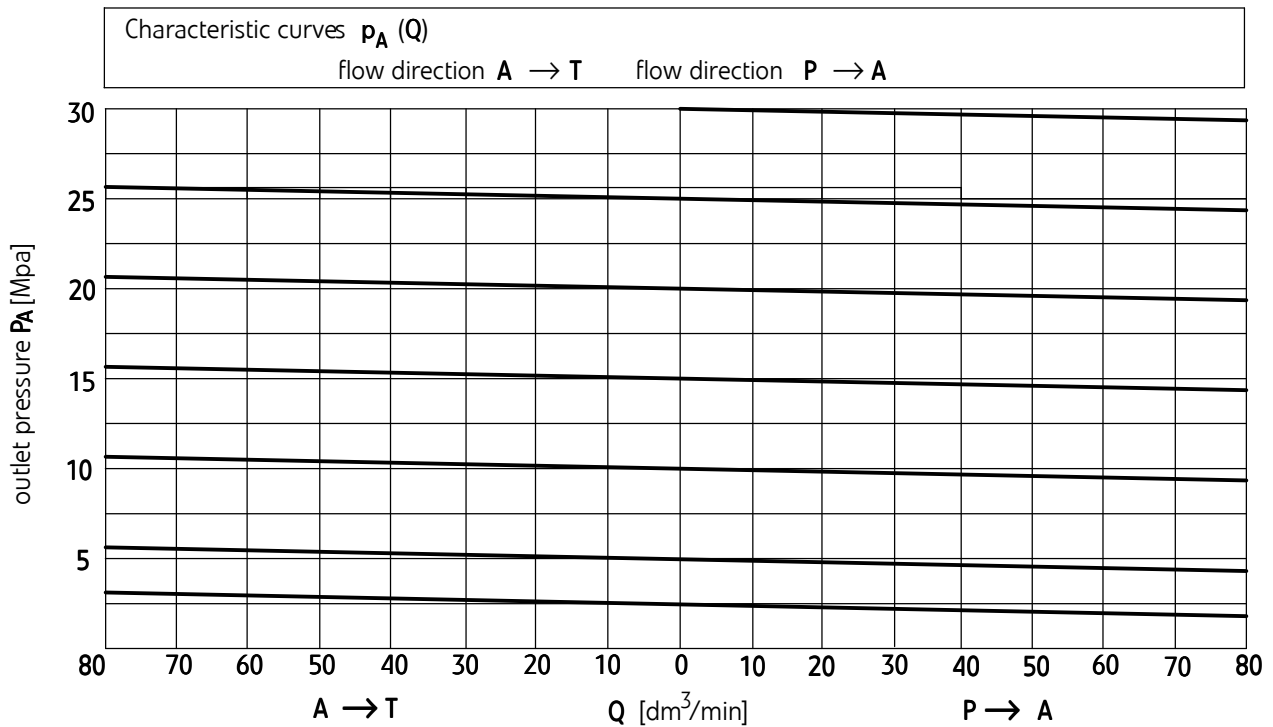


- WK 420 030 09.2007

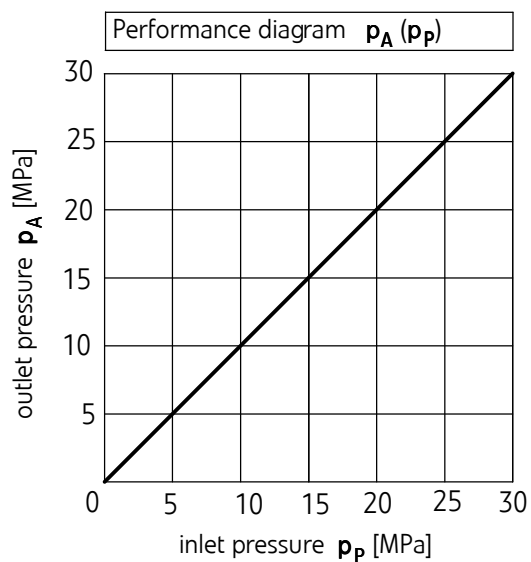
## PERFORMANCE CURVES

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

### Flow resistance curves



### Pressure diagram



## HOW TO ORDER

<b>UZCP</b>	<b>10</b>	—	/					★
-------------	-----------	---	---	--	--	--	--	---

**Nominal size (NS)**

**NS10** = 10

**Series number**

(30-39) - connection and installation dimensions unchanged = 3X

**series 32** = 32

**Pressure setting**

**up to 5 MPa** = 50

**up to 10 MPa** = 100

**up to 20 MPa** = 200

**up to 31,5 MPa** = 315

**Pilot supply and drain**

**internal pilot supply, internal pilot drain to port T** = W

**internal pilot supply, external pilot drain via port Y** = Y

**Adjustment method**

Hand knob = 1

**Set screw** = 2

Lockable hand knob = 3

**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)

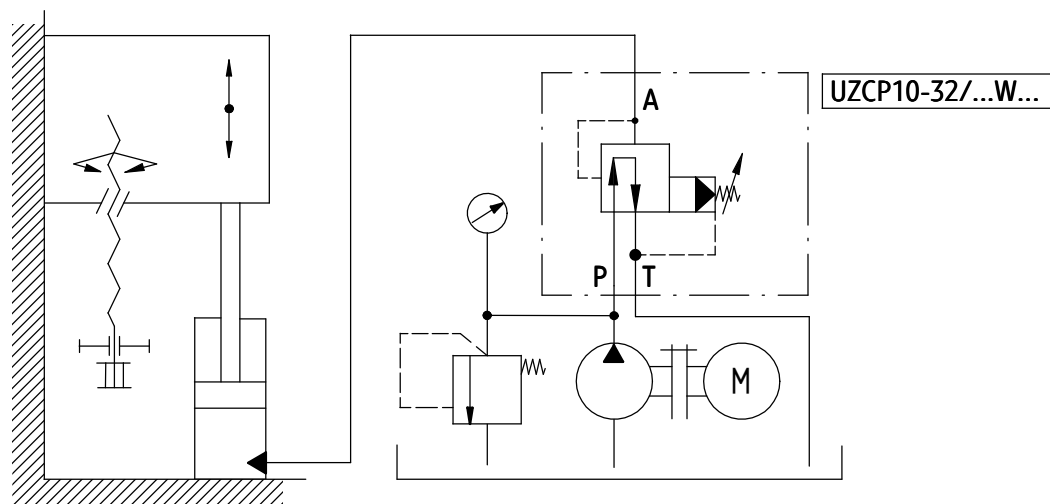
### NOTES:

The valve should be ordered according to the above coding.

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

Coding example: UZCP10 - 32/315 W 2

## EXAMPLE OF APPLICATION IN HYDRAULIC SYSTEM



## SUBPLATES AND MOUNTING BOLTS

Subplates must be ordered according to the data sheet  
**WK 496 520**. Subplates:

- G 66/01** - threaded connection **G 3/8**
- G 67/01** - threaded connection **G 1/2**
- G 89/01** - threaded connection **G 1/4**
- G 67/02** - threaded connection **M22 x1,5**

Subplates and mounting bolts in accordance with  
**PN - EN ISO 4762**

- **M6 x 70 - 10,9** - 2 pcs/kit
  - **M6 x 40 - 10,9** - 2 pcs/kit
- must be ordered separately.  
Tightening torque **Md = 15 Nm**

PONAR Wadowice S.A.  
ul. Wojska Polskiego 29  
34-100 Wadowice  
tel. +48 33 488 29 00  
fax. +48 33 488 21 03  
[www.ponar-wadowice.pl](http://www.ponar-wadowice.pl)

