

# Pressure reducing/relief valve, pilot operated type UZCP 10

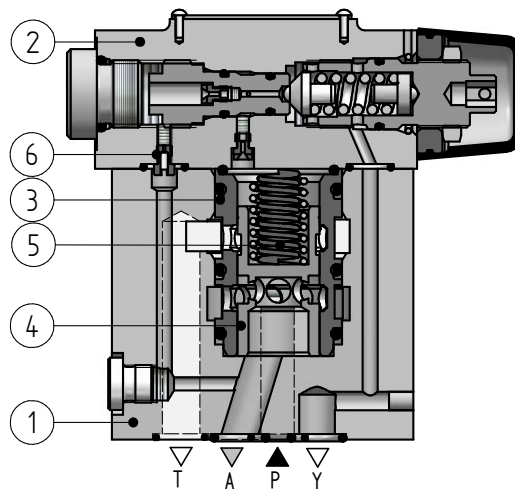
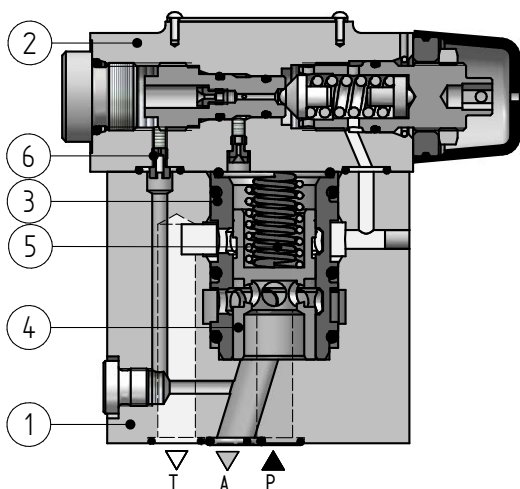
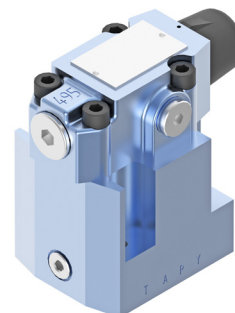
WN 10 |  $p_{max}$  35 MPa |  $Q_{max}$  80 dm<sup>3</sup>/min | WK 420 280



## DATA SHEET - OPERATION MANUAL

### APPLICATION

Pilot operated pressure reducing/relief valve type **UZCP10...** is used for maintaining the constant pressure in the system independently from the flow direction. The valve is designed for subplate mounting in any position in hydraulic systems.



### DESCRIPTION OF OPERATION

The pressure is set by means of the pilot valve **2**. If the pilot valve **2** is open then the fluid flows through it. The flow is branched out from the main flow reduced by orifice **6** and affects the pilot valve **2** and the spool **4** of the main valve **1** which mates with the cylindrical surface of the sleeve **3**. The spool **4** movement is limited by the spring **5**. If the pressure in line **A** exceeds the set pressure at the pilot valve **2**, then it opens and allows the fluid flow to the tank through the line **Y** (external drainage) - version **UZCP10...Y...** or through the line **T** (internal drainage)

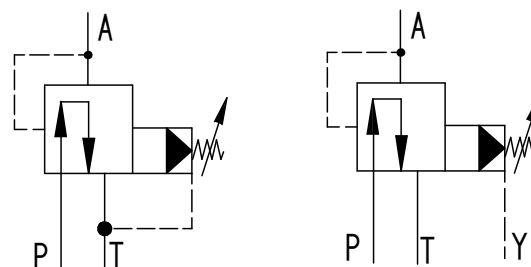
- version **UZCP10...W....** Opening the pilot valve **2** interferes the balance state on the main spool and causes self-emerging of new clearance throttling the pilot flow so that the pressure behind it, is independent on the flow rate. If the pressure increase in line **A** is so high, then the connection **P - A** is closed and the connection **A - T** is open, then the valve operates as a pressure relief valve. It secures the system from excessive pressure increase in line **A**, stabilising the pressure at required level independently from the flow direction.

### TECHNICAL DATA

hydraulic fluid	mineral oil
required oil cleanliness class	ISO 4406 class 20/18/15
nominal fluid viscosity	37 mm <sup>2</sup> /s at temp. 55°C
viscosity range	2,8 ÷ 380 mm <sup>2</sup> /s
fluid temperature range (in tank)	rec: 40÷55°C; max. -20 ÷ +70°C
ambient temperature range	-20 ÷ 70°C
max. operating pressure	35 MPa
weight	4,3 kg

assembly and operation requirements at:  
[www.operating-conditions.ponar.pl](http://www.operating-conditions.ponar.pl)

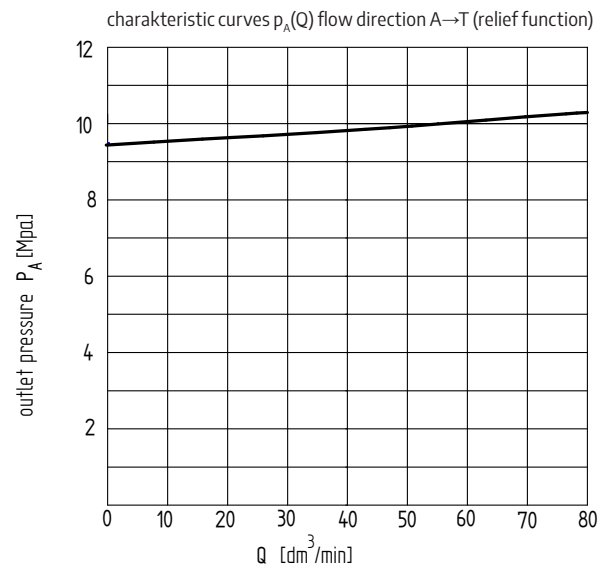
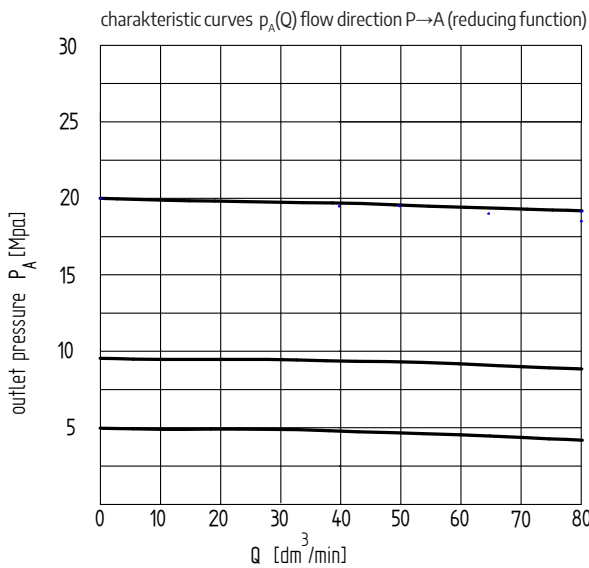
### HYDRAULIC DIAGRAMS





## CHARACTERISTICS

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



## HOW TO ORDER

UZCP 10 —   /           \*

1                      2                      3                      4                      5                      6                      7

### 1 nominal size (NS)

NS10 = 10

### 2 series number

seria 52= 52  
(51-59) - connection and installation dimensions unchanged

### 3 pressure setting

up to 5 MPa = 50  
**up to 10 MPa = 100**  
 up to 20 MPa = 200  
**up to 35 MPa = 350**

### 4 pilot flow drain

internal, along with drain flow to port T= W  
**external, through independent port Y = Y**

### 5 type of adjustment element

hand knob = 1  
 setting screw with internal hexagon = 2  
 hand knob with a key lock = 3

### 6 sealing

**NBR (for fluids on mineral oil base) = Ø**  
**FKM (for fluids on phosphate ester base) = V**

### 10 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: **UZCP10 - 52/350 W 2**

## SUBPLATES

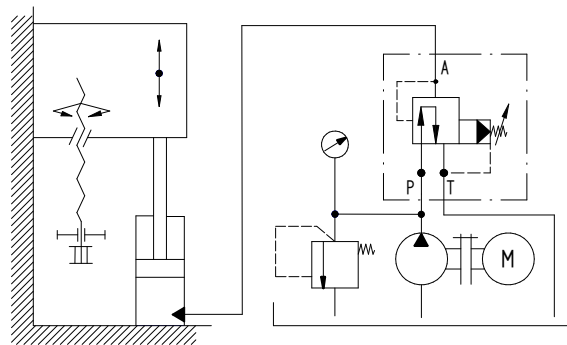
Subplates must be ordered according to data sheet **WK 496 520**, plate symbols:

**G 67/01 - threaded connection G 1/2**  
**G 534/01 - threaded connection G 3/4**

Subplates and mounting screws for valve assembly **M6 × 40 - 10,9** in accordance with **PN - EN ISO 4762 (PN/M-82302)** 4 pcs/set **delivered on separate order.**  
 Tightening torque  $M_d = 15 \text{ Nm}$ .

## EXAMPLE OF APPLICATION IN A HYDRAULIC SYSTEM

valve version: **UZCP10-52/...W...**



## CONTACT

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