

# Pressure cartridge relief valve type UZPS6

NS 6 |  $p_{max}$  35 MPa |  $Q_{max}$  60 dm<sup>3</sup>/min | WK 492 860



## DATA SHEET – OPERATION MANUAL

### APPLICATION

Pressure relief valve **UZPS6...** type is designed to limit pressure in hydraulic systems.

### DESCRIPTION OF OPERATION

The valve **UZPS6...** type is a pilot pressure relief valve and consists of a pilot valve and main valve. Regulated pressure affects the lower surface of the main valve spool **1** and at the same time through the nozzle **2** affects the upper surface of the main valve spool. The pressure also affects the pilot valve cone **4** through the nozzle **3**. In neutral position, the pressure on both sides of the main spool **1** is the same. The spring **5** holds the spool **1** in rest position (closed position). The ports **1** (P) and **2** (T) are separated from each other. When the pressure in the system reaches the value set by spring tension **6**, the pilot valve **4** opens and the oil flows through the nozzles **3** and **2**. At the nozzle **2** arises the pressure difference which affects both the upper and lower surface of the spool. As a result, the spool **1** lifts and the excessive oil can be drained to the tank.

### TECHNICAL PARAMETERS

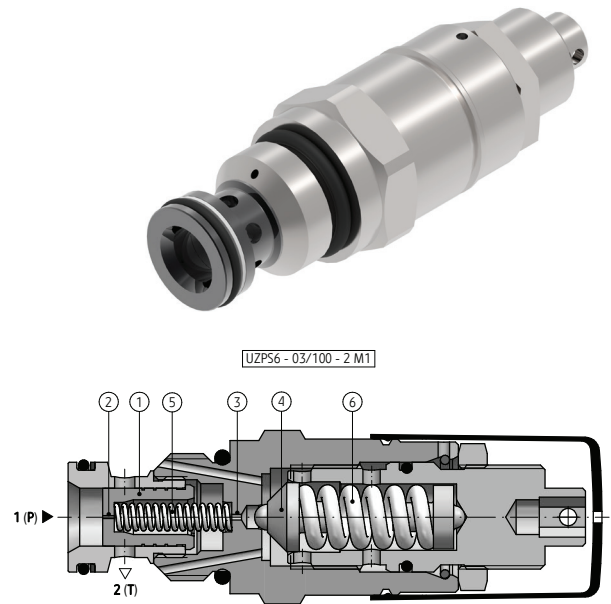
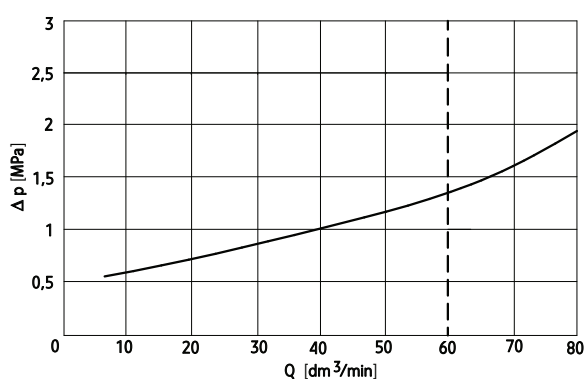
hydraulic fluid	mineral oil
required fluid cleanliness class	ISO 4406, class 20/18/15
nominal fluid viscosity	37 mm <sup>2</sup> /s at temperature 55 °C
viscosity range	2,8 ÷ 380 mm <sup>2</sup> /s
fluid temperature range (in a tank)	recommended 40 ÷ 55 °C max. -20 ÷ 70 °C
ambient temperature range	-20 ÷ 50 °C
maximum operating pressure	35 MPa
maximum flow	60 dm <sup>3</sup> /min
pressure setting ranges	5 MPa   10 MPa   20 MPa   35 MPa
weight	0,2 kg

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

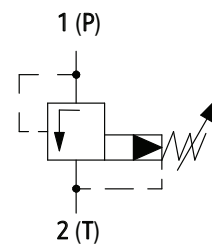
### PERFORMANCE CURVES

measured at viscosity  $\nu = 41$  mm<sup>2</sup>/s and temperature  $t = 50$  °C

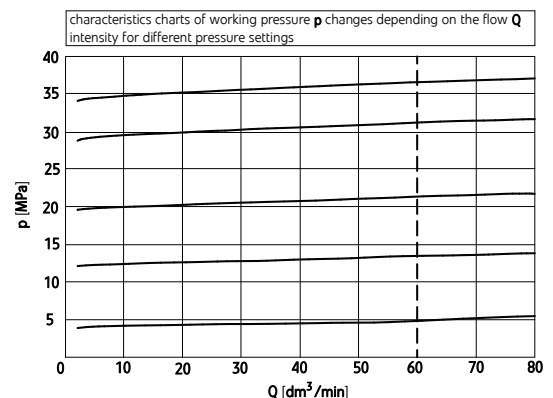
for flow resistance (the lowest settable pressure)



### DIAGRAMS

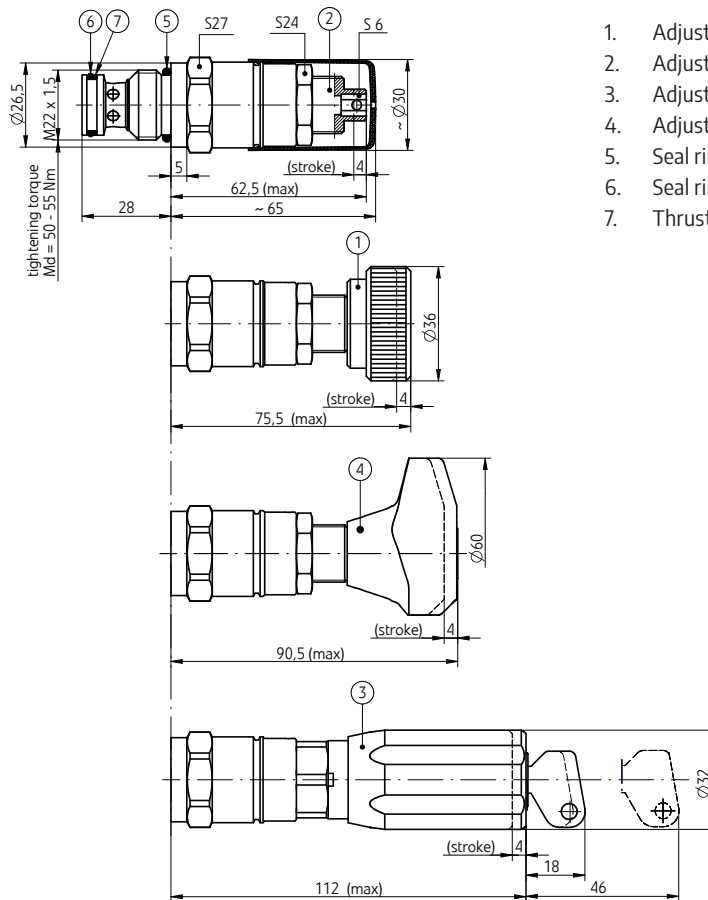


for the working pressure depending on the flow



## OVERALL AND CONNECTION DIMENSIONS

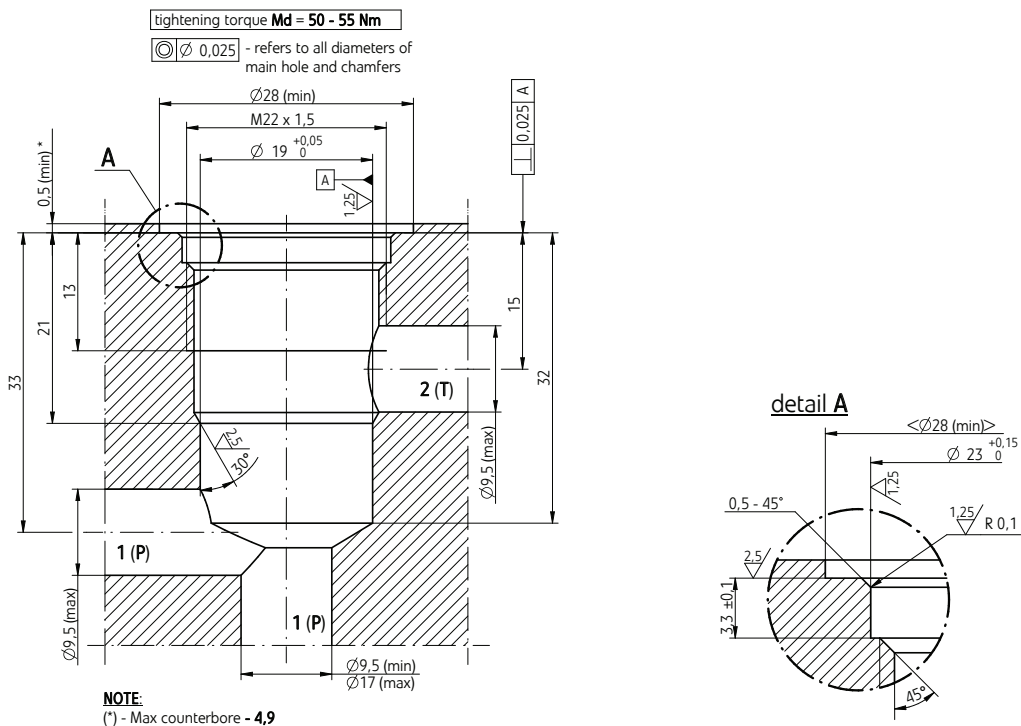
version UZPS6...M1...



1. Adjustment type **1** (rotary knob)
2. Adjustment type **2** (hexagon socket set screw **S6**)
3. Adjustment type **3** (lockable rotary knob)
4. Adjustment type **H** (three arm knob)
5. Seal ring **o-ring 18 x 2,65** - pc 1/kit
6. Seal ring **o-ring 15,6 x 1,78** - pc 1/kit
7. Thrust ring **19 x 16,2 x 0,7** - pc 1/kit

version UZPS6...M1...

connection cavity M-06-2 (M22 x 1,5; 2-way)



## HOW TO ORDER

UZPS **6** -  /   **M1**

1            2            3            4            5            6            7

### 1 Nominal size

WN6 = 6

### 2 Series number

(02-09) - connection and installation dimensions unchanged = 0X  
**series 03= 03**

### 3 Settable pressure range

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

### 4 Adjustment element

rotary knob = 1  
**set screw with internal hexagon = 2**  
 lockable rotary knob = 3  
 three arm knob = H

### 5 Mechanical connection type

thread M22 x 1,5 = **M1**

### 6 Sealing

**NBR (for fluids on mineral oil base) =**  $\emptyset$   
 FKM (for fluids on phosphate ester base) = V

### 7 Further requirements = \*

(to be agreed with the manufacturer)

The symbols **in bold** are preferred versions available in short delivery time.  
 $\emptyset$  symbol means the field should be left blank.

Coding example: **UZPS6-03/100-2M1**

## CONTACT

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