Pressure relief valve, pilot operated, sandwich plate design type **UZPR10...** is used to limit pressure in hydraulic systems.

**DESCRIPTION OF OPERATION**

Pressure relief valve sandwich plate type **UZPR10...** consists of a main body (1) and screwed-in relief cartridge valve pilot operated (2) type **UZPS6** according to catalogue sheet **WK 492 860**. Proper drilling of the body allows connections as per hydraulic diagram for the version. When the pressure in the system exceeds the setting of the valve (2), it opens, causing relief flow to port **T** (for the version **ABBA...** to port **A** or **B**).
### TECHNICAL DATA

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydraulic fluid</td>
<td>mineral oil</td>
</tr>
<tr>
<td><strong>Required filtration</strong></td>
<td>up to 16 µm</td>
</tr>
<tr>
<td><strong>Recommended filtration</strong></td>
<td>up to 10 µm</td>
</tr>
<tr>
<td>Nominal fluid viscosity</td>
<td>37 mm²/s at temperature 55°C</td>
</tr>
<tr>
<td>Viscosity range</td>
<td>2.8 up to 380 mm² /s</td>
</tr>
<tr>
<td>Fluid temperature range (in a tank)</td>
<td>recommended 40°C up to 55°C</td>
</tr>
<tr>
<td></td>
<td>max -20°C up to +70°C</td>
</tr>
<tr>
<td>Ambient temperature range</td>
<td>-20°C up to +70°C</td>
</tr>
<tr>
<td><strong>Max operating pressure</strong></td>
<td>31.5 MPa</td>
</tr>
<tr>
<td><strong>Settable pressure ranges</strong></td>
<td>5 MPa; 10 MPa; 20 MPa; 31.5 MPa</td>
</tr>
<tr>
<td><strong>Maximum set pressure</strong></td>
<td>31.5 MPa</td>
</tr>
<tr>
<td><strong>Maximum flow</strong></td>
<td>100 dm³ / min</td>
</tr>
<tr>
<td>Type of cartridge pressure relief valves fitted</td>
<td>UZPS6 according to catalogue sheet WK 492 860</td>
</tr>
<tr>
<td>Weight</td>
<td>1.6 kg for versions: ...AT..., ...PT..., ...BT...</td>
</tr>
<tr>
<td></td>
<td>2 kg for versions: ...ATBT..., ...ABBA...</td>
</tr>
</tbody>
</table>

### SCHEMES

**Hydraulic schemes of valves type UZPR10...**

<table>
<thead>
<tr>
<th>Version</th>
<th>Side of a component closing the stack</th>
<th>Subplate side</th>
</tr>
</thead>
<tbody>
<tr>
<td>UZPR10S...AT...</td>
<td>T A P B P</td>
<td></td>
</tr>
<tr>
<td>UZPR10S...BT...</td>
<td>T A P B P</td>
<td></td>
</tr>
<tr>
<td>UZPR10S...PT...</td>
<td>T A P B P</td>
<td></td>
</tr>
<tr>
<td>UZPR10S...ABBA...</td>
<td>T A P B P</td>
<td></td>
</tr>
<tr>
<td>UZPR10S...ATBT...</td>
<td>T A P B P</td>
<td></td>
</tr>
</tbody>
</table>
OVERALL AND CONNECTION DIMENSIONS

version UZPR10...AT...

1 - Seal o-ring 12 × 2 – 5 pcs/kit (P, T,A, T,B, A, B)

2 - Mounting holes configuration of a subplate in accordance with the standards listed below:
  · CETOP RP 121H – symbol CETOP 4.2-4-05 (nominal size CETOP 05)
  · ISO 4401 – symbol ISO 4401-05-04-0-94 fixing screws M6 × L* - 10.9 – 4 pcs/kit in accordance with PN - EN ISO 4762 tightening torque Md = 15 Nm

3 – Required surface finish of a subplate

NOTE:
(*) - Required length of the screws L is related to type and the number of hydraulic components sandwich fitted
OVERALL AND CONNECTION DIMENSIONS

versions: UZPR10...BT...; ...PT...

1 - Seal o-ring 12 × 2 – 5 pcs/kit (P, T, A, B)
2 - Mounting holes configuration of a subplate in accordance with the standards listed below:
   - CETOP RP 121H – symbol CETOP 4.2-4-05 (nominal size CETOP 05)
   - ISO 4401 – symbol ISO 4401-05-04-0-94 fixing screws M6 × L* - 10.9 – 4 pcs/kit in accordance with PN - EN ISO 4762 tightening torque Md = 15 Nm
3 - Required surface finish of a subplate

NOTE:
(*) – Required length of the screws L is related to type and the number of hydraulic components sandwich fitted
OVERALL AND CONNECTION DIMENSIONS

version UZPR10...ATBT...

1 – Seal o-ring 12 × 2 – 5 pcs/kit (P, T, A, B)
2 – Mounting holes configuration of a subplate in accordance with the standards listed below:
   - CETOP RP 121H – symbol CETOP 4.2-4-05 (nominal size CETOP 05)
   - ISO 4401 – symbol ISO 4401-05-04 -0-94 fixing screws M6 × L* - 10.9 – 4 pcs/kit in accordance with PN - EN ISO 4762 tightening torque Md = 15 Nm
3 – Required surface finish of a subplate

NOTE:
(*) – Required length of the screws L is related to type and the number of hydraulic components sandwich fitted

112,1 (max.) – 5 holes (P, T, A, B)
M6 depth
12 – 4 holes

0,01/100 mm
0,63

0,01/100 mm
0,63

0,01/100 mm
0,63

0,01/100 mm
0,63

0,01/100 mm
0,63

0,01/100 mm
0,63
OVERALL AND CONNECTION DIMENSIONS

version UZPR10...ABBA...

1 - Seal o-ring 12 × 2 - 5 pcs/kit (P, T, A, B)

2 - Mounting holes configuration of a subplate in accordance with the standards listed below:
   - CETOP RP 121H – symbol CETOP 4.2-4-05 (nominal size CETOP 05)
   - ISO 4401 – symbol ISO 4401-05-04-0-94 fixing screws M6 × L* - 10.9 – 4 pcs/kit in accordance with PN - EN ISO 4762 tightening torque Md = 15 Nm

3 - Required surface finish of a subplate

NOTE:
(*) - Required length of the screws L is related to type and the number of hydraulic components sandwich fitted
PERFORMANCE CURVES

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

![Performance Curves Graph]

**SUBPLATES AND FIXING SCREWS**

Subplates must be ordered according to the catalogue sheet **WK 496 520**. Subplate symbols:

- **G 66/01** – threaded connection G 3/8
- **G 67/01** – threaded connection G 1/2
- **G 89/01** – threaded connection G1/4
- **G 67/02** – threaded connection M22 x1,5

Subplates and screws fixing the relief valve **M6 \times L^{*} - 10,9** – 4 pcs/kit in accordance with **PN - EN ISO 4762** must be ordered separately.

Tightening torque **Md = 15 Nm**

**NOTES:**

(*) – Required length of the screws L is related to type and the number of hydraulic components sandwich fitted.

The subplate symbol in bold is the preferred version available in short delivery time.
HOW TO ORDER

UZPR 10 S / – *

Nominal size (NS)
NS10 = 10

Pressure relief valves fitted valves type UZPS6 = S

Series number
(00 – 09) – connection and installation dimensions unchanged = 0X
series 02 = 02

Settable pressure range
up to 5 MPa = 50
up to 10 MPa = 100
up to 20 MPa = 200
up to 31,5 MPa = 315

Adjustment element
set screw with internal hexagon = 2

Relief function for flow direction
(hydraulic schemes according to page 2)
from A to T = AT
from B to T = BT
from P to T = PT
from A to T and from B to T = ATBT
from A to B and from B to A = ABBA

Sealing
NBR (for fluids on mineral oil base) = no code
FKM (for fluids on phosphate ester base) = V

Further requirements in clear text (to be agreed with the manufacturer)

NOTES:
The pressure relief valve should be ordered according to the above coding.
The symbols in bold are the preferred versions available in short delivery time.
Coding example: UZPR10S - 02/315 - 2 PT

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