

DATA SHEET - OPERATION MANUAL

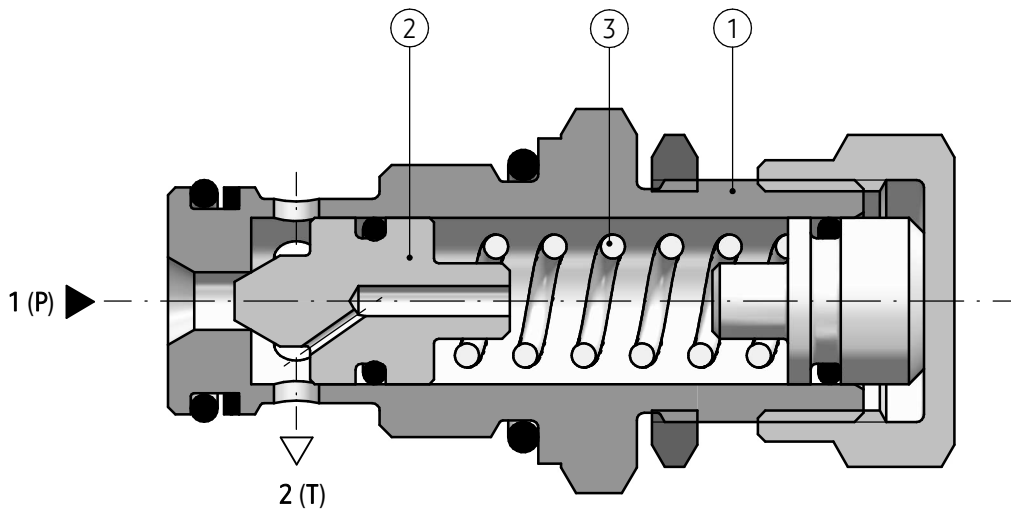
APPLICATION

Pressure relief valve type UZPD4... is designed to limit maximum pressure in the hydraulic system.



DESCRIPTION OF OPERATION

UZPD4 - 13 /160 M1



The valve type UZPD4... is direct operated pressure relief valve. Controllable pressure affects surface of the spool (2) in the housing (1). The spring (3) holds the spool in its initial position (closed). Ports 1(P) and 2(T) are

separated. If a pressure in the system reaches the value set by the tension of the spring, the spool opens allowing free oil flow.

TECHNICAL DATA

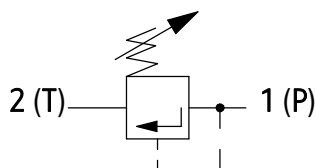
| | | |
|-------------------------------------|--|-------------------|
| Hydraulic fluid | mineral oil | |
| Required fluid cleanliness class | ISO 4406 class 20/18/15 | |
| Nominal fluid viscosity | 37 mm ² /s at temperature 55 °C | |
| Viscosity range | 2,8 up to 380 mm ² /s | |
| Fluid temperature 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 | |
| Maximum operating pressure | 31,5 MPa | |
| Max flow rate | 30 dm ³ /min | |
| Weight | 0,1 kg | |

INSTALLATION AND OPERATION REQUIREMENTS

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Only fully functional and operational valve must be used. 2. During the operation one must maintain the recommended fluid viscosity acc. to requirements defined in this Data Sheet - Operation Manual 3. In order to ensure failure free and safe operation the following must be systematically checked: <ul style="list-style-type: none"> • proper working of the valve • cleanliness of the hydraulic fluid 4. Due to heating of valve body to high temp., the valve shall be placed in such way to eliminate the risk of accidental contact with the valve body during | <ol style="list-style-type: none"> operation or suitable covers shall be applied acc. to European standards PN - EN ISO 13732 - 1 and PN - EN 4413 5. In order to provide proper tightness of the valve connection to the hydraulic system, one should keep the dimensions of the sealing rings, the dimensions of cavity, tightening torques values and valve operation parameters, specified in this Data Sheet - Operation Manual. 6. A person that operates the valve must be thoroughly familiar with this Data Sheet - Operation Manual. |
|---|---|

DIAGRAMS

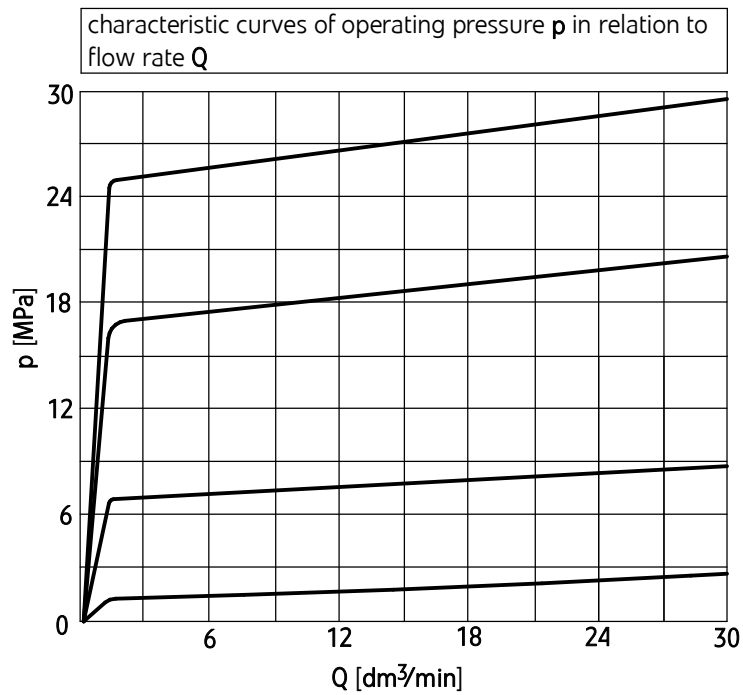
Graphic symbol for the valve type UZPD4...



PERFORMANCE CURVES

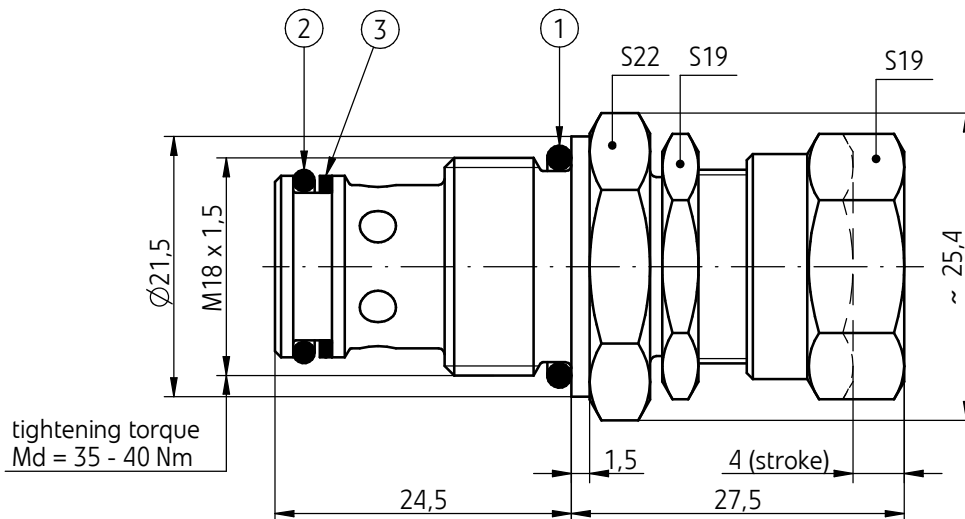
measured at viscosity $\nu = 41 \text{ mm}^2/\text{s}$ and temperature $t = 50^\circ\text{C}$

Flow curves



OVERALL AND CONNECTION DIMENSIONS

valve type UZPD4...



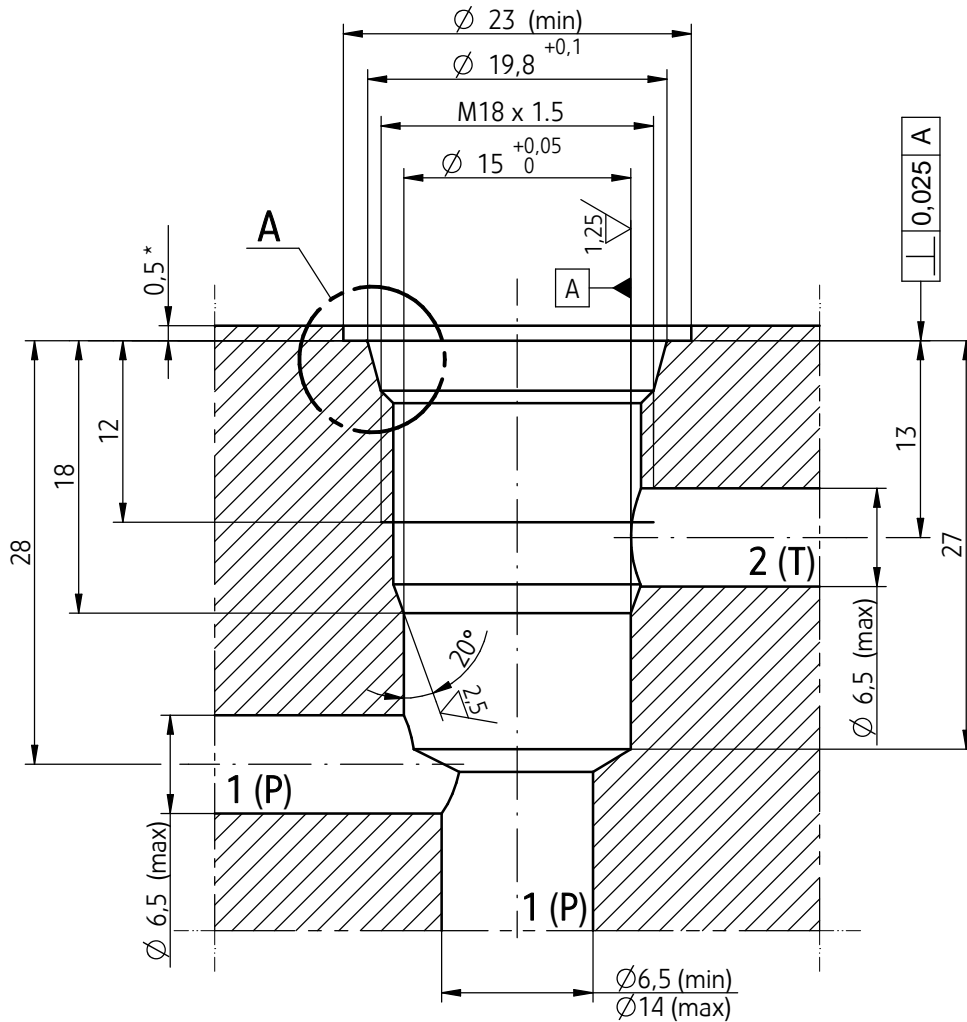
- | | |
|--------------------------------------|-------------|
| 1 - Sealing ring o-ring 16 x 2 | - pcs 1/set |
| 2 - Sealing ring o-ring 12,42 x 1,78 | - pcs 1/set |
| 3 - Support ring 15 x 12,2 x 1 | - pcs 1/set |

OVERALL AND CONNECTION DIMENSIONS

cavity M - 04 - 2 (M18 x1,5 - 2-way)

tightening torque **Md = 35 - 40 Nm**

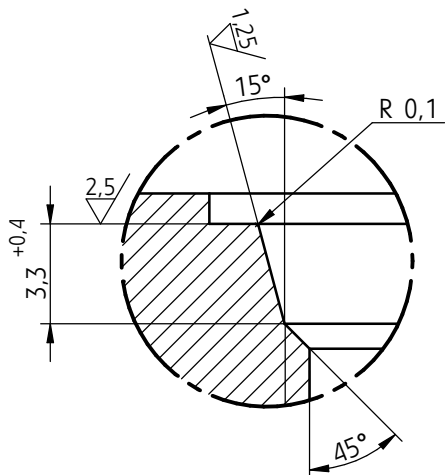
$\text{◎} \varnothing 0,025$ - applied to all diameters of the main hole and chamfers



detail A

NOTE:

(*) - Max depth of the counterbore - 1,4



HOW TO ORDER

| | | | | | | |
|-------------|----------|----------|----------|-----------|--|----------|
| UZPD | 4 | + | / | M1 | | ★ |
|-------------|----------|----------|----------|-----------|--|----------|

| | | | | | | |
|---|---|--|--|--|--|--|
| Nominal size (NS) NS4 | = 4 | | | | | |
| Series number (12-19) - connection and installation dimensions unchanged series 13 | = 1X = 13 | | | | | |
| Settable pressure range up to 8 MPa up to 16 MPa up to 31,5 MPa | = 80 = 160 = 315 | | | | | |
| Type of connection cavity M18 x 1,5 | = M1 | | | | | |
| Sealing NBR (for fluids on mineral oil base) FKM (for fluids on phosphate ester base) | = no designation = V | | | | | |
| Further requirements in clear text (to be agreed with the manufacturer) | | | | | | |

NOTES:

Directional cartridge valve should be ordered according to the above coding.

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

Coding example: UZPD4 - 13/160 M1

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