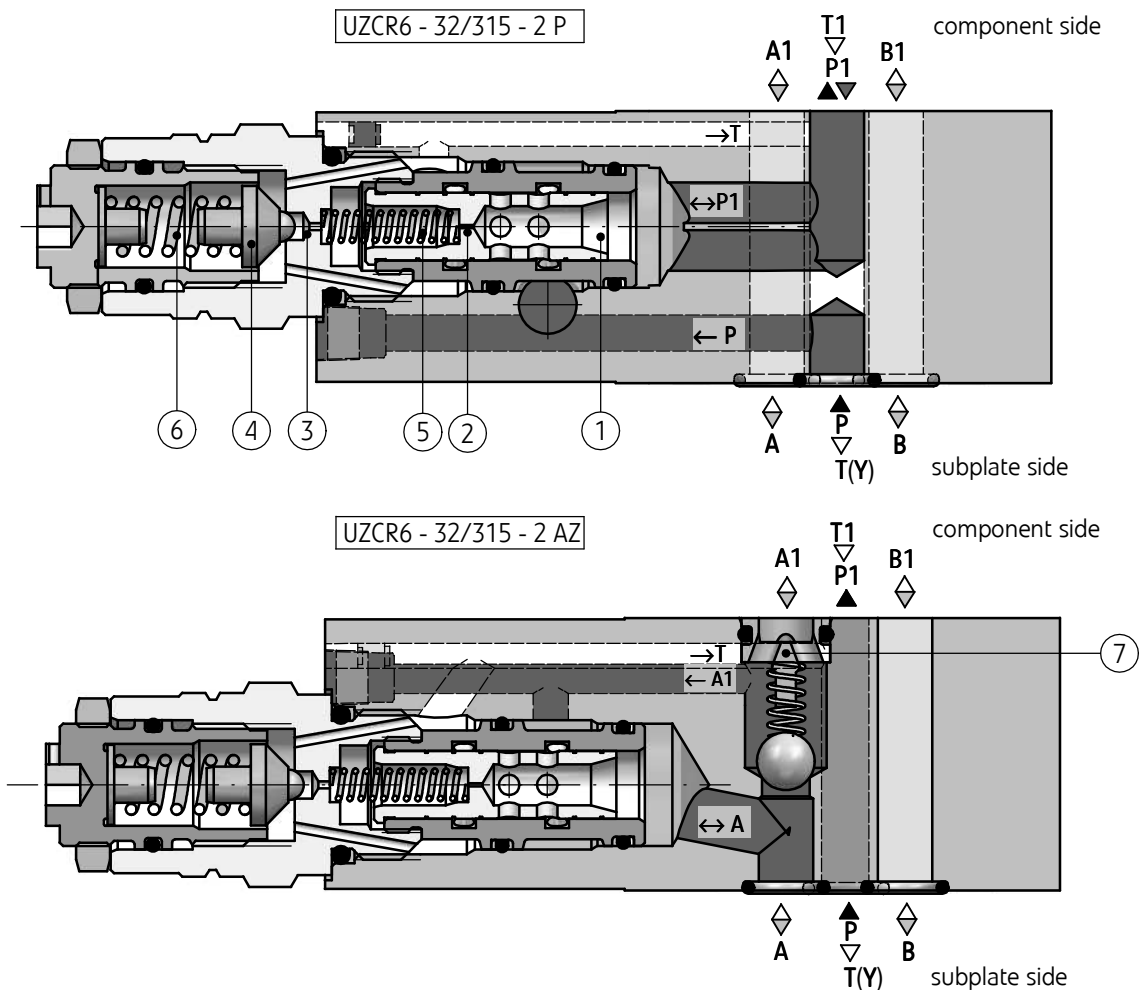


### APPLICATION

The pressure reducing - relief valve type UZCR6... is used for reducing pressure in hydraulic systems.



### DESCRIPTION OF OPERATION



The valve consists of pilot valve and main valve. The reduced pressure acts on the lower face of main spool (1), and through nozzle (2) also on the upper face and through nozzle (3) on pilot valve poppet (4). In rest position the pressure on both sides of the main spool (1) is identical. Spring (5) maintains the spool in initial (open) position. Lines P and P1 (A1 to A, B1 to B) are interconnected. When the pressure attains the value determined by the tension of spring (6), the pilot valve (4) opens and oil flows through nozzle (2).

A pressure drop is created across the nozzle, which acts on the upper and lower faces of spool (1) and moves it causing throttling of flow from P to P1 (A1 to A, B1 to B). When there is further increase of pressure, the flow is stopped completely, and further movement of spool (1) opens the T line overflow and restricts pressure rise. Unrestricted flow in opposite direction from A to A1 (B to B1) is effected through check valve (7) - design with check valve UZCR6...AZ; (UZCR6...BZ).

## TECHNICAL DATA

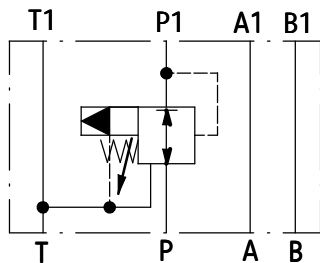
Hydraulic fluid	mineral oil	
<b>Required filtration</b>	<b>up to 16 µm</b>	
Recommended filtration	up to 10 µm	
Nominal fluid viscosity	37 mm <sup>2</sup> /s at temperature 55 °C	
Viscosity range	2,8 up to 380 mm <sup>2</sup> /s	
Fluid temperature range (in a tank)	recommended	40°C up to 55°C
	max	-20°C up to +70°C
Ambient temperature range	-20°C up to +70°C	
<b>Maximum operating pressure</b>	<b>31,5 MPa</b>	
<b>Maximum set pressure</b>	<b>31,5 MPa</b>	
<b>Pressure at inlet connection</b>	<b>up to 31,5 MPa</b>	
<b>Pressure at outlet connection</b>	<b>0,3 - 31,5 MPa</b>	
Settable pressure range	5 MPa; 10 MPa; 20 MPa; 31,5 MPa	
<b>Maximum flow</b>	<b>50 dm<sup>3</sup>/min</b>	
Weight	1,7 kg	

## SCHEMES

Hydraulic schemes of valves type UZCR6...

version UZCR6...P...

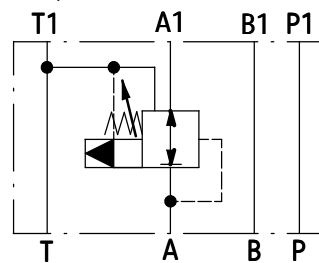
component side



subplate side

version UZCR6...A...

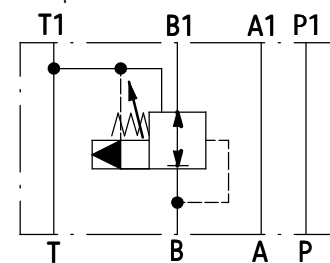
component side



subplate side

version UZCR6...B...

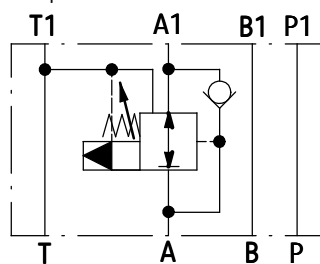
component side



subplate side

version UZCR6...AZ...

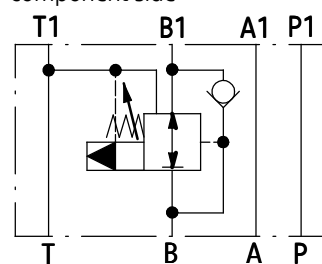
component side



subplate side

version UZCR6...BZ...

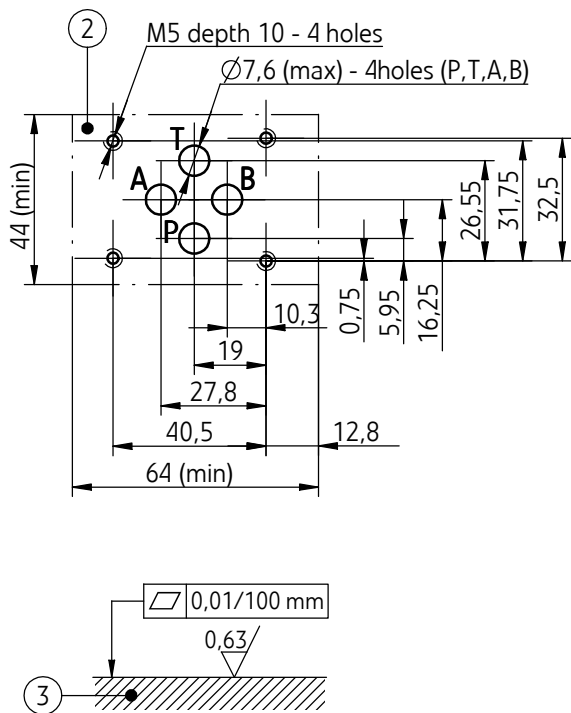
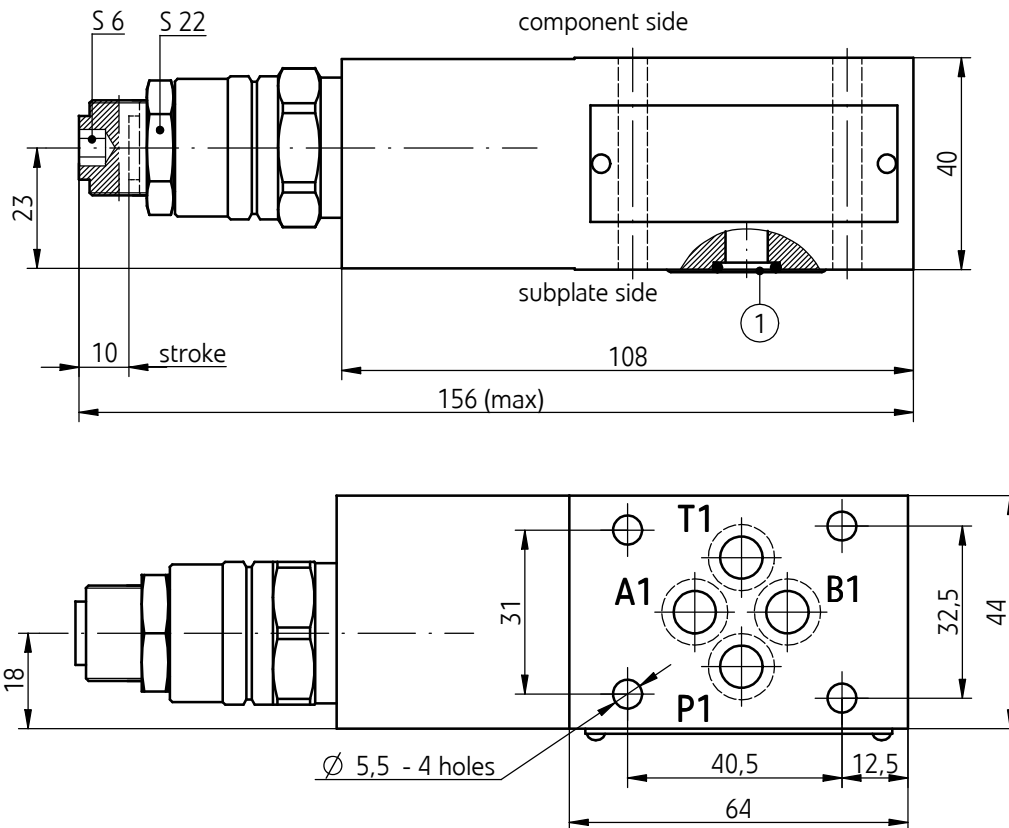
component side



subplate side

# OVERALL AND CONNECTION DIMENSIONS

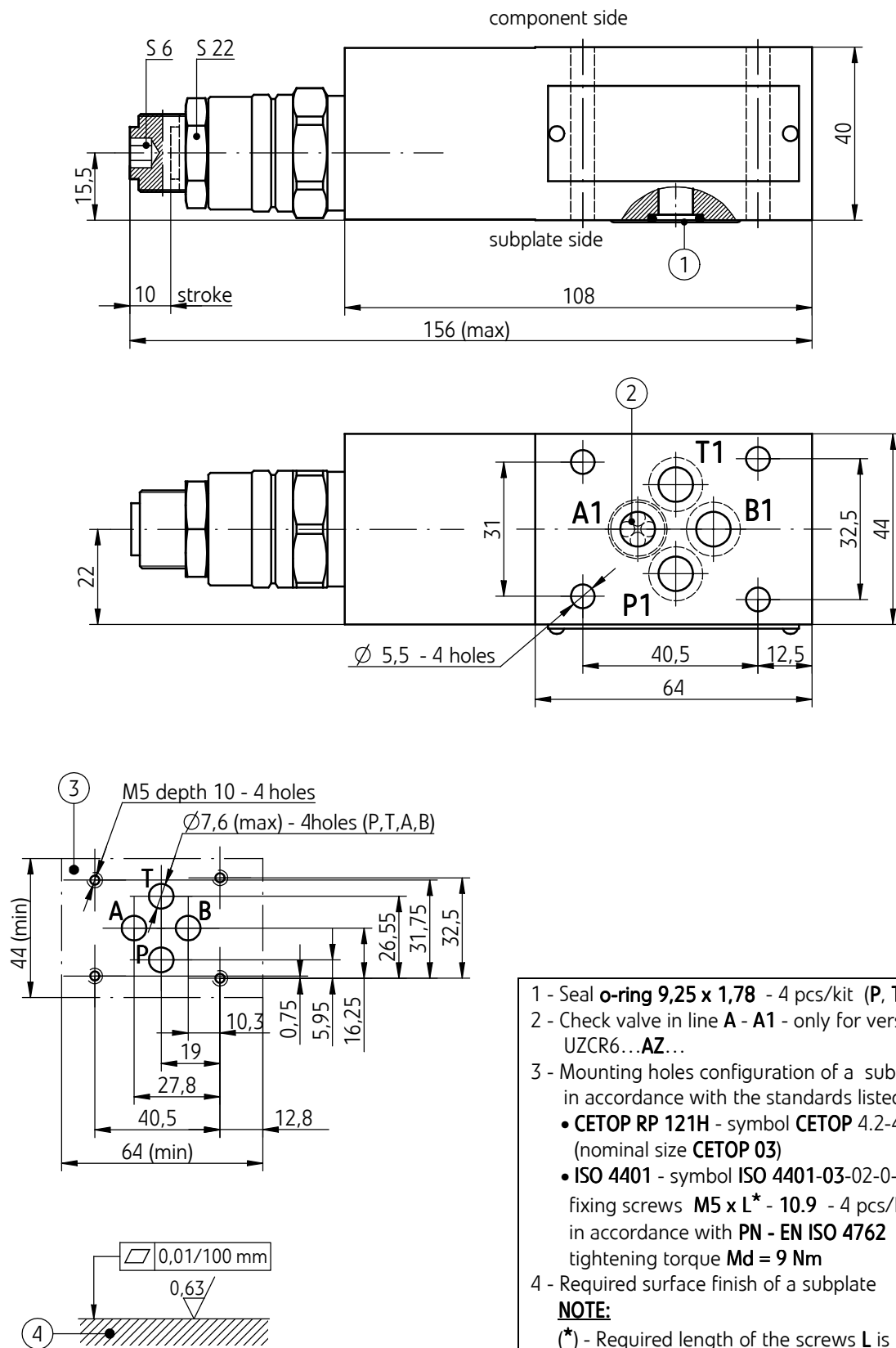
version UZCR6...P...



- 1 - Seal **o-ring 9,25 x 1,78** - 4 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 4.2-4-03** (nominal size **CETOP 03**)
    - **ISO 4401** - symbol **ISO 4401-03-02-0-94** fixing screws **M5 x L\*** - 10.9 - 4 pcs/kit in accordance with **PN - EN ISO 4762** tightening torque **Md = 9 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

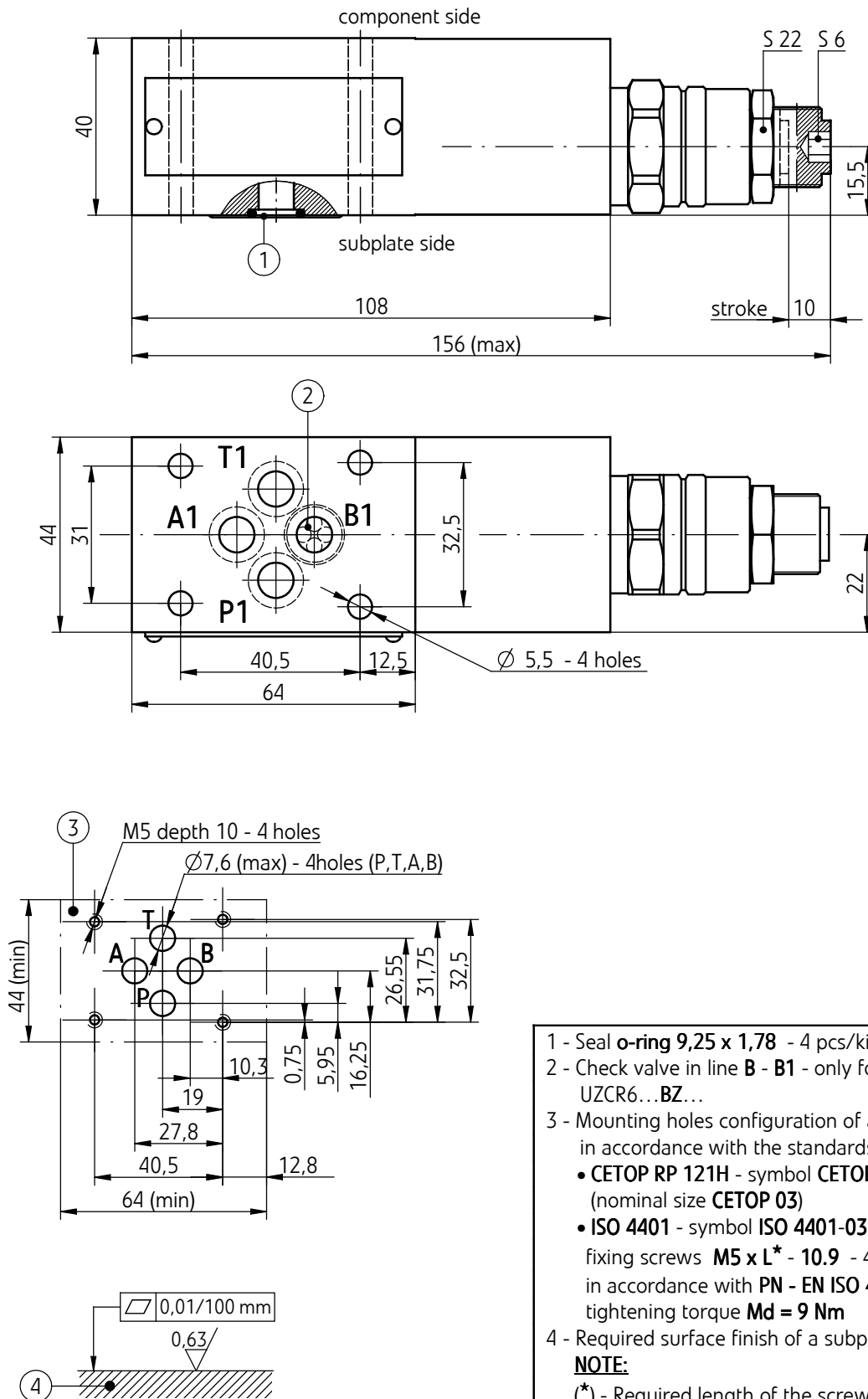
versions: UZCR6...A...; UZCR6...AZ...



- 1 - Seal **o-ring 9,25 x 1,78** - 4 pcs/kit (P, T, A, B)
  - 2 - Check valve in line **A - A1** - only for version UZCR6...AZ...
  - 3 - Mounting holes configuration of a subplate in accordance with the standards listed below:
    - **CETOP RP 121H** - symbol **CETOP 4.2-4-03** (nominal size **CETOP 03**)
    - **ISO 4401** - symbol **ISO 4401-03-02-0-94** fixing screws **M5 x L\*** - 10.9 - 4 pcs/kit in accordance with **PN - EN ISO 4762** tightening torque **Md = 9 Nm**
  - 4 - 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: UZCR6...B...; UZCR6...BZ...

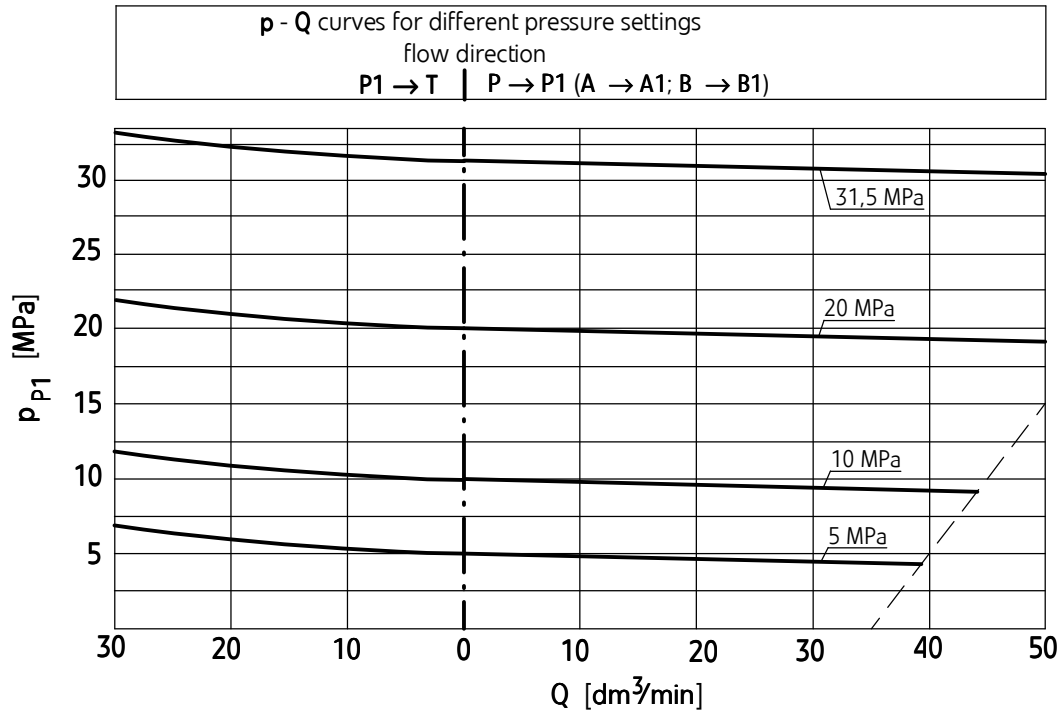


- 1 - Seal **o-ring 9,25 x 1,78** - 4 pcs/kit (P, T, A, B)
  - 2 - Check valve in line **B - B1** - only for version UZCR6...BZ...
  - 3 - Mounting holes configuration of a subplate in accordance with the standards listed below:
    - **CETOP RP 121H** - symbol **CETOP 4.2-4-03** (nominal size **CETOP 03**)
    - **ISO 4401** - symbol **ISO 4401-03-02-0-94** fixing screws **M5 x L\*** - **10.9** - 4 pcs/kit in accordance with **PN - EN ISO 4762** tightening torque **Md = 9 Nm**
  - 4 - 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

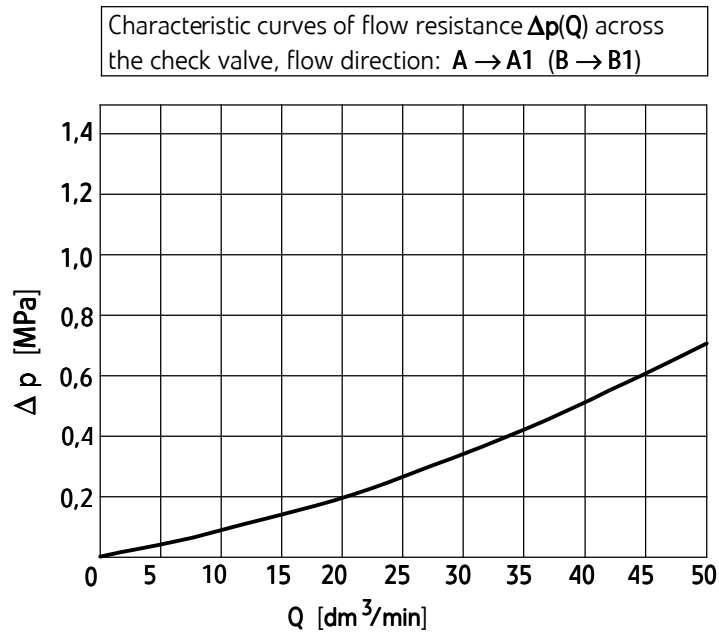
## PERFORMANCE CURVES

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

Characteristic curves of outlet pressure in relation to flow rate



Characteristic curves of flow resistance



## HOW TO ORDER

UZCR	6	-	/	-				*
------	---	---	---	---	--	--	--	---

**Nominal size (NS)**

**NS6** = 6

**Series number**

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

**series 32** = 32

**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

**Connection** (according to schemes on page 2)

**Reduction in line P** = P

Reduction in line A = A

Reduction in line B = B

Reduction in line A + check valve = AZ

Reduction in line B + check valve = BZ

**Sealing**

**NBR** (for fluids on mineral oil base) = no code

FKM (for fluids on phosphate ester base) = V

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

NOTES:

The pressure reducing - 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: UZCR6 - 32/315 - 2 P

## SUBPLATES AND FIXING SCREWS

Subplates must be ordered according to catalogue sheet **WK 496 480**. Subplate symbols:

G 341/01 - threaded connections G 1/4

**G 342/01** - threaded connections **G 3/8**

G 502/01 - threaded connections G 1/2

G 341/02 - threaded connections M14 x 1,5

G 342/02 - threaded connections M16 x 1,5

Subplates and screws fixing the pressure reducing valve **M5 x L\* - 10,9** - 4 pcs/kit in accordance with **PN - EN ISO 4762** must be ordered separately.

Tightening torque **Md = 9 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.

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