Pressure reducing valves type UZRC 10 are direct operated valves in sandwich plate design. They are used to maintain pressure behind the valve constant on condition that pressure in front of the valve is higher. The valve may also be applied where undesirable pressure increase behind the valve could appear. An additional overflow controlling an excessive pressure increase is then open.

## DESCRIPTION OF OPERATION
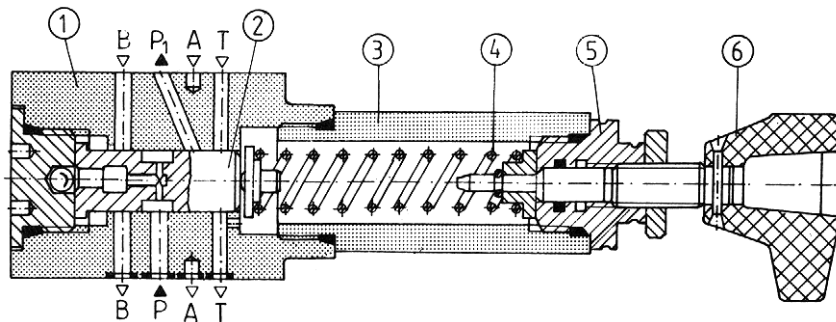
There is the spool 2 in the housing 1. The spool is affected by the reduced pressure on one side and the force of the spring 4 dependent on its deflection on the other. The spring force is set by turning the hand knob 6 of the setting element 5 screwed in the sleeve 3.If pressure exceeds the value set, the spool moves and closes flow line P.

That will be followed by larger restriction of flowing fluid resulting in limiting the pressure behind the valve. If the pressure continues to rise P1, the connection P to P1 is cut off. The further movement of the spool 2 causes the overflow from P1 to T to open.

TECHNICAL DATA

|	
Hydraulic fluid	Mineral oil or phosphate ester
Nominal fluid viscosity	37 mm^2/s at the temperature of 328 K
Viscosity range	2.8 to 380 mm^2/s
Optimum working temperature(fluid in a tank)	313 - 328 K
Fluid temperature range	243 - 343 K
Required fluid filtration	16 μm
Recommended fluid filtration	10 μm
Maximum pressure in ports A, B, P	31.5 MPa
Maximum pressure setting in port P (while in port T = 0 MPa)	21 MPa
Maximum pressure in port T	1.5 MPa
Weight	3 kg

OVERALL DIMENSIONS
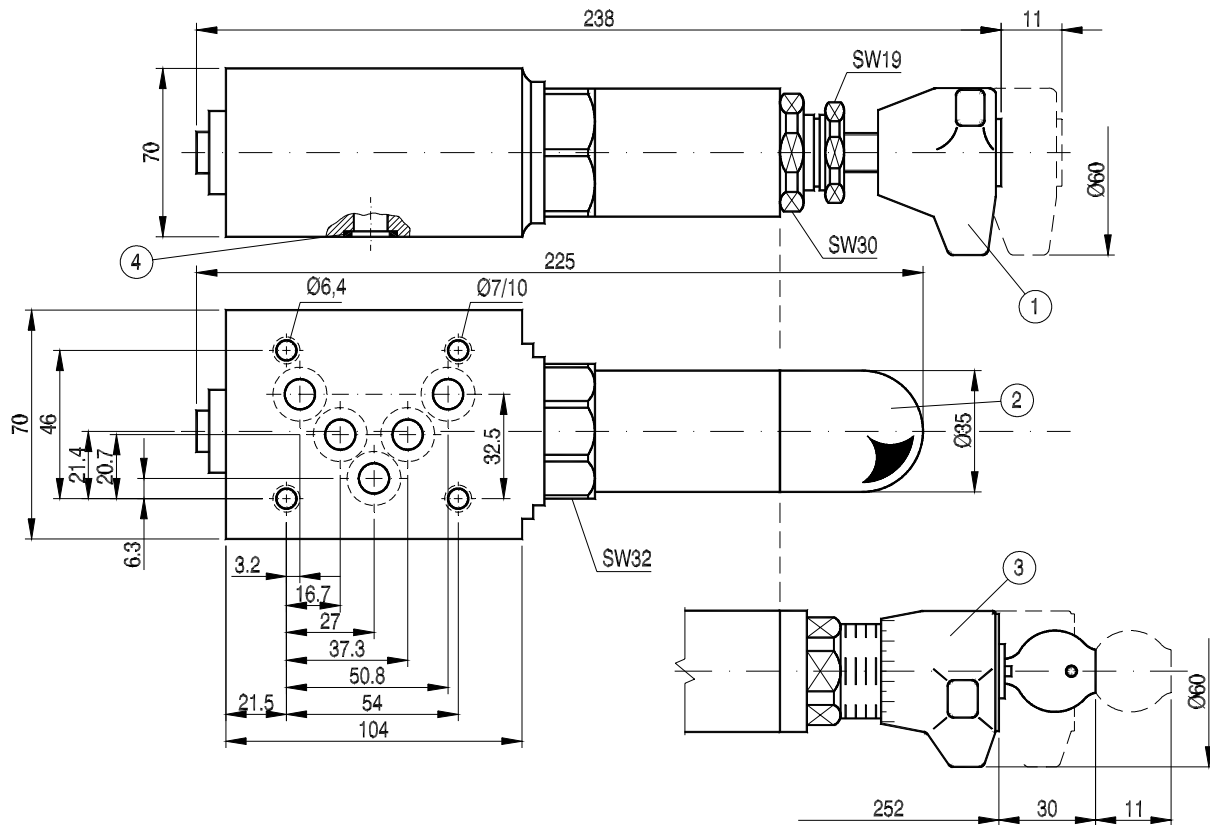
1 - Hand knob
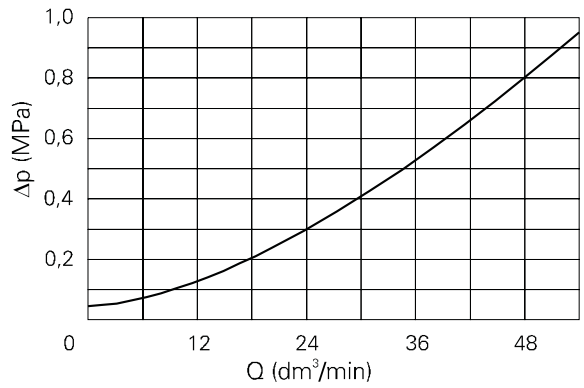2 - Set screw
3 - Lockable hand knob
4 - O-ring 12 × 2 - 5 pcs

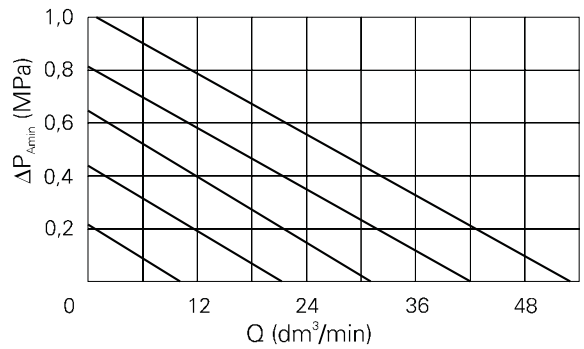Admissible surface roughness and flatness deviation for
a subplate face.
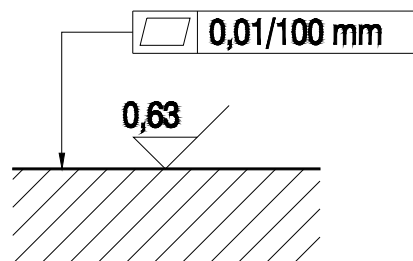
PERFORMANCE CURVES, measured at $\nu = 41$ mm²/s and T = 323 K
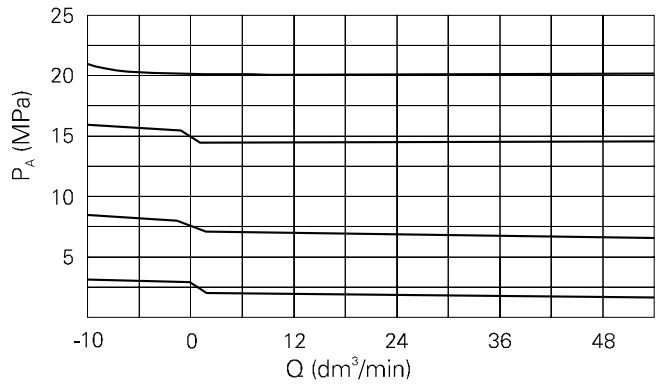
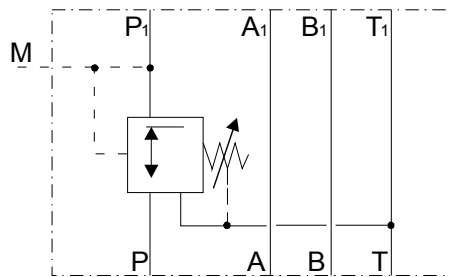$P_A = f(Q)$ - output pressure in relation to flow rate

$\Delta_P = f(Q)$ – pressure drop at check valve in relation to flow rate.

$\Delta_{P\,A\,min} = f(Q)$ - effect of flow changes in line A - A₁ or P - P₁ on output pressure P_A.

If, for example pressure at port is set at 3 MPa with flow of 20 dm³/min, output pressure increases to $P_A = 3.4$ MPa as flow decreases towards Q = 0 dm³/min.
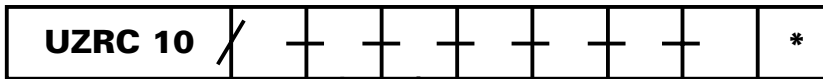
HYDRAULIC SCHEMES

UZRC 10/22-...-Y-...-P-...

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HOW TO ORDER

Orders coded in the way showed below should be forwarded to the manufacturer.

UZRC 10 / ┬ ┬ ┬ ┬ ┬ ┬ *****

Series number
22 = 22
(20 - 29) - installation and connection dimensions remain unchanged

Set pressure range
up to 2.5 MPa = 25
up to 7.5 MPa = 75
up to 15 MPa = 150
up to 21 MPa = 210

Pilot fluid supply and drain
Internal supply, external drain = Y

Adjustment method
Hand knob = 1
Set screw = 2
Lockable hand knob = 3

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

Sealing
Fluids on mineral oil base
= with no code
Fluids on phosphate-ester base = V

Accessories
Without accessories = no code
With chack valve = M

Valve location
Valve in line P = P

Coding example : UZRC 10/ 22 - 25 - Y - 1 - P

CONNECTION DIMENSIONS FOR SUBPLATE
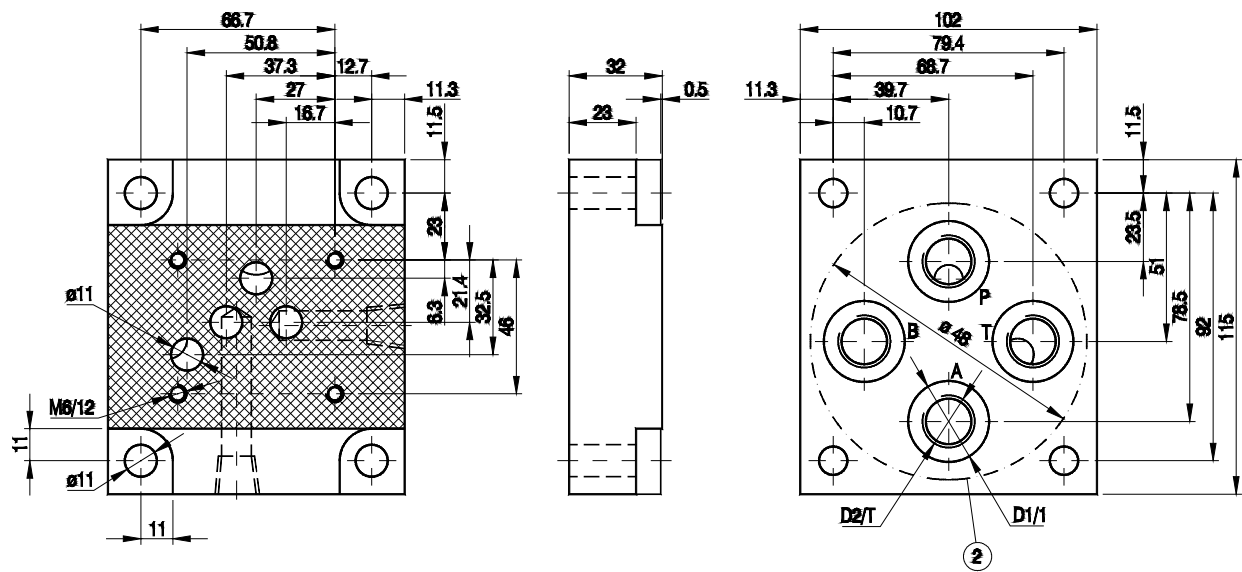
Type	D1	D2	T	Typ	D1	D2	T
G 89/ 01	25	G 1/ 4	12	G 89/ 02	24	M14 x 1,5	15
G 66/ 01	28	G 3/ 8	12	G 66/ 02	28	M16 x 1,5	15
G 67/ 01	34	G 1/ 2	14	G 67/ 02	36	M22 x 1,5	17

Weight of subplate 2,3 kg

Fixing the valve to the subplate by means of 4 bolts
M6 x L - 10.9 PN-74/M-82302 (DIN 912 - 10.9) long accord-
ing to the number of mounted components.
Tightening torque - 47 Nm.
Subplate and fixing bolts have to be ordered separately.

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