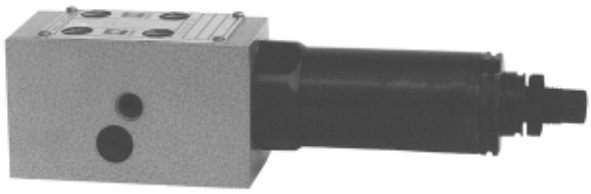
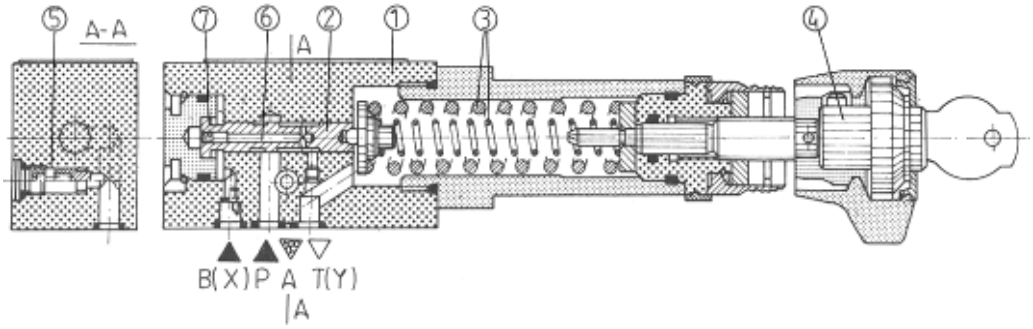
PONAR wadowice	DIRECT OPERATED PRESSURE REDUCING VALVE TYPE DR5DP			WK 450 447
	Size 5	21 MPa	15 dm³/min	04.1999r.

Direct operated pressure reducing valve DR5DP is used to limit secondary pressure. It may be mounted in a hydraulic system in any position.



DESCRIPTION OF OPERATION

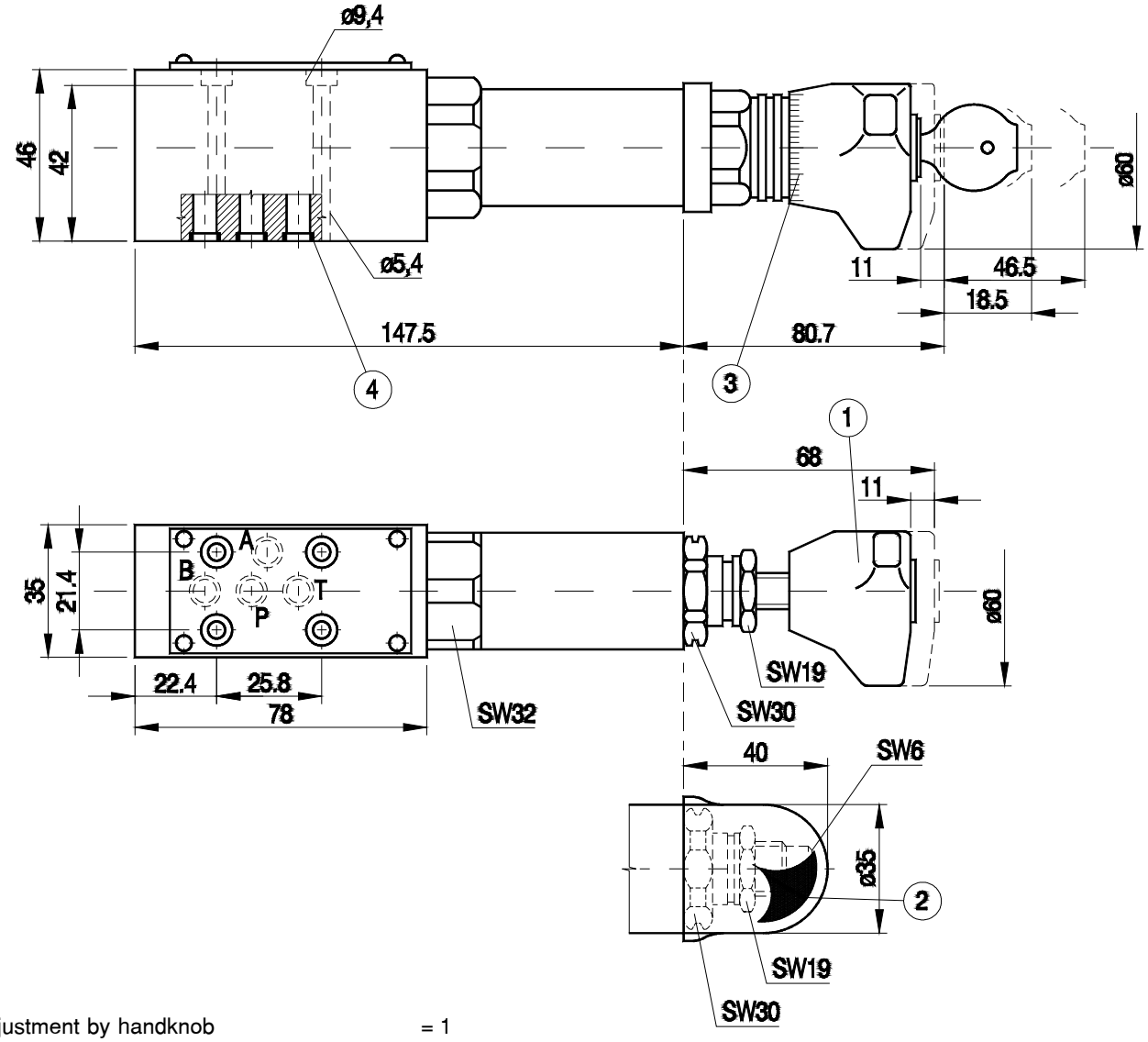


Pressure reducing valves consists basically of the housing 1, control spool 2, pressure springs 3, setting element 4 and optional check valve 5. A control element is the spool 2, which is held in neutral position in the housing 1 by the springs 3. In neutral position the valve is open.
Oil flows from port P through the housing to port A. At the same time pressure in port A affects the spool surface opposite the springs via control line 6. The control line 6 made in the moveable spool 2 is closed by the plug 7. If pressure at port A exceeds the value set at the spring, the spool 2 moves and reduces the flow from P to A.
A check valve can be fitted in order to allow free return flow from port A to P.

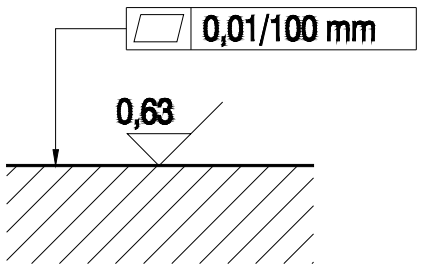
TECHNICAL DATA

Hydraulic fluid	Mineral oil or phosphate ester
Nominal fluid viscosity	37 mm²/s at the temperature of 328 K
Viscosity range	2.8 to 380 mm²/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
Pressure in ports P, A, B (X)	21 MPa
Backpressure pressure in port Y (T)	6.0 MPa
Maximum flow rate	15 dm³/min
Weight	1.4 kg

OVERALL DIMENSIONS

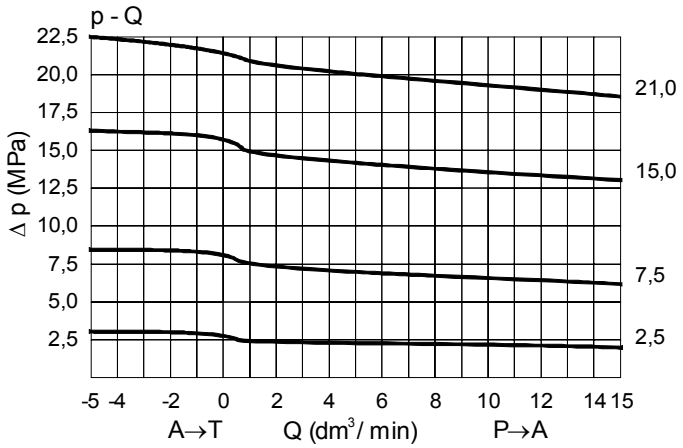


1 - Adjustment by handknob = 1
2 - Adjustment by sleeve with internal hexagon = 2
3 - Adjustment by lockable handknob = 3
4 - Sealing ring - o-ring 7 × 1.5 at ports P, A, Y (T), X (B) - 4 pcs

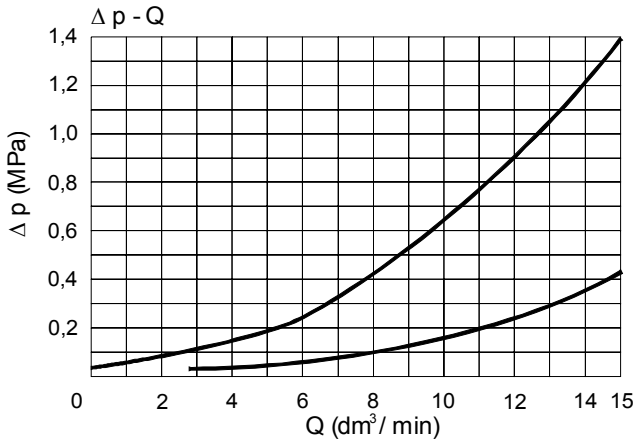


Admissible surface roughness and flatness deviation for a subplate face.

PERFORMANCE CURVES, measured at ν = 41 mm²/s and T = 323 K



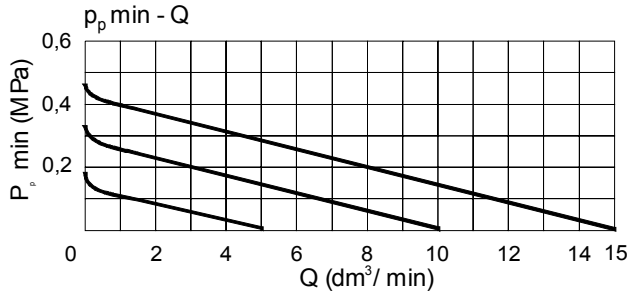
Pressure difference curve at inlet and outlet of the valve for particular pressure rate in relation to flow rate.



Pressure loss curve at flow through a built-in check valve

——— pressure set p ≤ 1.0 MPa

— — — — pressure set p > 1.0 MPa



Secondary pressure increase curve for pressure set at flow decreasing to zero

HOW TO ORDER

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

DR5DP	–	/				*

Adjustment method
Hand knob = 1
Sleeve with internal hexagon = 2
Lockable hand knob = 3

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

Maximum secondary pressure
max 2.5 MPa = 25
max 7.5 MPa = 75
max 15.0 MPa = 150
max 21.0 MPa = 210

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

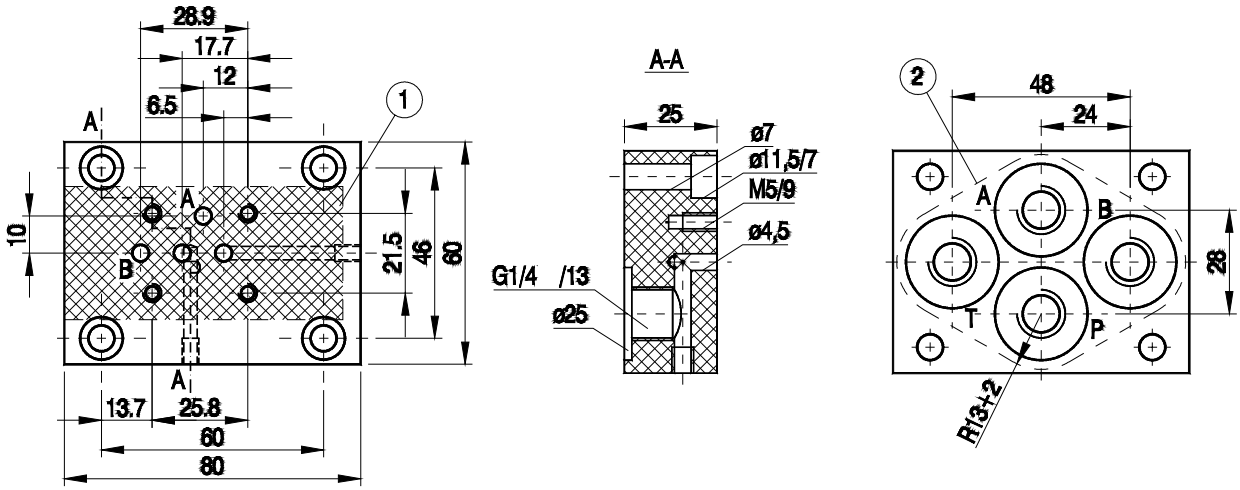
Check valve
With check valve = with no code
Without check valve = M

Pilot supply and drain
Pilot suply internal, drain external = Y
Pilot supply external, drain external = XY

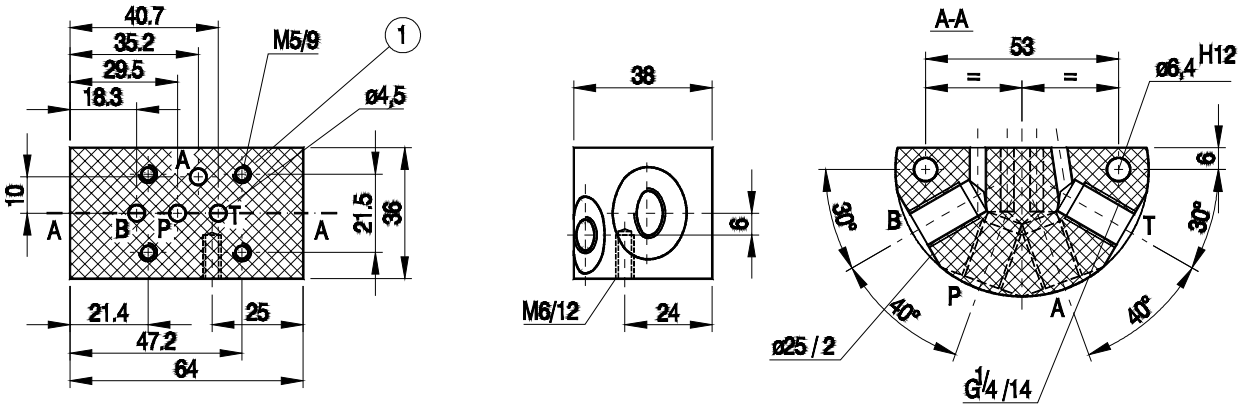
Coding example : DR5DP1-20/75Y

CONNECTION DIMENSIONS FOR SUBPLATE

Subplate G115/01 (G 1/4) Weight 0.7 kg



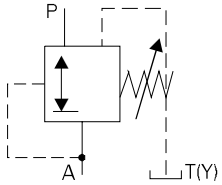
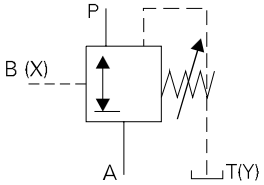
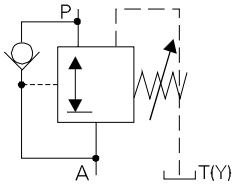
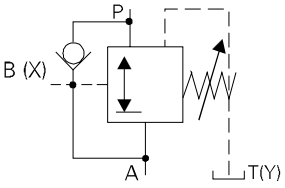
Subplate G96/01 (G 1/4) Weight 0.7 kg



1 - Mounting face of valve
2 - Recess in subplate face
3 - Mounting bolts - M5x50-8.8 PN - 87/M-82302 (DIN 912) - 4 pcs ; Tightening torque = 9 Nm

Note : Subplate and fixing bolts have to be ordered separately

Graphical symbol

	Internal pilot supply External pilot drain	External pilot supply Internal pilot drain
without check valve	 YM	 XYM
with check valve	 Y	 XY

NOTES :

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