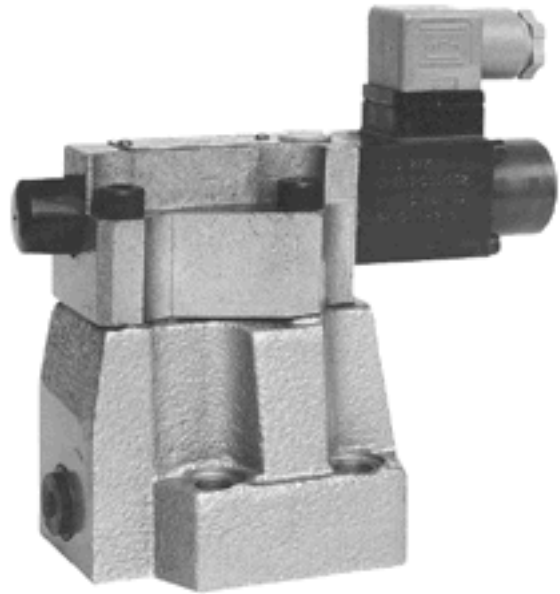


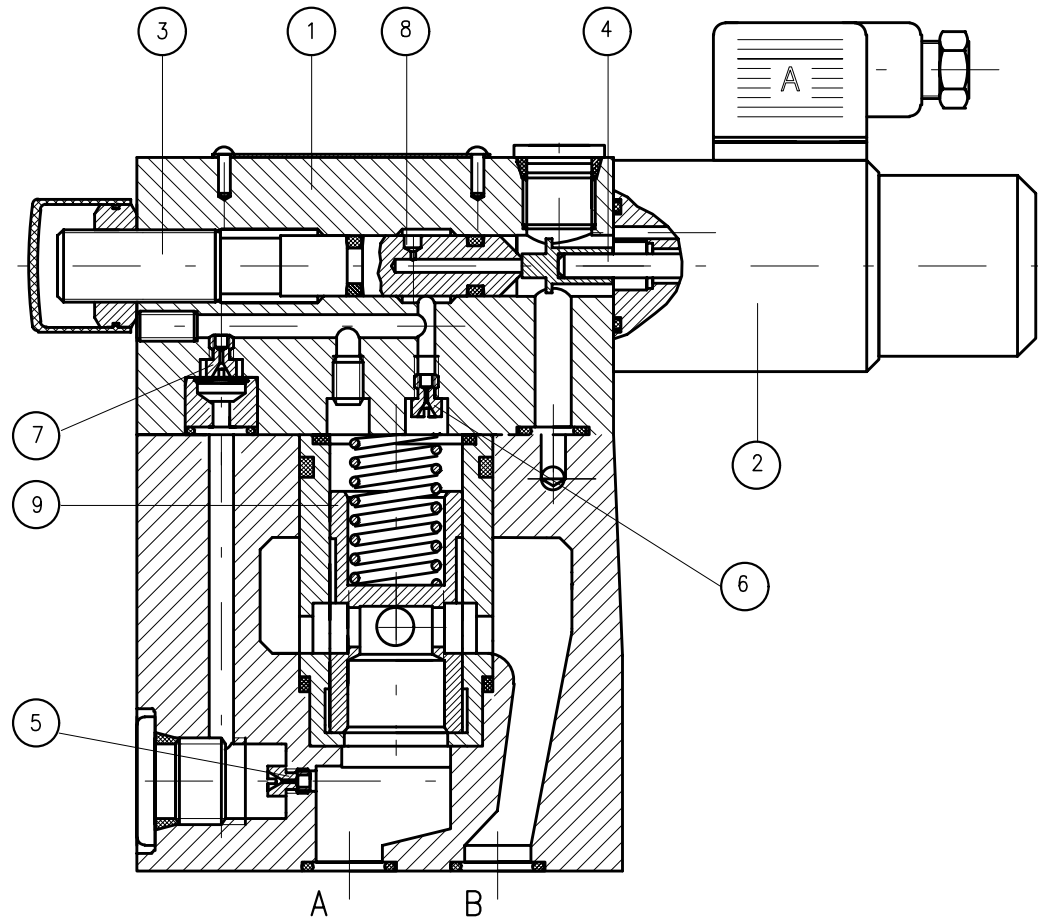
APPLICATION

Pressure reducing valves with proportional solenoid WZRPE serve to control pressure in hydraulic systems. The pressure reduced in hydraulic system is related to the solenoid current.

Electronic regulator type 20 RE 10 or another electronic device is used to supply the valve WZRPE.



DESCRIPTION OF OPERATION



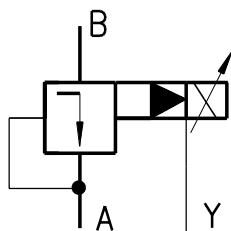
Pressure reducing valves WZRPE consist basically of the pilot unit housing 1, proportional solenoid 2, adjusting jet 3 and blind 4 connected with the proportional solenoid core. Pressure at port A acts through the system of jets 5, 6, 7, 8. On the bottom and top sides of the valve poppet 9 and blind 4 connected with the proportional solenoid core. Push force of the blind 4 to the jet 3 is

proportional to the strength of current following through the solenoid 2. If pressure applied at the blind 4 is higher than the setting, the blind is withdrawn and pressure at the top of the poppet drops. Thus the poppet 9 lifts and line A to B opens.

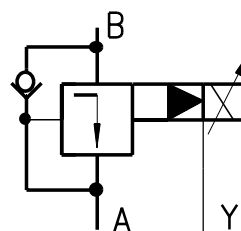
TECHNICAL DATA

Working medium	Mineral oil
Operating pressure P, A, B	up to 31,5
Port Y	direct drain to tank
Max flow	80 dm ³ /min (for size 10)
	200 dm ³ /min (for size 20)
Required filtration	16 μm
Recommended filtration	10 μm
Nominal viscosity	37 mm ² temp. 328 K
Viscosity range	2,8 to 380 mm ² /s
Working temperature (in tank)	313 to 328 K
Fluid temperature range	253 to 343K
Hysteresi	2,5% max pressure
Repetition accuracy	2 %
Working position	optional
Control current	0 to 0,8 A
Resistance of cold solenoid coil (293 K)	19,5Ω
Resistance of max hot solenoid coil	28,8Ω
Electronic regulator	20 RE 10-data card WK 495 771

GRAPHICAL SYMBOL



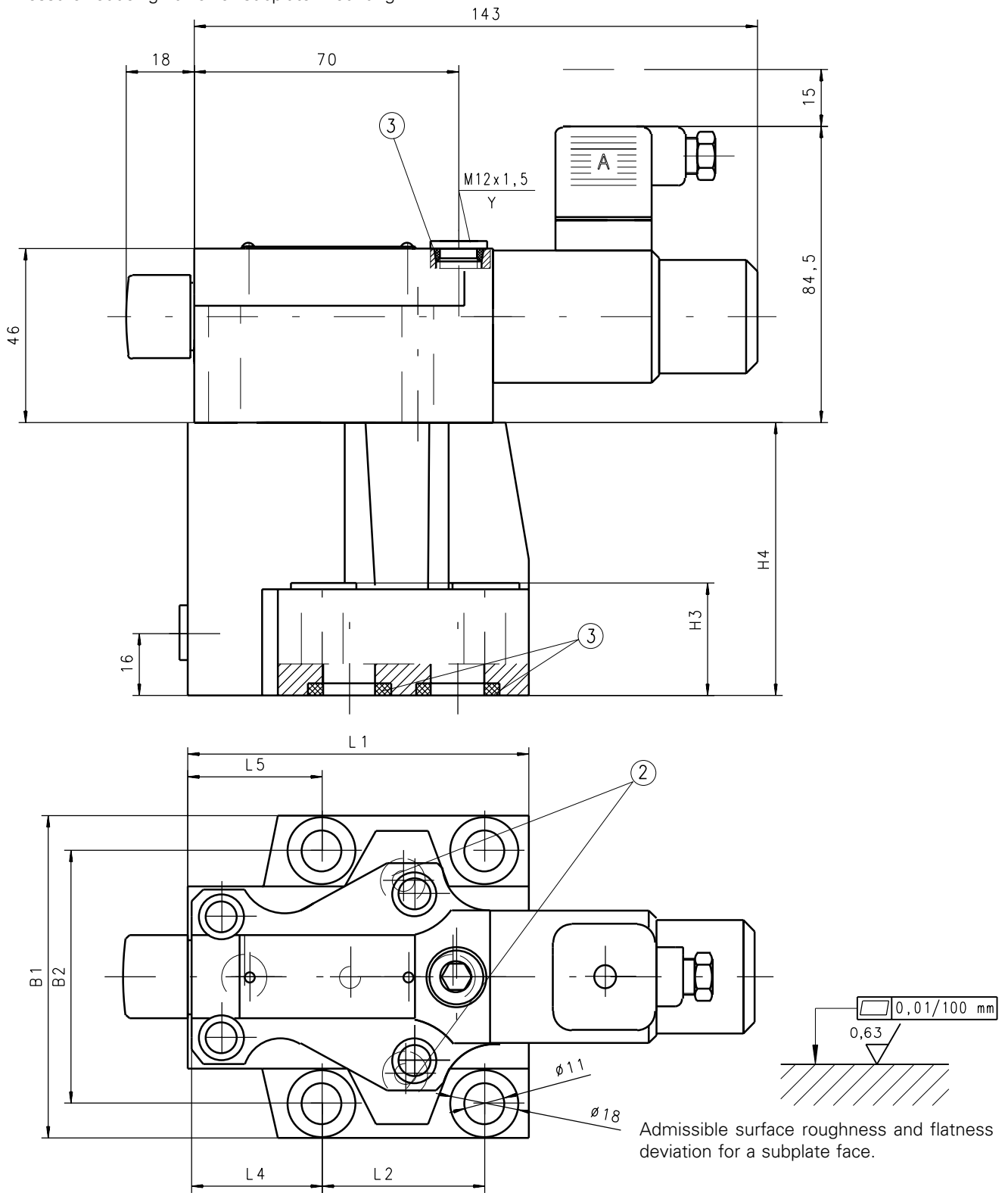
Version without check valve.



Version with check valve.

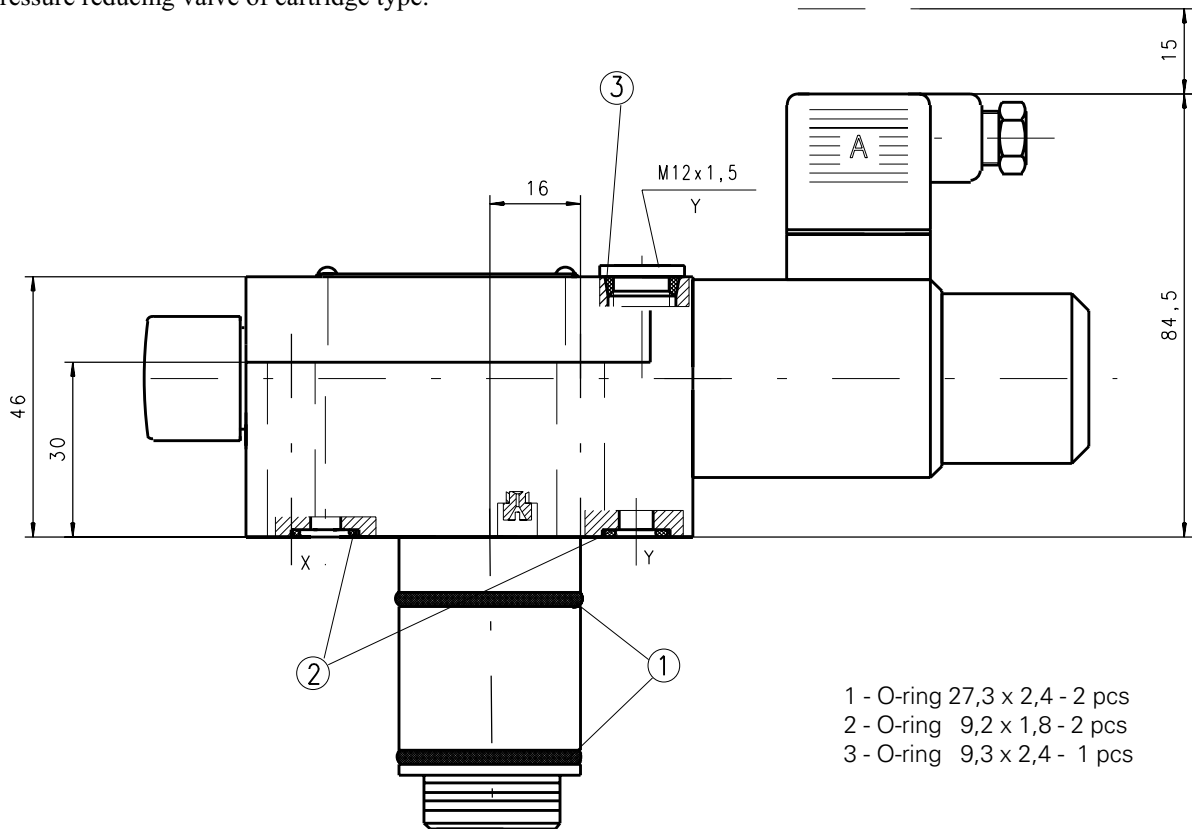
OVERALL AND CONNECTION DIMENSIONS

Pressure reducing valve for subplate mounting



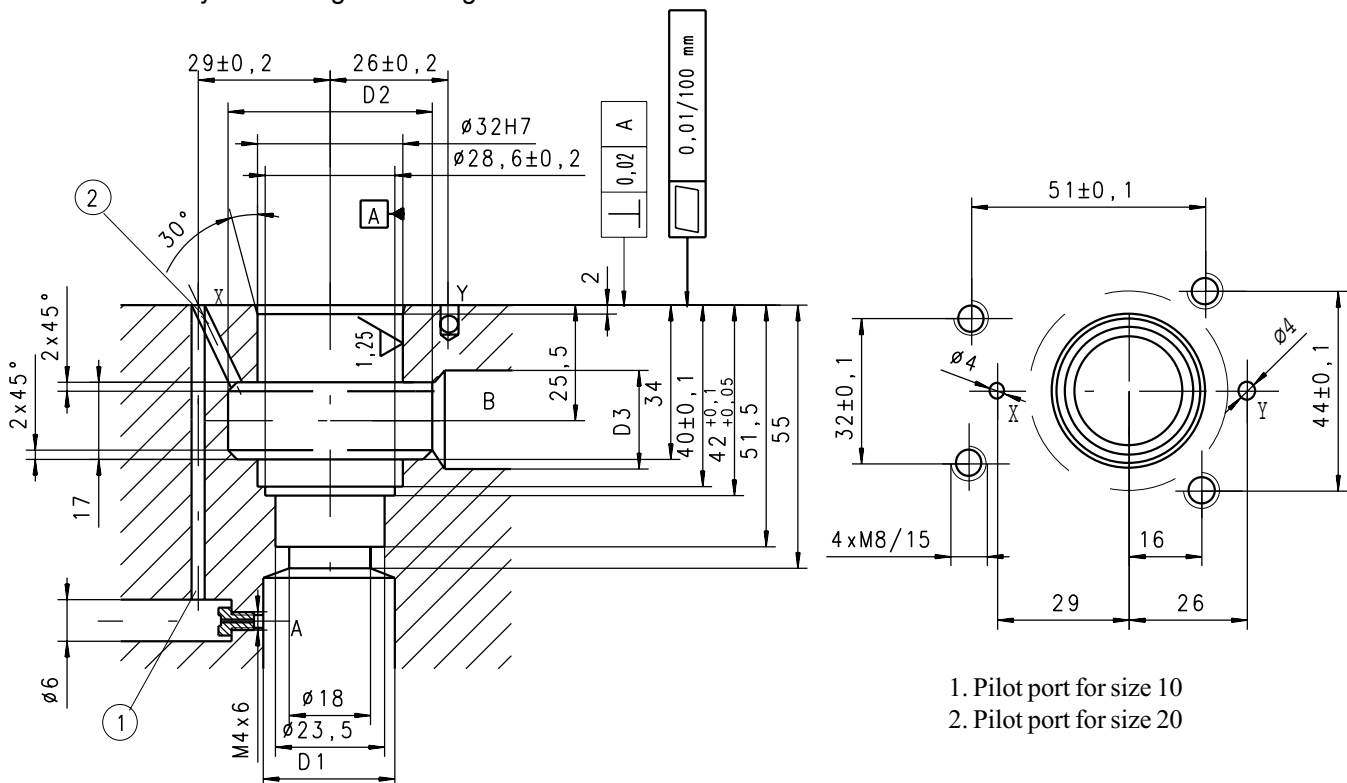
Valve	"O-ring"			B1	B2	H3	H4	L1	L2	L4	L5	Weight
	1	2	3									
WZRPE 10	17,1 x 2,6	9,2 x 1,8	9,3 x 2,4	85	66,7	28	72	96	42,9	29,6	35,5	3,9 kg
WZRPE 20	28,2 x 3,5	9,2 x 1,8	9,3 x 2,4	102	79,4	38	82	112	60,3	31,9	33,5	5,8 kg

Pressure reducing valve of cartridge type:



- 1 - O-ring 27,3 x 2,4 - 2 pcs
- 2 - O-ring 9,2 x 1,8 - 2 pcs
- 3 - O-ring 9,3 x 2,4 - 1 pcs

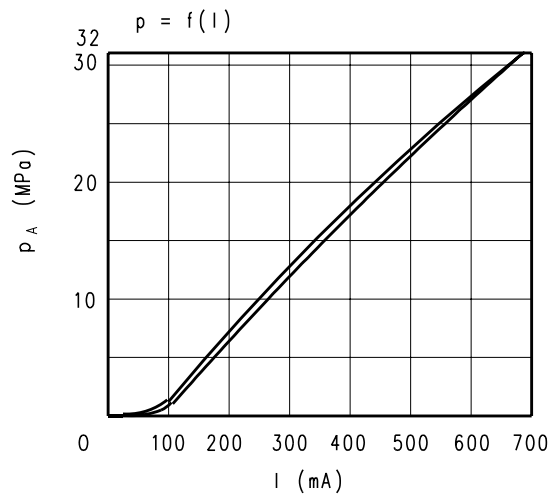
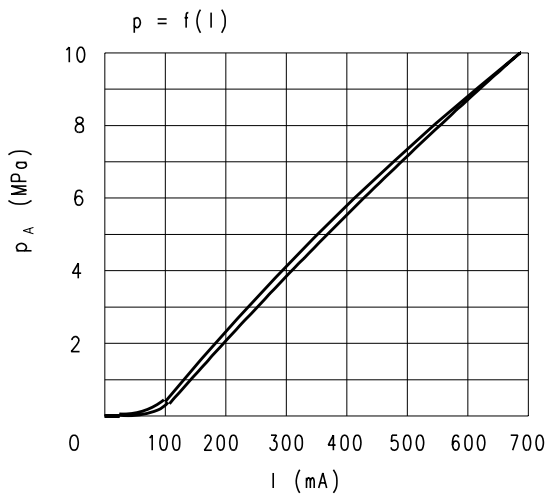
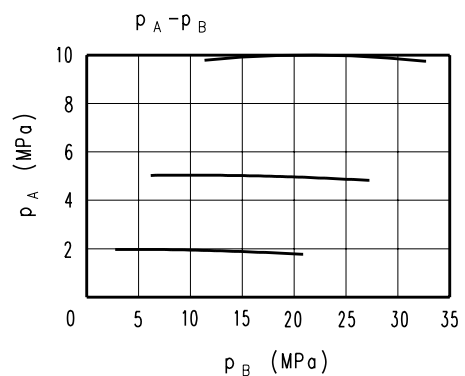
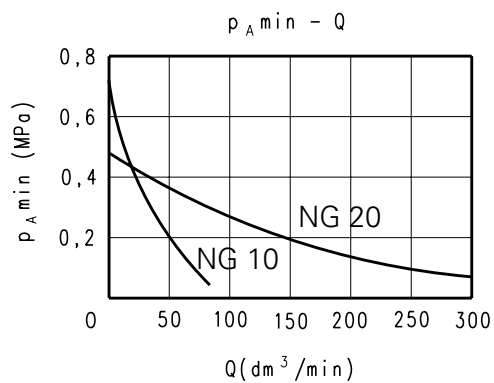
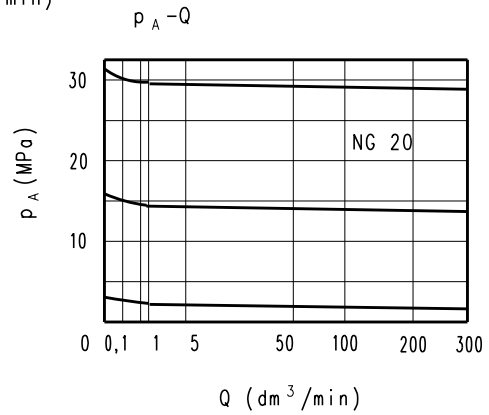
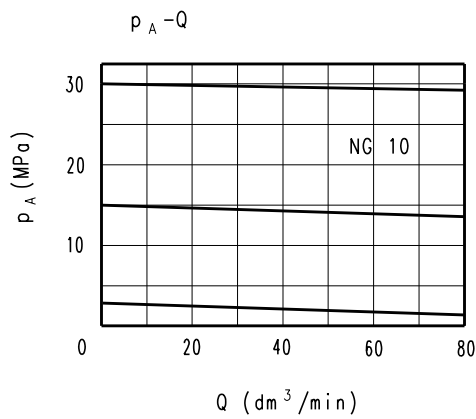
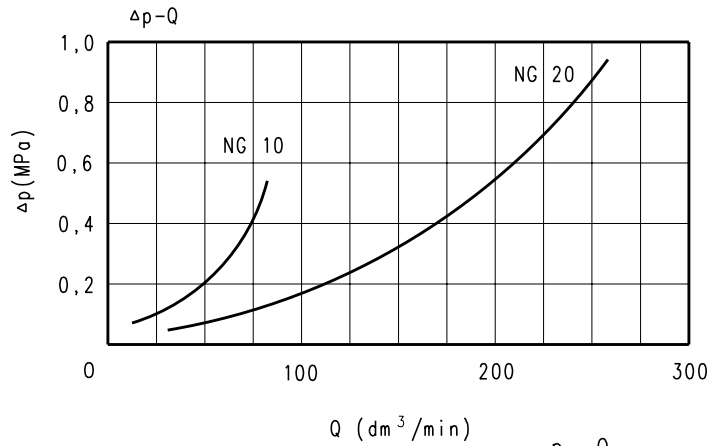
Valve cavity for cartridge mounting.



- 1. Pilot port for size 10
- 2. Pilot port for size 20

Valve	D1	D2	D3	Bolts mounting the valve to subplate	Torque
NG 10	10	40	10	4x M8x40-10.9 PN-87/M-82302 (DIN912)	31 [Nm]
NG 20	20	45	20		

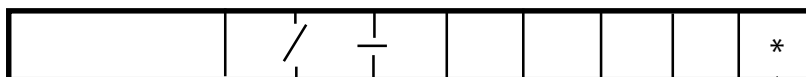
PERFORMANCE CURVES, measured at $v = 41 \text{ mm}^2/\text{s}$ and $T = 323 \text{ K}$



P_A - output pressure

HOW TO ORDER

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



Valve type

For subplate mounting
Cartridge type
(Size 10 and 30 only)

= WZPPE
= WZPSE

Nominal size

Size 10 = 10
Size 20 = 20

Series number

11 = 11
(11 - 19) - installation and connection dimensions remain unchanged

Set pressure range

up to 5 MPa = 50
up to 10 MPa = 100
up to 32 MPa = 320

Piloting

Internal pilot supply, external pilot drain Y =Y

Check valve

With check valve (for subplate version only) without check valve = no code
= M

Sealing

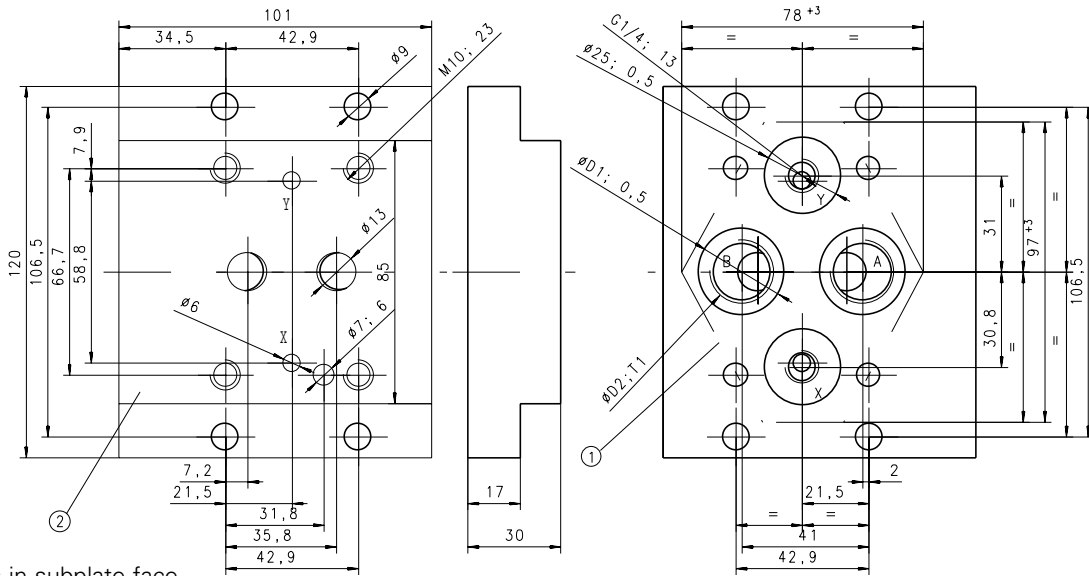
Fluids on mineral oil base = with no code
Fluids on phosphate-ester base = V

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

Coding example : WZRPE 10/11-320 Y Z

CONNECTION DIMENSIONS FOR SUBPLATE

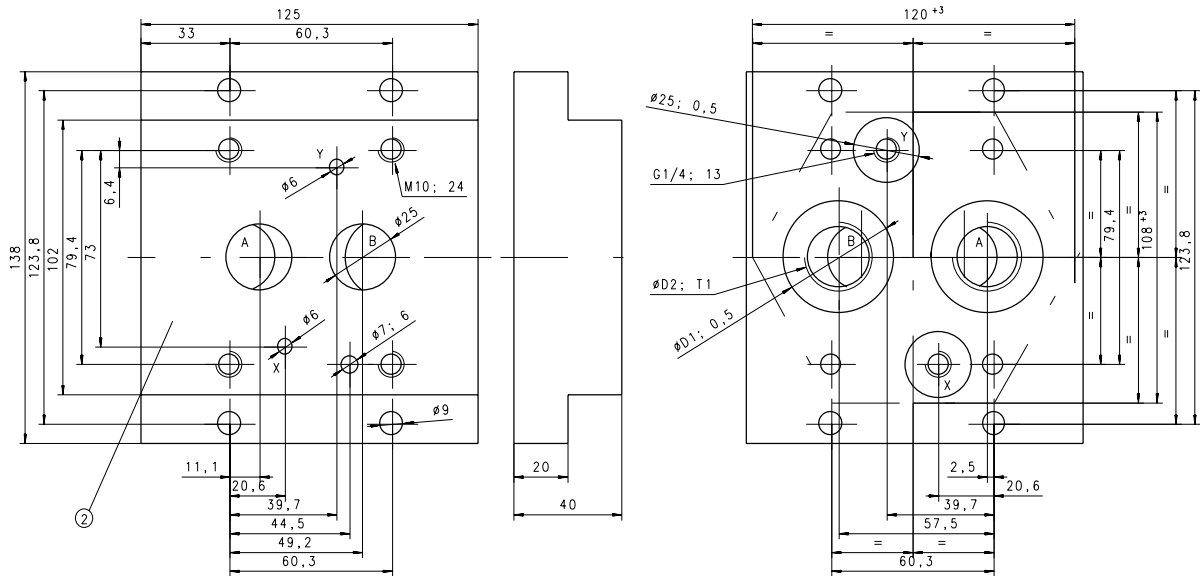
Subplates for pressure reducing valves (must be ordered separately)



- 1 - Recess in subplate face
- 2 - Mounting surface

Valve	Subplate	D1	D2	T1	Weight (kg)	Bolts mounting the valve to subplate	Torque [Nm]
NG 10	G 460/01	28	G3/8	13	1,7	4x M10x40-10.9 PN-87/M-82302 (DIN912)	69
	G 461/01	34	G1/2	15			

Nominal size 20.



- 1 - Recess in subplate face
- 2 - Mounting surface

Valve	Subplate	D1	D2	T1	Weight (kg)	Bolts mounting the valve to subplate	Torque [Nm]
NG 20	G 412/01	42	G3/4	17	3,3	4x M10x50-10.9 PN-87/M-82302 (DIN912)	69
	G 413/01	47	G1	20			

Note : Fixing bolts have to be ordered separately

NOTES:

PONAR WADOWICE S.A.
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34-100 Wadowice
tel. 033/ 823 39 43, 823 30 41
fax 033/ 873 48 80
e-mail: ponar@ponar-wadowice.pl

