

Pilot Operated Pressure Sequence Valve

Model: DZ...5X



- ◆ Size 10, 25, 32
- ◆ Maximum working pressure 315 bar
- ◆ Maximum flow rate 600 L/min

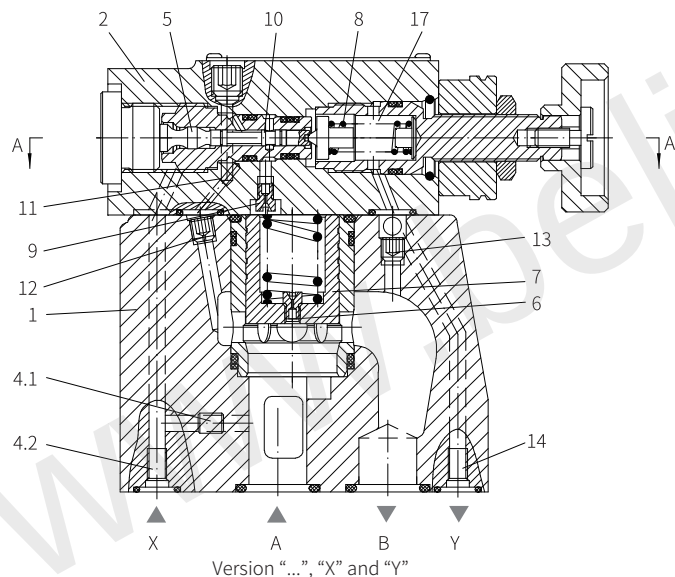
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Features

- Use as pressure valve, sequence valve and bypass valve
- For subplate mounting
- 4 adjusting elements
 - Rotary knob
 - Adjusting screw with protective cap
 - Lockable rotary knob with scale
 - Rotary knob with scale
- 4 pressure ranges
- Check valve, optional

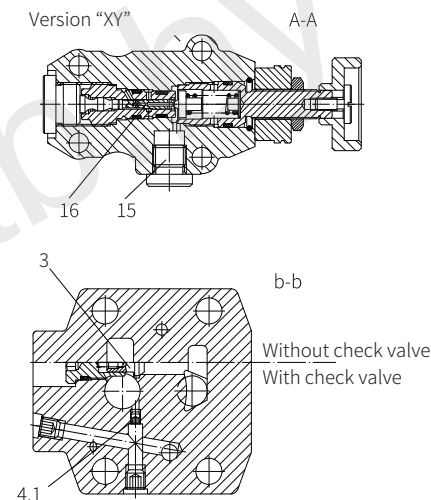
In principle, the function of this valve is same as model DZ...-5XJ/... but the signal is provided externally via control line (4.2) for model DZ...5XJ..X...



Function description, sectional drawing

Preload valve model DZ...-5XJ/..XY...(Control lines 4.2, 14 or 15 open; control lines 4.1, 12 and 13 closed)

The pressure in port X acts on control piston (5) of pilot valve (2) via control line (4.2). At same time, the pressure in port A acts on spring chamber of main spool (7) via throttle (6). When the pressure in port X exceeds the setting value of the spring (8), the control piston (5) is moved against the spring (8), the fluid flows from spring chamber of main spool (7) to spring chamber (17) of pilot valve (2) via orifice (9) and hole (16). The pressure in spring chamber of main spool (7) decreases. Thus, the fluid can flow from port A to port B with minimum pressure lose. The control oil in spring chamber (17) should be drained to tank without pressure via control line (14) or (15). An optional check valve (3) can be installed to allow the fluid flow freely from port B to port A.

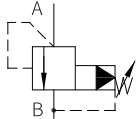


Models and specifications

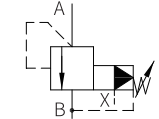
DZ		5X		50 to 59 series		50 to 59 series installation and connection size unchanged)	
pilot valve pilot valve without main spool insert (no mark for size)	=No code =C						more information in text
pilot valve with main spool insert (mark for size 30)	=C						sealing material No code= NBR seals V= FKM seals (consult for other seals)
size 10	=10						No code= with check valve
size 20	=20						M= without check valve
size 30	=30						pilot oil supply
adjusting element							No code= pilot oil supply and drain internal
rotary knob	=1						X= pilot oil supply external and drain internal
adjusting screw with protective cap	=2						Y= pilot oil supply internal and drain external
lockable rotary knob with scale	=3						XY= pilot oil supply and drain external
rotary knob with scale	=7						
50 to 59 series	=5X						50= setting pressure up to 50 bar
50 to 59 series installation and connection size unchanged)							100= setting pressure up to 100 bar
							200= setting pressure up to 200 bar
							315= setting pressure up to 315 bar

Functional symbols

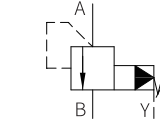
Model DZ...-5XJ/...M...
Model DZC...-5XJ/...M...



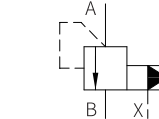
Model DZ...-5XJ/...XM...



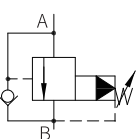
Model DZ...-5XJ/...YM...



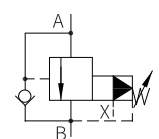
Model DZ...-5XJ/...XYM...
Model DZC...-5XJ/...XYM...



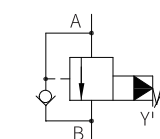
Model DZ...-5XJ/...



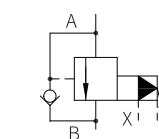
Model DZ...-5XJ/...X



Model DZ...-5XJ/...Y



Model DZ...-5XJ/...XY



Technical parameters

Installation position			Optional		
Environment temperature range		°C	-30 to +50 (NBR seal)		
			-20 to +50 (FKM seal)		
Weight	Size		10	25	32
	DZ...	kg	3.4	5.3	8.0
	DZC...	kg	1.2		
	DZC30...	kg	1.5		
Hydraulic					
Maximum working pressure port A, B, X		bar	315		
Maximum backpressure port T		bar	315		
Setting pressure	Minimum	bar	flow-related (see characteristic curve)		
	Maximum	bar	50; 100; 200; 315		
Maximum flow	Size		10	25	32
		L/min	200	400	600
Medium			Mineral oil (HL, HLP) ¹⁾ in accordance with DIN 51524; Fast living organisms degraded oil according to VDMA 24568; HETG (Rapeseed oil) ¹⁾ ; HEPG (Polyethyleneglycol) ²⁾ ; HEES (Synthetic Fats) ²⁾		
Hydraulic oil temperature range		°C	-30 to +80 (NBR seal)		
		°C	-20 to +80 (FKM seal)		
Viscosity range		mm ² /s	10 to 800		
Cleanliness of oil ³⁾			The maximum allowable pollution level of oil is ISO4406 Class 20/18/15		

1) For NBR seal and FKM seal.

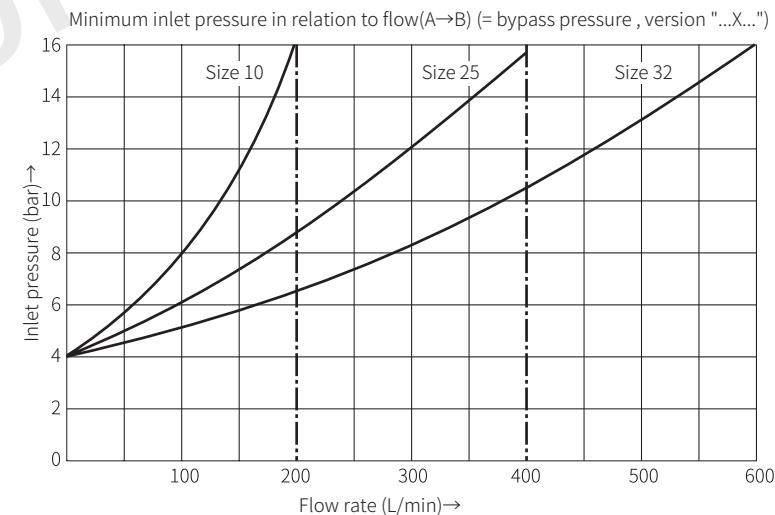
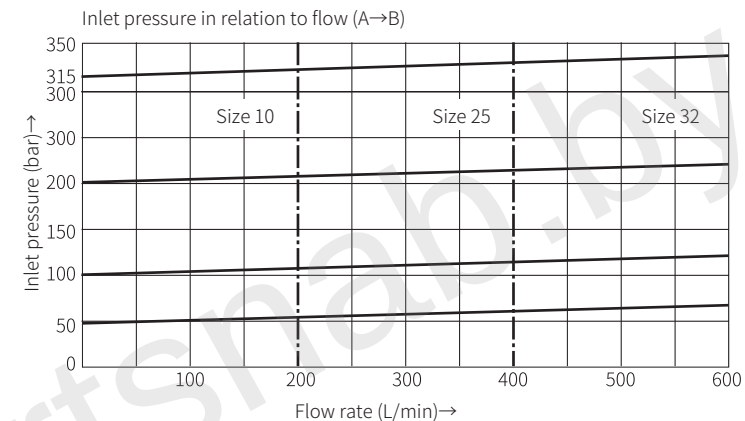
2) Only for FKM seal.

3) The oil must meet the cleanliness degree requested by the components in the hydraulic system.

Effective oil filtration can prevent failure and increase the service life of the components.

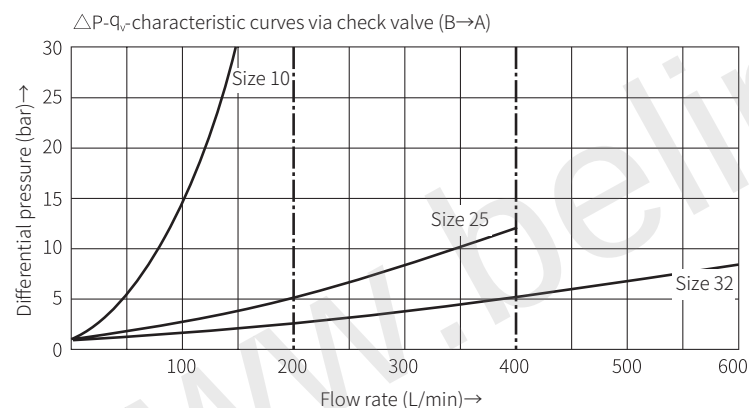
Characteristic curve

(Measured when using HLP46, $\vartheta_{oil}=40^{\circ}\text{C} \pm 5^{\circ}\text{C}$)

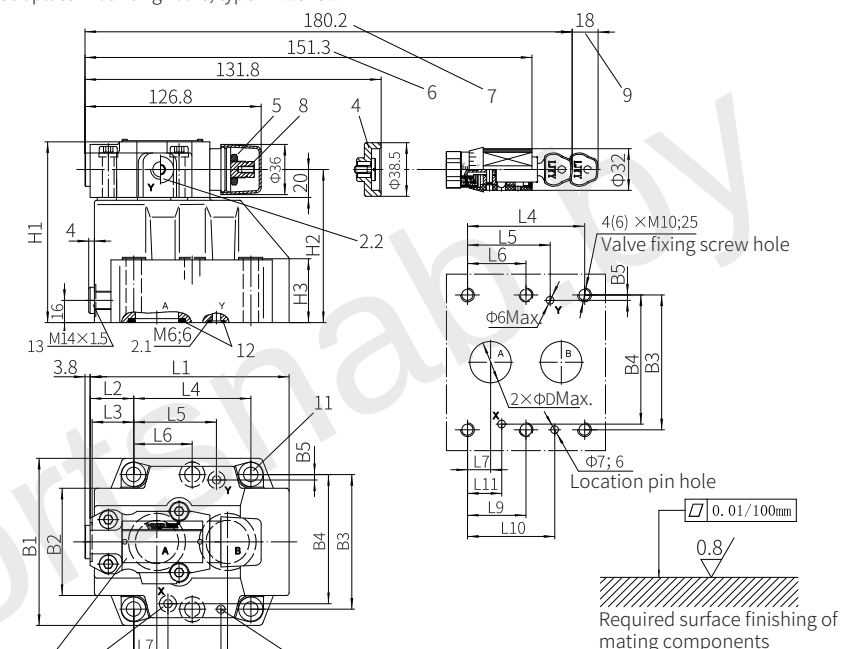


The curves are valid for outlet pressure $P_B=0$ over the entire flow range.

Subplate mounting valve, type DZ...5XJ...



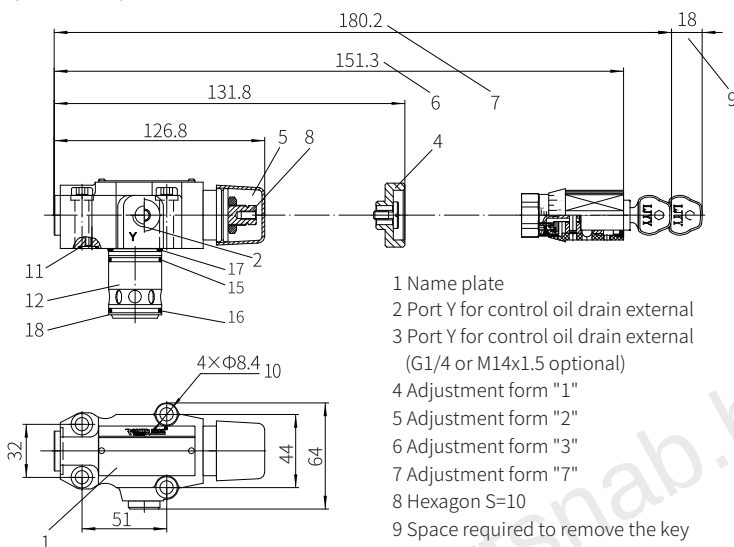
The curves are valid for outlet pressure $P_B=0$ over the entire flow range.



Tightening torque $M_A = 60 \text{ Nm}$

Size	B2	B3	B4	B5	H1	H2	H3	D
10	50	66.7	58.8	7.9	112	92	26	13
20	60	79.4	73	6.4	122	102	36	22
30	77	96.8	92.8	3.8	130	110	46	30

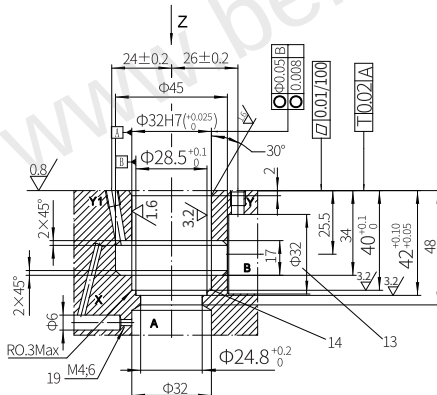
With (DZC10 or 30) or without DZC



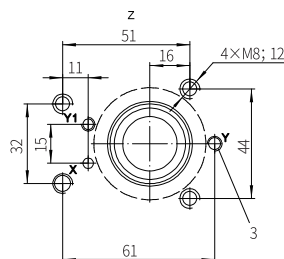
$\sqrt{0.01/100\text{mm}}$

0.8/

Required surface finishing of mating components



- 1 Name plate
- 2 Port Y for control oil drain external
- 3 Port Y for control oil drain external (G1/4 or M14x1.5 optional)
- 4 Adjustment form "1"
- 5 Adjustment form "2"
- 6 Adjustment form "3"
- 7 Adjustment form "7"
- 8 Hexagon S=10
- 9 Space required to remove the key
- 10 Valve fixing screw hole
- 11 O ring 9.25x1.78
- 12 Main valve insert
- 13 The Ø32 hole can intersect Ø45 hole at any position. Be careful not to damage oil port X and fixing holes
- 14 The retainer ring and O-ring should be installed in this hole before installing main spool.
- 15 O ring 28x1.8
- 16 O ring 28x2.65
- 17 O ring 27.3x2.4
- 18 Retainer ring 32x28.4x0.8
- 19 Without this hole when used as a bypass valve



Valve fixing screw
M8x40-10.9 grade GB/T70.1-2000
Tightening torque $M_A=34.3\text{Nm}$