

Multistage Electro-hydraulic Pilot Relief Valve

Model: DB3U...5X



БЕЛИМПОРТНАБ

- ◆ Size 10 to 32
- ◆ Maximum working pressure 350 bar
- ◆ Maximum working flow 600 L/min

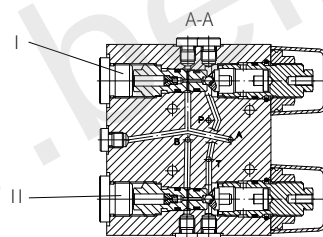
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Features

- Subplate mounting
- Threaded connection
- Cartridge connection
- Two-stage or three-stage pressure setting
- Controlled by solenoid directional valve
- Pressure adjusting forms:
 - Rotary knob
 - Internal hexagon screw with protective cap
 - Lockable rotary knob with scale

There are four different models of control oil: supply and drain internal, supply internal and drain external, supply external and drain internal, supply and drain external. (See the symbols of control oil in details).

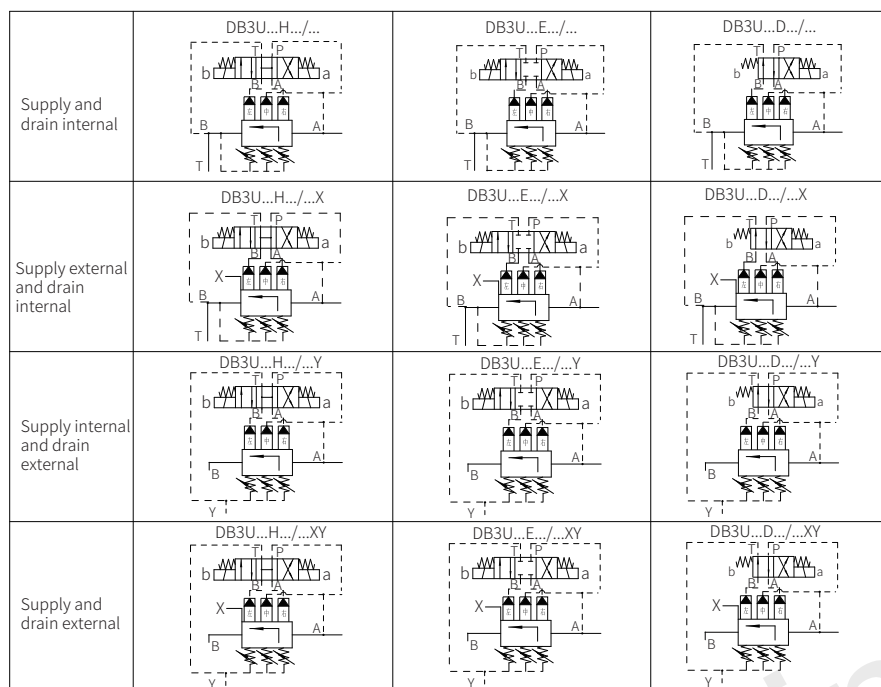


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Functional symbols



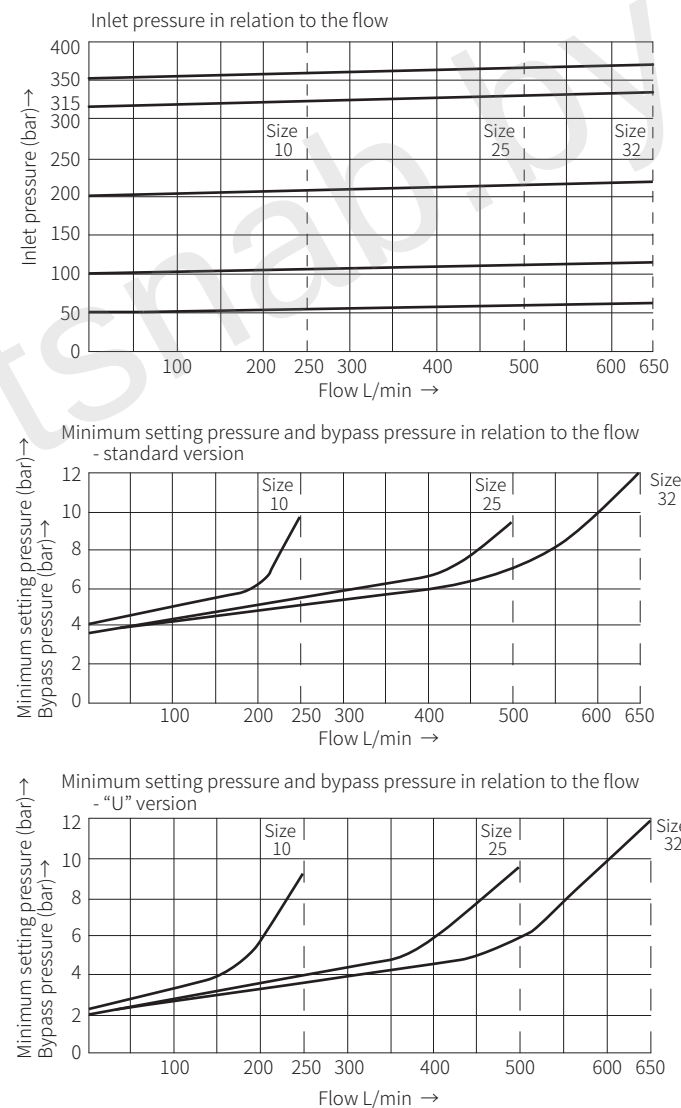
Technical parameters

Size		10	15	20	25	30
Flow (L/min)	threaded connection valve	200		400		
	subplate mounting valve	200	—	400	—	600
Working pressure		Mpa Port A, B, X to 35				
Port Y back pressure		Mpa to 31.5				
Minimum setting pressure		Mpa Related to flow, see characteristic curve				
Maximum setting pressure		Mpa 35				
Medium		Mineral hydraulic oil or phosphate hydraulic oil				
Viscosity range		mm ² /s 10 to 800				
Temperature range		°C -30 to +80 (NBR seal) -20 to +80 (FKM seal)				
Solenoid valve characteristic		See 4WE6 solenoid valve				

Characteristic curve

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

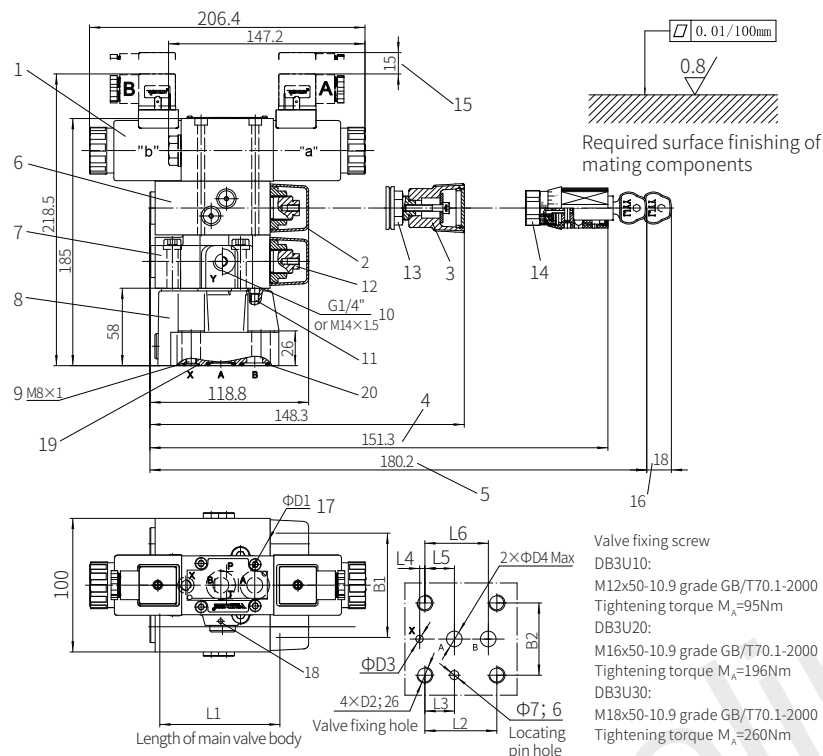
The curve was measured at zero pressure for externally controlled oil leakage.
For internal control oil return, the pressure at port B is added to the command value.



Component size

Size unit: mm

Subplate mounting valve model DB3U...-5XJ/...



Size	L1	L2	L3	L4	L5	L6	B1	B2	D1	D2	D3	D4
10	90	53.8	22.1	0	22.1	47.5	78	53.8	14	M12	6	12
20	117	66.7	33.4	23.8	11.1	55.6	100	70	18	M16	6	22
30	149.3	88.9	44.5	31.8	12.7	76.2	115	82.6	20	M18	7	30

- 1 Solenoid directional valve (type H, type D, optional)
- 2 Adjustment form "2"
- 3 Adjustment form "1"
- 4 Adjustment form "3"
- 5 Adjustment form "7"
- 6 Secondary or tertiary pilot valve
- 7 Primary pilot valve
- 8 Main valve
- 9 Port X for external pilot oil supply
- 10 Port Y for external pilot oil drain (G1/4" and M14x 1.5, optional)

- 11 Omitted with internal pilot oil drain
- 12 External hexagon screw S=10
- 13 Hexagon nut S=24
- 14 External hexagon screw S=24
- 15 Space required to remove the plug
- 16 Space required to remove the key
- 17 Valve screw fixing holes
- 18 Locating pin hole
- 19 O ring 9.25x1.78 (for port X)
- 20 DB2U10:
O ring 17.12x2.62(for port A, B)
DB2U20:
O ring 28.17x3.53(for port A, B)
DB2U30:
O ring 34.52x3.53(for port A, B)

It must be ordered separately if connection subplate is needed

DB3U10 Subplate model:
G545/01(G3/8"); G545/02 (M18x1.5)
G546/01(G1/2"); G546/02(M22x1.5)

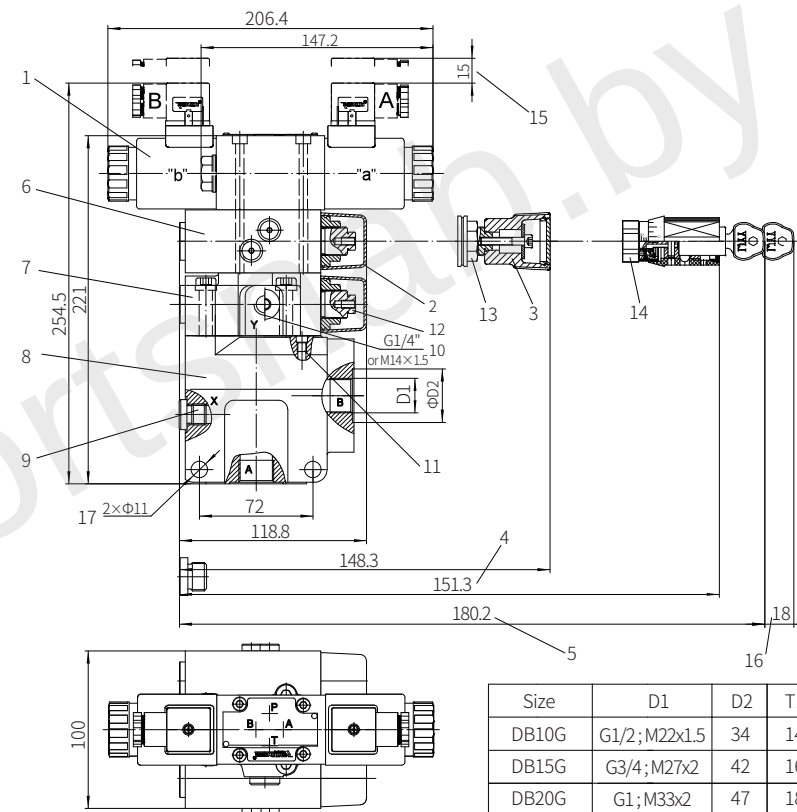
DB3U20 Subplate model:
G408/01(G3/4"); G408/02 (M27x2)
G409/01(G1"); G409/02 (M33x2)

DB3U30 Subplate model:
G410/01(G11/4"); G410/02 (M42x2)
G411/01(G112"); G411/02(M48x2)

Component size

Size unit: mm

Threaded connection valve model DB3U...-5XJ/...

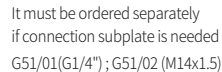


Size	D1	D2	T1
DB10G	G1/2; M22x1.5	34	14
DB15G	G3/4; M27x2	42	16
DB20G	G1; M33x2	47	18
DB25G	G1 1/4; M42x2	58	20
DB30G	G1 1/2; M48x2	65	22

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- 4 Adjustment form "3"
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- 6 Secondary or tertiary pilot valve
- 7 Primary pilot valve
- 8 Main valve
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- 11 Omitted with internal pilot oil drain
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- 13 Hexagon nut S=24
- 14 External hexagon screw S=24
- 15 Space required to remove the plug
- 16 Space required to remove the key
- 17 Valve screw fixing holes

02



- 12 External hexagon screw S=10
- 13 Hexagon nut S=24
- 14 External hexagon screw S=24
- 15 Space required to remove the plug
- 16 Space required to remove the key
- 17 O ring 27.3x2.4
- 18 Retainer ring 32x28.4x0.8
- 19 The $\Phi 32$ hole can intersect $\Phi 45$ hole at any position
- Be careful not to damage oil port X and fixing holes
- 20 The retainer ring and O-ring should be installed in this hole before install main spool
- 21 Throttle must be ordered separately