

Proportional directional valve

A.5.1



This product is a direct-action valve with one or two proportional solenoids to control the flow rate and directions in the hydraulic system.

Technical specification

Specification	02	03
Maximum pressure (MPa)	31.5	
Return pressure (MPa)	<16	
Maximum flow (l/min)	17	50
Hysteresis (%)	6	
Repeatability (%)	<3	
-3dB Frequency response(Hz)	5	3
Rated current (mA)	800、1500	
Filtration accuracy (um)	≤20	
Hydraulic fluid	Mineral oil, phosphate-ester	
Viscosity (mm²/s)	2.8~100	
Fluid temp. (°C)	-20~70	
Coil resistance (Ω)	19.5	
Weight (Kg)	2-Position	1.9
	3-Position	3.8
		2.6
		4.5
Cleanliness	Filter is recommended for the highest fluid pollution degree;the lowest specific filtration resistance according to ISO 4406 (C) 20/18/15.	

Model instruction

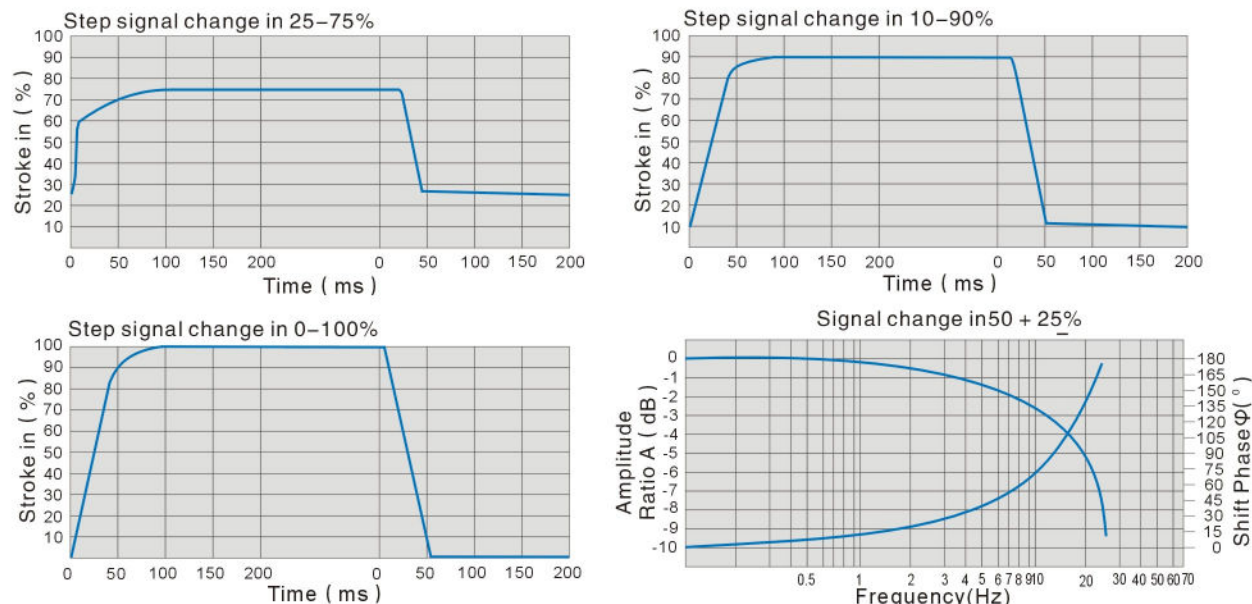
BFW — * — * — * — 50 *	
Proportional directional valve	Remarks
Specification 02 DN 6 03 DN 10	Design serial number
Symbol	Nominal flow (based on 1MPa pressure drop) 02 Specification 8 8 l/min 13 13 l/min 17 17 l/min 03 Specification 18 18 l/min 27 27 l/min 50 50 l/min

Code symbol

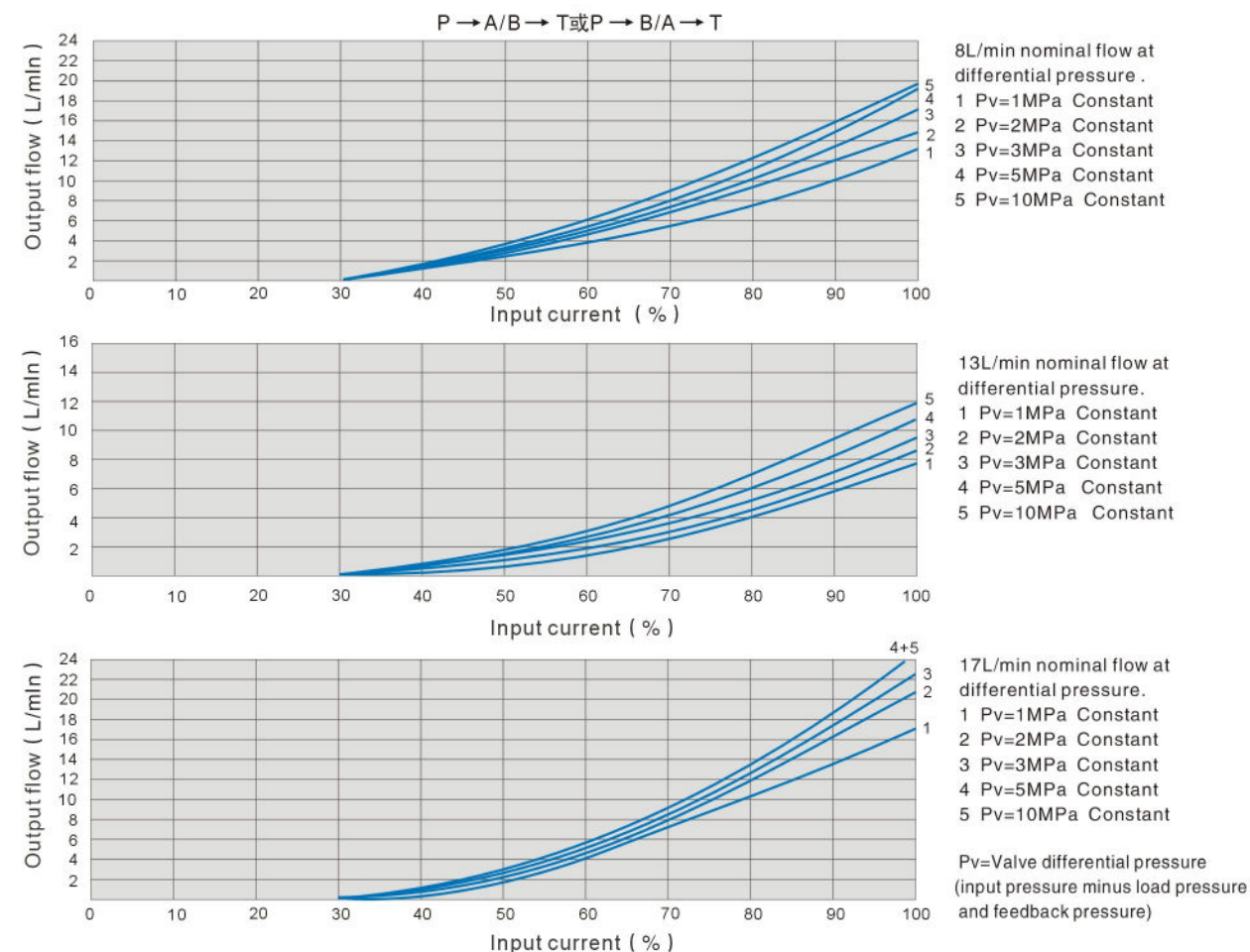
3C2 3C2 (1)	3C40 3C40 (1)
2B2B	2B40B
For functional symbol 3C2(1) and 3C40(1) P → A: Qvmax B → T: Qvmax/2 P → B: Qvmax/2 A → T: Qvmax	

Proportional directional valve

02 Model characteristic curves (Measured at $v=36 \times 10^{-6} \text{ m}^2/\text{S}$ $t=50^\circ\text{C}$)

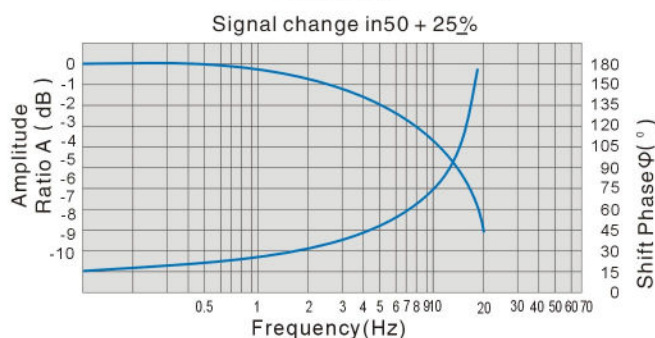
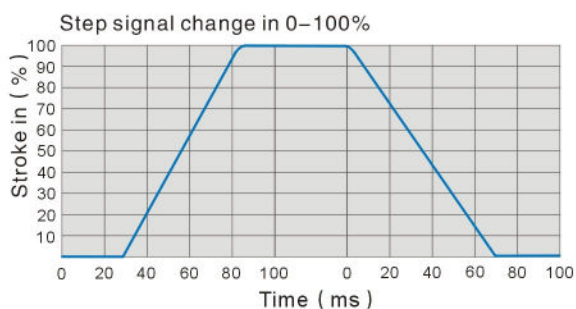
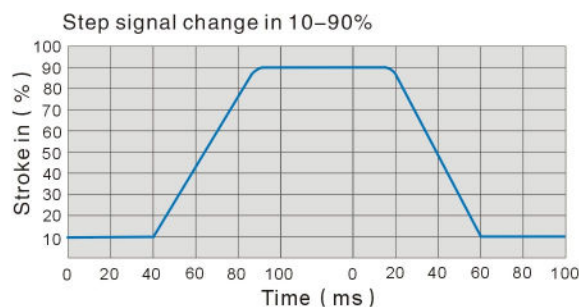
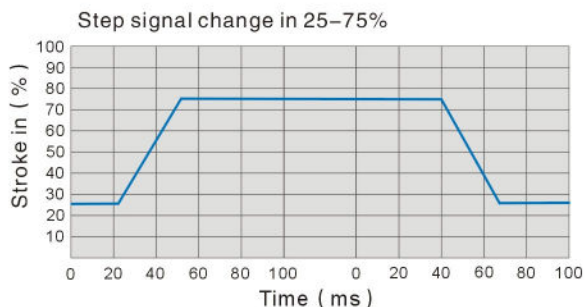


02 Model characteristic curves (Testing Condition $v=36 \times 10^{-6} \text{ m}^2/\text{S}$ $t=50^\circ\text{C}$)

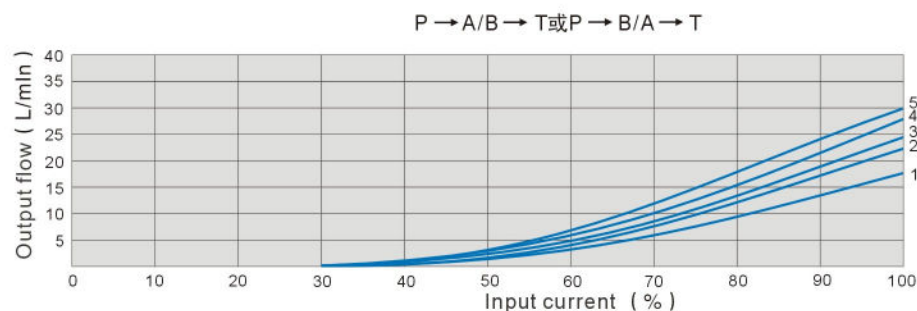


Proportional directional valve

03 Model characteristic curves (Measured at $\nu=36 \times 10^{-6} \text{ m}^2/\text{S}$ $t=50^\circ\text{C}$)

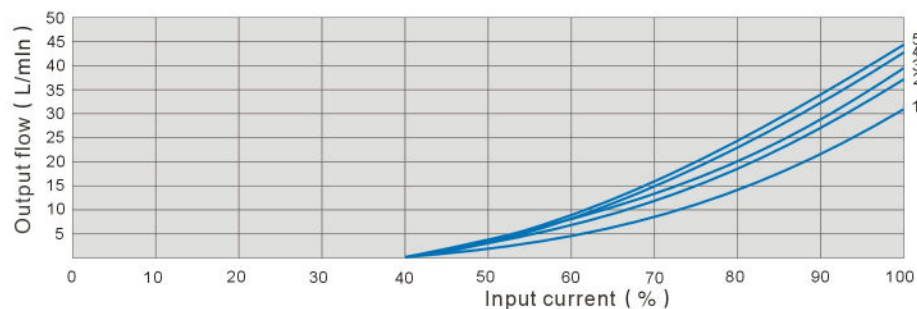


03 Model characteristic curves (Measured at $\nu=36 \times 10^{-6} \text{ m}^2/\text{S}$ $t=50^\circ\text{C}$)



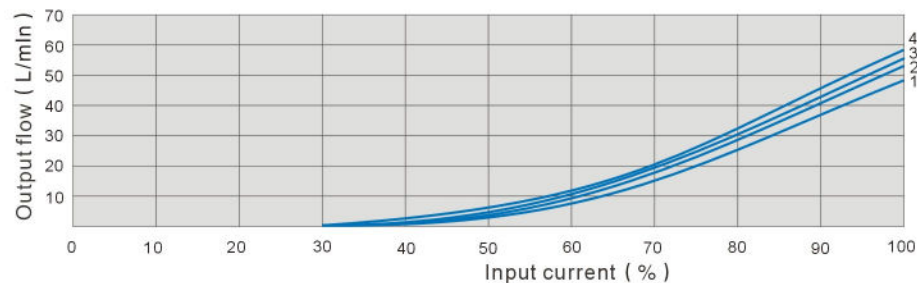
18L/min nominal flow at differential pressure .

- 1 $P_v=1\text{MPa}$ Constant
- 2 $P_v=2\text{MPa}$ Constant
- 3 $P_v=3\text{MPa}$ Constant
- 4 $P_v=5\text{MPa}$ Constant
- 5 $P_v=10\text{MPa}$ Constant



27L/min nominal flow at differential pressure.

- 1 $P_v=1\text{MPa}$ Constant
- 2 $P_v=2\text{MPa}$ Constant
- 3 $P_v=3\text{MPa}$ Constant
- 4 $P_v=5\text{MPa}$ Constant
- 5 $P_v=10\text{MPa}$ Constant



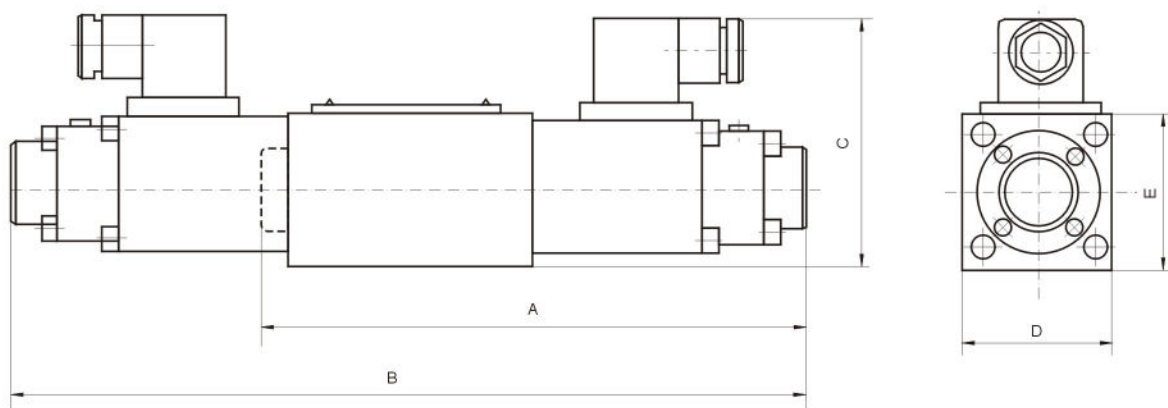
50L/min nominal flow at differential pressure.

- 1 $P_v=1\text{MPa}$ Constant
- 2 $P_v=2\text{MPa}$ Constant
- 3 $P_v=3\text{MPa}$ Constant
- 4 $P_v=5\text{MPa}$ Constant
- 5 $P_v=10\text{MPa}$ Constant

P_v =Valve differential pressure
(input pressure minus load pressure and feedback pressure)

Proportional directional valve

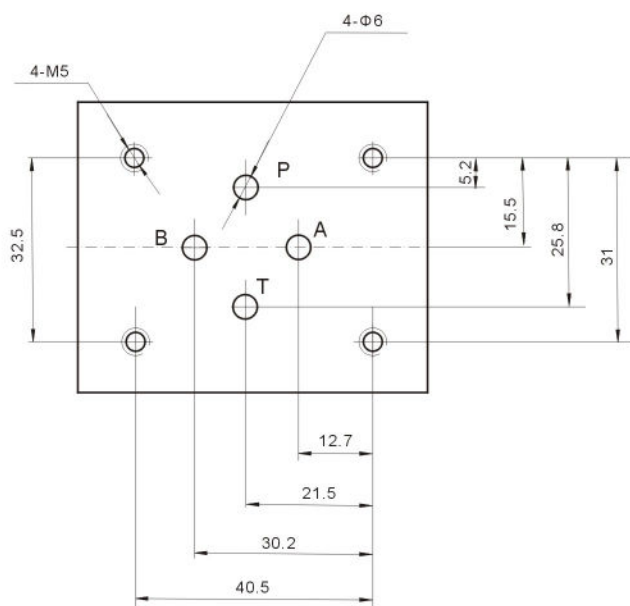
External dimensions



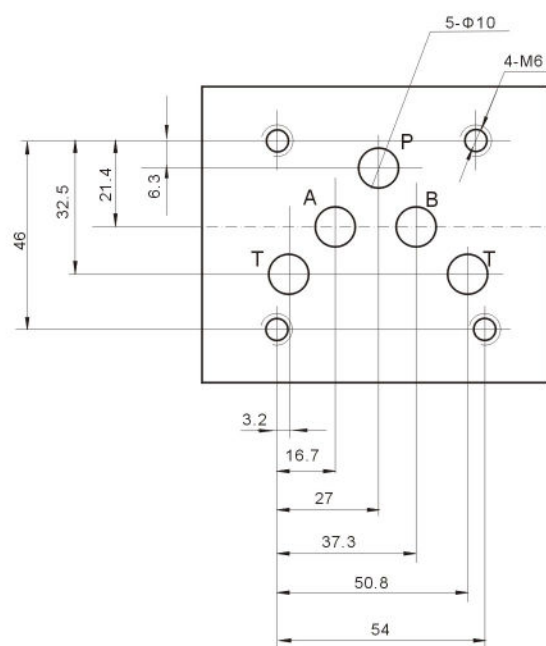
Specification	A	B	C	D	E
BFW-02	171	250	78	47	47
BFW-03	205	285	100	70	68

Plate size

BFW-02



BFW-03



The surface, connecting with the valve, should be Ra0.8 roughness, and 0.01/100mm flatness.