

Unloading Relief Valve

Technical specification



Specification	03	06	10	
Max. working pressure (MPa)	31.5			
Max. Flow (L/min)	10%	40	80	120
	7%	60	120	240
Working fluid	Mineral oil; phosphate-ester			
Fluid temp. (°C)	-20~70			
Viscosity (mm ² /s)	12~380			
Working press (MPa)	5	10	20	31.5
Cleanliness	The maximum allowable cleanliness of the oil should be according to 9th degree of Standard NAS1638. It is suggested that the minimum filter rating should be $\beta_{10} \geq 75$.			

YX/YXW valve is a pilot-operated unloading valve. Its function is to switch two situations in hydraulic system, by adjusting handle to set the working pressure or unloading pressure. Pump will be unloading automatically by controlling electrical magnetic.

Model description

YX * * - * - * * - * * / * * * * / * / * * 5X *		Remarks
Unloading Relief Valve		Serial number
Omit without solenoids directional valve W With solenoids directional valve		Seal material Omit NBR Seals V FPM Seals
Pilot operated valve Omit Pilot operated without main cartridge (not marked diameter) C Pilot operated with main cartridge (marked diameter)		Pilot operated drainage port thread Omit G1/4" M M14X1.5
Specification 03 DN10 06 DN20 10 DN30		Omit No damping ²⁾ 08 Φ 0.8 Damping 10 Φ 1.0 Damping 12 Φ 1.2 Damping
Working pressure 5 to 5MPa 10 to 10MPa 20 to 20MPa 31.5 to 31.5MPa		Omit without push rod emergency ³⁾ N9 with concealed push rod emergency
A Always closed ¹⁾ B Always open		Z5L Square connector with light ⁴⁾
1 Rotary knob 2 Sleeve with hexagon and protective cap		Working voltage ⁵⁾ D12 DC12V D24 DC24V A110 AC110V A220 AC220V B110 (A110V Rectified) B220 (A220V Rectified)
Omit Intl cntrl intl disch Y Intl cntrl extl disch		Switching differential pressure (P→A) 10 on average 17 on average

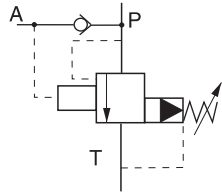
Explanation: 1. 1), 2), 3), 4), 5) is used in YXW solenoids relief valves

2. 2) damping is fixed at the B oil port of the solenoids directional valves

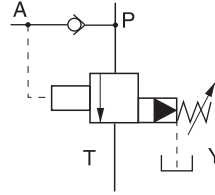
Unloading Relief Valve

Code symbol

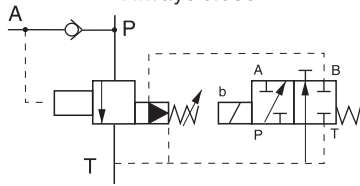
YX..



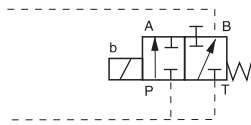
YX..Y..



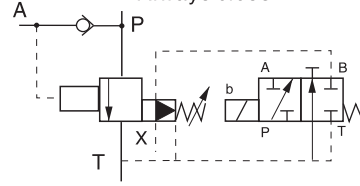
YXW..
Always close



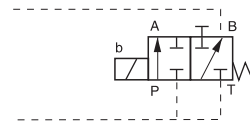
Always open



YXW..Y..
Always close

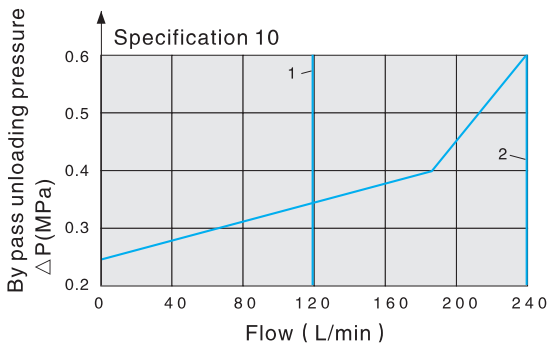
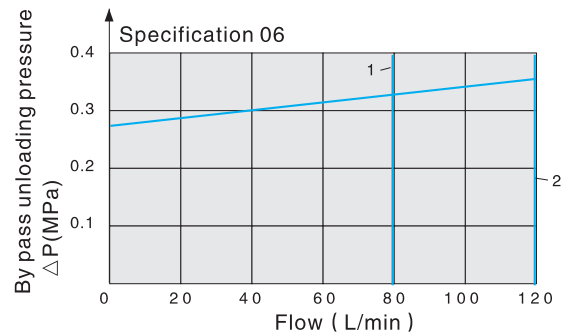
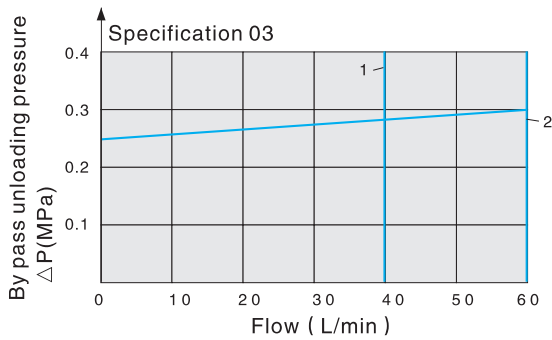


Always open



Performance curve (Measured at $\nu=41\text{mm}^2/\text{s}$ and $t=50^\circ\text{C}$)

Q_p (P→T) Unloading (by pass) pressure depends on the flow of the pump



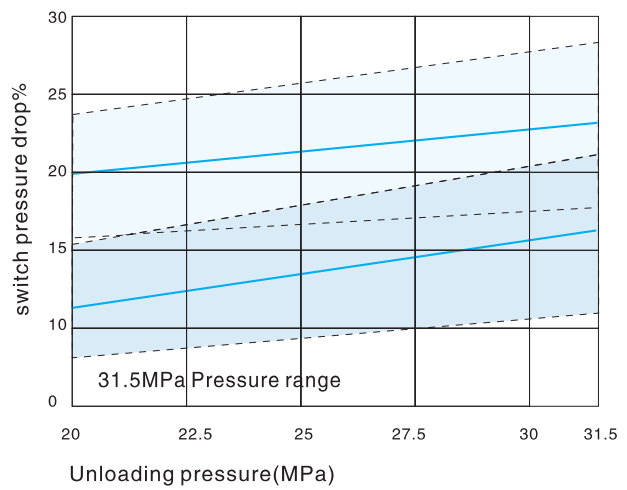
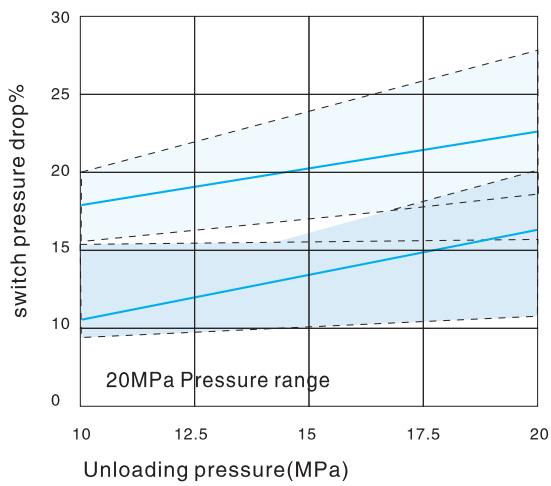
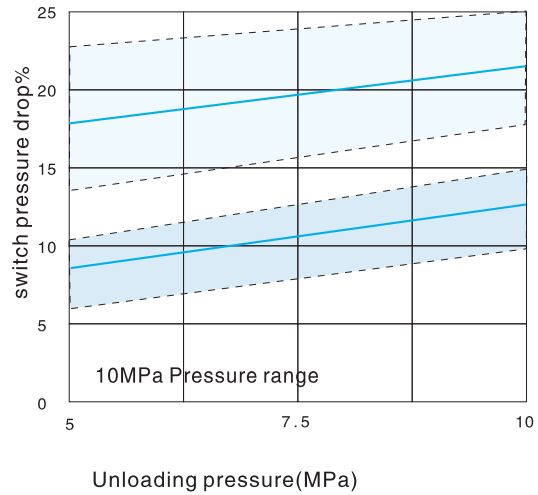
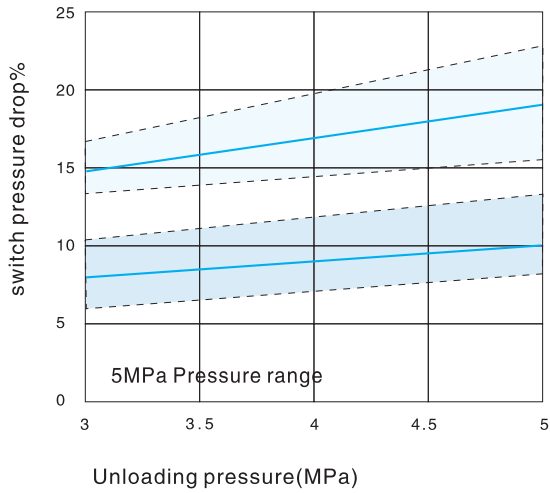
1. Q_{pmax} is used in type 10%
2. Q_{pmax} is used in type 17%


The characteristic curves are valid for outlet pressure $P_T=0$ for complete flow range.

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Performance curve (Measured at $v=41\text{mm}^2/\text{s}$ and $t=50^\circ\text{C}$)

Switching differential pressure (P→A) depending on cut-off pressure P_o (Type DA)

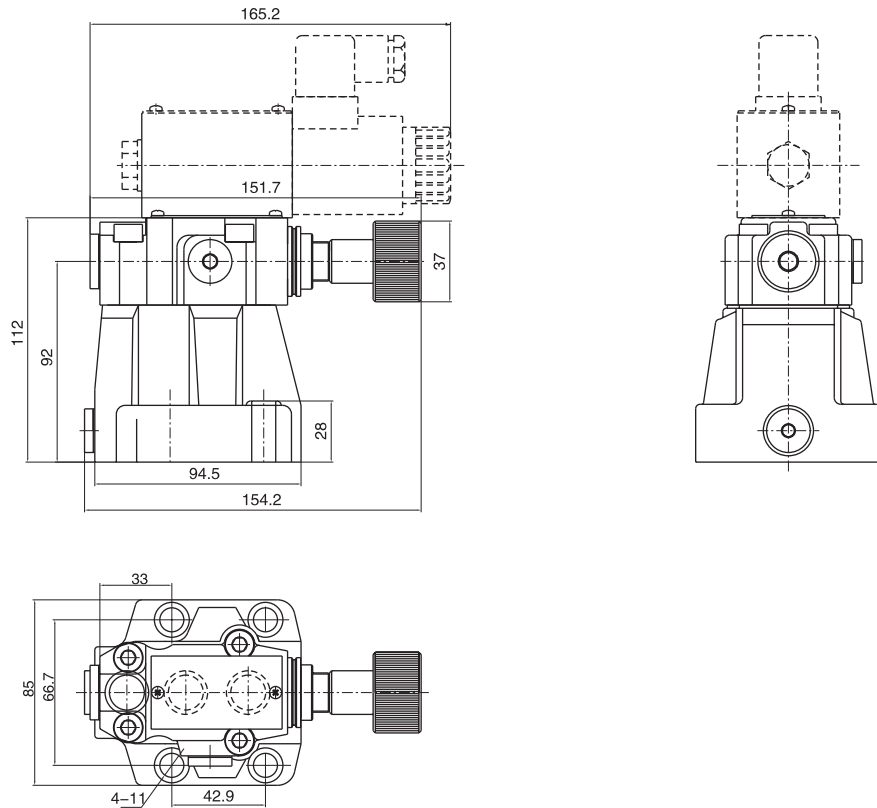


 Scatter range of type 17%

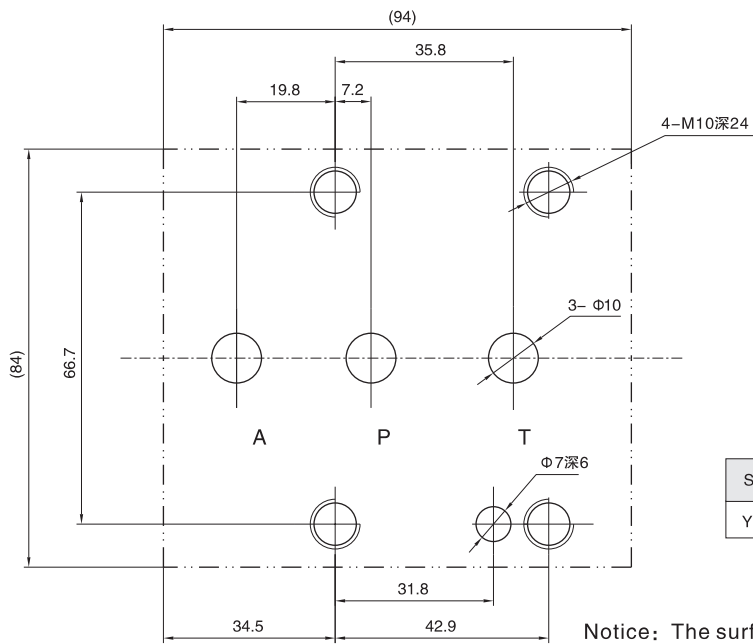
 Scatter range of type 10%

Unloading Relief Valve

03 External dimensions



03 Subplate mounting size

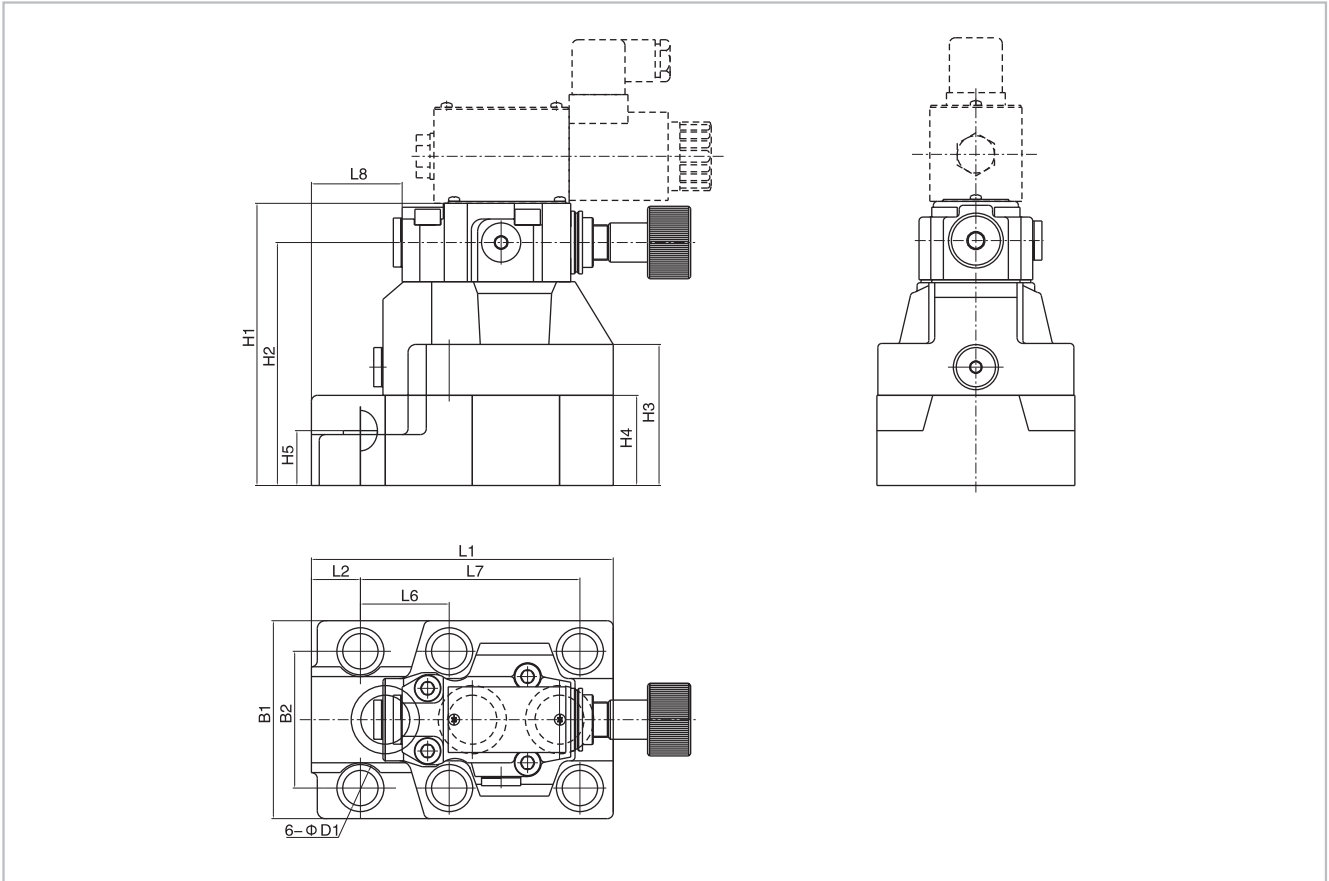


Specification	Mounting screw	Tighten torque
YX/YXW-03	4-M10x50-10.9	130Nm

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

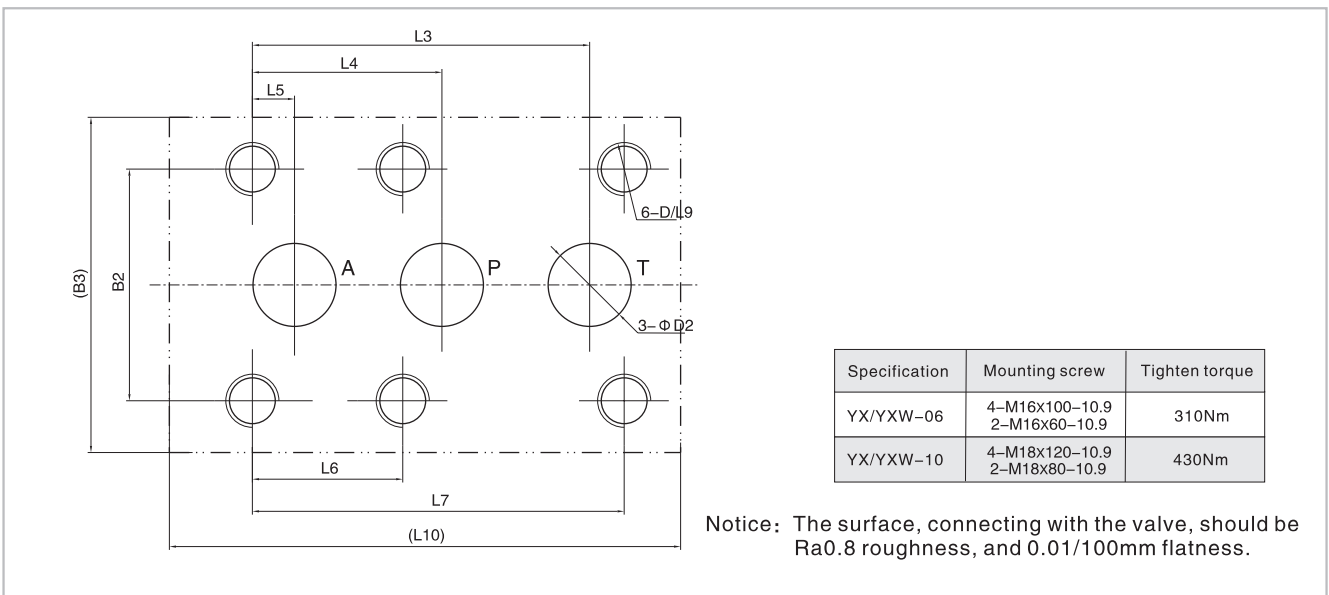
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06、10 External dimensions



B.3.5

06、10 Subplate mounting size



Specification	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	B1	B2	B3	H1	H2	H3	H4	H5	D	D1	D2
YX/YXW-06	154	25	101.6	57.1	12.7	46	112.7	46.3	34	156	101	69.9	103	144	124	72	46	28	M16	18	25
YX/YXW-10	199	42	127	63.5	12.7	50.8	139.7	67.9	37	201	118.5	82.5	118.5	165	145	93	87	45	M18	20	32