

Vincke solenoid valves is designed and tested under innovative concepts to satisfy the advanced needs of currents machines: versatility, reduced power absorbed and safety of use.

Solenoid directional valves are used for changing flow direction in hydraulic systems.

Technical characteristics

Specification		03	05		
Working pressure (Mpa)	Oil ports P,A,B	35	31.5		
	Oil port T	10	10		
Max. Flow (L/min)		80	120		
Working fluid		Mineral oil: phosphate-ester			
Fluid temp. (°C)		-20~70			
Viscosity (mm ² /s)		2.8~100			
Working voltage (V)	DC	12	24		
	AC	110/50Hz	220/50Hz		
Max. Switch frequency (T/h)		15000 (DC)	7200 (AC)		
Insulation grade		IP65			
Weight (kg)	Single solenoid	1.45 (DC)	1.4 (AC)	5.1 (DC)	4.3 (AC)
	Double solenoid	1.95 (DC)	1.9 (AC)	6.7 (DC)	5.1 (AC)

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 $\beta_{10} \geq 75$.

Ordering Code

4VNKSV - 6 - E - OF - DC24 - 4L

4 main ports
 Nominal size 6 Cetop 3 or 10 Cetop 5
 Type of spool E,J,D,C,HA,E etc.
 With spring return = no code
 Without spring return = O
 Without spring return with detent =OF

Electrical Connection:
 4L= DIN connector+led
 4X= DIN connector without led
 DC 24 or DC12
 AC220 AC110 AC24

Code symbol



1) Exemple:

Spool symbol H with spool A, ordering code HA

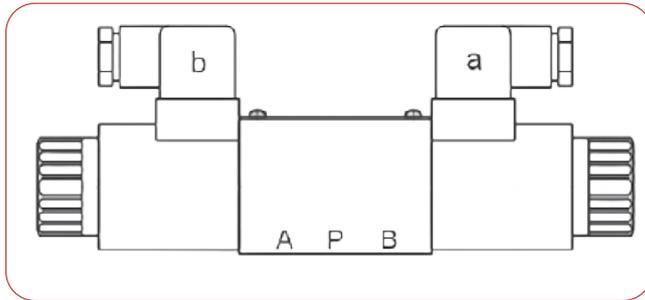
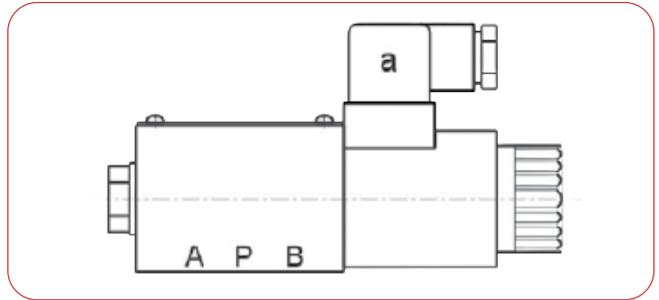
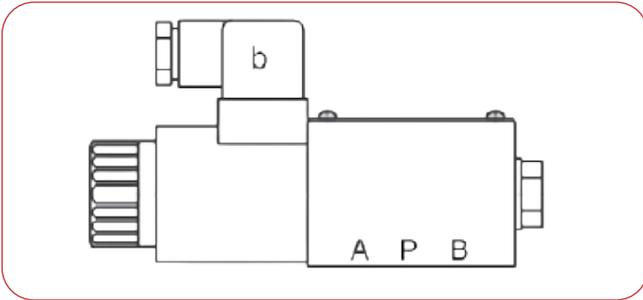
Solenoid directional valves are used for changing flow direction in hydraulic systems.

Code symbol

4VNKSV-6-*HL					
6-EHL		6-EAHL		6-LHL	
6-HHL		6-EBHL		6-MHL	
6-JHL		6-JAHL		6-PHL	
6-HAHL		6-JBHL		6-HBHL	
6-CHL		6-DHL		6-GHL	

4VNKSV-6-*HL					
10-E		10-EA		10-GB	
10-G		10-EB		10-D	
10-H		10-HB		10-L	
10-J		10-JA		10-M	
10-HA		10-JB		10-P	
10-C		10-GA			

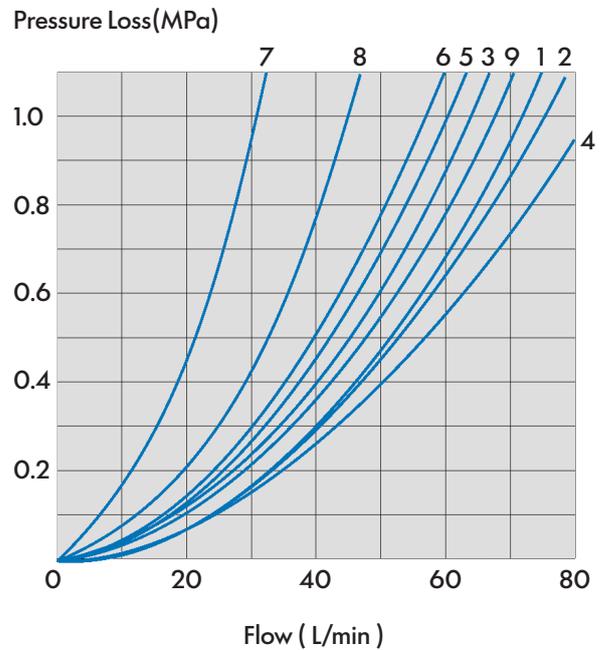
DN6 Cetop 3



Specification Performance curve

Mesured at $v=41\text{mm}^2/\text{s}$ and $t=50^\circ\text{C}$

Function Code	Direction			
	P > A	P > B	A > T	B > T
C	1	1	3	1
D	5	5	3	3
E	3	3	1	1
F	1	3	1	1
G	6	6	9	9
H	2	4	2	2
J	1	1	2	1
L	3	3	4	9
M	2	3	3	3
P	3	1	1	1



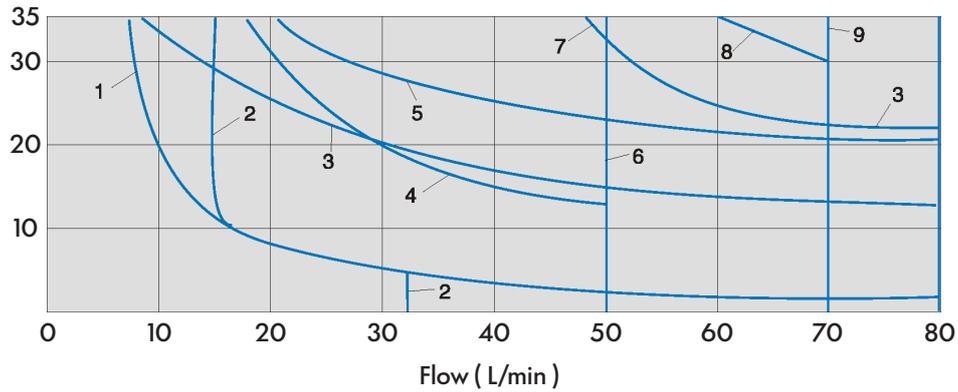
8. Spool symbol G in the neutral position P > T

Specification Working limits

DC24 12 110		AC 220 110 24 50HZ	
Curve	Symbol	Curve	Symbol
4	F P	14	F M
5	J	15	G
6	G H	16	H
7	L	17	E H/OF E/OF J M L
8	C D	18	C D
9	M		
10	E H/OF E/OF		

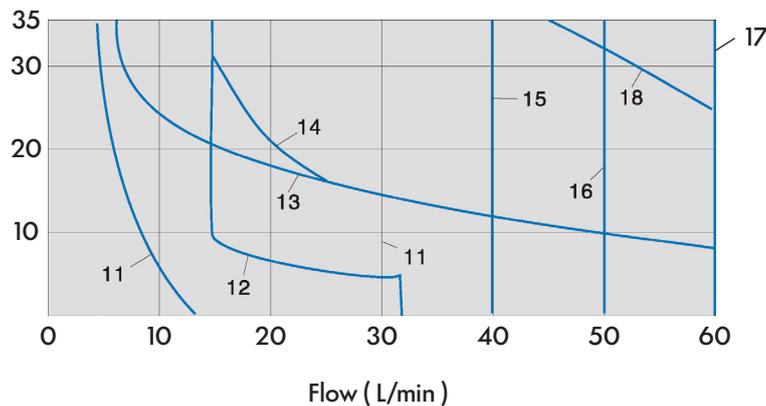
With regard to the four-way valve, the normal flow data as show is get from the regular use of two directions of the flow. See tables. If only one flow direction is needed, the maximum flow may be very small in the serious condition.

Working pressure (MPa)

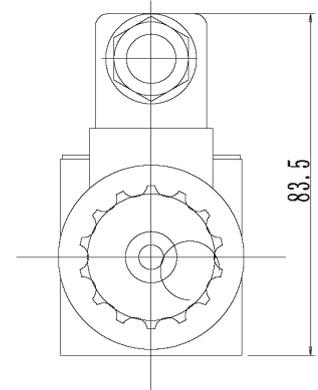
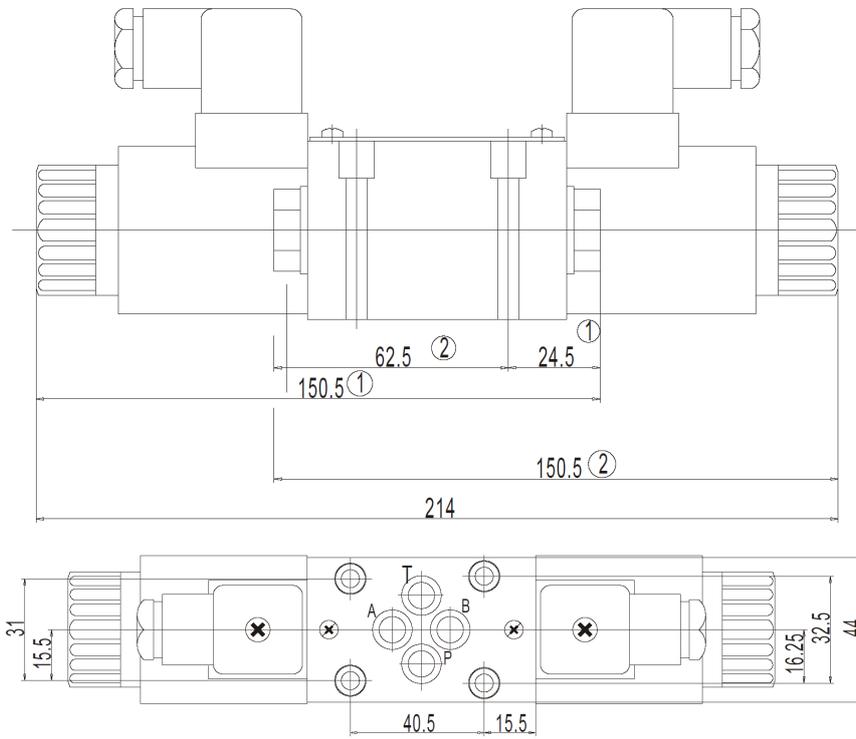


- 1) No manual emergency operation
- 2) Oil return from actuator to oli tank

Working pressure (MPa)



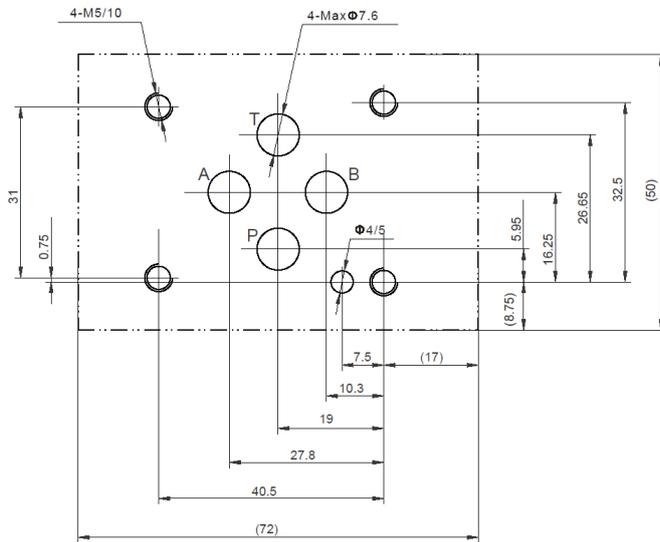
External dimensions



① ②

Two positions Electrical operated directional control valve

Size of subplate oil port



Mounting screw	Amount	Tighten torque
M5x45 - 10.9	4	9Nm

Supplementary explanation

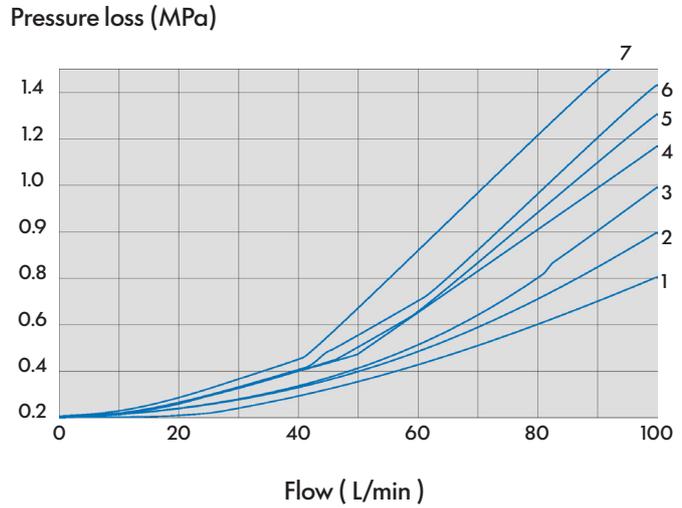
1. When installing the product, considering horizontal position firstly.
2. The medium used in the hydraulic system must be filtered, its accuracy at least $20 \mu\text{m}$.
3. Screw should be according to the parameters in catalogue.
4. The surface, connecting with the valve, should be Ra0.8 roughness, and 0.01/100mm flatness.

DN10 Cetop 5

SPECIFICATION PERFORMANCE CURVE

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

Function Code	Direction			
	P > A	P > B	A > T	B > T
C D	2	2	3	3
E	2	2	4	4
F	2	3	3	5
G	3	3	4	6
H	1	1	4	5
L	1	1	4	5
M	1	1	5	1
P	3	2	5	3

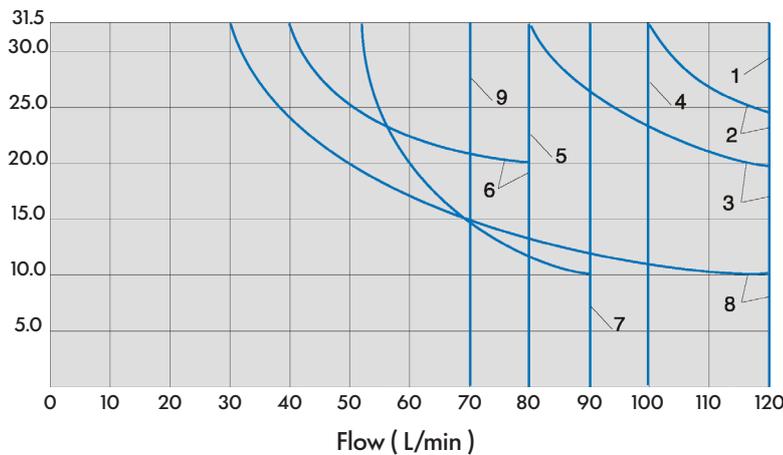


8. Spool symbol G in the neutral position P > T

Specification working limits

With regard to the four-way valve, the normal flow data as shown is get from the regular use of two directions of the flow (e.g. P to A, and simultaneous return flow from B to T). See tables, if only one flow direction is needed, for example: when a four port valve which is closed up port A or port B, used as a three-way valve, the maximum flow may be very small in the serious condition.

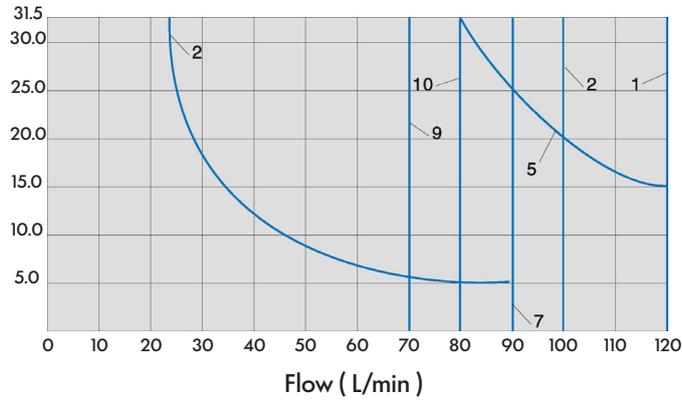
Working pressure (MPa) DC Solenoid operation



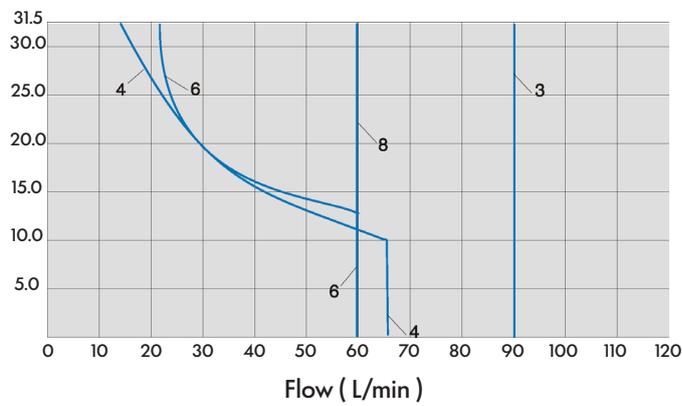
Curve	Symbol
1	C D H/OF E/OF M
2	E
4	L J H
6	G
7	F P

(1) Return circuit (independent of area ratio)

Working pressure (MPa) DC Solenoid operation

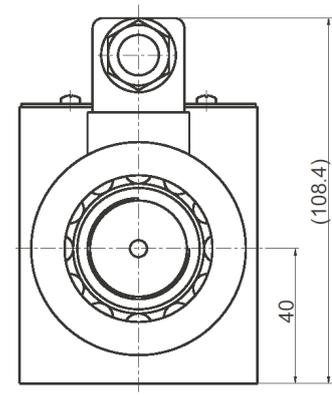
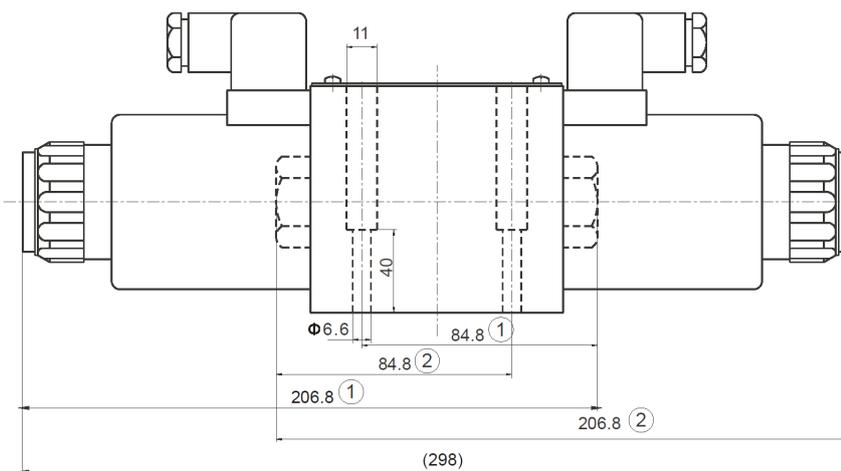


Working pressure (MPa) DC Solenoid operation



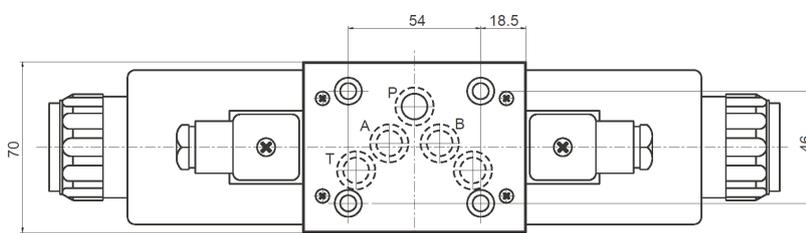
110V 220V	
Curve	Symbol
1	C D E/OF
2	E
3	L M
5	J
6	G
7	F P
8	H

External dimensions

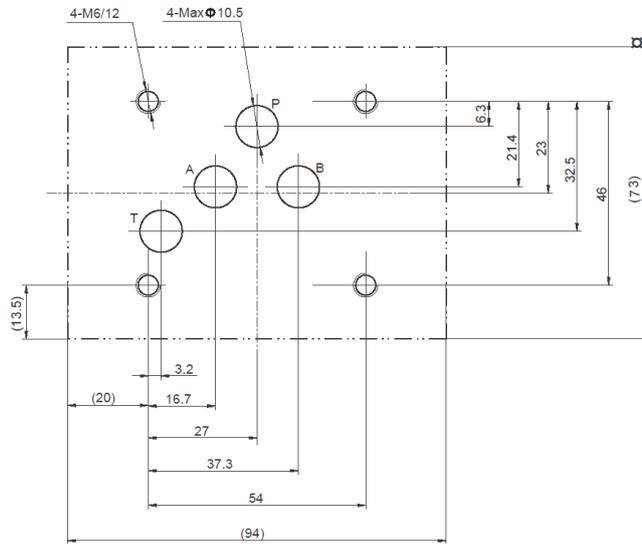


① ②

Two positions Electrical operated directional control valve



Size of subplate oil port



Mounting screw	Amount	Tighten torque
M6x50 - 10.9	4	15Nm

Supplementary explanation

1. When installing the product, considering horizontal position firstly.
2. The medium used in the hydraulic system must be filtered, its accuracy at least 20 μ m.
3. Screw should be according to the parameters in catalogue.
4. The surface, connecting with the valve, should be Ra0.8 roughness, and 0.01/100mm flatness.