

BEIJING HUADE HYDRAULIC INDUSTRIAL GROUP CO.,LTD.	Directional control valves, electrically operated Type WE 4			RE23140/12.2004
	size 4	up to 21 MPa	up to 25 L/min	Replaces: RE23140/05.2001

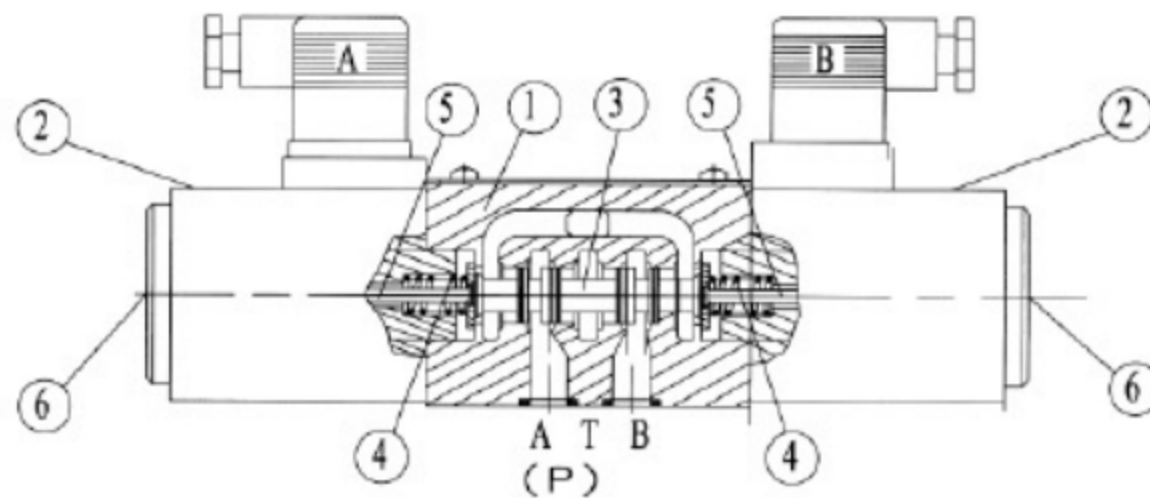
Features:

- Directional valves of type WE4 are solenoid operated directional spool valves
- Wet pin solenoids of direct or alternating current
- Porting pattern to ISO 4401 and CETOP-RP 121H



Function,section

Type 4WE4E 10B/



Directional valves of type WE4 are solenoid operated directional spool valves. They control the start, stop and direction of a fluid flow.

These directional valves basically consist of the housing (1), one or two solenoids (2), the control spool (3), and one or two return springs(4).

The control spool (3) is held by the return spring (4) in the central or in the initial position (except for detented spools). The control spool (3) is actuated via wet pin solenoids (2). In the energized condition. The force of the solenoid (2) acts via the plunger (5) on the control spool (3) and shifts the same from its rest position to the desired end position. Thus, the required flow pattern from P to A and B to T or P to B and A to T is selected. When the solenoid (2) is de-energized, the control spool (3) is returned to its neutral position by the return spring (4). A covered manual override is provided so that the control spool (3) can be operated without energizing the solenoid.

A

Type 4WE4 C 10B/O...

D

This version is a directional valve with 2 switching positions and 2 solenoids without detent and springs. There is no defined switching position in the de-energized condition.

A

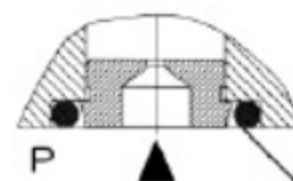
Type 4WE4 C 10B/OF...

D

This version is a directional valve with 2 switching position, 2 solenoids and a detent. Thus, the relevant switching positions are fixed and continuous energization of the solenoid is not necessary

Throttle inserts

The use of throttle inserts is only required, if, due to the operating conditions, flows are to be expected, which are higher than the stated maximum performance limits of the valve. It is inserted in the P channel of the directional valve.



Type 4WE 4-10B/...B..
O-ring 7 x 1.5

Ordering details

	WE	4		10	B	/	A							*
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3 service ports = 3
4 service ports = 4

Nominal size 4 = 4

Symbols see below

Series 10 to 19 = 10
(10 to 19 unchanged installation and connection dimensions)

The technology of Beijing Huade Hydraulic = B

Spring return = No code
Without spring return = O
Without spring return with detent = OF

Standard solenoid = A

12 V DC = 12
220 V AC 50 Hz = W220-50
24 V DC = G24
DC solenoid commuting automatically = W110/220R

Further details in
clear text

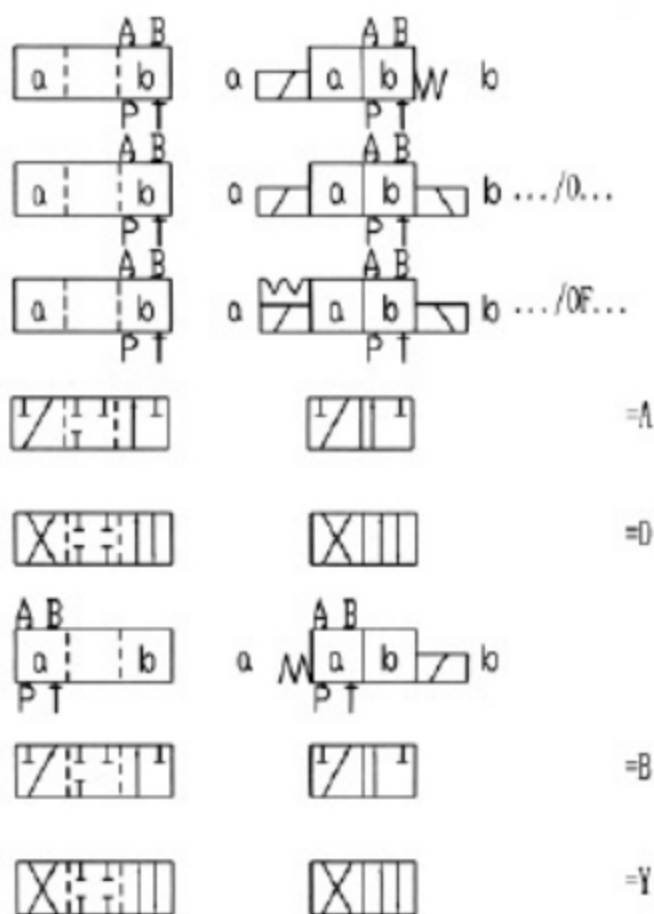
No code = mineral oils
V = phosphate ester

No code = without cartridge throttle
B08 = throttle ϕ 0.8 mm
B10 = throttle ϕ 1.0 mm
B12 = throttle ϕ 1.2 mm

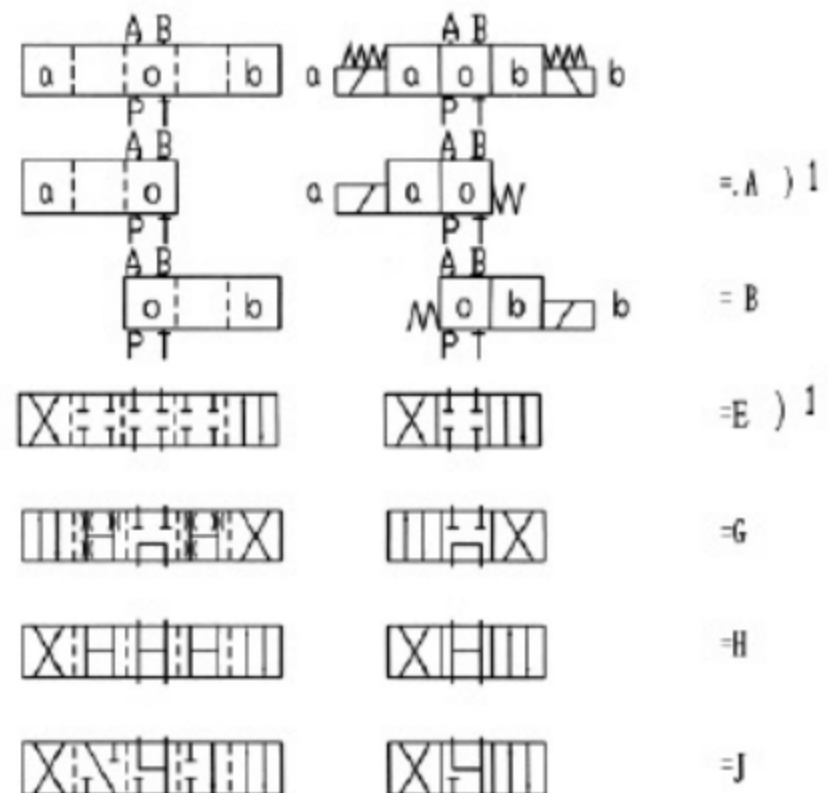
Z4 = normal plug
Z5 = Large angled plug
Z5L = Large angled plug with indicator light

N9 = With covered hand override
No = Without covered hand override

Symbols



1) Example: Spool E with switching position "a" ordering details..EA

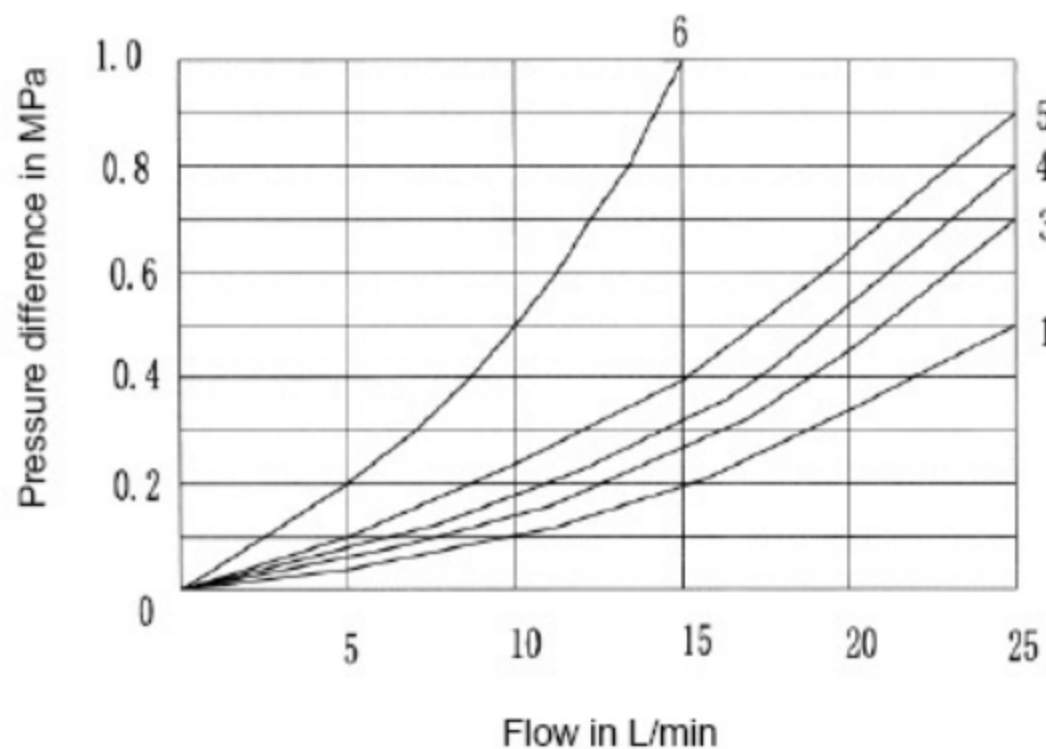


Technical data

Hydraulic technical data			
Max. operating pressure - Ports A, B, P	(MPa)	up to 21.0	
- Port T	(MPa)	10.0 ,With symbols A or B port T must be used as leakage port when the operating pressure is above the permissible tank pressure	
Max. flow	(L/min)	up to 25	
Pressure fluid		Mineral oil phosphate ester	
Viscosity range	(mm ² /s)	2.8 to 500	
Pressure fluid temperature range	(°C)	- 30 to + 80	
Degree of contamination	(µm)	Maximum permissible degree of contamination of the hydraulic fluid to NAS 1638 class 9. We therefore recommend a filter with a minimum retention rate of $\beta_{10} \geq 75$.	
Weight	(Kg)	- Valve with 1 solenoid 0.9 - Valve with 2 solenoids 1.3	
Electrical technical data			
Available voltages	(V)	12, 24, 220, 110R, 220R	
Power consumption	(W)	22	
Duty		continuous	
Switching time	ON	(ms)	20 to 30
	OFF	(ms)	10 to 20
Max. ambient temperature	(°C)	+50	
Max. coil temperature	(°C)	+150	
Protection to DIN 40 050		IP65	
Switching frequency	(cycles/h)	15000	

With electric connection the protective conductor (PE) must be connected according to the relevant regulations.

Characteristic curves (measured at $\nu = 41 \text{ mm}^2/\text{s}$ and $t = 50 \text{ °C}$)



Symbol	Flow direction				
	P → A	P → B	A → T	B → T	P → T
A	5	5	-	-	-
B	5	5	-	-	-
D,Y	5	5	4	4	-
E	4	4	3	3	-
G	3	3	4	4	6
H	1	1	1	1	-
J	5	5	3	3	-

