

## Electro-hydraulic directional control valve



Electro-hydraulic directional control valve is a control valve which can use the pressure of the hydraulic circuit to pull the spool and change the hydraulic oil direction.

Electro-hydraulic directional control valve is the combination of the electrical operated directional control valve and the hydraulic operated directional control valve. It uses the electrical operated directional control valve to control the hydraulic operated directional control valve, and change the hydraulic oil direction.

Electro-hydraulic directional control valve and hydraulic operated directional control valve are used mostly in hydraulic systems when electrical operated directional control valve can not afford the flow. It may control the movement of the power elements, or control the direction of the flowing oil.

### Technical specification

Specification		03		04		06	
Model		FWH-03   HFWH-03		FWH-04   HFWH-04		FWH-06   HFWH-06	
Max. Working ( MPa) pressure	P,A,B Port	28	35	28	35	28	35
	T port (internal leakage of control oil)	10		10		10	
	Y port (external leakage of control oil)	10		10		10	
Minimum control pressure ( MPa)		1.0 Spring-Return three-way valve two-way valve		1.2 Spring-Return three-way valve two-way valve		1.3 Spring-Return three-way valve two-way valve	
Maximum control pressure ( MPa)		to25					
Max. Flow (L/min)		160		300		650	
Working fluid		Mineral oilphosphate-ester					
Fluid temp. ( °C )		-20-70					
Viscosity ( mm²/s)		2.8-380					
Weight (kg)	Single-head solenoid	6.4		8.5		17.6	
	Double-head solenoids	68		89		18	
	FH Valve	4		7.3		16.5	
	Adjustor of reversing time	0.8		0.8		0.8	
	Pressure reducing valve	0.5		0.5		0.5	
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~10µm.						

## Electro-hydraulic directional control valve

### Model description

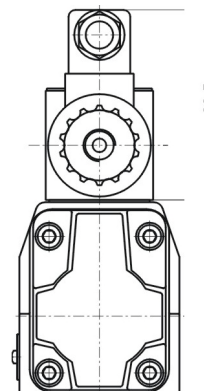
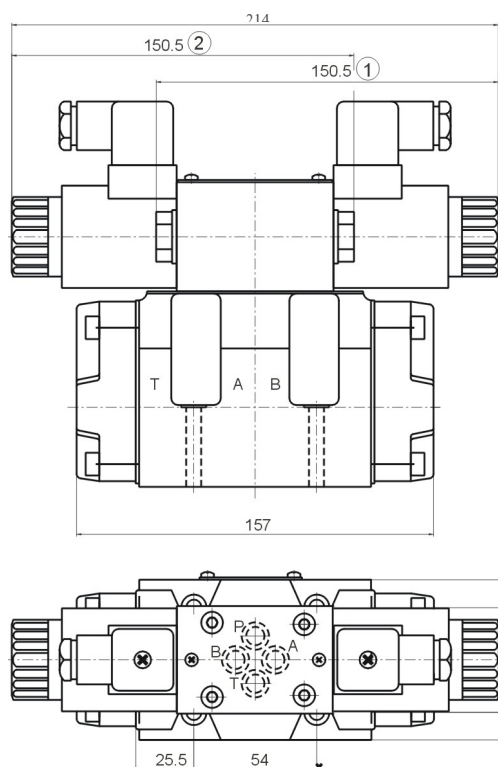
<p>Working pressure</p> <p>Omit 28MPa</p> <p>H 35MPa</p>	<p>FWH/FH</p>	<p>50</p>	<p>L</p>
<p>FWH Electro-hydraulic directional control valve</p> <p>FH Hydraulic operated directional control valve</p>			<p>Serial number</p>
<p>Specification</p> <p>03 NS 10</p> <p>04 NS 16</p> <p>06 NS 20</p>			<p>Seal material</p> <p>Omit NBR Seals</p> <p>V FPM Seals</p>
<p>Main valve return type</p> <p>Omit Spring return</p> <p>H Hydraulic centration</p>			<p>2) Omit No reducing valve</p> <p>03 With reducing valve</p>
<p>Function code</p> <p>Details as following symbol table</p>			<p>"Omit Without pre-load valve</p> <p>P4.5 With pre-load valve</p>
<p>Working voltage</p> <p>012 OC12V</p> <p>024 OC24V</p> <p>A110 AC110V</p> <p>A220 AC220V</p> <p>B110 AC110V Rectified</p> <p>8220 AC220V Rectified</p>			<p>Omit without stroke adjusting device</p> <p>A Head A of main valve with stroke adjustment</p> <p>B Head B of main valve with stroke adjustment</p> <p>W Both heads with stroke adjustment</p>
<p>Z5L Square connector with light</p> <p>Z6 Wire boxtype</p>			<p>Omit without shifting time adjustment</p> <p>S With shifting time adjustment: Inletflow control</p> <p>S1 shifting time adjustment: Outletflow control</p>
<p>Omit without hand emergency</p> <p>N9 with concealed hand emergency</p>			<p>Omit without damping</p> <p>08 cD0.8 Oamping</p> <p>10 cD 1.0 Oamping</p> <p>12 cD 1.2 Oamping</p>
			<p>Omit Intl cntrl intl disch</p> <p>XY Extl cntrl extl disch</p> <p>X Extl cntrl intl disch</p> <p>y Intl cntrl extl disch</p>

### Explanation

- For neutral unloaded directional control valve it must be ordered separately.  
There is no model (FWH-03)Electro-hydraulic directional control valve NS10.
- Only applied when the controlling pressure is higher than 25MPa

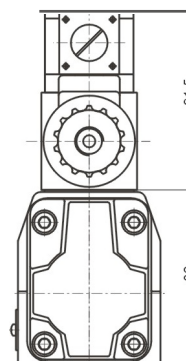
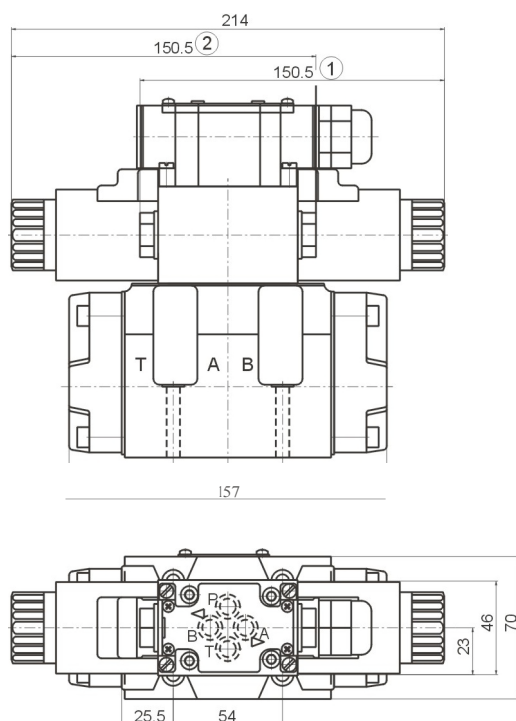
## Electro-hydraulic directional control valve

External dimensions ( 03 Direct current plug type)



Two positions Electrical  
operated directional control valve

External dimensions ( 03 Direct current wire box type)

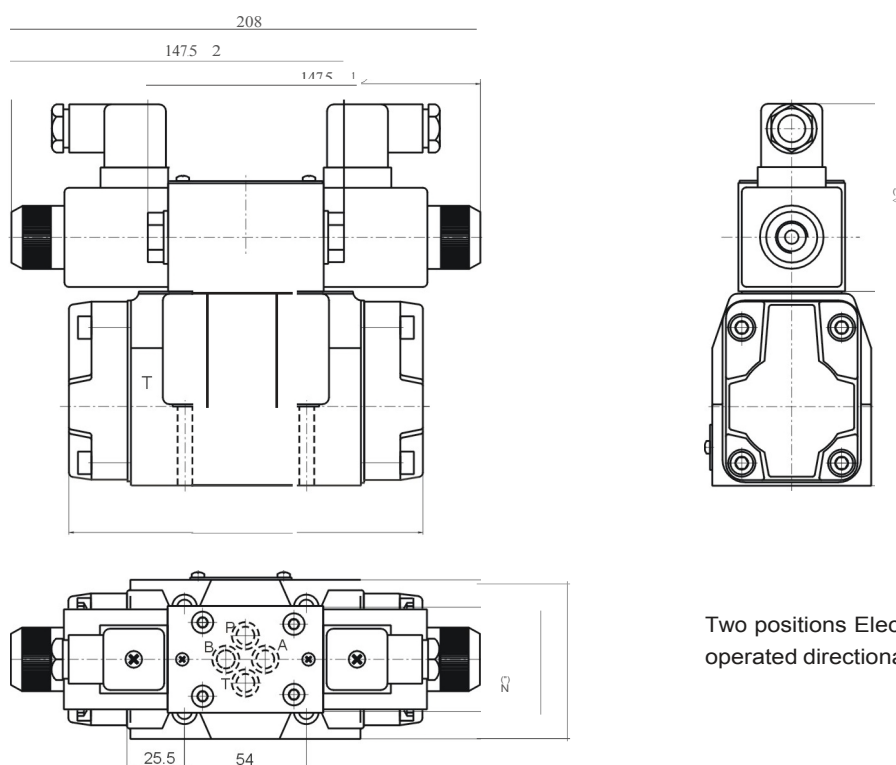


G)@

Two positions Electrical  
operated directional control valve

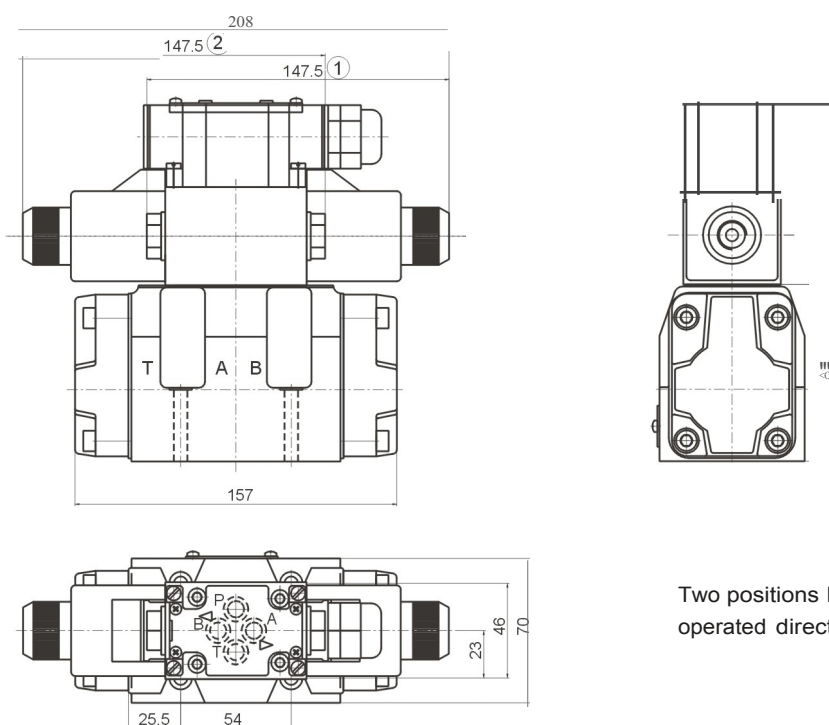
## Electro-hydraulic directional control valve

External dimensions ( 03 Alternating current plug type)



Two positions Electrical  
operated directional control valve

External dimensions ( 03 Alternating current wire box type)



Two positions Electrical  
operated directional control valve