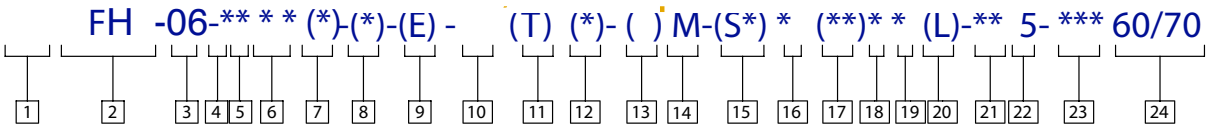
Itahydraulic
Power Technology

FH-06 DIRECCTIONAL VALVE CETOP 08

- Electro-Hydraulic Directional Control Valve
- Variety of Spool Configurations
- 18 Month Warranty
- Flow Rates to 70 gpm

Model Code Breakdown



1 **FH - Itahydraulic brand**

2 **Series Designation**
– Directional control valve
– Manifold or subplate mounted
– Solenoid controlled, pilot operated

3 **Interface**

06 - D08
08 - D10

4 **Spool Type**

Code Center position
0 – Open to T all ports
1 – Open P & A to T, closed B
2 – Closed to T all ports
3 – Closed P & B, open A to T
4 – Tandem P to T, closed to P crossover
6 – Closed P only, open A & B to T
7 – Open P to A & B, closed T
8 – Tandem P to T, open crossover
9 – Open to T all ports over tapers
11 – Open P & B to T, closed A
31 – Closed P & A, open B to T
33 – Closed P, open A & B to T over tapers

5 **Spool/Spring Arrangement**
A – Spring offset to A port
B – Spring centered, solenoid A removed
C – Spring centered

6 **Left Hand Assembly**
L – Left hand, single solenoid on (For right hand assembly P to A port when solenoid A is energized.)
Blank – Omit if not required

7 **Manual Override**
Blank – Plain override solenoid ends only

8 **Response Type**
X – Fast response
Blank – Standard low shock models

9 **Spool Control Modifications**
1* – Stroke adjustment both ends
2 – Pilot choke (dual) adjustment
3* – Pilot choke and stroke adjustment
7* – Stroke adjustment A port end only
8* – Stroke adjustment B port end only
2-7* – Dual pilot choke and stroke adjustment A port end only
2-8* – Dual pilot choke and stroke adjustment B port end only
Blank – Omit if not required

10 **Pilot Pressure**
Blank - Internal pilot pressure
E - External pilot pressure

11 **Pilot Drain**
Blank – External pilot drain
T – Internal pilot drain

12 **Pressure Port Check Valve**
K – 5 psi cracking pressure
R – 50 psi cracking pressure
S – 75 psi cracking pressure
Blank – Omit if not required

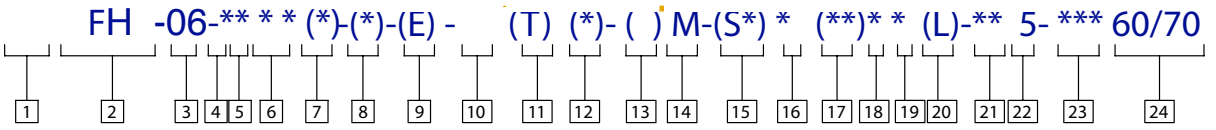
13 **Solenoid Energization Identity**
V – Solenoid identification determined by position of solenoid (solenoid A at port A end and/or solenoid B at port B end)
Blank – Standard arrangement for ANSI B93.9 (energize solenoid A for flow P to A port)
(Code V for any valve with code 4 or code 8 spool)

14 **Flag Symbol**
M – Electrical options and features

15 **Spool Indicator Switch***
(Available on models with high performance pilot DG4V3 only)
S3 – Normally open (available on valves with code P* only)
S4 – Normally closed (available on valves with code P* only)
S5 – Free leads (available on valves with coil type code F only)
S6 – LVDT type DC switch

16 **Coil Type**
U – ISO 4400
F – Flying Lead

Model Code Breakdown (continued)



17 Electrical Connections
(Code F coil only)
T* – Wired terminal block
PA* – Instaplug male receptacle only
PB* – Instaplug male & female receptacle
PA3 – Three pin connector
PA5 – Five pin connector
Blank – Omit if not required

18 Housing
(Code F coil only)
W – 1/2 NPT thread wiring housing
Blank – Omit if not required

19 Electrical Options
(Code U coil only)
Blank – ISO with fitted plug and lights

20 Solenoid Indicator Lights
(Code F coil with code T electrical connections only)
L – Indicator lights
Blank – Omit if not required

21 Coil Identification
A* – 110V AC 50 Hz
B – 110V AC 50 Hz/120V AC 60 Hz*
C* – 220V AC 50 Hz
D – 220V AC 50 Hz/240V AC 60 Hz*
G – 12 VDC
H – 24 VDC
DJ* – 98 VDC
P* – 110 VDC

22 Pilot Valve Tank Pressure Rating
2* – 10 bar (145 psi) WFDG4V3S-60 with S3, S4, or S5 spool indicator switch
5 – 100 bar (1450 psi) WFDG4V3S-60
6 – 160 bar (2300 psi) with WF4WE6-6X AC solenoids
7 – 210 bar (3000 psi) WF4WE6-6X with DC solenoids

23 Pilot Valve Port Orifices
Code Orifice diameter
***00** – Solid plug
***03** – 0,30 mm (0.012 in)
***06** – 0,60 mm (0.024 in)
***08** – 0,80 mm (0.030 in)
***10** – 1,00 mm (0.040 in)
***13** – 1,30 mm (0.050 in)
***15** – 1,50 mm (0.060 in)
***20** – 2,00 mm (0.080 in)
***23** – 2,30 mm (0.090 in)
Blank – Omit if not required
(* = P, T, A, and/or B as required)

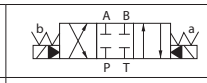
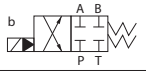
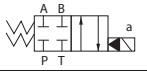
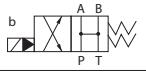
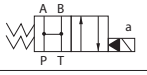
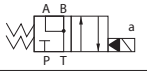
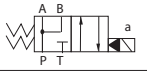
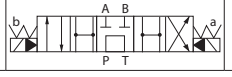
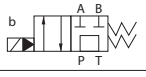
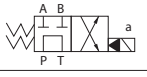
24 Design Number
60 – WFDG4V3S-60 Pilot Valve (Std performance)
70 – WF4WE6-6X Pilot Valve (High performance)

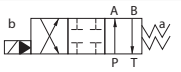
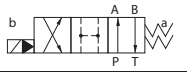
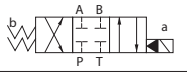
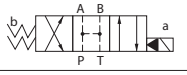
Valves should be installed in the horizontal position!
Filtered hydraulic oil should be at least 20 micron.

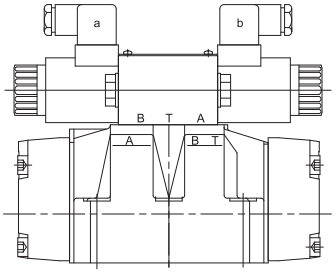
** Only Available in Reman*

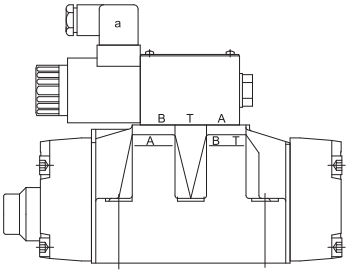
Technical Data for Pilot Pressure	**NG Size**	22	25
	Vickers	DG5S8	DG5SH8
Style	**ITA**	FH-06	FH-08
	Rexroth	4WH 22	4WH 25
	ITA	FH-06	FH-06
Pilot Oil Supply X External			
3-position valve spring-centered	psi	152	188
3-position valve, pressure-centered	psi	-	261
2-position valve with spring end position	psi	159	188
2-position valve with hydraulic end position	psi	116	116
Pilot Oil Supply X Internal	psi	65	65

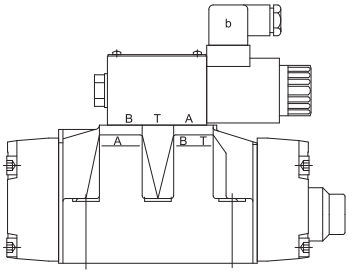
Spool Type and Spring Mechanism

2C		2B		2BL	
0C		0B		0BL	
6C		6B		6BL	
7C		7B		7BL	
8C		8B		8BL	

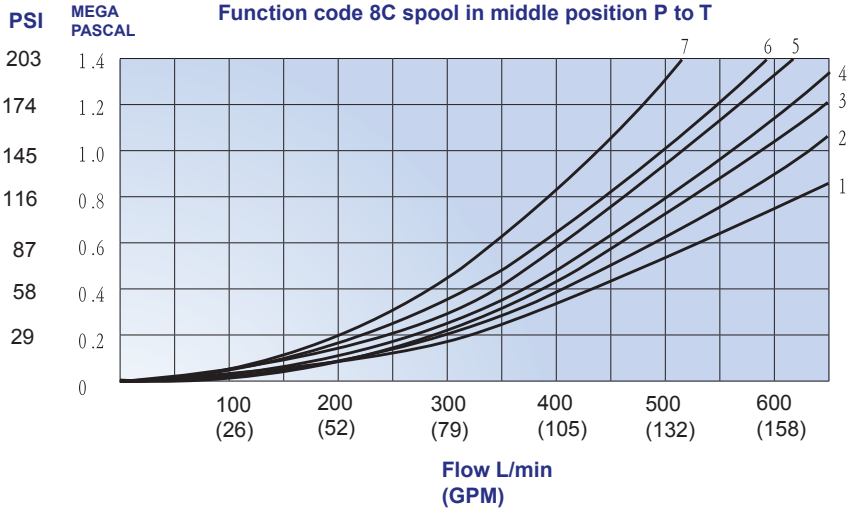
2A	
0A	
2AL	
0AL	







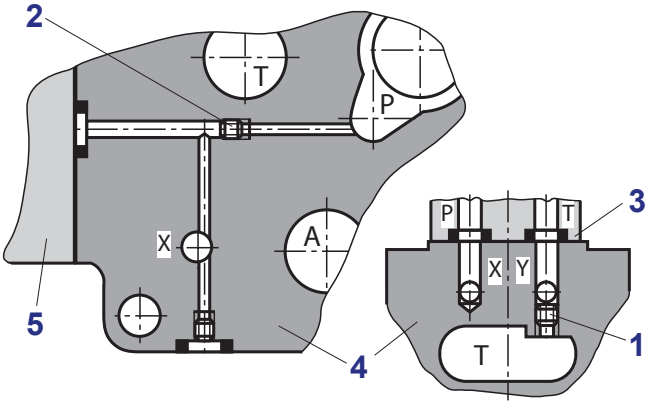
D08 Specification



Function	Switching Position			
	P ⇨ A	P ⇨ B	A ⇨ T	B ⇨ T
2C	1	1	1	3
7C	1	4	3	3
8C	3	1	2	4
0C	4	4	3	4
6C	2	2	3	5

Pilot Oil & Drain Plugging

FH-06 (NG25)



1	Plug screw M6, 3 A/F - pilot oil drain
2	Plug screw M6, 3 A/F - pilot oil supply
3	Pilot Valve
4	Main Valve
5	End Cover

Pilot Oil Supply
External: 2 closed
Internal: 2 open

Pilot Oil Drain
External: 1 closed
Internal: 1 open

NG10 and NG16: 35 Nm [25.8 ft-lbs]; NG25: 68 Nm [50.2 ft-lbs]
Tightening torques for cover mounting screws

Valve Model Code Additions:

Blank = Int. Pilot
E = Ext. Pilot

Blank = Ext. Drain
T = Int. Pilot

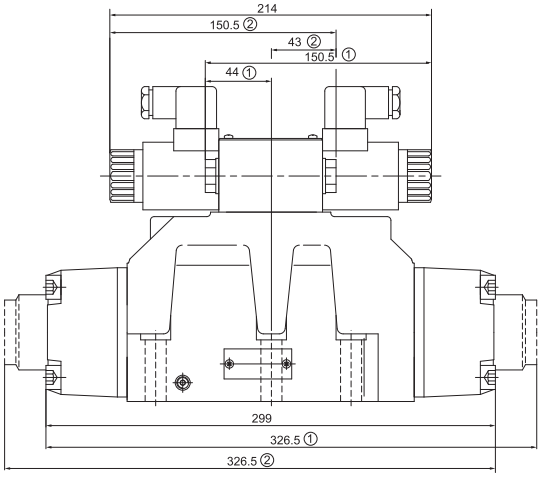
Type ET:
The pilot oil is supplied externally via channel X from a seperate pressure supply. The pilot oil is drained internally via channel T to the tank. Ports X and Y in the subplate are plugged.

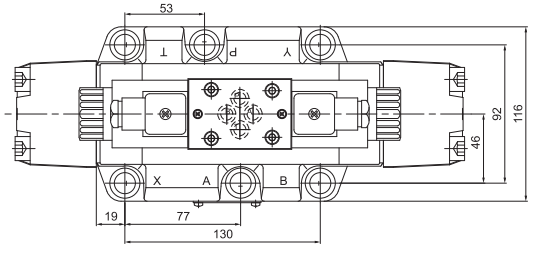
Type E:
The pilot oil is supplied externally via channel X from a separate pressure supply. The pilot oil is drained externally via channel Y to the tank. Port X in the subplate is plugged.

Type T:
The pilot is supplied internally from channel P of the main valve. The pilot oil is drained internally via channel T to the tank. Port Y in the subplate is plugged.

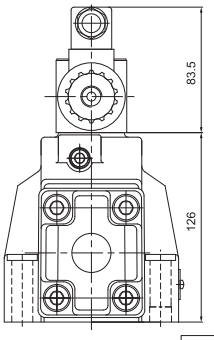
DO8 Drawings

Direct Current Din Plug



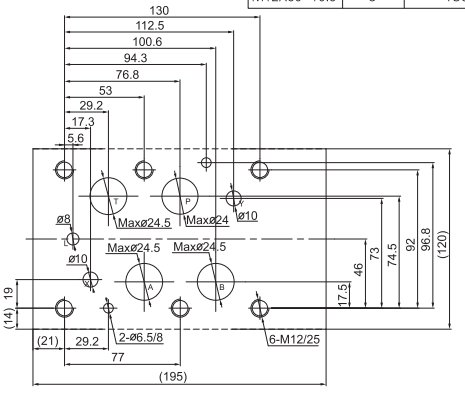


①② Two positions Electrical operated directional control valve

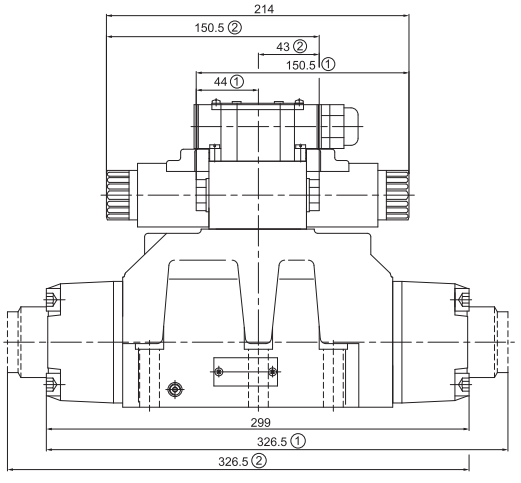


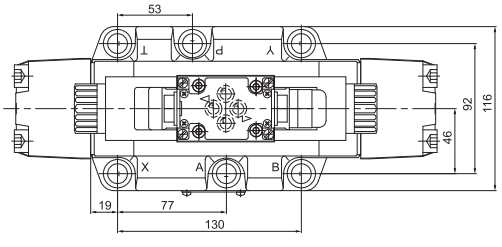
Specification	Amount	Tighten torquemoment
M12X60-10.9	6	130Nm

Size of subplate oil port



Direct Current Wire Box





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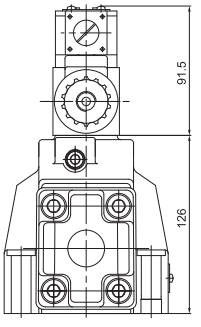
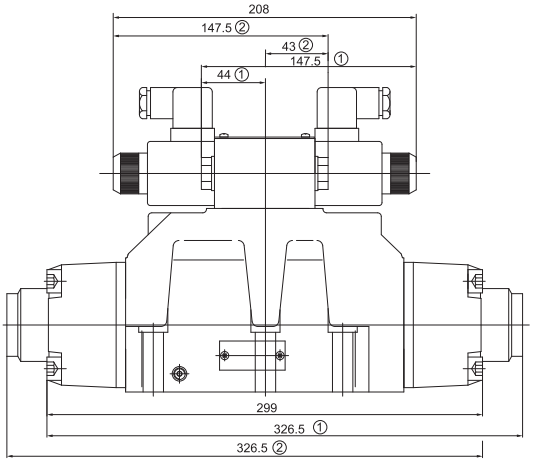


DO8 Drawings

Alternating Current Din Plug



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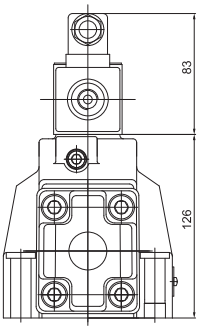
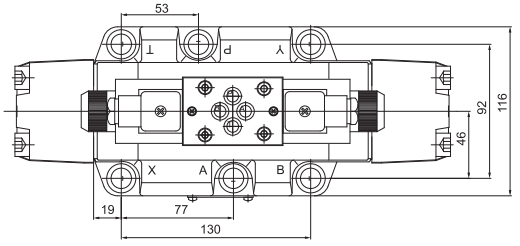
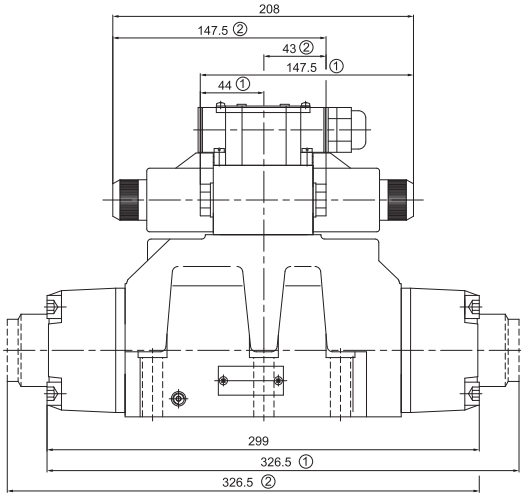




Alternating Current Wire Box



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