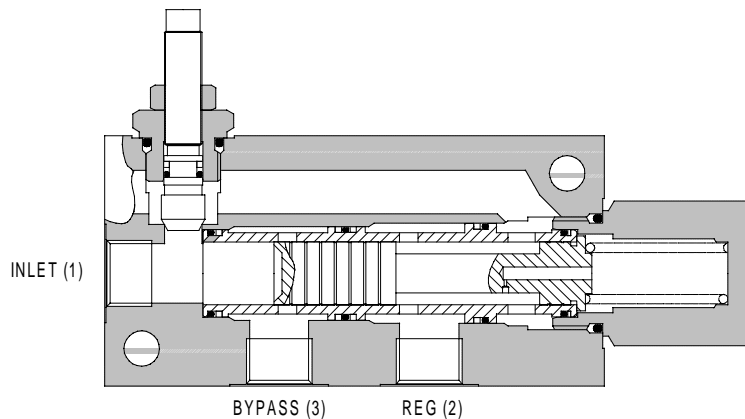
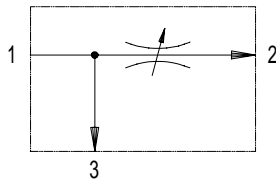




2FP SERIES PRESSURE COMPENSATED FLOW REGULATOR - COMBINATION STYLE

2FP SERIES



APPLICATION

2FP valves are priority flow regulators. The flow (and actuator speed) will be largely independent of the load and the pressure conditions.

If used to regulate flow from a fixed supply, for example a standard gear or piston pump, the valve will pass the required flow and any surplus flow will be diverted to the bypass port. The bypass flow may be used for a secondary circuit whether the secondary pressure requirement is higher or lower than the regulated pressure.

The valve inlet pressure will be approximately 7 bar (100 psi) more than the regulated or bypass pressure, whichever is higher.

OPERATION

Inlet flow passes through the adjustable orifice and the radial holes in the spool/sleeve assembly then out of the regulated port. The pressure drop across the orifice is sensed at each end of the spool, producing a force which, at the required flow rate, overcomes the spring force. The resultant movement of the spool regulates the flow by opening the radial valve ports to the bypass port and closing the regulated flow ports.

The valve will pass flow in the return direction but this is restricted by the flow path through the control orifice.

FEATURES

Line body construction with three flow ports allows direct connection into hydraulic systems. Leakproof adjust screw gives easy, accurate adjustment to required flow setting. Hardened and ground working parts give accurate flow control and long working life.

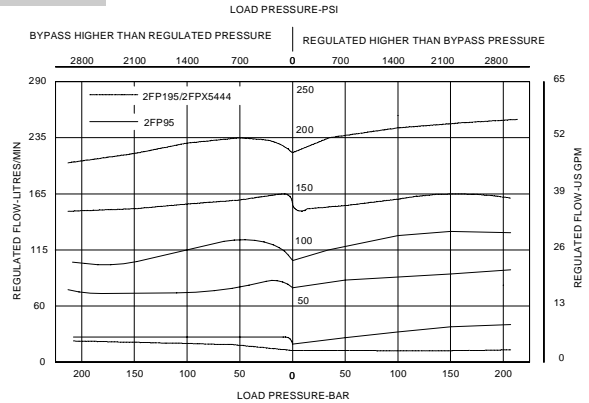
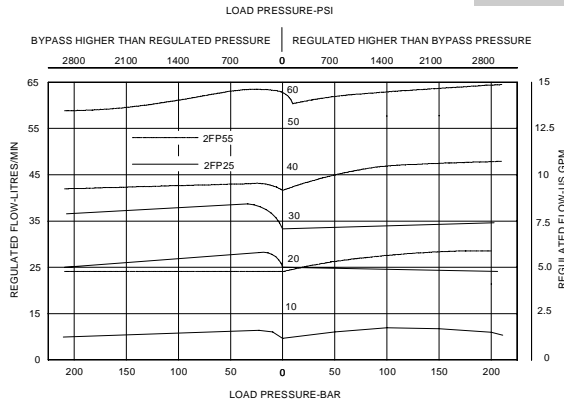
SPECIFICATIONS

Figures based on: Oil Temp = 40°C Viscosity = 40 cSt

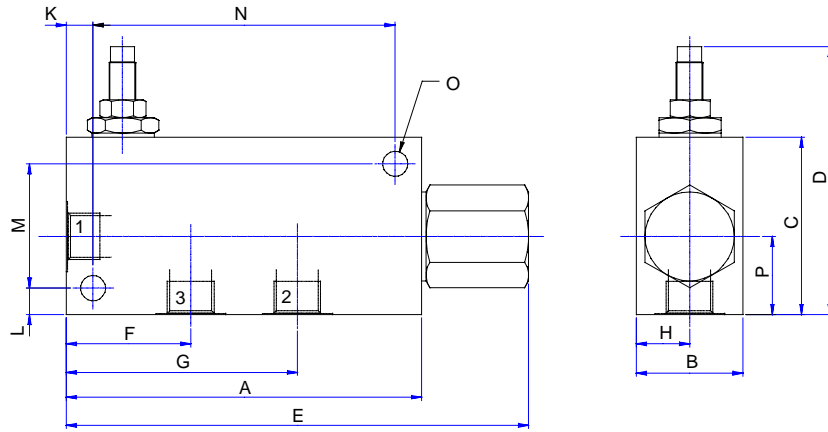
Rated Flow	INLET:	
	2FP25	55 litres/min (14 US GPM)
	2FPR55	95 litres/min (25 US GPM)
	2FP95	150 litres/min (40 US GPM)
	2FP195	380 litres/min (100 US GPM)
	2FPX5444	380 litres/min (100 US GPM)
	REGULATED:	
	2FP25	30 litres/min (8 US GPM)
	2FP55	55 litres/min (14 US GPM)
	2FP95	95 litres/min (25 US GPM)
	2FP195	195 litres/min (50 US GPM)
	2FPX5444	195 litres/min (50 US GPM)
Max Pressure	2FP25/55/95/195	210 bar (3000 psi)
	2FPX5444	350 bar (5000 psi)
Material	All working parts hardened and ground steel	
Body Material	Standard aluminium Add suffix '377' for steel option	
Mounting Position	Line mounted	
Weight	2FP25/2FP55	0.99 kg (2.20 lbs)
	2FP95	1.83 kg (4.03 lbs)
	2FP195	3.77 kg (8.30 lbs)
	2FPX5444	10.79 kg (23.75 lbs)
Seal Kit Number	2FP25/55	SK192 (Nitrile) SK192V (Viton)
	2FP95	SK222 (Nitrile) SK222V (Viton)
	2FP195	SK412 (Nitrile) SK412V (Viton)
Recommended Filtration Level	BS5540/4 Class 18/13 (25 micron nominal)	
Operating Temp	-20°C to +90°C	
Nominal Viscosity Range	5 to 500 cSt	

9

PERFORMANCE



COMPLETE VALVE



Basic Code	Port Size	A	B	C	D	E	F	G	H	K	L	M	N	O	P
2FP25	3/8" BSP	127	38	63.5	99	165	44.5	82.5	19	9.5	9.5	44.5	108	9	28.5
2FP55	1/2" BSP	130	38	63.5	99	168	47.5	85.5	19	12.5	9.5	44.5	108	9	28.5
2FP95	3/4" BSP	152.5	51	76	111	190	54.5	100	25.5	8	8	60	136.5	10.5	32
2FP195	1" BSP	146	63.5	127	162	202	41	99	32	13	13	101.5	120.5	10.5	67
2FPX5444	1" BSP	152	63.5	133	168	242	48	105	32	13	13	108	127	13.5	66.5

Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

2FP P 6W 95 S**

Basic Code

Adjustment Means

- P = Leakproof Screw Adjustment
 - R = Handknob Adjustment
 - D = Detent Adjustment
 - L = Lever Adjustment (2FP95 only)
- (See page 9-102 for dimensions)

Port Sizes - Bodied Valves Only

- 3W = 3/8" BSP 6T = 3/8" SAE
- 4W = 1/2" BSP 8T = 1/2" SAE
- 6W = 3/4" BSP 12T = 3/4" SAE
- 8W = 1" BSP 16T = 1" SAE

Seals

- S = Nitrile (For use with most industrial hydraulic oils)
- SV = Viton (For high temperature and most special fluid applications)

Adjustable Flow Range

- 25 = 0- 30 litres/min - 2FP25
- 55 = 0- 55 litres/min - 2FP55
- 95 = 0- 95 litres/min - 2FP95
- 195 = 0-195 litres/min - 2FP195/2FPX5444

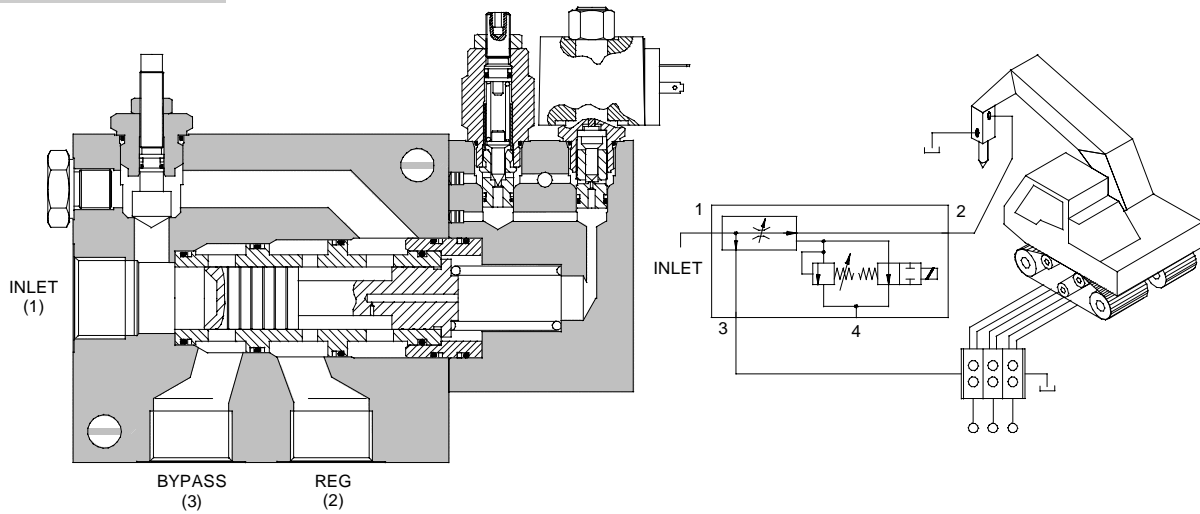
We reserve the right to change specifications without notice



2FPH SERIES PRESSURE COMPENSATED FLOW REGULATOR/DIVERTER - PRIORITY STYLE

2FPH SERIES

SOLENOID SWITCH



APPLICATION

The 2FPH series of priority flow regulator valves gives full control of regulated flow (see the 2FP series) plus remote selection of priority flow and adjustable limitation of the regulated line.

9

OPERATION

Inlet flow passes through the adjustable orifice and the radial holes in the spool/sleeve assembly then out of the regulated port. The pressure drop across the orifice is sensed at each end of the spool, producing a force which, at the required flow rate, overcomes the spring force. The resultant movement of the spool regulates the flow by opening the radial valve ports to the bypass port and closing the regulated flow ports. The solenoid valve vents the spring chamber to a drain line and in its NORMAL (de-energised) mode all inlet flow is diverted to the bypass port. The pre-set regulated flow is selected by energising the solenoid. The adjustable relief valve vents the spring chamber at the pre-set pressure and diverts the flow to the bypass port. It may be necessary to fit a 10 bar check valve in the bypass or regulated line to ensure the valve switches fully.

FEATURES

Line body construction with three ports allows direct connection into hydraulic systems. Leakproof adjust screw gives easy, accurate adjustment to required flow setting. Remote functional selection with solenoid operation. Adjustable relief valve gives system protection. Hardened and ground working parts give accurate flow control and long working life.

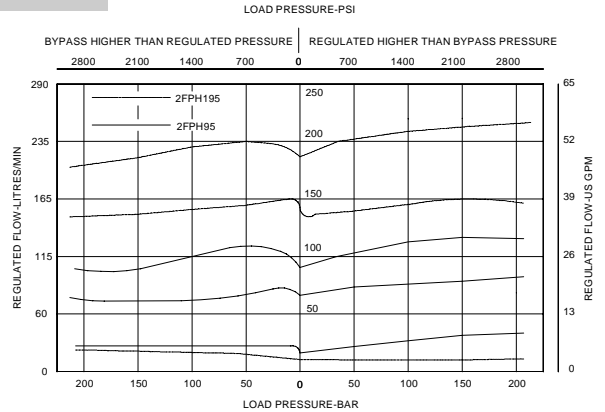
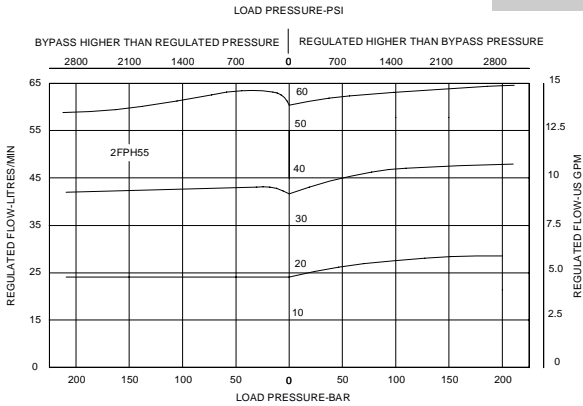
SPECIFICATIONS

Figures based on: Oil Temp = 40°C Viscosity = 40 cSt

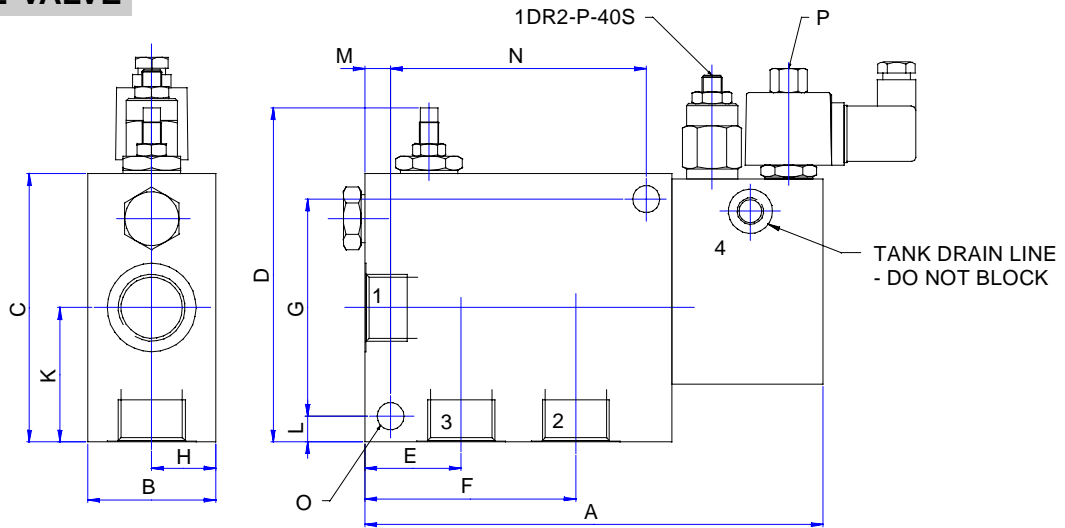
Rated Flow	INLET:	
	2FPH55	95 litres/min (25 US GPM)
	2FPH95	150 litres/min (40 US GPM)
	2FPH195	380 litres/min (100 US GPM)
	REGULATED:	
	2FPH55	55 litres/min (14 US GPM)
	2FPH95	95 litres/min (25 US GPM)
	2FPH195	195 litres/min (50 US GPM)
Max Pressure	2FPH55	280 bar (4000 psi)
	2FPH95/2FPH195	350 bar (5000 psi)
Material	All working parts hardened and ground steel	
Body Material	2FPH95/2FPH195	Steel
	2FPH55	Aluminium
Mounting Position	Line mounted	
Weight	2FPH55	3.00 kg (6.60 lbs)
	2FPH95	3.50 kg (7.70 lbs)
	2FPH195	12.26 kg (27.00 lbs)
Seal Kit Number	2FPH55	SK267 (Nitrile) SK267V (Viton)
	2FPH95	SK547 (Nitrile) SK547V (Viton)
	2FPH195	SK258 (Nitrile) SK258V (Viton)
Recommended Filtration Level	BS5540/4 Class 18/13 (25 micron nominal)	
Operating Temp	-20°C to +90°C	
Nominal Viscosity Range	5 to 500 cSt	

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PERFORMANCE



COMPLETE VALVE



Basic Code	Port Size	A	B	C	D	E	F	G	H	K	L	M	N	O	P	Std R/V Setting
2FPH55	1/2" BSP	168	51	76	127	44.5	82.5	-	32	28.5	8.5	10	95	Ø8.5	7SP20-1	280 bar
2FPH95	3/4" BSP	232	63.5	76	127	58	102	58	39.5	32	10	10	136	Ø10.5	7SN01-1	200 bar
2FPH195	1" BSP	227.5	63.5	133	168	47	104	108	32	67	13	13	127	Ø13.5	7SN01-1	280 bar

Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

2FPH P 6W 95 S H 24**

Basic Code

Adjustment Means

P = Leakproof Screw Adjustment
R = Handknob Adjustment
(See page 9-102 for dimensions)

Port Sizes - Bodied Valves Only

4W = 1/2" BSP 8T = 1/2" SAE
6W = 3/4" BSP 12T = 3/4" SAE
8W = 1" BSP 16T = 1" SAE

Adjustable Flow Range

55 = 0- 55 litres/min - 2FPH55
95 = 0- 95 litres/min - 2FPH95
195 = 0-195 litres/min - 2FPH195

Voltage

12 = 12VDC (DIN Connector Std)
24 = 24VDC (DIN Connector Std)
Other options available on request

Coil Termination

H = ISO4400 (plug included)
F = Flying Leads DC only
Other terminations available on request

Seals

S = Nitrile (For use with most industrial hydraulic oils)
SV = Viton (For high temperature and most special fluid applications)

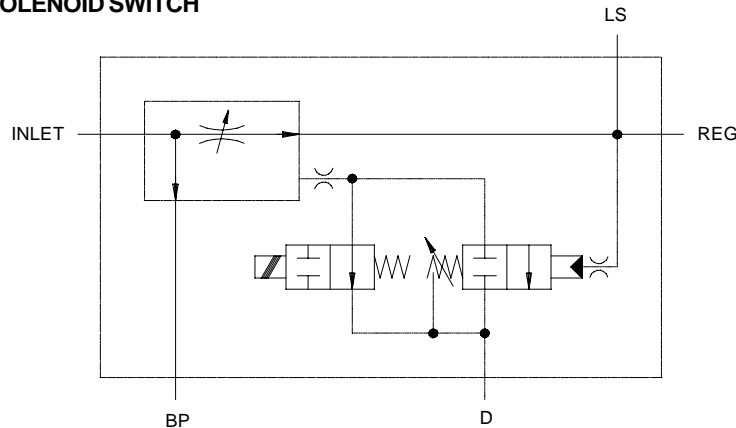
We reserve the right to change specifications without notice



2FPH SERIES PRESSURE COMPENSATED FLOW REGULATOR/DIVERTER - PRIORITY STYLE

2FPH SERIES

SOLENOID SWITCH



APPLICATION

The 2FPH series of priority flow regulator valves gives full control of regulated flow (see the 2FP series) plus remote selection of priority flow and adjustable pressure limitation of the regulated line.

OPERATION

9

Inlet flow passes through the adjustable orifice and the radial holes in the spool/sleeve assembly then out of the regulated port. The pressure drop across the orifice is sensed at each end of the spool, producing a force which, at the required flow rate, overcomes the spring force. The resultant movement of the spool regulates the flow by opening more radial holes to the bypass port. The solenoid valve vents the spring chamber to a drain line and in its de-energised mode all inlet flow is diverted to the bypass port. The pre-set regulated flow is selected by energising the solenoid. The adjustable pilot valve vents the spring chamber when the regulated line reaches the preset pressure, diverting the flow to the bypass port where the pressure can continue to rise if necessary. It may be necessary to fit a 10 bar check valve in the bypass or regulated line to ensure the valve switches fully.

FEATURES

Line body construction with three ports allows direct connection into hydraulic systems. Leakproof adjust screw gives easy, accurate adjustment to required flow setting. Remote functional selection with solenoid operation. Adjustable relief valve gives system protection whilst allowing bypass pressure to rise above setting if required. Hardened and ground working parts give accurate flow control and long working life.

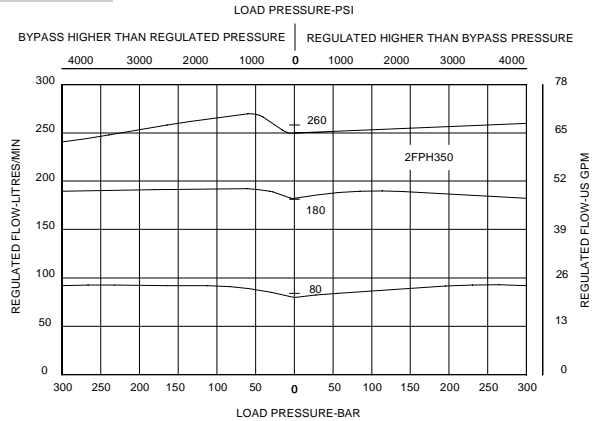
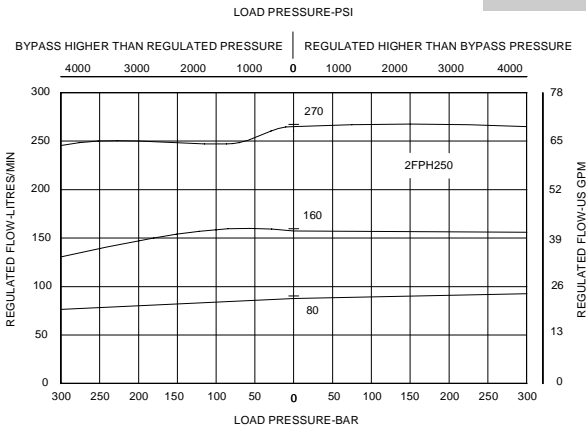
SPECIFICATIONS

Figures based on: Oil Temp = 40°C Viscosity = 40 cSt

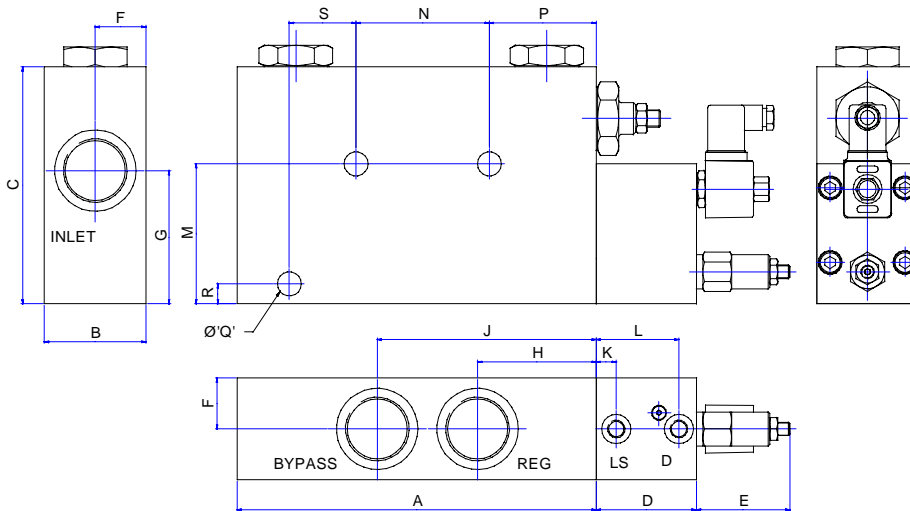
Rated Flow	INLET:	
	2FPH250	350 litres/min (92 US GPM)
	2FPH350	450 litres/min (120 US GPM)
	REGULATED:	
	2FPH250	250 litres/min (65 US GPM)
	2FPH350	350 litres/min (92 US GPM)
Max Pressure	2FPH250	280 bar (4000 psi)
	2FPH350	350 bar (5000 psi)
Material	All working parts hardened and ground steel	
Body Material	Steel, zinc plated and passivated	
Mounting Position	Line mounted	
Weight	2FPH250	17 kg (37.4 lbs)
	2FPH350	28 kg (61.0 lbs)
Seal Kit Number	2FPH250	SK819 (Nitrile) SK819V (Viton)
	2FPH350	SK820 (Nitrile) SK820V (Viton)
Recommended Filtration Level	BS5540/4 Class 18/13 (25 micron nominal)	
Operating Temp	5 to 500 cSt	
Nominal Viscosity Range	-20°C to +90°C	

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PERFORMANCE



COMPLETE VALVE



Basic Code	Port Size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	Std R/V Setting
2FPH250	1" BSP	177	63.5	177.8	75	70	31.75	143	47.5	105	15	62	110	95	63	13.5	-	-	280 bar
2FPH350	1 1/2" BSP	269	76.2	177.8	75	70	38.1	100	89	164	15	62	15	100	39	18.0	90	50	200 bar

Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

2FPH250 P 8W 250 S H 24

Basic Code _____

Adjustment Means _____

P = Leakproof Screw Adjustment
R = Handknob Adjustment
(See page 9-102 for dimensions)

Port Sizes - Bodied Valves Only _____

8W = 1" BSP **16T** = 1" SAE
12W = 1 1/2" BSP **24T** = 1 1/2" SAE

Adjustable Flow Range _____

250 = 0-250 litres/min - 2FPH250
350 = 0-350 litres/min - 2FPH350

Voltage

12 = 12VDC (DIN Connector Std)
24 = 24VDC (DIN Connector Std)
Other terminations available on request

Coil Termination

H = ISO4400 (plug included)
F = Flying Leads DC only
Other terminations available on request

Seals

S = Nitrile (For use with most industrial hydraulic oils)
SV = Viton (For high temperature and most special fluid applications)

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