

General Description

Series F5C proportional throttle valves adjust flow in proportion to the input signal. The combination of the F5C with pressure compensators R5A or R5P serves as a flow control valve, providing load compensated flow.

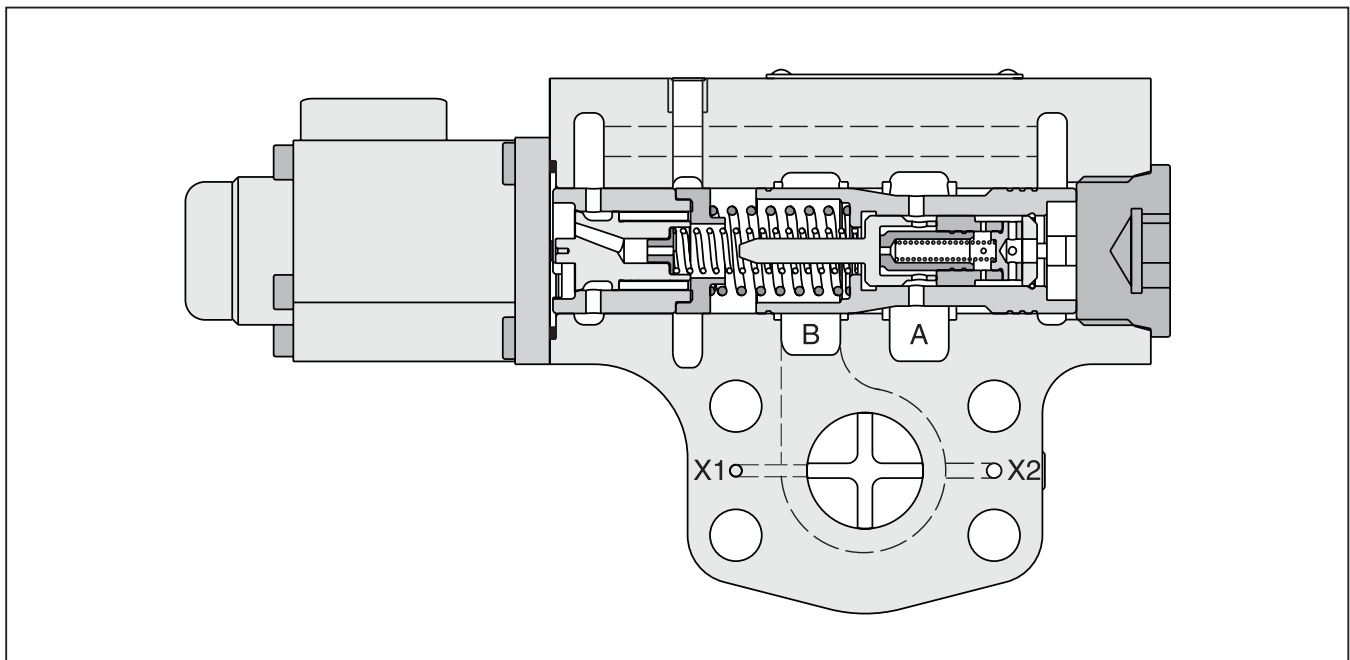
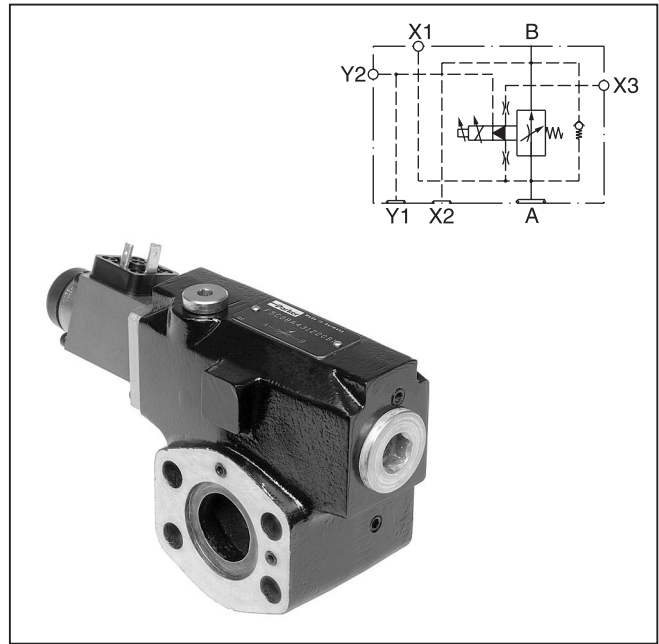
B

The F5C is offered with two types of response time:

Standard 350 ms at 1 LPM (0.3 GPM) pilot flow
Code A 250 ms at 2 LPM (0.5 GPM) pilot flow

Features

- Spool type proportional throttle valve.
- SAE 61 flange.
- Maximum pressure 270 Bar (3915 PSI).
- Maximum flow 380 LPM (100.5 GPM).
- 3 sizes: SAE 3/4", 1", 1 1/4".
- Load compensated flow in combination with R5A and R5P.



F5C	□	□	4	□	□	X	□	0	C	□	□
Proportional Throttle Valve	Size	Pilot Flow and Response	SAE 61 Interface	Pilot Ports	Spool Type	Proportional Solenoid 16V / 1.05A	Pilot Connection	Accessories	Design Series	Seal	Options Check with Factory

Code	Description
06	SAE 3/4"
08	SAE 1"
10	SAE 1 3/4"

Code	Description
3	G1/4"
N	1/4" NPT

Code	Description
1	Nitrile
5	Fluorocarbon

Code	Pilot Flow	Maximum Response
Omit	1 LPM (0.3 GPM)	350 ms
A	2 LPM (0.5 GPM)	250 ms

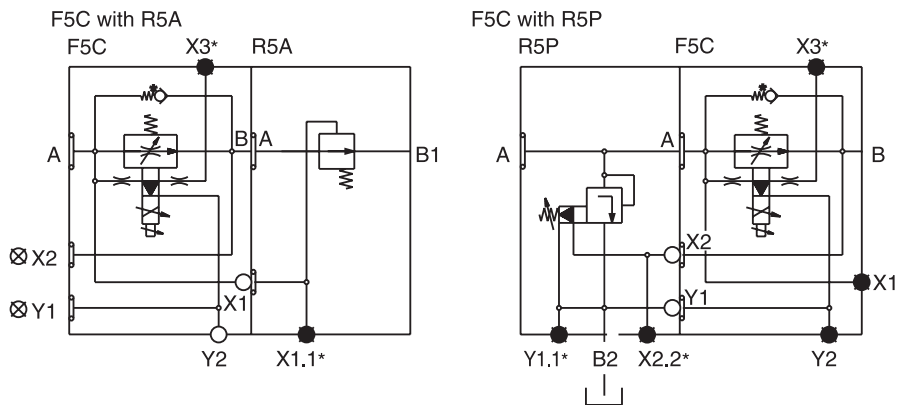
Code	Size	Maximum Flow*
A	06	23 LPM (6.1 GPM)
B	06/08	45 LPM (11.9 GPM)
1	06/08/10	95 LPM (25.1 GPM)
2	08/10	190 LPM (50.3 GPM)
3	10	380 LPM (100.5 GPM)

* At nominal pressure drop (Δp = 8.4 Bar (121.8 PSI))



Weight:
 F5C06 3.9 kg (8.6 lbs.)
 F5C08 4.1 kg (9.0 lbs.)
 F5C10 5.8 kg (12.8 lbs.)

Code	Pilot Connections	F5C without Compensators R5A, R5P	F5C for Combined with R5A	F5C for Combined with R5P
2	Internal PD (Y) Internal PP (X)			X1, X3, Y2 ● X2, Y1 ○ X2, Y1 ○
3	External PD (Y) External PP (X)		X1, X3, Y2 ○ X2, Y1 ⊗	
4	External PD (Y) External PP (X)	X3, Y2 ○ X1 ● X2, Y1 ⊗		X2, X3, Y1, Y2 ○ X1 ●
5	External PD (Y) Internal PP (X)		X1, Y2 ○ X3 ● X2, Y1 ⊗	
6	External PD (Y) Internal PP (X)	X1, X3 ● X2, Y1 ⊗ Y2 ○		X1, X3 ● X2, Y1, Y2 ○

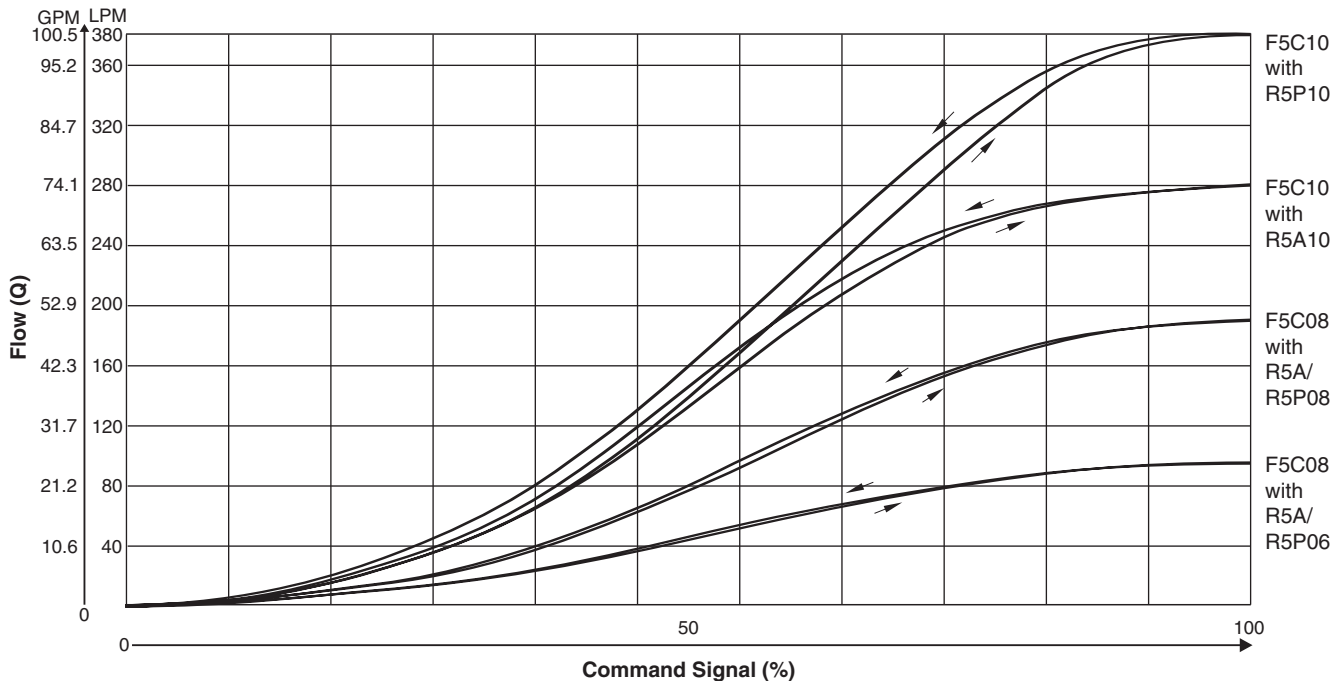


* optional ○ open ● closed ⊗ closed by counterpart

Specifications

General			
Size	06	08	10
Mounting	Flanged according to SAE 61		
Mounting Position	Unrestricted		
Ambient Temperature Range	-20°C to +50°C (-4°F to +122°F)		
Hydraulic			
Maximum Operating Pressure	Ports A, B, X1, X2, X3 270 Bar (3915 PSI) Ports Y1, Y2 70 Bar (1015 PSI)		
Maximum Pressure Drop (from A to B)	21 Bar (304.5 PSI)		
Flows	26 LPM (6.1 GPM) 45 LPM (11.9 GPM) 95 LPM (25.1 GPM)	45 LPM (11.9 GPM) 95 LPM (25.1 GPM) 190 LPM (50.3 GPM)	95 LPM (25.1 GPM) 190 LPM (50.3 GPM) 380 LPM (100.5 GPM)
Fluid	Hydraulic oil as per DIN 51524...51535, other on request		
Fluid Temperature	-20°C to +80°C (-4°F to +176°F)		
Viscosity Permitted Recommended	10 to 380 cSt / mm ² /s (46 to 1761 SSU) 30 to 80 cSt / mm ² /s (139 to 371 SSU)		
Filtration	ISO Class 4406 (1999) 18/16/13 (acc. NAS 1638: 7)		
Electrical			
Duty Ratio	100% ED; CAUTION: Coil temperature up to 150°C (302°F) possible		
Solenoid Connection	Connector as per EN175301-803		
Protection Class	IP65 in accordance with EN60529 (plugged and mounted)		
Supply Voltage	16 VDC		
Power Consumption	1.05A		
Resistance	11.3 Ohm		
Response Time	See Ordering information		
Coil Insulation Class	H (180°C) (356°F)		

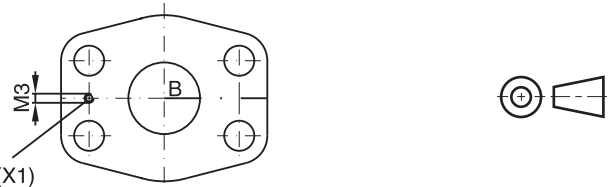
Performance Curves



F5C.indd, ddp

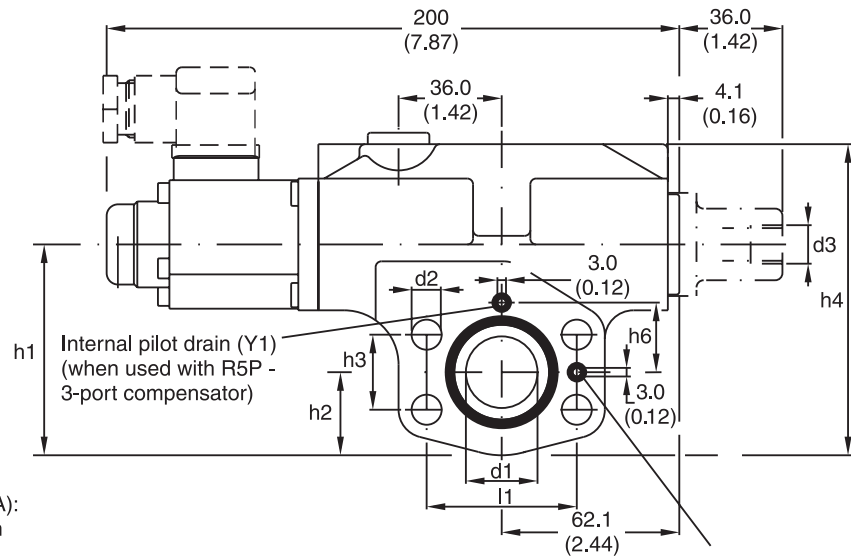
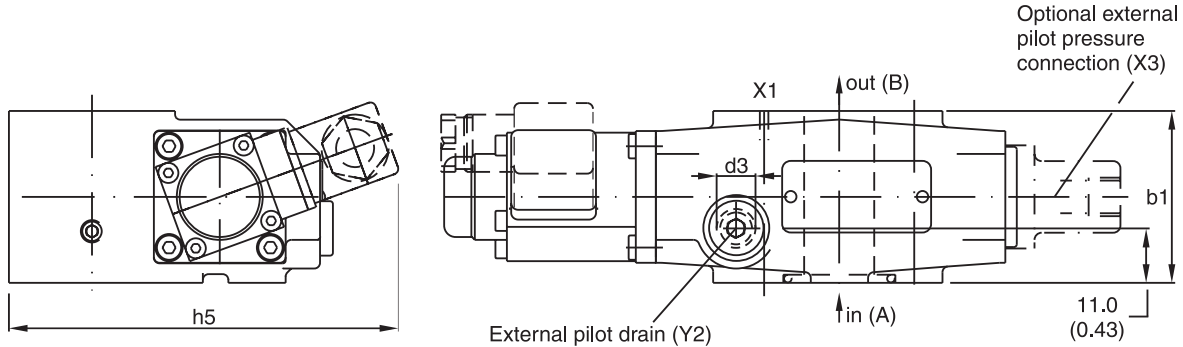


Inch equivalents for millimeter dimensions are shown in (**)

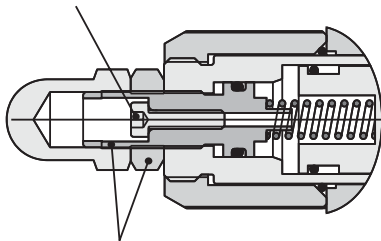


Internal pilot pressure connection (X1)
(for use with R5A - 2-port compensator)

B



Important (only for solenoid type 1-220 mA):
On initial start up and after long shut down periods bleed air from this plug.



Zero point is factory set!
Lock nut must not be loosened!

Internal pilot pressure (X2)
(when used with R5P - 3-port compensator)

Seal Kits		
Size	Nitrile	Fluorocarbon
06 / 08 / 10	S16-91850-0	S16-91850-5

Size	l1	b1	h1	h2	h3	h4	h5	h6	d1	d2	d3
06	47.6 (1.87)	60.0 (2.36)	68.2 (2.69)	26.0 (1.02)	22.2 (0.87)	103.2 (4.06)	183.0 (7.20)	20.8 (0.82)	19.0 (0.75)	10.5 (0.41)	G1/4"
08	52.4 (2.06)	60.0 (2.36)	73.6 (2.90)	29.0 (1.14)	26.2 (1.03)	108.6 (4.28)	187.0 (7.36)	24.3 (0.96)	25.0 (0.98)	10.5 (0.41)	G1/4"
10	58.7 (2.31)	75.0 (2.95)	83.5 (3.29)	36.5 (1.44)	30.2 (1.19)	118.5 (4.67)	198.0 (7.80)	29.3 (1.15)	32.0 (1.26)	12.5 (0.49)	G1/4"