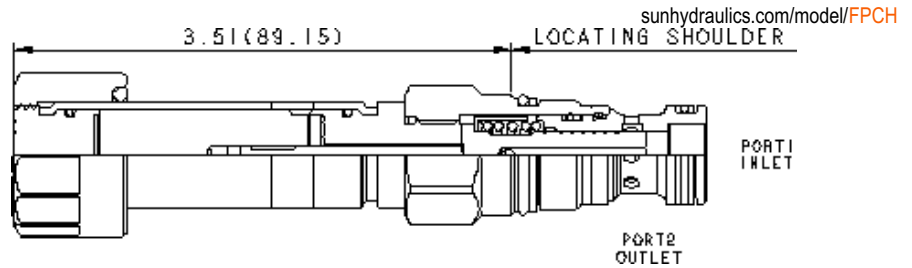


CONFIGURATION

X	Control	No Manual Override
C	Flow Rate	.25 - 7 gpm (1 - 28 L/min.)
N	Seal Material	Buna-N
(none)	Coil	No coil



This valve is a normally open electro-proportional throttle that is spring-biased open. Energizing the coil generates an closing force on the spool proportional to the command current, and this force is countered by the spring and flow forces. This force balance creates a metering orifice whose effective size is proportional to the current. The valve exhibits a large degree of self-compensation in the 1-to-2 direction and will provide proportional flow control in the 2-to-1 direction with the addition of an external compensator. Full reverse flow (2-to-1) with no command in the 2-to-1 direction is possible without a compensator under all conditions.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-13A
Series	1
Capacity	28 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	100 cc/min. @210 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Solenoid Tube Diameter	19 mm
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Model Weight (with coil)	0,50 kg
Seal kit - Cartridge	Buna: 990413007
Seal kit - Cartridge	Polyurethane: 990413002
Seal kit - Cartridge	Viton: 990413006
Seal and nut kit - Coil	Viton: 990770006
Model Weight	0.30 kg.

PROPORTIONAL PERFORMANCE DATA

Hysteresis (with dither)	<4%
Hysteresis with DC input	<8%
Linearity (with dither)	<2%
Repeatability (with dither)	<2%
Recommended dither frequency	140 Hz
Deadband, nominal (as a percentage of input)	25%

NOTES

Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.

CONFIGURATION OPTIONS

Model Code Example: FPCHXCN

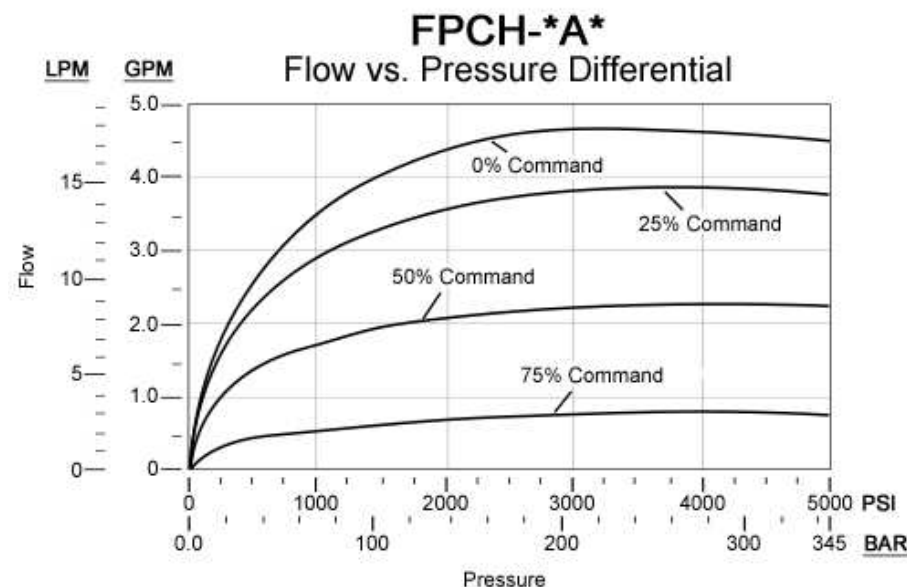
CONTROL	(X) FLOW RATE	(C) SEAL MATERIAL	(N) COIL *
X No Manual Override	C .25 - 7 gpm (1 - 28 L/min.)	N Buna-N	No coil
D Twist/Lock (Dual) Manual Override	A .1 - 1.5 gpm (0,4 - 6 L/min.)	E EPDM	212 DIN 43650-Form A, 12 VDC
E Twist (Extended) Manual Override	B .15 - 3.5 gpm (0,6 - 14 L/min.)	V Viton	224 DIN 43650-Form A, 24 VDC
L Twist/Lock (Detent) Manual Override			224NX01 DIN 43650-Form A, 24 VDC, no transient voltage suppression (TVS) diodes, with XMD-01 driver
M Manual Override			224NX02 DIN 43650-Form A, 24 VDC, no transient voltage suppression (TVS) diodes, with XMD-02 driver
T Twist (Momentary) Manual Override			912 Deutsch DT04-2P, 12 VDC
			912NX01 Deutsch DT04-2P, 12 VDC, no transient voltage suppression (TVS) diodes, with XMD-01 driver
			912NX02 Deutsch DT04-2P, 12 VDC, no transient voltage suppression (TVS) diodes, with XMD-02 driver
			924 Deutsch DT04-2P, 24 VDC
			924NX01 Deutsch DT04-2P, 24 VDC, no transient voltage suppression (TVS) diodes, with XMD-01 driver
			924NX02 Deutsch DT04-2P, 24 VDC, no transient voltage suppression (TVS) diodes, with XMD-02 driver

* Additional coil options are available

TECHNICAL FEATURES

- Available in either a normally open or normally closed configuration with three different capacity ranges.
- Capable of operating with pressures up to 5000 psi (350 bar).
- Low leakage levels in the closed position.
- Coils are interchangeable with Sun's other full flow, solenoid-operated valves and can be mounted on the tube in either direction.
- This cartridge has several manual override choices, including no manual override. See Option Configuration.
- For optimum performance, an amplifier with current sensing and adjustable dither should be used. Dither should be adjustable between 100 - 250 Hz.
- On models equipped with the D or L control, the detent mechanism in the manual override is meant for temporary actuation. The D, E, L and T manual control assemblies have a mechanical life expectancy of approximately 7,000 cycles.
- The momentary/twist override option "E" allows the operator to shift the valve by twisting the manual override clockwise 90 degrees.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES



FPCH-A* Flow vs. Command

