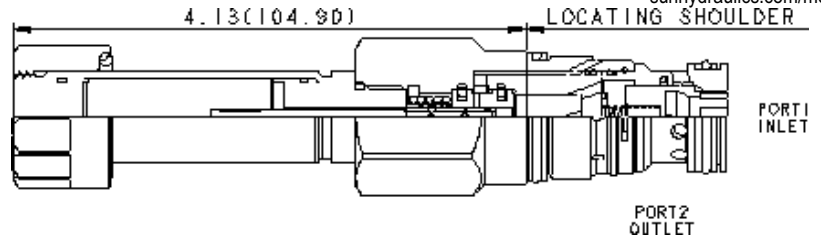


X-Control



This valve is a pilot-operated, normally closed, electro-proportional throttle with reverse free-flow check. Energizing the coil generates an opening force on the pilot stage which vents the main stage poppet to open proportionally. Metered flow is from port 1 to port 2 with reverse free flow from port 2 to port 1.

CONFIGURATION

X	Control	No Manual Override
D	Flow Rate	Nominal 20 gpm @ 200 psi (14 bar) differential (80 L/min.)
N	Seal Material	Buna-N
(none)	Coil	No coil

TECHNICAL DATA

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

Cavity	T-5A
Series	2
Capacity	80 L/min.
Recommended dither frequency	100 Hz
Maximum Valve Leakage at 110 SUS (24 cSt)	20 drops/min.@5000 psi
Manual Override Force Requirement	33 N/100 bar @ Port 1
Deadband, nominal (as a percentage of input)	25%
Manual Override Stroke	1,50 mm
Solenoid Tube Diameter	19 mm
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Model Weight (with coil)	0,55 kg
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Viton: 990203006
Seal and nut kit - Coil	Viton: 990770006
Model Weight	0.40 kg.

CONFIGURATION OPTIONS

Model Code Example: FPFKXDN

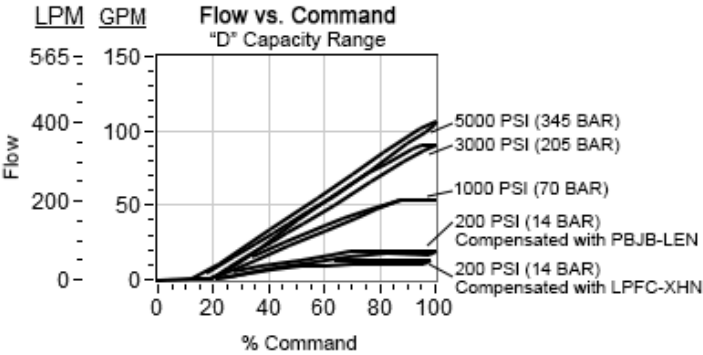
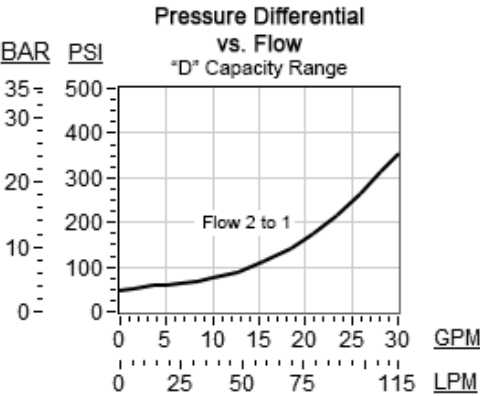
CONTROL	(X) FLOW RATE	(D) SEAL MATERIAL	(N) COIL *
X No Manual Override	D Nominal 20 gpm @ 200 psi (14 bar) differential (80 L/min.)	N Buna-N	No coil
E Twist (Extended) Manual Override		E EPDM	212 DIN 43650-Form A, 12 VDC
M Manual Override	B Nominal 10 gpm @ 200 psi (14 bar) differential (40 L/min.)	V Viton	224 DIN 43650-Form A, 24 VDC
			224NX01 DIN 43650-Form A, 24 VDC, no transient voltage suppression (TVS) diodes, with XMD-01 driver
			224NX02 DIN 43650-Form A, 24 VDC, no transient voltage suppression (TVS) diodes, with XMD-02 driver
			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

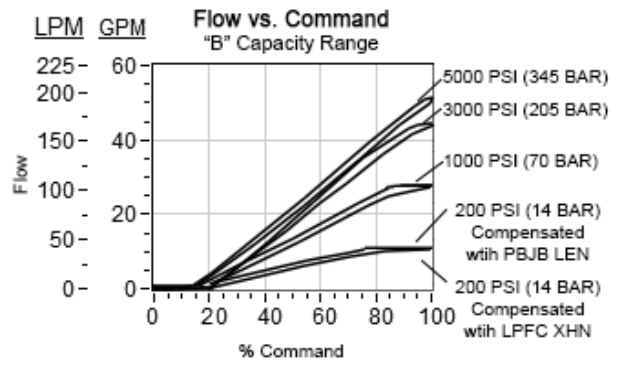
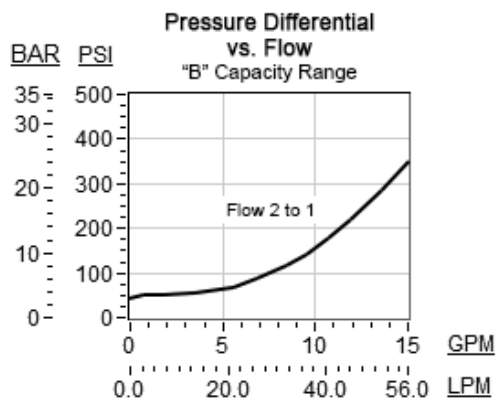
* Additional coil options are available

TECHNICAL FEATURES

- Capable of operating with pressures up to 5000 psi (350 bar).
- 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.
- The momentary/twist override option "E" allows the operator to shift the valve by twisting the manual override clockwise 90 degrees.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Capacities rated at 200 psi (14 bar) differential and maximum rated coil current.
- Maximum Deadband (as a percentage of command) B Flow Rate = 28% D Flow Rate = 32%
- Maximum Hysteresis at 200 psid (14 bar) B Flow Rate = 2.2 gpm (9 L/min.) D Flow Rate = 5.2 gpm (20 L/min.)
- Minimum Capacity at 1000 psid (70 bar) B Flow Rate = 25 gpm (94 L/min.) D Flow Rate = 49 gpm (185 L/min.)
- Depending on circuit requirements, a reverse free flow check bypassing the compensator may be needed when using the FPFK with an external compensator.
- 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





Example Circuit Using External Compensator

