



CONFIGURATION

X	Control	No Manual Override
C	Flow Rate	Nominal 2.6 gpm @ 200 psi (14 bar) differential (9.8 L/min) (9,8 L/min.)
N	Seal Material	Buna-N
(none)	Coil	No coil

This valve is a normally closed, electro-proportional, blocking poppet throttle that is spring-biased closed. Energizing the coil generates an opening force on the poppet 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 2-to-1 direction and will provide proportional flow control in the 1-to-2 direction with the addition of an external compensator. Full reverse flow (1-to-2) with 100% command in the 1-to-2 direction is possible without a compensator under all conditions.

TECHNICAL DATA

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

Cavity	T-162A
Series	0
Capacity	2.6 gpm
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	0.004 in ³ /min.@5000 psi
Viscosity Range	35 - 2000 SUS
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
Valve Hex Size	3/4 in.
Valve Installation Torque	20 - 25 lbf ft
U.S. Patent #	10,302,201
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Viton: 990162006
Model Weight	0.57 lb.

PROPORTIONAL PERFORMANCE DATA

Hysteresis (with dither)	14%
Linearity (with dither)	5%
Repeatability (with dither)	7%
Recommended dither frequency	100 Hz
Deadband, nominal (as a percentage of input)	50%

- NOTES**
- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
 - An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: FPBUArray

CONTROL	(X) FLOW RATE	(C) SEAL MATERIAL	(N) COIL *
X No Manual Override	C Nominal 2.6 gpm @ 200 psi (14 bar) differential (9.8 L/min) (9,8 L/min.)	N Buna-N	No coil
M Manual Override		E EPDM	* Additional coil options are available
		V Viton	

TECHNICAL FEATURES

- For optimum performance, an amplifier with current sensing and adjustable dither should be used. Dither should be adjustable between 100 - 250 Hz.
- FLeX Series proportional valves are fully compatible with the XMD Expandable Mobile Drivers from Sun.
- Exceeds new NFPA test standard T2.6.1 R2014 for fatigue and burst pressure ratings.
- Designed using CFD fluid simulation for optimized geometries.
- Capacities rated at 200-psi (14-bar) differential.
- All configurations of this valve include zinc-nickel plating as standard for 1000-hour salt fog protection.
- This valve can be used with both the 740 Series high-power coils and 747 Series hazardous location coils.
- A wide variety of coil termination and voltage options are available, with and without surge protection. See the CONFIGURATION section.
- Coil connector options offer ratings up to IP69K. See individual coil product pages for details.
- Designed and tested to 1 million on-off operational cycles.
- Direct actuated and requires no minimum hydraulic pressure for operation.
- This valve exhibits a large degree of self-compensation in the 2-to-1 direction and will provide proportional flow control in the 1-to-2 direction with the addition of an external compensator.
- Full reverse flow (1-to-2) with 100% command in the 1-to-2 direction is possible without a compensator under all conditions.
- 50-psi (3,5-bar) minimum back pressure is recommended.
- Extremely low leakage - 0.004 in3 (0.07 cc3)/min (1 drop/min)
- A FULL DATA SHEET is available for this model using the link at the top of the page.
- 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

