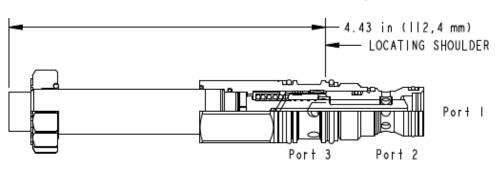


## CONFIGURATION

М	Control	Manual Override
D	Flow Rate	.1 - 9 gpm (0,4 - 34 L/min.)
Ν	Seal Material	Buna-N
	Coil	



This valve is a 3-way, meter-in, electro-proportional throttle. The flow path, unenergized, has the supply blocked at port 1 and port 2 is drained to tank at port 3. Energizing the coil generates a closing force on the spool, creating a metering orifice in the 1 to 2 direction that is proportional to the coil command current. The valve self-compensates in the 1-to-2 direction and with the addition of an external compensator

will provide pressure compensated flow control. Flow in the 2-to-3 direction is not proportional and is limited in the interest of increased resolution and capacity. Flow capacity in the 2-to-3 direction is about 1.5 gpm (6 L/min). This valve is meant to be used in a circuit that has a separate passage to tank such as a cushion lock circuit. Two FMDFs in conjunction with a cushion lock circuit create a meter-in/meter-out 3-position 4-way.

# **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

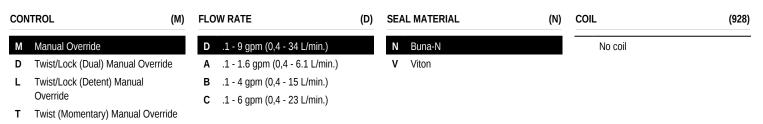
## TECHNICAL DATA NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-11A	
Series	1	
Capacity	9 gpm	
Maximum Operating Pressure	5000 psi	
Manual Override Force Requirement	5 lbs/1000 psi @ Port 1	
Manual Override Stroke	.10 in.	
Maximum Valve Leakage at 110 SUS (24 cSt)	2 in³/min.@1000 psi	
Solenoid Tube Diameter	.63 in.	
Valve Hex Size	7/8 in.	
Valve Installation Torque	30 - 35 lbf ft	

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.

#### **OPTION SELECTION EXAMPLE: FMDFMDN**



X No Manual Override

## **TECHNICAL FEATURES**

- Note: Flow in the 2 to 3 direction is limited to about 1.5 gpm (5 L/pm).
- The transition between positions is closed.
- Using 2 3-ways to create a 4-way allows one to choose existing flow ranges instead of cutting a special spool.
- These valves may be pressure compensated by an external, modulating, logic element. Use LR\_C-XHN for a bypass circuit or LP\_C-XHN for a restrictive circuit.
- The valve provides a degree of self-compensation and may be used as a flow control. To increase the accuracy of flow control, an external, modulating, logic element can be used to maintain a constant flow over a wider range of flows and pressures. See performance curves for additional information.
- For optimum performance, an amplifier with current feedback and adjustable dither (100 250 Hz) should be used.
- 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

