

This solenoid-operated 3-way, 2-position cartridge is a direct-acting, balanced spool pilot valve used to pilot other full-flow valves. The valve is normally open between port 1 and port 2 or port 1 and port 3 and all flow paths are bidirectional. This valve is designed to be used with 740 and 747 Series coils.

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

Cavity	T-9A
Series	P
Capacity	.25 gpm
Maximum Operating Pressure	5000 psi
Manual Override Force Requirement	10 lbs/1000 psi @ Port 1
Manual Override Stroke	.10 in.
Maximum Valve Leakage at 110 SUS (24 cSt)	10 drops/min.@5000 psi
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
Solenoid Tube Diameter	.63 in.
Valve Hex Size	7/8 in.
Valve Installation Torque	20 - 25 lbf ft
Seal kit - Cartridge	Buna: 990-009-007
Seal kit - Cartridge	EPDM: 990-009-014
Seal kit - Cartridge	Polyurethane: 990-009-002
Seal kit - Cartridge	Viton: 990-009-006

- 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.

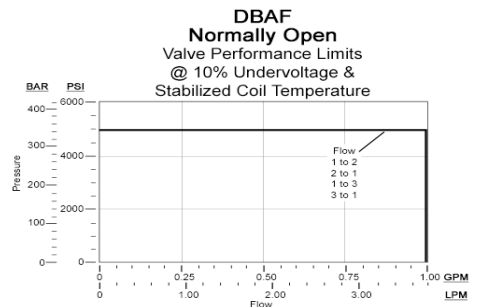
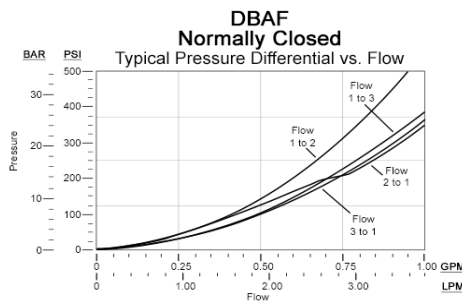
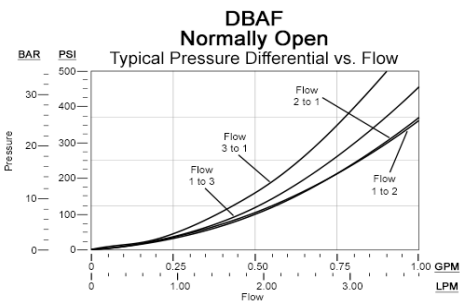
OPTION SELECTION EXAMPLE: DBAFMXCN

CONTROL	(M) SPOOL CONFIGURATION	(C) SEAL MATERIAL	(N) COIL
M Manual Override (Standard)	C Normally Closed	N Buna-N	No coil
D Twist/Lock (Dual) Manual Override	H Normally Open	E EPDM	
L Twist/Lock (Detent) Manual Override		V Viton	
T Twist (Momentary) Manual Override			
X No Manual Override			

TECHNICAL FEATURES

- The solenoid tube assembly is fatigue rated for 5000 psi (350 bar) service.
- This valve is direct actuated and requires no minimum hydraulic pressure for operation.
- Valves exhibit extremely low leakage rates; less than 10 drops/min. @ 5000 psi (0,7 cc/min @ 350 bar).
- This cartridge utilizes 740 Series low-power and high-power coils, and 747 Series hazardous location coils for both Normally Open and Normally Closed configurations.
- This cartridge has an option for manual override. See the CONFIGURATION section.
- 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.
- All configurations of this valve include zinc-nickel plating as standard for 1000-hour salt fog protection.
- Coil connector options offer ratings up to IP69K. See individual coil product pages for details.
- On models equipped with the D or L control, the detent mechanism in the manual override is meant for temporary actuation. The D, L and T manual control assemblies have a mechanical life expectancy of approximately 7,000 cycles.
- A FULL DATA SHEET is available for this model using the link at the top of the page.
- This valve utilizes a wet armature design. This means that the working fluid surrounds the armature and is exposed to the heat generated by the coil. This can be a factor if the coil is energized for long periods of time. Some fluids, notably water/glycol mixtures, break down at these temperatures over time and form varnishes that will affect the function of the cartridge.
- A wide variety of coil termination and voltage options are available, with and without surge protection. See the CONFIGURATION section.
- Coils can be mounted on the tube in either direction.
- 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



DBAF
Normally Closed
Valve Performance Limits
@ 10% Undervoltage &
Stabilized Coil Temperature

