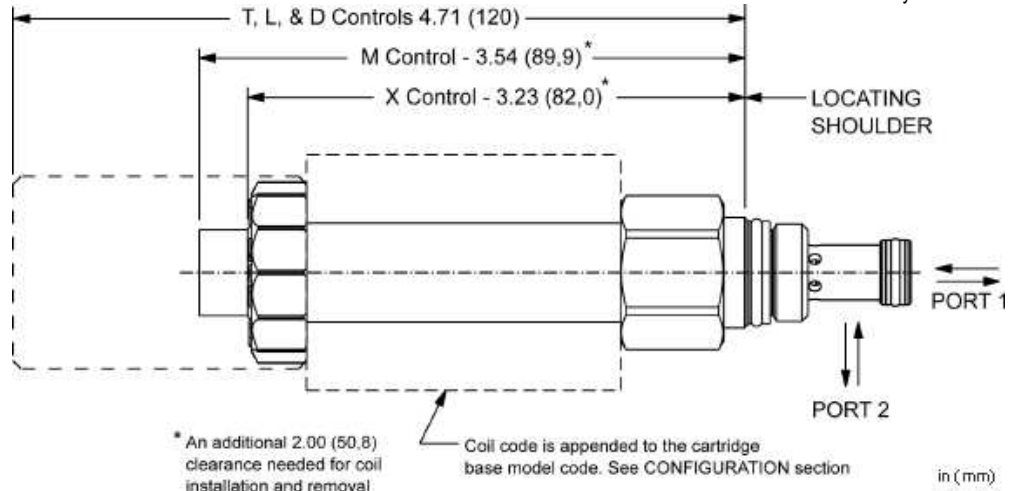


X-Control, H-Poppet



**CONFIGURATION**

<b>X</b>	Control	No Manual Override
<b>H</b>	Poppet Configuration	Normally Open
<b>N</b>	Seal Material	Buna-N
<b>(none)</b>	Coil	No coil

This solenoid-operated 2-way, 2-position cartridge is a direct-acting, poppet-style directional valve. The valve is available in either a normally open or normally closed configuration and is designed to be used with FLeX Series coils.

Due to the poppet style construction, this valve has extremely low leakage.

**TECHNICAL DATA**

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

Cavity	T-13A
Series	1
Capacity	10 gpm
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	10 drops/min.@5000 psi
Manual Override Force Requirement	5 lbs/1000 psi @ Port 1
Manual Override Stroke	.10 in.
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	30 - 35 lbf ft
Seal kit - Cartridge	Buna: 990413007
Seal kit - Cartridge	Polyurethane: 990413002
Seal kit - Cartridge	Viton: 990413006
Model Weight	0.53 lb.

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

**CONFIGURATION OPTIONS**

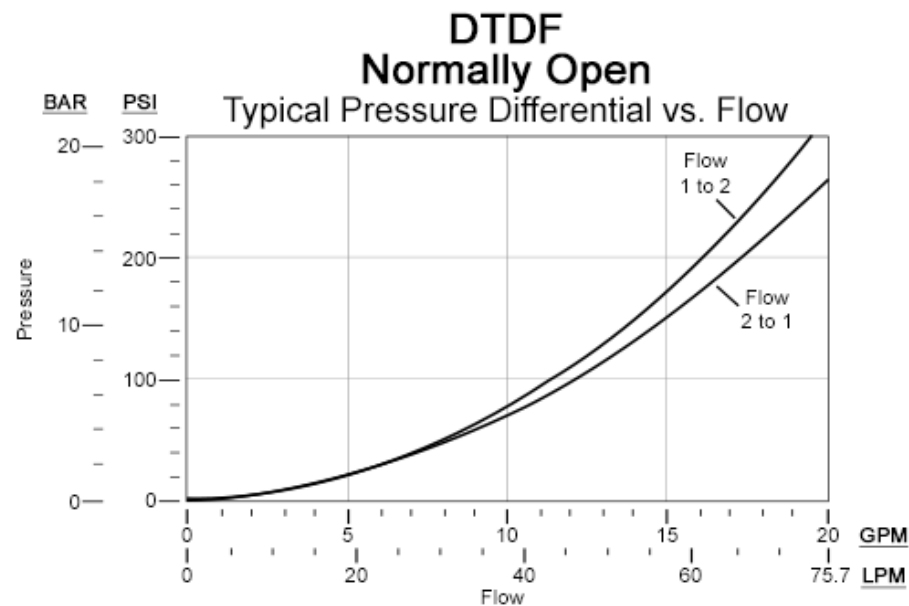
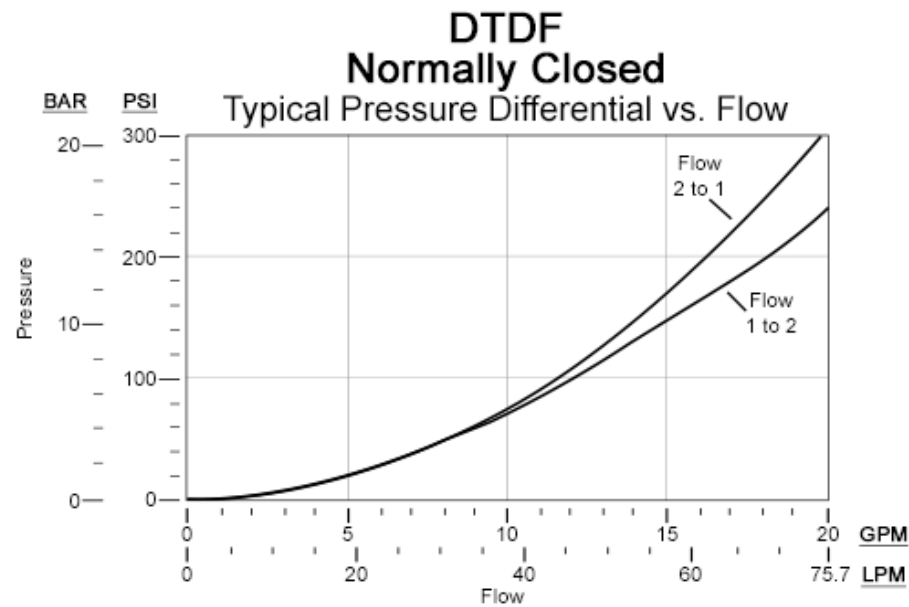
Model Code Example: **DTDFXHN**

CONTROL	(X) POPPET CONFIGURATION	(H) SEAL MATERIAL	(N) COIL *
<b>X</b> No Manual Override	<b>H</b> Normally Open	<b>N</b> Buna-N	No coil
<b>D</b> Twist/Lock (Dual) Manual Override	<b>C</b> Normally Closed	<b>V</b> Viton	* Additional coil options are available
<b>L</b> Twist/Lock (Detent) Manual Override			
<b>M</b> Manual Override			
<b>T</b> Twist (Momentary) Manual Override			

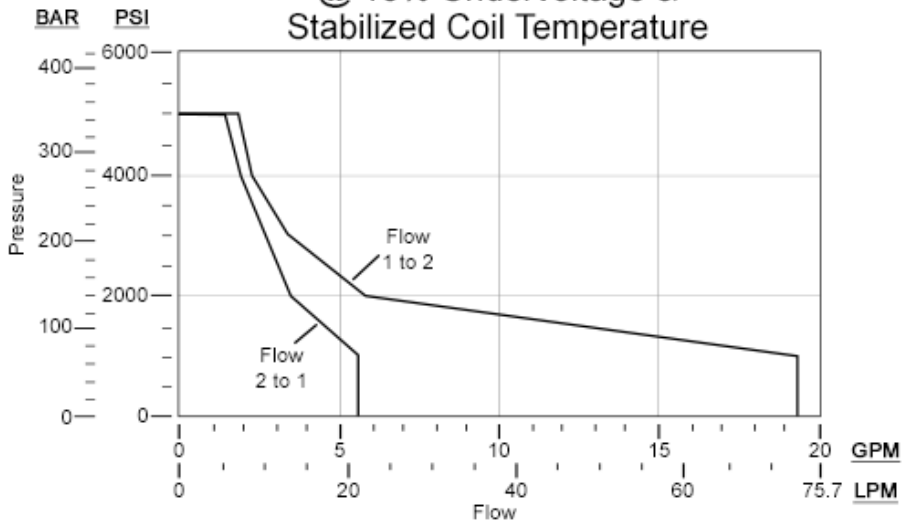
## TECHNICAL FEATURES

- 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.
- This valve is suitable for load holding applications when using the Normally Closed option. In the event of power failure, the valve will spring closed.
- 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 assembly has a mechanical life expectancy of approximately 7,000 cycles.
- 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.
- This cartridge utilizes both 740 Series high-power and 747 Series hazardous location coils.
- This cartridge has an option for manual override. See the CONFIGURATION section.
- Valves exhibit extremely low leakage rates; less than 10 drops/min. @ 5000 psi (0,7 cc/min @ 350 bar).
- 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.
- The solenoid's unique magnetic design results in a high efficiency solenoid, yielding high spool actuating force per Watt expended, leading to reliable valve shifting.
- 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



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



**DTDF**  
**Normally Open**  
 Valve Performance Limits  
 @ 10% Undervoltage &  
 Stabilized Coil Temperature

