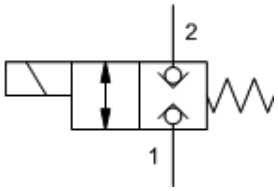
MODEL
DTDF

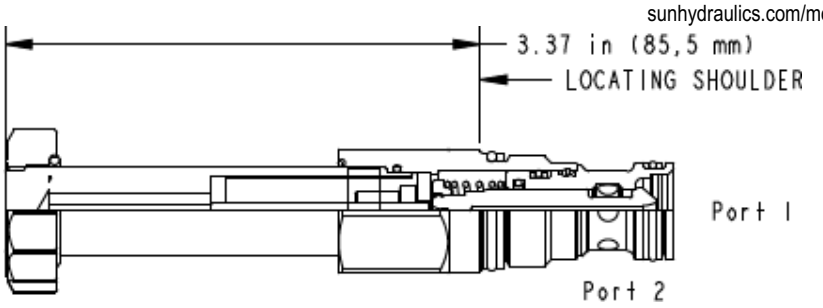
2-way, direct-acting, solenoid-operated directional blocking poppet valve (740 Series)

SERIES 1 / CAPACITY: 40 L/min. / CAVITY: T-13A

sunhydraulics.com/model/DTDF



X-Control, C-Poppet



CONFIGURATION

X	Control	No Manual Override
C	Poppet Configuration	Normally Closed
N	Seal Material	Buna-N
(none)	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 740 and 747 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	40 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
Solenoid Tube Diameter	16 mm
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Seal kit - Cartridge	Buna: 990413007
Seal kit - Cartridge	Polyurethane: 990413002
Seal kit - Cartridge	Viton: 990413006
Model Weight	0.24 kg.

NOTES

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

CONFIGURATION OPTIONS

Model Code Example: DTDFXCN

CONTROL (X)

- **X** No Manual Override
- **D** Twist/Lock (Dual) Manual Override
- **L** Twist/Lock (Detent) Manual Override
- **M** Manual Override
- **T** Twist (Momentary) Manual Override

POPPET CONFIGURATION (C)

- **C** Normally Closed
- **H** Normally Open

SEAL MATERIAL (N)

- **N** Buna-N
- **E** EPDM
- **V** Viton

COIL *

- No coil

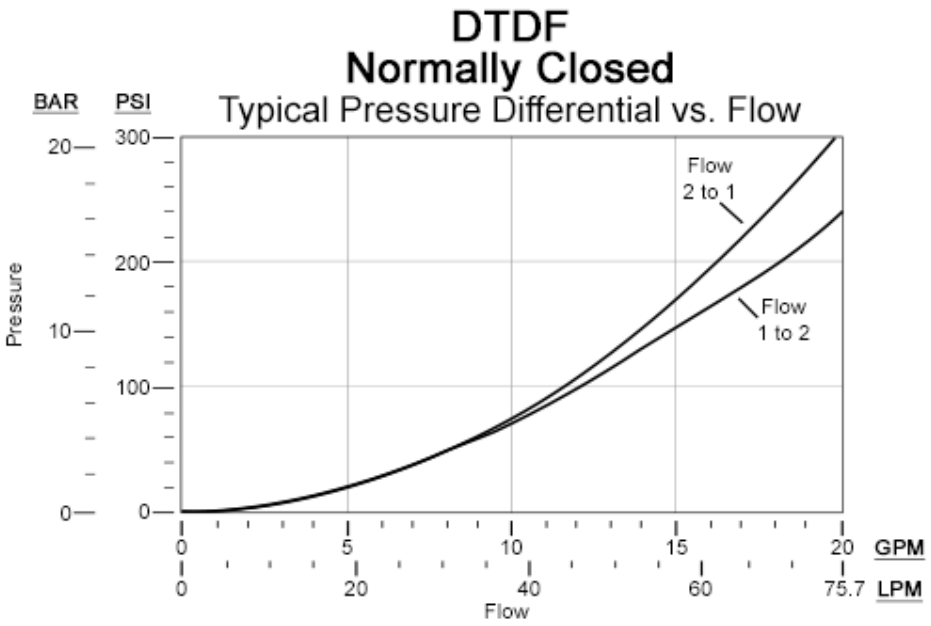
* Additional coil options are available

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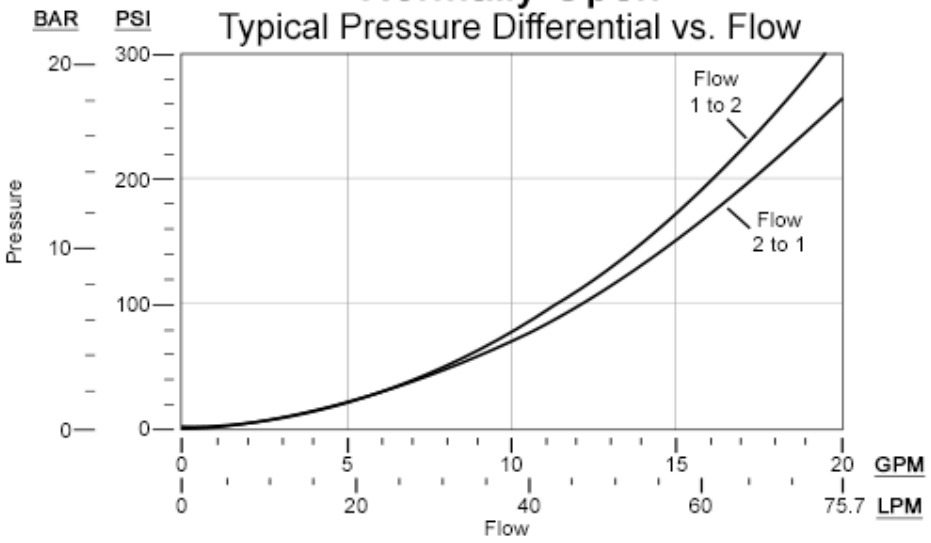
TECHNICAL FEATURES

- 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.
- 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.
- 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).
- 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.
- 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.

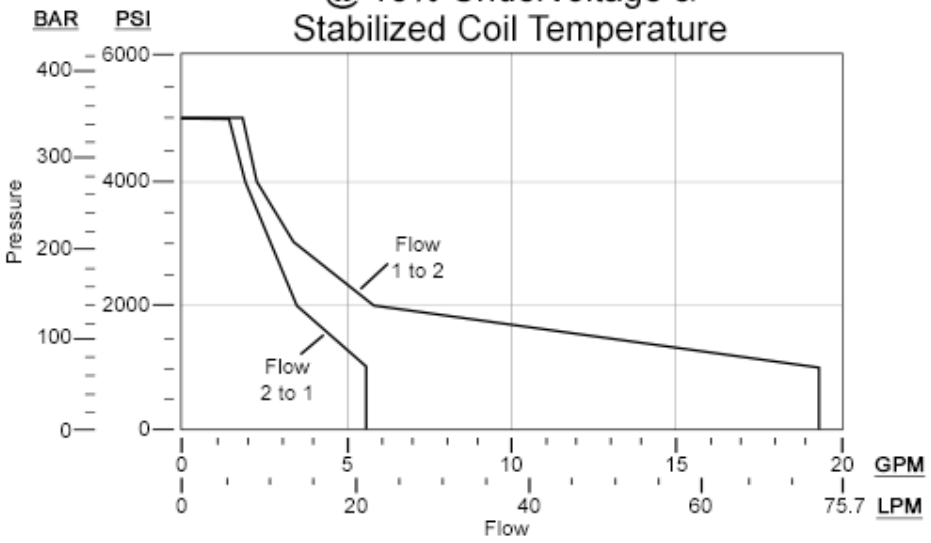
PERFORMANCE CURVES



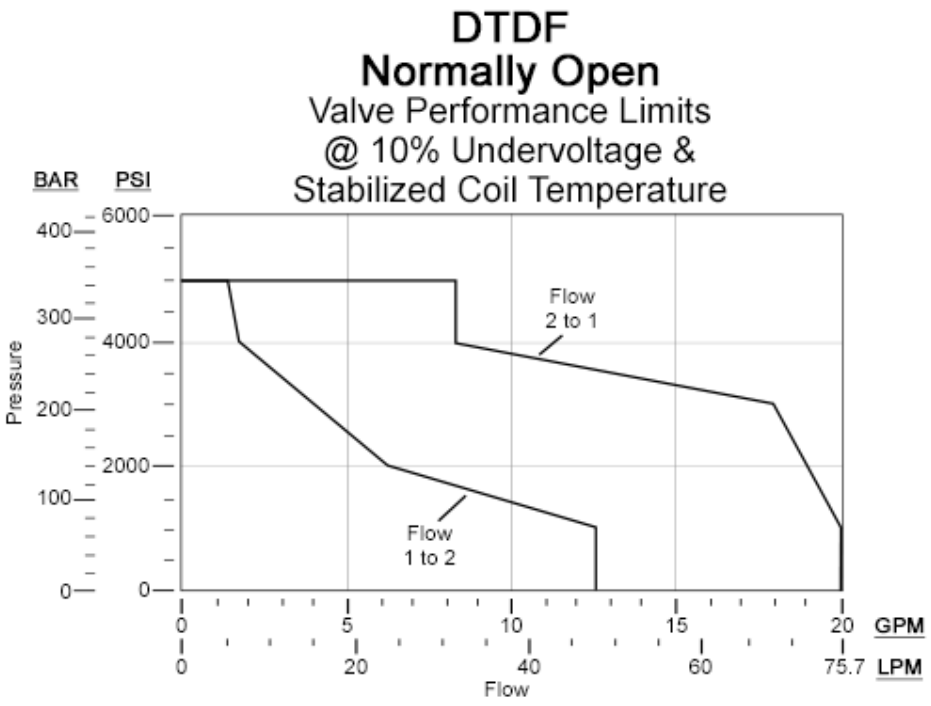
DTDF
Normally Open
Typical Pressure Differential vs. Flow



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



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RELATED MODELS

- DTDFS 2-way, direct-acting, soft shift, solenoid-operated directional blocking poppet valve (740 Series)

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