

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

CONFIGURATION

L	Control	Twist/Lock (Detent) Manual Override
H	Poppet Configuration	Normally Open
N	Seal Material	Buna-N
(none)	Coil	No coil

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	19 mm
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Seal kit - Cartridge	Buna: 990413007
Seal kit - Cartridge	EPDM: 990413014
Seal kit - Cartridge	Polyurethane: 990413002
Seal kit - Cartridge	Viton: 990413006
Seal and nut kit - Coil	Viton: 990770006
Model Weight	0.40 kg.

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: DTDALHN

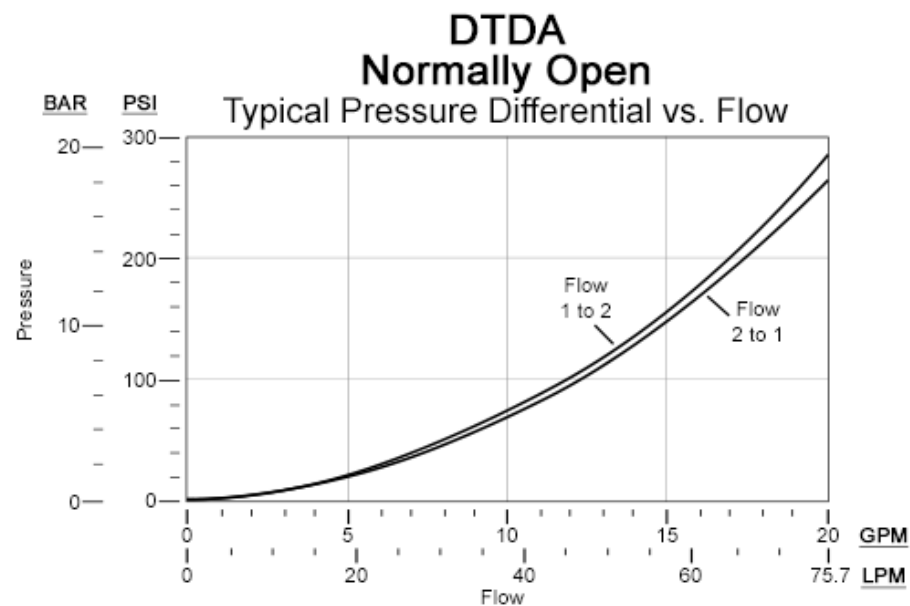
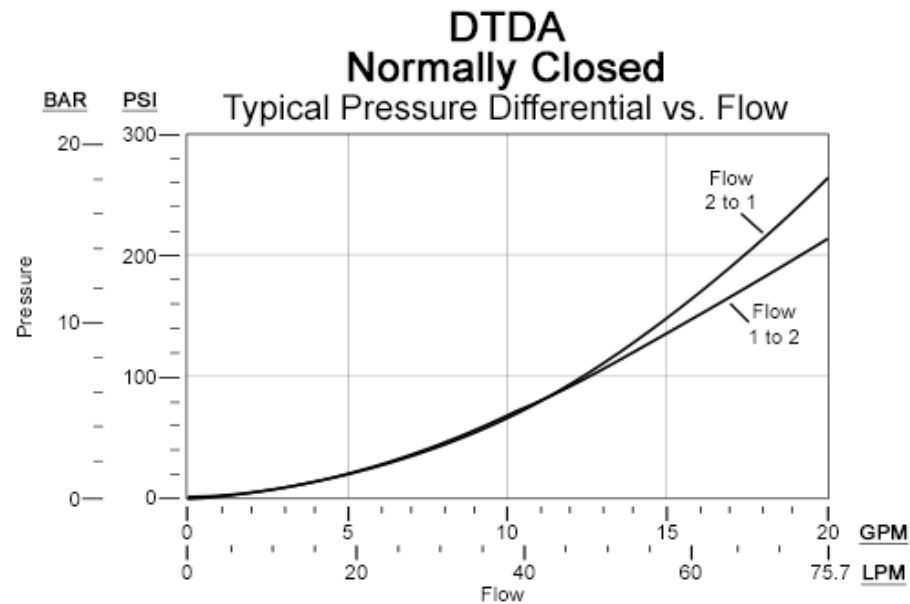
CONTROL	(L) POPPET CONFIGURATION	(H) SEAL MATERIAL	(N) COIL *
L Twist/Lock (Detent) Manual Override	H Normally Open	N Buna-N	No coil
X No Manual Override	C Normally Closed	E EPDM	212 DIN 43650-Form A, 12 VDC
D Twist/Lock (Dual) Manual Override		V Viton	224 DIN 43650-Form A, 24 VDC
M Manual Override			912 Deutsch DT04-2P, 12 VDC
T Twist (Momentary) Manual Override			924 Deutsch DT04-2P, 24 VDC

* Additional coil options are available

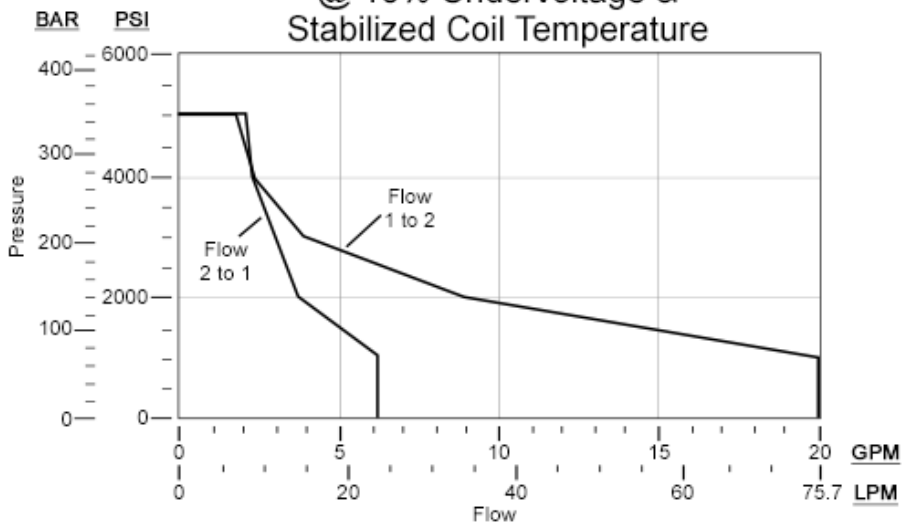
TECHNICAL FEATURES

- 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.
- Valves exhibit extremely low leakage rates; less than 10 drops/min. @ 5000 psi (0,7 cc/min @ 350 bar).
- This cartridge has several manual override choices, including no manual override. See the CONFIGURATION section. Please note: Manual override functionality is not compatible with weatherized coils.
- 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.
- 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.
- 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 are interchangeable with other Sun Series 1 solenoid products and can be mounted on the tube in either direction.
- Coil connector options offer ratings up to IP69K. See individual coil product pages for details. Additional weatherized coils and kits are available for more complete environmental protection.
- 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.

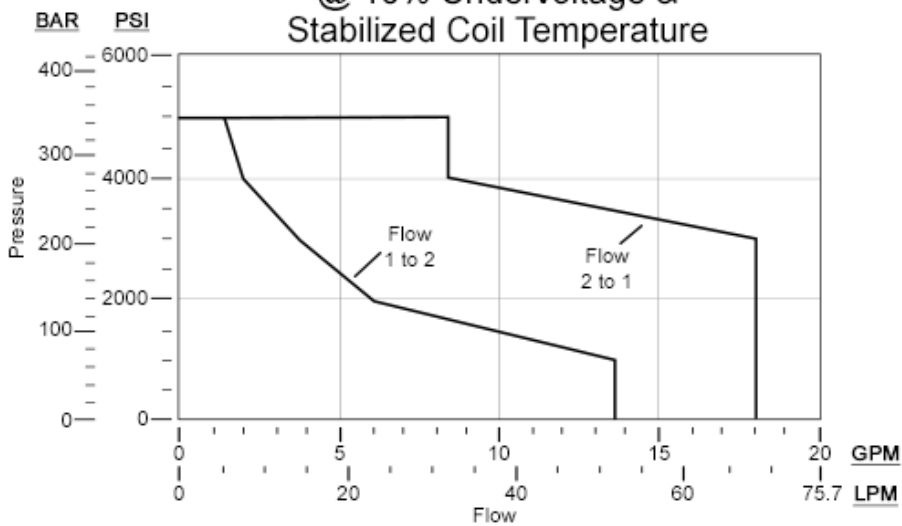
PERFORMANCE CURVES



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



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



RELATED MODELS

- [DTDAS](#) 2-way, direct-acting, soft shift, solenoid-operated directional blocking poppet valve