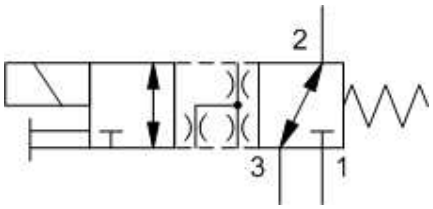
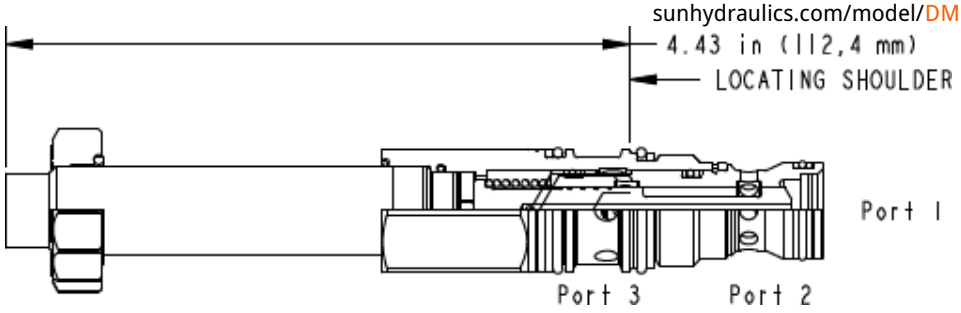
MODEL
DMDF

3-way, solenoid-operated directional spool valve (740 Series)
SERIES 1 / CAPACITY: 45 L/min. / CAVITY: T-11A

sunhydraulics.com/model/DMDF



M or S-Control, N-Spool



CONFIGURATION

M	Control	Manual Override
N	Spool Configuration	Normally Open 2 to 3, Closed 1 to 2
N	Seal Material	Buna-N
(none)	Coil	No coil

This solenoid-operated 3-way, 2-position cartridge is a direct-acting, balanced spool directional valve.

TECHNICAL DATA

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

Cavity	T-11A
Series	1
Capacity	45 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@210 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: 990411007
Seal kit - Cartridge	Viton: 990411006
Seal and nut kit - Coil	Viton: 990740006
Model Weight	0.28 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: DMDFMNN

CONTROL (M)

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

SPOOL CONFIGURATION (N)

- **N** Normally Open 2 to 3, Closed 1 to 2
- **A** Normally Open 1 to 2, Closed 2 to 3
- **R** Normally Open 2 to 3, Closed 1 to 2, Closed Transition

SEAL MATERIAL (N)

- **N** Buna-N
- **V** Viton

COIL *

- No coil

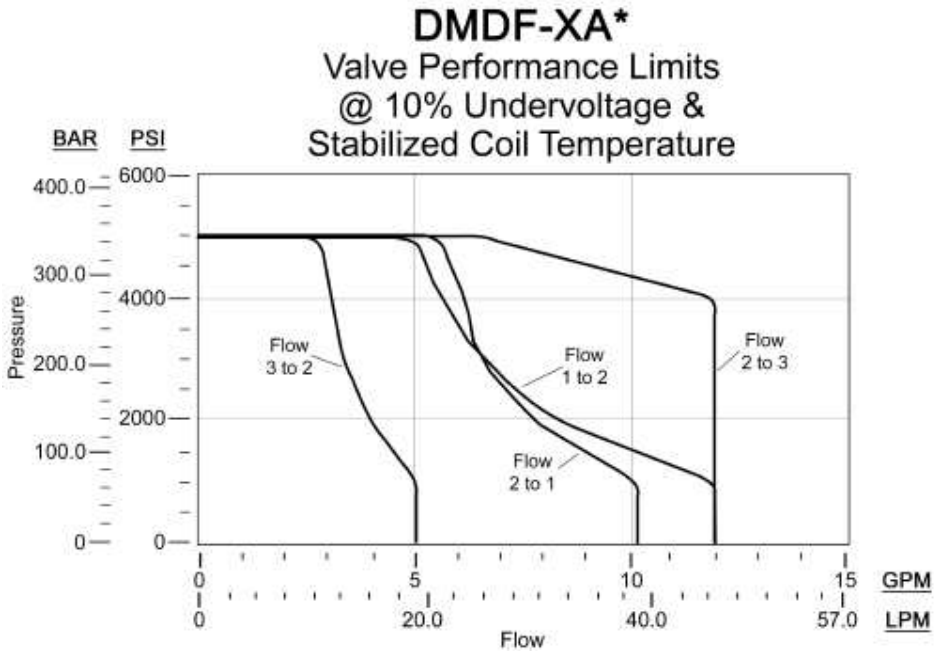
* Additional coil options are available

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TECHNICAL FEATURES

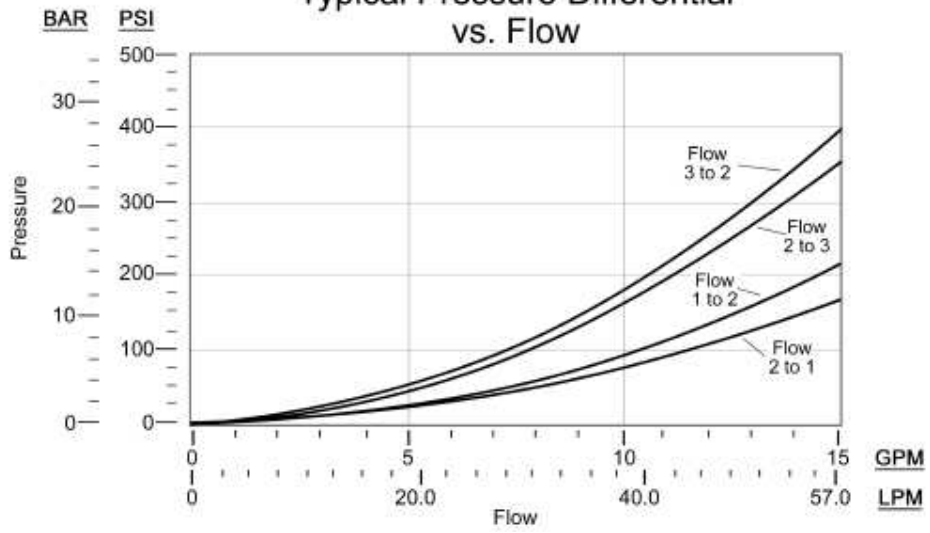
- The solenoid tube assembly is fatigue rated for 5000 psi (350 bar) service.
- The R-spool is closed in the transition between its two positions. This results in a higher performance limit at the expense of lower capacity. When used as pilot controls, where capacity is not a factor, the closed transition will provide faster and more consistent response times.
- This valve is direct actuated and requires no minimum hydraulic pressure for operation.
- 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.
- 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.
- 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



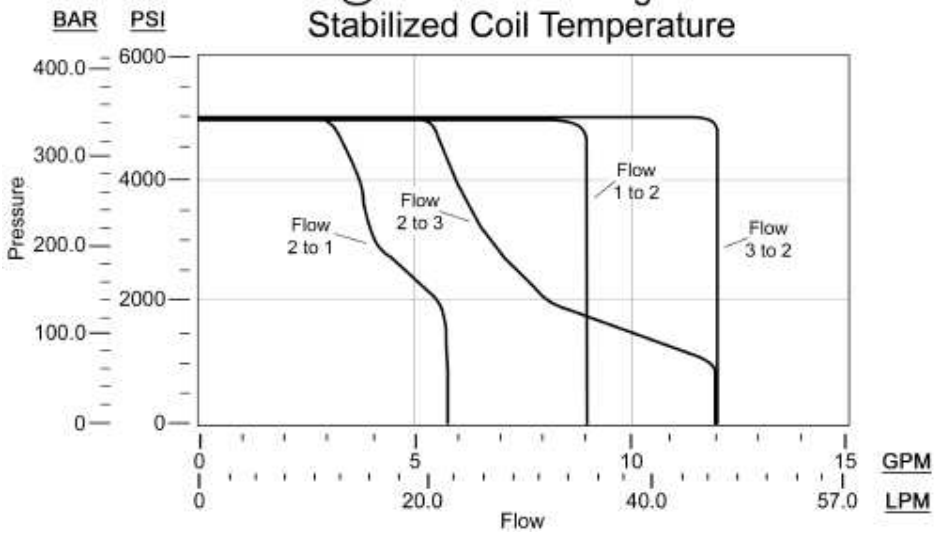
DMDF-XA*

Typical Pressure Differential vs. Flow



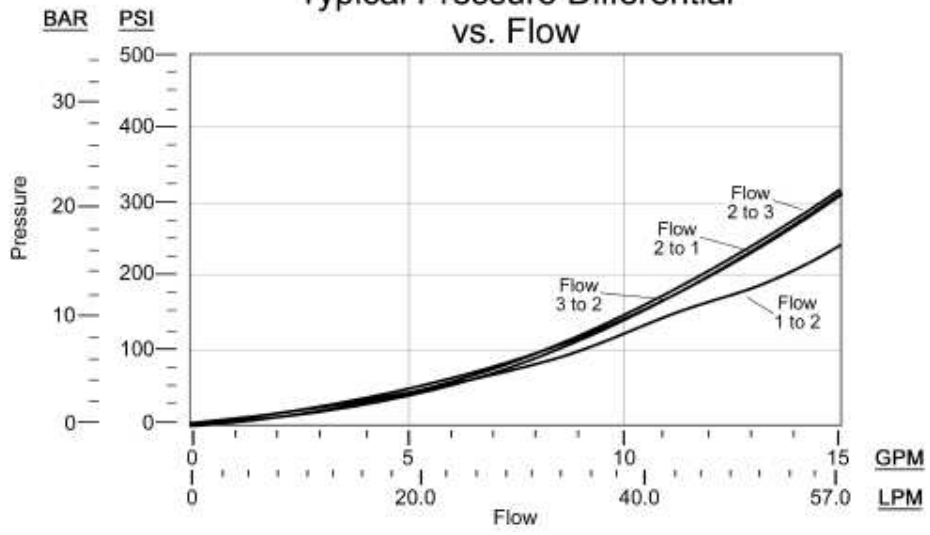
DMDF-XN*

Valve Performance Limits @ 10% Undervoltage & Stabilized Coil Temperature

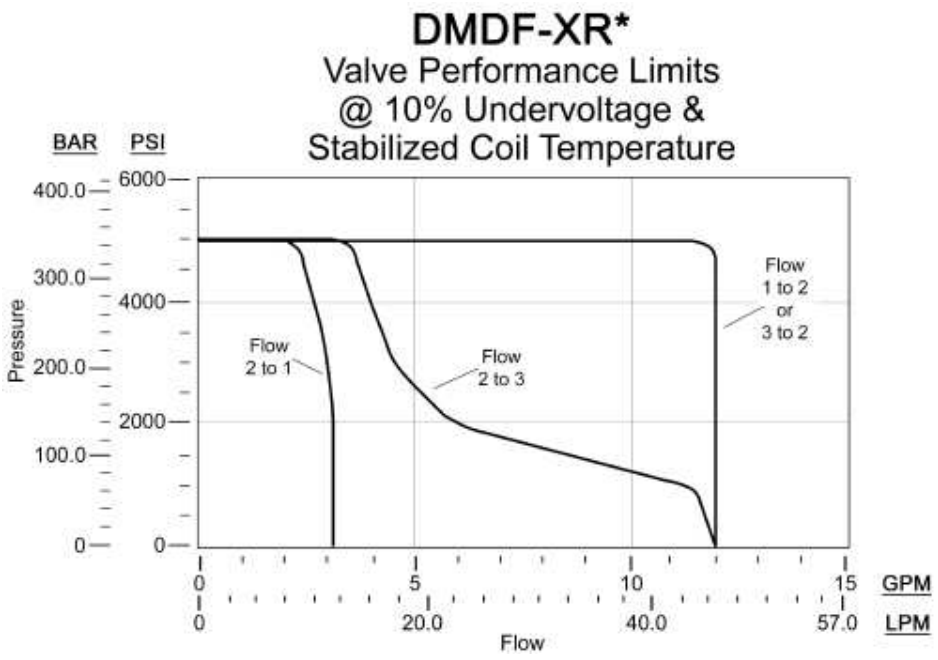


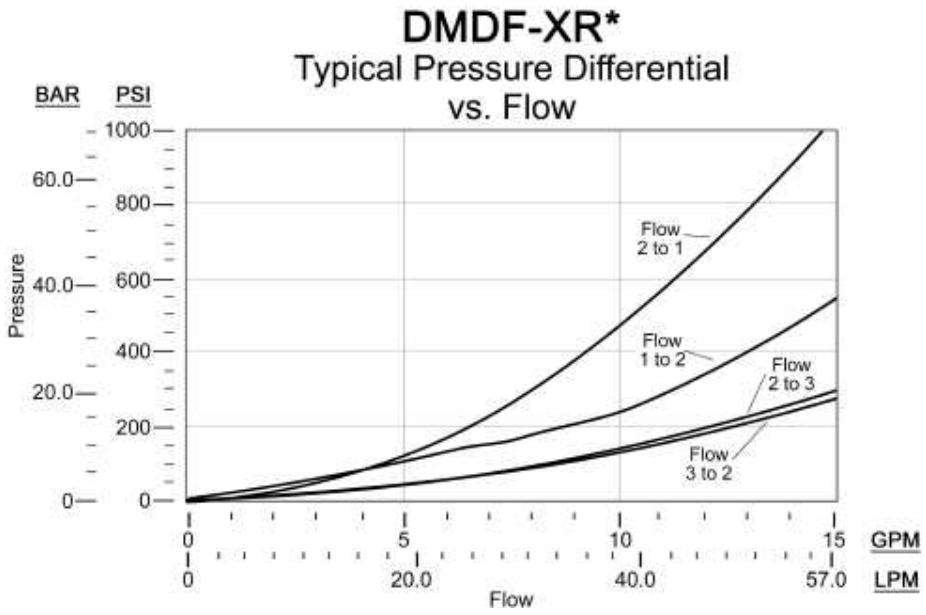
DMDF-XN*

Typical Pressure Differential vs. Flow



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RELATED MODELS

- DMDFS 3-way, soft shift, solenoid-operated directional spool valve (740 Series)

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