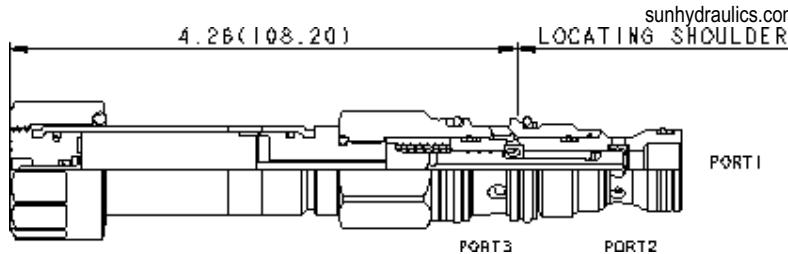


M or S-Control, B-Spool



sunhydraulics.com/model/DMDA

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

## CONFIGURATION

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

## TECHNICAL DATA

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

Cavity	T-11A
Series	1
Capacity	12 gpm
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	5 in <sup>3</sup> /min. @ 3000 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	.75 in.
Valve Hex Size	7/8 in.
Valve Installation Torque	30 - 35 lbf ft
Seal kit - Cartridge	Buna: 990411007
Seal kit - Cartridge	EPDM: 990411014
Seal kit - Cartridge	Viton: 990411006
Seal and nut kit - Coil	Viton: 990770006
Model Weight	0.74 lb.

## 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: DMDAMBN

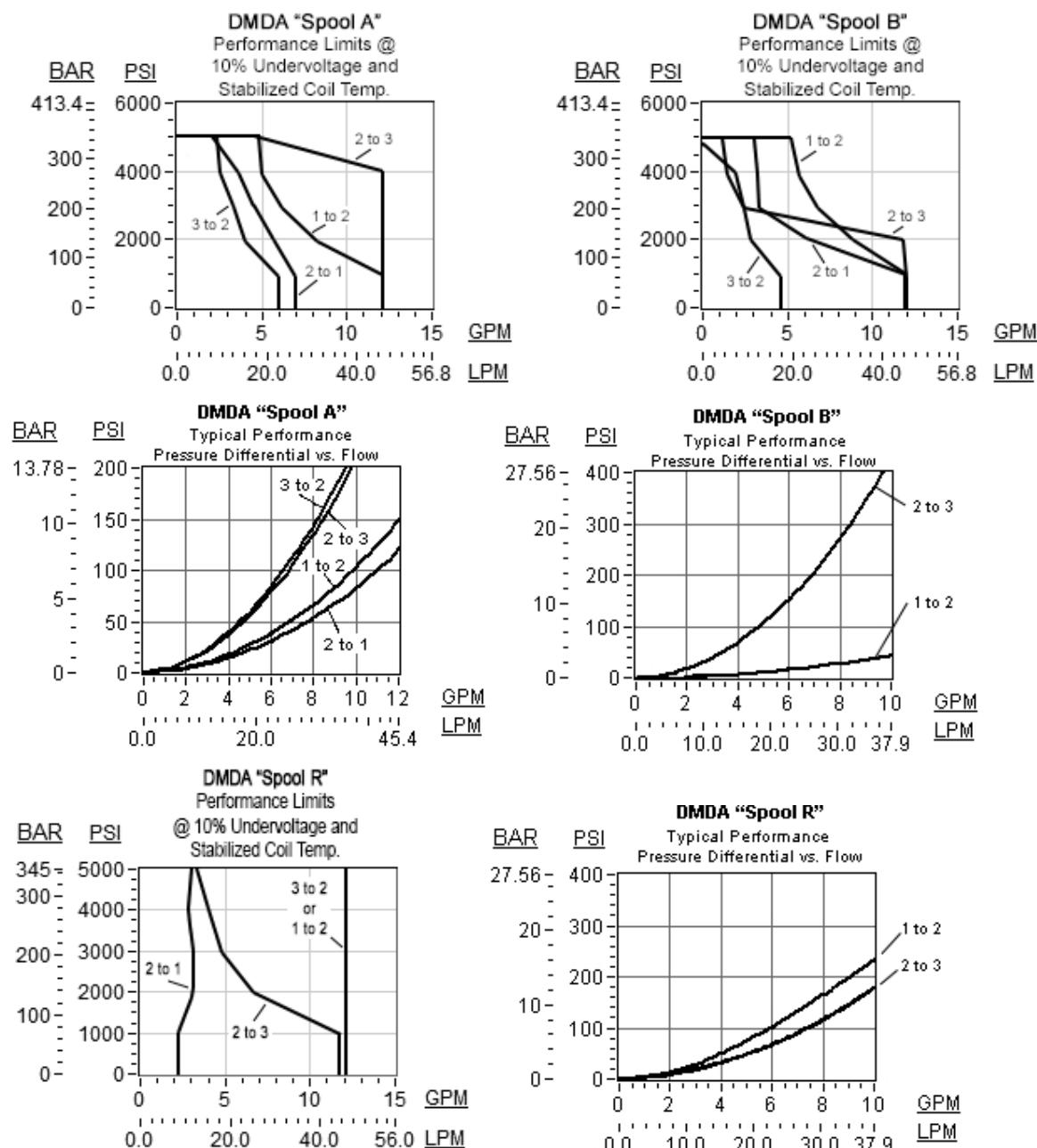
CONTROL	(M)	SPOOL CONFIGURATION	(B)	SEAL MATERIAL	(N)	COIL *
M Manual Override	B	Normally Open 1 to 2, Closed 2 to 3, Closed Transition	N	Buna-N		No coil
X No Manual Override			E	EPDM		212 DIN 43650-Form A, 12 VDC
D Twist/Lock (Dual) Manual Override	A	Normally Open 1 to 2, Closed 2 to 3	V	Viton		224 DIN 43650-Form A, 24 VDC
L Twist/Lock (Detent) Manual Override	N	Normally Open 2 to 3, Closed 1 to 2				912 Deutsch DT04-2P, 12 VDC
T Twist (Momentary) Manual Override	P	Normally Open 1 to 3, Closed 1 to 2				924 Deutsch DT04-2P, 24 VDC
	R	Normally Open 2 to 3, Closed 1 to 2, Closed Transition				

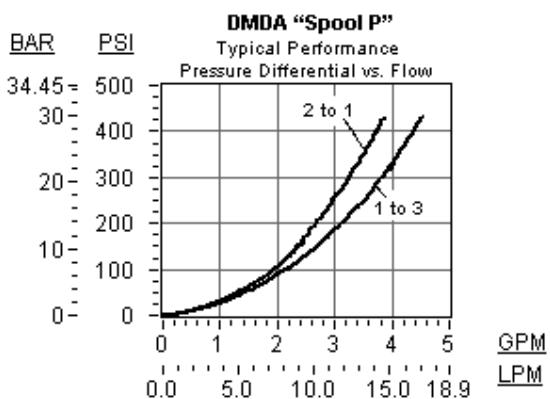
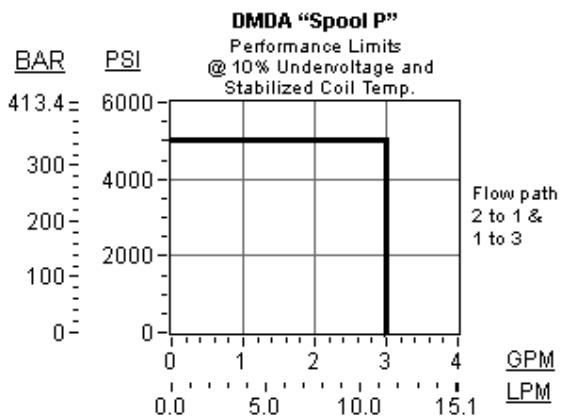
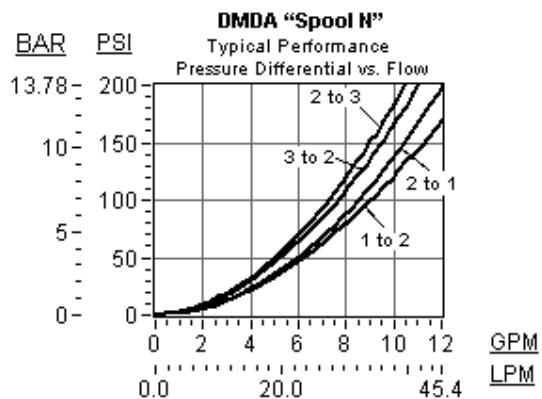
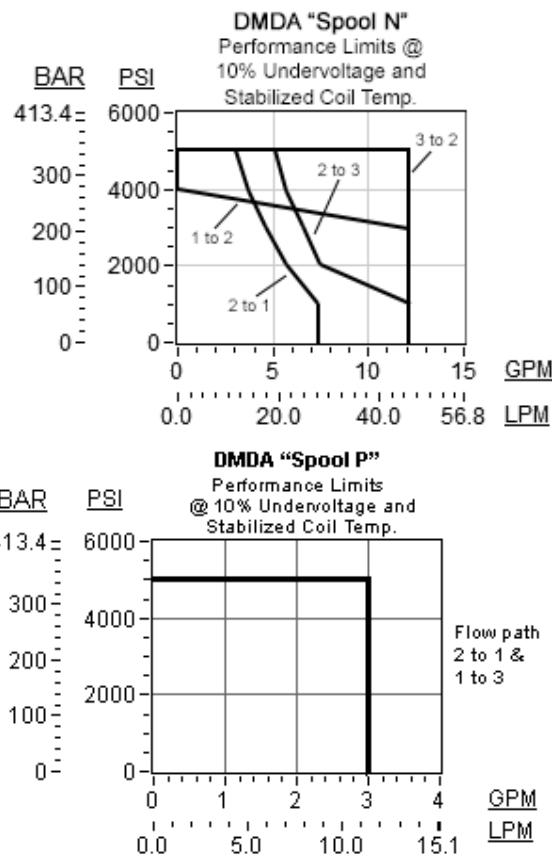
\* Additional coil options are available

## TECHNICAL FEATURES

- The solenoid tube assembly is fatigue rated for 5000 psi (350 bar) service.
- Spools B and R are closed in the transition between their 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.
- 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.
- Coils are interchangeable with other Sun Series 1 solenoid products and 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





## RELATED MODELS

- [DMDAS](#) 3-way, soft shift, solenoid-operated directional spool valve
- [DMDAZ](#) 3-way, solenoid-operated directional spool valve with position switch