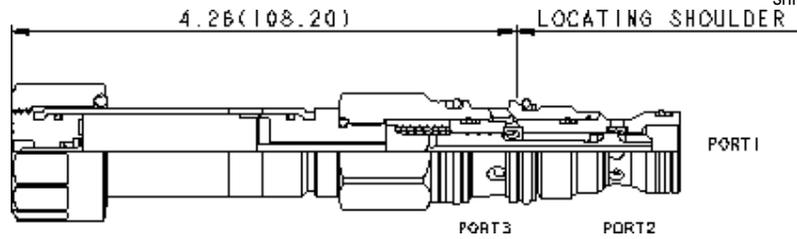


M or S-Control, A-Spool



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

**CONFIGURATION**

<b>M</b>	Control	Manual Override
<b>A</b>	Spool Configuration	Normally Open 1 to 2, Closed 2 to 3
<b>N</b>	Seal Material	Buna-N
<b>(none)</b>	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	0.61 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: DMDAMAN**

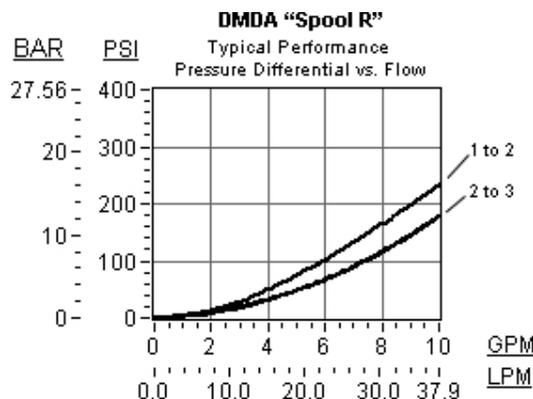
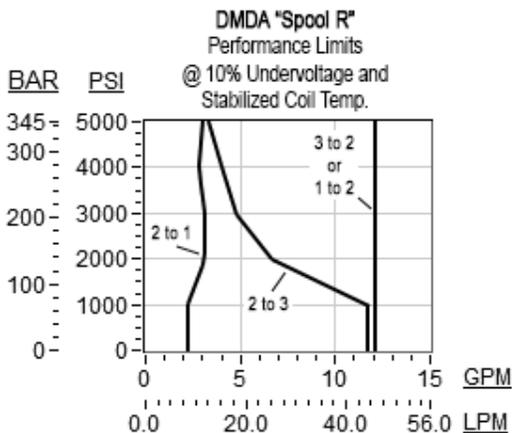
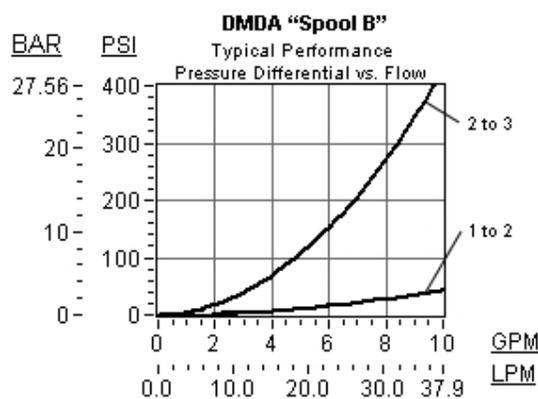
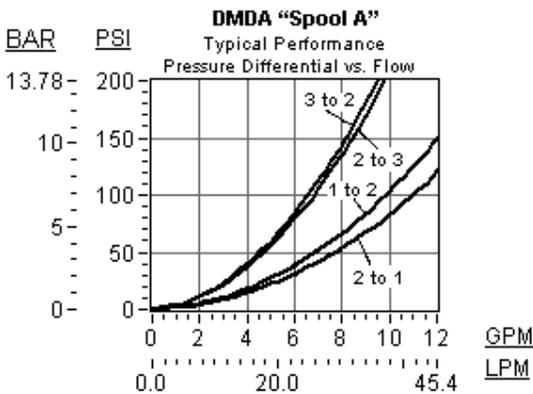
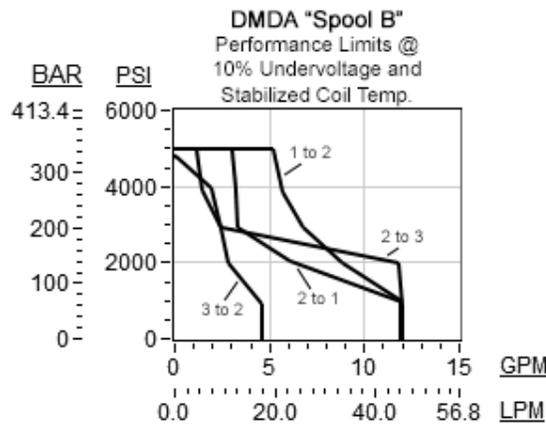
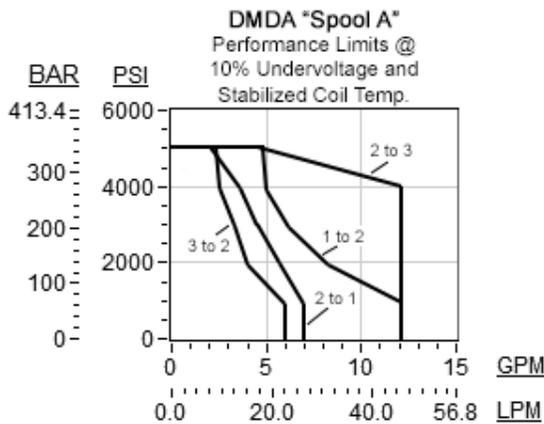
<b>CONTROL</b>	<b>(M)</b>	<b>SPOOL CONFIGURATION</b>	<b>(A)</b>	<b>SEAL MATERIAL</b>	<b>(N)</b>	<b>COIL *</b>
<b>M</b> Manual Override		<b>A</b> Normally Open 1 to 2, Closed 2 to 3		<b>N</b> Buna-N		No coil
<b>X</b> No Manual Override		<b>N</b> Normally Open 2 to 3, Closed 1 to 2		<b>E</b> EPDM		<b>212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

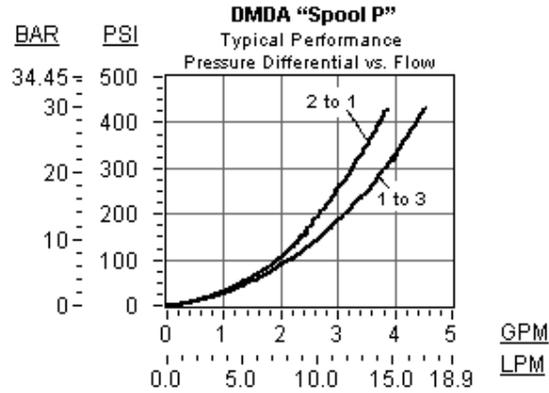
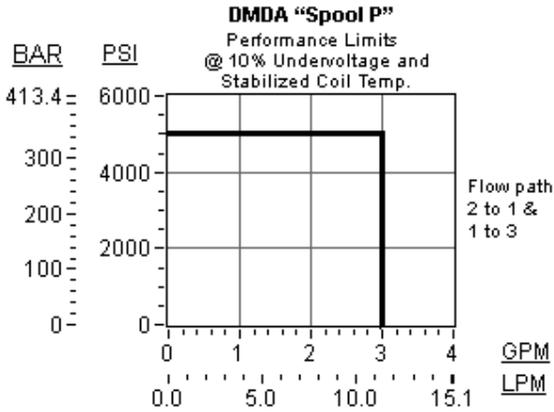
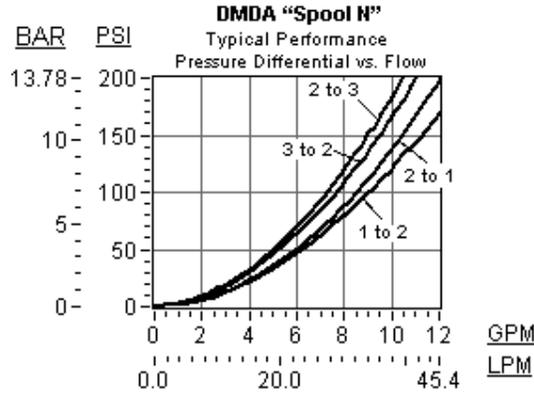
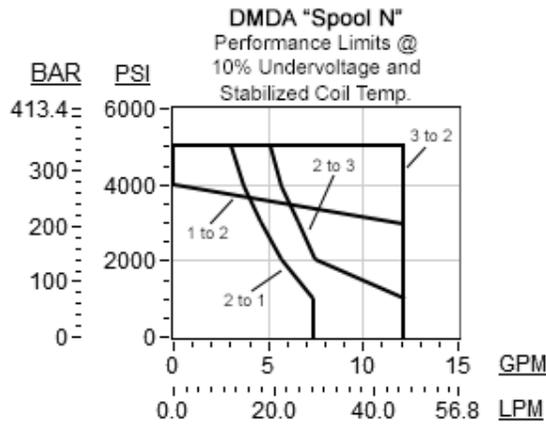
\* Additional coil options are available

## TECHNICAL FEATURES

- The solenoid tube assembly is fatigue rated for 5000 psi (350 bar) service.
- 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.
- 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.
- 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.
- 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