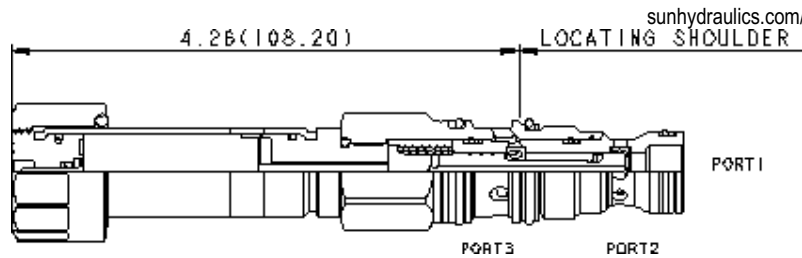


M or S-Control, B-Spool



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

## CONFIGURATION

|               |                     |  |
|---------------|---------------------|--|
| <b>M</b>      | Control             | Manual Override  |
| <b>B</b>      | Spool Configuration | Normally Open 1 to 2, Closed 2 to 3, Closed Transition |
| <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                              | 0.74 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

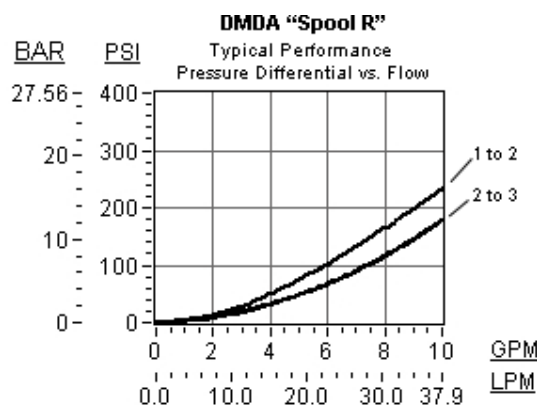
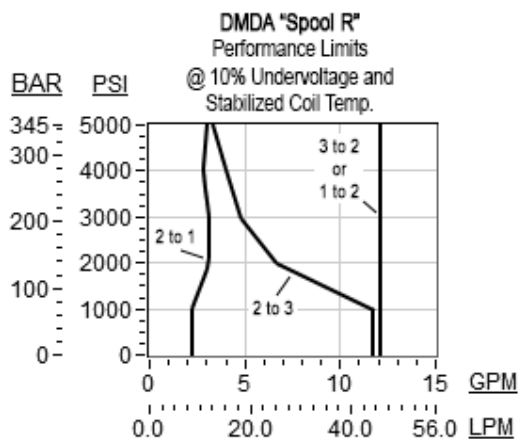
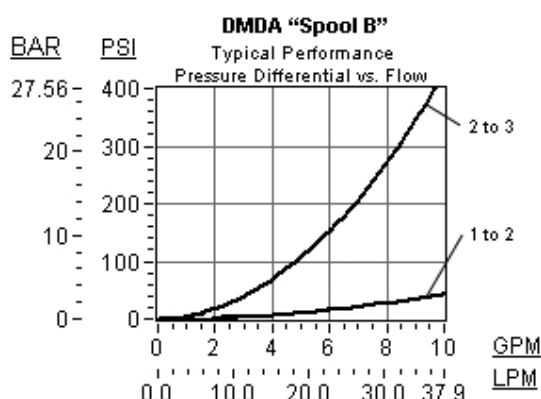
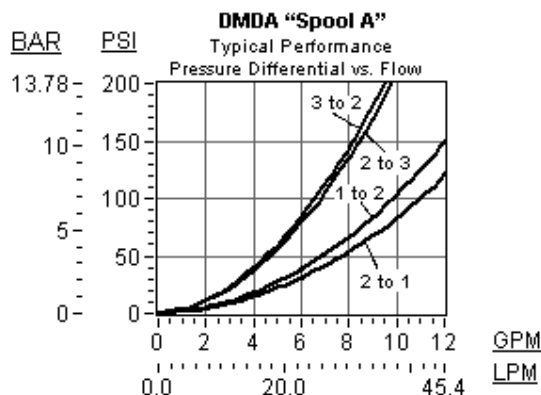
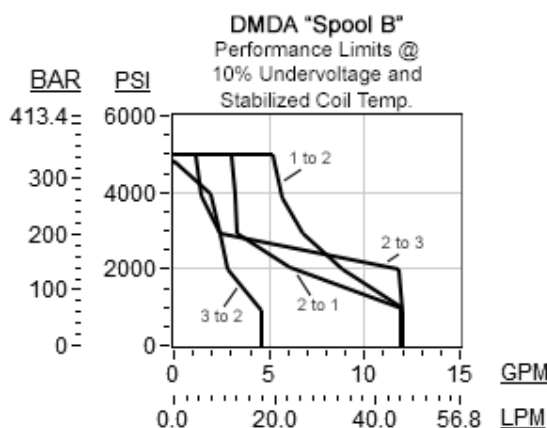
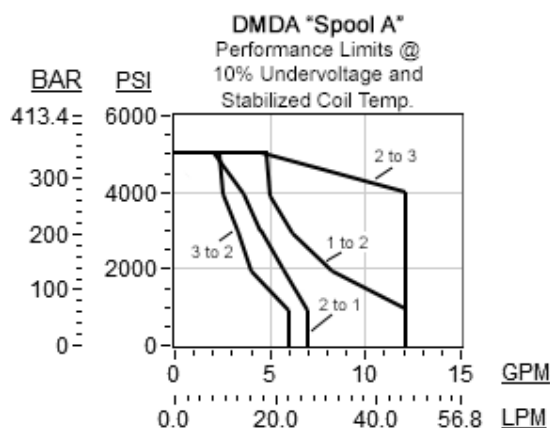
| CONTROL                                      | (M) | SPOOL CONFIGURATION   | (B) | SEAL MATERIAL   | (N) | COIL *                              |
|--|-----|---|-----|-----------------|-----|-------------------------------------|
| <b>M</b> Manual Override                     |     | <b>B</b> Normally Open 1 to 2, Closed 2 to 3, Closed Transition |     | <b>N</b> Buna-N |     | No coil                             |
| <b>X</b> No Manual Override                  |     | <b>A</b> Normally Open 1 to 2, Closed 2 to 3                    |     | <b>E</b> EPDM   |     | <b>212</b> DIN 43650-Form A, 12 VDC |
| <b>D</b> Twist/Lock (Dual) Manual Override   |     | <b>N</b> Normally Open 2 to 3, Closed 1 to 2                    |     | <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  |

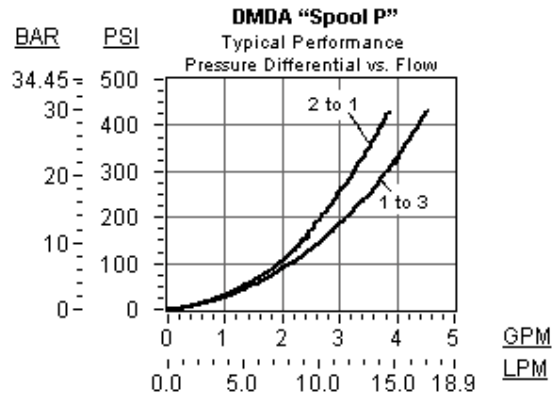
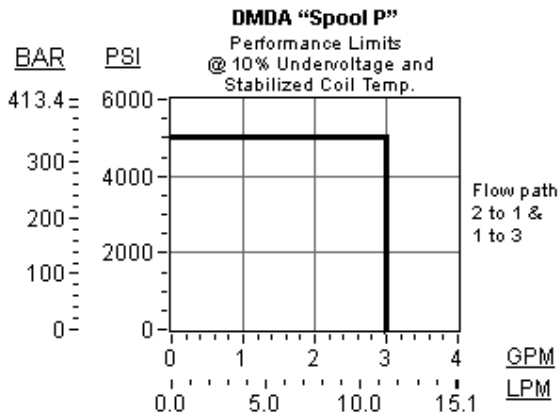
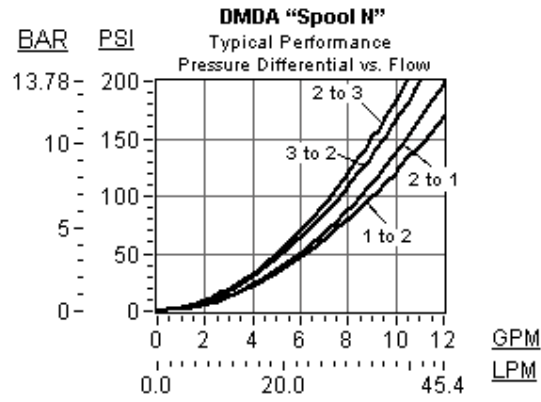
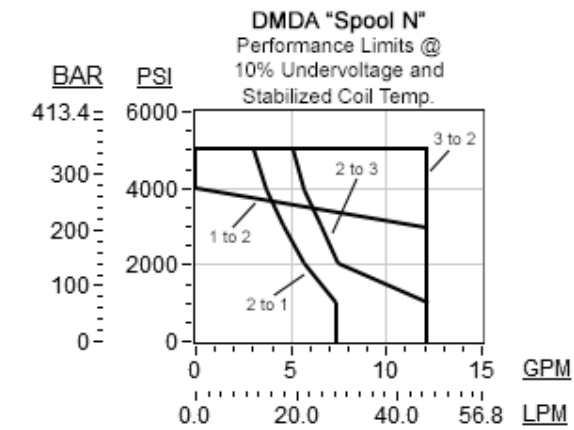
\* Additional coil options are available

## 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.
- 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