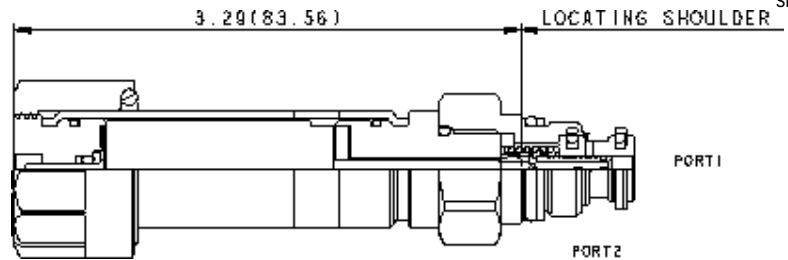


M or S-Control, C-Spool



This solenoid-operated 2-way, 2-position cartridge is a direct-acting, balanced spool pilot valve used to pilot other full-flow valves. The valve is available in either a normally open or normally closed configuration.

This cartridge can be installed directly into a cavity in the end of many of Sun's pilot operated and ventable valves to provide integrated pilot control.

CONFIGURATION

| | | |
|---------------|---------------------|-----------------|
| M | Control | Manual Override |
| C | Spool Configuration | Normally Closed |
| N | Seal Material | Buna-N |
| (none) | Coil | No coil |

TECHNICAL DATA

| | |
|---|---------------------------|
| Maximum Operating Pressure | 5000 psi |
| Response Time - Typical | 50 ms |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 10 drops/min. @5000 psi |
| Switching Frequency | 15000 cycles/hr |
| Manual Override Force Requirement | 5 lbs/1000 psi @ Port 1 |
| Manual Override Stroke | .10 in. |
| Seal kit - Cartridge | Buna: 990-008-007 |
| Seal kit - Cartridge | Polyurethane: 990-008-002 |
| Seal kit - Cartridge | Viton: 990-008-006 |

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: DAALMCN

| CONTROL | (M) | SPOOL CONFIGURATION | (C) | SEAL MATERIAL | (N) | COIL * |
|--|-----|--------------------------|-----|-----------------|-----|--|
| M Manual Override | | C Normally Closed | | N Buna-N | | No coil |
| X No Manual Override | | H Normally Open | | E EPDM | | 212 DIN 43650 3 pin (Hirschman), 12 VDC |
| D Twist/Lock (Dual) Manual Override | | | | V Viton | | 224 DIN 43650 3 pin (Hirschman), 24 VDC |
| L Twist/Lock (Detent) Manual Override | | | | | | 712 Twin Lead, 12 VDC |
| T Twist (Momentary) Manual Override | | | | | | 724 Twin Lead, 24 VDC |
| | | | | | | 912 Deutsch DT04-2P, 12 VDC |
| | | | | | | 924 Deutsch DT04-2P, 24 VDC |

* Additional coil options are available

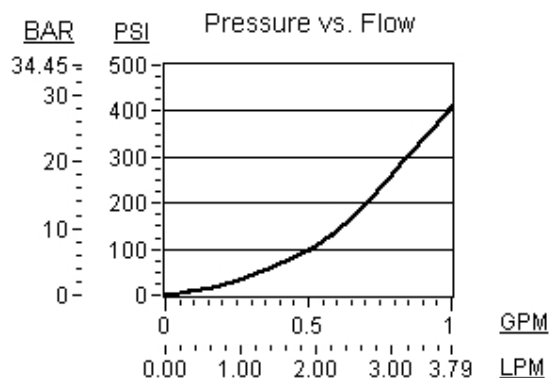
TECHNICAL FEATURES

- Model DAAL integrates the same coil, connector, and manual override options that are currently available on Series 1 valves. The DAAL is interchangeable with the DAAA except for the external coil dimensions and higher coil wattage.
- 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 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.
- Cartridge can be installed directly into a cavity in some Sun pilot operated and ventable cartridges to provide electrically operated pilot control functions. Separate pilot lines are eliminated and only one cavity needs to be machined to accommodate both the control and primary function.
- Valves exhibit extremely low leakage rates; less than 10 drops/min. @ 5000 psi (0,7 cc/min @ 350 bar).
- Note: The main stage valve should first be installed to the correct torque value followed by the T-8A pilot control section into the main stage valve to its required torque value.
- 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 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.
- 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



RELATED MODELS

- [DAALS](#) 2-way, soft shift, solenoid-operated directional spool valve - pilot capacity

RELATED ACCESSORIES

- [773-812](#) 12 VDC weatherized coil with Metri-Pack, Series 150-2M connector
- [773-814](#) 14 VDC weatherized coil with Metri-Pack, Series 150-2M connector
- [773-824](#) 24 VDC weatherized coil with Metri-Pack, Series 150-2M connector
- [773-828](#) 28 VDC weatherized coil with Metri-Pack, Series 150-2M connector
- [991-225](#) Momentary/twist operation, manual override control kit, T control
- [991-226](#) Detent/lock operation, manual override control kit, L control
- [991-227](#) Dual twist/lock operation, manual override control kit, D control
- [XRAK](#) Solenoid operated pilot relief assembly
- [XRCL](#) Solenoid operated cross port relief assembly
- [XRCM](#) Solenoid operated ventable relief assembly
- [XRCX](#) Solenoid operated ventable relief assembly
- [XREL](#) Solenoid operated cross port relief valve assembly
- [XREM](#) Solenoid operated ventable relief assembly
- [XREX](#) Solenoid operated ventable relief assembly
- [XRFI](#) Solenoid operated ventable relief assembly
- [XRGL](#) Solenoid operated cross port relief assembly
- [XRGM](#) Solenoid operated, pressure reducing/relieving valve assembly
- [XRGX](#) Solenoid operated ventable relief assembly
- [XRHM](#) Solenoid operated ventable relief assembly
- [XRIK](#) Y-Assembly
- [XRIM](#) Solenoid operated pressure reducing/relieving assembly
- [XRIX](#) Solenoid operated ventable relief assembly
- [XRJK](#) Solenoid operated, sequence valve assembly
- [XRJM](#) Solenoid operated ventable relief assembly
- [XROK](#) Solenoid operated ventable relief assembly
- [XRPK](#) Solenoid operated ventable relief assembly
- [XRQK](#) Solenoid operated ventable relief assembly
- [XRRK](#) Solenoid operated ventable relief assembly