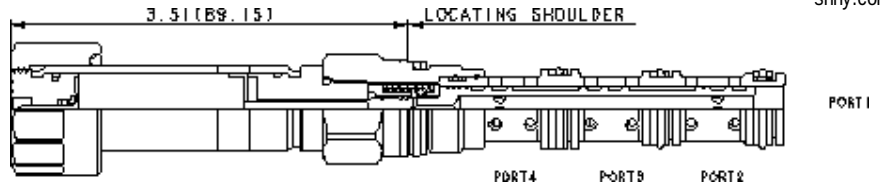


M or S-Control, N-Spool



This solenoid-operated 4-way, 2-position cartridge is a direct-acting, balanced spool directional valve.

CONFIGURATION

M	Control	Manual Override
N	Spool Configuration	Through, Shift to Cross
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 in ³ /min. @ 3000 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: 990-431-007
Seal kit - Cartridge	Viton: 990-431-006

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: DNDAMNN

CONTROL	(M)	SPOOL CONFIGURATION	(N)	SEAL MATERIAL	(N)	COIL *
M Manual Override		N Through, Shift to Cross		N Buna-N		No coil
X No Manual Override		C Closed, Shift to Through		E EPDM		212 DIN 43650 3 pin (Hirschman), 12 VDC
D Twist/Lock (Dual) Manual Override		D Closed, Shift to Cross		V Viton		224 DIN 43650 3 pin (Hirschman), 24 VDC
L Twist/Lock (Detent) Manual Override		E Cross, Shift to Closed				712 Twin Lead, 12 VDC
T Twist (Momentary) Manual Override		H Open, Shift to Cross				724 Twin Lead, 24 VDC
		J Open, Shift to Through				912 Deutsch DT04-2P, 12 VDC
		L Cross, Shift to P to A, B and T Blocked				924 Deutsch DT04-2P, 24 VDC
		R Regen, Shift to Cross				* Additional coil options are available
		S Regen, Shift to Through				
		T Tandem, Shift to Through				
		U Through, Shift to Tandem				
		X Cross, Shift to Through				
		Y Motor, Shift to Cross				
		Z Motor, Shift to Through				

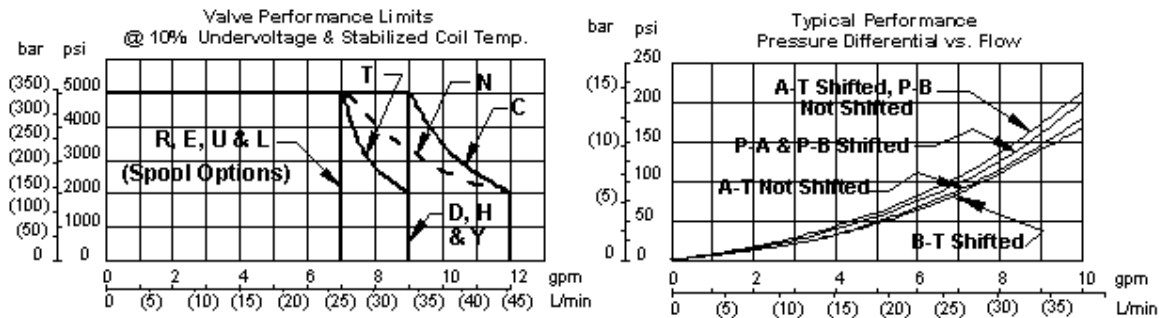
TECHNICAL FEATURES

- 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.
- 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.
- A wide variety of coil termination and voltage options are available, with and without surge protection. See the CONFIGURATION section.
- 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 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



Note: Performance limits are derived with 4-way operation and symmetrical flow.
For valve applications where either asymmetrical flow or 3-way operation is present, these performance limits may be reduced.

RELATED MODELS

- [DNDAS](#) 4-way, 2-position, soft shift, solenoid-operated directional spool valve

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
- [991-056](#) T-13A and T-31A cavities, weatherized coil seal kit
- [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