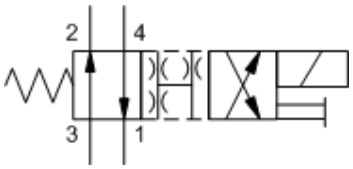
MODEL
DNDAS

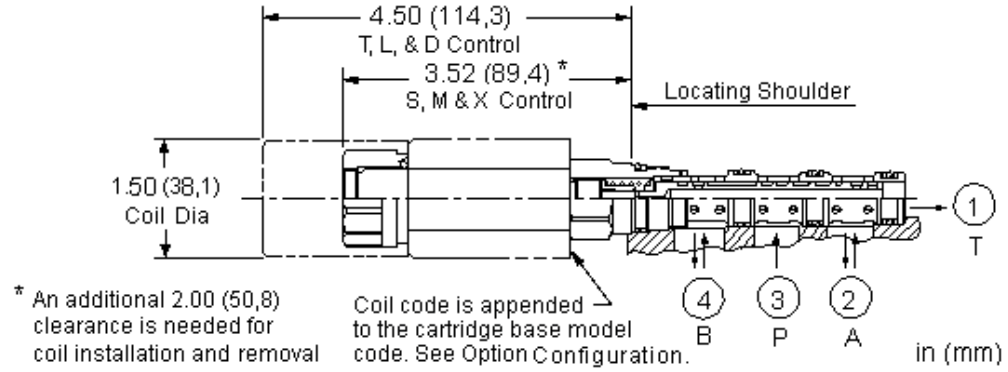
4-way, 2-position, soft shift, solenoid-operated directional spool valve

SERIES 1 / CAPACITY: 4 gpm / CAVITY: T-31A

sunhydraulics.com/model/DNDAS



M or S-Control, N-Spool



CONFIGURATION

N	Spool Configuration	Through, Shift to Cross
N	Seal Material	Buna-N
(none)	Coil	No coil

This solenoid-operated 4-way, 2-position cartridge is a direct-acting, balanced spool directional valve with a soft shift feature. The soft shift feature greatly reduces system shock due to valve actuation.

TECHNICAL DATA

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

Cavity	T-31A
Series	1
Capacity	4 gpm
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	10 in³/min.@3000 psi
Manual Override Force Requirement	5 lbs/1000 psi @ Port 1
Manual Override Stroke	.10 in.
Solenoid Tube Diameter	.75 in.
Valve Hex Size	7/8 in.
Valve Installation Torque	30 - 35 lbf ft
Seal kit - Cartridge	Buna: 990431007
Seal kit - Cartridge	EPDM: 990431014
Seal kit - Cartridge	Viton: 990431006
Model Weight	0.62 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.

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CONFIGURATION OPTIONS

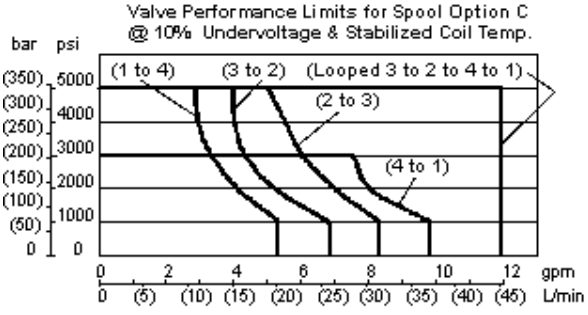
Model Code Example: DNDASNN

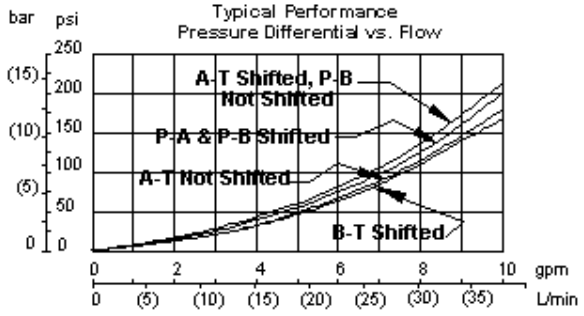
SPOOL CONFIGURATION (N)	SEAL MATERIAL (N)	COIL *
N Through, Shift to Cross	**N** Buna-N	No coil
C Closed, Shift to Through	**E** EPDM	**212** DIN 43650-Form A, 12 VDC
D Closed, Shift to Cross	**V** Viton	**224** DIN 43650-Form A, 24 VDC
E Cross, Shift to Closed		**912** Deutsch DT04-2P, 12 VDC
H Open, Shift to Cross		**924** Deutsch DT04-2P, 24 VDC
L Cross, Shift to P to A, B and T Blocked		* Additional coil options are available
R Regen, Shift to Cross		
T Tandem, Shift to Through		
U Through, Shift to Tandem		
Y Motor, Shift to Cross		

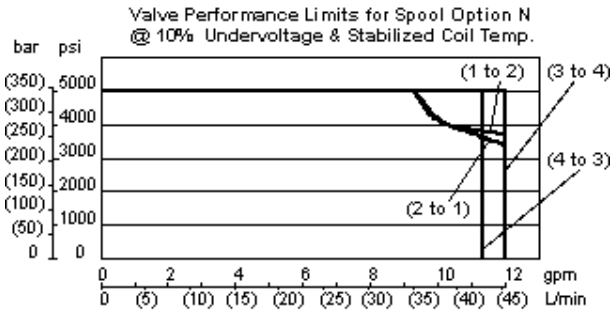
TECHNICAL FEATURES

- The soft shift cartridge is interchangeable with the standard cartridge, however, the performance limits are lower.
- The soft shift feature can reduce shock due to valve actuation but should not be counted upon in applications where timing is critical. If you need accurate ramping or timing control, consider Sun's electro-proportional valves.
- The soft shift feature results in an increase in response time over Sun's standard solenoid. Response time is dependent on flow, pressure, coil voltage, oil viscosity and ambient temperature.
- For consistent soft shift performance, port 1 should be at a positive pressure.
- This valve includes a push-type manual override control. Other manual control options such as T or D, cannot be ordered with the soft shift control but can be installed easily in the field. See Twist/Lock Manual Override link above for details. Please note: Manual override functionality is not compatible with weatherized coils.
- The solenoid tube assembly is fatigue rated for 5000 psi (350 bar) service.
- 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.
- 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.
- 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

- DNDA 4-way, 2-position, solenoid-operated directional spool valve

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