2-way, solenoid-operated directional spool valve - pilot capacity

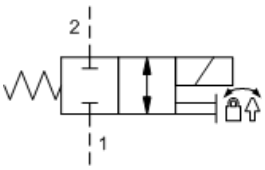
Capacity:
.25 gpm (1 L/min.)

Model:
DAAL

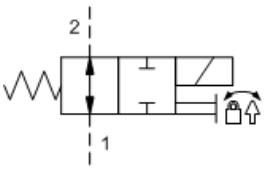
Product Description

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.

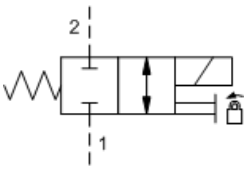
This cartridge can be installed directly into a cavity in the end of many of Sun's pilot operated and ventable valves to provide integrated pilot control.



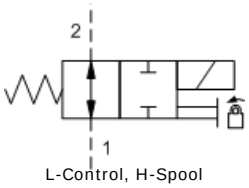
D-Control, C-Spool



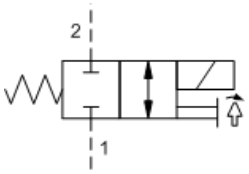
D-Control, H-Spool



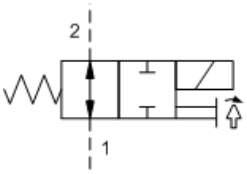
L-Control, C-Spool



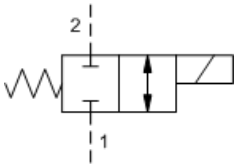
L-Control, H-Spool



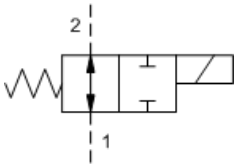
T-Control, C-Spool



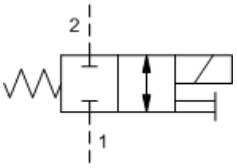
T-Control, H-Spool



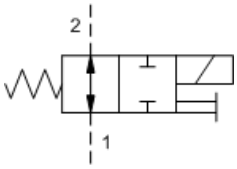
X-Control, C-Spool



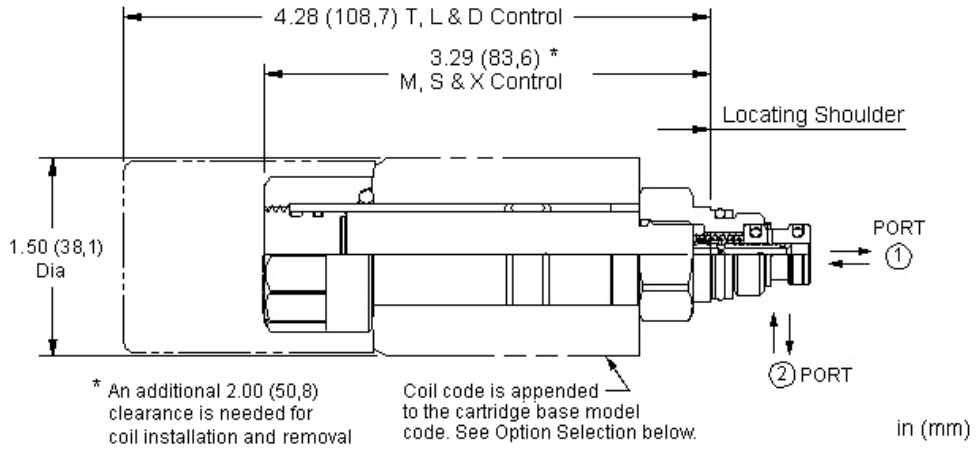
X-Control, H-Spool



M-Control, C-Spool



M-Control, H-Spool

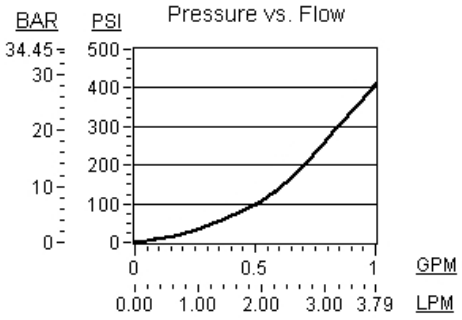


Technical Features

- The DAAL integrates the coil, connector, and manual operator options that are currently available on the Series 1 valve with the Series P pilot solenoid valve. 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.
- 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.
- This cartridge has several manual override choices, including no manual override. See Option Selection below.
- 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.

Technical Data

	U.S. Units	Metric Units
Cavity	T-8A	
Capacity	.25 gpm	1 L/min.
Manual Override Force Requirement	5 lbs/1000 psi @ Port 1	3 kgs/100 bar @ Port 1
Manual Override Stroke	.10 in.	2,5 mm
Maximum Operating Pressure	5000 psi	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	10 drops/min.@5000 psi	0,7 cc/min.@350 bar
Response Time - Typical	50 ms	
Series (from Cavity)	Series P	
Switching Frequency	15000 cycles/hr	
Solenoid Tube Diameter	.75 in.	19 mm
Valve Hex Size	7/8 in.	22,2 mm
Valve Installation Torque	20 - 25 lbf ft	27 - 33 Nm
Model Weight (with coil)	1.00 lb	0,45 kg
Seal Kits - Cartridge	Buna: 990-008-007	
Seal Kits - Cartridge	Viton: 990-008-006	
Seal Kits - Coil	Viton: 990-770-006	
Model Weight	0.55 lb.	0.25 kg.



DAAL-XCN-***

Control

Preferred Options

X No Manual Override

Standard Options

D Twist/Lock (Dual) Manual Override

L Twist/Lock (Detent) Manual Override

M Manual Override

T Twist Manual Override

Spool Configuration

Preferred Options

C Normally Closed

H Normally Open

Seal Material

Preferred Options

N Buna-N

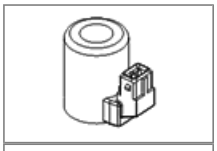
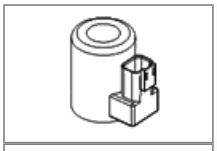
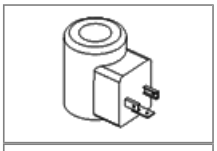
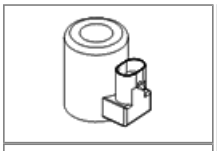
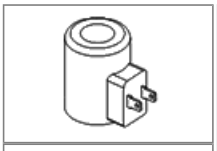
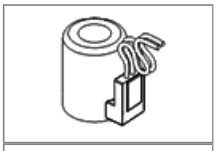
Standard Options

V Viton

Coil

*** See Coil Options Below

Standard Coil Options

					
AMP Junior Timer	Deutsch DT04-2P	DIN 43650 4 pin (Hirschman)	Metri-Pack	SAE J858A	Twin Lead

*** no coil	524 SAE J858A 24 VDC	812 Metri-Pack 12 VDC
211 DIN 43650 4 pin (Hirschman) 115 VAC	528 SAE J858A 28 VDC	814 Metri-Pack 14 VDC
212 DIN 43650 4 pin (Hirschman) 12 VDC	536 SAE J858A 36 VDC	824 Metri-Pack 24 VDC
214 DIN 43650 4 pin (Hirschman) 14 VDC	612 AMP Junior Timer 12 VDC	828 Metri-Pack 28 VDC
223 DIN 43650 4 pin (Hirschman) 230 VAC	614 AMP Junior Timer 14 VDC	836 Metri-Pack 36 VDC
224 DIN 43650 4 pin (Hirschman) 24 VDC	624 AMP Junior Timer 24 VDC	848 Metri-Pack 48 VDC
228 DIN 43650 4 pin (Hirschman) 28 VDC	628 AMP Junior Timer 28 VDC	912 Deutsch DT04-2P 12 VDC
236 DIN 43650 4 pin (Hirschman) 36 VDC	636 AMP Junior Timer 36 VDC	914 Deutsch DT04-2P 14 VDC
248 DIN 43650 4 pin (Hirschman) 48 VDC	712 Twin Lead 12 VDC	924 Deutsch DT04-2P 24 VDC
297 DIN 43650 4 pin (Hirschman) 24 VAC	724 Twin Lead 24 VDC	928 Deutsch DT04-2P 28 VDC
298 DIN 43650 4 pin (Hirschman) 220 VDC	728 Twin Lead 28 VDC	936 Deutsch DT04-2P 36 VDC
299 DIN 43650 4 pin (Hirschman) 127 VDC	736 Twin Lead 36 VDC	948 Deutsch DT04-2P 48 VDC
514 SAE J858A 14 VDC		

Embedded Coil Options

2E12V	DIN 43650 4 pin (Hirschman) programmable via IR link coil/power saver 12 VDC 0-10V	4E12V	Deutsch DT04-6P programmable via IR link coil/power saver 12 VDC 0-10V
2E24V	DIN 43650 4 pin (Hirschman) programmable via IR link coil/power saver 24 VDC 0-10V	4E24V	Deutsch DT04-6P programmable via IR link coil/power saver 24 VDC 0-10V

Additional Options

Additional Coils

512	SAE J858A 12 VDC	71219	Twin Lead to Delphi Weather-Pack Connector, 9 inch lead length, 12 VDC	72419	Twin Lead to Delphi Weather-Pack Connector, 9 inch lead length 24 VDC
548	SAE J858A 48 VDC	714	Twin Lead 14 VDC	748	Twin Lead 48 VDC
648	AMP Junior Timer 48 VDC				