Electro-proportional relief valve - pilot capacity, high pressure setting with no command

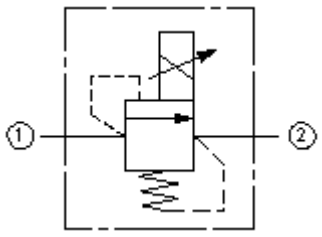
Capacity:
.25 gpm (1 L/min.)

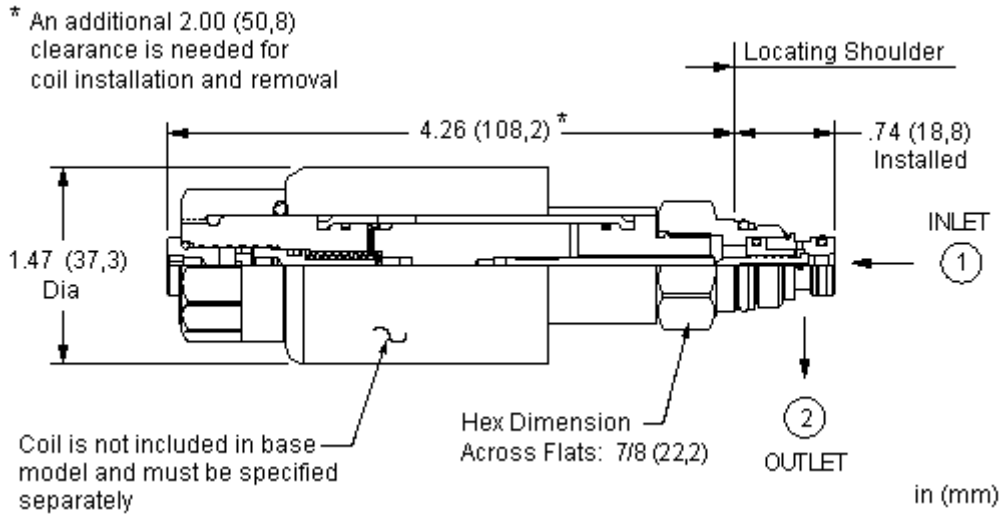
Functional Group:
Products : Cartridges : Electro-Proportional : Relief : 2-Port, Relief - Inverse Function

Model:
RBAN

Product Description

This 2-port, pilot-stage, direct-acting relief cartridge is an electro-proportionally controlled, normally-closed pressure regulating valve. The valve is spring biased closed to its highest setting (customer specified). Increasing current to the coil will proportionally decrease the pressure setting. When the pressure at port 1 (inlet) is sufficient to overcome the spring force minus the solenoid force, as determined by the command signal, the poppet lifts and allows flow from port 1 to port 2 (outlet). This pilot control cartridge utilizes the T-8A cavity so it can be used in conjunction with Sun's main stage, pressure control elements.





Technical Features

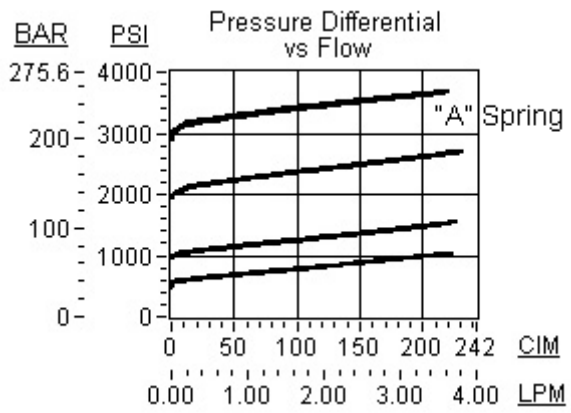
- Varying the command to the proportional solenoid provides a step-less control of pressure.
- Customer must specify a maximum relief setting, which the valve defaults to with no command, within the selected spring range.
- Note: The main stage valve should first be installed to the correct torque value followed by the T-8A pilot control section into the main stage valve to its required torque value.
- Low leakage levels in the closed position. (Reseat occurs at 85% of cracking pressure.)
- For optimum performance, an amplifier with current sensing and adjustable dither should be used. Dither should be adjustable between 100 - 250 Hz.
- This electro-proportional cartridge utilizes the Sun T-8A, 2-port cavity making it the ideal choice to use in conjunction with Sun's main stage cartridges. Separate pilot lines are eliminated and only one cavity needs to be machined to accommodate both the control and primary function. Note: All 2-port pilot stage control cartridges utilize the same cavity and are physically interchangeable. Functionality is the only consideration.
- High pilot capacity allows for operation of larger size main stage elements.
- Damped construction provides stable operation over a wide range of operating conditions.
- Coils are interchangeable with Sun's other full flow, solenoid operated valves and can be mounted on the tube in either direction.
- Incorporates the Sun floating style construction to eliminate the effects of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

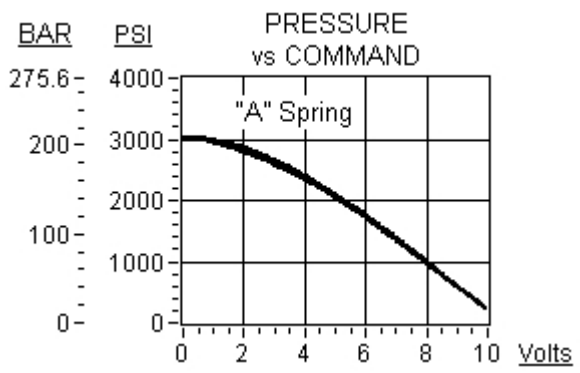
Technical Data

	U.S. Units	Metric Units
Cavity	T-8A	
Capacity	.25 gpm	1 L/min.
Hysteresis (with dither)	<4%	<4%
Hysteresis with DC input	<8%	<8%
Linearity (with dither)	<2%	<2%
Repeatibility (with dither)	<2%	<2%
Maximum Operating Pressure	4500 psi	315 bar
Maximum Valve Leakage at Reseat	1.5 in/min.	25 cc/min.
Solenoid Tube Diameter	.75 in.	19 mm
Reseat	>85% of Set Pressure	>85% of Set Pressure
Valve Hex Size	7/8 in.	22,2 mm
Valve Installation Torque	25 - 30 lbf ft	35 - 40 Nm
Model Weight (with coil)	1.00 lb	0,45 kg
Seal Kits	Buna: 990-208-007	
Seal Kits	Viton: 990-208-006	

Related Information

Terms and Definitions





Option Selection

RBAN-X A N-***

Preferred Options

Control	*Adjustment Range*	*Material/Seal Material*
Standard Options		
X* No Manual Override	A 1500 - 3000 psi (105 - 210 bar)	N Buna-N
	B 800 - 1500 psi (55 - 105 bar)	V Viton
	D 300 - 800 psi (20 - 55 bar)	
	W 3000 - 4500 psi (210 - 315 bar)	

Coil Options

*** {No coil}	612 12 VDC AMP Junior Timer	824 24 VDC Metri-Pack
212 12 VDC ISO/DIN	624 24 VDC AMP Junior Timer	912 12 VDC Deutsch
224 24 VDC ISO/DIN	712 12 VDC Twin Lead	924 24 VDC Deutsch
512 12 VDC SAE J858	724 24 VDC Twin Lead	
524 24 VDC SAE J858	812 12 VDC Metri-Pack	

Additional Coil Options

The following options are not widely used and may be application specific. Please contact your Sun distributor for application information.

72419 24 VDC Weather-Pack

*Special Setting required, specify at time of order

Related Information

The T-8A Cavity Concept