



This 2-port, pilot-operated 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 analog input signal, the poppet lifts and allows flow from port 1 to port 2 (outlet).

PROPORTIONAL PERFORMANCE DATA

Hysteresis (with dither)	A-Range: 9%, W-Range: 10%
Linearity (with dither)	A-Range: 3%, W-Range 5%
Repeatability (with dither)	3%
Recommended dither frequency	110 Hz
Deadband, nominal (as a percentage of input)	35%

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

Cavity	T-13A
Series	1
Capacity	25 gpm
Maximum Operating Pressure	5000 psi
Factory Pressure Settings Established at	4 gpm
Maximum Valve Leakage at 110 SUS (24 cSt)	2 in ³ /min.@1000 psi
Valve Hex Size	7/8 in.
Valve Installation Torque	30 - 35 lbf ft
Adjustment Screw Internal Hex Size	1/8 in.
Locknut Hex Size	7/16 in.
Locknut Torque	45 - 55 lbf in.
Model Weight	.55 lb
Seal and nut kit - Coil	Viton: 990-740-006
Seal kit - Cartridge	Buna: 990-010-007
Seal kit - Cartridge	Viton: 990-010-006
U.S. Patent #	10,775,812

- 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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OPTION SELECTION EXAMPLE: RPEILN

CONTROL

(L) SEAL MATERIAL

(N) COIL

L Standard Screw Adjustment

N Buna-N

No coil

C Concealed Manual Override

V Viton

TECHNICAL FEATURES

- The setting represents the maximum relief pressure which the valve will default to with no command. As the command increases, the relief setting will decrease. See performance curves for selected pressure range.
- Varying the analog input signal to the proportional solenoid provides a step-less control of pressure.
- Damped construction provides stable operation over a wide range of operating conditions.
- For optimum performance, an amplifier with current sensing and adjustable dither should be used. Dither should be adjustable between 100 - 250 Hz.
- This cartridge utilizes 740 Series low-power and high-power coils, and 747 Series hazardous location coils.
- All configurations of this valve include zinc-nickel plating as standard for 1000-hour salt fog protection.
- Coil connector options offer ratings up to IP69K. See individual coil product pages for details.
- This valve is fully compatible with the XMD Expandable Mobile Drivers from Sun.
- The preferred mounting configuration is horizontal or vertically with the coil down. The valve can be mounted coil up if it is installed below reservoir oil level to prevent air accumulation in the solenoid tube. Do not actuate the valve manually or electrically when the valve is not installed.
- Coils can be mounted on the tube in either direction.
- 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



