



Pilot-operated, anti shock relief cartridges limit maximum system pressure and also limit the rate of pressure rise. The valve opens and then ramps closed at a constant speed, independent of settings and flows. The adjust screw determines the maximum (relief) setting and the minimum (threshold) setting.

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

Cavity	T-16A
Series	3
Capacity	100 gpm
Maximum Operating Pressure	5000 psi
Control Pilot Flow	10 - 25 in <sup>3</sup> /min.
Factory Pressure Settings Established at	4 gpm
Pressure Ramp Up Time	300 - 500 ms
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	4.5
Valve Hex Size	1 1/4 in.
Valve Installation Torque	150 - 160 lbf ft
Adjustment Screw Internal Hex Size	5/32 in.
Locknut Hex Size	9/16 in.
Locknut Torque	80 - 90 lbf in.
Model Weight	1.60 lb.
Seal kit - Cartridge	Buna: 990-316-007
Seal kit - Cartridge	Viton: 990-316-006
U.S. Patent #	6,039,070

**NOTES:**

- Patents: US#6,039,070; Germany EP 1 001 197; Japan #3,119,230
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## OPTION SELECTION EXAMPLE: RPITLAN

CONTROL	(L)	ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)	MATERIAL/COATING
<b>L</b> Standard Screw Adjustment		<b>A</b> 2000 - 3000 psi (140 - 210 bar), 2000 psi (140 bar) Standard Setting		<b>N</b> Buna-N		Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set		<b>C</b> 4500 - 6000 psi (315 - 420 bar), 4500 psi (315 bar) Standard Setting		<b>V</b> Viton		<b>IAP</b> Stainless Steel, Passivated
		<b>W</b> 3000 - 4500 psi (210 - 315 bar), 3000 psi (210 bar) Standard Setting				

## TECHNICAL FEATURES

- All 2-port relief cartridges (except pilot reliefs) are physically and functionally interchangeable (same flow path, same cavity for a given frame size).
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.
- Not suitable for use in load holding applications.
- When pressure at the inlet (port 1) exceeds the threshold setting, the valve opens to tank (port 2). The pilot section moves forward at a steady rate, increasing the setting by compressing the pilot spring. Maximum setting is achieved when the pilot section reaches a mechanical stop.
- Valve provides protection for pumps and motors from pressure transients due to sudden load changes, especially variable displacement pumps, since the displacement mechanism is sometimes too slow to catch these pressure transients.
- Valve provides protection for hydrostatic drives by reducing the jerk caused by sudden reversals. The valve is suitable for cross-port applications.
- When used with a switching device, the valve can provide the ramp characteristic typically provided by proportional valves.
- Small power units can be started against an anti shock relief to provide longer pump life.
- Back pressure on the tank port (port 2) is directly additive to the valve setting at a 1:1 ratio.
- 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

