



This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is a balanced poppet design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the poppet element starts to open to tank (port 2), throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between port 1 and port 2.

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

Cavity	T-3A
Series	2
Capacity	50 gpm
Maximum Operating Pressure	5000 psi
Control Pilot Flow	10 - 15 in <sup>3</sup> /min.
Main stage leakage at reseal	10 drops/min.
Pilot Control Cavity	T-8A
Pilot Control Valve Hex Size	7/8 in.
Pilot Control Valve Installation Torque	20 - 25 lbf ft
Response Time - Typical	2 ms
Valve Hex Size	1 1/8 in.
Valve Installation Torque	45 - 50 lbf ft
Model Weight	.50 lb
Seal kit - Cartridge	Buna: 990-303-007
Seal kit - Cartridge	EPDM: 990-303-014
Seal kit - Cartridge	Polyurethane: 990-303-002
Seal kit - Cartridge	Viton: 990-303-006

**NOTES:** • Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

## OPTION SELECTION EXAMPLE: RPGS8BWN

ADJUSTMENT RANGE	(B)	SEAL MATERIAL	(N)
<b>B</b> 50 - 1500 psi (3,5 - 105 bar)		<b>N</b> Buna-N	
<b>W</b> 100 - 5000 psi (7 - 350 bar)		<b>E</b> EPDM	
		<b>V</b> Viton	

### TECHNICAL FEATURES

- Because the modulating occurs inside the cartridge, these valves are immune to most of the problems associated with cavitation, namely noise and manifold erosion.
- 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.
- 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.
- Valve is relatively insensitive to varying oil temperatures and oil borne contamination.
- Main stage orifice is protected by a 150-micron stainless steel screen.
- Back pressure on the tank port (port 2) is directly additive to the valve setting at a 1:1 ratio.
- NOTE: With the -8 control option, the main stage valve should first be installed to the correct torque value. The T-8A pilot control valve should then be installed into the main stage valve to its required torque value.
- The -8 control option allows the pilot control valve to be incorporated directly into the end of the relief cartridge via the T-8A cavity. These pilot control cartridges are sold separately and include electro-proportional, solenoid, air pilot, and hydraulic pilot operation. See Pilot Control Cartridges.
- 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

