



This valve is a 3-way, normally open modulating element that incorporates an integral pilot control cavity. The pilot control cavity will accept any T-8A pressure control cartridge. The valve reduces a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1, with a full flow relief function from port 1 to tank (port 3). The pilot cartridge's setting determines the difference in pressure between reduced pressure (port 1) and the tank (port 3).

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

Cavity	T-11A
Series	1
Capacity	10 gpm
Maximum Operating Pressure	5000 psi
Control Pilot Flow	7 - 10 in <sup>3</sup> /min.
Pilot Control Cavity	T-8A
Pilot Control Valve Hex Size	7/8 in.
Pilot Control Valve Installation Torque	20 - 25 lbf ft
Valve Hex Size	7/8 in.
Valve Installation Torque	30 - 35 lbf ft
Model Weight	0.21 lb.
Seal kit - Cartridge	Buna: 990-011-007
Seal kit - Cartridge	EPDM: 990-011-014
Seal kit - Cartridge	Polyurethane: 990-011-002
Seal kit - Cartridge	Viton: 990-011-006

**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: PPDB8WN

**MINIMUM CONTROL PRESSURE**

(W)

**SEAL MATERIAL**

(N)

<b>W</b>	100 psi (7 bar)
<b>D</b>	25 psi (1,7 bar)

<b>N</b>	Buna-N
<b>V</b>	Viton

### TECHNICAL FEATURES

- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 3000 psi (210 bar).
- Maximum inlet pressure is determined by the bias spring. The D spring is tested with 2000 psi (140 bar) maximum differential pressure and the W spring is tested with 5000 psi (350 bar) maximum inlet pressure.
- 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.
- 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 three-port pressure reducing and reducing/relieving cartridges are physically interchangeable (i.e. same flow path, same cavity for a given frame size). When considering mounting configurations, it is sometimes recommended that a full capacity return line (port 3) be used with reducing/relieving cartridges.
- Full reverse flow from reduced pressure (port 1) to inlet (port 2) may cause the main spool to close. If reverse free flow is required in the circuit, consider adding a separate check valve to the circuit.
- Pilot operated valves exhibit very low dead-band transition between reducing and relieving modes.
- Pilot operated valves exhibit exceptionally flat pressure/flow characteristics, are very stable and have low hysteresis.
- 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

