



This valve is a 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. The pilot cartridge's setting determines the difference in pressure between reduced pressure (port 1) and the drain (port 3).

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

Cavity	T-19A
Series	4
Capacity	80 gpm
Maximum Operating Pressure	5000 psi
Control Pilot Flow	15 - 20 in ³ /min.
Factory Pressure Settings Established at	blocked control port (dead headed)
Pilot Control Cavity	T-8A
Valve Hex Size	1 5/8 in.
Valve Installation Torque	350 - 375 lbf ft
Model Weight	2.31 lb.
Seal kit - Cartridge	Buna: 990-019-007
Seal kit - Cartridge	Polyurethane: 990-019-002
Seal kit - Cartridge	Viton: 990-019-006

OPTION SELECTION EXAMPLE: PBJF8WN

MINIMUM CONTROL PRESSURE	(W)	SEAL MATERIAL	(N)
W 100 psi (7 bar)		N Buna-N	
D 25 psi (1,7 bar)		V Viton	

TECHNICAL FEATURES

- These valves have the main stage orifice drilled into the piston rather than a staked-in orifice. This allows the valve to survive physically demanding applications.
- 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.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 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.
- 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.