



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). This valve is open in the transition from reducing to relieving which provides good pressure control and dynamic response at the expense of higher pilot flow in the deadheaded condition.

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	25 - 30 in ³ /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: PPD8WN

MINIMUM CONTROL PRESSURE

(W)

SEAL MATERIAL

(N)

W 150 psi (10,5 bar)

N Buna-N

D 100 psi (7 bar)

E EPDM

V Viton

TECHNICAL FEATURES

- This valve has been optimized to work with the RBAP X**, RBAP L**, and RBAN electro-proportional pilot reliefs.
- The transition from reducing to relieving is slightly open. The result is very good pressure control with oil consumption of about 0.1 gpm (0,4 L/min.). The relatively high pilot control flow is only a factor in a dead-headed condition.
- 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

