



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-19A |
| Series | 4 |
| Capacity | 80 gpm |
| Maximum Operating Pressure | 5000 psi |
| Control Pilot Flow | 15 - 20 in ³ /min. |
| Pilot Control Cavity | T-8A |
| Valve Hex Size | 1 5/8 in. |
| Valve Installation Torque | 350 - 375 lbf ft |
| Model Weight | 2.27 lb. |
| Seal kit - Cartridge | Buna: 990-019-007 |
| Seal kit - Cartridge | Polyurethane: 990-019-002 |
| Seal kit - Cartridge | Viton: 990-019-006 |

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: PPJB8WN

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

- Maximum pressure at port 3 should be limited to 3000 psi (210 bar).
- 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.
- 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.
- 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.
- 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

