



Pilot operated, pressure reducing/relieving main stage with integral T-8A control cavity and drain to port 4

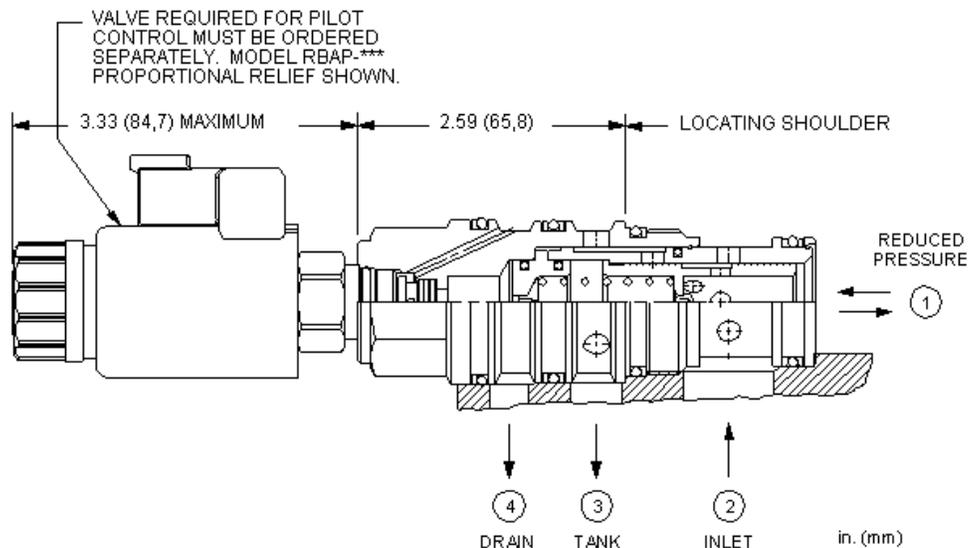
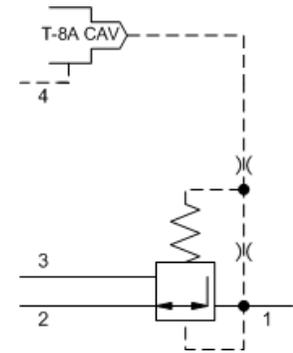
Capacity:
40 gpm (160
L/min.)

Model:
PVHL8

Product Description

This valve is a 3-way, normally open modulating element, externally drained, 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 drain (port 4).

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.



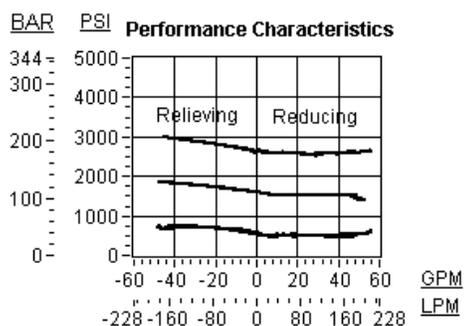
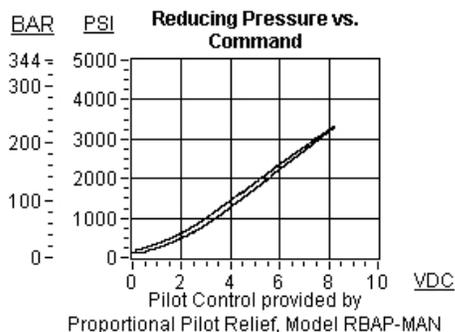
Technical Features

- Maximum pressure at port 3 should be limited to 3000 psi (210 bar).
- 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.
- 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.
- Pressure on the drain (port 4) 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.

- 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.

Technical Data

	U.S. Units	Metric Units
Cavity	T-23A	
Capacity	40 gpm	160 L/min.
Control Pilot Flow	25 - 30 in ³ /min.	0,40 - 0,50 L/min.
Maximum Operating Pressure	5000 psi	350 bar
Pilot Control Cavity	T-8A	
Pilot Control Valve Hex Size	7/8 in.	22,2 mm
Pilot Control Valve Installation Torque	20 - 25 lbf ft	27 - 33 Nm
Series (from Cavity)	Series 3	
Valve Hex Size	1 1/4 in.	31,8 mm
Valve Installation Torque	150 - 160 lbf ft	200 - 215 Nm
Seal Kits - Cartridge	Buna: 990-023-007	
Seal Kits - Cartridge	Viton: 990-023-006	
Model Weight	1.32 lb.	0.60 kg.



PVHL-8WN

Minimum Control Pressure	Seal Material
Standard Options	Standard Options
D 100 psi (7 bar)	N Buna-N
W 150 psi (10,5 bar)	V Viton