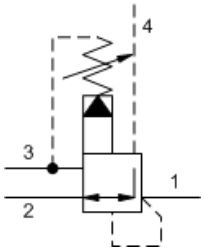
Ventable, pilot operated, pressure reducing/relieving valve

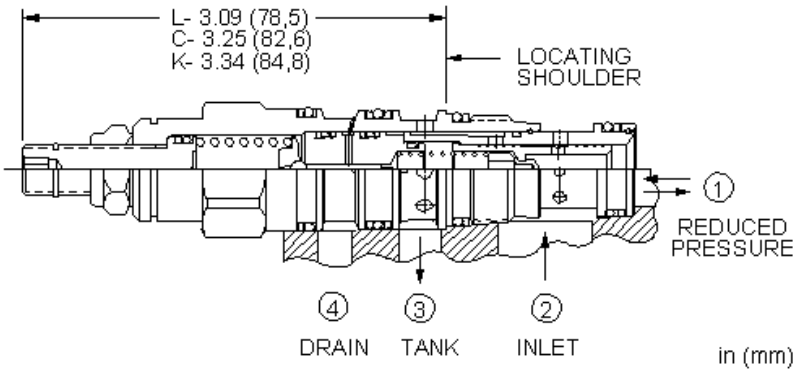
Capacity:
10 gpm (40 L/min.)

Model:
PVDB

Product Description

Ventable, pilot-operated pressure reducing/relieving valves reduce a high primary pressure at the inlet to a constant reduced pressure at port 1, with a full-flow relief function from port 1 to tank (port 3). The vent port (port 4) can be used as a means for remote control by pilot or 2-way valves.





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).
- 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.
- Recommended maximum inlet pressure is determined by the adjustment range. Ranges D, E, N, and Q are tested with a 2000 psi (140 bar) maximum differential between inlet and reduced pressure. Ranges A, B, and H are tested with a 3000 psi (210 bar) maximum differential between inlet and reduced pressure. Ranges C and W are tested with 5000 psi (350 bar) of inlet pressure.
- Pilot operated valves exhibit exceptionally flat pressure/flow characteristics, are very stable and have low hysteresis.
- By controlling the pressure at the vent (port 4), the effective setting of the valve can be controlled below the nominal valve setting.
- 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.

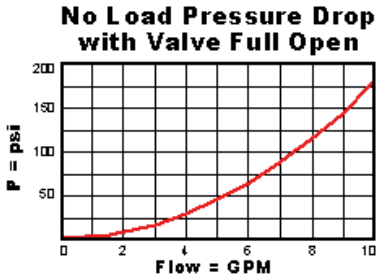
Special Notes

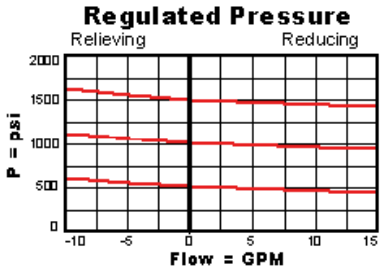
- Maximum pressure differentials for spring ranges: A and B are 3000 psi (210 bar) D and E are 2000 psi (140 bar) W is 5000 psi (350 bar) inlet pressure

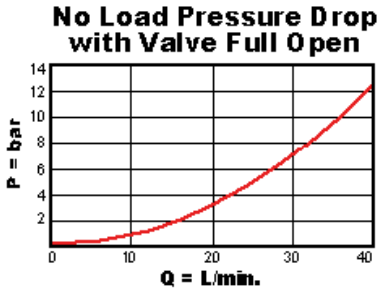
Technical Data

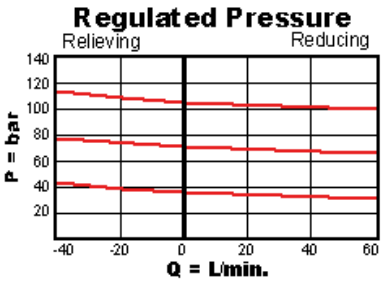
	U.S. Units	Metric Units
Cavity	T-21A	
Capacity	10 gpm	40 L/min.
Control Pilot Flow	7 - 10 in³/min.	0,11 - 0,16 L/min.
Factory Pressure Settings Established at	blocked control port (dead headed)	

Maximum Operating Pressure	5000 psi	350 bar
Series (from Cavity)	Series 1	
Adjustment - Number of Clockwise Turns to Increase Setting	5	
Valve Hex Size	7/8 in.	22,2 mm
Valve Installation Torque	30 - 35 lbf ft	40 - 50 Nm
Adjustment Screw Internal Hex Size	5/32 in.	4 mm
Adjustment Locknut/Cap Hex Size	9/16 in.	15 mm
Adjustment Nut Torque	80 - 90 lbf in.	9 - 10 Nm
Seal Kits - Cartridge	Buna: 990-021-007	
Seal Kits - Cartridge	Viton: 990-021-006	
Model Weight	0.41 lb.	0.19 kg.









PVDB-LAN

Control	Adjustment Range	Seal Material
Standard Options	Standard Options	Standard Options
C* Tamper Resistant - Factory Set	A 100 - 3000 psi (7 - 210 bar), 200 psi (14 bar) Standard Setting	N Buna-N
K Handknob	B 50 - 1500 psi (3,5 - 105 bar), 200 psi (14 bar) Standard Setting	V Viton
L Standard Screw Adjustment	D 25 - 800 psi (1,7 - 55 bar), 200 psi (14 bar) Standard Setting	
	E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting	
	W 150 - 4500 psi (10,5 - 315 bar), 200 psi (14 bar) Standard Setting	

Additional Options

Control	Adjustment Range	Seal Material
	H 30 - 3000 psi (2 - 210 bar), 200 psi (14 bar) Standard Setting	
	J 25 - 1500 psi (1,7 - 105 bar), 200 psi (14	

bar) Standard Setting

N 60 - 800 psi (4 - 55 bar), 200 psi (14 bar) Standard Setting

Q 60 - 400 psi (4 - 28 bar), 200 psi (14 bar) Standard Setting

* Special Setting required, specify at time of order
Customer specified setting stamped on hex.