

Pilot operated, pressure reducing valve

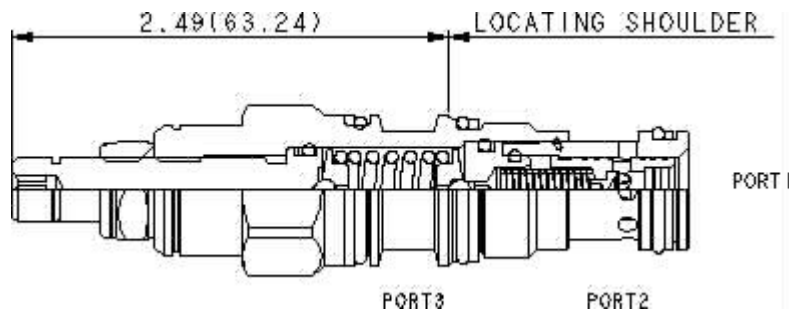
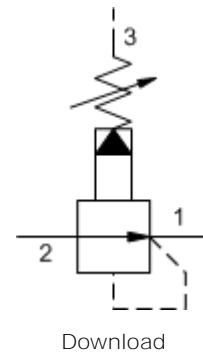
Capacity:
10 gpm (40 L/min.)

Functional Group:
Products : Cartridges : Reducing : 3 Port : Pilot Operated Reducer

Model:
PBDB-LWN

Product Description

Pilot-operated, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1, allowing circuits with multiple pressure requirements to be operated using a single pump.



Technical Features

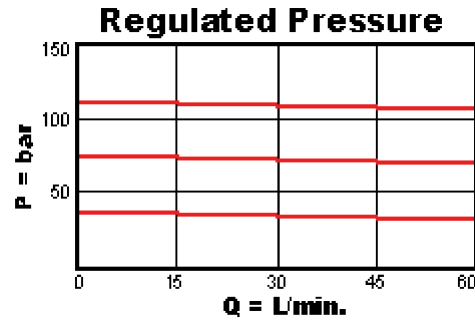
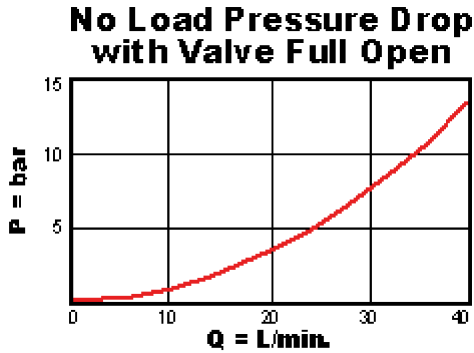
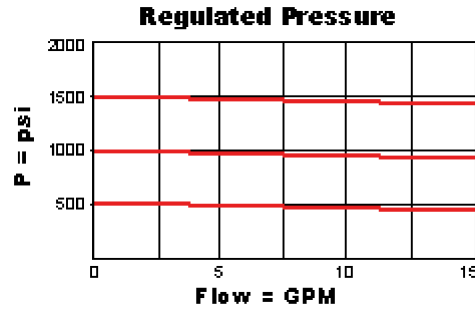
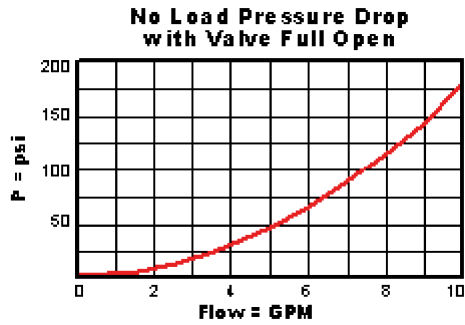
- Full reverse flow from reduced pressure (port 1) to inlet (port 2) may cause the main spool to close. If reverse free flow is required in the circuit, consider adding a separate check valve to the circuit.
- Main stage orifice is protected by a 150 micron stainless steel screen.
- Pilot operated valves exhibit exceptionally flat pressure/flow characteristics, are very stable and have low hysteresis.
- Pilot operated reducing, reducing/relieving valves by nature are not fast acting valves. For superior dynamic response, consider direct acting valves.
- Stainless steel cartridge options P or W are intended for use within corrosive environments
- If pilot flow consumption is critical, consider using direct acting reducing/relieving valves.
- 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 (200 bar) maximum differential between inlet and reduced pressure. Ranges C and W are tested with 5000 psi (350 bar) of inlet pressure.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- 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.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding

with all external components manufactured in stainless steel or titanium. Internal working components remain the same as the standard valves.

due to excessive installation torque and/or cavity/cartridge machining variations.

Technical Data

	U.S. Units	Metric Units
Model Weight	0.35 lb.	0.16 kg.
Cavity	T-11A	
Capacity	10 gpm	40 L/min.
Adjustment - Number of Clockwise Turns to Increase Setting	5	
Control Pilot Flow	7 - 10 in ³ /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	
Valve Hex Size	7/8 in.	22,2 mm
Valve Installation Torque	30 - 35 lbf ft	45 - 50 Nm
Adjustment Screw Hex Socket Size	5/32 in.	4 mm
Adjustment Nut Hex Size	9/16 in.	15 mm
Adjustment Nut Torque	108 lbf in.	12 Nm
Seal Kits	Buna: 990-011-007	
Seal Kits	Viton: 990-011-006	



PBDB-LWN

Control

Adjustment Range

External Material/Seal Material

L Standard Screw Adjustment	+0.00	150 - 4500 psi (10,5 - W 315 bar), 200 psi (14 bar) Standard Setting	+0.00	N Buna-N +0.00
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If the material/seal is P, the control must be L or C
If the material/seal is W, the control must be L or C

* Special Setting required, specify at time of order
Customer specified setting stamped on hex \$1.10

Related Models
PBDB8

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