



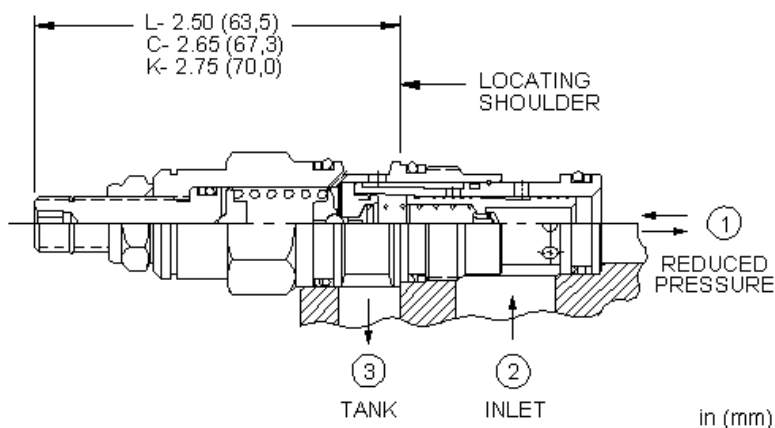
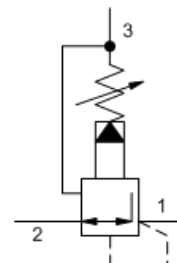
Pilot operated, pressure reducing/relieving valve

Capacity:
10 gpm (40 L/min.)

Model:
PPDB

Product Description

Pilot-operated, pressure reducing/relieving valves reduce 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).



Technical Features

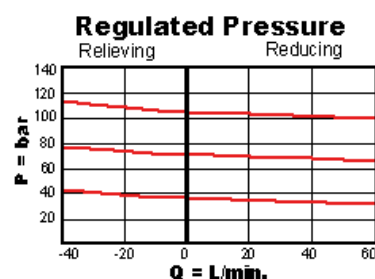
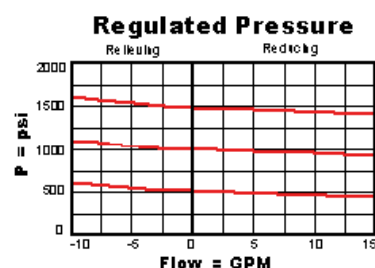
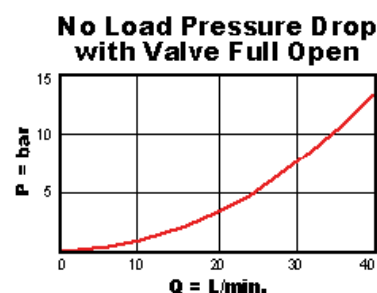
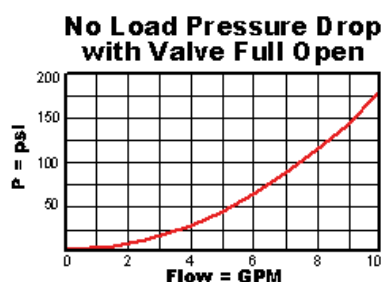
- Full reverse flow from reduced pressure (port 1) to inlet (port 2) may cause the main spool to close. If reverse free flow is required in the circuit, consider adding a separate check valve to the circuit.
- If pilot flow consumption is critical, consider using direct acting reducing/relieving valves.
- 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 (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.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Pilot operated reducing, reducing/relieving valves by nature are not fast acting valves. For superior dynamic response, consider direct acting valves.
- 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 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) N and Q are 2000 psi (140 bar) W is 5000 psi (350 bar) inlet pressure

Technical Data

	U.S. Units	Metric Units
Cavity	T-11A	
Capacity	10 gpm	40 L/min.
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	
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: 990-011-007	
Seal Kits - Cartridge	Viton: 990-011-006	
Model Weight	0.33 lb.	0.15 kg.



PPDB-LAN

Control	Adjustment Range	Seal Material	Material/Coating Modifier
Preferred Options	Preferred Options	Preferred Options	Preferred Options
L Standard Screw Adjustment Standard Options	A 100 - 3000 psi (7 - 210 bar), 200 psi (14 bar) Standard Setting	N Buna-N Standard Options	No modifier (standard material with no special coating) Special Options
C* Tamper Resistant - Factory Set	W 150 - 4500 psi (10,5 - 315 bar), 200 psi (14 bar) Standard Setting	V Viton	/ AP Stainless Steel, Passivated
K Handknob	Standard Options		Control: C Control: L Control: Y
	B 50 - 1500 psi (3,5 - 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		

Our stainless product line is growing! If you are interested in a stainless option for this model which is not shown please contact Sun.

Additional Options

Control	Adjustment Range	Seal Material
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M	Capped Screw Adjustment with Lockwire Holes	C	150 - 6000 psi (10,5 - 420 bar), 200 psi (14 bar) Standard Setting
O	Handknob with Panel Mount	D	25 - 800 psi (1,7 - 55 bar), 200 psi (14 bar) Standard Setting
Q *	Capped and Lockwired	E	25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting
W *	Max. Setting Limiter	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
		K	75 - 1500 psi (5 - 105 bar), 200 psi (14 bar) Standard Setting
		O	15 - 400 psi (1 - 28 bar), 200 psi (14 bar) Standard Setting
		P	40 - 400 psi (2,8 - 28 bar), 200 psi (14 bar) Standard Setting

When the modifier is /AP, the control must be C, L or Y

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