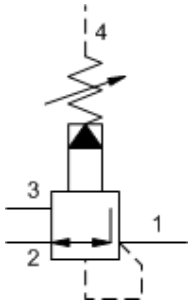
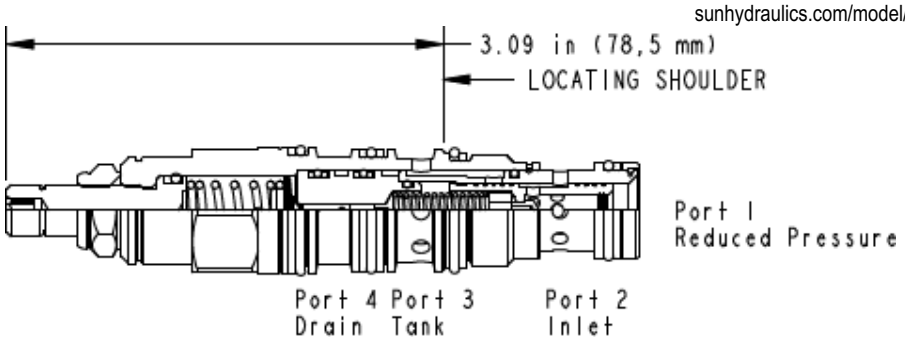
MODEL
PVDA

Pilot-operated, pressure reducing/relieving valve with drain to port 4
SERIES 1 / CAPACITY: 40 L/min. / CAVITY: T-21A

sunhydraulics.com/model/PVDA





CONFIGURATION

L	Control	Standard Screw Adjustment
B	Adjustment Range	50 - 1500 psi (3,5 - 105 bar), 200 psi (14 bar) Standard Setting
N	Seal Material	Buna-N
(none)	Material/Coating	

Externally drained, 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). Draining the pilot section at port 4 makes these valves insensitive to pressure at tank (port 3) and provides a means for remote control by pilot or 2-way valves.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-21A
Series	1
Capacity	40 L/min.
Maximum Operating Pressure	350 bar
Factory Pressure Settings Established at	blocked control port (dead headed)
Control Pilot Flow	0,11 - 0,16 L/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	EPDM: 990021014
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006
Model Weight	0.19 kg.

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

CONFIGURATION OPTIONS

Model Code Example: PVDALBN

CONTROL (L)

- **L** Standard Screw Adjustment
- **C** Tamper Resistant - Factory Set
- **K** Handknob
- **Y** Tri-Grip Handknob

ADJUSTMENT RANGE (B)

- **B** 50 - 1500 psi (3,5 - 105 bar), 200 psi (14 bar) Standard Setting
- **A** 100 - 3000 psi (7 - 210 bar), 200 psi (14 bar) Standard Setting
- **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

SEAL MATERIAL (N)

- **N** Buna-N
- **V** Viton

MATERIAL/COATING

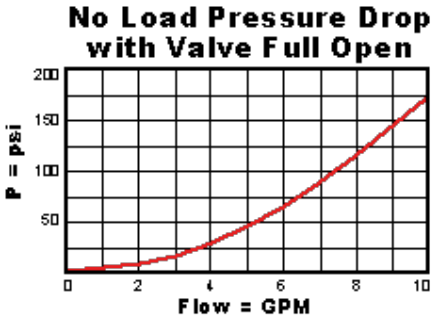
- Standard Material/Coating
- **/AP** Stainless Steel, Passivated
- **/LH** Mild Steel, Zinc-Nickel

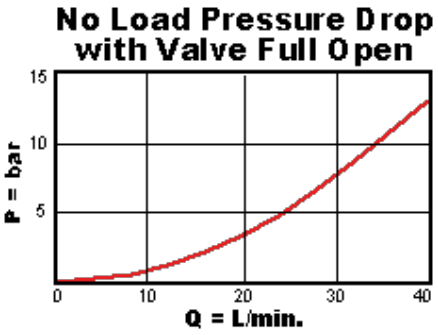
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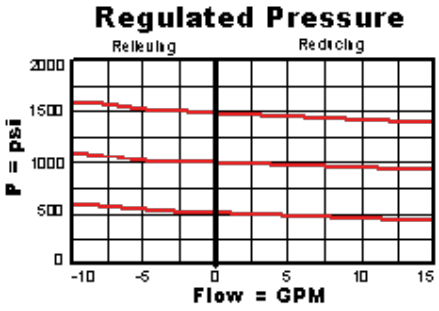
TECHNICAL FEATURES

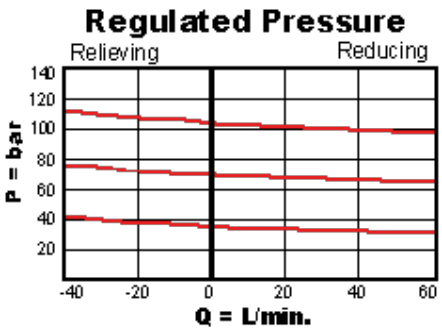
- Maximum pressure at port 3 should be limited to 3000 psi (210 bar).
- Pilot operated valves exhibit very low dead-band transition between reducing and relieving modes.
- Recommended maximum inlet pressure is determined by the adjustment range. Ranges D, E, N, and Q are tested with a 2000 psi (140 bar) 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.
- Pressure at port 4 should not exceed 5000 psi (350 bar).
- Pilot operated valves exhibit exceptionally flat pressure/flow characteristics, are very stable and have low hysteresis.
- 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).
- Pilot operated reducing, reducing/relieving valves by nature are not fast acting valves. For superior dynamic response, consider direct acting valves.
- W and Y controls (where applicable) can be specified with or without a special setting. When no special setting is specified, the valve is adjustable throughout its full range using the W or Y control. When a special setting is specified, this setting represents the maximum setting of the valve.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- 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.
- By controlling the pressure at the drain (port 4), the effective setting of the valve can be increased over 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.

PERFORMANCE CURVES









RELATED MODELS

- PVDA8 Pilot-operated, pressure reducing/relieving main stage with integral T-8A control cavity and drain to port 4

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