



Direct-acting, 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). These valves incorporate a damped construction for stable operation allowing the use of high reduced pressure.

CONFIGURATION

L	Control	Standard Screw Adjustment
A	Adjustment Range	500 - 3000 psi (35 - 210 bar), 700 psi (50 bar) Standard Setting
N	Seal Material	Buna-N
(none)	Material/Coating	Standard Material/Coating

TECHNICAL DATA

Factory Pressure Settings Established at	blocked control port (dead headed)
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	2 in ³ /min.
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	9/16 in.
Locknut Torque	80 - 90 lbf in.
Seal kit - Cartridge	Buna: 990-011-007
Seal kit - Cartridge	Polyurethane: 990-011-002
Seal kit - Cartridge	Viton: 990-011-006

NOTES For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

CONFIGURATION OPTIONS

Model Code Example: PRDBLAN

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
L Standard Screw Adjustment	A 500 - 3000 psi (35 - 210 bar), 700 psi (50 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	W 750 - 4500 psi (50 - 315 bar), 1000 psi (70 bar) Standard Setting	E EPDM	/AP Stainless Steel, Passivated
K Handknob	B 50 - 1500 psi (3,5 - 105 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 S 25 - 200 psi (1,7 - 14 bar), 100 psi (7 bar) Standard Setting	V Viton	/LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- 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.
- 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.
- All spring ranges are tested for correct operation with 5000 psi (350 bar) inlet pressure.
- Suitable for accumulator circuits since the absence of pilot control flow results in reduced secondary circuit leakage.
- Direct acting concept provides highly reliable operation in contaminated systems, especially at dead headed conditions.
- Unlike pilot operated versions, direct acting valves exhibit a transitional step between reducing and relieving modes. This step equals 5% of the high end of the adjustment range, independent of the valve setting. Therefore, these valves may not be suitable for counterbalancing applications.
- Direct operated version offers superior dynamic response compared to equivalent pilot operated models.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Leakage specified in Technical Data is out of port 3 with a supply pressure of 2000 psi (140 bar) and the valve set at mid range. This leakage is directly proportional

to pressure differential and inversely proportional to viscosity expressed in centistokes.

- 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.
- 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

