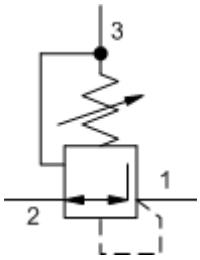

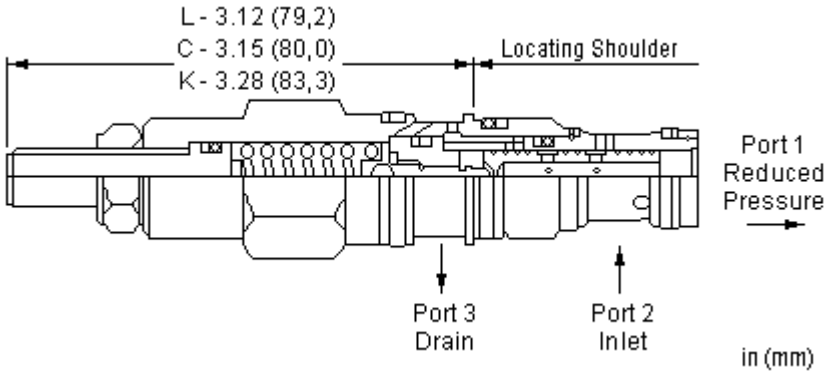

Direct-acting, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. These valves incorporate a damped construction for stable operation allowing the use of high reduced pressure. This valve is open in the transition from reducing to relieving. It provides good pressure control and dynamic response.

TECHNICAL DATA

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

Cavity	T-163A
Series	0
Capacity	5 gpm
Maximum Operating Pressure	5000 psi
Factory Pressure Settings Established at	0.25 gpm
Maximum Valve Leakage at 110 SUS (24 cSt)	20 in^3/min.
Adjustment - No. of CW Turns from Min. to Max. setting	7
Valve Hex Size	3/4 in.
Valve Installation Torque	20 - 25 lbf ft
Adjustment Screw Internal Hex Size	5/32 in.
Locknut Hex Size	1/2 in.
Locknut Torque	80 - 90 lbf in.
Model Weight	.30 lb
Seal kit - Cartridge	Buna: 990-163-007
Seal kit - Cartridge	Viton: 990-163-006

OPTION SELECTION EXAMPLE: PRBCLANV

CONTROL	(L)
L	Standard Screw Adjustment
C	Tamper Resistant - Factory Set

ADJUSTMENT RANGE	(A)
A	500 - 3000 psi (35 - 210 bar), 700 psi (50 bar) Standard Setting
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
W	750 - 4500 psi (50 - 315 bar), 1000 psi (70 bar) Standard Setting

SEAL MATERIAL	(V)
V	Viton
E	EPDM
N	Buna-N

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).
- 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.
- The transition from reducing to relieving is slightly open. The result is very good pressure control with oil consumption of about 0.1 gpm (0,4 L/min.).
- 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.
- Direct acting concept provides highly reliable operation in contaminated systems, especially at dead headed conditions.
- Direct operated version offers superior dynamic response compared to equivalent pilot operated models.
- 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