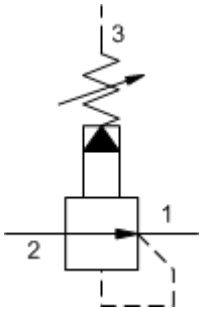

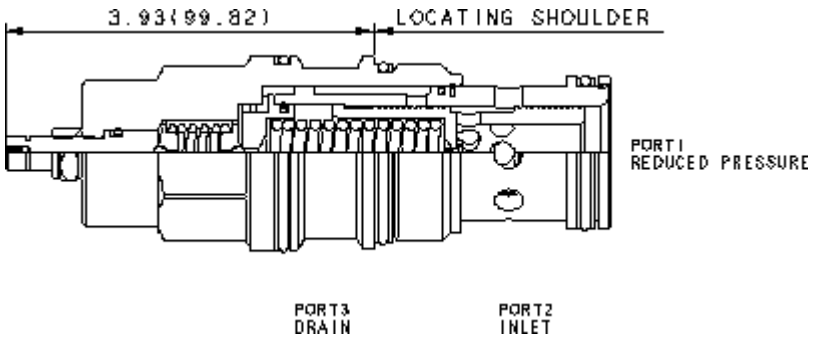

Pilot-operated, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1, allowing circuits with multiple pressure requirements to be operated using a single pump.

TECHNICAL DATA

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

Cavity	T-19A
Series	4
Capacity	80 gpm
Maximum Operating Pressure	5000 psi
Control Pilot Flow	15 - 20 in^3/min.
Factory Pressure Settings Established at	blocked control port (dead headed)
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	1 5/8 in.
Valve Installation Torque	350 - 375 lbf ft
Adjustment Screw Internal Hex Size	5/32 in.
Locknut Hex Size	9/16 in.
Locknut Torque	80 - 90 lbf in.
Model Weight	2.89 lb.
Seal kit - Cartridge	Buna: 990-019-007
Seal kit - Cartridge	EPDM: 990-019-014
Seal kit - Cartridge	Polyurethane: 990-019-002
Seal kit - Cartridge	Viton: 990-019-006

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

OPTION SELECTION EXAMPLE: PBJBLAN

CONTROL	(L)
L	Standard Screw Adjustment
C	Tamper Resistant - Factory Set
K	Handknob
Q	Capped and Lockwired
W	Hex Wrench Adjustment
Y	Tri-Grip Handknob

ADJUSTMENT RANGE	(A)
A	100 - 3000 psi (7 - 210 bar), 200 psi (14 bar) Standard Setting
B	50 - 1500 psi (3,5 - 105 bar), 200 psi (14 bar) Standard Setting
J	25 - 1500 psi (1,7 - 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
W	150 - 4500 psi (10,5 - 315 bar), 200 psi (14 bar) Standard Setting

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

MATERIAL/COATING	
	Standard Material/Coating
/AP	Stainless Steel, Passivated
/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.
- If pilot flow consumption is critical, consider using direct acting reducing/relieving valves.
- Main stage orifice is protected by a 150 micron stainless steel screen.
- 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.
- 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.
- 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