



Three-port normally closed modulating elements with relief provide two functions when combined with an external orifice. The mainstage is a bypass compensator that controls a priority flow into the circuit, determined by the external orifice. Input flow in excess of the priority flow is bypassed to tank (port 2). If the inlet (port 1) pressure rises to the valve setting, the valve operates as a normal relief valve.

CONFIGURATION

L Control	Standard Screw Adjustment
A Adjustment Range	75 - 3000 psi (5 - 210 bar), 1000 psi (70 bar) Standard Setting
N Seal Material	Buna-N

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	4 gpm
Maximum Valve Leakage at 110 SUS (24 cSt)	2 in ³ /min.@1000 psi
Response Time - Typical	10 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	3/4 in.
Valve Installation Torque	20 - 25 lbf ft
Adjustment Screw Internal Hex Size	5/32 in.
Locknut Hex Size	9/16 in.
Locknut Torque	80 - 90 lbf in.
Seal kit - Cartridge	Buna: 990163007
Seal kit - Cartridge	Polyurethane: 990163002
Seal kit - Cartridge	Viton: 990163006
Model Weight	0.25 lb.

CONFIGURATION OPTIONS

Model Code Example: RVBBArray

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N)
L Standard Screw Adjustment	A 75 - 3000 psi (5 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	
C Tamper Resistant - Factory Set	B 75 - 1500 psi (5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	
K Handknob	C 75 - 6000 psi (5 - 420 bar), 1000 psi (70 bar) Standard Setting		
	N 75 - 800 psi (5 - 55 bar), 400 psi (28 bar) Standard Setting		
	Q 75 - 400 psi (5 - 28 bar), 200 psi (14 bar) Standard Setting		
	W 75 - 4500 psi (5 - 315 bar), 1000 psi (70 bar) Standard Setting		

TECHNICAL FEATURES

- Compensating pressure for all ranges is 50 psi (3,5 bar).
- Explanation of the performance curve: The X axis is system pressure. The Y axis shows the pressure differential that the valve creates across the control orifice. The curves represent various bypass flows (pump flow minus control flow). The capacity and performance of this valve is determined by the bypass flow, control flow is not a factor.

PERFORMANCE CURVES

