



Ventable, pilot-operated, balanced piston relief cartridges are normally closed pressure regulating valves. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to regulate the pressure. They provide a vent port (port 3) that connects between the main piston and pilot stage to provide for remote control by other pilot or 2-way valves. These valves are accurate, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

**CONFIGURATION**

<b>L</b>	Control	Standard Screw Adjustment
<b>B</b>	Adjustment Range	50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting
<b>N</b>	Seal Material	Buna-N
<b>(none)</b>	Material/Coating	Standard Material/Coating

**TECHNICAL DATA**

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

Cavity	T-11A
Series	1
Capacity	15 gpm
Factory Pressure Settings Established at	4 gpm
Maximum Operating Pressure	5000 psi
Control Pilot Flow	7 - 10 in <sup>3</sup> /min.
Maximum Valve Leakage at 110 SUS (24 cSt)	2 in <sup>3</sup> /min.@1000 psi
Response Time - Typical	10 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	7/8 in.
Valve Installation Torque	30 - 35 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: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006
Model Weight	0.34 lb.

**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: RVCALBN**

<b>CONTROL</b>	<b>(L) ADJUSTMENT RANGE</b>	<b>(B) SEAL MATERIAL</b>	<b>(N) MATERIAL/COATING</b>
<b>L</b> Standard Screw Adjustment	<b>B</b> 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set	<b>A</b> 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>E</b> EPDM	/AP Stainless Steel, Passivated
<b>K</b> Handknob	<b>W</b> 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting	<b>V</b> Viton	/LH Mild Steel, Zinc-Nickel
<b>O</b> Handknob with Panel Mount	<b>C</b> 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		
	<b>D</b> 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting		
	<b>E</b> 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting		

## TECHNICAL FEATURES

- A remote pilot relief on port 3 (vent) will control the valve below its own setting.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.
- Main stage orifice is protected by a 150-micron stainless steel screen.
- Not suitable for use in load holding applications due to spool leakage.
- Back pressure on the tank port (port 2) is directly additive to the valve setting at a 1:1 ratio.
- 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

