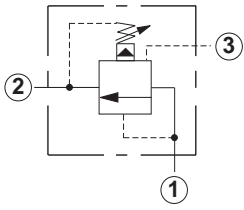


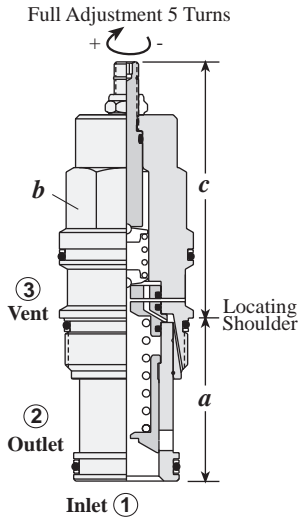
# Relief Valves

## PILOT OPERATED WITH VENT



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions					Installation Torque (lb. ft.)
			a	b	c			
					L	C	K	
7.5 GPM	RVBA – LAN	T - 163A	1.22	3/4"	2.55	2.63	2.77	25/30
15 GPM	RVCA – LAN	T - 11A	1.38	7/8"	2.50	2.56	2.75	30/35
30 GPM	RVEA – LAN	T - 2A	1.38	1 1/8"	2.81	2.88	3.06	45/50
60 GPM	RVGA – LAN	T - 17A	1.81	1 1/4"	3.28	3.31	3.53	150/160
120 GPM	RVIA – LAN	T - 19A	2.50	1 5/8"	3.94	4.09	4.19	350/375

### OPTION ORDERING INFORMATION



## RV \* A - \* \* \*

Nominal Capacity	Control**	Adjustment Range	Seal
<b>B</b> 7.5 GPM*	<b>L</b> Standard Screw	<b>A</b> 100 - 3000 psi	<b>N</b> Buna-N
<b>C</b> 15 GPM	<b>C</b> Tamper Resistant	<b>W</b> 150 - 4500 psi	<b>V</b> Viton
<b>E</b> 30 GPM	<b>K</b> Handknob	<b>B</b> 50 - 1500 psi	
<b>G</b> 60 GPM		<b>C</b> 150 - 6000 psi	
<b>I</b> 120 GPM		<b>N</b> 60 - 800 psi	
		<b>Q</b> 60 - 400 psi	

**Adjustment Range Options:**

A, B, C, and W are standard set at 1000 psi.

N Option is standard set at 400 psi.

Q Option is standard set at 200 psi.

\* Minimum setting 75 psi on all ranges.

**Customer may specify pressure setting.**

\*\* See page 244 for information on Control Options

## TECHNICAL TIPS / PERFORMANCE CURVES

### Relief Valves, Pilot Operated with Vent

#### Applications

Ventable, pilot operated relief valves incorporate an additional port for remote control.

- To provide remote adjustment of the main cartridge through the use of the **RBAC-\*\*\*** pilot cartridge or other suitable device.
- To unload the main relief valve by opening the vent port with a 2-way solenoid valve (**DAAA-\*\*\***). Normal relief operation is activated by blocking the bypass pilot flow.

#### Design Concepts and Features

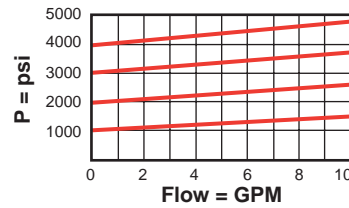
- Incorporates 150 micron stainless steel screen to protect the main stage control orifice.
- Low leakage, 2 to 5 in.<sup>3</sup>/min./1000 psi, dependent on frame size.
- Control pilot flow .05 to .07 GPM, dependent on frame size.
- Low hysteresis, less than  $\pm 1\%$
- Low pressure drop when unloaded.

**Note:** Any pressure at port 2 is additive to the pressure setting of the valve. If absolute system pressure must be regulated at port 1 and variable pressure is present at port 2, consider using the 4 port **RV\*D-\*\*\*** series where an independent drain port is provided.

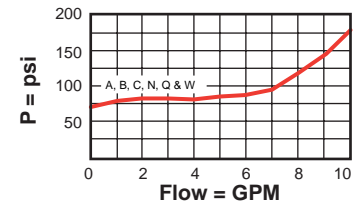
#### Performance Curves

##### Typical Pressure Rise

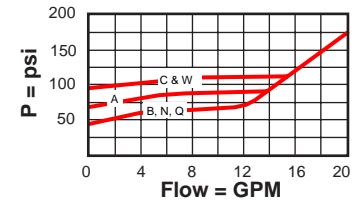
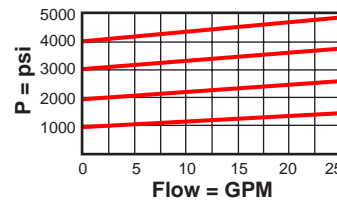
##### RVBA-L\*N



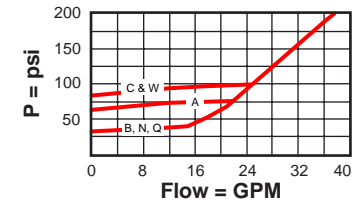
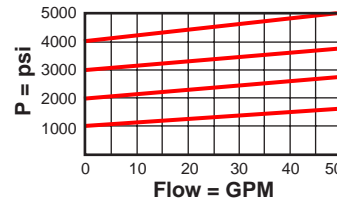
##### Vented Pressure



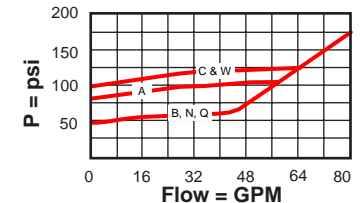
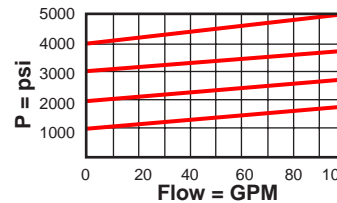
##### RVCA-L\*N



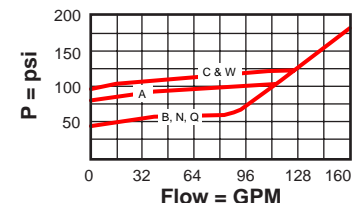
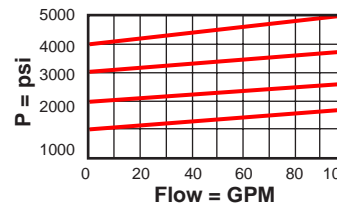
##### RVEA-L\*N



##### RVGA-L\*N



##### RVIA-L\*N



### General Application Requirements

- Operating Temperature Range: Buna-N seals -50° F to 200° F, Viton seals 0° F to 250° F.
- Viscosity Range: 60-3000 SUS.
- Fluid Contamination Level: ISO 4406 18/15 or better; Recommend  $\beta_{10} \geq 75$  to achieve ISO 18/15 or better in most systems.
- Factory Pressure Setting for cartridge is established at a 4 GPM flow rate.