



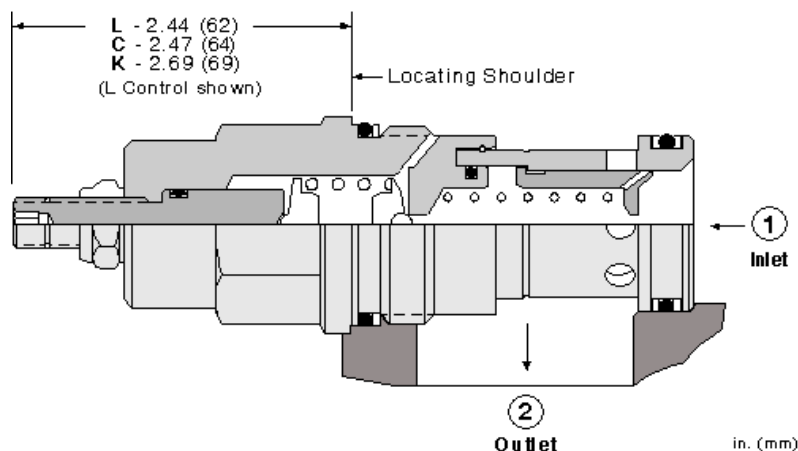
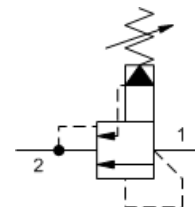
Kick-down, pilot operated, balanced piston relief valve

Capacity:  
100 gpm (380 L/min.)

Model:  
ROI B

Product Description

Kick-down relief cartridges act similar to a circuit breaker in an electrical system. The valves will kick completely open and remain open once the pressure at the inlet (port 1) exceeds the valve setting, creating an unrestricted flow path from port 1 to tank (port 2). The valve remains open as long as the pressure at port 1 exceeds the pressure at port 2. To reset the valve, flow from port 1 to port 2 must cease and pressure at port 2 must be equal to or greater than the pressure at port 1.



Technical Features

- To reset valve, flow through the cartridge must cease.
- Main stage orifice is protected by a 150 micron stainless steel screen.
- Not suitable for use in load holding applications.
- Intended for use on the actuator side of the system as flow through the valve must cease for the valve to reset. If used on the pump side of a system, pump flow must be shut off for the valve to reset.
- Back pressure on the tank port (port 2) is directly additive to the valve setting at a 1:1 ratio.
- All 2-port relief cartridges (except pilot reliefs) are physically and functionally interchangeable (same flow path, same cavity for a given frame size).
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP (see Option Selection below). External parts are made from stainless steel with titanium or brass components, where applicable. Internal parts are made from carbon steel leaded alloy, the same as standard valves. For further details, please see the Materials of Construction page.
- 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.

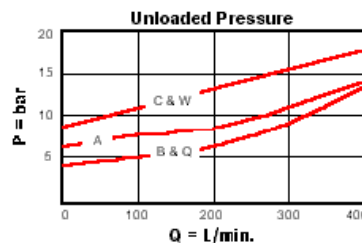
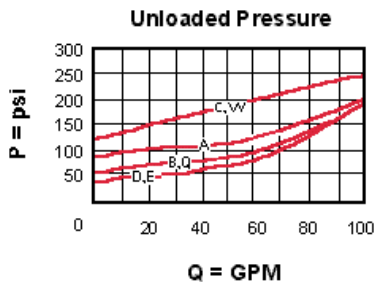
Special Notes

- Do not use in load holding applications.

Technical Data

	U.S. Units	Metric Units
Cavity		T-16A
Capacity	100 gpm	380 L/min.
Factory Pressure Settings Established at	Kick down point	
Maximum Operating Pressure	5000 psi	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	4 in <sup>3</sup> /min. @1000 psi	65 cc/min. @70 bar

Response Time - Typical	25 ms	
Series (from Cavity)	Series 3	
Adjustment - Number of Clockwise Turns to Increase Setting	5	
Valve Hex Size	1 1/4 in.	31,8 mm
Valve Installation Torque	150 - 160 lbf ft	200 - 215 Nm
Adjustment Screw Internal Hex Size	5/32 in.	4 mm
Adjustment Locknut/Cap Hex Size	9/16 in.	15 mm
Adjustment Nut Torque	80 - 90 lbf in.	9 - 10 Nm
Seal Kits - Cartridge	Buna: 990-016-007	
Seal Kits - Cartridge	Viton: 990-016-006	
Model Weight	1.19 lb.	0.54 kg.



### RQI B-LAN

Control	Adjustment Range	Seal Material	Material/Coating Modifier
Standard Options	Standard Options	Standard Options	Preferred Options
C* Tamper Resistant - Factory Set	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N V Viton	No modifier (standard material with no special coating) Special Options
K Handknob	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting		/AP Stainless Steel, Passivated
L Standard Screw Adjustment	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting		Control: C Control: L

*Our stainless product line is growing! If you are interested in a stainless option for this model which is not shown please contact Sun.*

#### Additional Options

Control	Adjustment Range	Seal Material
	M 40 - 800 psi (2,8 - 55 bar), 400 psi (28 bar) Standard Setting Q 60 - 400 psi (4 - 28 bar), 200 psi (14 bar) Standard Setting	

When the modifier is /AP, the control must be C or L

\* Special Setting required, specify at time of order  
Customer specified setting stamped on hex.