

CRB

Description

The Generant Series CRB, Cryogenic Relief Valve with Integral Bleed Valve, is a spring reference over pressure protection device with a built-in bleed valve function for venting system pressure during line maintenance operations. This device is ideally suited for use as a "Blocked Line Safety" in cryogenic systems. The bleed adjustment screw is fully retained to prevent removal and can be opened and closed using a 5/64" allen wrench. The bleed valve's unique porting configuration vents system pressure away from the operator. The CRB offers all the same functions and features as Generant's Series CRV, including the exclusive "Dirt Guard" feature for minimizing valve contamination. The CRB is supplied cleaned and packaged for oxygen service.

The valve can be ordered with set pressures ranging from 10 to 750 Psig (0.7 to 51.7 Bar) and comes factory preset and permanently locked. Relief pressure cannot be altered or adjusted in the field. The CRB is supplied with Fluorosilicone (FS) seals for set pressures 10 – 49 Psig (0.7 – 3.4 Bar) and PCTFE (K) seals for set pressures 50 – 750 Psig (3.5 – 51.7 Bar).

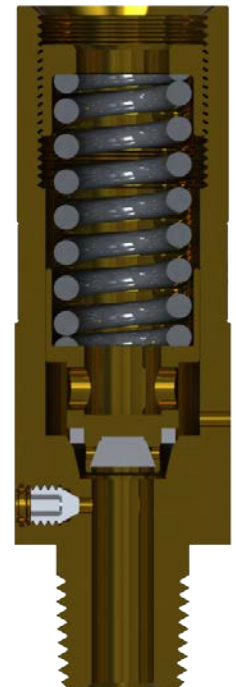
Features

- Integral Bleed Valve for Quick and Easy System Depressurization during Maintenance Operations.
- Fully Retained Bleed Valve Adjustment Screw to Prevent Removal
- Exclusive "Dirt Guard" Poppet incorporates Screen to Extend Valve Life and Ensure Reliability
- High Flow Capacity and Excellent Reseal Performance
- Supplied Factory Preset and Permanently Locked for Tamper Proof Service
- Discharge to Atmosphere or a Wide Variety of Inline Piping Configurations
- Optional Deflector Cap available for Diverting Exhaust Gas
- 100% Factory Tested for Leakage, Crack and Reseal
- Cleaned and Packaged for Oxygen Service



Technical Data

Nominal Set Pressure Range: 10 – 750 Psig (0.7 to 51.7 Bar)
 Factory Set Tolerance*: Set Pressure ≥ 72.5 PSI, ± 3%
 Set Pressure < 72.5 PSI, ± 2.175 PSI
*tolerance specifications per EN ISO 4126-1.
 Zero Leakage to 95% of Set Pressure
 Full Rated Flow @ 110% of Set Pressure
 Unaffected by up to 10% Back Pressure
 Reseat: 90% of set pressure
 85% for PCTFE seals set below 100 Psig (6.9 Bar)
 Temperature Rating: -320° to 350° F (-196° C to 176° C)
based on seal material (see How To Order)
 Lubricant: Krytox®

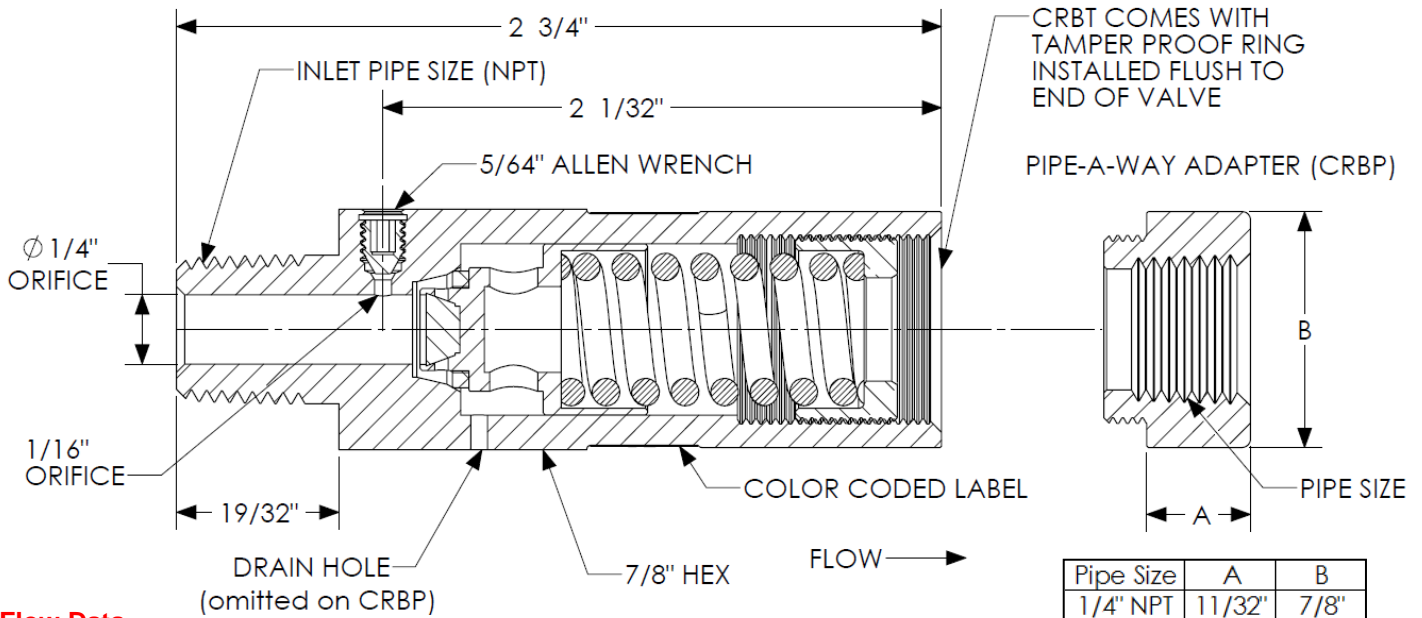


Materials of Construction

Component	Material
Body, Poppet, Adjusting Spring Retainer, Pipe-Away Adapters, Deflector Cap, Tamper Proof Ring	Brass, ASTM B16
Bleed Valve Set Screw	316 SS (ASTM A313)
Spring	302 SS (ASTM A313) or 17-4PH SS (ASTM A564)
Seal	PCTFE (ASTM D1430), or Fluorosilicone
Color Coded Identification Label	Mylar

SERIES

CRYOGENIC RELIEF VALVE (BRASS)



Flow Data

Set Pressure Range (Psig)		Discharge Coefficient (Kd*)	Valve Orifice .250" (6.35mm) Diameter (same for 1/4", 3/8" and 1/2" NPT)
From	To		
10.0	17.0	0.62	*Flow Coefficient Kd is stated at 110% accumulation Relief Valve Flow Capacity can be calculated using Generant's Online Flow Calculator at www.generant.com or contact Customer Service at 973-838-6500.
17.1	29.0	0.62	
29.1	40.0	0.53	
40.1	60.0	0.53	
60.1	90.0	0.61	
90.1	125.0	0.76	
125.1	190.0	0.76	
190.1	275.0	0.67	
275.1	375.0	0.61	
375.1	600.0	0.48	
600.1	750.0	0.40	

Pipe Size	A	B
1/4" NPT	11/32"	7/8"
3/8" NPT	11/16"	1"
1/2" NPT	3/4"	1"

* Deflector Cap (CRBD) diverts flow radially through six 1/4" holes.

How To Order

	CRB - 250B - K - 350		
SERIES		NOMINAL SET PRESSURE	10-750 Psig (0.7 - 51.7 Bar)
CRB -Cryogenic Relief Valve with Bleed		SEAL MATERIAL	FS - Fluorosilicone for 10-49 Psig (-85° to 350° F (-65° to 176° C)) K - PCTFE for Above 50 Psig (-320° to 165° F (-196° to 74° C))
CRBP2 -Cryogenic Relief Valve with Bleed - 1/4" Female Pipe-A-Way Adapter Installed		INLET PIPE SIZE (NPT)	250B - 1/4" Male 500B - 1/2" Male
CRBP3 -Cryogenic Relief Valve with Bleed - 3/8" Female Pipe-A-Way Adapter Installed			
CRBP4 -Cryogenic Relief Valve with Bleed - 1/2" Female Pipe-A-Way Adapter Installed			
CRBT -Cryogenic Relief Valve with Bleed - Tamper Proof Ring Installed			
CRBD -Cryogenic Relief Valve with Bleed - Deflector Adapter Installed			
CRBB4 -Cryogenic Relief Valve with Bleed - 1/2" BSPT Female Pipe-A-Way Adapter Installed			

PROPER COMPONENT SELECTION – When specifying a component, the total system design must be considered to ensure safe and trouble-free performance. Intended component function, materials compatibility, pressure ratings, installation, environment and maintenance are the responsibility of the system designer.



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1865 Route 23 South PO Box 768 Butler, New Jersey 07405 973.838.6500 Fax 973.838.4888