

**CRYOGENIC RELIEF VALVE (BRASS)**  
**1/4", 3/8" and 1/2" NPT**  
**10 - 750 Psig (0.7 - 51.7 Bar)**

**SERIES CRV BRASS**

**Description**

The Generant Series Brass CRV, Cryogenic Relief Valve is a spring reference over pressure protection device. The CRV incorporates Generant's exclusive "Dirt Guard" feature which increases the valves ability to tolerate particulate contamination. This device is ideally suited for use as a "Blocked Line Safety" in cryogenic systems. The CRV 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 come factory preset and permanently locked. Relief pressure can not be altered or adjusted in the field. Seat and poppet geometry combined with optimized spring ranges provide high flow rates with minimum pressure accumulation. Compact design and availability of a variety of inlet and outlet configurations reduces size and piping requirements. Relief pressure can be discharged to atmosphere or to a downstream connection. The CRV is supplied with Fluorosilicone seals for set pressures from 10 – 49 Psig (0.7 – 3.4 Bar) and PCTFE seals for set pressures 50 – 750 Psig (3.5 – 51.7 Bar).

**Features**

- Available **CE** marked in accordance to the requirements of the PED
- 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 exhausted 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 ≤ 28.90 PSI, ± 5%  
                                   Set Pressure 29.00 – 48.30 PSI, ± 1.45 PSI  
                                   Set Pressure ≥ 48.40 PSI, ± 3%  
\*tolerance specifications per EN ISO 4126-1.

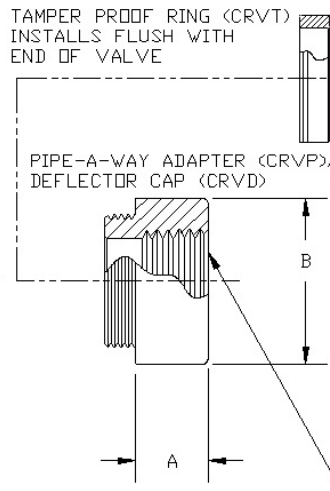
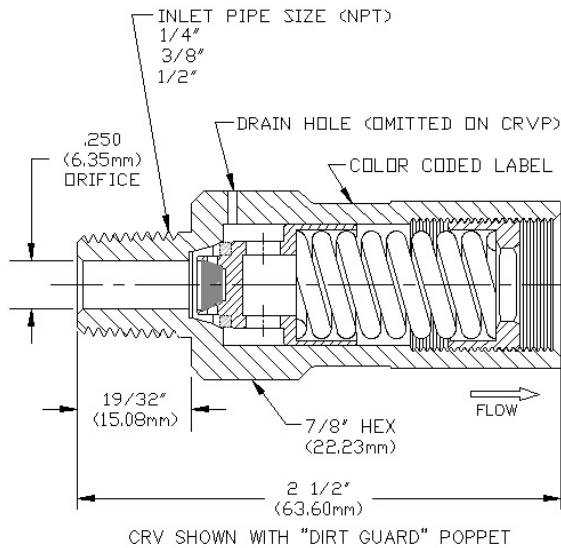
Zero Leakage to 95% of Set Pressure  
 Full Rated Flow @ 110% of Set Pressure  
     Unaffected by up to 10% Back Pressure  
 Reseat: 90% of set pressure  
     85% for PCTFE seals set below 100 Psig (6.9 Bar)  
 Temperature Rating: -320° to 350° F (-196° C to 176° C)  
based on seal material (see How 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
Spring	302 (ASTM A313) or 17-4PH (ASTM A564)
Seal	PCTFE (ASTM D1430), or Fluorosilicone
Color Coded Identification Label	Mylar



# CRYOGENIC RELIEF VALVE (BRASS)



PIPE SIZE	A	B
1/4" NPT	11/32" (8.73mm)	7/8" (22.23mm)
3/8" NPT	11/16" (17.46mm)	7/8" (22.23mm)
1/2" NPT	3/4" (19.05mm)	1" (25.40mm)
1/2" BSPT	3/4" (19.05mm)	1" (25.40mm)
DEFLECTOR CAP *	3/4" (19.05mm)	7/8" HEX (22.23mm)

\* DEFLECTOR CAP DIVERTS FLOW TO SIDES THROUGH SIX (6) 1/4" (6.35mm) HOLES. (NOT SHOWN)

## 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)  *Flow Coefficient Kd is stated at 110% accumulation  Relief Valve Flow Capacity can be calculated using <b>Generant's Online Flow Calculator</b> at <a href="http://www.generant.com">www.generant.com</a> or contact Customer Service at 973-838-6500.
From	To		
10.0	17.0	0.62	
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	

## How To Order

**CRV - 250B - K - 350**

### SERIES

- CRV -Cryogenic Relief Valve
- CRVP2 -Cryogenic Relief Valve with 1/4" Female Pipe-A-Way Adapter Installed
- CRVP3 -Cryogenic Relief Valve with 3/8" Female Pipe-A-Way Adapter Installed
- CRVP4 -Cryogenic Relief Valve with 1/2" Female Pipe-A-Way Adapter Installed
- CRVT -Cryogenic Relief Valve with Tamper Proof Ring Installed
- CRVD -Cryogenic Relief Valve with Deflector Adapter Installed
- CRVB4 -Cryogenic Relief Valve with 1/2" BSPT Female Pipe-A-Way Adapter Installed

NOMINAL SET PRESSURE  
10-750 Psig (0.7 - 51.7 Bar)

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))

INLET PIPE SIZE (NPT)  
250B - 1/4" Male  
375B - 3/8" Male  
500B - 1/2" Male

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.



[www.generant.com](http://www.generant.com)

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