

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

CRV BRASS

SERIES

Description

The Generant Series Brass CRV, Cryogenic Relief Valve is a spring reference over pressure protection device. Incorporating the exclusive "Dirt Guard" to protect from system debris, the CRV is ideally suited as a "Blocked Line Safety" in cryogenic systems. The CRV is supplied cleaned and packaged for O2 service standard. This valve can be ordered factory preset from 10 to 750 Psig (0.7 to 51.7 Bar) and are permanently locked. Seat and poppet geometry combined with optimized spring ranges provide high flow with minimum pressure accumulation. 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:** "CE Marked" in accordance with the requirements of the Pressure Equipment Directive (PED).
- **EXCLUSIVE "DIRT GUARD" POPPET:** Incorporates a poppet screen to extend valve life and ensure reliability.
- **OPTIMIZED FOR HIGH FLOW:** High Flow Capacity and Excellent Reseat Performance.
- **TAMPER PROOF:** Supplied Factory Preset and Permanently Locked for Tamper Proof Service.
- **CONFIGURABLE:** Discharge to Atmosphere or a Wide Variety of Inlet and Outlet piping configurations, Optional Deflector Cap available for diverting exhausted gas.
- **100% FACTORY TESTED:** Tested for Leakage, Crack and Reseat performance.
- **OXYGEN SERVICE COMPATIBLE:** Cleaned and Packaged for Oxygen Service standard.

Technical Data

Nominal Set Pressure Range: 10 – 750 PSIG (0.7 to 51.7 Bar)
Factory Set Tolerance: Set Pressure ≤ 28.90 PSI, $\pm 5\%$
Set Pressure 29.00 – 48.30 PSI, ± 1.45 PSI
Set Pressure ≥ 48.40 PSI, $\pm 3\%$
NOTE: 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®

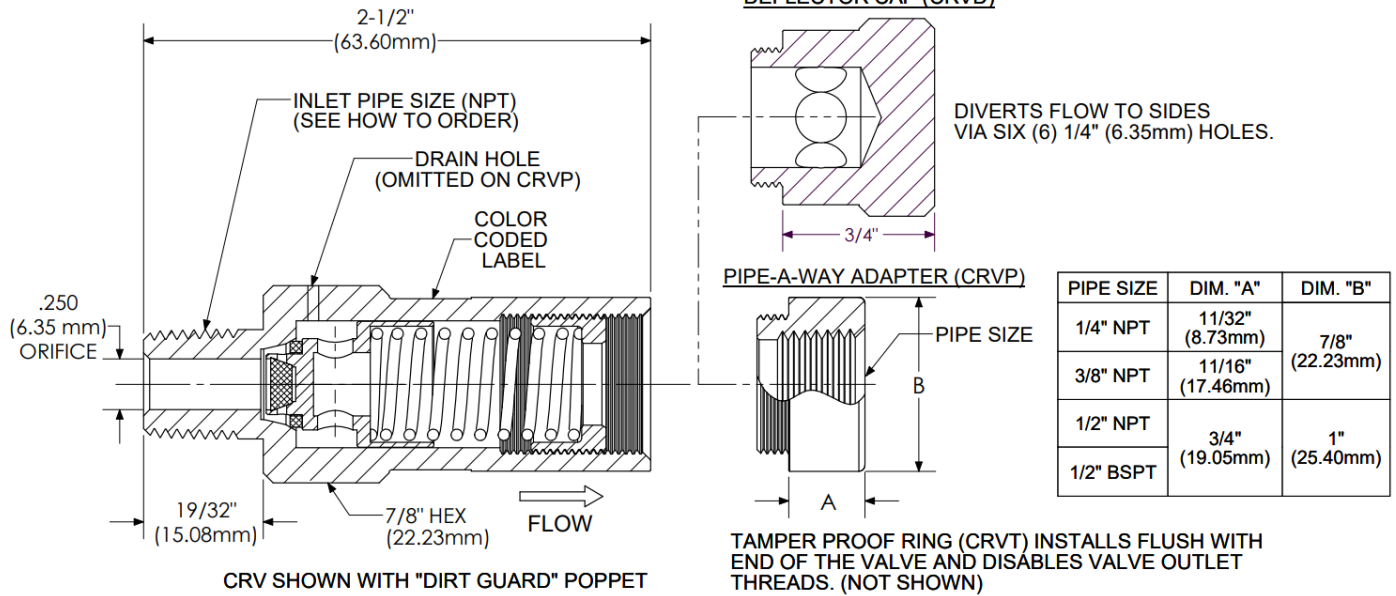
Materials of Construction

| 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 | Film Coated Vinyl |



CRYOGENIC RELIEF VALVE (BRASS)

OPTIONAL CONFIGURATIONS (SEE HOW TO ORDER)



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) *Discharge Coefficient (Kd) is stated at 110% accumulation with a 90% safety factor applied. 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. |
|---------------------------|-------|-----------------------------|---|
| From | To | | |
| 10.0 | 17.0 | 0.62 | |
| 17.1 | 29.0 | 0.62 | |
| 29.1 | 45.0 | 0.53 | |
| 45.1 | 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 | 400.0 | 0.61 | |
| 400.1 | 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.