RVA Series Relief Valve
User Instructions

Scope and Intended Use:

These user instructions are applicable for all Series RVA Relief Valves.

The intended use of these products is to protect against over pressure in a given system including ASME certified pressure vessels. Always ensure that the valve flow rating meets the vessel PRD capacity requirement. These products can be used with the following media: Inert Gas, Oxygen, and potential Oxidizer gases > 21%, Hydrogen, Carbon Dioxide and Liquefied Natural Gas.

Technical Data:

Series RVA valves are supplied preset, 100% factory tested and permanently staked to prevent any adjustment of the pressure setting. Every RVA valve is engraved with manufacturer, part number, set pressure (PSI), National Board's "NB" Mark, ASME Certification Mark with UV designator, Date of Manufacture Code, Material Lot Code, and Flow Rating (SCFM Air).

Operating Parameters:

Nominal Set Pressure Range: 20 – 550 PSI
Factory Set Pressure Tolerance: ± 3% or ±1.45 PSI, whichever is greater.
Reseat: >90% of Nominal Set Pressure
Zero Leakage to 95% of Set Pressure

Temperature Range(s)
- Fluorosilicone (FS): -85° to 392°F (-65° to 200°C)
- Carbon-Filled PTFE (CT): -320° to 200°F (-196° to 93°C)

Full rated flow by 110% of Set Pressure

Maintenance:

These valves are factory preset and are NOT to be tampered with in the field. Periodic inspection is very important. National Board Inspection Code recommends an inspection interval of every three (3) years for relief valves on pressure vessels for "air and clean dry gases" and an interval of every five (5) years for pressure relief valves in combination with a rupture disk. CGA S-1.2 recommends an inspection at least every five (5) years. In line with these recommendations, Generant advises an inspection interval at least every five (5) years for cryogenic vessels OR vessels that also incorporate a rupture disk. In other cases, the inspection interval should be at least every three (3) years. Inspection should include a test that the valve opens at the specified set pressure as well as visual inspection that the outlet is free and clear, the valve is properly marked, and there are no signs of corrosion or cracking. Appropriate measures must be taken when testing the valve to ensure that the test system is clean and free of debris that could cause the valve to malfunction. If the valve fails inspection in any aspect, the valve should be discarded and replaced.

⚠ WARNING

Generant Relief Valves are supplied Cleaned for Oxygen Service and are shipped from the factory individually heat-sealed in poly bags. Once removed from the bag, the integrity of this cleaning has been compromised. Proper handling should be used to ensure the integrity and cleanliness of the entire system.

Installation Instructions:

1. All Series RVA relief valves are 100% factory tested for leakage before opening, opening pressure, and reseat performance.
2. The piping system should be complete before installation of the relief valve.
3. All upstream piping and connection ports must be free from particulate contamination that is naturally generated during the assembly of the piping system. This should be accomplished by purging the system with clean, dry nitrogen gas. Visually inspect the port for cleanliness prior to installation.
4. Teflon tape should be used to seal the connection between the relief valve and the piping system.
5. Beginning with the first thread, wrap tape in the direction of the male tapered thread spiral, and join with a slight overlap.
6. Make sure the tape does not overhang the first thread, as the tape could shred and get into the system.
7. Cut off excess tape. Draw the free end of the tape around the thread tautly so that it conforms to the threads. Press in firmly at the overlap point. The connection is now ready for makeup. (If any additional pipe sealant is being used (i.e.: pipe dope or Swak).
   Do not apply it to the first thread of the valve.
8. Thread the valve into the connection port hand tight. Using a 7/8" open-end wrench, tighten the valve an additional 1 to 2 full turns until a leak-fee connection is made.

Safe Component Selection

When selecting a component, the total system design must be considered to ensure safe, trouble-free performance. Component function, materials compatibility, adequate ratings, proper installation, operation, cleanliness, and maintenance are the responsibility of the system designer and user.

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