Series BPR, Back Pressure Regulator
User Instructions

Scope and Intended Use:
These User Instructions are applicable for Generant Series BPR Regulators. The intended use for these regulators is a pressure limiting device or economizer for cryogenic liquid cylinders.

Technical Data:
Series BPR Regulators are 100% factory tested for leakage and factory pre-set. Every regulator is marked with Manufacturer, Part Number, Date Code, Maximum Inlet Pressure, Set Pressure Range and Direction of Flow. Regulators come factory pre-set based on the end customer specifications, to a pressure in the range listed below.

Operating Parameters:
Max Inlet Pressure: 750 PSIG (51.7 Bar)

Outlet Pressure Ranges:
"A" Spring: 15 – 65 PSIG
"B" Spring: 40 – 175 PSIG
"C" Spring: 100 – 350 PSIG
"D" Spring: 300 – 600 PSIG

Regulator setpoint varies slightly depending on whether it is used in a vent-to-atmosphere or true economizer application. When a regulator is set vent-to-atmosphere and installed in a true economizer application (substantial outlet pressure is present), it will begin to open at a slightly lower pressure than its original vent-to-atmosphere setpoint. Factory standard setting is vent-to-atmosphere, but they can be set either way. Consult factory for more information.

BPR Regulators sense pressure on the inlet and open when inlet pressure exceeds setpoint. This type of regulator features a metal-metal internal seal for robust performance in cryogenic applications. Due to the nature of the sealing mechanism, a small amount of leakage through the device is allowed at pressures below setpoint. Consult factory for allowable leak rates, which vary by spring range.

Maintenance:
BPR series regulators are designed to be field serviceable and fully repairable.

Repair kits are readily available and will be supplied as loose placement parts. BPR springs can be interchanged for A, B, and C range models. Instructions on how to order replacement parts / repair kits and repair your BPR unit are available upon request.

⚠ WARNING

Generant Series BPR Regulators are supplied "Cleaned for Oxygen Service" standard in heat sealed in poly bags. Once removed from the bag, integrity of this cleaning has been compromised. Proper handling should be used to ensure the integrity and cleanliness of the system.

Operating Instructions:
1. Ensure that the regulator is installed according to the directional flow indicators marked on the regulator body.
2. If adjustments need to be made to the set pressure, refer to Generant's BPR Field Re-Setting User Instructions
3. (EN-FR-175) prior to adjusting.
4. To adjust regulator, refer to the following table to adjust to desired setpoint from Factory Pre-Set pressure.
   Turn regulator adjusting screw (1/2" hex) CW to increase pressure and CCW to decrease pressure.
   *Note: Values in the table are for reference only.
   Actual pressure adjustments will vary slightly.
5. Once desired adjustment is made, the regulator can be locked by tightening the lock nut on the adjustment screw.

SPRING	RANGE (PSIG)	PSI/TURN (APPROX)
A	15 - 65	15
B	40 - 175	25
C	100 - 350	55
D	300 - 600	85

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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