Advanced Technology

# Back Pressure Controller (BPC)

## ELECTRONIC BACK PRESSURE CONTROLLER

In a helium recovery system, neighboring cryostats, helium transfers, or gas handling equipment downstream can translate into pressure fluctuations in a cryogenic measurement instrument. For pressure sensitive instruments, this manifests into temperature instabilities or measurement noise.

The Quantum Design Back Pressure Controller (BPC) isolates these external pressure changes and stabilizes internal pressure at a pre-set value. Unlike inexpensive static regulators, changes in boil-off rate are automatically compensated by subtle adjustments of gas flow through the BPC.

The BPC is installed after the instrument cryostat and before any other equipment in the recovery system to properly isolate the instrument from pressure fluctuations. Gas must be at room temperature before it enters the BPC. The BPC must be bypassed while transferring liquid helium, as the flow would typically exceed the back-pressure controller's flow limit.

## SPECIFICATIONS

| Model | Low Flow, High Sensitivity | Relative Pressure |
|---|---|---|
| Flow | < 10 liter/min | < 55 liter/min |
| Pressure | < 3 bar absolute | < 100 mbar relative |
| Power Requirements | 100 – 220 V; 0.5A; 50 – 60 Hz | |
| Dimensions | Height: 12.75"; Width: 10.75"; Depth: 5" | |
| Connection Hose | SS 0.5" ID; 0.5 Male NPT; 10 ft. Length | |


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1314-007, Rev.A0