

POLYCOLD® PGC-152 GAS CHILLER

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Polycold® Gas Chillers use Polycold®’s auto-cascade refrigerant cycle with a mixed gas refrigerant, to provide ultra-low temperatures without the cost, risk or inconvenience of liquid nitrogen. Now you can cool your dry gas to temperatures between -90°C and -125°C without sacrificing high flow rates.

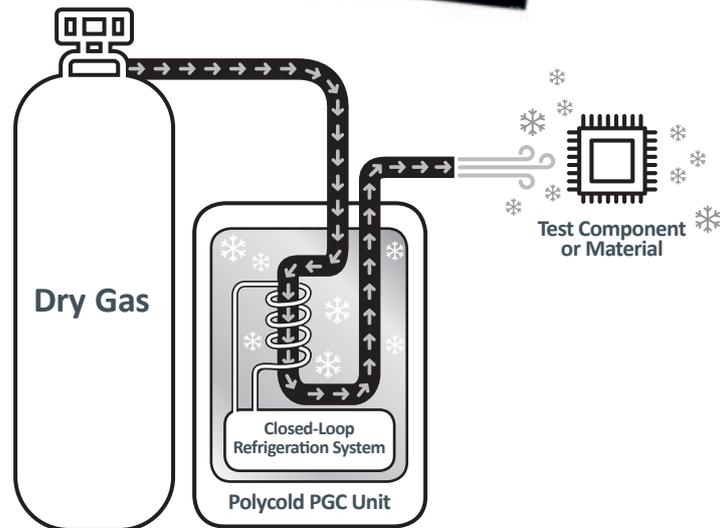
The PGC-152 is CE marked and meets Semi S2 requirements. Polycold’s proprietary and patented refrigerant mixtures are fully compliant with current European environmental regulations. The Polycold® PGC Gas Chillers are the most cost-effective systems available to cool a gas stream in this low temperature range.

Applications include:

Thermal Testing of Electronics, Cooling of Wafer Chucks in Semiconductor Process Tools, Cold Gas Venting of Vacuum Chambers, Rheology, Low Temperature Characterization of Materials, etc.

- Cools Compressed Dry Gas
- -90° to -125°C (-130° to -193°F , 183° to 148°K)
- Continuous Cooling
- Heat Removal to 810 Watts

Polycold® Gas Chillers cool dry gases (such as nitrogen, argon or air) from ambient to cryogenic temperature without precooling. The Gas Chiller is a closed-loop refrigeration system which cools a gas stream using a refrigerant to gas tube-in-tube heat exchanger. The gas stream is non-recirculating.



Features and Benefits

- | | | |
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| <ul style="list-style-type: none"> • Free standing, compact size • Rated for continuous operation • Air-cooled or water-cooled models • Uses a single compressor for reliable performance | <ul style="list-style-type: none"> • 50 or 60 Hz operation, single phase • CE marked, Semi S2 compliant • Refrigerant gases are US EPA– SNAP approved • CFC-Free and HCFC Free refrigerants meet European Union laws | <ul style="list-style-type: none"> • Patented refrigerant gases • Flow control solenoid and flow sensor |
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Polycold® PGC-152 Gas Chiller Specifications

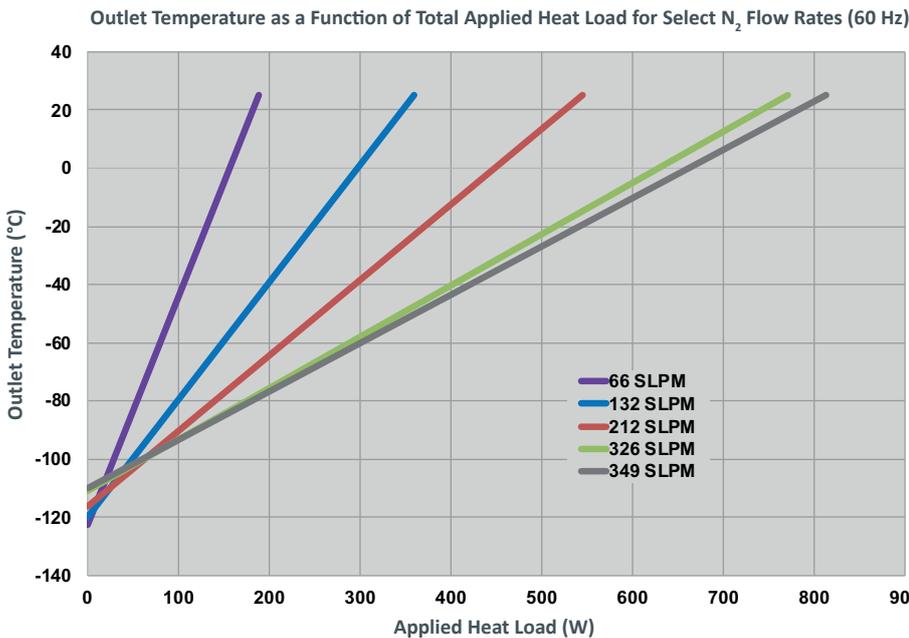
| Typical Performance Specifications | |
|--|---|
| Maximum Gas Heat Load (Watts @ 25 C inlet) | 810 |
| Temperature Range C (F) | -90° C to -125° C (-130° F to -193° F) |
| Maximum Flow Rate (SCFH) | 750 |
| Time to Pre-Cool Heat Exchanger Prior to Initial Use | 20 min. |

| Typical Gas Flow Conditions: | | | | |
|---------------------------------|---------------------------------|-----------------------|------------------------|---------------------|
| N ₂ Flow Rate (SCFH) | N ₂ Flow Rate (SLPM) | Inlet Pressure (PSIG) | Outlet Pressure (PSIG) | Pressure Drop (PSI) |
| 140 | 66 | 5 | 3 | 2 |
| 280 | 132 | 23 | 18 | 5 |
| 450 | 212 | 45 | 36 | 9 |
| 690 | 326 | 75 | 65 | 10 |
| 740 | 349 | 80 | 68 | 12 |

| Physical Data | |
|---|----------------------------|
| PGC Unit Dimensions: | |
| Width, mm (in.) | 508 (20) |
| Depth, mm (in.) | 457 (18) |
| Height, mm (in.) | 889 (35) |
| Weight, kg (lb.) 108 (240) | |
| Gas Inlet/Outlet Tubing Diameter, mm (in.) | 9.5 (3/8) |
| Max. Angle of Inclination (for moving, etc.) | 45 degrees |
| Utilities | |
| Gas Source (Customer's Dry Gas) e.g. | Air, Nitrogen, Argon, etc. |
| Required Gas Source Dewpoint (for extended run times) | Colder than -80 C |
| Maximum Gas Source Temperature | 30 C |
| Maximum Temperature Air Inlet to Condenser | 32 C |
| Remote Reading Thermocouple on Gas Outlet | Type T |
| Voltage Range: At 50 Hertz | 180-216 |
| At 60 Hertz | 187-253 |
| Rated Load Amps | 12.5 |

Polycold® PGC-152 Gas Chiller Performance

Specifications are subject to change without notice.



The outlet temperature of the PGC-152 is based upon the external heat load as well as the flow rate of nitrogen through the unit. Both the flow rate and the applied heat load can be varied to obtain the desired outlet temperature for the process.

GLOBAL CONTACTS

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