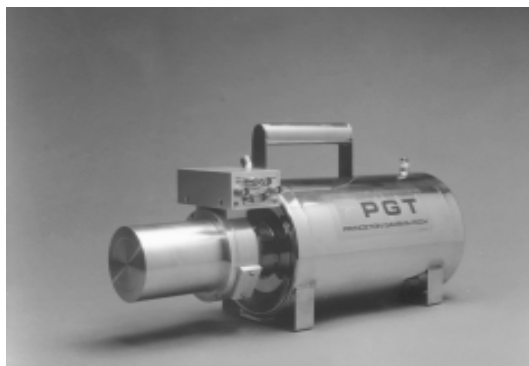


Series MPS and GF Portable Cryostats



Product Information



Princeton Gamma-Tech offers two styles of portable detector cryostats for gamma and X-ray spectroscopy. Both the Multi-Use Portable Spectrometer (MPS) and the Gravity Feed (GF) series of portable cryostats will work with all PGT intrinsic germanium coaxial, planar, and Si(Li) detectors in all attitudes without risk of liquid nitrogen spillage.

PGT portable detectors are suited for applications of emergency response situations, specialized laboratory applications or anywhere where space or weight is a constraint. Additional uses include environmental analysis, whole body counting, in-vivo lung monitoring and nuclear high-spin experimentation. Both portable cryostats are compatible with portable MCA's as well as standard multi-channel analyzers and NIM bin modules. Both the MPS and GF styles have an internal temperature sensor for high voltage shut-off protection in the event of accidental warm up.

MPS Cryostat

The Multi-Use Portable Spectrometer (MPS) is designed for lightweight, hand held operation or for stable bench top work. MPS design allows for hands free, self supported use in either the vertical (uplooking) or horizontal geometry.

The stainless steel construction allows for simple decontamination. Yet the unit is light weight and rugged enough to handle all field situations.

The detector is designed to work with either a pressurized or manual LN₂ filling system. Typical holding times and LN capacity are shown below:

MPS Dewar Sizes		
<u>MODEL</u>	<u>HOLD TIME</u>	<u>LN2 CAP.</u>
MPS	16-24 HRS.	1.2 LITERS
MPS5	72 HOURS	5 LITERS
MPS7.5	100 HOURS	7.5 LITERS

The PGT Gravity Feed (GF) Portable Spectrometer

The Gravity Feed (GF) series of portable cryostats for germanium and silicon detectors offers users an instrument that is ready for use when needed. The aluminum cryostat is lightweight and the detachable handle allows for ease of use in a variety of applications.

The GF and its associated feeder dewar can be used in a static, down-looking position or can be detached quickly for emergency response. Spill contamination and wound monitoring are only a few of the possible applications for this versatile instrument. An optional flexible fill line can be added for special applications and spatial constraints. The fill line is detachable in less than one minute for emergency response.



Like the MPS, the Gravity Feed detectors are available in a variety of sizes for different holding time requirements. Please contact PGT to discuss your particular requirements.

PGT offers several options which allow you to tailor these portable detectors to meet your specific needs:

PGT Portable Cryostat Options

Construction

Choice of Aluminum or Stainless Steel

Preamplifier Configuration

Available in either in-line or conventional mounting in all styles: resistive feedback, pulsed optical, or transistor reset.

Airtight Preamplifier

Prevents damaging humidity from entering preamplifier enclosure.

Low Power Preamplifier

The PGT Model 352 has a current requirement of less than 250 mW. This drains a portable MCA's battery at a much slower rate than a conventional preamplifier and usually precludes the necessity of additional battery packs.

LN₂ Auto Fill Systems

PGT has several auto fill system designs for pressurized filling of the MPS cryostat. They include a variety of fill dewar sizes with timed or on demand controller electronics.

This combination has kept portable detectors ready for immediate use for over ten years. The GF unit employs a gravity feed fill system by directly coupling the detector cryostat to a 30 liter mother dewar. Flexible fill lines are available for special applications.

Low Background Materials

High-purity copper, low background electronics, and internal shielding are available to eliminate background radiation contribution.

Applications:

- Homeland security / border inspections
- Field environmental spectroscopy
- Emergency response
- Routine waste site monitoring
- Industrial on line monitoring

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