

## 'SuperVariTemp' Magnet Inserts



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Cryo Industries' Sample in Vapor Variable Temperature Inserts (VTIs) fit into the bore of superconducting magnets and provide variable temperatures from <math><1.4</math> to 300 K. Samples are cooled by insertion into flowing helium gas exiting from the vaporizer (also known as the diffuser or heat exchanger).

A small amount of liquid helium is drawn from the magnet's 'bath' into the vaporizer located at the bottom of the sample tube. The liquid helium is vaporized and heated to your pre-selected temperature. The gas enters the sample zone and the sample is cooled to temperature of the flowing gas.

Systems are available with choice of many standard sample tube sizes from 0.50" to greater than 4 or more inches. Inserts can be ordered to fit your existing magnet systems.

The 'Super Variable Temperature' (SVT) Inserts are available in three styles:

- **Separate (top-loading) Insert**
- **Magnet Support Combo:** variable temperature and magnet support.
- **Combination Insert:** Dynamic SuperVariTemp Insert and removeable Static Exchange Gas Insert: Two Inserts in One!

All styles feature top-loading samples and high refrigeration capacity. All systems can be configured with vapor shielding for extended high temperature operation. Helium-3 inserts are also available which install directly into or interchange with the VTI.

Cryo Industries is able to offer the 'SuperVariTemp' Magnet Insert alone or as part of a complete Superconducting Magnet System, that includes:

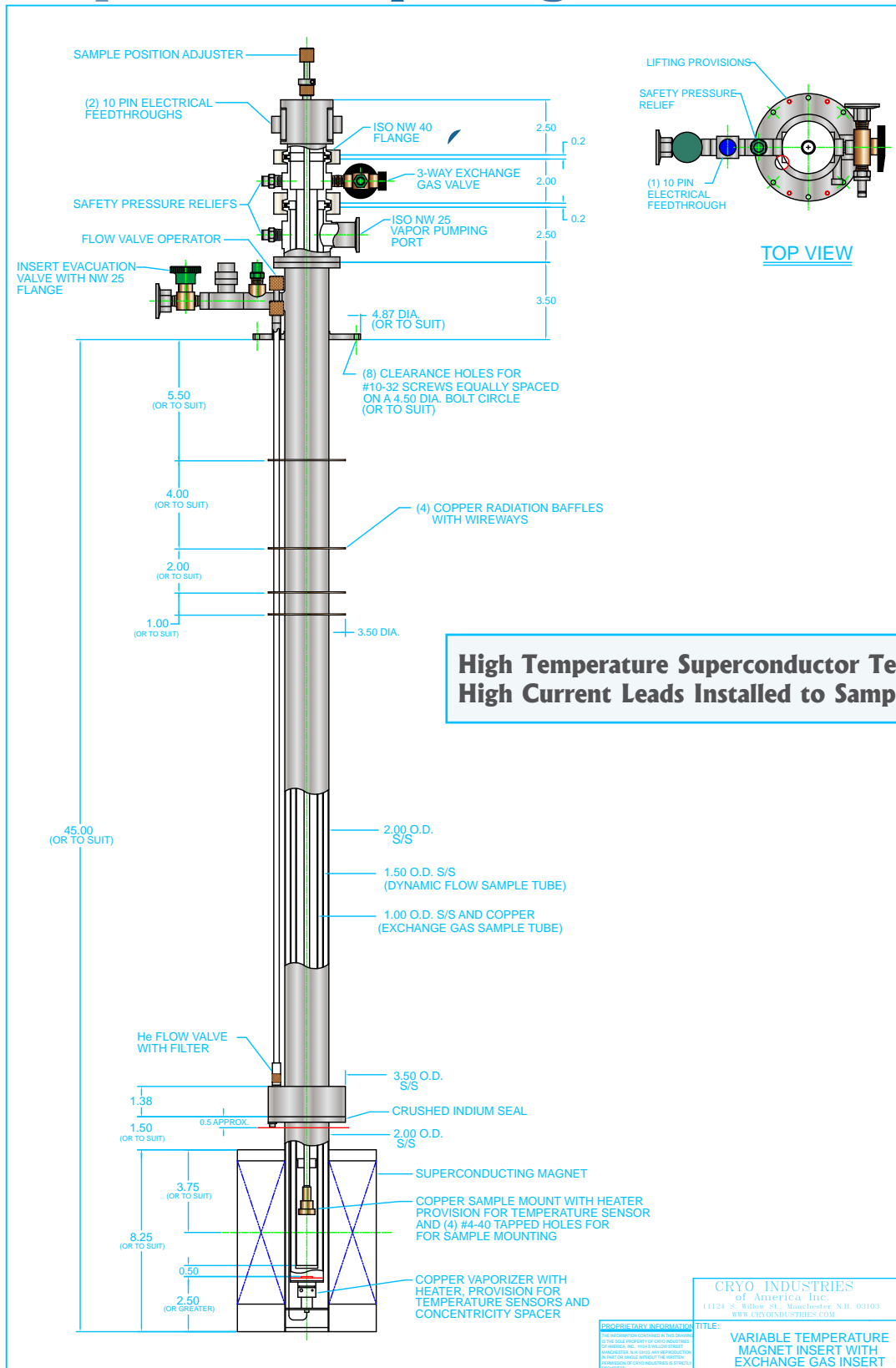
- High performance dewar
- SuperVariTemp Insert
- Standard Solenoids from 5 T to 17 T
- Liquid Helium Level Probe with electronic readout
- Integrated Superconducting Magnet Power System
- Temperature Sensors
- Temperature Controllers

Mossbauer, Magnetic Measurements, Spectroscopy, Materials Research, Vibrating Sample Magnetometer, Scanning Tunneling Microscope or whatever your needs - CRYO has the capability to design and build superconducting magnet systems to meet your requirements.

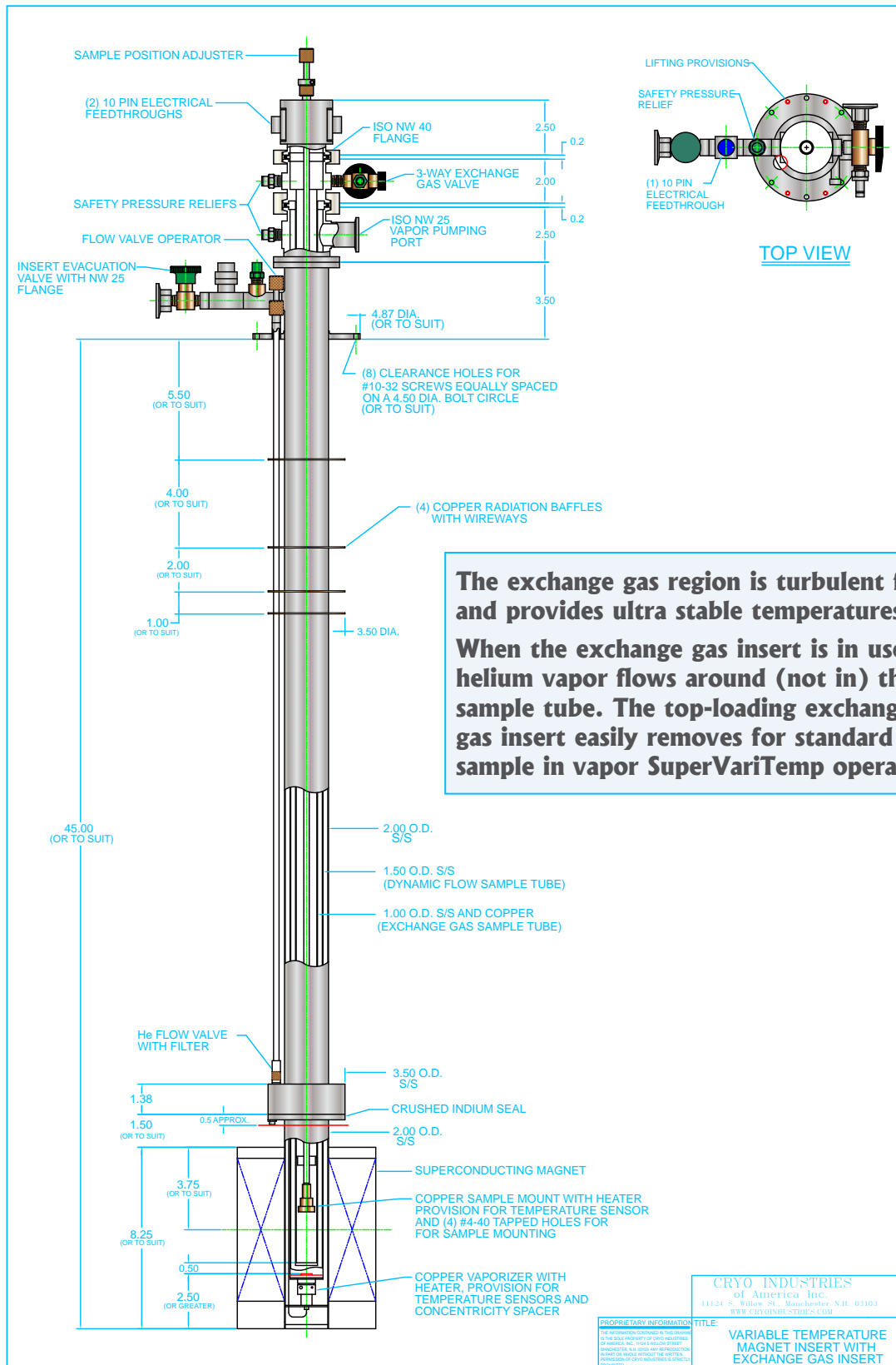


**Superconducting Magnet System with 'SuperVariTemp' Magnet Insert**

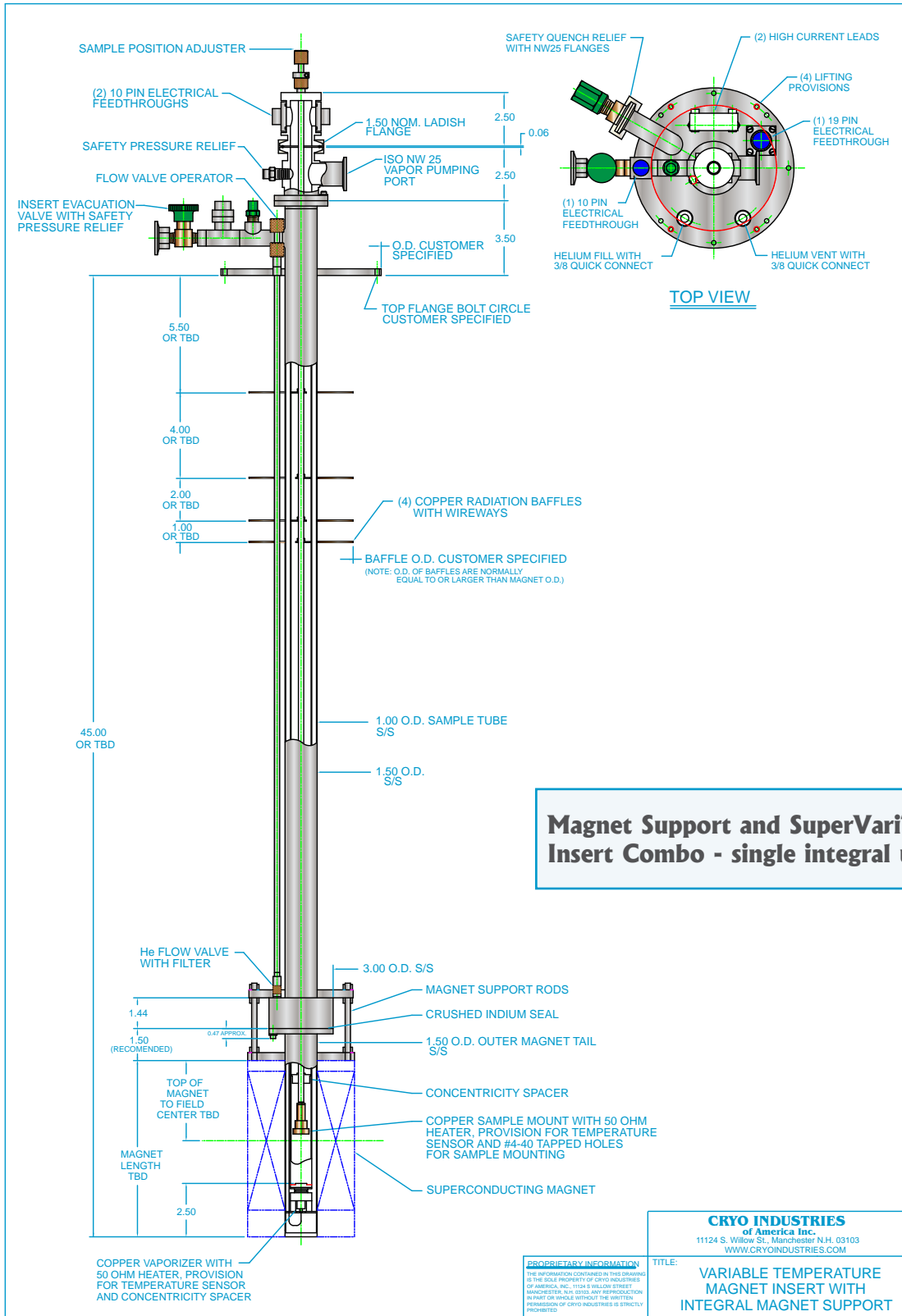
## 'SuperVariTemp' Magnet Insert



## 'SuperVariTemp' Insert w/Exchange Gas Insert



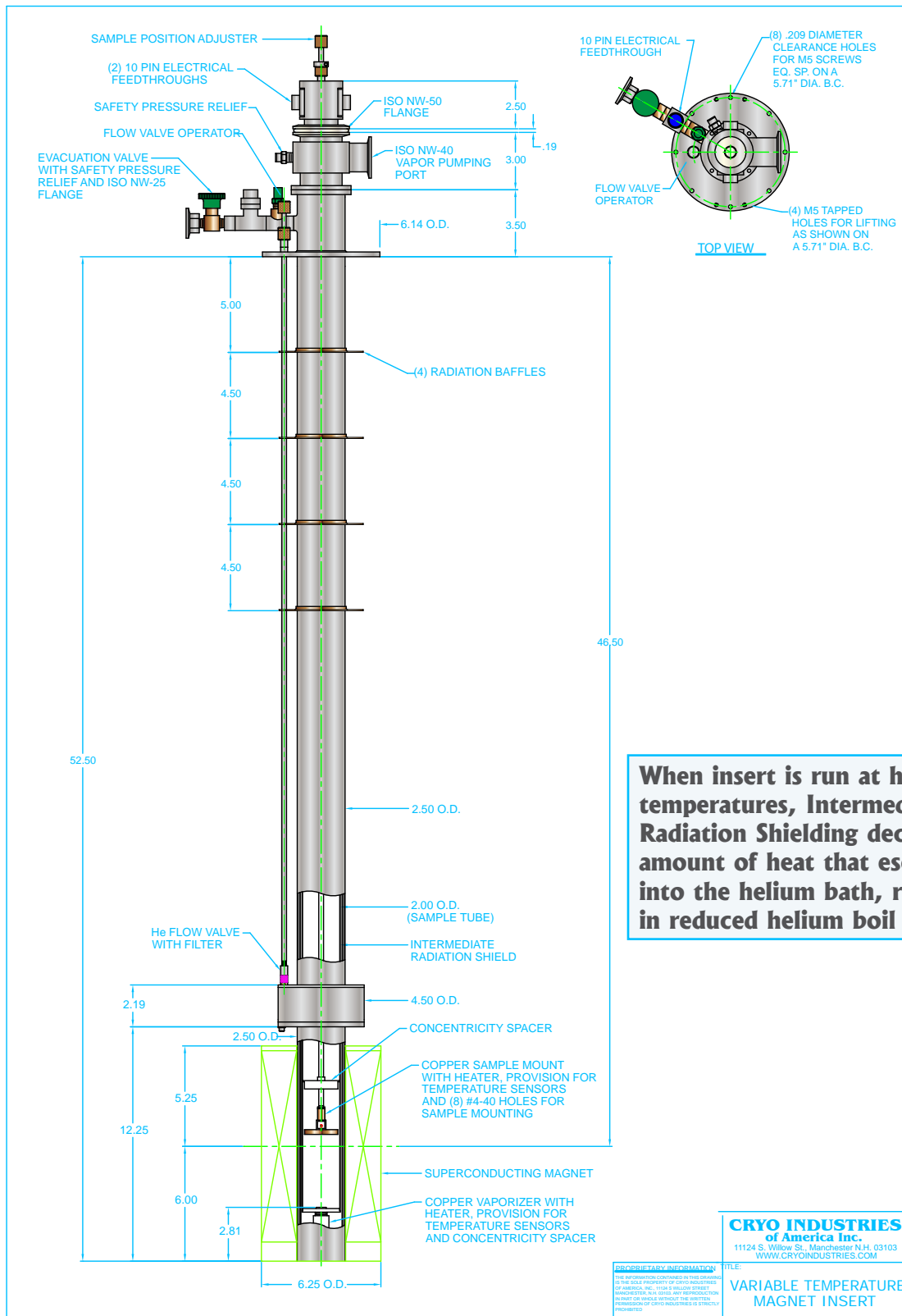
## 'SuperVariTemp' Insert w/Integral Magnet Support



**Magnet Support and SuperVariTemp Insert Combo - single integral unit!**

<b>CRYO INDUSTRIES</b> of America Inc. 11124 S. Willow St., Manchester, N.H. 03103 WWW.CRYOINDUSTRIES.COM	
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## 'SuperVariTemp' Insert w/PITA Shielding



**When insert is run at higher temperatures, Intermediate Radiation Shielding decreases amount of heat that escapes into the helium bath, resulting in reduced helium boil off.**

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TITLE:  
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MAGNET INSERT**