



Helium Flow Cryostat:

Model:

LTR 2K Helitran®

Cryostat Components:

LTR includes the following:

- Helitran Model LTR with impedance valve
- Transfer line with coaxial shield flow.
- Double wall Glassware for Bruker (JEOL or Varian)
- Sample Receiver
- Temperature Control – 2 Thermocouple sensors and control heater.
- Flow meters for Helium usage metering
- Dewar adapter for universal dewar mounting
- Temperature Controller for reading T/C's

See options also.

Applications:

EPR, X-Band. ESR

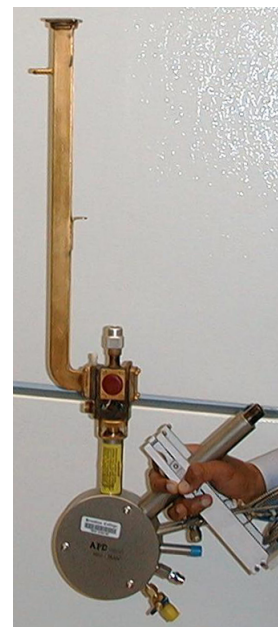
Standard Features:

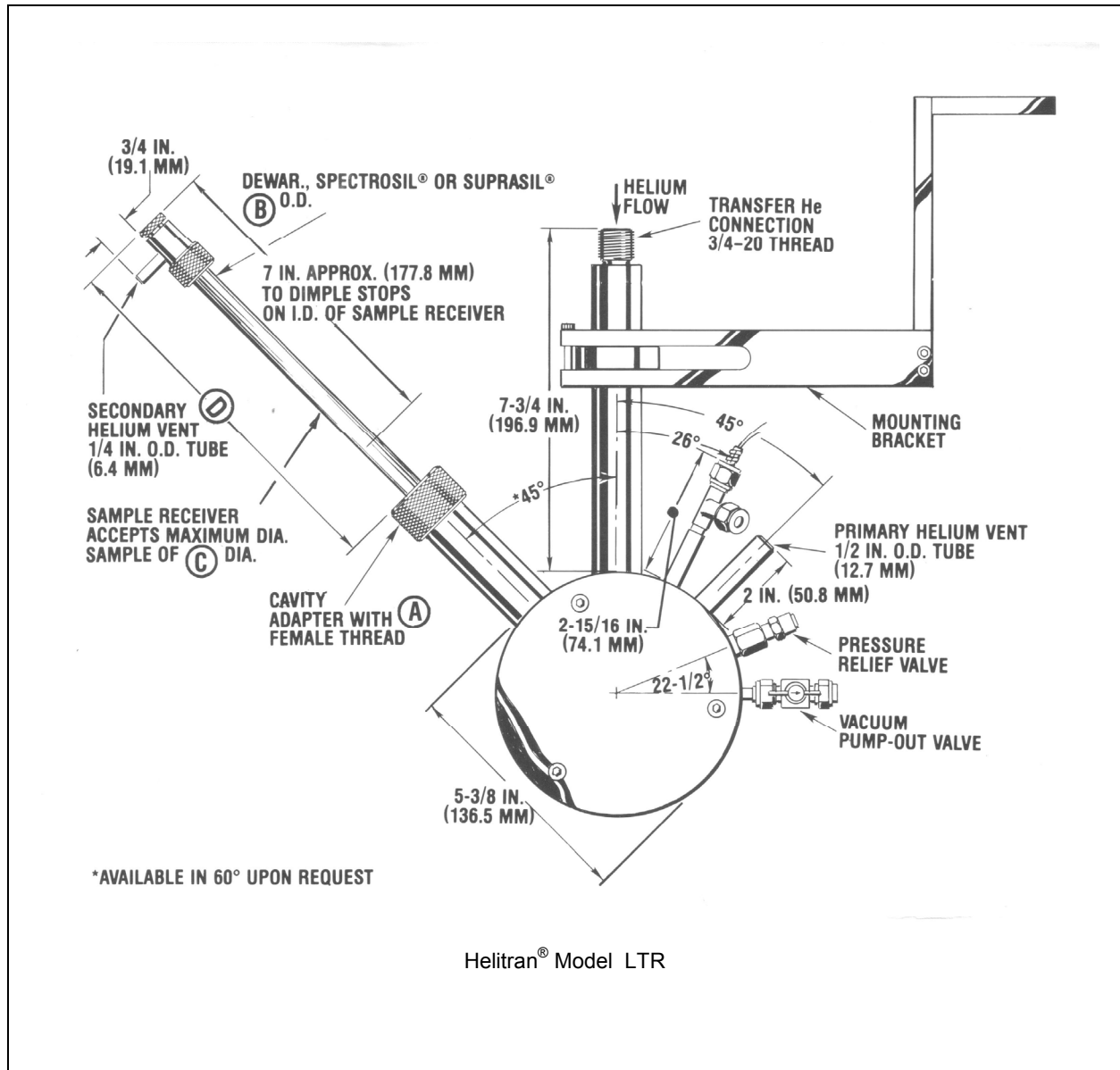
- Glassware to fit into the Bruker cavity. Varian and JEOL are also available.
- Bruker cavity adapter
- Mounting arrangement for the Bruker magnet.
- Sample space is in the sample receiver.
- Transfer Line has Braided Stainless Steel casing over bellows for durability.
- Flowmeter Panel for Helium flow control and optimization. Flow settings can be repeated precisely for standard experiments with multiple operators.
- Dewar Adapter with pressure relief valves to ensure safety of system during pressurization of the dewar and to protect the transfer line from stresses.

Advanced Features:

- **Impedance Valve:** The Helitran® cryostat has an impedance valve for sub 4K performance. This adjustable valve provides the restriction to pump against to get the pressure drop for sub 4K temperature drop.
- **Matrix Heat Exchanger:** The tip has an extended surface heat exchanger for efficient heat transfer between the liquid helium (and cold gaseous helium) and the sample. This ensures efficient use of the cryogen permitting reduced flow and helium consumption.
Other Advantages of the MHX:
 - * It provides uniform temperature of the helium flowing over the sample.
- **Co-Axial Shield Flow:** In the transfer line isolates the tip flow from radiant heat permitting uniform (nonturbulent) laminar flow of 100% liquid even when the flow rate is very low.
- **Flowmeter Panel** for Helium flow control and optimization. Flow settings can be repeated precisely for standard experiments with multiple operators.

See Tech Note: **Helitran® – Advanced Features**, for further discussion on system performance.





Specifications:

Cryocooler Model

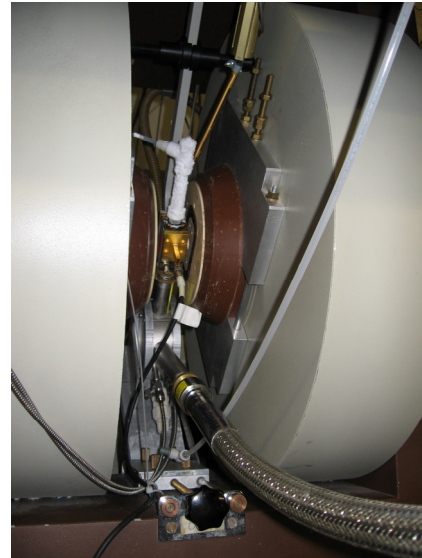
	<u>L He.</u>
Temperature, Minimum	4.2K (1.7K with pumping)
Temperature, Maximum	350K
Cooldown Time to 4.2K	20 Minutes
He. Consumption	0.75 L/Hr. Lower at higher temperatures.



Closed Cycle Cooler. For EPR. No Cryogen required.



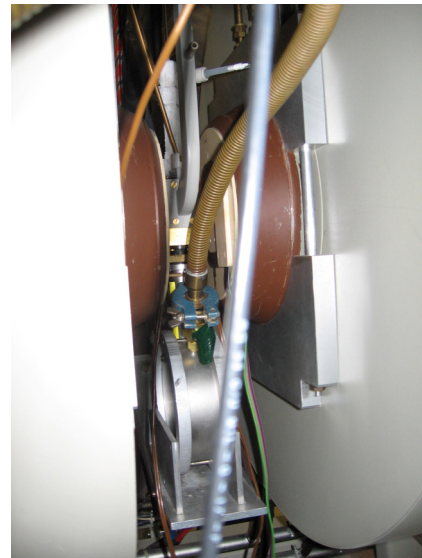
System Installation.



Front of the magnet.



Top of the LTR.



Rear of the magnet.