



Cryogen-Free Systems

- Sustainable, and Affordable Modular Cooling Systems

WaveGuide, Stinger & FlexLine Systems

Sources of liquid helium have become limited, expensive and delivery unreliable. Bruker now introduces three cryogen-free EPR variable temperature systems for both CW and Pulse EPR spectroscopy. These systems free the spectroscopist from the need to purchase liquid cryogens to attain the low temperatures required for many EPR experiments. These cryostats utilize standard sample tubes and allow rapid sample interchange. All of these cryostats are compatible with the same compressor and controller.

Features of all three Systems

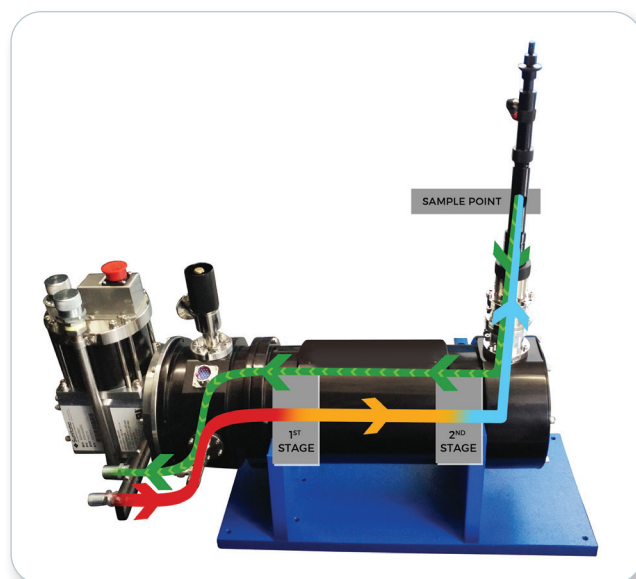
- Requires no liquid helium
- Reduces cost of low temperature experiments
- Two base temperature options
- Low vibration factor means spectra are not affected
- Rapid sample exchange
- Variable temperature base to > 250 K

WaveGuide System

Features of the Waveguide System

The WaveGuide Cryostat System provides cryogen-free cooling for standard X-Band resonators.

- Gaseous helium used as heat transfer medium
- < 1 ½ hr to reach base temperature
- Standard quartz insert dewar and sample holder
- Base temperature < 5K
- Continuous operation from base temperature to > 250K



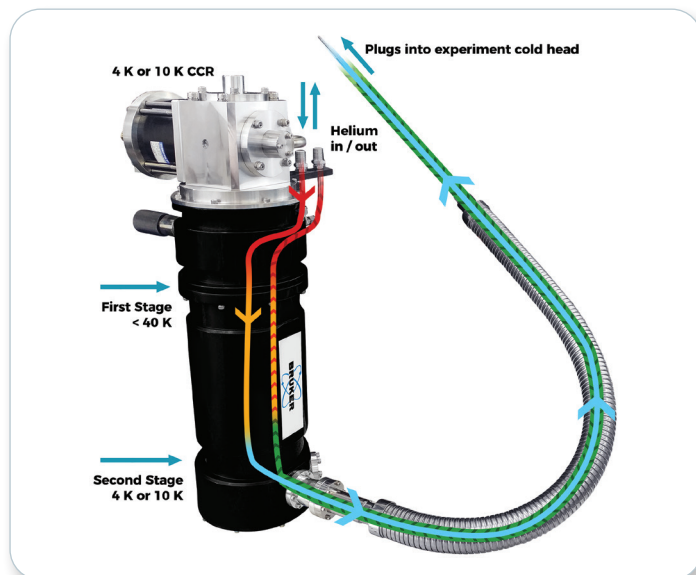
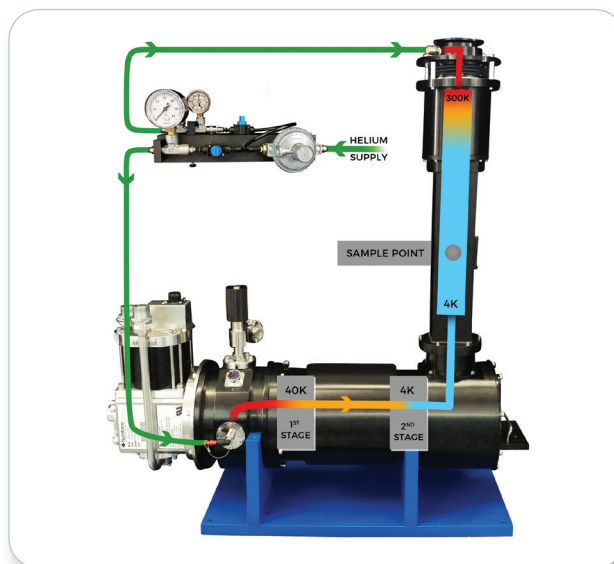
● Reduce Costs of Low Temperature Experiments

FlexLine Systems

Features of the FlexLine Systems

The FlexLine Cryostat System provides cryogen-free cooling for pulse and high frequency resonators.

- Negligible gaseous helium consumption
- Optical access
- Base temperature < 5.8K or < 10K
- Accommodates all FlexLine resonators
- Continuous operation from base temperature to 300K



The Stinger™

Features of the Stinger System

The Stinger serves as a cryogen-free substitute for a dewar of liquid helium. It can be moved between CW and pulse/Q-Band cryostats to provide environmentally friendly cryogen-free cooling.

- Flexible line orientation
- Very low vibration
- Cool multiple cryostats
- Transfer Gas Recirculator
- Gas handling manifold

Recirculator & Manifold

Now included to reduce consumable cost for the WaveGuide Cryostat and the Stinger

- Additional compressor recirculates exchange gas
- 10 kW total power/water requirement
- Purifier to remove contaminants

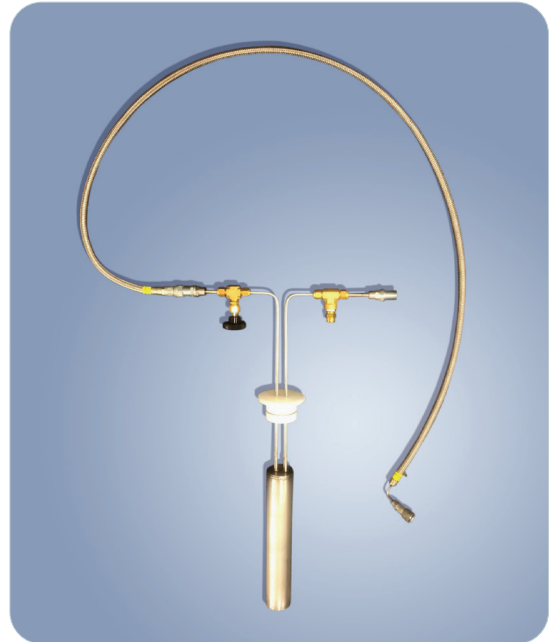


Accessories

LN2 Cold Trap

Liquid nitrogen cold-trap for removing contamination in transfer gas.

- Traps air and water in helium stream
- Used in-line or separately
- Uses standard LN2 dewar
- Easily pumped out for re-use



Vacuum Pump

Vacuum Pump package for evacuating isolation space.

- Turbomolecular high vacuum pump
- Oil-free forepump
- Gauges
- Includes all necessary fittings

