

KelvinoxHA[®]

High performance wet dilution refrigerator for large experiments with many signal lines.

Options and accessories

DC and RF Wiring

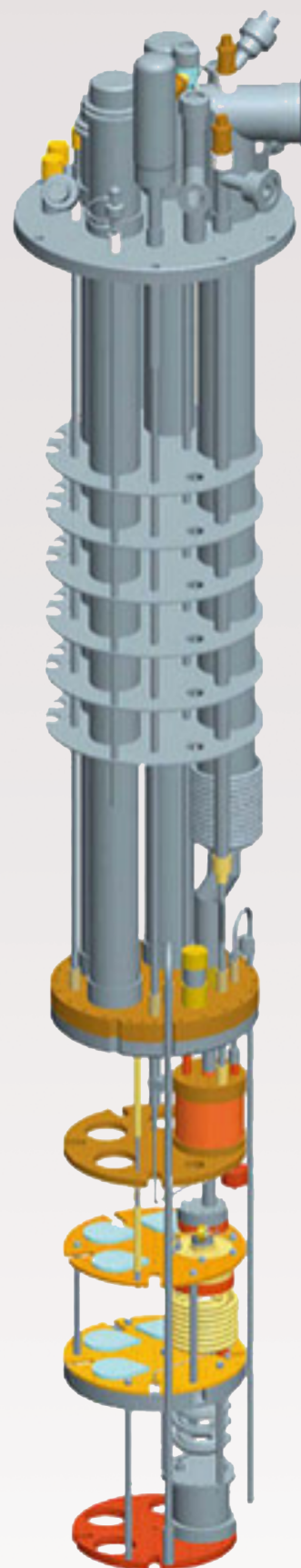
Choose between a wide range of standard wiring options: twisted pairs of constantan, copper or NbTi for low-frequency measurements, flexible stainless steel coaxes for MHz signals, semi-rigid stainless steel coaxes for up to 18 GHz or Thermocoaxes for heavily filtered low-frequency signals. Alternative wiring materials, attenuators and integrated amplifiers are also available on request.

Rotator Insert

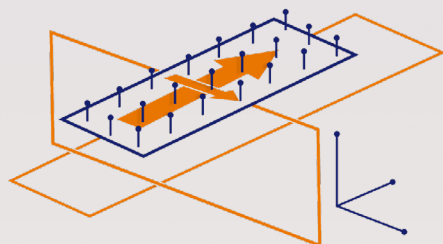
Mechanical rotator with 15 x 15 mm sample space allows for 260 degree polar rotation in high-magnetic fields. The rotator assembly below the mixing chamber is demountable to make space for a cold finger when a fixed sample position is preferred. The drive rod from room temperature is retractable to break the thermal connection to the mixing chamber after sample rotation. Automated stepper motor control using MercuryITC.

Low Eddy Current Sample Holder

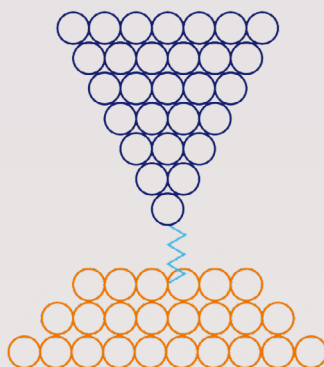
Our low eddy current sample holder with optimised geometry minimises both sample temperatures during a field sweep and quench forces acting on the refrigerator during a magnet quench.



Electrical Transport Measurements



Scanning Probe Microscopy



Spintronics



- Large experimental plates with easily accessible ports for installation of wiring and components
- Three line-of-sight ports for installation of up to six semi-rigid coaxes per port
- Two IVC ports allow electronics to be installed in liquid for improved thermal anchoring
- 144 mm diameter mixing chamber plate with 40 mm diameter sample space at field centre
- Automated gas handling system with software for data visualisation and remote control

Key Specifications

Base temperature	≤ 10 mK
Base temperature stability	± 1 mK
Maximum temperature	1 K
Cooling power at 100 mK	≥ 300 μ W (guaranteed) ≥ 400 μ W (typical)
Sample environment	Sample in vacuum
Continuous operation	Standard (no regeneration cycle is required)