OXFORD INSTRUMENTS

HelioxVT ™

Why choose HelioxVT?

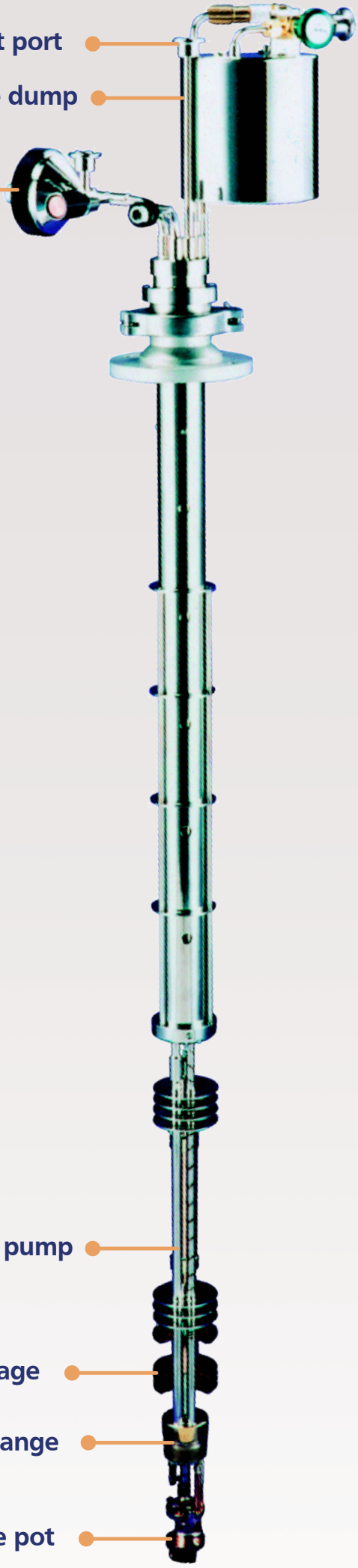
The **Heliox**VT range of single shot ^{3}He systems allows users to access temperatures below 300 mK for extended periods.

A fully configured **Mercury**iTC provides total control of the **Heliox**VT, automating cool down from room to base temperature and simplifying integration into your measurement setup via a range of standard communication interfaces.

For more specific experimental requirements, we can offer tailored ^{3}He systems designed to meet your needs.

Precise control of magnetic field and temperature

The **Helioc**VT is designed to operate safely in integrated into cryo-magnet systems – allowing access to the lowest temperatures and the highest fields.



Features

- Achieves < 300 mK for > 40 hours and 50 µW of cooling power at 350 mK for > 6 hours
- Fast turn around time for sample exchange
- **Heliox**VT uses a cold gas environment with a 50 mm access, therefore no liquid helium
- The sample temperature range of a new or existing VTI can be extended below 300 mK
- No liquid helium in the sample plane making the **Heliox**VT ideal for neutron or X-ray scattering experiments
- Compatible with 50 mm diameter VTIs
- 1 K pot free design – no additional room temperature pumps make this a simple, self-contained solution.

Magnetic Field Configuration

Magnetic field requirement	Configuration	Benefits
Up to 14 T	**Heliox**VT with **Teslatron**PT **Cyrofree** superconducting magnet system	- No requirements for liquid cryogens (or accompanying infrastructure) - Complete turn-key solution for material characterisation
Up to 21 T	**Heliox**VT **Integra** liquid helium cyrostat	- Higher magnetic fields than a **Cryofree** system - **Integra**AC cyrostat offers almost zero liquid helium consumption (at 4.2 K)

Key Specifications

Base temperature	≤ 300 mK for 40 hrs with no applied heat load
Cooling power	< 350 mK for 6 hrs with 50µW applied
Temperature range	300 mK to 300 K
Temperature stability	± 3 mK below 1.2K ; ± 0.1 K above 1.2 K
HelioxVT Sample space	43 mm diameter

Visit **nanoscience.oxinst.com** or email **nanoscience@oxinst.com**