General options:

- other geometries and vessel volumes
- tubes for cabling in LHe vessel (K-2000)
- DN40CF flanges for custom wiring (K-2005)
- DN16CF flanges for custom wiring (K-2003)
- N₂ vessel with optimized design to reduce vibration due to LN₂ boil off (K-2002)

Optional 3 T magnet (K2009):

- fully UHV compatible split pair coil
- SPM access by 30 mm x 50 mm bore

Optional custom designed radiation shields:

- 2 level shielding: LN₂, LHe
- wobble stick operation or by means of linear or rotation feedthrough mounted to the top flanges
- custom defined access

Optional mechanical access to experimental area

- linear push and/or pull mechanism (K-2008)
- internal (adjustable) spring set up

Optional external passive damping system (K-2001)

- passive air pressure damping system
- · fully integrated in LHe system
- · various different damping systems available
- easy internal mechanical shortcut to switch off damping for handling and maintenance

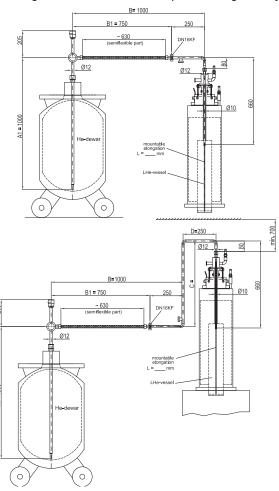
Alternative systems

- integrated LT / 1K stage
- integrated JT stage (<1 K ⁴He / < 500 mK ³He)
- integrated high field 1D, 2D or 3D superconduction solenoid or split pair magnet
- "up-side-down" design for e.g. top SEM access

fully customizing to meet your experimental needs

Transfer line set up:

As standard we offer a U-shape (L-2047) and a z-shape (L-2042) transfer line design for LHe filling, beside the standard design dimensions can be adapted to lab geometry.



Cryovac low temperature technologies

CryoVac GmbH & Co. KG Heuserweg 14 53842 Troisdorf, Germany Phone: +49 (0) 2241 84673 0 Fax: +49 (0) 2241 84673 29 info@cryovac.de www.cryovac.de

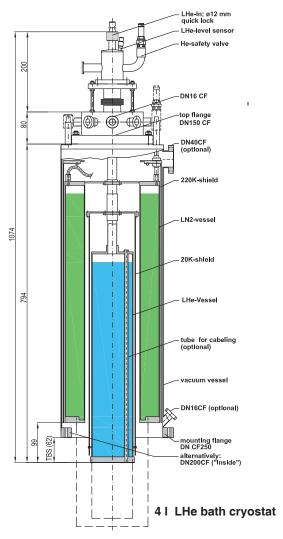
UHV SPM bath cryostat



- 2.2 K to 4 K
- compact design
- low loss (e.g. 4l LHe lasts > 120 h)
- SPM compatible

40 years of customized cryogenic solutions





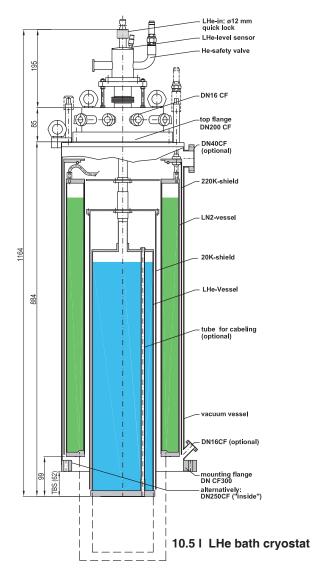
2 different standard sizes:

- 4 liter LHe / 15 liter LN_a version:
 - > 90 hours LHe hold time
 - > 100 hours LN_a hold time

base flange DN200CF (Order number K-2100) base flange DN250CF (Order number K-2101)

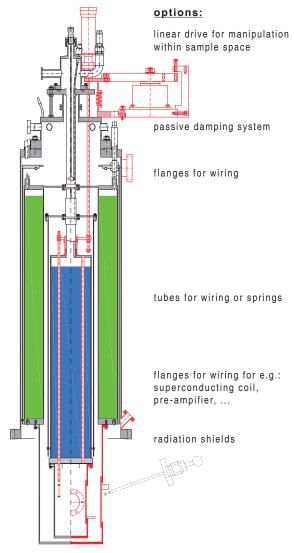
- 10 liter LHe / 21 liter LN₂ version:
 - > 200 hours LHe hold time
 - > 130 hours LN_o hold time

base flange DN250CF (Order number K-2200) base flange DN300CF (Order number K-2201)



Specifications of UHV bath cryostat:

- very well suitable for SPM measurements
- compact geometry and modular design
- UHV compatible, bakeable up to 200°C
- very low cryogenic consumption, therefore very low intrinsic vibration
- LHe system adjustable in regard to LN₂ / UHV system
- LHe system separable from LN₂ system for easy wiring and SPM set up
- active cooled LHe and active cooled LN₂ radiation shield
- · short sample / tip exchange distance
- full optical access to SPM setup
- 8 x DN16CF for custom cabling



Accessories

Beside this standard cryostat system and a broad range of customized variations CryoVac manufactures and offers all necessary accessories to operate these systems, such as:

- temperature monitor / controllers (e.g. E-0141)
- transfer lines standard (L-2042 or L-2047) and customized
- dewars (storage, transport, lab)
- LHe/LN₂ level monitors and controllers (e.g. E-0301)
- · Helium recovery and liquefaction systems
- UHV chambers
- radiation shields (for further information see special flyer)
- ..