

attoDRY2200

1024138

Technical Specifications

General Specifications	
technology	ultra-low vibration, pulse-tube based closed-cycle cryostat, designed for scanning probe microscopy applications
sample environment	He exchange gas
sample space	49.7 mm diameter probe bore fitting all attocube inserts
sample exchange	top loading system for quick access
usability	fully automated temp. and mag. field control via integrated touchscreen, web interface or LAN API
vibration & acoustic noise damping system	benchmark ultra-low vibration design
Performance Data	
temperature control	fully automated, including all pumps and valves, touchscreen & remote control via PC
temperature range	1.8 .. 300 K (automated control)
base temperature	1.65 .. 1.8 K (for standard inserts)
temperature stability	< ± 5 mK expected (1.5 .. 10 K), < ± 10 mK guaranteed (1.5 .. 10 K)
magnetic field control	via touchscreen, via remote control, via API
cool down time of sample	approx. 5 .. 8 h (depending on insert)
cooling power at sample location	> 1 mW @ 2 K
initial cool down time of system without insert (unattended)	15 .. 20 h (system without magnet), 25 .. 30 h (incl. 9 T magnet)
Compressor	
power consumption	max. 9.0 kW, 7.2 kW steady state
cooling of compressor	water cooling (requires local infrastructure)
Size and Dimensions	
cryostat (width x depth x height)	1450 x 793 x 1360 mm ³
required min. ceiling height	approx. 2.60 m (depending on magnet)
optional electronics rack (width x depth x height)	640 x 640 x 1050 mm ³
weight	420 .. 520 kg (depending on magnet)
Options and Upgrades	
superconducting magnet	solenoids: 9 T, vector magnets: 1/1/1 T, 9/1/1 T
bipolar magnet power supply	included (with optional magnet)
temperature controller	included
pumping kit	turbomolecular pump with suitable backing pump for sample space preparation
Compatibility	
confocal microscopes	attoCFM I, attoCFM IV
atomic force microscopes	attoAFM I, AFM upgrade options (MFM, KPFM, PFM, conductive-tip AFM), attoAFM III
transport measurements	atto3DR