

attoDRY2100

1009389

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, Constant low pressure (~50 mbar) over complete temperature range
sample space	49.7 mm diameter probe bore fitting all attocube inserts
sample exchange	top loading system for quick access, Manual gas handling
usability	fully automated temperature and magnetic field control via integrated touchscreen, USB interface for remote control
vibration & acoustic noise damping system	proprietary low vibration design
Performance Data	
temperature control	Fully automated, including all pumps and valves Touchscreen & remote control via PC
temperature range	1.65 .. 300 K (automated control)
base temperature	1.65 (expected), 1.8 K (guaranteed)
magnetic field control	via touchscreen, via remote control
Max. magnetic field	100 % (e.g. 9 T)
cool down time of sample	approx. 3 .. 5 h (depending on insert)
initial cool down time of system without insert (unattended)	15 .. 20 h (system without magnet), 20 .. 24 h (incl. 9 T magnet)
cooling power at sample location	> 2 mW @ 2 K
Closed-Cycle Cooler	
field cooling possible	yes
nominal cooling power	> 900 mW @ 4.2 K
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)	1120 x 640 x 1050 mm ³ (depending on magnet choice)
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
Options and Upgrades	
superconducting magnet	solenoids: 9, 12 T, vector magnets: e.g.: 9/3 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
confocal Raman microscopes	cryoRAMAN
atomic force microscopes	attoAFM I , AFM upgrade options (MFM, KPFM, PFM, conductive-tip AFM), attoAFM III (on request)
transport measurements	atto3DR

