attoDRY1100

1007003

Technical Specifications

Closed-Cycle Cooler	
cooling of compressor	water cooling (requires local infrastructure)
field cooling possible	no
nominal cooling power	> 900 mW @ 4.2 K
power consumption	max. 9.0 kW, 7.2 kW steady state
Size and Dimensions	
cryostat (width x depth x height)	1120 x 640 x 1050 mm³ (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 mm³
General Specifications	
technology	ultra-low vibration, pulse-tube based closed-cycle cryostat, designed for scanning probe microscopy applications
sample environment	He exchange gas, 4 pressure ranges, fully automated gas handling
sample space	49.7 mm diameter probe bore fitting all attocube inserts
sample exchange	top loading system for quick access, Automatic 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
Options and Upgrades	
superconducting magnet	9 T (other magnets on request)
bipolar magnet power supply	included (with optional magnet)
temperature controller	included
pumping kit	included
Compatibility	
confocal microscopes	attoCFM I, attoCFM II, attoCFM III, attoCFM IV
confocal Raman microscopes	attoRAMAN
atomic force microscopes	attoAFM I , AFM upgrade options (MFM, KPFM, PFM, conductive-tip AFM), attoAFM III (on request)
scanning Hall probe microscopes	attoSHPM
transport measurements	atto3DR
Performance Data	
temperature control	Fully automated, including all pumps and valvesTouchscreen & remote control via PC
temperature range	4 .. 300 K
base temperature	4 K (guaranteed), 3.2 (expected)
magnetic field control	via touchscreen, via remote control
Max. magnetic field	100 % (e.g. 9 T) @ 4 K sample temperature, 67% (e.g. 6 T out of 9 T) @300 K sample temperature, 100 % guaranteed for temperature between 4 and 10 K, 67% guaranteed, for temperature between 10 and 300
cool down time of sample	approx. 2 h (depending on insert)
cool down time of system (system incl. 9 T magnet)	approx. 10 .. 15 h (unattended)
cool down time of system (system without magnet)	approx. 5 .. 10 h (unattended)
temperature stability	< ± 10 mK expected (4 .. 50 K), < ± 25 mK guaranteed (4 .. 50 K)
cooling power at sample location	> 75 mW @ 10 K