

Technical Specifications

General Specifications	
technology	compact optical cryostat integrated into optical breadboard
sample environment	cryogenic vacuum, sample cooled via braids (ATC100)
sample space	75 mm (diameter)
sample exchange	easy access via removal of vacuum shroud
usability	fully automated temperature control (vacuum, cooldown, T control, warmup), all pumps integrated, USB interface for remote control
vibration & acoustic noise damping system	proprietary low vibration design
Performance Data	
temperature range	3.8 .. 320 K (depending on configuration)
Base pressure (in sample chamber)	< 5e-6 mbar
leak rate of vacuum	< 5e-9 mbar l/s
cool down time (incl. pumping time)	< 4.5 h to 5 K (depending on thermal load)
temperature stability	< 15 mK (peak-to-peak with damped sample mount)
cooling power at cold plate	> 170 mW @ 5 K
vibration level (cold plate, vertical)	< 5 nm (peak-to-peak@1500 Hz)
Compressor	
power consumption	max. 3 kW
cooling of compressor	water cooling (default; requires local infrastructure)
Size and Dimensions	
cryostat (width x depth x height)	430 x 710 x 890 mm ³
additional weight capacity	120 kg
Options and Upgrades	
temperature controller	included
pumping kit	included
vacuum shroud	Basic (standard shroud); upgrade options: RT-SWD, RT-USWD, LT-APO objective, HV objective, Photonic Probe Station, or customized height, diameter, windows & working distance
electrical access	36 customer wires included, heat sunk @ 4 K (additional wiring on request)
feedthroughs	electrical (DC, HF), optical fibers, gas capillary (on request)
sample motion	low temperature positioners
cryostat compressor upgrade	air-cooled (grey-room recommended)
flexlines	extension to 13 m or 20 m (instead of 6 m)
Compatibility	
confocal Raman microscopes	cryoRaman (on request)
Cryogenic Photonic Probe Station	confocal microscope with 2 fiber probes for side excitation/detection