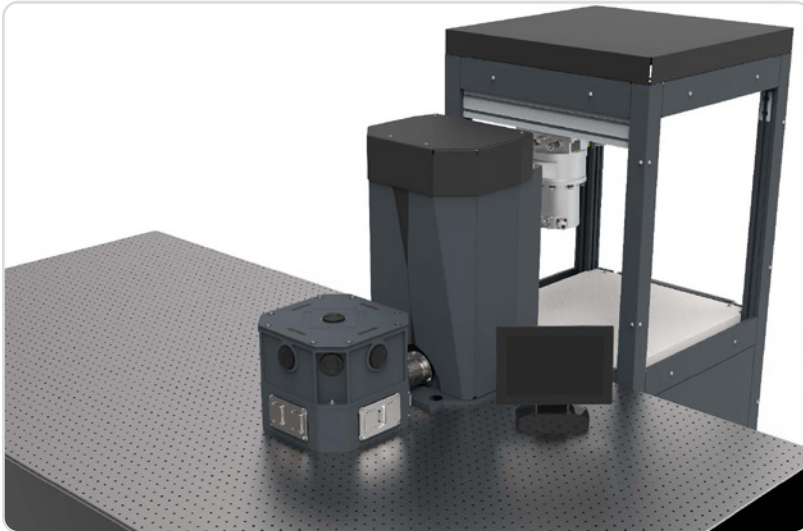


# Cryostation 200 PT

Configurable optical cryostat for complex use in quantum applications



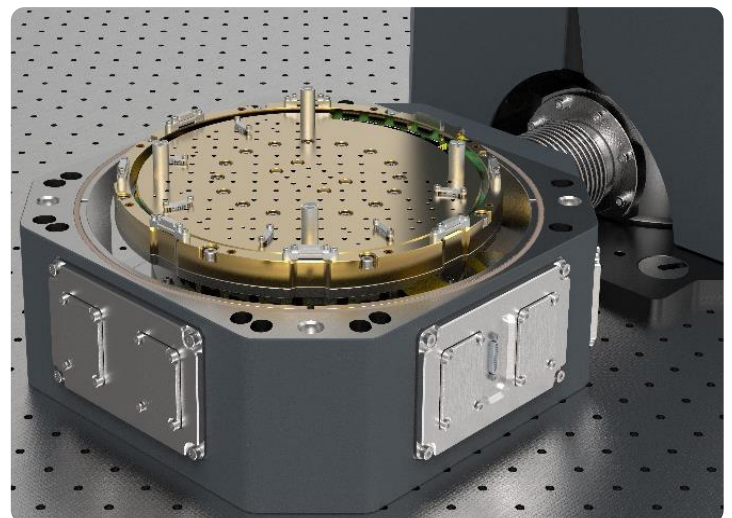
## Key features

- >250mW Cooling at 4.2 Kelvin
- Low temperature and vibrations
- Cryogen-free/closed-cycle cryostat
- Turn-key equipment solution with push button cooling
- External control via ethernet
- Free-space optical access
- Multiple vacuum feedthroughs for RF, DC, and Fiber Cables

## Optical Cryostat with High Cooling Capacity and Large Configurable Sample Space

High cooling capacity with large configurable sample space allows a user to easily design any experiment in the **Cryostation 200 PT**. The closed-cycle optical cryostat utilizes a pulse tube cryocooler and Montana Instruments patented low vibration technology to provide users superior mechanical and electrical vibrations. Six customizable vacuum-feedthroughs and >20 watts of cooling on the first stage of the sample platform allows for up to 100 RF feedthroughs or DC connections. Montana Instruments Galaxy Software provides push button cooldown/heat up control of your optical cryostat and advance remote monitoring, control and analysis of your system.

Cold science  
made **simple**



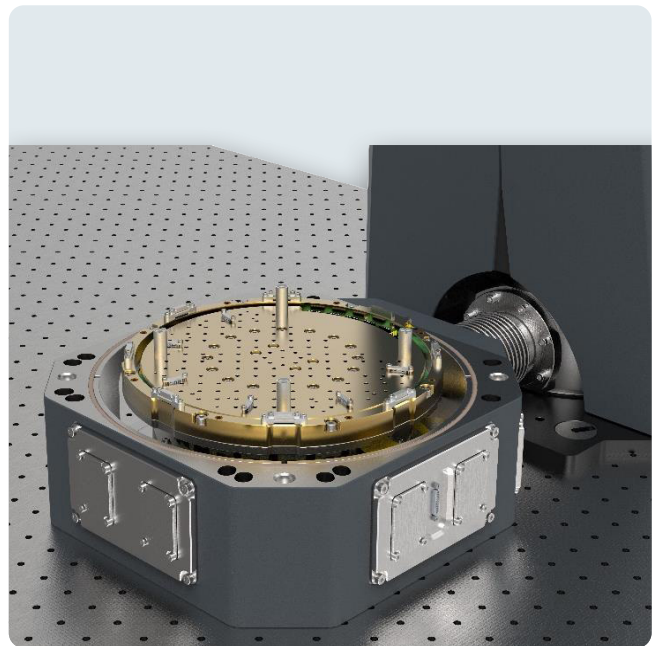
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## Sample Platform

The 200mm 4K low vibration breadboard platform offers maximum flexibility in design of your experiment. Eight optical windows allow for transmission or reflective measurements. Unparalleled optical access to your sample can be achieved by either low working distance windows or a Cryo-Optic that integrates a high NA objective into the sample space.



## Sample Chamber

Designed to accommodate a variety of configurations with incredible sample, electrical, and optical access for total experiment flexibility; simply lift off the vacuum housing assembly and radiation shield for unobstructed access to the sample and wiring. Six standard side panels support a wide range of RF, DC, fiber-optic or gas feedthroughs. Three large side panels support high density electrical connections.



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MONTANA INSTRUMENTS

# Cryostation 200 PT

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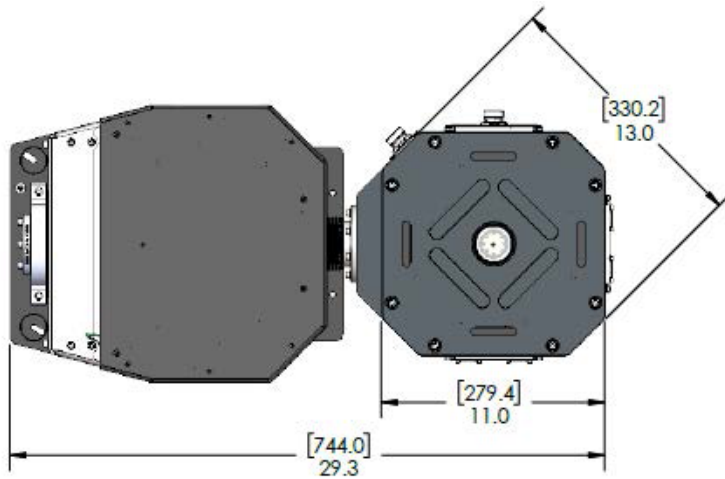
Specifications (PRELIMINARY)	
<b>Dimensions</b>	
Sample Space Standard configuration, customization available	Ø200 mm x 116 mm
<b>Performance</b>	
Temperature Platform temperature	3.6 K – 50 K
Temperature stability (P-P) With damped manual positioner	<20 mK
Vibrations (P-P)	<30 nm
Cool Down Time to 4.2K Depending on lab and sample environment	6 Hours
Cooling Power at 4.2K	>250 mW
<b>Optical Access</b>	
Optical Windows Standard configuration, customization available	7 Side + 1 Top
Beam Height	137 mm
Acceptance Angle (Full)	10°
<b>Electrical Access</b>	
Electrical	24 DC
Configurable Side Panels	6
<b>Control</b>	
Temperature Control Channels	2
Remote Control and Scripting	√
<b>Cryo-Cooler</b>	
Compressor	Water-cooled
Cold Head	Pulse tube
Flex Lines	20 meters
<b>Options</b>	
Sample Mounts	Multiple (Including electrical and custom designs)
Variable Temperature	ATSM (4.2K-350K)
Optical	Cryo-Optic (horizontal) Window Substrate Low Working Distance
Vacuum	Turbo
Positioning	Manual Positioner The Rook Nanopositioner 3 <sup>rd</sup> Party Nanopositioners
Interfacing (Side Panel Feedthroughs)	RF, DC, Fiber, Gas, Vacuum



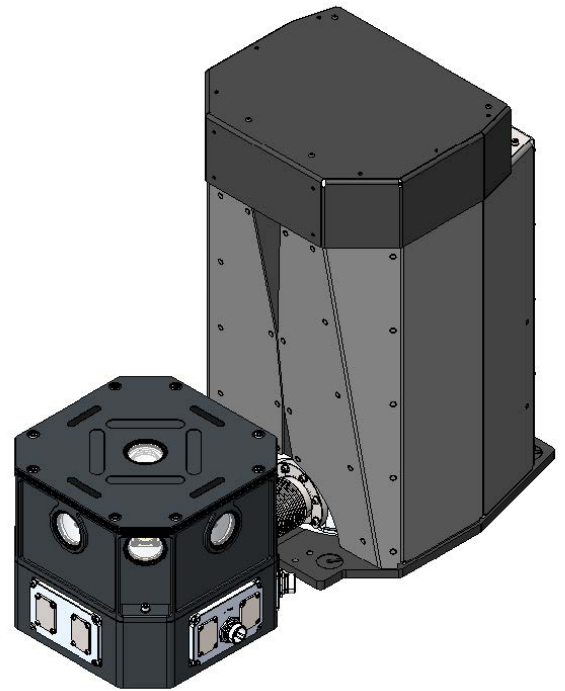
# Cryostation 200 PT

Configurable optical cryostat for complex use in quantum applications

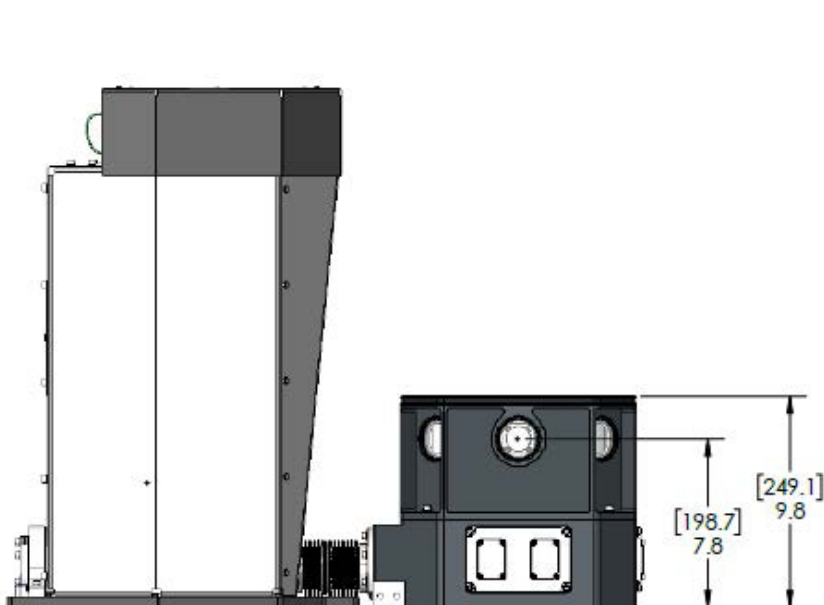
## Dimensions



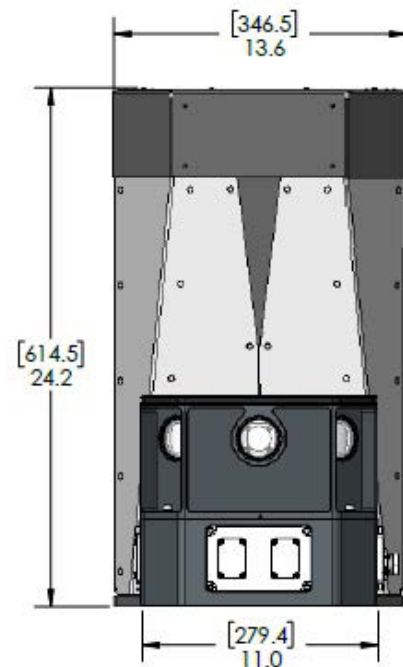
Top-down view



System may be mounted to imperial (inch) or metric optical tables.  
System may be aligned with edge of optical table or at a 45° angle.



Side view



Profile