HPD **Kilimanjaro 1260** Low Vibration, True 4 K Probe Station

> Overview

The Kilimanjaro 1260 Large Volume Low Vibration Probe Station is designed for researchers that need a true 4 K temperature probe station with a low vibration environment. The high cooling capacity, low base temperature, and low vibration provide a unique experimental setup for testing of superconducting devices and materials. The 4 K stage of the probe station is isolated from system vibration sources and integrated into an optical table for vibration isolation from the environment. The larger volume enables larger experiments that require magnetic shielding or large signal capacity. The Kilimanjaro was used as the base system for our Scanning SQUID Microscope (SSM).

When you need low vibration at 4 K





> Features

- Large experimental volume at 4K
- Low vibration from < 1 Hz to 1 kHz
- Opposed bellows
- Passive isolation
- Active isolation (optional)

• 4 K platform with quick access

- 4 K electrical and fiber optic feedthroughs
- Expandable, modular construction
- Easy, flexible I/O
- 7x easily accessible NW50 flanges above the table
- 1x large rectangular customizable flange
- 18x HPD standard feedthroughs on 50 K stage and 10x on 3 K stage
- Large rectangular customizable feedthroughs on 50 K and 3 K stages
- Standard ports for DC, RF & optical fibers
- Smart controls
- Pushbutton auto cooldown from atmosphere
- TCP/IP control
- Cryogen-free

> Design Specifications

- Ø34 cm x 25 cm tall 4 K experimental space
- 1.5 W cryocooler
- 1 W thermal lift at cold stage at 4.2 K
- < 4 K base temperature
- < 50 nm vibration stability, peak to peak
- < 5 mK temperature stability
- < 14 hr cooldown
- System will scan a 20 mm chip
- Attocube positioners with 5 mm travel in Z, 20 mm in X & Y
- 50 K and 4 K radiation shields



Create the right sample environment with optional double layer magnetic shields



Counterbalanced bellows and a rigid support tube isolate the cryocooler's vibrations from the rest of the system



50 K and 4 K thermal shields help ensure a 4 K sample environment.

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