

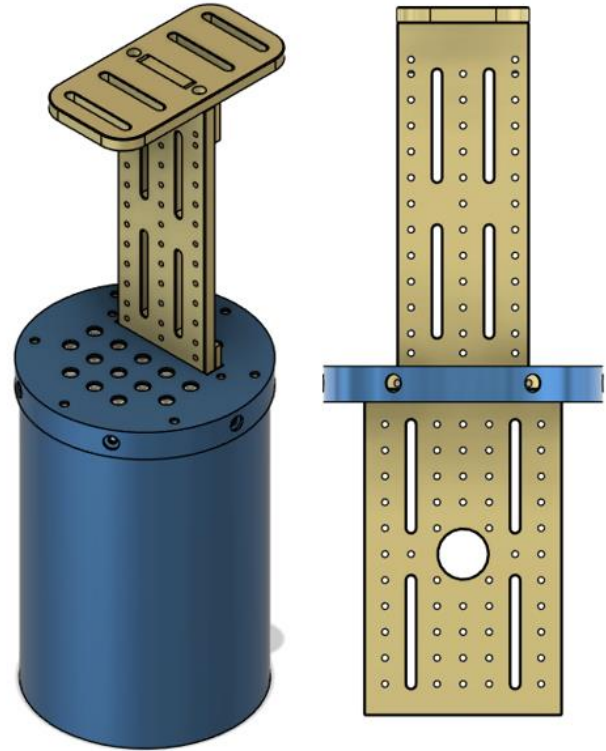
QMC-CRYOBRD-03-offset



Dilution Refrigerator Breadboard Sample Measurement System

Description

QMC-CRYOBRD-03-offset is a versatile, full-package cryogenic breadboard designed for the most demanding low-temperature experiments. Precision-machined from gold-plated OFHC copper, it delivers excellent thermal performance and long-term durability. A near-light-tight architecture combines cryogenic mu-metal and aluminum superconducting shielding to suppress magnetic and electromagnetic interference. The innermost sample space features an infrared gold-plated copper shield. A fully non-magnetic interior with 16 non-magnetic SMA bulkhead feedthroughs enables flexible, high-density signal routing. Designed to mount directly to the mixing-chamber flange of most dilution refrigerators, QMC-CRYOBRD-03-offset offers a turnkey solution for ultra-low-noise cryogenic research. QMC-CRYOBRD-03-offset, offsets the vertical breadboard from the center providing more space on one side of the breadboard to mount larger components.



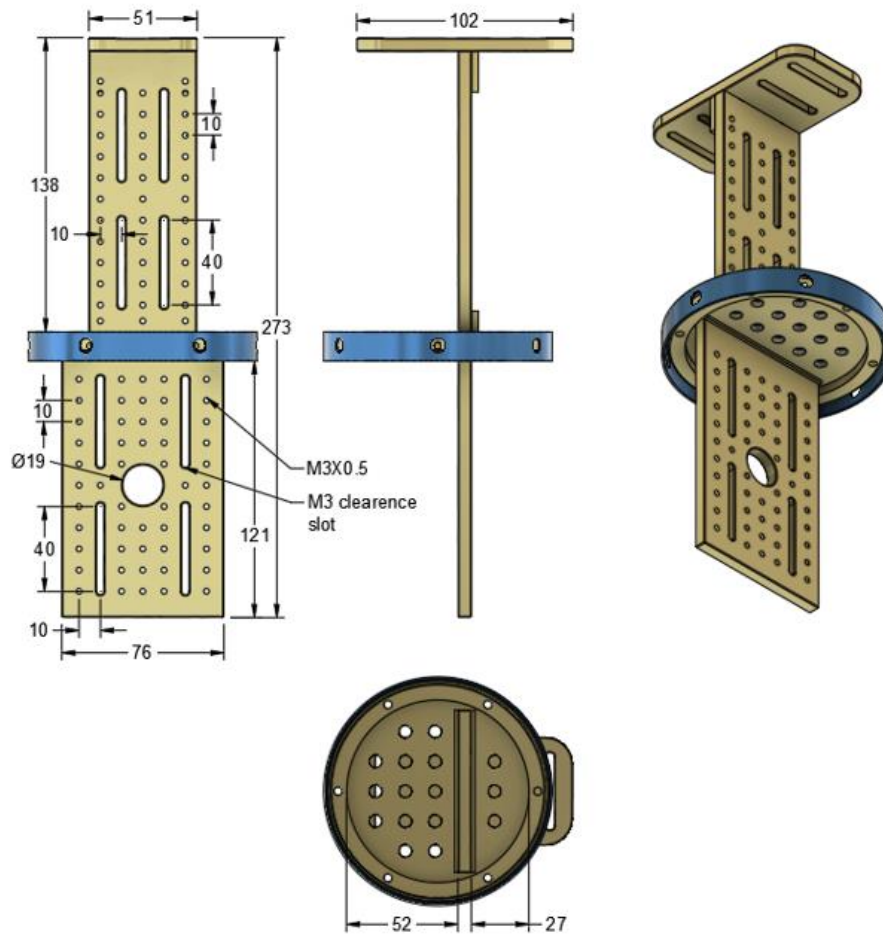
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Key Features

- Vertical Breadboard offset 12.7 mm from center to provide more space to facilitate mounting of larger components.
- 16x SMA nonmagnetic bulkhead feed-thrus
- 16x nonmagnetic SMA caps to shield ports which are not in use
- Breadboard consists of 52X M3 threaded holes, and 4x M3 screw clearance slots for flexibility in mounting samples
- Magnetic shielding includes Amuneal A4k and 6061 Superconducting shields.
- Gold plated infrared inner shield
- Durable Nickel-free gold plating on all copper parts
- DC feedthrough options available

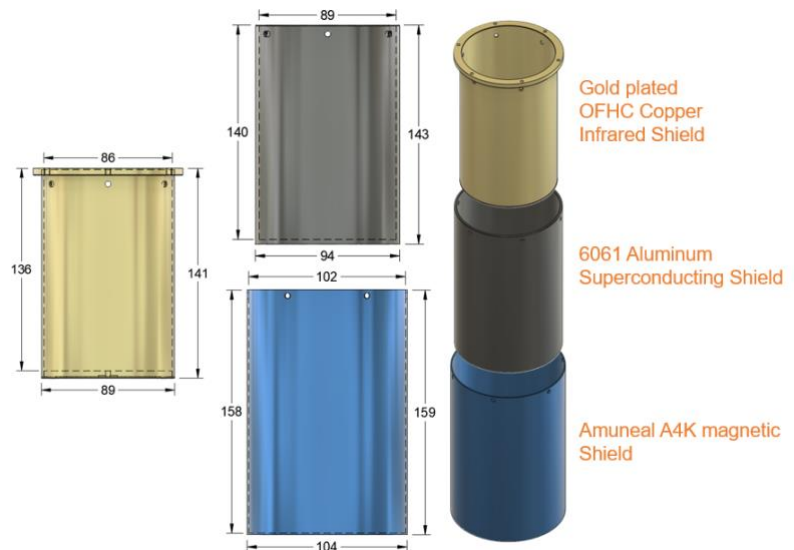
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Shielding

- 86 mm ID OFHC Copper Infrared Shield
- 6061 Aluminum Superconducting Shield machined from a solid piece
- Amuneal A4K 0.04" Mu-metal magnetic shield



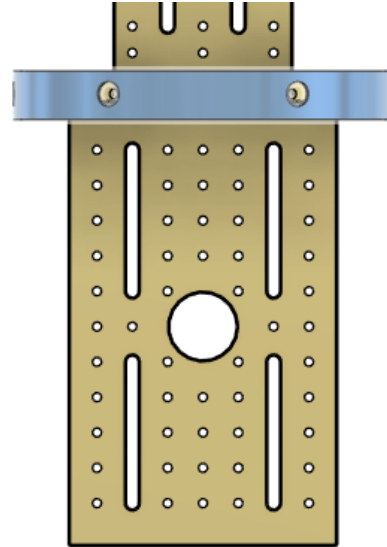
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Breadboard

- Breadboard material OFHC copper with hard durable gold plating with thickness of 30 microinches.
- Breadboard consists of 52X M3 threaded holes, and 4x M3 screw clearance slots for flexibility in mounting samples.



Mounting

- Breadboard system can be mounted to a mixing chamber flange of a dilution refrigerator through 4x M4 clearance slots allowing for flexibility in mounting position of measurement system. Clearance slots are offset by 2 cm for easy mounting to hole patterns found in most dilution refrigerator systems.

