



Installation Requirements

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Quantum Design MPMS SQUID VSM System



Required ceiling height, weight and dimension of system:

- See attached drawing.
- The assembled system fits through a 82 cm (32") wide door.
- The main system unit is mounted on casters and can be rolled between different locations.

Laboratory Ambient Conditions:

- Operating ambient temperature: 10-40 °C (50-104 °F)
- Operating ambient relative humidity: 10-90% (non condensing)

Cooling:

- Open air flow for pump and electronics cooling. There are no water or additional cooling requirements for the standard system configuration.

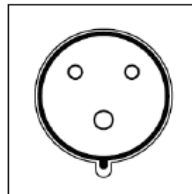
Vibration:

- The floor should be vibration free. As long as a person can not feel the vibrations when standing on the floor it should be acceptable.

Power Rating, Power Outlet and Fusing:

- The system is rated 200-230VAC, 50/60Hz, 10A Max., Single Phase
- The laboratory power outlet is required to be fused to 16A MAX.
- The Power cord supplied with the system is 2.5m (10 ft) long. The power outlet should be within that distance from the planned system location or an extension cord will be required (not supplied).

- Laboratory outlet specifications:
International industrial type connector
IEC 60309 6H Female,
16A/250V, 2P+E
I44 (splash proof)
Color Code: blue
Safety approvals: UL/CSA, VDE, IEC



Cryogenic Requirements:

For the initial cooldown the system requires the following:

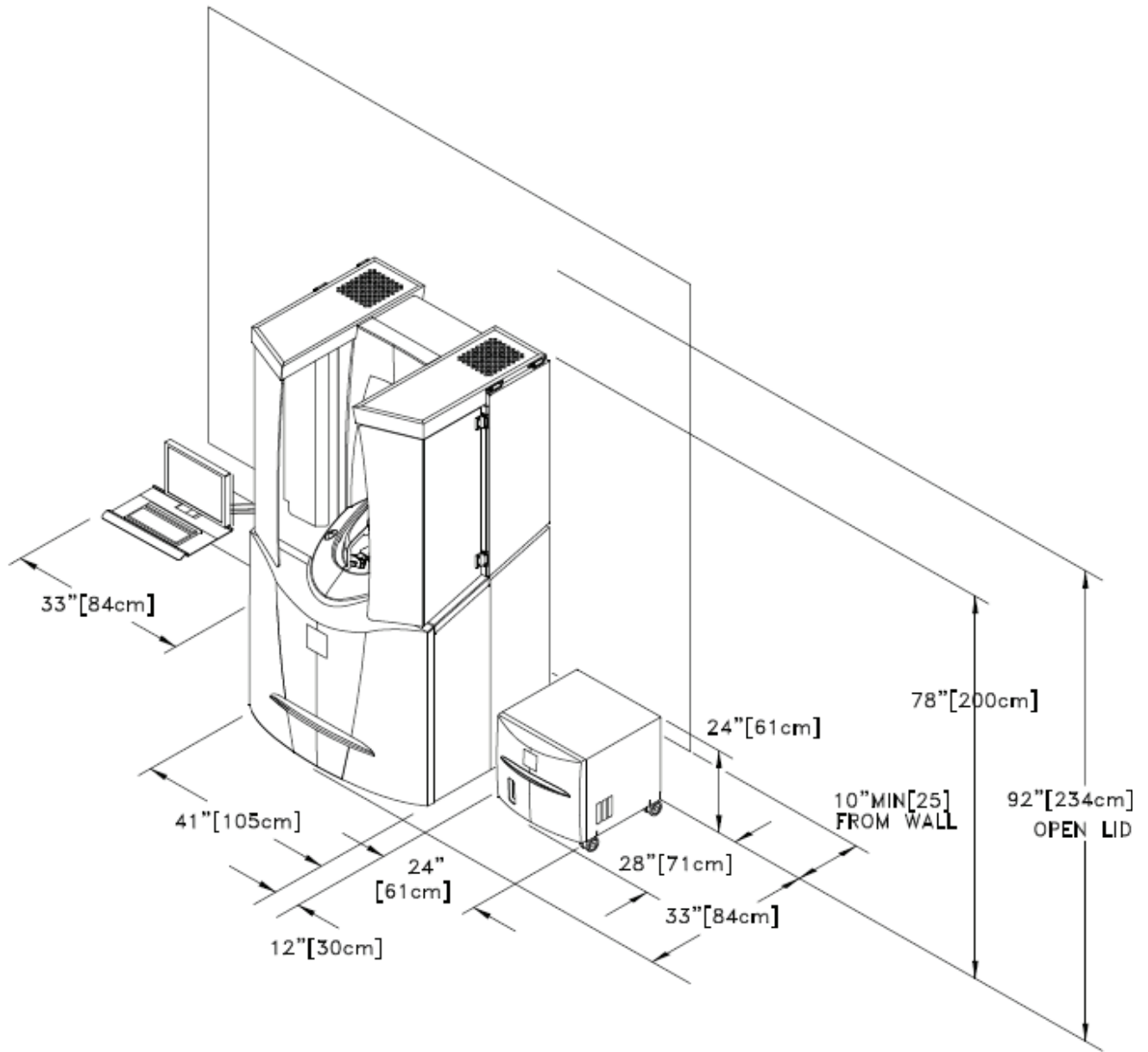
- Liquid Nitrogen: 100 liters in self pressurizing dewar.
- Liquid Helium: 100 liters (another 100 liters should be available as a back-up).
- The He transfer tube has an outer diameter of 9.5 mm (3/8"). A 12.7 mm (1/2") adapter is delivered with the system. Please make sure the Helium storage dewar has suitable fittings to allow use of either 12.7 mm or 9.5 mm.
- Helium gas cylinder with regulator (0-1 bar), min. pressure 100 bar on a 10 l bottle to allow flushing the system prior to cooldown and to pressurize the Helium transport dewar during helium transfer.
- Helium thumper to determine liquid helium level in storage dewar.

First cool down of system:

- Upon decision of the installer an initial cool down might be performed without using the He-gas recovery system.

Internet:

- Connecting the system to the Internet is highly recommended. The IT department should open ports 5631 and 5632 from IP 64.73.239.178 for access from QD to allow remote diagnostics and support.
- We recommend to have a telephone near the system.



MPMS SQUID VSM Laboratory Setup