



Cryogenic Thermal Testing



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Using a Cryostat-200 Thermal Insulation Test Apparatus, commissioned by NASA Kennedy Space Center's Cryogenics Test Laboratory, Aerospace Fabrication & Materials (AFM) tests to ASTM C1774, characterizing thermal performance of insulation systems.

AFM is an ISO9001/AS91000 certified manufacturing company that specializes in the design, fabrication, and installation of multilayer insulation (MLI) blankets for aerospace and cryogenic applications.

Cryogenic Testing Capabilities

The Cryostat-200 thermal insulation test apparatus is a cylindrical comparative calorimeter. This apparatus utilizes the boil off flowrate of liquid nitrogen to calculate heat flow and effective thermal conductance through a material, including MLI blankets, low-conducting bulk fill materials, and other insulation systems. The apparatus is a two part chamber, capable of pumping down to high vacuum to simulate orbital environments.

SPECIFICATIONS

Operating Pressure Levels

- Minimum Pressure: 10^{-5} torr
- Maximum Pressure: 100 torr

Operating Temperatures

- Cold Boundary Temp: 77 K (LN2)
- Maximum Warm Boundary Temp: 360K

Thermocouple Attachments

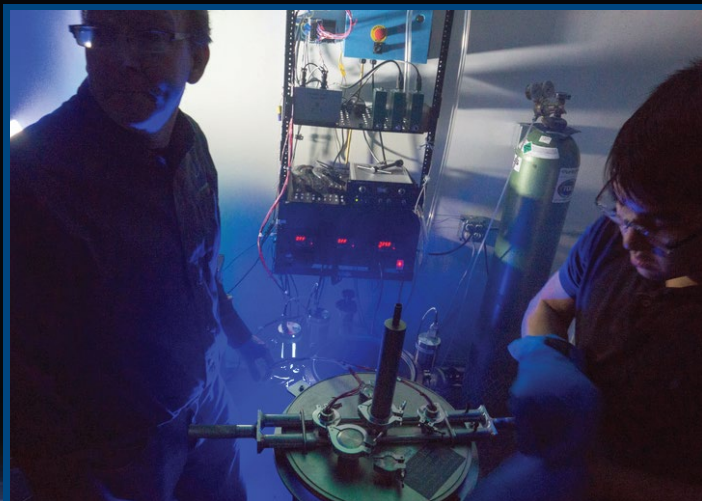
- 10 temperature measurement locations available

Chamber Dimensions

- Full Chamber
 - Height: 26.5 in
 - Inside Diameter: 11.75 in
- Inner Test Cylinder
 - Height: 20.75 in
 - Diameter: 5.20 in
- Bulk Fill Sleeve
 - Diameter: 7.20 in

Any Questions?

Please contact us at mli@aerospacefab.com to discuss further details.



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