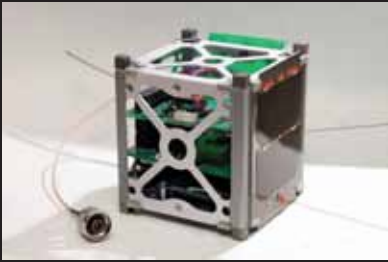


Space Simulation Systems



NANO-MASTER, Inc.
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NANO-MASTER Space Simulation Systems

The NDT-4000 is a Device Testing System for testing devices or samples in extreme vacuum and controllable uniform heat and cold cycle conditions. It is equipped with computer control, safety interlocks, and multiple levels of access with password restrictions. It can be used to test devices/samples with automated heat and cool cycles for extended periods of time exceeding 36 hours with varying temperature conditions defined by the recipe. One of the common applications of this system would be space simulation. The approximate chamber size is 43" in length and 24" in diameter. A 16" x 32" sliding thermal platform can be controlled within ± 1 °C across its surface are for temperatures ranging from would be -100°C to 150°C This platform is mounted on rolls so that it can be pulled out to 75% of its length for loading devices/samples. The chamber has provision for 4x 8" CF flanges that can be configured with an assortment of customer-defined feedthroughs for digital and analog communication, temperature measurement, power, RF, and other instrumentation needs . The standard vacuum system consists of a 1250 l/sec turbomolecular pump and a 680 l/min dry scroll backing pump. The base pressure of the system can be as low as 7×10^{-8} Torr and could reach 10^{-6} Torr range in less than 20 minutes.

Custom feedthroughs, additional instrumentation flanges and pump upgrades can be done upon request.



Sliding Thermal Platform

NANO-MASTER Space Simulation Systems

APPLICATIONS

- Mini Satellites
- Device Testing in Temperatures
-100°C to 150°C in Extreme Vacuum
for Space Simulation

FEATURES

- Rapid heating and cooling times
- 24"x43" horizontal cylindrical chamber
- Chamber has a provision for 4x 8"CF flanges
- 16" x 32" thermal platform controlled within $\pm 1^\circ\text{C}$ for temperatures ranging from -100°C to 150°C
- Thermal platform is mounted on rolls so that it can be pulled out to 75% of its length for loading devices
- Closed refrigeration system to eliminate consumable cost of liquid nitrogen used in most other systems
- Various pumping package configurations
- Base pressure 7×10^{-8} Torr, 10^{-6} Torr range in less than 20 minutes
- Automatic pressure control
- Multiple levels of access with password restrictions
- Fully automated PC based, recipe driven
- Custom feedthroughs



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