
NANO-MASTER Space Simulation Systems

NDT-4000 is a Nano-Master 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 24 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 sliding thermal platform of 16" X 32" would be cooled to -100°C. The thermal platform can also be heated to 150°C with 3 cm exclusion zone around the edges achieving the uniformity of ± 1 °C throughout the platform. Thermal platform is mounted on rolls so that it can be pulled out to 75% of its length for loading devices/samples. Chamber has a 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 . Vacuum system consists of HiPace 1200 (1000 l/sec) turbomolecular pump and an ISP 500 dry scroll 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

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APPLICATION

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

FEATURES

- Controllable uniform heat and cold cycle conditions
- Computer controlled
- Safety interlocks
- Multiple levels of access with password restrictions
- Chamber size is 43" in length and 24" in diameter
- Sliding thermal platform of 16" x 32" cooled to -100°C
- Thermal platform can also be heated to 150°C with 3 cm exclusion zone around the edges achieving the uniformity of $\pm 1^{\circ}\text{C}$ throughout the platform
- Thermal platform is mounted on rolls so that it can be pulled out to 75% of its length for loading devices/samples
- Chamber has a provision for 4x 8"CF flanges
- Vacuum system consists of turbomolecular pump and dry scroll pump
- Base pressure 7×10^{-8} Torr, 10^{-6} Torr range in less than 20 minutes
- Custom feedthroughs



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