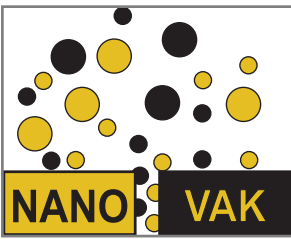


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Space Simulator System





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Space Simulator System

NANOVAK Ar-Ge Ltd. has recently developed a space simulator that enables the user to conduct vacuum, gas, temperature dependent experiments using a computer user interface. The chamber is 200 lt. and houses a thermal table that is 40 cm deep, 30 cm wide and can carry loads up to 25 kg. Base pressure level is 10^{-7} Torr and pressure can also be controlled by leaking mixture of Ar, N₂ and O₂, H₂ gases from 10^{-7} to 1 Torr.

Thermal table temperature is PID controlled and follows a multi-step, user programmable profile that varies between -100°C / +150°C continuously. The table has been tested under 400 W thermal load and functions properly.

In addition, 10 auxiliary thermocouples are supplied to monitor temperature of various parts of the test sample. The computer program displays 10 different temperatures on the screen continuously. Log of vacuum level, 10 different temperatures and temperature profile of the table are kept in an excel file for each run.

High voltage and high current electrical feedthroughs as well as BNC, RF and multi-pin connector feedthroughs are supplied in desired configurations to carry out electrical measurements during tests. The chamber is equipped with several sight windows. For optical measurements, Quartz, Sapphire and Germanium windows can also be installed for optical coupling.

All system operations can be controlled using a simple LabView program on the computer. Due to unique design of the system rapid cycle-times enables the user to conduct 2-3 experiments per day.



Screen shot of a run with NVSS-600, where table temperature profile, temperatures and vacuum level are displayed on the screen.