

Space Environmental Test Laboratory



Services Provided:

- Thermal tests in components, subsystems, and systems levels
- Thermal space environment simulation and modeling
- Satellite thermal design verification
- Thermal vacuum qualification test
- Thermal vacuum acceptance test
- Thermal vacuum proto-qualification test
- Vacuum bake-out test
- Thermal balance test (TBT)
- **And many others...**

Samples from our Projects / Products:

- Payload Camera for EgSACube which will be launched to ISS
- Structure Thermal Model (STM) for Micro-satellite (NExSat-1)
- Battery and communication boards for EgSACube Series

Facilities Available:

- ❑ Vacuum chamber from (CAST) China Academy of Space Technology with the following specifications:
 - Effective size (4.5m x 6m) (Length x Diameter)
 - Vacuum pumping system reaches up to (10⁻⁵)Pa (unloading pressure)
 - Cooling system reaches to (– 173)Celsius degree using LN2 Circulation, while heating system reaches to (+ 200)Celsius degree using Heat Cage method
- ❑ Vacuum chamber from LACO Technologies Company with the following specifications:
 - Size (1m x 1m x 1m) (Length x Width x Height)
 - Vacuum pumping system reaches up to (10⁻⁵)Pa
 - Cooling system reaches to (–150)Celsius degree & heating system reaches to (+150)Celsius degree
- ❑ Vacuum chamber from ABBESS Company with the following specifications:
 - Size (0.6m x 0.6m x 0.6m) (Length x Width x Height)
 - Vacuum pumping system reaches up to (10⁻⁷)bar
 - Cooling system reaches to (– 80)Celsius degree using thermal fluid circulation, while heating system reaches to (+ 150)Celsius degree using heaters



Part of our Facilities / Services:

Dynavac gaseous nitrogen Thermal Conditioning Units (TCU)

They provide high efficiency temperature control of shrouds, platens, or cold plates over an operating range of -180°C to 150°C . TCU is controlled through PLC, while the user interface is controlled via a local touch screen.



Rough pump unit

It reaches the pressure inside the chamber from atmospheric to 1pa.

Cryo pump unit

Does not contribute any contamination to the vacuum chamber because it functions by capturing gases, and no moving parts or lubricants are exposed to the vacuum. Produce clean, fast vacuum for high-vacuum applications .

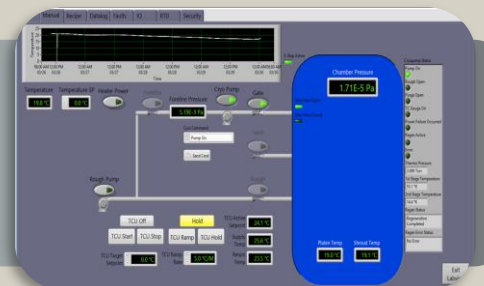


Thermal vacuum chamber

Simulate the space environment by achieving lower space vacuum level and space thermal environment.

Manual and automatic control Unit

Enables the operator to control the system manually and automatically.



And many others... Contact us to know more about our Services.

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