

Thermal Vacuum/Thermal Equilibrium

Abstract:

This instruction describes the appearance features, technical specifications, interface definitions and communication protocols of Thermal Vacuum/Thermal Equilibrium.

Key Words: Satellite, Thermal Vacuum, Thermal Equilibrium, Specification

1. Appearance

The appearance of Thermal Vacuum/Thermal Equilibrium is shown as figure1.



Fig.1 Thermal Vacuum/Thermal Equilibrium

2. Specifications

It has a Thermal Vacuum/Thermal Equilibrium laboratory, which undertakes the task of Thermal Vacuum/Thermal Equilibrium test. Its annual test capacity is 1000 sets. The Thermal Vacuum/Thermal Equilibrium laboratory has 24 sets of high and low Thermal Vacuum/Thermal Equilibrium environment control test boxes, high Thermal Vacuum/Thermal Equilibrium aging test boxes and Thermal Vacuum/Thermal Equilibrium impact test boxes, all of which can meet the test requirements of GJB1027- 2005.

Table1 Thermal Vacuum/Thermal Equilibrium laboratory List

Item	Number	Remark
HVT 2000	2	Φ 1000mmX1200mm
RZKW A	4	Φ 800mmX1000mm
RZKW II	2	Φ 600mmX600mm
RZKW F	1	Φ 1500mmX2000mm

It can be used for whole satellite, subsystem and single machine.

Table2 HVT2000

Item	Ability	Remark
Temperature control range	-70°C~120°C	
Limit Vacuum Degree	<10-4Pa	
Max capacity	50kg	
Vacuum chamber leakage rate	<5X10-3 Pa • L/s	
Temperature Sensor	8	
Interface	92bin of 12set; Interface of 3A Cable	
Volume	Φ 1000mmX1200mm	

Table3 RZKW A

Item	Ability	Remark
Temperature control range	-70°C~120°C	
Limit Vacuum Degree	<10-4Pa	
Max capacity	30kg	
Vacuum chamber leakage rate	<5X10-3 Pa • L/s	
Temperature Sensor	6	
Interface	92bin of 16 set; Interface of 3A Cable	
Volume	Φ 800mmX1000mm	

Table4 RZKW II

Item	Ability	Remark
Temperature control range	-70°C~120°C	
Limit Vacuum Degree	<10-4Pa	
Max capacity	50kg	
Vacuum chamber leakage rate	<5X10-3 Pa • L/s	
Temperature Sensor	8	
Interface	92bin of 12set; Interface of 3A Cable	
Volume	Φ 600mmX600mm	

Table5 RZKW F

Item	Ability	Remark
Temperature control range	-70℃~120℃	
Limit Vacuum Degree	<10-4Pa	
Max capacity	50kg	
Vacuum chamber leakage rate	<5X10-3 Pa • L/s	
Temperature Sensor	8	
Interface	92bin of 12set; Interface of 3A Cable	
Volume	Φ 1500mmX2000mm	

3. Application

- 1) Manned Space Engineering;
- 2) The lunar exploration program;
- 3) Micro nano satellite.