Thermal Vacuum Testing Equipment

Application:

Thermal vacuum testing equipment is used for military industry and aerospace products to simulate the space vacuum, cold black and solar radiation environments in the ground environment, to conduct thermal vacuum tests and thermal balance tests. Space environment ground simulation test equipment can simulate the cold and hot environment of vacuum space, perform thermal vacuum test on the test piece, and effectively control, monitor and record the temperature of the test piece in the vacuum space, which provides necessary conditions for the research of related aerospace products.

Specification:

Product	Thermal Vacuum Testing Equipment		
Model	MQ-KM1	MQ-KM2	MQ-KM3
Vacuum Tank Size (m)	φ1×1.5	φ2×2.5	φ3×3.5
Limiting Vacuum (Pa)	$\leq 5\times10^{-5}$		
Working Vacuum (Pa)	$\leq 1.0\times10^{-3}$		
Refrigeration Mode	Refrigerating Medium	Complex Working Medium	Liquid Nitrogen Refrigeration
	Thermal Sink + Cold-Plate	Thermal Sink +Heating Cage	Liquid Nitrogen thermal sink+ Heating Cage
Temp. Range	-70℃ ~ +130℃	-150℃ ~ +150℃	-173℃ ~ +170℃
Temp. Stability	≤1℃/h	≤1℃/h	≤1℃/h
Temp. Uniformity	≤±2.0℃	≤±3.0℃	≤±5.0℃
Temp. Precision	±1℃	±1℃	±1℃
Heating / Cooling Rate	≥1℃/min		
Leakage Rate of Vacuum System	$< 5\times10^{-9}$ Pa.m3/s		
Noise	Noise from Vacuum Extraction Equipment < 70dB (A)		
Vacuum Time	The container can be pumped to better than 1.0×10-3Pa within 4 hours under atmospheric temperature and no load.		
Temp. Detection System	The system uses multi-channel Pt100 temperature inspection meter to measure multi-point temperature		
Control Monitoring System	Mainly include industrial control computer, control cabinet, PLC, instrument, various operation control switches, etc		
Controller	Programmable controller, communication module, communication cable		
Power Supply	AC 380V±10% ,50HZ		
Standards	GJB 1027A; GJB 1033; QJ 1446A; QJ 2630.1; QJ 2630.2; QJ 2630.3; GB 150-1998; GB/T 3164-2007; GB/T 6070-2007; GB 50054-1995; GB 50316-2008…		