Simulation of High Altitude Low Pressure Test Chamber 6004C

1. Product description

Battery low pressure (high altitude) simulation test, all tested samples were tested at negative pressure of 11.6kPa(1.68psi). High altitude simulation test, all samples tested were tested at low pressure.

2. Test purpose:

The final result of the test requires that the battery should not explode or catch fire; moreover, the battery should not smoke or leak, and the battery protection valve should not be destroyed. Test whether other electronic and electrical products can work normally at low pressure, or be damaged, etc.

3. Implementation standards

3.1 GB 31241-2014 Safety Requirements for Lithium-Ion Batteries and Battery Packs for Portable Electronic Products.

3.2 UN 38.3, Proposals on the Transport of Dangerous Goods-Testing and Standards Manual, Part III, Section 38.3.

3.3 UL 1642 Lithium Battery Standard.

3.4 UL 2054 Domestic and Commercial Battery Groups.

3.5 IEC62133-2012 Safety requirements for batteries and battery packs containing alkaline or non-acidic electrolyte-Safety batteries for sealed batteries for portable equipment.

Standard requirements:

After fully charging the battery according to the specified test method, place the battery in a 20℃ ST 5℃ vacuum box, reduce the internal pressure to 11.6kPa (simulated altitude 15240m) and maintain it for 6h.

The battery should not avoid fire, explosion or leakage.

Note: 20℃± 5℃ is the ambient temperature, and the ambient temperature adjustment is controlled within the standard requirements.

4.Box structure and the vacuum system:

Internal box size	500×500×500mm (W×D×H)
Carton size	800×750×1480mm (W×D×H) Subject to actual object
Interlayer	The inner box is divided into two layers and two distribution boards

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Visualisation window	Door has 19mm tempered glass window, size W250 * H300mm
Internal box material	304 # stainless steel industrial plate thickness is 4.0mm, internal strengthening treatment, vacuum is not deformed
External box material	Cold-rolled steel plate, 1.2mm thick, powder baking paint treatment
Hollow filling material	Rock wool, good thermal insulation effect
Seal material at the door	High temperature resistant silicone strip
Trundle	Install movable brake castwheel, fixed position and arbitrary push
Box structure	Connectype, operating panel and vacuum pump installed under the machine
Vacuum extraction control mode	Using E600 optimization instrument 7 inch touch screen instrument, the whole process of automatic work, the product put in-start the vacuum can be
Control model	The parameters such as vacuum limit, vacuum limit, pressure retention time, end pressure relief and end alarm can be set at will 
Tightness	The door of the machine is sealed with a high-density silicone sealing strip
Vacuum induction mode	Using diffusion silicon pressure sensor
Vacuum display mode	Display on the touch screen meter
Low pressure range of the aircraft station	5.0 KPa~101.3KPa
The lowest pressure	5.0KPa

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Control accuracy	± 0.5 kPa (at 5 kPa), ± 1 KPa (at 5 KPa ~ 40 KPa), ± 2 KPa (at 40 KPa ~ 80 KPa)
Pressure discharge rate	15KPa/min±3.0KPa
Vacuum pressure-retaining leakage rate	About 0.8 KPa per hour
Vacuum pump noise	Within 75DB
Air pressure protection	When the pressure protection value is exceeded, the vacuum operation is stopped automatically and the pressure relief protection is provided
Vacuum pump configuration	Equipped with a VP-2 vacuum pump, motor power 220V/0.25KW 
Machine power supply	220V/50Hz 7A 1.5KW
Circuit protection system	Ground-based protection, fast insurance, etc
Weight	About 250kg

5. Configuration list

Order number	Accessories name	Model	Brand manufacturer
1	Touch screen controller	E600	Excellent instrument
2	vacuum pump	VP 750	Darto
3	Pressure relief solenoid valve	FB2E-V	KSD
5	vacuum control check valve	DN15	good day
5	Digital display timer	JSS48A	Tai song
6	panel switch	LA38	Jiangyin
7	Vacuum AC contactor	LC1/N0910	Schneider
8	Overload protection	NR2-25/2.5A-4A	Schneider

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9	Overcurrent fuse / seat	10A	Chint
10	Torque switch	PCB Y090	Two workers
11	Switching Mode Power Supply	S-35-24	Panasonnic
12	auxiliary relay	JQX13F（LY2）	Leck
12	cable conductor		Minxing / Jin Ya
11	pressure pickup	KLJYB-K	The Kunlun Mountains

6. List of easily damaged equipment

Order number	Name of a part	Explain
01	Weatherstrip	Custom made
02	Vacuum pump	Be sure to replace the pump oil regularly and maintain it regularly according to the operation of the equipment

7. Equipment Delivery list

7.1 Instructions;

7.2 Delivery order;

7.3 Simog high altitude low pressure test chamber;

7.4 Qualification certificate, warranty certificate;

8. Requirements for equipment use environment

Specifications	**Index requirements**
Environmental requirements	Temperature below 45 degrees, humidity below 80%
Power	AC220V，50/60Hz
Headwaters	/
Vacuum	/
Compressed air	/
Ground requirements and load-bearing requirements	Concrete ground: 300kg

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Network requirements	/
Smoke, dust, exhaust gas, Construction requirements for wastewater treatment plant	Vacuum pump exhaust port is φ 20mm

9. Product appearance



Pictures are for reference only, please refer to the actual product.

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