Technical Specification of Sand Test Chamber

1. Product Application

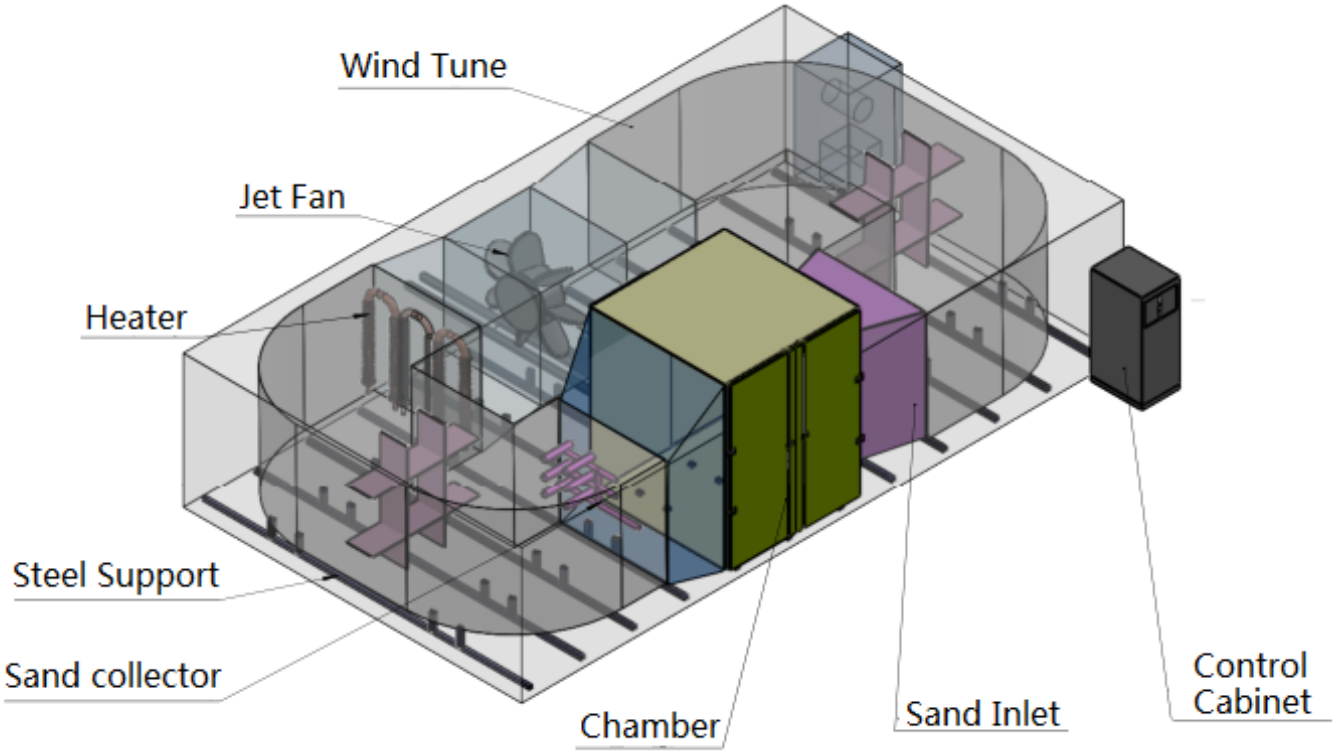
The sand test chamber is driven by a high-power fan to blow a certain concentration of sand dust over the surface of the test samples at a certain flow rate, so as to evaluate the ability of these test samples (equipment) to resist the penetration effect of dust particles under the action of dry sand or dusty atmosphere, the ability to resist the abrasion or blocking effect of gravel, and the ability to store and operate.

2. General Parameter

Standard: IEC.60068-2-68-1994 Test L: Dust and sand
Chamber internal Dimension: 3750*2500*6600mm(D*W*H);
Temperature Range:≤60℃;
Humidity Range: ＜25%RH;
Wind Speed:≤29m/s;
Sand Density:＜11g/m^3;
Noise during running＜85dB.

3. Structure

Shanghai Zealwe Technology Co., Ltd.
Add：No.1288, Zhongchun Road, Minhang District, Shanghai, China, 201109
Tell：+86-21-5432 2103 / 5432 2105
E-mail：info@zealwe.cn



Sr. No.	Equipment part	Function	Specification of key material.
1	Chamber	Enclose the sample	External Material： 0.8 thickness, Steel plate. Internal Material: 1.2mm thickness, 201stainless steel. Heart Insulation Material: 100mm thickness, Flame retardant polyurethane. Sample fixture： For 2200mm*1250mm*50mm Module. 40*40mm Aluminum alloy. Observation Window: Tempered glass, 400*500mm. Temperature sensor: PT100 Temperature range: 0-200℃. Temperature resolution: 0.1℃. Temperature accuracy: 1%. Humidity sensor: Wet bulb gauze Humidity range: 0-100%RH. Humidity resolution: 1%. Humidity accuracy: 5%.

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2	Wind tube	Produce the wind to blow the sand	Jet Fan： 110KW. Wind Tune： 201 stainless steel. Sand density sensor: Pipe type. Sand density range: 0-20g/m^3. Fresh air inlet: Self-balance inlet + Filter grid. Over pressure outlet: Self-balance inlet + Filter grid. Wind speed sensor range: 0-40m/s. Wind speed accuracy： 0.1m/s
3	Cooling & Heating system	Control the temperature in the chamber.	Cooling system: Cooling(Chiller) power, 20P. Heating system: 9KW. 304 stainless steel heater. Temperature sensor: PT100. Temperature range: 0-200℃. Temperature resolution: 0.1℃. Temperature accuracy: 1%.
4	Sand system	Control Sand density	Sand feeder： 304 steel controllable feeder. Sand tank： 200L, 304 stainless steel. Speeder: Frequency control. Adding sand: Manual. Collector: Replaceable polyester dust-proof filter bag. Electric pusher：6000N, Aluminum alloy.

Internal view

Sand collector

Wind tune

4. Control

Controller: 7" touch screen controller, 800*600 resolution.
Temperature control: PID
Humidity control: PID
Ammonia control: On/Off
Operation: Pre-set program.
Program capacity: 999 pcs program. 999 step in one program.
Temperature, Humidity, Wind speed, Testing time could be recorded and memorized every 5 second. Faulty

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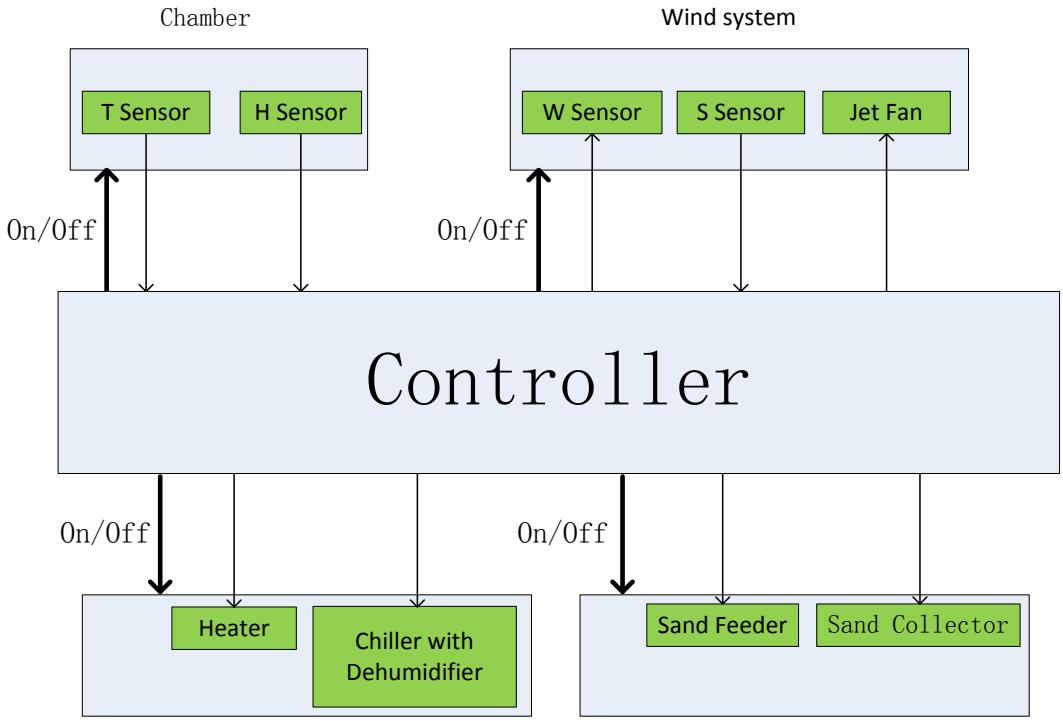
alarm and faulty reason could be displayed.



5. Security protect

Reliable grounding protection；

Leakage break off protection；

Heater short circuit protection；

Jet fan over load protection

Over temperature protection with acoustooptic alarm

Over press protection of chiller.

Over load protection of chiller；

Low voltage, over voltage, Lack phase protection of power supply.

6. Facility demand

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Sand: According to the standard.

Compressed air: Pressure≥0.8Mpa, Flow:≥500L/min.

Power supply: AC 380V, 50HZ,180KW.

Space: 18000*9000*7000 (L*W*H)

Environment Temperature: 10 ℃40 ℃.

Environment Humidity: ≤85%.

7. Spare parts & Consumables

Sr. No.	Name	Manufacture	Model	Replace Period
1	Wet bulb gauze	WICK	WG-104H	3 months
2	Sealing strip	Ao Weite	R18	2 years
3	Sand density sensor	Dongya	DFM/TS	1 year
4	Heating tube	Yangshi	U-2000	1 year
5	Collector bag	Bangte	130*1000	1 year
6	Sand transfer	Shenwo	Double-25	0.5 year
7	Temperature Sensor	Suzhou Weile	PT100	1 year
8	Filter	Schneider	DTAR0721	0.5 year
9	Solid state relay	Wuxi Gute	SSR-3P4040	1 year
10	Wind speed sensor	Dayu	WS200B	1 year

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