

Climatic Temperature and humidity chamber



product description

The temperature and humidity values set by the user can be maintained in the constant temperature and humidity test chamber, and these temperature and humidity values can also be alternately changed by program settings. As long as it is necessary to test the performance of the product under high temperature, low temperature, high humidity, dryness, alternating temperature and humidity, etc., it is necessary to use a constant temperature and humidity machine. Usually it is widely used in electronics, electrical appliances, communications, instrumentation, vehicles, plastic products, metals, food, chemicals, building materials, medical, aerospace and other industries. The constant temperature and humidity test chamber has other names, such as constant temperature and humidity tester, thermostat, constant temperature and humidity chamber, which are all kinds of products.

Features

The constant temperature and humidity cabinet is made of SECC steel plate and sprayed by CNC machine tool. The shape is beautiful, novel and adopts no reaction handle. It is easy to operate.

Microcomputer temperature and humidity controller, accurate and reliable temperature control

The large observation window is equipped with a light to keep the box bright, and three layers of vacuum glass are used to clearly observe the condition of the box at any time.

It has an independent temperature limit alarm system, which automatically interrupts when the temperature exceeds the limit temperature, ensuring safe operation without accidents.

The test box is equipped with a test hole with a diameter of 50mm on the left side of the box for external test power or signal lines.

High quality fixed PU movable wheel on the bottom of the machine

Technical Parameters

型号 Model	RHP
控制系统 Control system	平衡调温调湿控制系统 (BTHC), 以 P. I. D. 方式控制
温度范围 Temp. range	-40°C ~ 150°C
湿度范围 Hum. range	10% ~ 98% R. H
温度波动度 Temp. fluctuation	±0.5°C
湿度波动度 Hum. fluctuation	±2.5% R. H
温度偏差 Temperatur	±2.0°C

e deviation	
湿度偏差 Humidity deviation	±3%R.H(≥75%R.H时)/±5.0%R.H(<75%R.H时)
升温时间 Heating time	约 45 分钟, -40℃~150℃ 约 60 分钟, -70℃~150℃约 75 分钟以内 About 45 minutes, -40 ° C ~ 150 ° C for about 60 minutes, -70 ° C ~ 150 ° C for about 75 minutes
降温时间 Cooling time	20℃~-70℃约 75 分钟以内 20 ° C ~ -70 ° C within about 75 minutes
内箱尺寸 Inner box size	W:30(cm) H:30(cm) D:25(cm)
外箱尺寸 Carton size	W:50 (cm) H:125(cm) D:90(cm)
内箱材质 Inner box material	SUS304 高级不锈钢板 SUS304 advanced stainless steel plate
外箱材质 Outer box material	SUS304 高级不锈钢板或钢板静电喷涂表面处理 SUS304 advanced stainless steel plate or steel plate electrostatic spraying surface treatment
保温材料 Insulation material	高密度聚胺酯泡沫及玻璃纤维 High density polyurethane foam and fiberglass
冷冻系统 Freezing system	气冷式/水冷式 Air cooled / water cooled
	单段/复叠式, 全封闭式压缩机, 环保冷媒 (R404a/R23) Single/multi-stack, fully enclosed compressor, environmentally friendly refrigerant (R404a/R23)
控制器 Controller	TEMI 8805.7 英寸 LCD 彩色触摸屏, 中/英文显示 TEMI 8805.7-inch LCD color touch screen, Chinese / English display
保护装置 protective device	无熔丝开关、压缩机超压、过热、过电流保护、超温保护、风超载保护、保险丝、干烧机保护器、缺水保护开关、故障警告统、警报器 No fuse switch, compressor overpressure, overheating, overcurrent protection, over temperature protection, wind super Load protection, fuse, dry burner protector, water shortage protection switch, fault warning system, Alarm

标准配件 Standard accessories	<p>28×34cm 三层真空层观察窗 1 个、11W 节能照明窗口灯 1 支、 ϕ5cm 测试孔 1 个（附不锈钢孔盖 1 只、硅胶塞头 1 只）、不锈 钢 SUS#304 方型冲孔钢板置物架 2 套、内藏式不锈钢水箱 （20L）、电源线 2 米、USB 预留接口一个、电源线 4.0 mm²×4 蕊，低阻抗橡胶电缆线 2.5m 长 1 条、保险丝一套（易损件）、 标准测试用不织布 5 片、控制器使用说明书一套、操作说明书一 套、测试报告一份</p> <p>28×34cm three-layer vacuum layer observation window, 1 11W energy-saving lighting window light, 1 ϕ5cm test hole (1 stainless steel hole cover, 1 silicone plug), stainless steel SUS#304 square punched steel plate 2 sets, built-in stainless steel water tank (20L), power cord 2 meters, USB reserved interface, power cord 4.0 mm²×4 core, low-impedance rubber cable 2.5m long, fuse set (wearable parts), Standard test non-woven fabric 5 pieces, controller instruction manual set, operation manual set, test report</p>
选配件 Optional accessories	<p>另加测试孔、另加置物架、记录仪、计算机通讯接口、联机软 件、大玻璃窗、逆渗透纯水机、产品合格证、电气原理图、制冷 /除湿系统图、产品材料明细表、保修卡、外购件合格证</p> <p>Additional test hole, additional rack, recorder, computer communication interface, online software, large glass window, reverse osmosis pure water machine, product certificate, electrical schematic, refrigeration / dehumidification system diagram, product material list, warranty Card, purchased parts certificate</p>
使用环境 Use environment	5℃~35℃、≤85%RH、86~106Kpa
电源功率 Power supply	AC380±10%50HZ 三相四线+保护地线 AC380±10%50HZ three-phase four-wire + protective ground wire
<p>注：1. 以上数据均在环境温度（QT）25℃，工作室无负载条件下测得；2. 可根 据用户的具体要求定做非标型“恒温恒湿试验室”、“高低温试验箱”、 “低温试验箱”。</p> <p>Note: 1. The above data are measured at ambient temperature (QT) 25 ° C, under no load conditions in the studio; 2. Root According to the user's specific requirements, non-standard "constant temperature and humidity laboratory", "high and low temperature test chamber", "Cryogenic test chamber".</p>	

注：以下表格型号尺寸可置换以上表格型号尺寸

Note: The model size of the following table can replace the above

model size. (Red fonts is suitable for your requirements)

型号	RHP-23	RHP-64	RHP-80	RHP-100	RHP-120	RHP-150	RHP-225	RHP-408	RHP-800	RHP-1000
W	30	40	40	50	50	50	60	68	100	100
H	30	45	50	50	50	60	75	80	100	100
D	25	40	40	40	48	50	50	75	80	150
W	50	60	60	70	70	70	80	88	120	120
H	125	140	155	155	155	161	171	176	195	195
D	90	110	110	115	123	125	125	150	155	175

选购配件

Optional accessories

用户可根据实际情况自行选购相关配件。

Users can purchase related accessories according to the actual situation.



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旋转涡轮式除湿机

Rotary turbine dehumidifier

可在测试过程中，保证低湿度（23%RH）

Low humidity (23% RH) during testing



逆渗透纯水机

Reverse osmosis pure water machine

纯水制造装置，每天可产纯水 80 加仑（364 升）

Pure water manufacturing unit, producing 80 gallons of pure water per day (364 liters)



温湿度记录器

Temperature and humidity recorder

-100°C~+150°C/0~100%RH 100mm 有效宽度 2 笔式、6 打点、12 打点

-100° C~+150° C/0~100%RH 100mm effective width 2 pen type, 6 hits, 12 hits



故障指示灯

Fault indicator

当试验机发生故障时，提供信号警告。

Provide a signal warning when the test machine fails



测试孔玻璃门

Test hole glass door

附两个直径 130mm 操作手孔, 无需开门即可操作测试物品。

Two hand holes with a diameter of 130mm are attached, and the test items can be operated without opening the door.



隔板

Partition

提供两种隔板：25KG，40KG

Available in two partitions: 25KG, 40KG

故障处理

Troubleshooting

一. 控制器显示温度异常

The controller displays an abnormal temperature

检查步骤:

Inspection step

1、查看控制面板的超温保护器,是否设定在 150°C 的位置;

Check if the over-temperature protector of the control panel is set at 150 ° C;

2、查看机房的循环马达是否损坏没有运转;

Check if the circulating motor in the equipment room is damaged and not working.

3、查看是否温度部份的固态继电器烧毁短路: 如果加热器未烧毁,使用三用电表交流电压档,电压档位开到 600 伏特的位置,将红黑棒分别放在线号标注为 T 的那一颗固态继电器交流两侧,将温度部份的温度设定值设置 0°C,此时温度部份的固态继电器的指示灯不会亮起,如果量测的电压值没有变化,维持在 10V 以下代表固态继电器烧毁呈现短路状态。

Check if the temperature of the solid state relay burns out the short circuit: If the heater is not burned, use the three-meter electric AC voltage file, the voltage gear position is opened to 600 volts, and the red and black rods are respectively placed on the line number labeled T. On both sides of the solid state relay, the temperature setting value of the temperature part is set to 0 ° C. At this time, the indicator of the solid state relay of the temperature part will not light up. If the measured voltage value does not change, it is maintained below 10V. Solid state relay burned out of short circuit

解决办法:

Solution:

1、将面板超温保护器转至 150°C 的位置, 或者使用温度再加 30°C 的位置;

Turn the panel over-temperature protector to a position of 150 ° C, or use a temperature plus 30 ° C position

2、通知厂家客服维修部门更换循环马达;

Inform the factory customer service maintenance department to replace the cycle motor

3、更换温度部份的固态继电器(线号标注为 T 的那一颗固态继电器), 或者通知售后上门进行维修。

Replace the temperature part of the solid state relay (the solid state relay marked with T as the line number), or notify the after-sales door to repair

二、控制器显示湿度异常

The controller shows abnormal humidity

检查步骤:

Inspection step

1、查看控制机房的欠水超温保护器, 是否设定在 150°C 的位置

Check whether the under-water over-temperature protector in the control room is set at 150 ° C.

2、查看机房内, 管路是否过脏, 造成水流不顺;

Check whether the pipeline is too dirty in the equipment room, causing the water flow to be unsatisfactory.

3、查看上水箱是否有水, 如果没有水, 再查看下水箱是否有水;

Check if there is water in the water tank. If there is no water, check if there is water in the tank.

4、查看是否湿度部份的固态继电器烧毁短路: 如果加热器未烧毁, 使用三用电表交流电压档, 电压档位开到 600 伏特的位置, 将红黑棒分别放在线号标注为 H 的那一颗固态继电器交流两侧, 将湿度部份的湿度设定值设置 0%, 此时湿度部份的固态继电器的指示灯不会亮起, 如果量测的电压值没有变化, 维持在 10V 以下

代表固态继电器烧毁呈现短路状态。或者首先将湿度部份设定值设为 0%，再看机房内加湿桶是否水在煮沸状态。

Check if the solid state relay in the humidity part is short-circuited: If the heater is not burned, use the three-meter electric AC voltage file, the voltage gear is opened to 600 volts, and the red and black bars are placed on the line number labeled H. On both sides of the solid state relay, set the humidity setting value of the humidity part to 0%. At this time, the indicator of the solid state relay of the humidity part will not light up. If the measured voltage value does not change, keep it below 10V. The solid state relay burned out and showed a short circuit condition. Or first set the humidity part setting to 0%, and then see if the humidification tank in the machine room is boiling.

解决办法:

Solution:

1、将欠水超温保护器转至 150°C 的位置;

Turn the over water over temperature protector to 150 ° C

2、首先将机台后方总电源关上,然后将加湿桶下方的排水阀,打开到与管路平行的位置,带上水箱的水都排光的时候,利用扳手将加湿桶打开,将内部因长期做湿度的水垢清除,然后将硅胶管路拔除,在水中搓洗,保养完毕后按照拆除的方式,反方向装回去,装置完毕后,需将加湿桶下方的排水阀,关闭到与管路垂直的位置,然后再将机台后方总电源打开;

First, turn off the main power supply at the rear of the machine, and then open the drain valve under the humidifying bucket to the position parallel to the pipeline. When the water in the water tank is drained, use the wrench to open the humidifying bucket. Remove the scale of the humidity, then remove the silicone tube and wash it in the water. After the maintenance is completed, follow the removal method and replace it in the opposite direction. After the device is finished, close the drain valve below the humidification tank to the vertical line. Position, then turn the main power on the back of the machine

3、下水箱都无水,将下水箱加水,即可解决。上水箱如果没有水,下水箱有水,,则为下水箱打水马达坏掉,通知环仪公司维修客服部门上门进行维修;

The water tank is free of water, and the water tank can be filled with water to solve it. If there is no water in the upper tank, there

is water in the lower tank, then the water motor in the lower tank is broken, and the ring service company is notified to repair the customer service department for maintenance;

4、更换湿度部份的固态继电器(线号标注为H的那一颗固态继电器),或者通知售后上门进行维修。

Replace the solid state relay in the humidity section (the solid state relay marked with H as the line number), or notify the after-sales door to repair

三、湿度实际值一直显示在 100%的数值;

The actual humidity value is always displayed at 100%

检查步骤:

Inspection step

1、箱内空气非常干燥的状况:首先查看干湿球固定座水槽部份,是否有水;2). 查看测试箱内部干湿球固定座,在湿球感测器部份上面所挂的湿球纱布,在感测器的部份是否湿润;

The air inside the box is very dry: first check the dry and wet ball seat sink part, whether there is water; 2). View the dry and wet ball mount inside the test box, the wet ball hanging on the wet ball sensor part Gauze, whether it is wet in the sensor

2、箱内空气非常潮湿的状况(湿度可能未达 100%,可是一直偏高):首先将湿度部份设定值设为 0%,再看机房内加湿桶是否水在煮沸状态。

The air in the box is very humid (the humidity may not reach 100%, but it is always high): First set the humidity part setting to 0%, then see if the water in the machine room is boiling.

解决办法:

Solution:

1、箱内空气非常干燥的状况:1). 如果没有水,调整机房内水位水杯,位于上面那一个,或者查看水位水杯至干湿球固定座间的管路是否有阻塞,调整过后用布,将水吸干,确保水会一直进去。2). 如果没有湿润,更换纱布。(建议每个月更换一次纱布)如果常做高温高湿条件,则更换次数则需更多,如果只做温度条件可以将纱布取出已延长寿命。取出后,可以放在酒精内浸泡,已延长其寿命;

The air inside the box is very dry: 1). If there is no water, adjust the water level in the machine room, located on the top, or check the pipeline between the water level cup and the wet and dry ball holder. If it is adjusted, use the cloth. Drain the water to make sure the water goes in all the way. 2). If it is not wet, replace the gauze. (It is recommended to replace the gauze once a month.) If the temperature is high or high, the number of replacements will be more. If only the temperature conditions are used, the gauze can be taken out for an extended life. After being taken out, it can be soaked in alcohol and has prolonged its life.

2、箱内空气非常潮湿的状况(湿度可能未达 100%,可是一直偏高):如果有煮沸,更换湿度部份的固态继电器(线号标注为 H 的那一颗固态继电器)或者通知售后上门进行维修。

The air in the box is very humid (the humidity may not be 100%, but it is always high): If there is boiling, replace the solid state relay of the humidity part (the solid state relay marked with H) or notify the after-sales door service

四、湿度实际值一直无法到达设定值,且湿度实际值低于湿度设定值很多;

The actual humidity value has not been able to reach the set value, and the actual humidity value is lower than the humidity setting value.

检查步骤:

Inspection step

1、查看是否湿度部份的固态继电器烧毁断路:如果加热器未烧毁,使用用电表交流电压档,电压档位开到 600 伏特的位置,将红黑棒分别放在线号标注为 H 的那一颗 固态继电器交流两侧,将湿度部份的湿度设定值设置 100%,此时湿度部份的固态继电器的指示灯会亮起,如果量测的电压值没有变化,维持在 220V 或者 380V,则代表固态继电器烧毁呈现断路状态;

Check if the solid state relay in the humidity part is burned and broken: If the heater is not burned, use the meter's AC voltage file and the voltage gear position to 600 volts. Place the red and black rods on the line numbered H. On both sides of the solid state relay AC, set the humidity setting value of the temperature part to 100%. At this time, the indicator of the solid state relay of the humidity part will light up. If the measured voltage value does not change, it is maintained at 220V or 380V. Solid state relay burned out of open state

2、 查看保险丝是否烧毁;

Check if the fuse is burned

3、 查看是否加湿桶加热器烧毁:将加湿桶加热器两条线剪断,使用三用电表欧姆档,量取电阻值,如果电阻呈现无限大,代表加热器烧毁。

Check whether the humidification barrel heater is burnt: cut the two lines of the humidification barrel heater, use the three-meter ohms file, and measure the resistance value. If the resistance is infinite, it means the heater burns.

解决办法:

Solution:

1、 更换湿度部份的固态继电器(线号标注为H的那一颗固态继电器),或者通知售后上门进行维修;

Replace the solid state relay in the humidity section (the solid state relay marked with H as the line number), or notify the after-sales door to repair

2、 更换同规格保险丝;

Replace the fuse of the same specification

3、 通知购买商寄加湿桶加热器,或者通知售后上门进行维修。

Inform the purchaser to send a humidifier heater or notify the after-sales door to repair

产品安装

Product installation

- 1. 安置位置应考虑设备的散热性及易于设备检查维护。
- The location of the installation should consider the heat dissipation of the equipment and facilitate equipment inspection and maintenance.

- 2. 机器底部是制冷系统，热量较大，故在安装时，机身与墙壁及其它任何机器之间最少应有 60 公分以上之距离，以保持通风。
- The bottom of the machine is a refrigeration system with a large amount of heat, so at least 60 cm or more between the fuselage and the wall and any other machine should be installed to maintain ventilation.
- 3. 设备应置于地面平整，避免阳光直射，且维持室内空气流通。
- The equipment should be placed on the ground to avoid direct sunlight and maintain indoor air circulation.
- 4. 该设备应放置于单独的空间，不可置于公众的场所或有易燃、易爆、易腐化学物品及强烈振动、强电磁场附近，以免发生故障，发生火灾和造成人身伤害。
- The equipment should be placed in a separate space, not in public places or in the vicinity of flammable, explosive, perishable chemicals and strong vibrations, strong electromagnetic fields, to avoid malfunction, fire and personal injury.
- 5. 供电路及排水管路，应尽可能缩短。
- Supply circuit and drain pipe should be as short as possible
- 6. 设备应避免放置于肮脏与灰尘多的场所，环境温度：5℃~+30℃（24 小时内平均温度≤30℃），环境湿度：≤85%RH，机器在此环境下才能获得最佳最稳定的运转。否则可能导致降温速度慢甚至无法达到设定温度，且温湿度控制不能保持稳定。
- Equipment should be avoided in places with dirty and dusty environment, ambient temperature: 5 ° C ~ +30 ° C (average temperature within 24 hours ≤ 30 ° C), ambient humidity: ≤ 85% RH, the machine can get the best in this environment Stable operation. Otherwise, the cooling rate may be slow or even reach the set temperature, and the temperature and humidity control cannot be stabilized.
- 7. 恒温恒湿试验箱顶部不得放置任何杂物以免重物掉下造成人体受伤财物受损。
- Do not place any debris on the top of the constant temperature and humidity test chamber to prevent heavy objects from falling and causing damage to human body damage.
- 8. 搬运时不要手持电箱、电线、马达作为推动力支点，防止电箱电器损坏、松脱或造成意外故障。
- Do not hold the electrical box, wires, or motor as the driving force fulcrum during transportation to prevent the electrical box electrical equipment from being damaged, loose, or causing unexpected failure.
- 9. 定位后的机器要再移位时，请将机身四个水平脚收回然后移位，再调平衡，以免损坏试验设备。

- When the positioned machine is to be displaced again, please retract and then shift the four horizontal feet of the fuselage, and then adjust the balance to avoid damage to the test equipment.