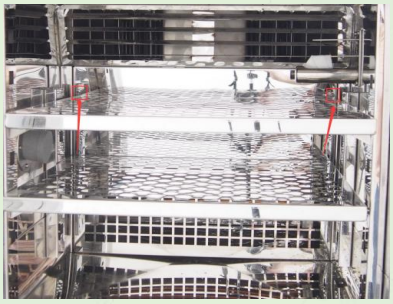
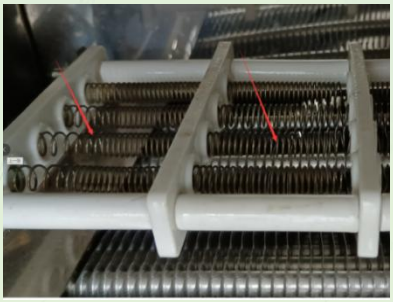
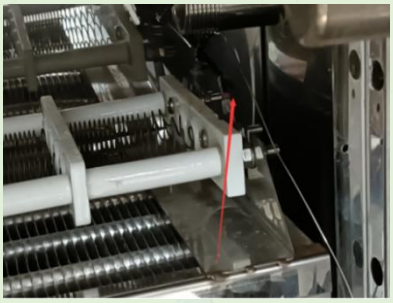
Temperature and Humidity Test Chamber Maintenance Processing List

Catalogue

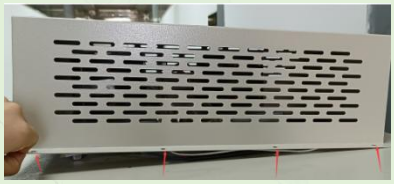
Editing Date: 2024.5.31

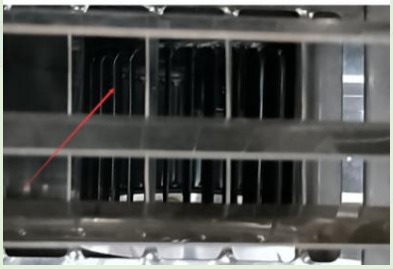
Heating system

1. Check heating strip.

Step	Description	As shown in the figure
1	Remove the left and right screws inside the working room, open this cover.	
2	Check whether the heating strip is broken, if yes, please replace it in time.	
3	Check whether the wire is connected well, no damage. Once every half a year.	

2. Check circulation fans motor

Step	Description	As shown in the figure
1	Remove the screws from the motor, open the cover of motor on top of the chamber.	
2	Functional check, check whether there is noise during working. If there is noise, please adjust motor levelness.	/

3	Observe the position of the wind blades inside the workroom, check whether the wind blades is unbalanced and the screws fixing the fan blade are loose .	 
4	Adjust the motor position with gasket until the noise disappears	/

3. Check temperature sensor

Step	Description	As shown in the figure
1	If the controller shows "- -", check whether the sensor connection is normal, otherwise the sensor is damaged.	
2	Check whether the connecting wires are loose.	

4. Check solid-state relay

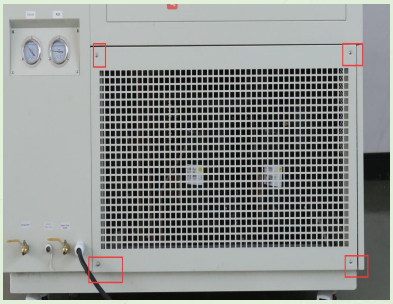
Step	Description	As shown in the figure
1	Check whether the connecting wires are loose.	
2	Blow off the dust with the pressurized air and tighten the screws.	/
3	Using electric pen to test the input and output volt, the normal value is the input 220V, the output is 0~400V.	/

5. Check contactor

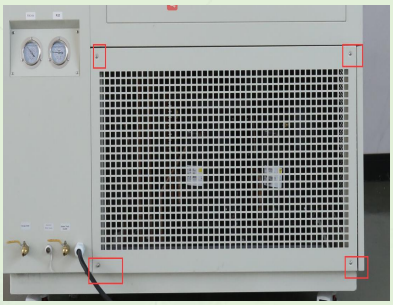
Step	Description	As shown in the figure
1	Check whether the connecting wires are loose.	
2	Functional check, when the test chamber is running, the solid state relay display lights up and the contactor is in the suction state.	
3	Blow off the dust with the pressurized air and tighten the screws.	/

Humidification system

1. Check condenser.

Step	Description	As shown in the figure
1	Remove the screws on the cover at the back of the test chamber.	
2	Blow off the dust on the condenser fan behind the compressor with pressurized air.	

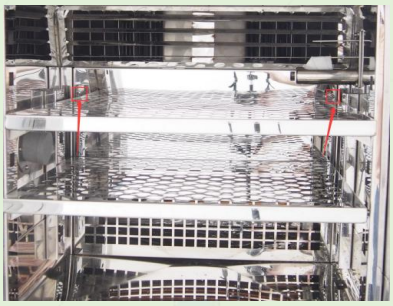
2. Check compressor.

Step	Description	As shown in the figure
1	Remove the screws on the cover at the back of the test chamber.	
2	Blow off the dust on the compressor with pressurized air.	

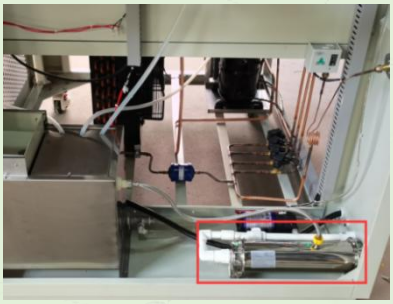
3. Check pressure gauge.

Step	Description	As shown in the figure
1	Check the pressure gauge located on the back of the chamber. 1. Under the machine stop condition, the pressure range should be 5 ~ 15bar; 2. Under the machine is running condition, the pressure range is 15-25bar	
2	Pressure gauge indicates less than 5bar, that means the refrigerant is not enough.	Add refrigerant
3	Pressure gauge is ”0”, that means the refrigerant leaked, please repair leak point and add refrigerant.	/

4. Check evaporator

Step	Description	As shown in the figure
1	Remove the left and right screws inside the working room, open this cover.	
2	Blow off the dust on the Evaporator with the pressurized air.	

5. Check water filter.

Step	Description	As shown in the figure
1	Change filter element once a year	

6. Check pump motor.

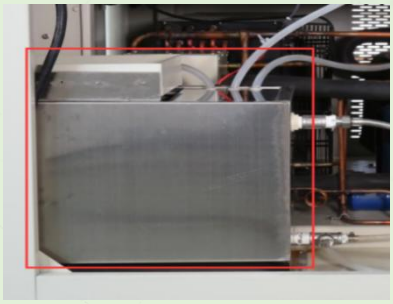
Step	Description	As shown in the figure
1	Check regularly, clean dust and blockage in the pipe	
2	Check whether the pipe is clogged	

7. Check heater for humidifier.

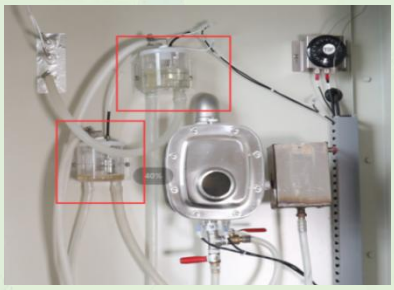
Step	Description	As shown in the figure
1	Open the cover at the right of the test chamber.	

2	Check the heating pipe in the humidifier, check if can work normally. Check the resistance of the heating pipes. If the output resistance is 13Ω ~26Ω., it is normal. Otherwise, please replace the heating pipes.	
3	Remove the screws and clean the impurities in the humidifier regularly. Check if the float ball of humidifier could float normally, if not, please adjust the height of water cup. If it doesn't work, please replace it.	

8. Check water tank.

Step	Description	As shown in the figure
1	Drain the water inside the tank and clean up the internal impurities and dirt once a month	
2	Functional check, check if the float ball of water tank could float normally. Clean the impurities in float once a month	

9. Check water cup.

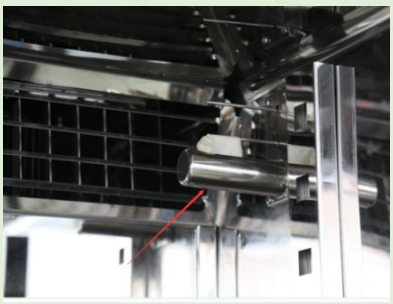
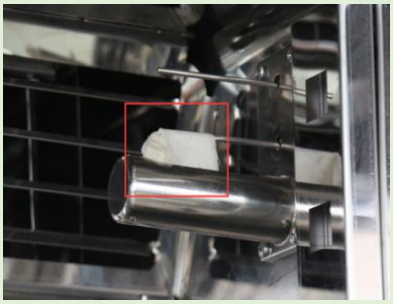
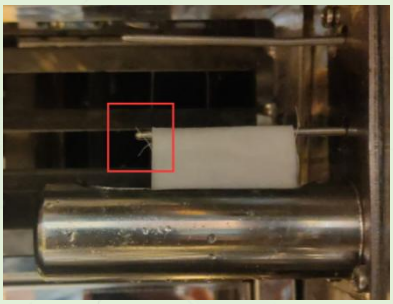
Step	Description	As shown in the figure
1	Open the cover at the right of the test chamber.	
2	Open the cover, clean the impurities and dirt inside regularly.	
3	Check if the float ball of water cup could float normally. If not, please adjust the height of water cup. If it doesn't work, please replace it. Clean the impurities in float once a month.	

10. Check pipes.

Step	Description	As shown in the figure
1	Open the cover at the right of the test chamber.	
2	Check if the pipes are clogged. If the pipe is too dirty, please replace it.	

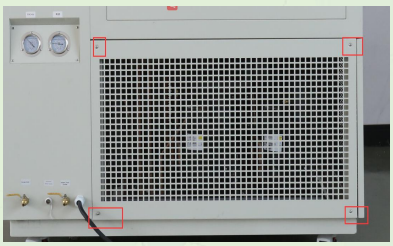
3	**Note:** The pipes should not be cross-knotted, which would cause the flow of water to stop.	

11. Check wet wick.

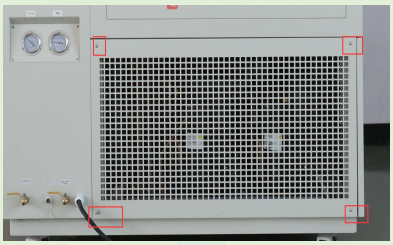
Step	Description	As shown in the figure
1	Open the test chamber, humidity sensor is located in the upper right corner.	
2	Check regularly, check if the wet wick cover the sensor.	
3	**Note:** Do not expose the temperature sensor, If the sensor is exposed, it will lead to inaccurate measurements	
4	Check if the wet wick turned yellow and moldy. If yes,please replace it in time. Clean the sink under the wet wick with tissue regularly.	/

Cooling system

1. Check condenser.

Step	Description	As shown in the figure
1	Remove the screws on the cover at the back of the test chamber.	
2	Blow off the dust on the condenser behind the compressor with a pressurized air.	

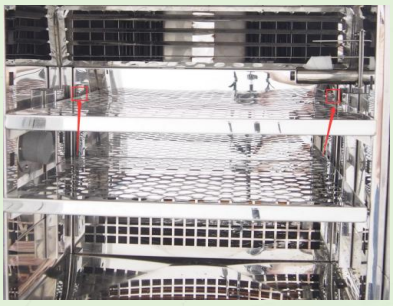
2. Check compressor.

Step	Description	As shown in the figure
1	Remove the screws on the cover at the back of the test chamber.	
2	Blow off the dust on the compressor with the pressurized air.	

3. Check pressure gauge.

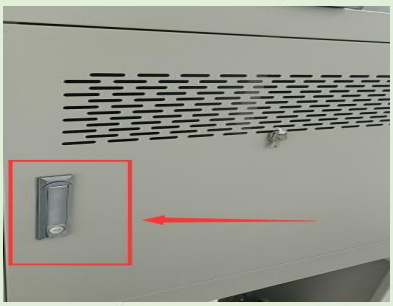
Step	Description	As shown in the figure
1	Check the pressure gauge located on the back of the chamber. Under the machine stop condition, the pressure range should be 5 ~ 15bar; Under the machine is running condition, the pressure range is 15-25bar	
2	Pressure gauge indicates less than 5bar, that means the refrigerant is not enough.	Add refrigerant
3	Pressure gauge is ”0”, that means the refrigerant leaked, please repair leak point and add refrigerant.	/

4. Check evaporator

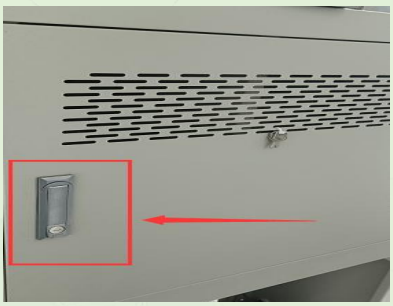
Step	Description	As shown in the figure
1	Remove the left and right screws inside the working room, open this cover.	
2	Blow off the dust on the Evaporator with pressurized air.	

Electrical system

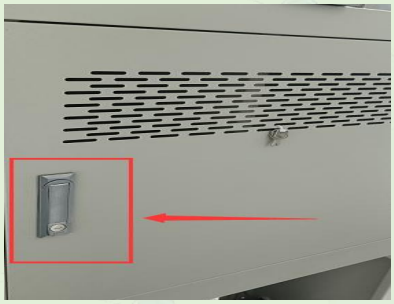
1. Check controller

Step	Description	As shown in the figure
1	Open the cover at the right of the test chamber.	
2	Functional check , check whether the connection is well. Blow off the dust with pressurized air and tighten the screws.	

2. Check contactor

Step	Description	As shown in the figure
1	Open the cover at the right of the test chamber.	
2	check whether the connecting wire is loose. Blow off the dust with pressurized air and tighten the screws.	

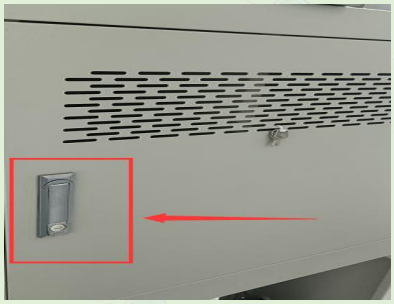
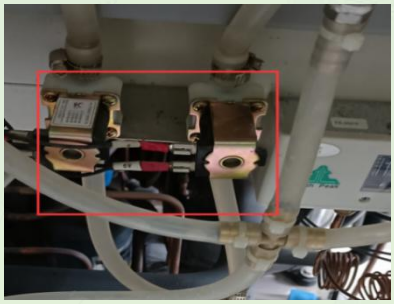
3. Check relay

Step	Description	As shown in the figure
1	Open the cover at the right of the test chamber.	
2	Check regularly, clean dust and tighten screws Blow off the dust with pressurized air and tighten the screws.	

4. Check transformer

Step	Description	As shown in the figure
1	Check regularly, clean dust and tighten screws	
2	Blow off the dust with a pressurized air and tighten the screws.	/

5. Check solenoid valve for water pump

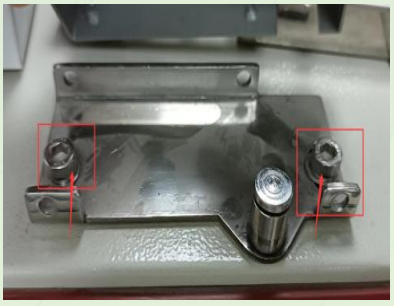
Step	Description	As shown in the figure
1	Open the cover at the right of the test chamber.	
2	Check regularly, clean dust and tighten screws.	

6. Check circuit board

Step	Description	As shown in the figure
1	Check regularly, clean dust and tighten screws, check whether the connection is loose	
2	Blow off the dust with pressurized air and tighten the screws.	/

Other system

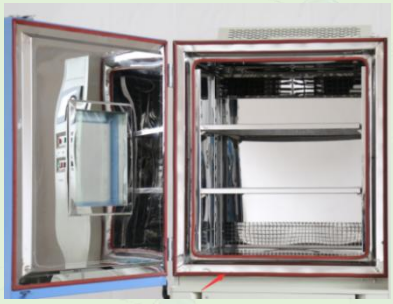
1. Check lock

Step	Description	As shown in the figure
1	Check if the lock is loose in real time.	
2	Check if the machine is leaking when humidity testing. If it is necessary, adjust the screws on the left and right sides of the lock and move them back to tighten the lock.	

2. Check rubber plug of test hole

Step	Description	As shown in the figure
1	Check whether the rubber plug is aging and harden in real time.	
2	If the rubber plug is aging and harden,please replace it in time. Usually replace it once every 2 year.	/

3. Check sealing Strip

Step	Description	As shown in the figure
1	Check whether the sealing strip is aging and harden in real time.	
2	If there is air leakage during the test, please check whether the door is not locked properly or the sealing strip is aging. If the sealing strip is aging and harden,please replace it in time. Usually replace it once every 2 year.	/

4. Check button

Step	Description	As shown in the figure
1	Check whether the connection is well.