

CW-5000/5200 冷水机故障检测手册

Fault Detection Manual for CW-5000/5200 Chiller

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一、使用注意事项 Important Notice

1、请确保电源插座接触良好且地线可靠接地

1. Make sure the power socket are in good contact and the earth wire is firmly grounded.

1.1 以防引起人身触电或火灾的危险

1.1 To prevent personal electric shock or fire hazard.

2、请确保冷水机的工作电压与工作频率稳定、正常

2. Ensure stable and normal working voltage and working frequency of the chiller

2.1 由于冷水机内部元件对电源的电压和频率比较敏感，必须按照机器铭牌或相关说明书选配。

2.1 Because the internal components of the chiller are relatively sensitive to the voltage and frequency of the power, they must be selected according to machine nameplates or related instructions.

2.2 我公司标准产品的正常工作电压为 210~240V (110V 机型为 100~120V)，工作频率分为 50Hz 与 60Hz 两种，如工作电压不稳定或工作频率不匹配会导致冷水机损坏。

2.2 Normal working voltage of our standard products covers 210~240V (100~120V for 110V model). Working frequency is divided into 50Hz and 60Hz. Unstable working voltage or unmatched working frequency will cause damage to the chiller.

3、冷水机工作环境。

3. Operating condition of the chiller

3.1 冷水机工作环境温度不得超过 40 度，并严禁在高温、潮湿、有太阳直射等特殊恶劣的环境下使用，否则容易导致冷水机报警严重则冷水机损坏。

3.1 Operating ambient temperature of the chiller shall not exceed 40℃, and its operation under harsh environment such as high-temperature, humid and direct sunlight environment is forbidden. Otherwise, serious alarm of the chiller may be caused easily and the chiller will be damaged.

4、请确保冷水机出/入风口通道畅通

4. Ensure unblocked air outlet / inlet of the chiller

4.1 冷水机出风口（风扇）与障碍物保持 50CM 以上距离。

4.1 The distance between the air outlet of the chiller (fan) and the obstacle shall be more than 50CM.

4.2 冷水机入风口（防尘网）与障碍物保持 30CM 以上距离。

4.2 The distance between the air inlet of the chiller (dust gauze) and the obstacle shall be more than 30CM.

5、冷水机严禁无水循环，以免损伤水泵

5. Running the chiller without water is forbidden to avoid damaging the water pump

5.1 新机装箱前都排空了储水水箱，请确保水箱注入足够水后再开机，否则水泵极易损坏。

5.1 Water tank is emptied before the new chiller is packed. Therefore, please make sure the water tank is filled with enough water before starting the chiller. Otherwise, water pump will be damaged easily.

5.2 当水箱水位在水位计绿色中下范围以下时，冷却机制冷量会轻微下降，请保证水箱水位在水位计合适范围。

5.2 When the water level of water tank is lower than the middle-bottom area of the green indicator of the water level gauge, the cooling capacity of the chiller will decrease slightly, so please ensure that the water level of the water tank is within proper range of water level gauge.

5.3 禁止使用循环泵排水。

5.3 Do not use circulating pumps for drainage

6、冷水机长时间停机不使用或初次注水使用/重新换水，可能导致 E7 报警

6. Long-time not using the chiller or initial water filling / water replacing of the chiller may cause E7 alarm

6.1 冷水机长时间停用，初次启动冷水机时可能会导致水泵启动困难。请在冷水机通电前轻轻拨动电机尾部塑料胶壳内部叶片。

6.1 Initial starting the chiller after long-time not using it may cause difficulty in starting the water pump. The impeller within the plastic shell at the tail of the motor shall be gently toggled before the chiller is connected to the power.

6.2 冷水机初次注水使用/重新换水，因排水完毕后水泵内部只有空气，所以初次注水使用可能会导致 E7 报警，需反复几次启动停止冷水机，将水泵内部空气排空。

6.2 For initial water filling / water replacing of the chiller, because there is only air inside the water pump after drainage, initial water filling may cause E7 alarm. The chiller shall be started and stopped repeatedly to empty the air inside the water pump.

7、入风口的滤网必须定期清洗

7. Dust gauze at the air inlet must be regularly cleaned

7.1 必须定期清洗滤尘网，以防滤尘网堵塞，导致内部空气不流通，引起机器内部温度升高制冷量下降，从而报警不能正常工作。（建议至少一周清洗一次，如在特殊环境，清洗时间根据客户需求而定）

7.1 Dust gauze must be regularly cleaned to prevent clogging, for the clogging will lead to bad air circulation and the rising temperature inside the chiller, resulting in the decreasing of the chiller's cooling capacity and even worse, the chiller failing to work normally because alarm occurs. (It is suggested to clean the dust gauze at least once a week. Cleaning frequency may vary from customer to customer in particular

environment.)

8、请确保水质干净

8. Ensure high water quality

8.1 冷水机内部循环水建议至少 3 个月更换一次，如在特殊环境，更换时间根据客户需求而定。

8.1 It is suggested to replace the circulating water every 3 months at least, and if particular environment applies, the replacing frequency shall be determined based on customers' needs.

7.2 安装有过滤器的冷水机建议至少 3 个月清洗或更换滤芯，如在特殊环境，更换时间根据客户需求而定。

7.2 It is suggested that chiller equipped with filter should be cleaned or have filter element replaced every 3 months at least, and if particular environment applies, the replacing frequency shall be determined based on customers' needs.

9、本产品为工业设备，非专业人士请勿操作

9. This product is categorized as industrial equipment, and cannot be operated by non-professionals

9.1 设备安装、电气维护、机器检修等作业必须由具备相关专业的人员操作。

9.1 Equipment installation, electrical maintenance, machine maintenance and so on must be performed by related professionals.

二、冷水机报警代码检测步骤

Detection Steps of the Chiller's Alarm Code

E1 室温超高报警 Ultrahigh room temperature alarm

故障可能性 Failure possibility

- 1、使用环境温度偏高
1. Relatively high ambient temperature
- 2、机器摆放位置不通风
2. Bad ventilation in the chiller's location
- 3、冷水机积尘严重
3. The chiller has serious dust problem
- 4、室温传感器故障
4. Room temperature sensor failure

检测步骤 Detection step (1) :

查看环境温度是否偏高

check whether the ambient temperature is relatively high

按温控器“▼”键会显示 t1，再按一下会显示室温。查看设备工作环境温度是否接近气温超高报警值（出厂设置 F6=45°，更多详细参数和设置请参考机器上的温控参数表标签）。

Press the "▼" button to display T1, and press again to display room temperature. Check whether the ambient temperature is close to the value of ultrahigh room temperature alarm (F6=45°, for more detailed parameters and settings, please refer to the label on the chiller which indicates the temperature control related parameters).



【红色方框为“▼”键】

[The red box is the "▼" button]

情景判断 Situational judgment

1.1 如温控器显示环境温度值接近 40℃。

1.1 If the value of the ambient temperature displayed by the thermostat is close to 40℃

处理：请客户自行调节设备工作使用环境，设备最佳工作环境温度约 20-30℃。

Solution: customer shall adjust the working condition of the chiller, and the best operating ambient temperature is 20-30℃.

1.2 如温控器显示环境温度范围正常，请进行下一步检测。

1.2 If the ambient temperature displayed by the thermostat is within the normal range, the next detection step shall be made.

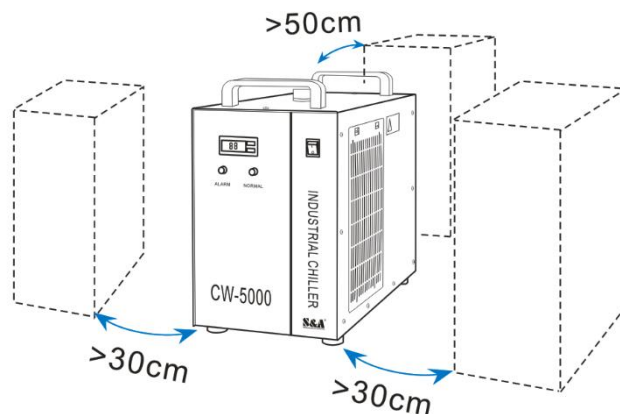
检测步骤 Detection step (2) :

查看设备摆放位置是否通风

Check whether the chiller's location has good ventilation

请查看冷水机摆放位置是否符合：出风口（风扇）距离障碍物留有 50CM 以上距离，入风口（滤尘网）距离障碍物留有 30CM 以上距离。

Check whether the chiller's location meets the following conditions: distance between the air outlet (fan) and the obstacle is more than 50CM, and distance between air inlet (dust gauze) and obstacle is more than 30CM.



情景判断 Situational judgment

2.1 如冷水机摆放位置不符合以上要求。

2.1 If the chiller's location doesn't meet the above conditions

处理：请客户自行调节设备摆放位置，以免影响冷水机散热功能。

Solution: customer shall adjust the chiller's location to avoid bad heat dissipation of the chiller.

2.2 如冷水机摆放位置符合以上要求，请进行下一步检测。

2.2 If the chiller's location meets the above conditions, the next detection step shall be made.

检测步骤 Detection step (3) :

查看冷水机防尘网、内部冷凝器是否积尘严重

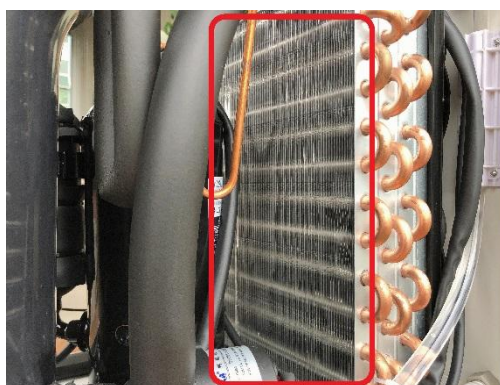
Check whether dust gauze of the chiller and the internal condenser have serious dust problem

请查看冷水机左、右两侧防尘网，以及内部冷凝器是否积尘严重，积尘过多容易导致容易引起冷水机故障。

Check whether the left and right dust gauzes of the chiller and the internal condenser have serious dust problem. Too much dust may lead to the fault of the chiller easily.



【左右两侧防尘网】 [dust screen on both sides]



【红框位置为冷水机内部冷凝器】 [The red box is the internal condenser of the chiller]

情景判断 Situational judgment

3.1 如积尘严重

3.1 If they have serious dust problem

处理：建议定时使用清水清洗两侧防尘网，使用气枪吹走内部冷凝器积尘。防尘网不建议长时间拆卸。

Solution: It is suggested that the left and right dust gauze should be cleaned regularly with clean water and air gun should be used to blow away the internal condenser's dust. Long-time disassembly of dust gauze is not recommended.

检测步骤 **Detection step** (4) :

测试室温传感器

Test the thermostat sensors (room temperature sensor and water temperature sensor)

室温传感器故障时温控器可能会伴随室温传感器故障报警代码 E4。

When the room temperature sensor fails, the thermostat may be accompanied by the room temperature sensor failure alarm code E4.

在冷水机内部找到室温传感器进行定温检测,将室温传感器放已确定温度的水中测量温度是否与实际相符(建议 30℃ 水温)。

Locate the room temperature sensor inside the chiller to have a constant temperature testing. Put the room temperature sensor in the water with determined temperature to measure whether the temperature is consistent with the actual (30 °C temperature is recommended).



【黑探头为室温传感器】 [the black probe is the room temperature sensor]

情景判断 **Situational judgment**

4.1 如显示温度与实际温度存在误差,基本判断传感器存在故障。

4.1 If there is difference between the temperature displayed and the actual temperature, it can be basically judged that the sensor has a fault.

处理: 更换温控器传感器,由于室温传感器和水温传感相连,所以更换时需要一并更换。

Solution: replace the thermostat sensor. Because the room temperature sensor is connected to the water temperature sensor, they shall be replaced together when replacement is needed.

E2 水温超高报警 Ultrahigh water temperature alarm

故障可能性 Failure possibility

- 1、外部使用因素
1. External settings
- 2、温控器故障
2. Temperature controller failure
- 3、风扇故障（制冷状态下风扇不工作，或转速下降）
3. Fan failure (running failure of the fan or decreased speed under refrigeration state)
- 4、压缩机启动电容故障（制冷状态下压缩机不工作或出现异响/发热不震动）
4. Compressor's starting capacitor fault (running failure of the compressor or occurred abnormal sound /heating without vibration under refrigeration state)
- 5、压缩机故障（制冷状态下压缩机不工作或出现异响/发热不震动）
5. Compressor failure (running failure of the compressor or occurred abnormal sound heating without vibration under refrigeration state)
- 6、制冷系统故障（制冷状态下风扇吹冷风）
6. Refrigeration system failure (fan blowing cold air under refrigeration state)

检测步骤 Detection step (1) :

排除外部使用因素

Rule out the faults caused by the external settings

请仔细阅读《使用注意事项》排除由于电压、频率、水位、积尘等问题引发的故障。

Please read the Important Notice carefully to rule out the faults arising from voltage, frequency, water level and dust problem.

1.1 请根据《使用注意事项》描述情况，调节冷水机外部使用因素。

1.1 Please adjust the external settings of the chiller according to descriptions of Important Notice.

1.2 如排除了冷水机外部使用因素无法恢复正常，请进行下一步检测。

1.2 If the chiller can't resume normal operation after ruling the faults caused by the external settings, the next detection step shall be made.

检测步骤 Detection step (2) :

检测温控器是否故障

Check whether the temperature controller is faulty

开启冷水机，并等待温控器 D2 指示灯常亮。

Turn on the chiller and wait until the thermostat D2 indicator is steady on.

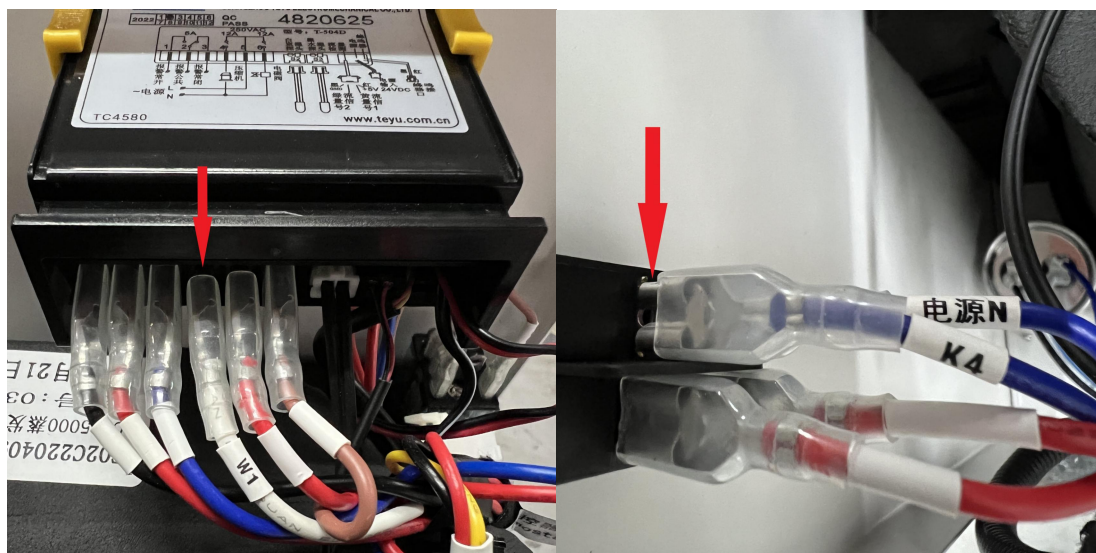


【红色方框内为 D2 指示灯位置】

[the red box is the position of the D2 indicator light]

找到温控器接压缩机火线端子（4 号端子）与电源开关零线端，在温控器 D2 指示灯常亮时，使用万用表交流电压档测量是否有稳定的 220V 电压。

Find the thermostat connecting the compressor live wire terminal (terminal 4) and the neutral wire end of the power switch. When the temperature controller D2 indicator is steady on, use the multimeter to measure whether there is a stable 220V.



【左图：压缩机火线端子；右图：电源开关零线端】

[Left: compressor live line terminal; Right: zero line end of power switch]

情景判断 Situational judgment

2.1 如温控器 D2 指示灯常亮时,无 220V 电压，可判断温控器故障

2.1 If the temperature controller D2 indicator light is on and there is no 220V voltage, the temperature controller fault can be judged

处理：更换温控器。

Solution: Replace the temperature controller.

2.2 如温控器 D2 指示灯常亮时，有 220V 电压，请进行下一步检测。

2.2 If the temperature controller D2 indicator light is on and there is 220V voltage, please proceed to the next step.

检测步骤 Detection step (3) :

查看冷水机风扇是否正常运转

Check whether the chiller's fan runs normally

冷水机两个风扇与压缩机同步启停运作，如其中一个风扇不运作、转速下降，或压缩机启动时风扇不运转，基本可以判断为端子接触不良或风扇问题。

The two fans of the chiller start and stop operation synchronously with the compressor, if one of the fans does not operate, the speed drops, or the fan does not operate when the compressor starts. Basically can be judged as poor terminal contact or the fan has a problem

在风扇旁边找到“接风扇”线束端子，拔掉端子并在温控器 D2 指示灯亮起时使用万用表交流电压档测量是否有稳定的 220V 电压。

Locate the fan harness terminal next to the fan. Unplug the terminal and use the multimeter in ac voltage mode when the thermostat D2 indicator is on to check for a stable 220V voltage.



【左图：“接风扇”线束端子位置（2个）；右图：测量内阻】

[Left: Fan's two wiring harness terminals ; Right: Measure internal resistance]

情景判断 Situational judgment

3.1 如风扇不运转，并且无电压输出，可判断线路接触不良或温控器无输出。

3.1 If the fan does not operate and there is no voltage output, it can be judged that the line contact is bad or the temperature controller has no output.

处理：检查温控器 4 号端子电压后，再检查线路。

Solution: Check the voltage of thermostat terminal 4 before checking the circuit.

3.2 如风扇转速下降或者不运转，但有稳定的 220V 电压，可判断端子接触不良或风扇故障。

3.2 If the fan speed drops or does not operate, but there is a stable 220V voltage, Basically can be judged as poor terminal contact or the fan has a problem.

处理：建议重新拔插端子或更换风扇。

Solution:It's recommend to reinsert the terminal or replace the fan.

3.3 如风扇转速正常，且有稳定的 220V 电压，请进行下一步检测。

3.3 If the fan speed is normal and has a stable 220V voltage, please carry out the next test.

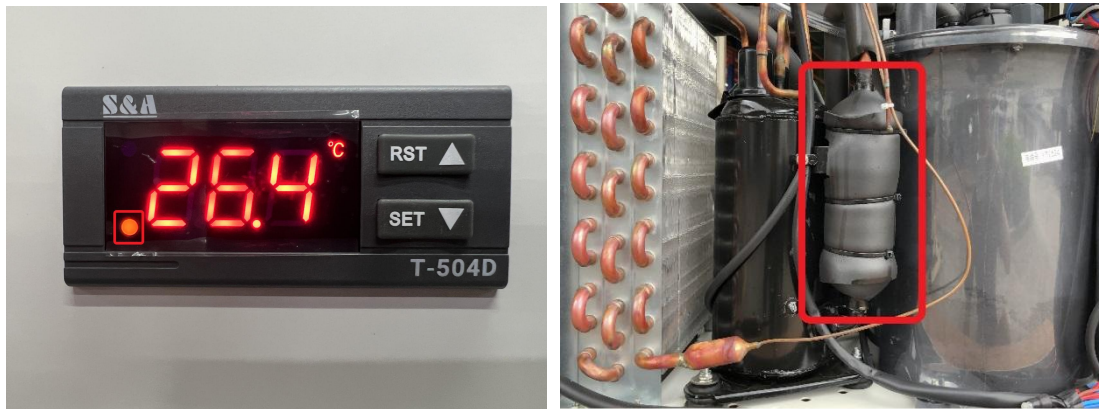
检测步骤 Detection step (4) :

查看压缩机启动电容是否异常或电容值下降

Check if the compressor's starting capacitor is abnormal or the capacitance value decreases

在温控器 D2 指示灯常亮时，判断压缩机是否启动运行是否正常。因压缩机运行时表面温度达到 90℃ 以上，不建议直接用手触碰，可以触碰压缩机储液罐感受震动。如出现异响基本判断压缩机故障。

When the temperature controller D2 indicator light is on, judge whether the compressor is started and running normally. Because the surface temperature of the compressor is above 90℃ when it is running, it is not recommended to touch it directly by hand. Instead, the liquid storage tank of the compressor can be touched to feel the vibration. If there is abnormal sound, basic judgment compressor failure.



【左图：红色方框内为 D2 指示灯位置；右图；红色方框为压缩机储液罐】

[Left : the red box is the position of the D2 indicator light; Right ; the red box is the liquid storage tank]

如压缩机无启动，请先关闭冷水机，在冷水机内找到压缩机启动电容，查看压缩机启动电容外观是否破损，如外观发现明显烧坏痕迹或内部液体泄漏，则建议更换启动电容，如外观正常请进行下一步检测。

If the compressor is not started, please turn off the chiller first, find the compressor starting capacitor in the chiller, and check whether the appearance of the compressor starting capacitor is damaged. If the appearance is obviously burned out or internal liquid leakage is found, it is suggested to replace the starting capacitor. If the appearance is normal, please carry out the next test.



【压缩机启动电容】 [compressor starting capacitor]

关闭冷水机，使用尖嘴钳拔出压缩机启动电容端子并放电，再使用万用表电容档测量电容值是否低于标称值 5%（按照电容上注明的标称值）

Turn off the chiller, pull out the capacitor terminal of the compressor and discharge with the nip-nosed pliers, and then measure whether the capacitance value is lower than 5% of the nominal value (according to the nominal value indicated on the capacitor) by using the capacitor of the multimeter.



【左图：使用尖嘴钳将压缩机电容端子取出；右图：使用万用表电容档测量电容值】

[Left : Take out the capacitor terminal of the compressor with the nip-nosed pliers; Right : Measure the capacitance value with the capacitance of the multimeter]

情景判断 Situational judgment

4.1 如低于 5%，可判断压缩机电容容量低于启动容量导致制冷量下降。

4.1 If it is lower than 5%, the capacitance of the compressor's capacitor will be judged as being lower than the starting capacity, which causes decreased refrigerating capacity.

处理：更换相同规格压缩机启动电容。

Solution: change the compressor's starting capacitor with the same specification.

4.2 如压缩机启动电容容量正常，请进行下一步检测。

4.2 If the capacity of the compressor's starting capacitor is normal, the next detection step shall be made.

检测步骤 Detection step (5) :

查看压缩机是否正常运转

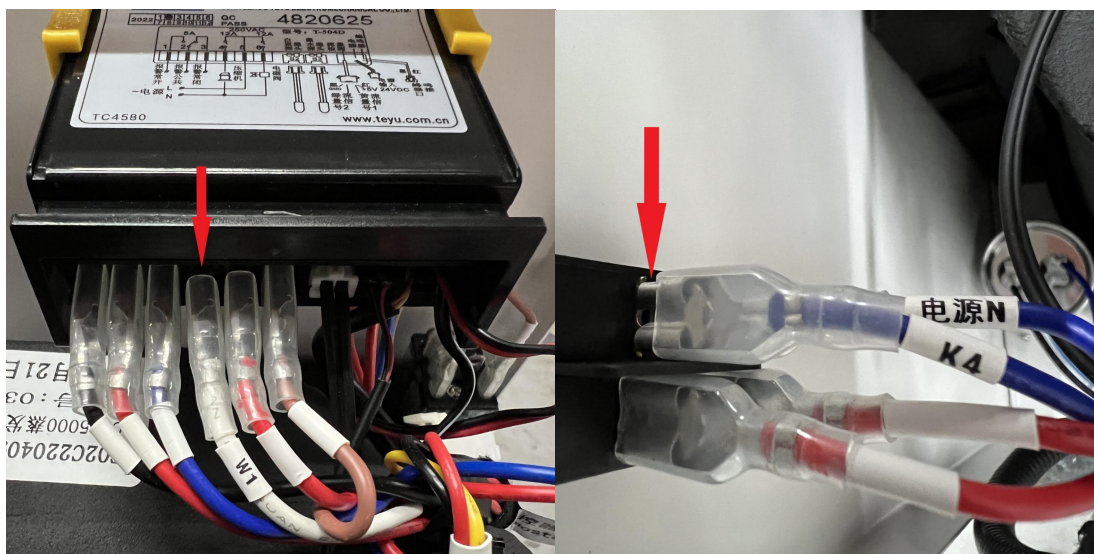
Check if the compressor is running normally

压缩机与风扇同步运转, 如风扇运行时压缩机不运转或运转时发生异响, 基本可判断压缩机故障。

Compressor and fan run synchronously, if the compressor does not run when the fan is running or abnormal sound occurs during the operation, the compressor fault can be basically judged.

找出温控器 4 号端子与电源开关零线端子, 在温控器 D2 指示灯常亮时使用万用表交流电压档测量是否有稳定的 220V 电压。

Find the terminal 4 of the thermostat and the zero line terminal of the power switch, and use the multimeter to measure whether there is a stable 220V voltage when the thermostat D2 indicator is on.



【测量温控器 4 号与电源开关零线端子电压】

[Measure the voltage of No.4 terminals and power switch zero line]

情景判断 Situational judgment

5.1 如温控器 D2 指示灯常亮时, 且无 220V 电压, 可判断温控器故障

5.1 If the temperature controller D2 indicator light is on, and there is no 220V voltage, the temperature controller fault can be judged.

处理: 更换温控器。

Solution: Replace the temperature controller.

5.2 如温控器 D2 指示灯常亮时，且有 220V 电压，但压缩机不运转，请进行下一步检测。

5.2 If the temperature controller D2 indicator light is on, and the voltage is 220V, but the compressor does not operate, please carry out the next test.

使用测量工具（电流表）测量温控器接线端处压缩机共端电流是否低于标称电流（压缩机标称电流需要与特域机电联系确认）。

Measuring tools (ammeter) will be used to measure whether the current of the compressor's live wire at the output end of AC contactor is lower than the nominal current (S&A shall be contacted to confirm the nominal current of the compressor).

另外压缩机运转时表面温度达 90℃ 以上，不建议用手直接触碰以免烫伤！

The surface temperature of the compressor is above 90℃ during operation, it is not recommended to contact with the hand directly to avoid scalding!



【白色耐高温线为压缩机共端】

[White high-temperature line is the common end of the compressor]

情景判断 Situational judgment

5.2.1 如压缩机运行电流为零，可判断压缩机保护器短路（压缩机过热会引起保护器工作）

5.2.1 If the compressor running current is zero, the compressor protector can be judged to be short circuit (overheating of the compressor will cause the protector to work)

处理：让冷水机静置 30 分钟使其降温后再开机。

Solution: Let the chiller cool down for 30 minutes before turning it on.

5.2.2 如电流大于额定电流 3 倍或以上，可判断压缩机内部转子卡住不转动。

5.2.2 If the current is more than 3 times the rated current or above, it can be judged that the internal rotor of the compressor is stuck and does not rotate.

处理：冷水机压缩机故障涉及烧焊工艺，建议联系专业焊工处理或返厂维修。

Solution: dealing with the faults of chiller compressor involves welding technique. It is recommended to contact professional welders to repair the compressor or return the

compressor to the factory for maintenance.

5.2.3 如压缩机运转正常，建议进行下一步检测。

5.2.3 If the compressor is in normal operation, the next detection step will be recommended.

检测步骤 Detection step (6) :

查看制冷系统是否正常

Check whether the refrigeration system is normal

使用测量工具（电流表）测量温控器接线端处压缩机共端电流是否低于标称电流（压缩机标称电流需要与特域机电联系确认）。

Measuring tools (ammeter) will be used to measure whether the current of compressor's common end at thermostat terminal is lower than the nominal current (S&A shall be contacted to confirm the nominal current of the compressor).



【左图：白色高温线为压缩机共端。右图：蒸发器入口铜管结霜现象】

[Left: white high-temperature line is the compressor's common end. Right: Frosting occurs on the copper tube at the inlet of evaporator]

情景判断 Situational judgment

如发生冷媒泄漏，泄漏位置会有明显油污渗漏，可用肥皂水涂抹铜管处，查看是否有气泡产生，气泡产生位置可确认为泄露点。另外如发生冷媒泄漏或冷媒堵塞现象，蒸发器入口铜管会出现结霜现象。可初步判断为制冷系统故障。

In case of refrigerant leakage, there will be noticeable oil leakage at the leakage point. Soap water can be applied to the copper tube to check whether bubble occurs. The location of the bubble can be confirmed as the leakage point. In addition, in case of refrigerant leakage or blockage, frosting will occur on the copper tube at the inlet of evaporator. The refrigeration system can be basically judged as having a fault.

处理：冷水机制冷系统故障涉及烧焊工艺，建议联系专业焊工处理或返厂维修。

Solution: dealing with the faults of chiller's refrigeration system involves welding technique. It is recommended to contact professional welders for repairing or return it to



the factory for maintenance.

※以上检测步骤如无法消除 E2 水温超高报警，建议将冷水机进行返厂维修。

※If it is impossible to remove E2 ultrahigh water temperature alarm with the detection steps above, it is recommended that the chiller should be returned to the factory for maintenance.

E3 水温超低报警 Ultralow water temperature alarm

故障可能性 Failure possibility

- 1、秋、冬季节首次开机实时水温偏低
1. Low actual water temperature in the first startup in autumn and winter
- 2、水温传感器故障
2. Water temperature sensor fault

检测步骤 Detection step (1) :

落实是否秋、冬季节首次开机

Check whether it is the first startup in autumn and winter

秋、冬季节首次开机容易出现实际水温 (Actual Temp) 低于设定水温 (Set Temp) 情况。

It is likely to occur that the actual temperature is lower than the set temperature in the first start up in autumn and winter.

情景判断 Situational judgment

1.1 秋、冬季节首次开机

1.1 First startup in autumn and winter

处理: 适当添加温水或让热负载设备工作一段时间之后, 水温逐渐上升自行消除该报警。

Solution: the water temperature will gradually increase and then the alarm will disappear automatically after proper warm water is added or after the equipment with heat load operates for some time.

1.2 如夏季冷水机水温长时间异常偏低, 请进行下一步检测。

1.2 If the water temperature of chiller in summer is abnormally low for a long time, the next detection step shall be made.

检测步骤 Detection step (2) :

测试水箱内的水温与实际探测水温是否一致

Check whether the water temperature in water tank is consistent with the actual detected water temperature

水温传感器故障可能伴随水温传感器故障报警代码 E5

Sensor fault may be accompanied by sensor fault alarm code E5

用水杯承接冷水机排水口放出的少量冷却水, 使用温度计测量冷却水温度是否与实际水温一致 (如无温度计情况下, 可使用冷水机室温传感器探测水温度, 按一下温控器“▼”键显示 t1, 再按一下即可显示室温传感器所探测的温度值)。

Take a small amount of cooling water from the outlet of the chiller with a water cup, and use a thermometer to measure whether the temperature of the cooling water is consistent with the actual water temperature (if there is no thermometer, you can use the room temperature sensor of the chiller to detect the water temperature,.Press the "▼" button to display t1, and press again to display the temperature value detected by the room temperature sensor).



【黑探头为室温传感器】 [The black probe is a room temperature sensor]

情景判断 Situational judgment

2.1 如显示温度与实际温度存在误差，基本判断传感器存在故障。

2.1 If there is difference between the temperature shown and the actual temperature, the sensor will be basically judged as having a fault.

处理：更换温控器传感器，由于室温传感器和水温传感相连，所以更换时需要一并更换。

Solution: change the thermostat sensor. Because room temperature sensor is connected to water temperature sensor, they shall be replaced together when replacement is needed.

E4 室温传感器故障 Room temperature sensor fault

故障可能性 Failure possibility

- 1、室温传感器接线松动
1. Loose wiring of the room temperature sensor
- 2、温控器/室温传感器故障
2. Fault of thermostat/room temperature sensor

检测步骤 Detection step (1) :

查看室温传感器接线是否松动

Check whether the wiring of the room temperature sensor is loose

在温控器接线端找到室温传感器接线端子，拨动端子是否松脱，重新拧紧。

Find the wiring terminal of room temperature sensor at the thermostat wiring end. Toggle the terminal to see whether it is loose, and then retighten it.

情景判断 *Situational judgment*

1.1 如室温传感器接线松动。

1.1 If the wiring of room temperature sensor is loose

处理：重新拧紧室温传感器接线端子，冷水机可取消报警。

Solution: retighten the wiring terminal of room temperature sensor. The alarm will be removed from the chiller.

1.2 如温控器接线端子无松脱且仍然报警，请进行下一步检测。

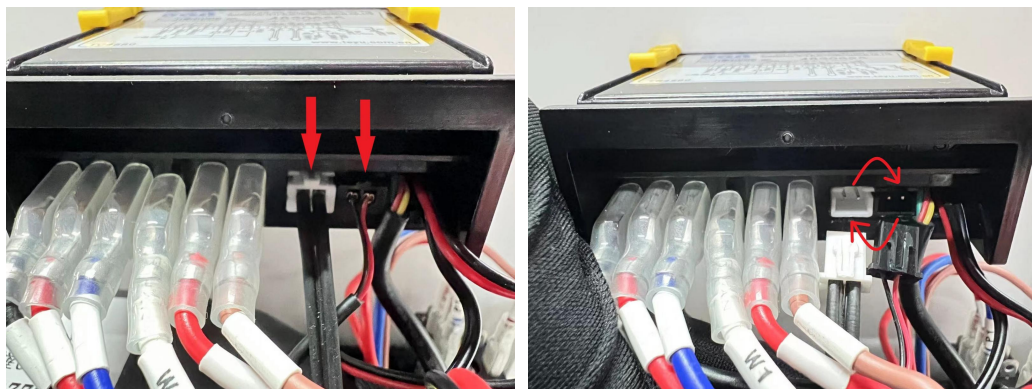
检测步骤 Detection step (2) :

查看温控器/室温传感器是否故障

Check whether faults of thermostat/room temperature sensor occurs

关闭冷水机电源，用小一字螺丝刀按压卡扣并拔出室温传感器的白色端子，水温传感器的黑色端子，将白色端子和黑色端子位置互换，再开机观察温控器所出现的报警代码。

Turn off the chiller, press the buckle with a small flat-head screwdriver, and pull out the white terminal of the room temperature sensor and the black terminal of the water temperature sensor. Switch the white terminal and the black terminal on the water temperature sensor, and then start the chiller and observe the alarm code of the temperature controller.



【将室温传感器白色端子与水温传感器黑色端子互换】

[Swap the white terminal of the room temperature sensor with the black terminal of the water temperature sensor]

情景判断 Situational judgment

2.1 如仍出现 E4 报警，可判断温控器出现故障。

2.1 If E4 alarm still remains, the thermostat can be judged as having a fault.

处理：由于室温传感器和水温传感相连，所以更换时需要一并更换。

Solution: because room temperature sensor is connected to water temperature sensor, they shall be replaced together when replacement is needed.

2.2 如出现 E5 报警，可判断室温传感器出现故障。

2.2 If E5 alarm occurs, the room temperature sensor can be judged as having a fault.

处理：由于室温传感器和水温传感相连，所以更换时需要一并更换。

Solution: Because room temperature sensor is connected to water temperature sensor, they shall be replaced together when replacement is needed.

2.3 如更换传感器无法消除报警或 E4、E5 同时出现报警。

2.3 If the alarm still exists after the sensors are replaced or E4 and E5 alarm occur simultaneously

处理：建议更换温控器及整套传感器。

Solution: it is recommended that the thermostat and the complete set of sensors should be replaced.

E5 水温传感器故障 Water temperature sensor fault

故障可能性 Failure possibility

- 1、水温传感器接线松动
1. Loose wiring of water temperature sensor
- 2、温控器/水温传感器故障
2. Fault of thermostat/water temperature sensor

检测步骤 Detection step (1) :

查看水温传感器接线是否松动

Check whether the wiring of water temperature sensor is loose

在温控器接线端找到水温传感器接线端子，拨动端子是否松脱，重新拧紧

Find the wiring terminal of water temperature sensor at the thermostat's wiring end.

Toggle the terminal to see whether it is loose, and then retighten it.

情景判断 Situational judgment

1.1 如水温传感器接线松动。

1.1 If the wiring of water temperature sensor is loose

处理：重新拧紧水温传感器接线端子，冷水机可取消报警。

Solution: Retighten the wiring terminal of water temperature sensor. Alarm will be removed from the chiller.

1.2 如温控器接线端子无松脱且仍然报警，请进行下一步检测。

1.2 If the wiring terminal of the thermostat is not loose but the alarm still exists, the next detection step shall be made.

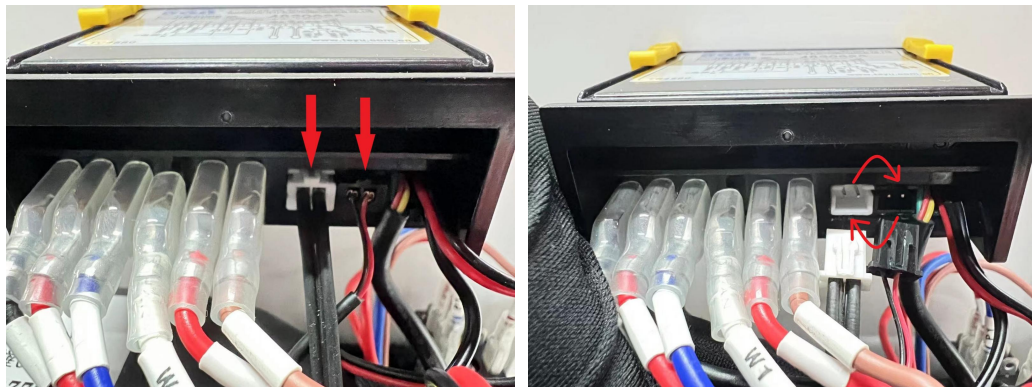
检测步骤 Detection step (2) :

查看温控器/水温传感器是否故障

Check whether faults of the thermostat/water temperature sensor exist

关闭冷水机电源，用小一字螺丝刀按压卡扣并拔出室温传感器的白色端子，水温传感器的黑色端子，将白色端子和黑色端子位置互换，再开机观察温控器所出现的报警代码。

Turn off the chiller, press the buckle with a small flat-head screwdriver, and pull out the white terminal of the room temperature sensor and the black terminal of the water temperature sensor. Switch the white terminal and the black terminal on the water temperature sensor, and then start the chiller and observe the alarm code of the temperature controller.



【将室温传感器白色端子与水温传感器黑色端子互换】

[Swap the white terminal of the room temperature sensor with the black terminal of the water temperature sensor]

情景判断 Situational judgment

2.1 如仍出现 E5 报警，可判断温控器出现故障。

2.1 If E5 alarm still remains, the thermostat can be judged as having a fault.

处理：由于室温传感器和水温传感相连，所以更换时需要一并更换。

Solution: because room temperature sensor is connected to water temperature sensor, they shall be replaced together when replacement is needed.

2.2 如出现 E4 报警，可判断水温传感器出现故障。

2.2 If E4 alarm occurs, the water temperature sensor can be judged as having a fault.

处理：由于室温传感器和水温传感相连，所以更换时需要一并更换。

Solution: because room temperature sensor is connected to water temperature sensor, they shall be replaced together in replacement.

2.3 如更换传感器无法消除报警或 E4、E5 同时出现报警。

2.3 If replacement of the sensor cannot remove alarms or E4 and E5 alarm occur simultaneously

处理：建议更换温控器及整套传感器。

Solution: it is recommended that the thermostat and the complete set of sensors should be replaced.

E6 流量 1 报警 Water flow 1 alarm

当冷水机出现 E6 水流量报警首先必须将冷水机调整为自循环状态,使用水管短接冷水机进、出水口。并应将水加至最高水位线。

When E6 water flow alarm occurs in the chiller, the chiller must be first regulated to the self-circulation state. The water inlet and water outlet of the chiller must be short connected with a water tube. Water shall be added to the maximum water level.



【左图：测试需使用一米长水管将其短接。右图：水位应加至绿色区域与黄色区域之间（红色方框内）】
[Left: The test requires short connection with a one-meter long water tube. Right: the water level shall reach the area between the green indicator and the yellow indicator (as indicated in the red mark)]

故障可能性 Failure possibility

- 1、冷水机外部管道堵塞
1. Blocked external tube of the chiller
- 2、流量传感器故障（流量传感器在机器内部的出水口）
2. Flow sensor failure (flow sensor is at the internal outlet of chiller)
- 3、水泵故障
3. DC pump failure

检测步骤 Detection step (1) :

查看冷水机外部管道

Check the external tube of the chiller

情景判断 Situational judgment

1.1 如冷水机自循环时 E6 报警取消且水流量正常，基本判断为冷水机外部管道堵塞。

1.1 If E6 alarm is removed and water flow is normal during self-circulation of the chiller, the external tube of the chiller will be basically judged as being blocked.

处理：清理冷水机外部管道。

Solution: clean the external tube of the chiller.

1.2 如冷水机自循环时仍出现 E6 报警且水流量正常，请进行下一步检测。

1.2 If E7 alarm still remains and water flow is normal during self-circulation of the chiller, the next detection step shall be made.

1.3 如冷水机自循环仍出现 E6 报警且水流量不正常或不出水，请从步骤 3 开始检测。

1.3 If E6 alarm still remains and water flow is abnormal or there is no water discharge during self-circulation of the chiller, detection shall be made from step 3.

检测步骤 Detection step (2) :

查看流量传感器是否故障

Check whether the flow sensor is faulty

在冷水机自循环时，先确定有水流，并查看温控器实时流量是否为零。T-503D/504D在非设定状态下按“▼”键会显示t2，再按一下会显示流量1（单位升：L/min）。

When the chiller is self-circulating, make sure whether there is water flow and check whether the real-time flow rate of the temperature controller is zero. T-503d /504D Press "▼" in the non-setting state will display T2, press again will display flow 1 (unit : L/min)



【按“▼”键温控器会显示t2，再按“▼”键显示流量1】

[Press "▼" and the thermostat will display T2, and then press "▼" to display flow 1]

情景判断 Situational judgment

2.1 如水流正常，但温控器实时流量显示为 0，则判断流量传感器故障。

2.1 If the water flow is normal, but the real-time flow rate of the thermostat is displayed as 0, the fault of the flow sensor can be judged.

处理：更换流量传感器

Solution: replace the flow sensor

2.2 如水流量仍不正常或不出水，且温控器实时流量显示为 0，请进行下一步检测。

2.2 If the water flow is still abnormal or there is no water, and the real-time flow rate of the thermostat is displayed as 0, please conduct the next test.

检测步骤 Detection step (3) :

查看直流泵是否正常工作

Check whether DC pump is in normal operation

查看直流泵前需确认 24V 开关电源是否输出正常。开关电源输出正常情况下，可用手直接触碰直流泵，观察直流泵是否震动、发烫、出水管是否出水。

24V switching power supply shall be confirmed for normal output before checking DC pump. For normal output of the switching power supply, touching the DC pump with hands is allowed. Observe whether there is vibration, extreme heat and water discharge of discharging tube of DC pump.



【用手触碰直流水泵外壳】

[Touch the DC pump housing with your hand]

情景判断 Situational judgment

如开关电源有输出情况下，直流泵无正常出水，基本判断为直流泵故障。

If there is output of the switch power supply but no water discharge of DC pump, DC pump will be basically judged as having a fault.

处理：更换直流泵

Solution: Replace DC pump

E7 流量 2 报警 Flow rate 2 alarm

当冷水机出现 E7 水流量报警首先必须将冷水机调整为自循环状态,使用水管短接冷水机进、出水口。并应将水加至最高水位线。

When E7 water flow alarm occurs in the chiller, the chiller must be first regulated to the self-circulation state. The water inlet and water outlet of the chiller must be short connected with a water tube. Water shall be added to the maximum water level.



【左图：测试需使用一米长水管将其短接。右图：水位应加至绿色区域与黄色区域之间（红色方框内）】
[Left: The test requires short connection with a one-meter long water tube. Right: the water level shall reach the area between the green indicator and the yellow indicator (as indicated in the red mark)]

故障可能性 Failure possibility

- 1、冷水机外部管道堵塞
1. Blocked external tube of the chiller
- 2、流量传感器故障（流量传感器在机器内部的出水口）
2. Flow sensor failure (flow sensor is at the internal outlet of chiller)
- 3、水泵故障
3. DC pump failure

检测步骤 Detection step (1) :

查看冷水机外部管道

Check the external tube of the chiller

情景判断 Situational judgment

- 1.1 如冷水机自循环时 E7 报警取消且水流量正常，基本判断为冷水机外部管道堵塞。
1.1 If E7 alarm is removed and water flow is normal during self-circulation of the chiller, the external tube of the chiller will be basically judged as being blocked.

处理：清理冷水机外部管道。

Solution: clean the external tube of the chiller.

1.2 如冷水机自循环时仍出现 E7 报警且水流量正常，请进行下一步检测。

1.2 If E7 alarm still remains and water flow is normal during self-circulation of the chiller, the next detection step shall be made.

1.3 如冷水机自循环仍出现 E7 报警且水流量不正常或不出水，请从步骤 3 开始检测。

1.3 If E7 alarm still remains and water flow is abnormal or there is no water discharge during self-circulation of the chiller, detection shall be made from step 3.

检测步骤 Detection step (2) :

查看流量传感器是否故障

Check whether the flow sensor is faulty

在冷水机自循环时，且确定有水流经过，并查看温控器实时流量是否为零。T-503D/504D 在非设定状态下持续按“▼”键显示t3，再按一下“▼”键显示流量2（单位升：L/min）。

When the chiller is self-circulating, make sure there is water flow, and check whether the real-time water flow is zero. For T-503D /504D, keep pressing "▼" to display t3 in non-setting state, and then press "▼" to display flow 2 (unit liter: L/min)



【温控器显示t3后，再按“▼”键显示流量2】

[After the thermostat displays T3, press "▼" to display water flow 2]

情景判断 Situational judgment

2.1 如水流正常，但温控器实时流量显示为 0，则判断流量传感器故障。

2.1 If the water flow is normal, but the real-time flow rate is displayed as 0, the fault of the flow sensor will be judged.

处理：更换流量传感器

Solution: replace the flow sensor

2.2 如水流量仍不正常或不出水，且温控器实时流量显示为 0，请进行下一步检测。

2.2 If the water flow is still abnormal or there is no water, and the real-time flow rate is displayed as 0, please conduct the next test.

检测步骤 Detection step (3) :

查看直流泵是否正常工作

Check whether DC pump is in normal operation

查看直流泵前需确认 24V 开关电源是否输出正常。开关电源输出正常情况下，可用手直接触碰直流泵，观察直流泵是否震动、发烫、出水管是否出水。

24V switching power supply shall be confirmed for normal output before checking DC pump. For normal output of the switching power supply, touching the DC pump with hands is allowed. Observe whether there is vibration, extreme heat and water discharge of discharging tube of DC pump.



【用手触碰直流水泵外壳】

[Touch the DC pump housing with your hand]

情景判断 Situational judgment

如开关电源有输出情况下，直流泵无正常出水，基本判断为直流泵故障。

If there is output of the switch power supply but no water discharge of DC pump, DC pump will be basically judged as having a fault.

处理：更换直流泵

Solution: Replace DC pump

三、冷水机其它操作与检测（以下步骤需关机操作）

Other operations and detections of the chiller (Shutdown the chiller is required for the following steps.)

※操作前确保漏电保护器与空气开关选配正确，并确保机器外部接线盖有 220V 稳定电压输入。

※ Prior to operation, ensure that the leakage protector and air switch are selected properly, and that the external wiring cover of the machine has a stable voltage input of 220V.

1、冷水机不开机 Starting failure of the chiller

故障可能性 Failure possibility

1、冷水机电源插口问题

1.Power socket problem of chiller

2、电箱保险丝烧坏

2. The electric box fuse is burnt out

检测步骤 Detection step (1) :

检查电源线母插头是否插到位

Check whether the power cord plug is in place

查看冷水机电源插座，插头是否插到位，可参考下图原点位置，将原点覆盖即可。

Check the outlet of the chiller and see if the plug is in place. Please refer to the origin position in the figure below and cover the origin.



【左图：红框为圆点位置；右图：正确安装示意】

[Left : red box is the location of the dots; Right : the correct installation signal]

情景判断 Situational judgment

1.1 如电源插头安装不到位。

1.1 If the power plug is not installed in place

处理：重新按照指示安装电源插头。

Solution:Reinstall the power plug as instructed

1.2 如电源插头安装稳妥，请进行下一步检测。

1.2 If the power plug is properly installed, please do the next test

检测步骤 Detection step (2) :

检查电箱保险丝是否烧坏

Check whether the electric box fuse is burnt out

取出冷水机电源插座内的保险管，使用测量工具测量保险管是否断路

Take out the fuse from the outlet of the chiller and use the measuring tool to measure whether the fuse is open.



【左图：取出保险管座示意图；右图：测量保险管是否通路】

[Left: Schematic diagram of removing the fuse seat; Right: measuring whether the fuse is accessible]

情景判断 Situational judgment

2.1 如测量出保险管座两极断路，可判断保险管断路。

2.1 If it is measured that the two poles of the fuse seat are open, it can be judged that the fuse is open.

处理：更换保险管，并查看下一章《跳闸或烧保险》。

Solution: Replace the fuse and see the next chapter, "Trip or fuse burning in start-up".

2.2 如保险管处于导通状态，建议联系我司售后排查原因

2.2 If the fuse is in the conduction state, it is recommended to contact our company for after-sales investigation.

2、跳闸或烧保险 Trip or fuse burn-out

故障可能性 Failure possibility

- 1、24V 开关电源短路（启动冷水机保险管立刻熔断）
1.Short circuit of 24V switching power supply(Start the chiller, fuse blew immediately)
- 2、发热棒短路（需查看本机是否有发热棒，温控器 D2 指示灯不亮时，保险管立刻熔断）
2. Heating rod short circuit(Check whether chiller has a heating rod,temperature controller D2 indicator is off,fuse blow out immediately)
- 3、风扇短路（温控器 D2 指示灯常亮，立刻跳闸或烧保险）
3.Fan short circuit (temperature controller D2 indicator is steady on, fuse blow out immediately)
- 4、压缩机短路（温控器 D2 指示灯常亮，立刻跳闸或烧保险）
4.Compressor short circuit (temperature controller D2 indicator is steady on, fuse blow out immediately)

检测步骤 Detection step (1) :

检测 24V 开关电源是否有短路

Check whether there is a short circuit in the 24V switching power supply

关闭冷水机电源，找出 24V 开关电源“逆变器输入”线束端子，拔掉端子并使用万用表欧姆档测量 24V 开关电源输入端内阻是否为零。

Turn off the chiller,locate the "transformer input" wiring harness terminal of the 24V switching power supply,remove the terminals and use a multimeter to measure whether the internal resistance at the input end of the 24V switching power supply is zero.



【左图：逆变器输入线束端子；右图：测量箭头所指位置内阻】

[Left : transformer input wiring harness terminal; Right: Measure internal resistance at arrow point]

情景判断 Situational judgment

- 1.1 如 24V 开关电源电阻为零，可判断 24V 开关电源故障

1.1 If the resistance of the 24V switching power supply is zero, the fault of the 24V switching power supply can be judged.

处理：更换 24V 开关电源

Solution: replace the 24V switching power supply

1.2 如 24V 开关电源电阻不为零，请配合机型选择进行下一步检测。

1.2 If the resistance of 24V switching power supply is not zero, please cooperate with the model to select the next test.

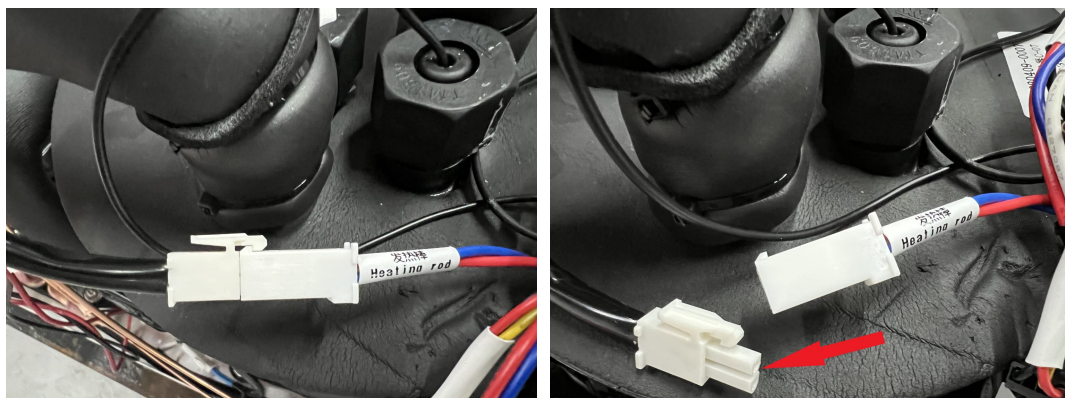
检测步骤 Detection step (2) :

检测发热棒是否短路

Check whether there is a short circuit in the heating rod

关闭冷水机电源，在水箱顶部找到“发热棒”线束端子，拔掉端子并使用万用表欧姆档测量发热棒内阻是否为零。

Turn off the chiller, find the "heating rod" wire harness terminal at the top of the water tank, unplug the terminal and use the multimeter ohm range to measure whether the internal resistance of the heating rod is zero



【左图：发热棒线束端子在水箱顶部；右图：测量箭头所指位置内阻】

[Left: Heating rod wire harness terminal at the top of the water tank; Right: Measure internal resistance at arrow point]

情景判断 Situational judgment

2.1. 如发热棒电阻为零，可判断发热棒故障

2.1 If the resistance of the heating rod is zero, the fault of the heating rod can be judged.

处理：更换发热棒

Solution: replace the heating rod.

2.2 如发热棒电阻不为零，请进行下一步检测

2.2 If the resistance of the heating rod is not zero, please carry out the next test.

检测步骤 Detection step (3) :

检测风扇是否短路

Check whether there is a short circuit in the fan

关闭冷水机电源，在风扇旁找出“接风扇”的线束端子，拔掉端子并使用万用表欧姆档测量风扇内阻是否为零。

Turn off the chiller and find the fan cable harness terminal next to the fan. Remove the terminal and use a multimeter to measure whether the internal resistance of the fan is zero.



【左图：风扇线束端子（2个）；右图：测量内阻】

[Left: Fan's two wiring harness terminals ; Right: Measure internal resistance]

情景判断 Situational judgment

3.1 如风扇电阻为零，可判断风扇故障

3.1 If the resistance value of the fan is zero, the fan fault can be judged.

处理：更换风扇

Solution: replace the fan.

3.2 如风扇电阻不为零，请进行下一步检测。

3.2 If the resistance value of the fan is not zero, please proceed to the next step.

检测步骤 Detection step (4) :

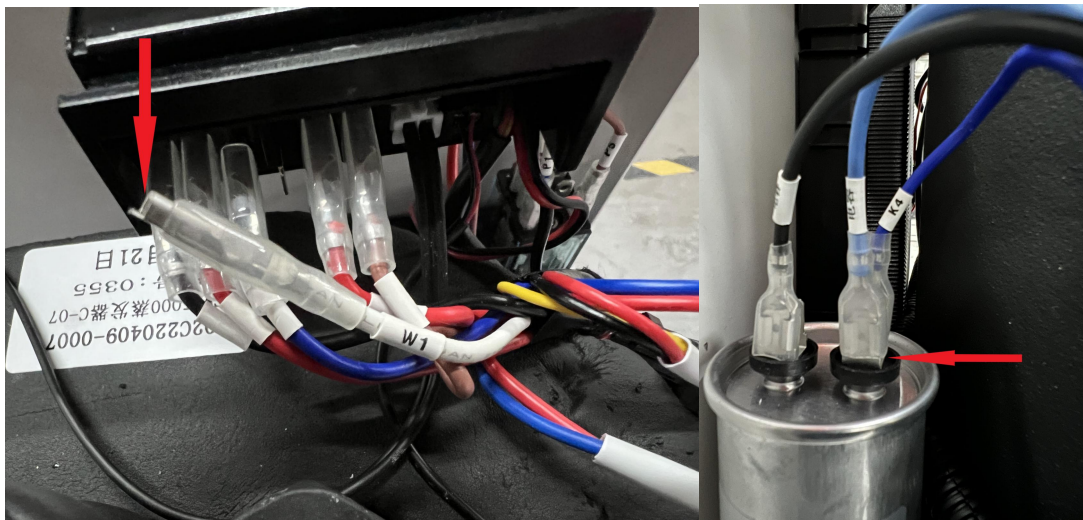
检测压缩机是否短路

Check whether there is a short circuit in the compressor

关闭冷水机电源，找出连接在温控器上的压缩机火线（白色耐高温线），再将火线端子取出使用万用表欧姆档，测量压缩机火线与压缩机电容零线之间内阻是否为零。

Turn off the chiller, find out the compressor fire line (white high temperature line) connected to the thermostat, then take out the live wire terminal and use a multimeter to

measure whether the internal resistance between the compressor fire line and the compressor capacitor null line is zero.



【测量压缩机火线与压缩机电容零线端子之间的内阻】

[Measure the internal resistance between compressor fire line and compressor capacitor null line terminal]

情景判断 Situational judgment

4.1 如压缩机电阻为零，可判断压缩机故障

4.1 If the resistance value of compressor is zero, the compressor fault can be judged.

处理：更换压缩机

Solution: replace the compressor.

4.2 如压缩机电阻不为零，可判断线路问题。

4.2 If the resistance value of the compressor is not zero, circuit fault can be judged.

处理：检查线路

Solution: inspect the line.

3、漏电保护开关跳闸 Leakage protection switch trips

故障可能性 Failure possibility

- 1、压缩机启动电容故障
1. Compressor starting capacitor failure
- 2、压缩机故障
2. Compressor failure
- 3、风扇故障
3. Fan failure
- 4、发热棒故障（需查看本机是否有发热棒配置，若无可进行下一步判断）
4. Heating rod failure (check whether chiller has heating rod, if no, further judgment can be made)
- 5、漏电保护开关故障
5. Leakage protection switch failure

检测步骤 Detection step (1) :

判断压缩机启动电容是否故障

Check whether the compressor starting capacitor is faulty

关闭冷水机电源，在冷水机内部找到压缩机启动电容，用尖嘴钳拔出压缩机启动电容三个接线端子（注意：记住接线端子的接线位置），并使用电工胶布缠绕接线端子，以防触电。再开启冷水机时查看漏电保护开关是否再次跳闸。

Turn off the chiller, find the compressor starting capacitor inside the chiller, pull out the three terminals of the compressor starting capacitor with a needle nose pliers (note: remember the wiring position of the terminals), and wrap the terminals with electrical tape to avoid electric shock. Check whether the leakage protection switch trips again when opening the chiller.



【左图：压缩机启动电容；右图：使用电工胶布将接线端子不留触点完整包好】

[Left: compressor starting capacitor; Right: Connecting terminals are completely wrapped with electrical tape without any contacts]

情景判断 Situational judgment

1.1 如开机后冷水机无出现跳闸现象，则判断压缩机启动电容故障。

1.1 If there is no tripping phenomenon in the chiller after starting up, the fault of the compressor starting capacitor will be judged.

处理：建议更换压缩机启动电容

Solution: It is recommended to replace the compressor starting capacitor

1.2 如开机后冷水机仍出现跳闸现象，请进行下一步检测。

1.2 If the chiller still trips after turning on the chiller, please conduct the next test.

检测步骤 Detection step (2) :

判断压缩机是否故障

Check whether the compressor is faulty

关闭冷水机电源，在冷水机内部找到压缩机，用扳手松开压缩机顶部接线端子保护盖螺母，再用尖嘴钳拔出压缩机顶部接线端子（注意：记住接线端子的接线位置）

Turn off the chiller, find the compressor inside the chiller, loosen the protective cover nut of the top terminal of the compressor with a wrench, and then pull out the top terminal of the compressor with a needle nose pliers (Note: remember the wiring position of the terminal).



【左图：保护盖螺母松开示意图；右图：使用尖嘴钳将接线端子拔出】

[Left : Diagram of Loosen Protective Cover Nut; Right Picture: Pull out the wiring terminal with sharp-nosed pliers]

使用电工胶布缠绕接线端子，以防触电。再开启冷水机观察漏电保护开关是否再次跳闸。

Use electrical tape to wrap the terminals to prevent electric shock. Turn on the chiller and observe whether the leakage protection switch trips again.



【使用电工胶布将接线端子不留触点完整包好】

[Use electrical tape to completely wrap the terminals without any contacts]

情景判断 Situational judgment

2.1 如开机后冷水机无出现跳闸现象，则判断压缩机故障。

2.1 If the chiller does not trip after starting up, the fault of the compressor can be judged.

处理：冷水机压缩机故障涉及烧焊以及充冷媒，建议联系专业焊工处理或返厂维修。

Solution:Chiller compressor failure involves welding and refrigerant filling, it is recommended to contact professional welder for treatment or back to the factory for maintenance.

2.2 如开机后冷水机仍出现跳闸现象，请进行下一步检测。

2.2 If the chiller still trips after starting up, please conduct the next test.

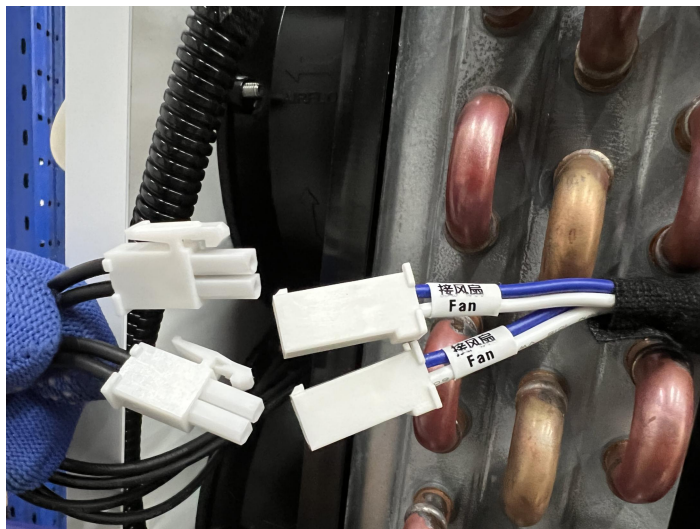
检测步骤 Detection step (3) :

判断风扇是否故障

Check whether the fan is faulty

关闭冷水机电源，在风扇旁找出“接风扇”线束端子,将端子拔掉后再开启冷水机观察漏电保护开关是否再次跳闸。

Turn off the chiller and find the fan cable harness terminal next to the fan. Remove the terminal and then turn on the chiller and observe whether the leakage protection switch trips again.



情景判断 Situational judgment

3.1 如开机后冷水机无出现跳闸现象，则判断风扇故障。

3.1 If the chiller does not trip after starting up, the fan fault can be judged.

处理：建议更换风扇。

Solution: replace the fan.

3.2 如开机后冷水机仍出现跳闸现象，请进行下一步检测。

3.2 If the chiller still trips after starting up, please conduct the next test.

检测步骤 Detection step (4) :

判断发热棒是否故障（部分机型无发热棒配置）

Check whether the heating rod is faulty (some models do not have heating rod)

关闭冷水机电源，在水箱顶部找到“发热棒”线束端子，拔掉端子后再开启冷水机观察漏电保护开关是否再次跳闸。

Turn off the chiller, find the "heating rod" wire harness terminal at the top of the water tank and unplug the terminal, then open the chiller to observe whether the leakage protection switch trips again.



【发热棒安装在水箱顶部】

[Heating rod is installed on the top of the water tank]

情景判断 Situational judgment

4.1 如开机后冷水机无出现跳闸现象，则判断发热棒故障。

4.1 If there is no tripping phenomenon in the chiller after starting up, the heating rod shall be judged to be faulty.

处理：建议更换发热棒。

Solution: replace the heating rod

4.2 如开机后冷水机仍出现跳闸现象，请进行下一步检测。

4.2 If the chiller still trips after starting up, please conduct the next test.

检测步骤 Detection step (5) :

漏电保护开关故障

Leakage protection switch failure

如排除冷水机内部所有可能故障零件仍发生跳闸情况，则判断漏电保护开关故障。

If all possible faulty parts in the chiller are excluded, the tripping situation still occurs, then the fault of leakage protection switch is judged

处理：更换漏电保护开关

Solution: replace the leakage protection switch

※以上检测步骤如无法消除故障，建议联系我司 400 售后服务热线或将冷水机返厂检修。

※ If the above detection steps cannot eliminate the fault, it is suggested to contact our 400 after-sales service hotline or return the chiller to the factory for maintenance.