



Hot Air Circulating Drying Oven

**CT-C Series**



**Instruction manual**



**CHANGZHOU KODI MACHINERY CO., LTD**

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**Changzhou Kodi Company pursues extraordinary quality and focuses on good after-sales service!**

本说明书就该 CT-C 热风循环烘箱的用法加以说明!

**This manual specially illustrates the usage of CT-C series hot air drying oven!**

操作错误会引起意外事故，缩短装置的寿命，降低其性能。

**Wrong operation can cause accidents, shorten the life of the device and reduce its performance.**

因此，恳请您在使用前务必仔细阅读该说明书!

**Therefore, please be sure to carefully read the manual before using!**

将本说明书交到最终用户手中!

**The manual will be submitted to end-users!**

请妥善保管好本说明书，以备需要时查阅!

**Please keep this manual to prepare for inspection when required!**

说明书供参考所用，具体设计外形以实物为准!

**The manual is used for only reference, the specific shape design is subject to the real object.**

## **I. General Introduction**

KODI company's hot air circulation drying oven, after several upgrading, has reached the advanced level at home and abroad. It is widely used in pharmaceutical, chemical, food, light industry and heavy industry raw materials and products for heating and dehumidification.

The basic principle of CT-C series hot air circulation drying oven is that steam or electricity is used as heat energy, and the heat is generated by steam radiator or electric heating element, and the fan carries out convection heat transfer, carries out heat transfer to the material, and continuously adds fresh air to the oven and discharges moist air out of the oven. In drying time, the oven keeps proper relative temperature and humidity. The most important feature is that most of the hot air is circulated in the drying chamber, thus enhancing heat and mass transfer, and saving energy.

## **II. Instructions Before Use**

1. CT-C series drying oven adopts steam heater or far infrared heating element as heat source, the maximum working pressure of steam heater is 0.8MPa, forbid over pressure use.
2. If the oven temperature is required to reach 120~140°C, that is, the steam pressure should be in the range of 0.4~0.8MPa. If the temperature requirement is 80~120°C, that is, the steam pressure should be within the range of 0.2~0.4MPa.
3. Far infrared heating element voltage adopts 380V and 220V (Three-phase / four

wire, except for special cases).

4. Turn on the fan switch after turning on the fan power, and the direction of the fan shall be in accordance with the mark direction sign.
5. Through the oven steam pipeline and steam supply pipe, when the oven is used, you must first open the bypass valve of the steam trap, discharge possible residual debris and condensate in the pipe, to ensure that the trap can work properly. As there are residues in the pipeline, solenoid valve and trap when the initial use, if found to fail work, you must remove the pipe for cleaning, to be clean inside the pipeline, in order to maintain normal operation.
6. About the shutters (air distributor) on both sides of the oven to be adjusting blade angle, try to maximize the hot air flow area. Note that the two blades at the bottom are not opened, from the third blades up, the blade opening angle should gradually increase, Because the adjustment of the shutters blade is correct or not, it will directly affect the temperature in the drying oven.
7. Method for adjusting temperature difference in oven:
8. The moisture removing mechanism on the oven is used to remove the moist air in the oven, When the temperature of the oven is raised to the set value you need, the moisture is removed, but the opening angle in the drain valve should not be too large. The moisture content should be carried out according to the water content contained in the material.
9. If the parts in the transportation process are shifted, the parts must be adjusted before use so as to ensure the use of the oven.

### III. Main Technical Parameters

Model	Drying capacity(kg/batch)	Electric heating power(kw)	Fan power(kw)	Overall dimensions W*D*H(mm)	Equipped drying shelf(set)	Drying plate equipped (pc)	Total weight(kg)
CT-C-O	60	6-9	0.45	1380*1200*2000	1	24	820
CT-C-I	120	15	0.45	2260*1200*2000	2	48	1580
CT-C-II	240	30	0.45*2	2260*2200*2000	4	96	1800
CT-C-III	360	45	0.45*3	2260*3200*2000	6	144	2100
CT-C-IV	480	60	0.45*4	4480*2200*2270	8	192	2800

### IV. Operation Process

The automatic control device, before being put into use, it is necessary to adjust and check whether the power supply voltage is consistent with the use of the equipment, whether the pipe is leaking, whether the fan is flexible and whether the heat relay is used properly, then follow the steps listed

1. Switch on the power switch SA, and notice whether the indicator HL1 is indicated.
2. Press the power button SB2, then check that the fan turn is correct or not.
3. The "manual", "automatic" switch on "automatic" position, turn the XMT-122 setting button, check whether the solenoid valve is flexible, and then set the temperature control point, the limit alarm point, and then put the instrument into

use, the specific method of setting:

Put instrument switch on upper limit position, at the same time rotate the corresponding setting potentiometer, at this point the figure shows the required temperature; In the same way, set the temperature of the oven, the point of use and the temperature alarm point respectively, and then place the instrument switch in the measuring position.

4. Turn off the cut-off valve (see Figure 1-1) "1,2" to open the bypass valve, and open the trap bypass valve in the pipeline, discharged sewage and garbage, and then in the opposite order, turn off the bypass valve 1, open cut-off valve 3,4, then put the manual, automatic switching device in the manual device, Press the heating button switch and repeat it several times. Check the operation of the solenoid valve from the bypass valve, if it is found that the solenoid valve does not open or close, it should be checked immediately whether there is garbage or welding slag at the ends of the solenoid valve. After cleaning, the test will be carried out until no abnormal phenomenon can be put into use and turn off bypass valve 2.

5. Switch the limit switch of the electric actuator to the open and close position

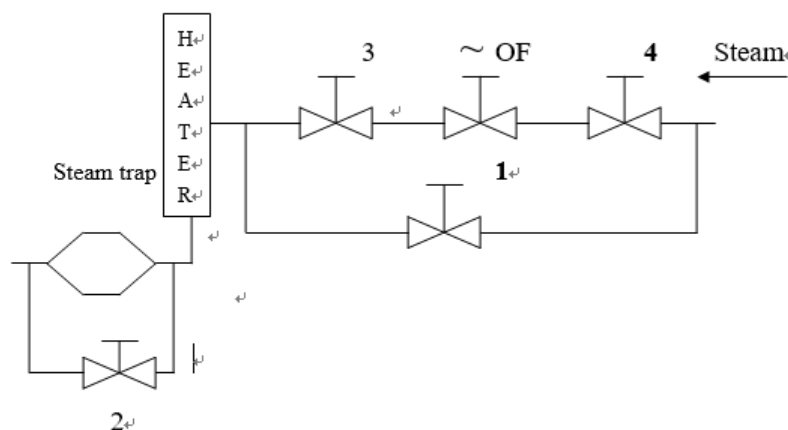


Figure 1-1

6. In the use of steam, electric heating dual-use oven, should first check whether the heating pipe wiring is solid. Whether the nut is tightened, whether or not loose phenomenon. Power line I shall not be less than  $6\text{mm}^2$ , plus oven grounding wire

## V. Troubleshooting & Methods

Fault	Cause	Removal method
Temperature is not high	(1) The steam pressure is too low (2) Steam trap not work (3) Electric heater voltage is too low (4) Drain valve is in normally open condition (5) Fan turn is not correct (6) Display meter is incorrect	(1) Increase steam pressure as required (2) The trap is clogged with debris (3) Increase network voltage, supply power as required (4) Close drain valve (5) The power line can be switched freely (6) Check whether the thermal resistor is properly fastened and the wiring is correct. Check the thermometer with a standard resistance box if necessary
Uneven temperature in the oven	(1) The blade of the shutter is improperly adjusted (2) The door is not fully closed	(1) In accordance with the second part of the sixth adjustments (2) Check and close the door
The fan is noisy	(1) Fan or motor bolts loose (2) Fan blade collision, bearing wear (3) Motor two-phase operation	(1) Check & remove (2) Check & remove (3) Check wiring & electrical switches
The drying speed is too slow	(1) The temperature in the oven is too low (2) Improper selection of drain (3) Air volume is too small (4) Heat loss	(1) See fault 1 (2) Adjust the opening of the drain valve (3) Check whether the blower and air pipe are leaking and the blade is absorbed by sundries (4) Check whether the insulation should be kept warm

Fault	Cause	Removal method
Switch on the power supply without indication	(1) SA bad contact, damage (2) Core short-circuit (3) Power is not correct (4) Indicator light is damaged	(1) Open, repair, or replace (2) Replace (3) Wiring according to drawing (4) Replace
Fan can not start, loud noise	(1) Fan stuck (2) Automatic switch trip (3) Motor single-phase operation (4) The main line is out of contact (5) Motor bearing damage	(1) Adjusting clearance (2) Close the automatic switch (3) Check the power supply voltage (4) Fasten each connection terminal (5) Replace or refuel
No air in the oven	(1) Fan turn not correct (2) Improper adjustment of blinds in oven (3) The duct is blocked	(1) Any two phase power supply for motor switching (2) Adjust each guide plate (3) Dredge
Instrument display is incorrect	(1) Thermal resistance lead wire and instrument connection is bad, contact resistance increases (2) Wiring error	(1) Check the connection  (2) Connect the circuit correctly according to the diagram
Oven temperature out of control	(1) The solenoid valve is out of control and there is rubbish (2) Bypass valve leak (3) Instrument damage	(1) Check & cleaning (2) Repair & replacement (3) Same as above