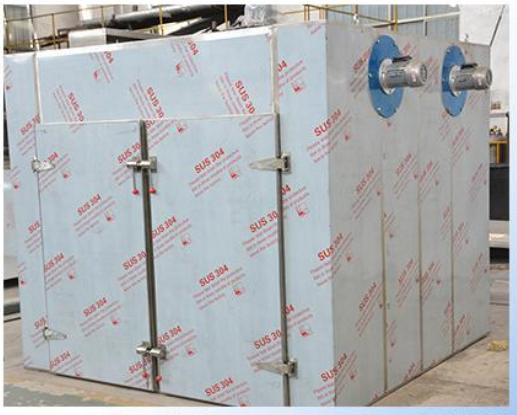
Hot air circulation oven

user's manual



A. Working principle

RXH (CT-C) series hot air oven takes air as carrier and uses steam or electric energy or hot air stove as heat source to achieve the purpose of drying materials. After the cold air entering from outside the box is heated by the heat exchanger, it is forced to circulate in layers and advection by the fan to exchange heat with the materials in the drying pan, and take away the moisture (moisture) emitted by the materials, and return to the heat exchange. Heater (steam heating, electric heating) to heat up again. After so many cycles, the moisture in the hot air increases and the ability to absorb moisture in the material decreases. At this time, it is necessary to open the moisture exhaust valve to remove part of the high-humidity hot air and inhale part of the low-temperature cold air to achieve the purpose of continuous drying.

External details

B. Features and scope of application

In order to minimize the temperature difference at each point in the oven, in addition to relying on the convective heat transfer of the forced circulating air, there are also adjustable air distribution devices on the left and right sides of the oven to adjust the gap between the air distribution blades to make the upper, lower, and lower parts of the oven. The temperatures at the front and rear points are basically the same.

The hot air circulation oven is a shelf-type intermittent drying, which is a kind of drying equipment with great versatility. It has the characteristics of low noise, reliable operation, controllable temperature, and easy operation. It is widely used in the drying of powder, granular and bulk materials in pharmaceutical, traditional Chinese medicine, vegetables, food, light industry, chemical industry, electronics and other industries.

Special note: When drying flammable and explosive materials, users should purchase our company's explosion-proof equipment.

1. Heat source: steam, electricity, hot blast stove, electricity+steam, electricity+steam dual-use, the specific heat source used is subject to the contract, if not specified in the contract, the supplier's configuration shall prevail.

2. Use temperature: steam heating (electricity or hot blast stove heating): 60-140℃.

3. If the operating temperature is less than 60℃ or greater than 140℃, please indicate it when ordering.

4. Special requirements for non-standard ovens should be specified, and the unit price is negotiable.

5. The size of the baking pan is 460×640×45mm, the size is uniform and can be interchanged.

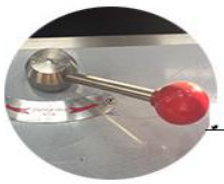
6. With electric heating or far-infrared heating, the temperature in the box can reach ≤ 300 ℃ (users should make special recommendations). Using electricity as the heat source in the table can be designed at 140°C.

7. The power of special axial flow fan is 0.45-0.55kw/set.

8. If a hot blast stove is used to supply hot air, the hot air is generally not recycled.

9. The parameters in the table are for reference only.

Internal details



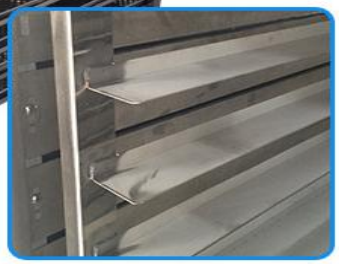
Wet valve (manual)

heat sink

Door seam seal

drying car track

Universal wheel



pan track

bracket

C. Installation and debugging

1. The site where the oven is installed should be flat, and the minimum plane and height of the workshop should be determined according to the overall size of the oven and the rotation space required for operation.

2. Place the oven and connect the pipeline and circuit (the neutral wire should be effectively grounded).

3. Test drive preparation:

(1) A. When using steam as the heat source: ensure that the steam pipeline is unobstructed and leak-free. When the temperature automatic control device is installed, the steam should first pass through the bypass of the solenoid valve to discharge the rust and dirt in the pipeline. , to ensure that the solenoid valve is not blocked.

B. When using a hot blast stove as a heat source: it should be operated according to its instruction manual.

(2) Check whether the circuit is correct and smooth, and whether the neutral line is effectively grounded.

(3) Check whether the fixing bolts are loose. If they are loose, they should be tightened.

(4) Turn on the fan, and check whether the rotation direction of the fan is correct, whether the blade rotates flexibly, and whether the noise is normal. If it does not work normally, it should be adjusted normally.

(5) Adjust the gap between the air distribution blades on both sides so that the temperature of each point in the box is basically the same.

4. After the above test run preparations, the test run can be carried out. The test run should be carried out in the following order:

(1) Pull out the drying car and put the wet material into the drying plate with a uniform thickness. Then push the cart into the oven and close the oven door.

(2) Turn on the fan, then turn on the steam or heating power for heating. The temperature in the oven will gradually increase to the set temperature. With the temperature control device, when the temperature in the box exceeds the set requirement, it will automatically cut off the power and stop or reduce the heating of the air. When the temperature in the box is lower than the set temperature, the control device will automatically energize and continue to heat the air to make it meet the set requirements. Repeat this to keep the oven at the set temperature (Note: the automatic control device is proposed by the buyer when the contract is signed)

(3) After a period of time after the box reaches the set temperature, the humidity (moisture) in the hot air increases. At this time, the ability of the hot air to absorb the moisture in the material is reduced. Inhale a certain amount of cold air.

(4) If it is necessary to test the drying degree of the material, the heat source should be turned off, and the drying door should be closed immediately after sampling with a tool. If the moisture of the material does not meet the requirements, turn on the heat source and continue drying to meet the requirements. If the moisture content of the material meets the requirements, pull out the drying car, close the drying door, and take out the material after cooling. After loading the wet material, open the drying door, push in the drying car, close the drying door, and turn on the heat source.

5. Shutdown: Turn off the heat source first, open the moisture exhaust port, and stop the fan when the temperature in the oven is less than or equal to 40°C.

D. Normal production

1. Start production according to the commissioning steps.

2. Due to the different physical and chemical properties of each material, users should find out the hot air temperature, moisture removal time, and drying time suitable for their own materials according to their own material properties and drying requirements.

3. During the production process, the number of times of opening the drying door should be less and the time should be short to reduce heat loss and improve thermal efficiency.

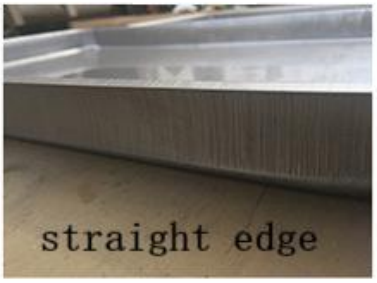
产品细节

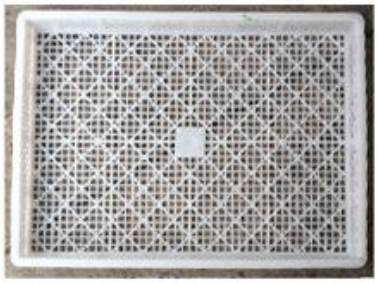
product details

Flat Bottom Press Disc
(Crimped)
Strong and Durable

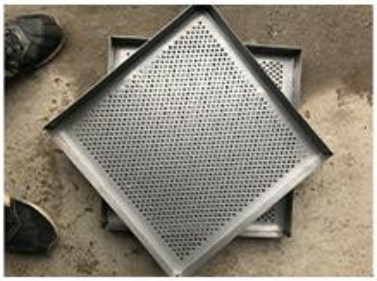
Punching disc

GMP baking tray
easy to clean





Plastic mesh disk
light and affordable
with strong air permeability



304 stainless steel

non-standard handmade
plate demand customization

Manual net disk
(big hole)

Manual Net Disk
(Medium Hole)

Manual net disk
(small hole)

E. maintenance and care

1. The fan should be maintained and maintained according to its instructions.

2. When the machine is shut down for a long time for reproducing, first open the dehumidification valve and turn on the fan for 10 minutes to discharge the dust. If steam is used as heat source: steam should be passed through the bypass of the solenoid valve, and the rust and dirt in the pipeline should be drained to avoid blocking the solenoid valve.

3. When abnormal noise is found, stop the machine and resume production after removing it.

F. the main fault analysis and troubleshooting

serial number

Troubleshooting method

1. The noise is loud, the fixing bolts are loose and the tightening bolts are loosened

2. The moisture of the material is uneven. The thickness of the material is uneven;

3. Uneven distribution of wind. Discharge the material evenly and evenly;

4. Adjust the air distribution blades. In principle, the gap is reduced at high temperature, and the gap is increased at low temperature.

G. Main wearing parts

1. Drying door sealing strip;

H. Special instructions

If the user orders a non-standard hot air circulation oven with special requirements, the physical equipment of the equipment shall be restructured according to the user's requirements, not completely in accordance with the above standard (Articles 1 to 9 of this manual).