Packing list

Serial number	Name	Quantity	Remark
1	Host machine	1	
2	laminate	2	
3	User manual	1	
4	Product certificate	1	

After sales service terms

(1) Free after-sales warranty for three years (consumables warranty for one year: motor, temperature controller, relay), providing lifelong technical services. The warranty period is based on the date of the sales invoice. Customers must keep the sales invoice safe.
(2) Unauthorized modification or disassembly of products by customers is not covered by free warranty.
(3) Malfunctions or damages caused by improper use by customers are not covered by the free warranty.
(4) For products that have expired the warranty period and are not within the scope of free warranty, only the corresponding production cost will be charged during service.



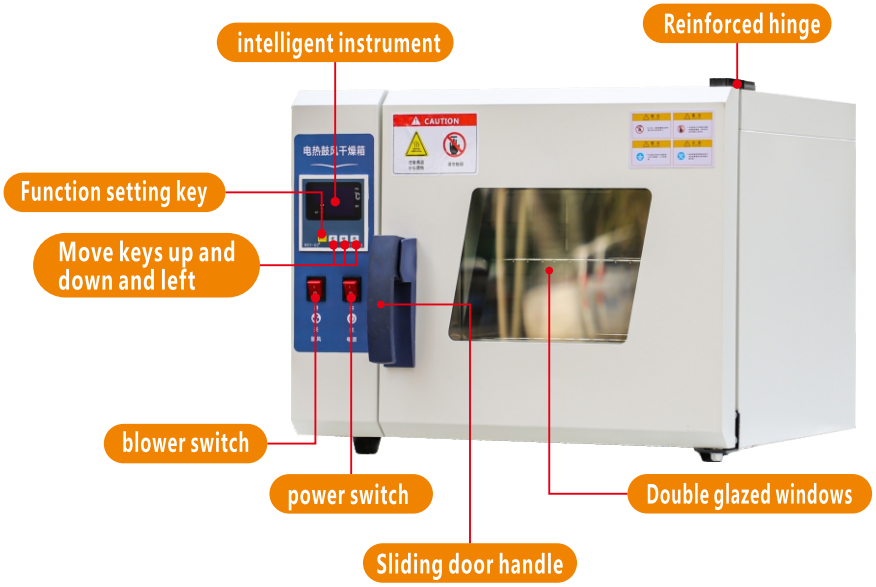
DHG series blast drying oven

(DHG)series user's manual

Before using the device
Please read the manual carefully

EXCELLENT DETAILS DON'T STOP HERE

BECAUSE OF CONCENTRATION/SPECIALTY



Before using the electric drying oven, please read this user manual carefully and believe that it will maximize the functionality of your electric drying oven. After reading this manual, please keep it safe for easy access at any time.Version: 2023-1

1、Applicable scope

The equipment is suitable for drying and conducting various constant temperature adaptability tests on various products or materials, as well as electrical, instrumentation, electronic, electrical, automotive, aviation, communication, plastic, mechanical, chemical, food, chemical, and hardware tools under constant temperature environmental conditions. The drying, heat treatment, and heating of test samples in laboratories of industrial and agricultural production, scientific research, medical and health units are not suitable for volatile, flammable, and explosive materials to prevent explosions.

2、Product features

Product features: The back of this product studio is equipped with stainless steel O-shaped finned high-temperature resistant heating tubes. The finned O-shaped electric heating element is suitable for various places that require air heating, oven heating, oven heating, drying moisture, winter heating, electronic product drying or incubation room heating fins. The electric heating tube is wrapped on the surface of ordinary components with metal heat dissipation fins, which expand the heat dissipation area compared to ordinary components. Due to the shortened length of the components, their thermal losses are reduced. Under the same power conditions, they have advantages such as fast heating, uniform heating, good heat dissipation performance, high thermal efficiency, long service life, and small heating device volume. Designed reasonably according to user requirements for easy installation. The product has been widely used in industries such as mechanical manufacturing, automobiles, textiles, food, and home appliances. The back of the box is equipped with an external blowing device, and there is a high-temperature resistant dual fan fan inside. A more reasonable fan is used to make the hot air flow inside the box faster and the temperature uniformity better. The built-in cooling fan improves the durability of the fan. The fan is isolated from the hot air inside the box, and the blowing is controlled by a separate switch, resulting in a longer service life. The temperature gauge controls the constant and high/low temperature, and the heat generated during the heating process inside the box is discharged outward from the top heat dissipation hole. There is thickened insulation material between the studio and the outer shell, which is made of cold-rolled steel and sprayed on the surface of the box. The studios are respectively made of 201 stainless steel.

3、Product model and technical parameters

product model	working capacity(mm)			working voltage AC(V)	Maximum power consumption (KW)	operation temperature (°C)	temperature control resolving power (°C)	fluctuation °C
	width	depth	height					
DHG-00B	350	350	350	220	0.8	RT+10-250	0.1	±1%
DHG-1B	450	350	450	220	1.3	RT+10-300	0.1	±1%
DHG-2B	550	450	550	220	1.6	RT+10-300	0.1	±1%
DHG-3B	600	500	750	220	2	RT+10-300	0.1	±1%
DHG-4B	800	800	1000	380	4	RT+10-300	0.1	±1%

4、Usage

Controller operation instructions

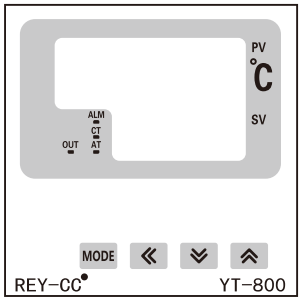
- Please read the instructions carefully before use and keep them safe.
- Do not use this product in an environment where the temperature and humidity are too high and there are strong corrosive gases.
- Before connecting the power supply, ensure that the power supply voltage and load capacity are within the rated range.

Main Function Introduction

The YT-800 temperature controller adopts a brand new design, which has a beautiful appearance, complete functions, and simple operation.

Overview: The YT-800 series intelligent temperature controller is a multifunctional regulating instrument that uses microprocessors. It adopts advanced design and production technology, making the instrument delicate, compact, and reliable in performance. The unique intelligent control function enables operators to achieve good results through simple operations.

① Panel name and various functions



Panel Description	Content Description
Upper display	Actual temperature value inside the oven
Lower display	Set temperature value or time
OUT indicator light	The temperature inside the oven is too low, and the heater is heating up
ALM indicator light	Abnormal temperature inside the oven
CT indicator light	The temperature inside the oven has reached the set temperature
AT indicator light	Automatic setting of PID parameters in progress
MODE	Parameter setting key
«	Shift key
»	add keys
^	Reduce key

② Operation and Use of Instruments

Temperature setting method:

Press the **MODE** key to directly enter the temperature setting state, and the upper row displays So. Press ^ Key to increase the set temperature, press » Key to reduce the set temperature. Press « You can directly move the decimal point to set a number to one, ten, or hundred places.
As shown in the following figure:



Time setting method:

Press the **MODE** key for about 3-5 seconds, and the upper row will display SΓ. Press ^ , » Set the timing time with the key, press « You can directly move the decimal point to set the minute or hour.
As shown in the following figure:



Press the MODE button again to display LCK in the upper row and 0 in the lower row. Set the lower row to 0 and set it to 2. Then press the MODE page, and the upper row will display AL. This page can set the over temperature alarm value, such as setting the number in the lower row to 10. If the temperature exceeds your set value by 10 degrees, an alarm beep will sound.

The instrument with timing function displays the insulation time in the lower row after starting the timer, and turns off the output when the timer is set. The lower row displays oFF. If the timing time is set to 0, the timing function will be turned off and the device will remain at a constant temperature.

Attention: The timing function can only assist workers in on-site operations and cannot be used in completely unsupervised situations to avoid accidents in the event of malfunctions.

Parameter setting method:

Incorrect parameter settings may affect the normal operation of the instrument. Please carefully read the instructions below when making modifications to ensure better operation of the oven.

Press the setting button for 3 seconds, and SΓ will be displayed in the upper row. Press the setting button again to change LCK to 1. Press the setting button to enter IT and Po settings. Reasonably setting parameters can reduce temperature overshoot and accelerate temperature stability. If the temperature is too high during use, the IT setting value can be increased. If it exceeds the set temperature, the IT value can be increased by a certain amount. If the temperature rises slowly when approaching the set value, the IT value can be reduced.

Po is the average heating power percentage when the oven temperature is constant, and the time

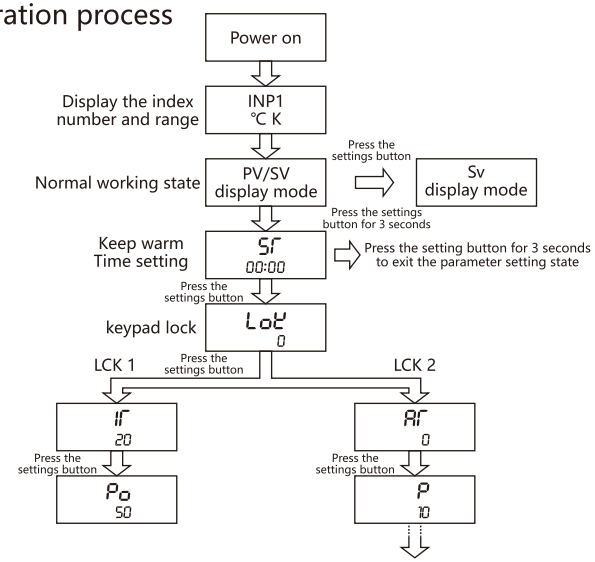
percentage setting for heating can be observed when the temperature is constant (pressing the button while the instrument is in operation, SV displays the heating power percentage).

If there is a significant error between the instrument and the ambient temperature during startup, the Sc value can be modified. For example, if the actual temperature is 26 degrees and the instrument displays 28 degrees, the Sc value can be set to -2. Sm is used to correct errors at high temperatures, measured in percentage. For example, if the instrument displays 196 degrees Celsius with an error of 2% when the actual temperature is 200 degrees Celsius, set Sm to 2.0. For example, if the instrument displays 202 degrees Celsius with an error of -1% when the actual temperature is 200 degrees Celsius, set Sm to -1.0.

Control parameter function

Display symbol	name	illustrate	Setting Range	Factory value	
SΓ	ST	There is no timing function when the timing time is set to 00:00	0-99hour59minute	0	
LcK	LCK	Keyboard lock, set corresponding values when entering parameter settings	0~9999	0	
IT	IT	Overrush suppression, set to increase when the overshoot is large, Reduce the set value when the temperature rise does not reach the set value.	1~100		LCK 1
Po	Po	Constant temperature power, the percentage of power required for constant temperature in an oven.	0~100		
AL	AL	Alarm value	full scale	20	
AT	AT	Self tuning, used to automatically set IT, Po, and PID parameters.	0~1	0	
P	P	Proportional band (when P is set to 0, it is a positional control)	0~200	10	
I	I	Integral time (seconds)	0~3600	360	LCK 2
d	D	Differential time (seconds)	0~3600	120	
T	T	Output cycle (seconds)	1~100	40	
HY	HY	Control hysteresis width (i.e. switching difference)	0.1~10.0	3.0	
Sc	Sc	Zero position correction, correcting the error of the cold box.	-100~100	0	
Sm	Sm	Full scale correction, correcting errors when the temperature is relatively high.	-50.0~50.0	0	

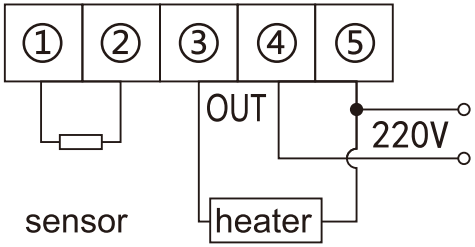
Operation process



Common troubleshooting

When the instrument displays HHH, check if the sensor and connecting wires are open circuit.
When the instrument displays LLL, check if the sensor and connecting wires are short circuited or reversed.
When the upper display on the instrument panel is normal, but there is no heating and the heating indicator light is not on, check if the set temperature is normal.
The heating indicator light is on, check if there is electricity on the heater. If there is electricity on the heater, it indicates that the heater is faulty. If there is no electricity on the heater, replace the instrument.
The heating indicator light is not on, but the heater is still heating (due to the residual heat of the heater, it will still heat up for a while when heating is stopped). Please check if the instrument, AC contactor, and solid-state relay are damaged.
There is no display on the instrument. Check if there is a 220V power supply on the wiring terminals. If there is no power, check if the external power supply is normal, if the wiring is loose, and if the fuse is blown. If there is a 220V power supply on the wiring terminal, replace the instrument.

Wiring Diagram



YT-871

5、Precautions

1. Before powering on, please ensure that the switch is in the "off" position and check for any open circuit or leakage.
2. Due to the slight smoking process during the first heating (there may be welding processes and interfaces inside the box), it is recommended not to place the sample before formal use. Close the door, unscrew the exhaust cover on the top of the box, turn on the power switch, and set the temperature controller to 100 ℃. At this time, the temperature inside the box starts to rise. When it reaches 100 ℃, the temperature controller automatically maintains a constant temperature and can cut off the power. Open the box door to dissipate heat and smoke.
3. When in formal use, first place the sample on the shelf, close the box door, unscrew the exhaust cover on the top of the box, connect the power, turn on the power switch, and then set the temperature controller to the desired temperature. At this time, the box begins to heat up until the temperature reaches the set temperature value and remains constant.
4. The sample should not be placed too tightly during use to avoid affecting the convection inside the box. When placing the box, please connect the power supply effectively according to regulations to ensure safe use. When powering on, do not touch the left electrical circuit of the box with your hands or damp cloth.
5. This series of drying boxes is a non explosion-proof product.
6. Please do not put volatile, flammable and explosive materials into the box for heating to prevent explosion or combustion.

6、Maintenance and Repair

Daily maintenance of equipment:
1. The drying oven should be kept clean regularly, and the door should be wiped with a soft cotton cloth. Do not use corrosive chemical solutions to wipe to avoid chemical reactions.
2. If the drying oven is not used for a long time, neutral grease or Vaseline should be applied to the electroplated parts to prevent corrosion, and a plastic film dust cover should be placed in a dry room to prevent electrical equipment from getting damp and causing malfunctions that may affect use.
3. Daily maintenance of equipment:
When you operate according to our manual and encounter equipment malfunctions, please follow the following troubleshooting methods for preliminary troubleshooting; If unsuccessful, please call our after-sales service department, and we will be happy to provide you with timely and accurate service.
Equipment failure phenomena, fault analysis and solutions:

Equipment failure phenomena, fault analysis and solutions:

Fault phenomenon	Fault analysis and solutions
1. Plug in the power and turn on the power switch. There is no response from the device	★Power supply issue, please seek assistance from an electrician to resolve. ★If the electric heating tube is burnt out, the resistance value at both ends of the electric heating tube can be measured with a multimeter in the "ohm" range. If the resistance value is 0, it indicates a short circuit in the electric heating wire, which is manifested as a total tripping of the circuit breaker. If the resistance value is several hundred dry ohms or infinite, it indicates that the heating wire has melted and is open circuit. ★The power switch plug has come loose. ★The power switch is on, and the control circuit board and corresponding connecting wires can be checked.
2. The temperature cannot rise	★Check if the scheduled time has reached the set value. ★Most users are not familiar with this function. When the scheduled time reaches the set value, the heating tube will not work and the fan will not rotate, resulting in no heating and temperature rise. ★Check the circuit control board and use a multimeter to check for output.
3. The motor is not running	★Result: There is heating, but the inner liner cannot circulate, causing slow temperature rise. Check if the fan is running. If it is found to be faulty (a multimeter can be used to measure if there is 220V voltage at both ends of the fan pin), notify our company to mail the accessories to solve the problem.
4. Handle damaged	★Notify our company to replace and handle
5. There is a difference between the temperature displayed on the control board and the mercury thermometer inside the box	★Judgment premise ★The thermometer needs to be inspected and approved by the testing department before measuring the installation position of the mercury thermometer. Please suspend the thermometer in the center of the cavity and do not directly place it on the shelf for measurement. Please wait for the set temperature to remain constant for half an hour before taking the measurement, as the uniformity of the temperature inside the box will be higher at this time.
6. The temperature display may jump or remain still or show abnormalities such as "□□□"	★It can be determined that there is a problem with the temperature sensor and it should be replaced and resolved.