

A decorative graphic consisting of three blue circles of varying sizes, each with a lighter blue ring around its center. Two thin, light blue diagonal lines intersect at the top left, forming a large 'V' shape that frames the circles. The circles are positioned in the top right, middle right, and bottom right areas of the page.

# Operation Manual

*Programmable High & Low Temperature Chamber*

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## **1. SUMMARY**

Please read the manual carefully before starting the chamber. All the instruction shall be abided by. Please don't apply the chamber to the use out of the range of the instruction, otherwise it might bring about the breakdown or dysfunction or might damage your specimen.

If the breakdown and dysfunction resulted from misuse, we would be exempt from product responsibility.

## **2. WORKING ENVIRONMENT**

The chamber shall be placed in a proper environment or office:

- (1) Environment temperature: 5 ~ 30℃. The environment temperature of office MUST be 30℃ or lower, otherwise the chamber cannot work normally.
- (2) Humidity: ≤85%R.H
- (3) Good air ventilation
- (4) No strong electromagnetic field; No strong heat radiation and sunlight ; No vibration; No strong wind; No corrosive gas or high-density of stave
- (5) Power supply: 380V±38V, 50Hz, 3P

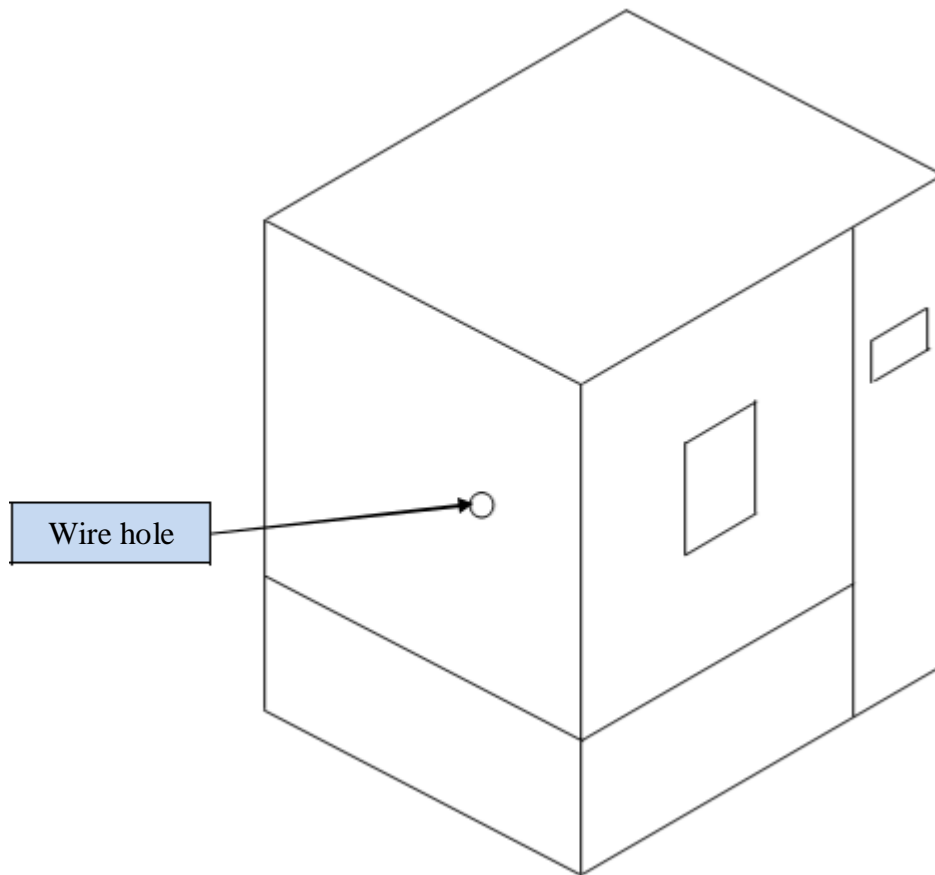
## **3. BRIEF INTRODUCTION**

### **3.1 Technical Parameters**

Model	WGD405
Temperature range	-40 ~ 150℃
Refrigerating mode	Air cooling
Refrigerant	R404 & R23
Power supply	380V±38V, 50Hz, 5Kw

### 3.2 Structure

(1) **Wire hole:** the wire hole has two functions: passing through wires and helping stabilize the temperature.

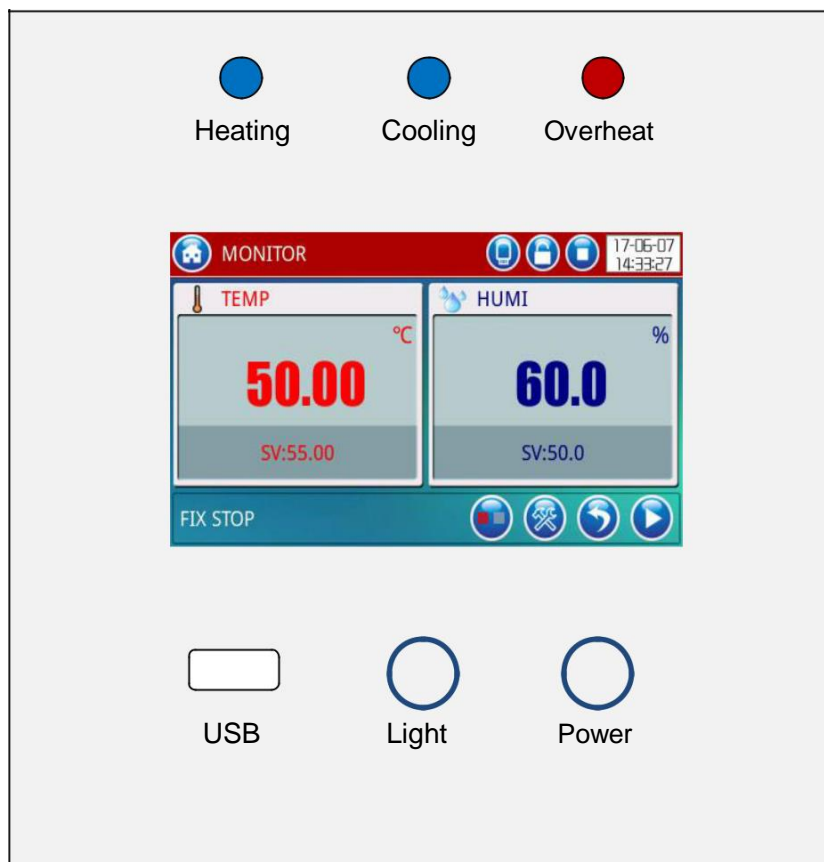


**Passing through wires:** through this wire hole, the tested specimen can be linked with other device outside the chamber, such as power supply. When you link the tested specimen with other device outside, please seal the chink by towel. The wire hole shall be sealed by the stainless steel lid if the tested specimen is not linked with other device outside.

**Helping stabilize temperature:** if the wire hole is not used to pass through wires, it can also be used to stabilize temperature.

Temperature	Whether open or close the wire hole?
0 ~ 39℃	Closed
40 ~ 70℃	Open

#### 4. CONTROLLING PANEL

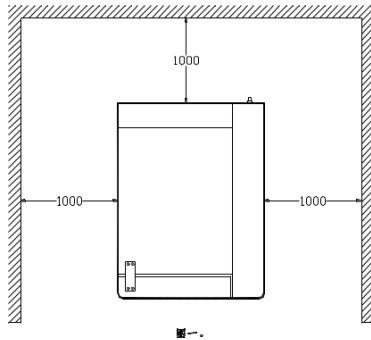


No.	Button	Function
1	Heating indicator light	When heater is working, the lamp is on.
2	Cooling indicator light	When cooling system is working, the lamp is on.
3	Overheat indicator light	It means that the actual temperature surpasses the highest limit of the chamber
4	USB	Test data can be downloaded to USB
5	Light	The light in the chamber.
6	Power	Push power then system power on.

## **5. PREPARATION BEFORE USE**

### **Step (1)**

The chamber should be placed in a room where there is enough space around the chamber for ventilation.



### **Step (2)**

Link the power supply. The chamber would refused to start if the power phase is incorrect.

### **Step (3)**

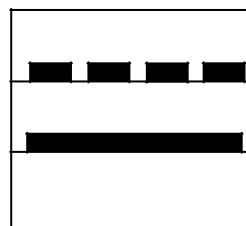
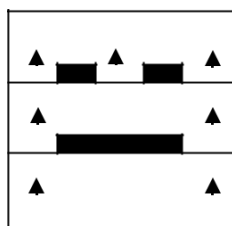
Check whether the phase of the power supply is correct. If it is not correct, the phase protector will prevent the chamber from starting.

### **Step (4)**

Please dry the water in the test area before low temperature test so as to guarantee the precision of the test.

### **Step (5)**

Please the specimen into the chamber. Certain space should be spared between the wall of the test area so as to ensure the air circulation. Otherwise, the uniformity of temperature would be negatively affected because of the stagnate air.



Correct

Incorrect

**Step (7)**

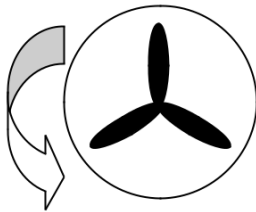
Press **POWER** on the controlling panel.

**Step (8)**

Press **LIGHT** on the controlling panel. Then you can observe the tested specimen in the test area. Please don't continuously turn on the light for more than 5 minutes.

**Step (9)**

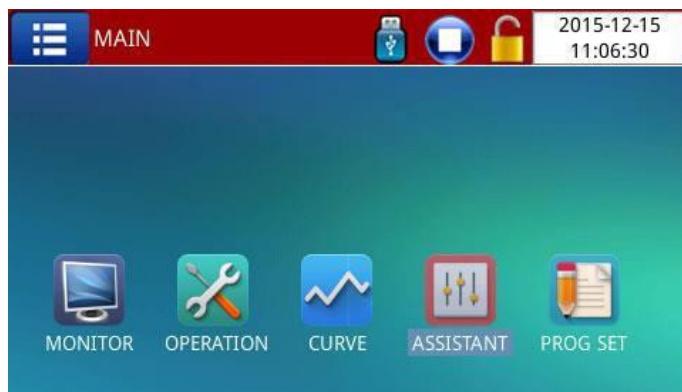
Check whether the blower revolves anticlockwise. Anticlockwise is correct.



**6. FIX OPERATION**

**Step (1)**

Press **OPERATION**.



**Step (2)**

Press **RUN MODE** as **FIX MODE**.



Press (3)

Press MONITOR.



Step (4)

Press SV to set the target temperature.





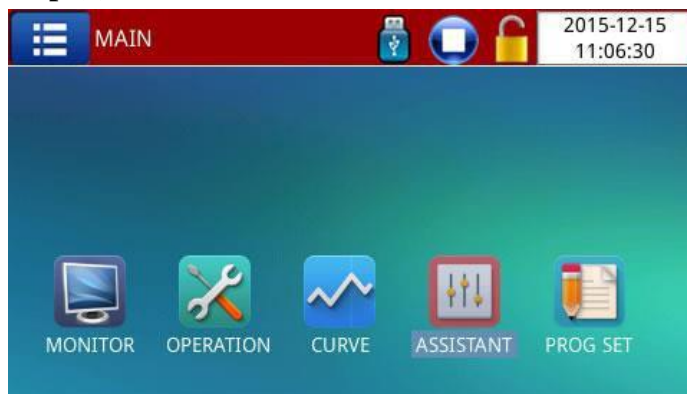
### Step (5)

Press  to start running.



## 7. PROGRAMMABLE OPERATION

Step (1): Press **OPERATION**.



Step (2): Set the **RUM MODE** as **PROG MODE**.



**Step (3): Press PROG. SET.**



**Step (4): Press EDIT.**

FIX STOP				
NO.	NAME	SEG. NUM	LOOP CNT.	OTHER
1	PROG-001	1	1	...

1/1       BACK

PROG 001 SET							
NO.	TEMP	HUMI	TIME	TS1	TS2	TS3	TS4
001	55.00	60.0	6.01	OFF	OFF	OFF	OFF
002							
003							
004							
005							

LOOP SET   1/1       BACK

**For example, if you want to realize the program below, you may set 001: Temperature rises to 25°C within 30 minutes.**

- 2: Temperature constant at 25℃ for 1 hour.
- 3: Temperature rises to 60℃ within 30 minutes.
- 4: Temperature constant at 60℃ for 1 hour.
- 5: Temperature drops to 10℃ as fast as it can.

NO.	TEMP	HUMI	TIME
001	25.00	0.00	0.30
002	25.00	0.00	1.00
003	60.00	0.00	0.30
004	60.00	0.00	1.00
005	10.00	0.00	0.01

**Note: Please ignore TS1, TS2, TS3 and TS4.**  
**0.01 Time means as fast as possible.**

**Step (5):** Press  to start the program.



## **8. TEST DATA RECORD**

**Step (1):** Insert the U disk and press **CURVE**.



**Step (2):** Press the test data then the coordinate can be adjusted. Press the clock then the history test data can be viewed.

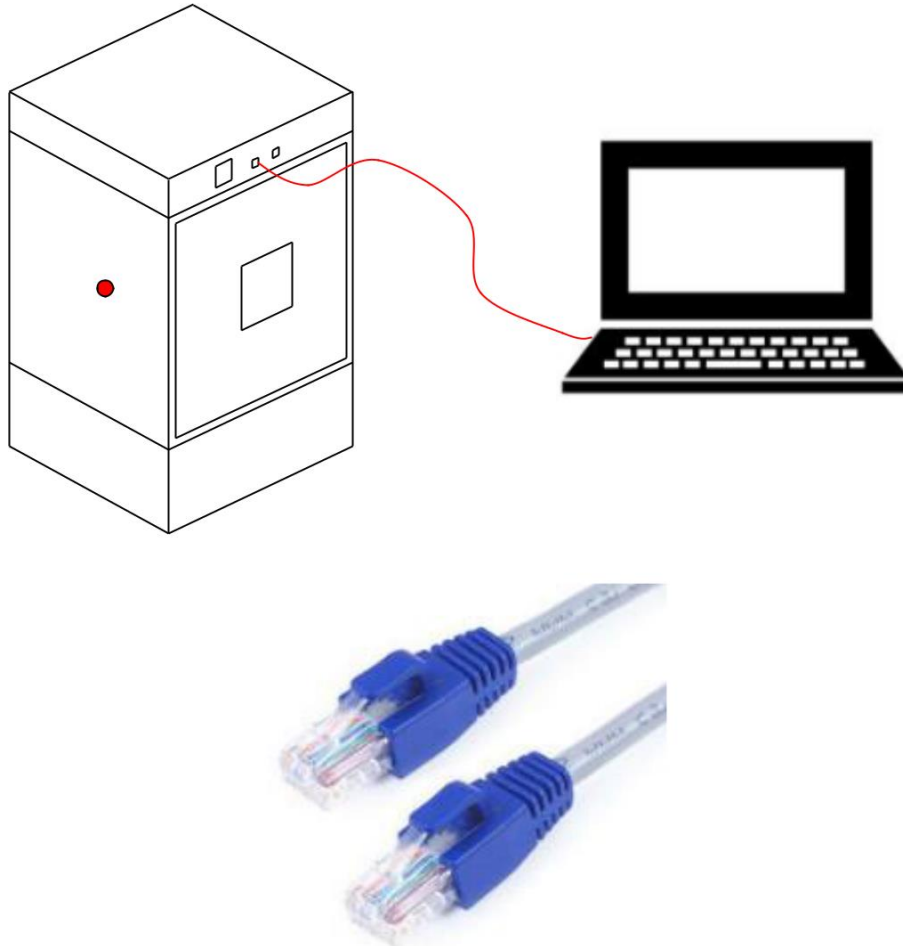


**Step (2):** Press export to UDISK, then test data is downloaded to U disk.

OTHER SET		17-06-07 14:36:56	
RECORD INTERVAL	60Sec	↶	
TABLE SHOW	↶		
EXPORT TO UDISK (BIN)	↶	1/2	
EXPORT TO UDISK (XLS)	↶	▲	
DELETE DATA	↶	▼	

## **9. COMPUTER CONNECTION**

**Step (1):** Link the PC with the chamber through ethernet port.



**Step (2):** Install the software. Open the software. The computer will automatically find the chamber. Then the user can monitor the status of the chamber and control the chamber.

## 10. TEMPERATURE BIAS

If the display value is different from calibrated value, the bias can be corrected by these steps. These steps can only be proceeded under professional guide and professional calibration.

### Step (1)

Quickly press area A and area B



### Step (2)

Press **SENSOR**.



### Step (3)

Press **Linear Correct**. If displayed value is  $2^{\circ}\text{C}$  higher than actual value, set the Linear Correct at  $-2^{\circ}\text{C}$ . If displayed value is  $3^{\circ}\text{C}$  lower than actual value, set the Linear Correct at  $3^{\circ}\text{C}$ .



## **11. MAINTENANCE**

**Step (1):** Clean and dry the test area after each test.

**Step (2):** Dry the water in the test area.

**Step (3):** Clean the evaporator at the bottom every 3 month.



## **12 PROBLEM & RESOLUTION**

<b>Problem</b>	<b>Cause</b>	<b>Resolution</b>
No display	1. The cable is not connected correctly.	1. Check power cable
	2. No power supply	2. Check power supply
	3. Power supply for controller disconnect	3. Check Controller power supply and reconnect
	4. Controller failure	4. Contact with supplier
	5. Overheat alarm	5. Set a higher over-heat alarm temp.
Display disorderly	1. Cable connector loose	1. Check cable
	2. Temp. sensor is broken	2. Change sensor
	4. Controller failure	4. Contact with supplier
Actual temperature is always higher than target temperature		Open the wire hole