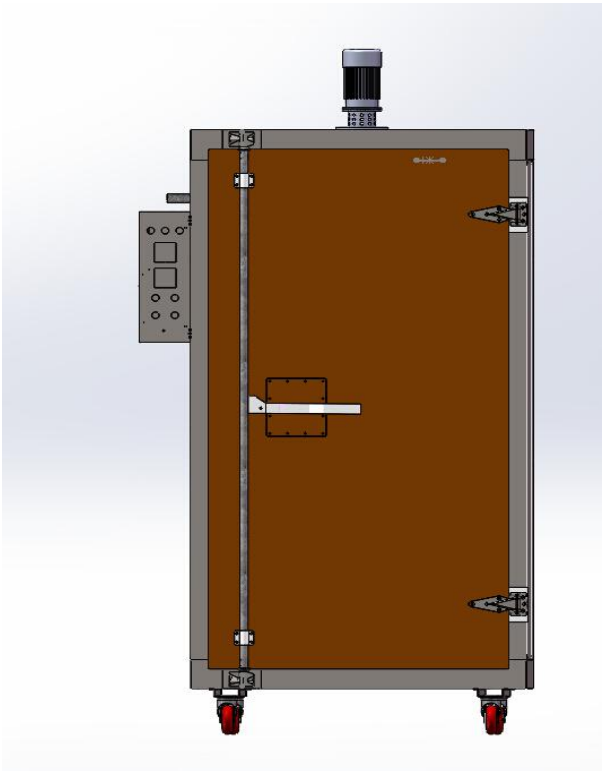
1688 electric oven
Operating Instruction



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Recommendation:This operating manual includes the use of this equipment,repairs and maintenace of a detailed description.To ensure your personal and property safyty,installation and before the 3 initial start,please read the entire contents of this operating manual!

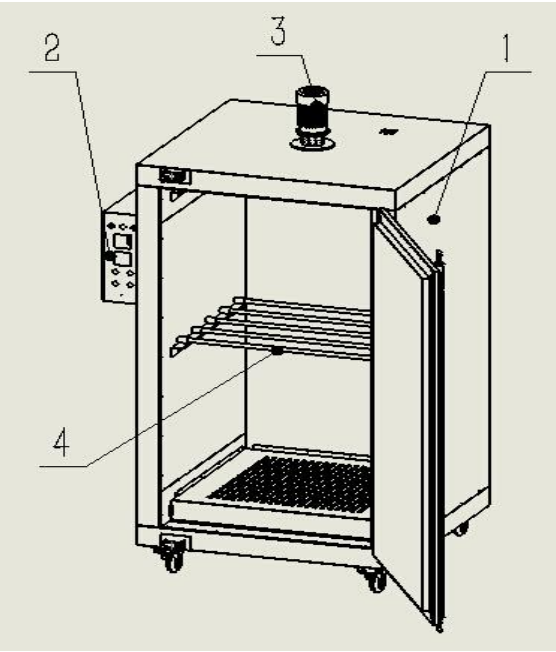
1. PRODUCT DESCRIPTION

1.1 APPLICATION

1688 electric oven is mainly used for the powder solidification process in the powder coating production process. The workpiece which has been finished powder coating is placed inside the electric oven,the powder coating under curing temperature conditions,chemical reactions,and cross-linked cured film,become a certain physical and mechanical properties,chemical resistance is also very good polymer compound coating.

1.2 COMPOSITION AND DIAGRAM

1688 electric oven is mainly composed of 4 parts: oven body,electric controller, exhaust fan, and workpiece hanger. The electric heating tubes are used to generate heat to increase the internal temperature of the electric oven, the air inside the oven is circulated by the fan to uniformly raise the temperature inside the oven.



Item	Parts	Quantity

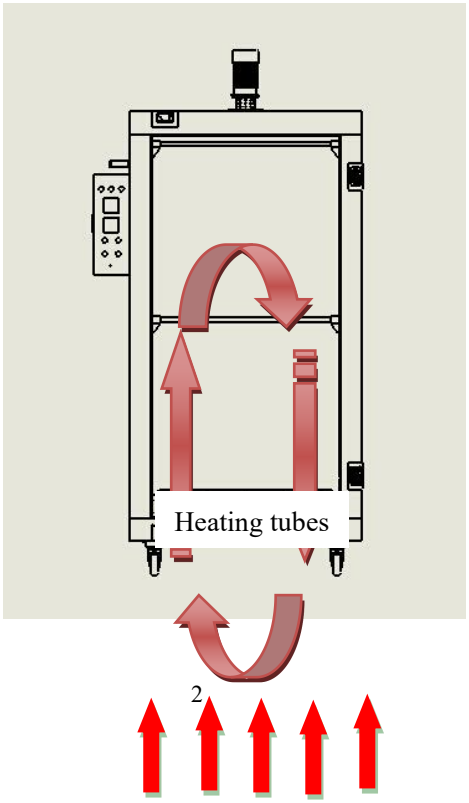
1	Oven main body	1
2	Electric control box	1
3	Exhaust fan	1
4	Workpiece hanger (with 2 shelves,5rails per shelf)	1

1.3 TECHINCAL PARAMETERS

a) Oven effective internal size: 845 × 1600 × 845mm (W × H × D)
b) Operating temperature: room temperature -250 ° C
c) Oven temperature uniformty: ±5 ° C
d) Temperature uniformity: ±1 ° C
e) Fan power: 0.55kW (multi-wing low noise centrifugal fan)
f) Heating element: material is Cr20Ni80 (1.5kw electric heating tube)
g) Workpiece drive mode: manual
h) Oven Door open type: single door open, asbestos compression seal.
i) Total power: 6.55Kw; input voltage: three-phase 380V, 50-60Hz

1.4 WORKING PRINCIPLE AND DIAGRAMS

1688 electric oven is formed a closed space by the rock wool insulation board.When oven working,the oven bottom electric heating tubes generate the heats to increase the temperature, and the oven inside air is forced to convect by the oven top fan to improve the temperature uniformity. Operator can set the required heating temperature and holding time on the electric controller.During Oven working, operator can get oven inside real-time temperature and working condition from the display panelon electric control box.



2. INSTALLATION AND PRECAUTIONS

Suggestion:Before installation and initial start-up,familiar with the corresponding operating manual

2.1 INSTALLATION SITE REQUIREMENT

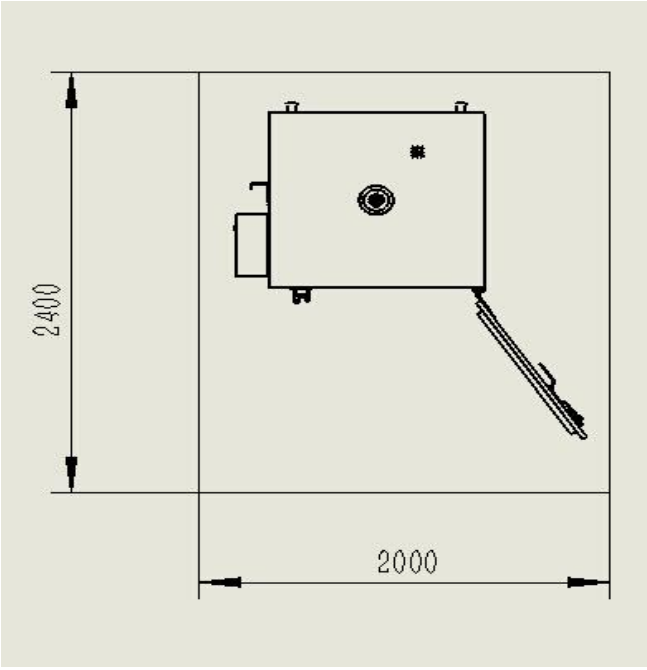
a) The ground must be level.
b) Where the ventilation is good and little dust.
c) Do not install in a damp place.
d) Do not install under flammable or corrosive gases.
e) Ambient temperature shoud not be high, better to keep between0--40℃.

2.2 INSTALLATION SPACE REQUIREMENT

a) Oven front and back should be 1 meter away from the wall in order to normal opeartion.

b) Between machines should be separated by one meter to facilitate air circulation and personnel maintenance.

c) Oven exterior dimensions: 2500×2000×2400mm（L×W×H）



2.3 INSTALLATION AND COMMISSIONING

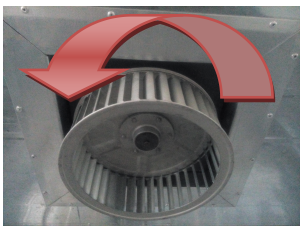
a) According to the requirements 2.1and 2.2 to install and fix the oven .

b) Open the electric control box as shown in the figure below and connect the power cord according to the circuit diagram .

c) Refer to the operation process to turn on the power and set the heating temperature and holding time.

d) Go inside the oven to check the heating tubes and fan whether can work normally.

e) If fan rotates in wrong direction, please exchange the two fire lines L1 and L2.



correct direction of fan rotation

2.4 INSTALLATION AND PRECATION

a) Please supply power according to the specifications (three-phase 380V) specified by the appliance.

b) Voltage variation rate must be controlled in the rating±10V.

c) Check three-phase power is lack of phase or not , oven cannot be broken phase operation.

d) Do not connect the ground wire to a gas pipe or water pipe.

e) The leakage circuit breaker electric furnace and this device can not share zero line, Otherwise, the leakage switch will be tripped and the machine will not work normally.

⚠ Warning: The user must maintain proper grounding of all system components!

3. OPERATION AND PRECAUTIONS

3.1 OPERATION PROCESS

Please connect the power phase number and phase place according to the requirements of “2. Installation and Precautions”, and install the power supply and turn on the air circuit breaker  , power light7 lights up。

1.Open the oven door, put the workpiece into furnace, thenclose it, be careful not to collide with the thermocouple.

2.In RKC temperature controller interface, press the set button, use the △ three buttons to set the temperature (adjust according to the powder temperature), after finish adjusting, press again the set button.

3.Set the holding time and adjust it on HHS16B time timer(the temperature is adjusted according to the powder curing time) .

4.Press the fan on button 3 to activate the fan, the fan operating, light 6 lights up.

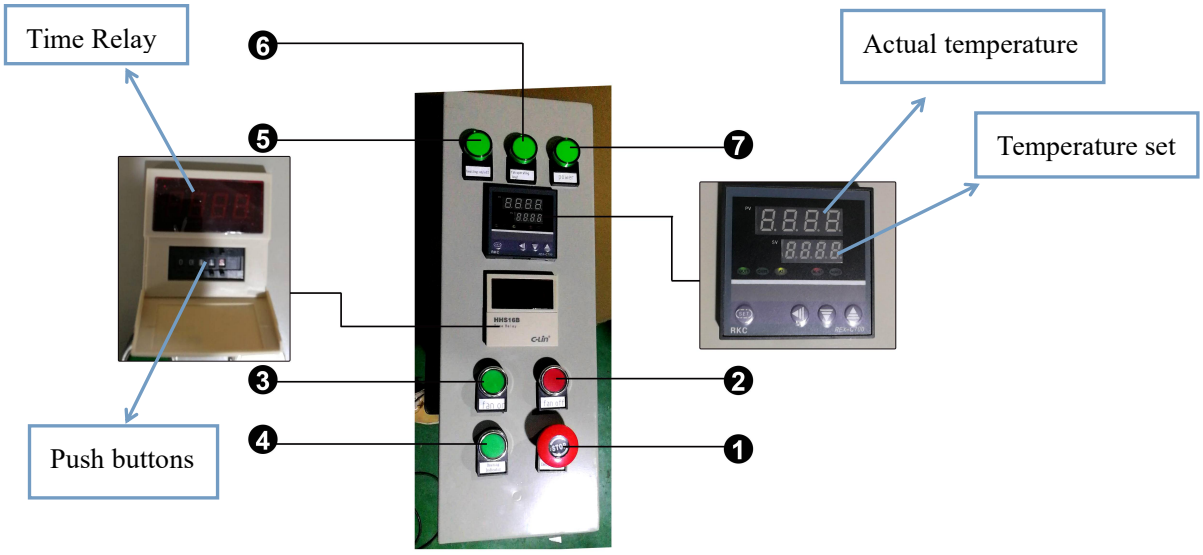
5.Starting heating,press heating button, indictor heating on/off, ligh 5 lights up.

6.After heating holding time’s up， manual turn off heating indicator button 4，heating on/off light6 is off。

7.Then press fan off button 2， trun off fan。

8.After temperature drop,take out the worpiece.

9.During oven operation, in case of emergency can press the emergency stop button1,after eliminating the emergency,reset the button.



3.2 OPERATION ATTENTIONS

1.When first time use oven, there may be a little odor or white smoke. That is because the new product relationship, will automatically disappear after baking for a period of time, which will not affect the performance of the machine.

2.Do not put explosives, pressurized containers or combustible materials in an oven. Combustible materials include: flammable materials, oxides, pyrotechnics and flammable gases. Otherwise, it may cause an explosion and cause serious industrial disasters.

3.Oven maximum operating temperature is 250 ° C, and it is strictly forbidden to use over temperature.。

4.When oven is operated at high temperature, it should be carefully checked whether the door is tightly closed to prevent the hot air from blowing and hurting the operator.

5.The equipment must be properly grounded.

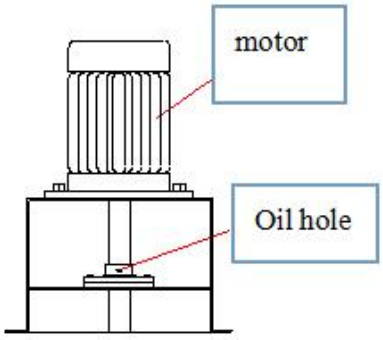
6.It is strictly forbidden to operate with electricity during maintenance, and the main power supply must be cut off before it can be repaired.

7.This electric oven should be guarded by the person when using it. Pay attention to the fire source and inflammable and explosive materials.

4.ROUTINE MAINTENANCE

Item	Content	Time
Electric oven	Keep oven clean	Any time
Ventilation mesh plate	Keep the air vents open	Any time
Ground wire	Keep grounded	Any time
Temperature induction line	Make sure the induction line does not fall off	Any time
Bearing housing	Regular lubrication	Any time

1. disassemble oven inside, check the heating tubes wiring and correction
2. Replace the large capacity switch
3. Check the line and correct it



How to add lubricant

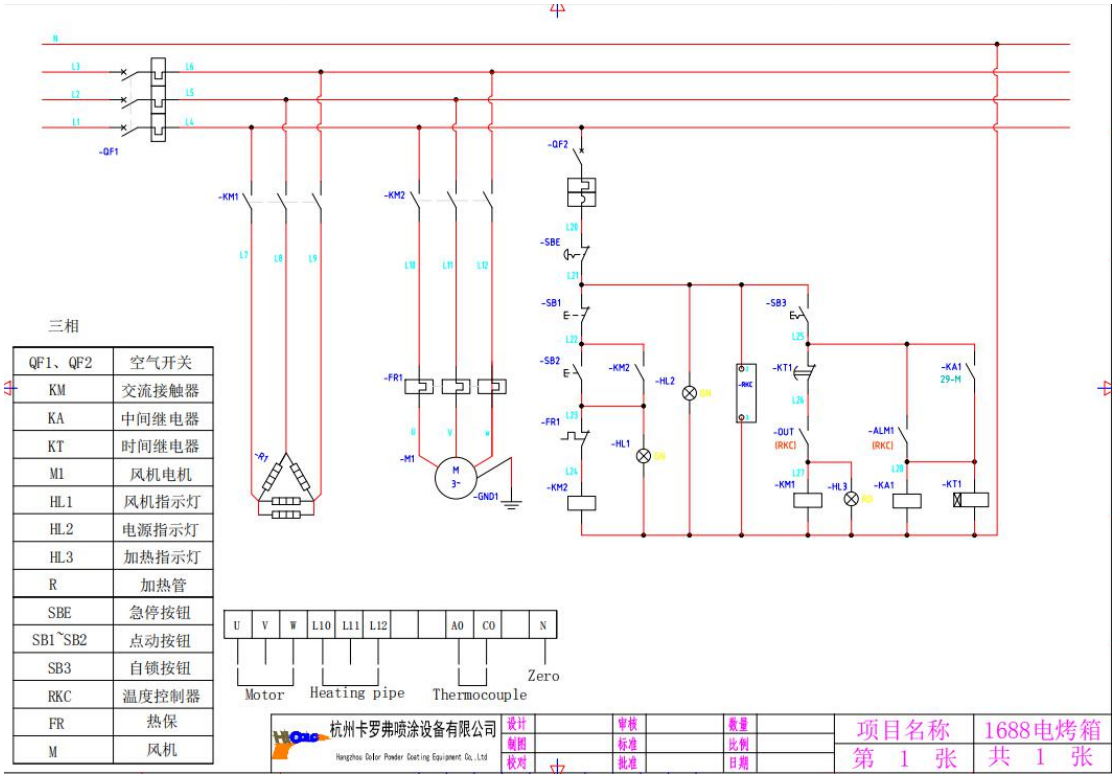
5. COMMON TROUBLESHOOTING

⚠ Warning: It is strictly forbidden to operate with electricity during maintenance. The main power supply must be cut off before it can be repaired!

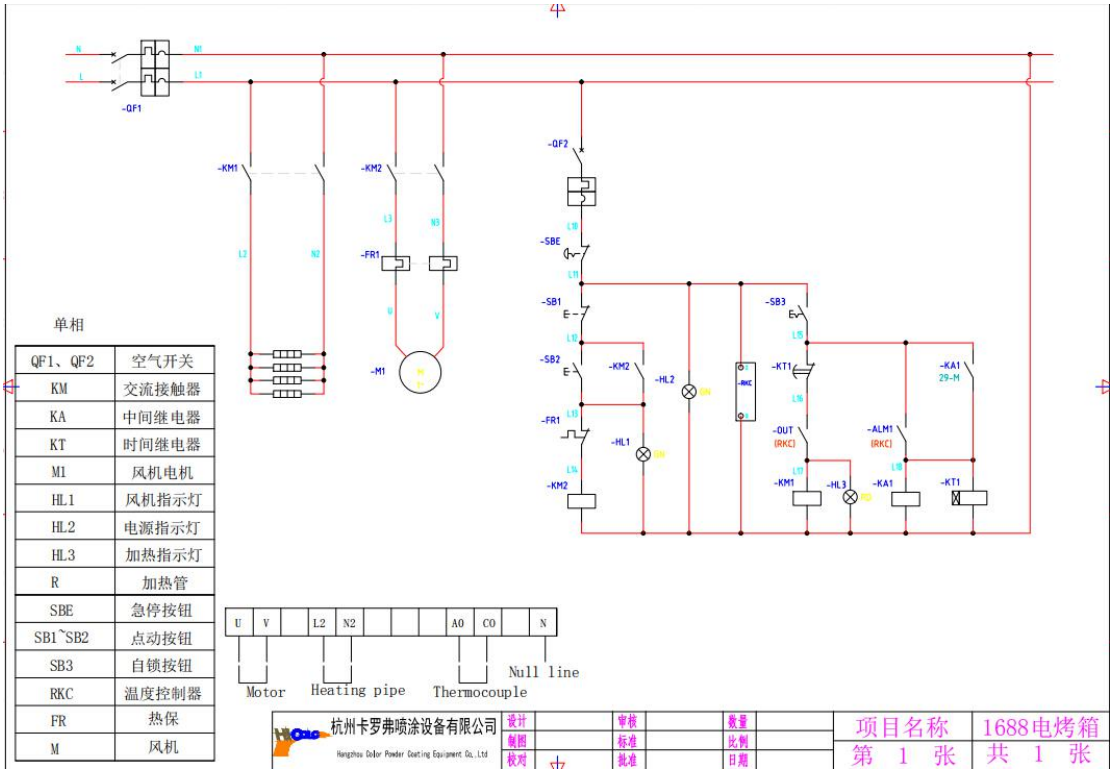
Fault phenomenon`	Analysis of causes	troubleshooting
Can not start up after power on	1. The power supply does not meet the specifications. 2. the zero line is not connected.	1. Connect the power supply required by the specifications 2. Connect the zero line
The heating switch is not on, but the temperature is still rising	1. The contacts of the heated AC contactor are bonded together and cannot be disconnected.	1. Replace the contactor
The temperature inside the furnace is not uniform and abnormally high	1. Thermocouple reaction is not sensitive 2. Unreasonable placement of workpieces 3. The furnace door is not closed well	1. Replace the thermocouple 2. Change the workpiece placement method 3. Close well the furnace door.

Turn on the heating switch and the power supply trips	1. Electric heating tube short circuit 2. The power supply total switch capacity is too small 3. The main power switch box is equipped with a leakage protection switch, but the wiring is incorrect.	1. disassemble the oven inside, check the heating tubes wiring and correct it 2. Replace the large capacity switch 3. Check lines and correct it

6. 1 1688 electric oven three-phase circuit schematic：



6.2 1688 electric oven single-phase circuit schematic：



Warning ： Please contact a qualified electrician to connect the circuit areas!