

# Table of Contents

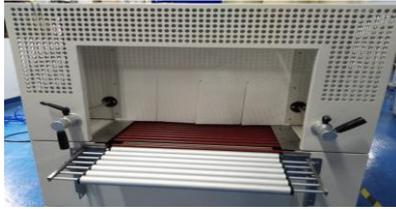
一、 Safety Precautions.....	
二、 Rules for Safety Operation.....	
三、 Machine Specifications .....	
四、 Names of All Parts of the Machine .....	
五、 Names of All Parts of the Control Panel.....	
六、 Installation.....	
七、 Operations .....	
八、 Air Volume Adjustment.....	
九、 Care&Maintenance.....	
十、 Trouble Elimination.....	
十一、 Circuit Diagram .....	

## 一、 Safety Precautions

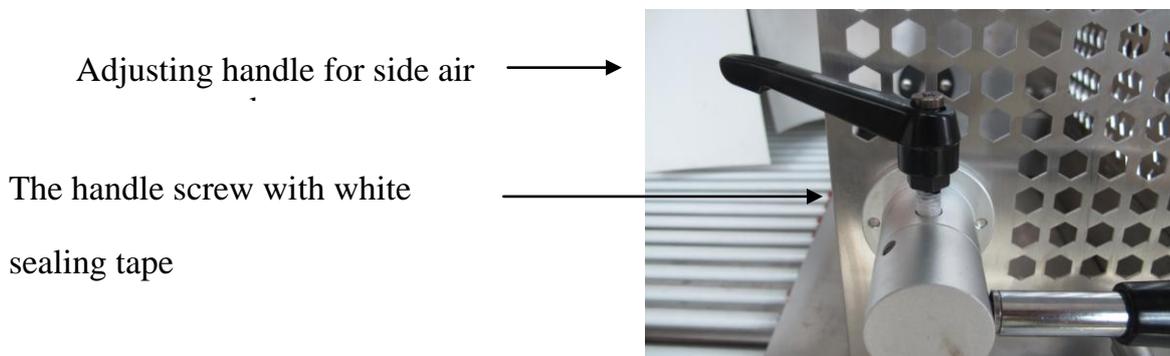
- 1、 The operators should read the detailed instructions related to this machine before operating.
- 2、 In order to prevent accidents, the operation of the machine should be done in good ventilation conditions, and should avoid the leakage of liquid and gas caused by the damaged outer packing,.
- 3、 The maintenance staff, before doing repairing and maintenance work should read about the maintenance instructions of this machine.
- 4、 Be sure the power is turned off when making repairing and maintenance.
- 5、 After the machine runs, in case of any accident, the power must be turned off first and then take corresponding measures.
- 6、 The sequence of power installation should be in accordance with the rotating directions of fan motor.
- 7、 If the machine is modified without authorization, we are not responsible for any danger.

## 二、 Rules for safety operation

- 1、 Non operators cannot operate this machine randomly. Don't put the hands or other body parts at the entrance of the furnace during its running or when the temperature has not come down after power is off, in avoid of any scald or clip by the conveying chain and iron rods.

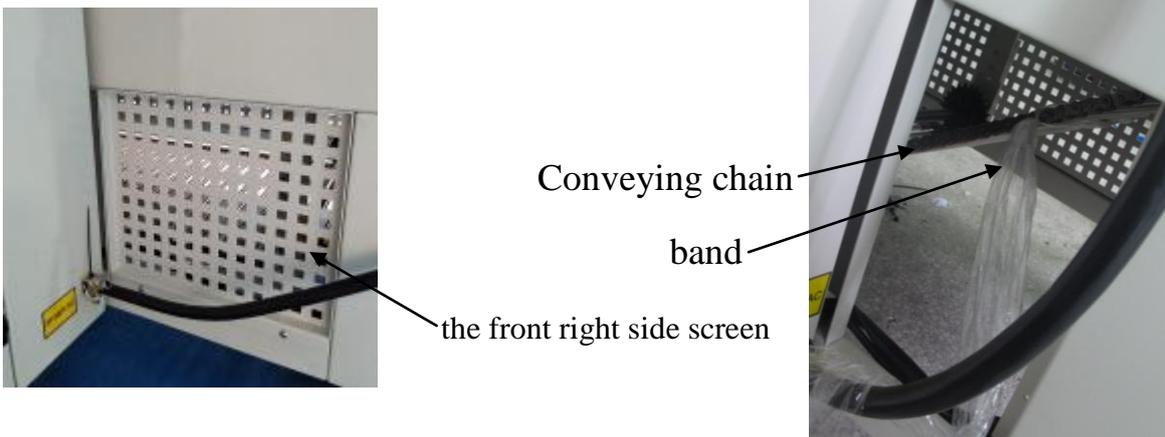


- 2、 Non professional technicians are not allowed to change the circuit of the electric box, in case of the mechanical failure due to the changes and result in loss and damage.
- 3、 Before the machine is going out of factory, the L typed handle screw which is used to adjust the side air volume of the furnace are wrapped with white sealing tape in order to avoid the handle missing caused by loosening during transportation. After the machine is installed, customers can remove or leave the tape as alone according to the actual situation.

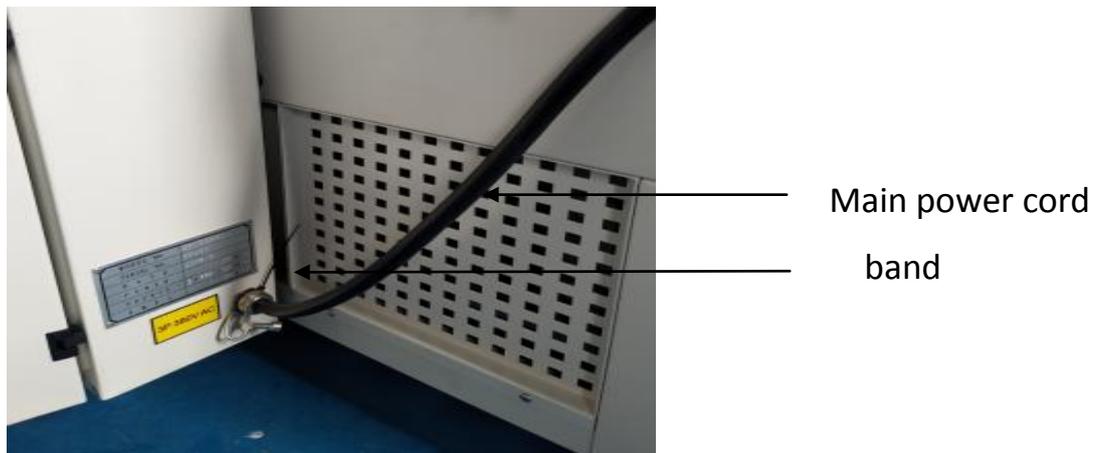
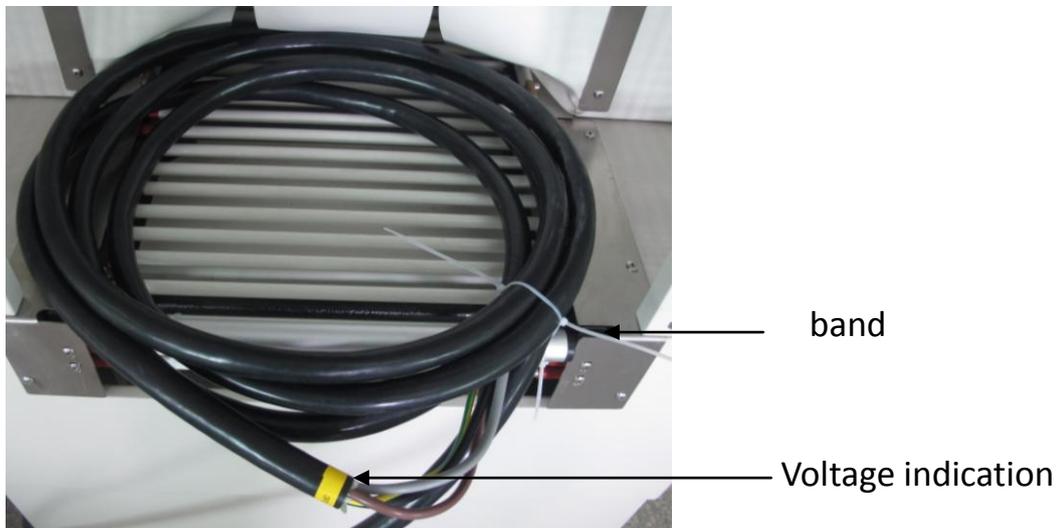


- 4、 Before the device is powered on, please complete the following operations.

(1) First, remove the front right screen of the shrinkage furnace, and then untie the band on the conveying chain.



(2) Untie the band on the main power cord, and notice the main voltage value on the yellow label on the power cord.



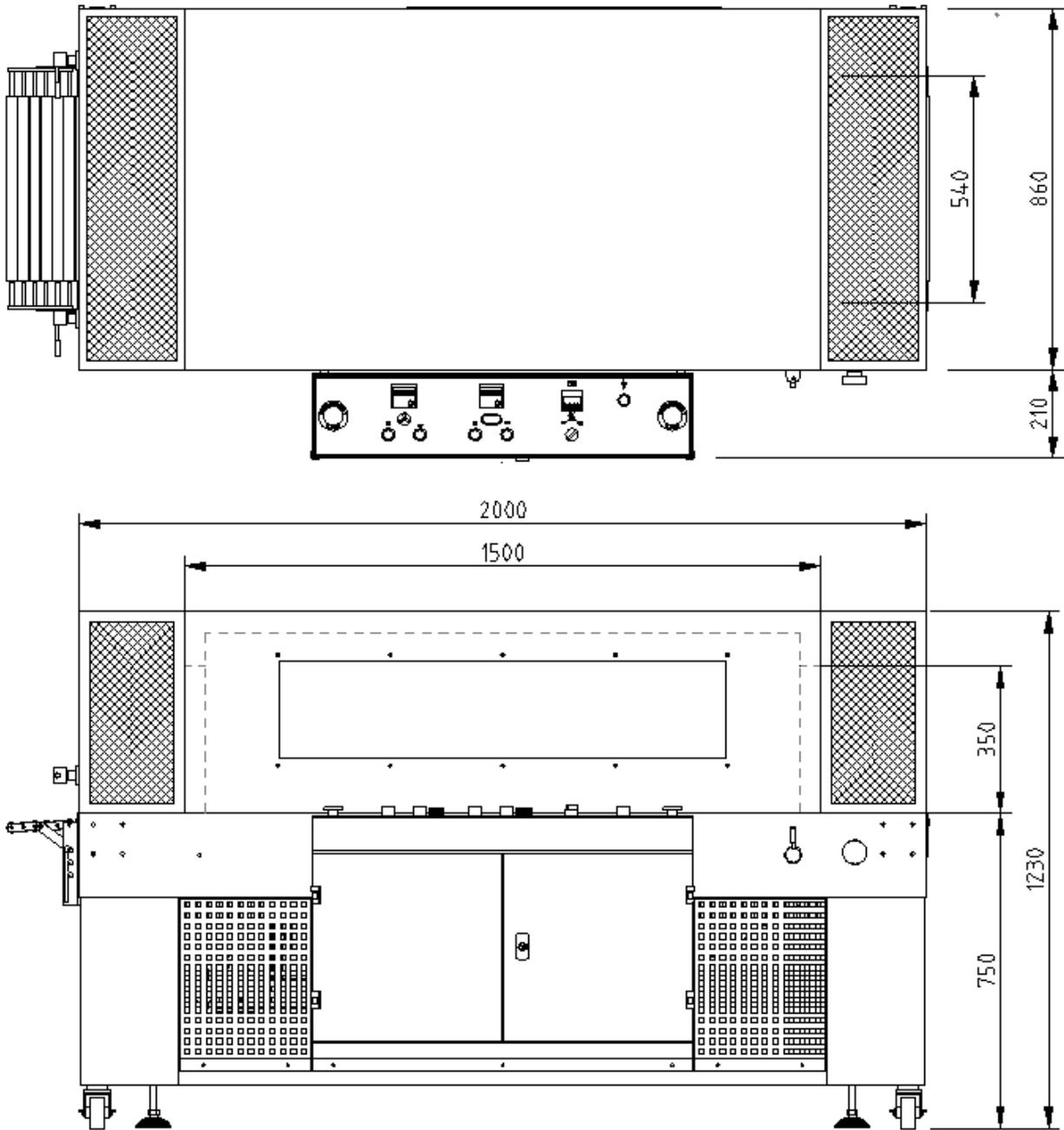
3、 When turning down the machine, confirm whether the temperature of the furnace has come down to below 100°C. Only when it is below 100°C, the worker can switch off the power and leave.

### 三、 Machine Specifications

#### 1、 Machine specifications

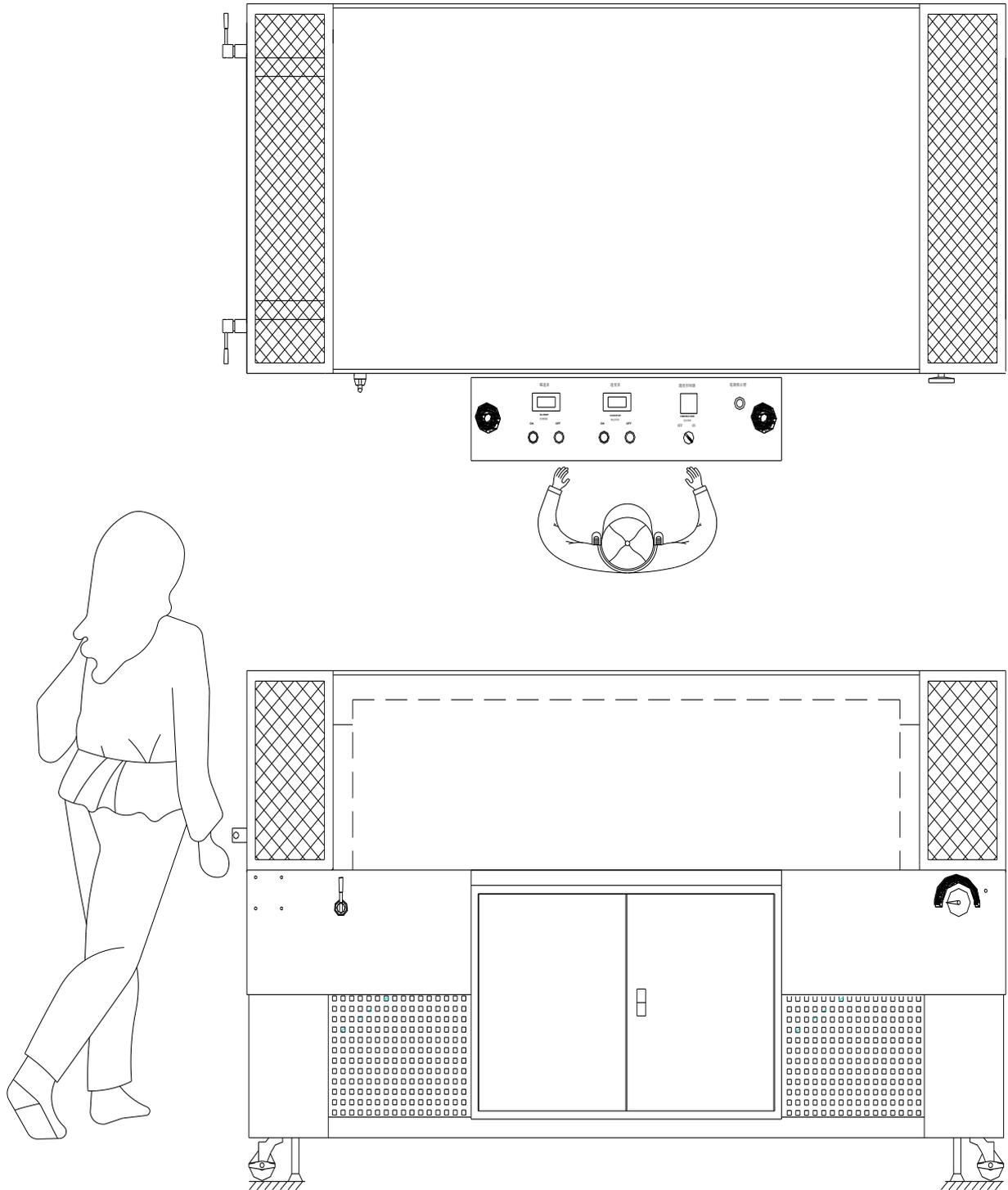
Model No.:	ZF-S550
L×W×H(Machine Size):	2000 mm×1070 mm×1230mm
L×W×H(Size of shrinkage slot):	1500 mm×540 mm×350mm
W×H(Maximum size of packed item):	400 mm×300mm
Packing speed(meter/min.):	0-30m/min
Temperature inside furnace:	normal -250℃
Voltage:	380V/3P
Motor power:	1.7KW
Electric power:	12KW
Total power:	14KW
Gross weight:	500KG

## 2、Mechanical Specifications Diagram

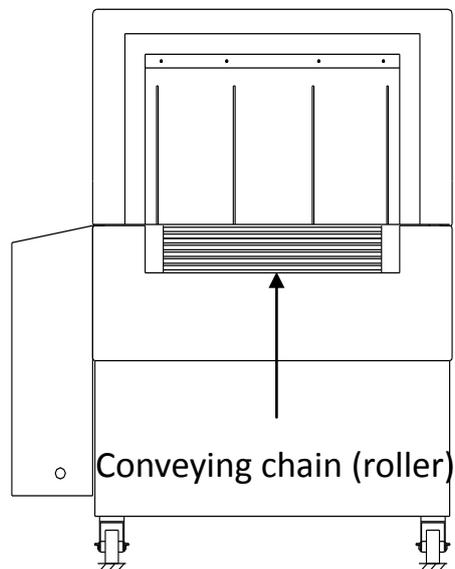
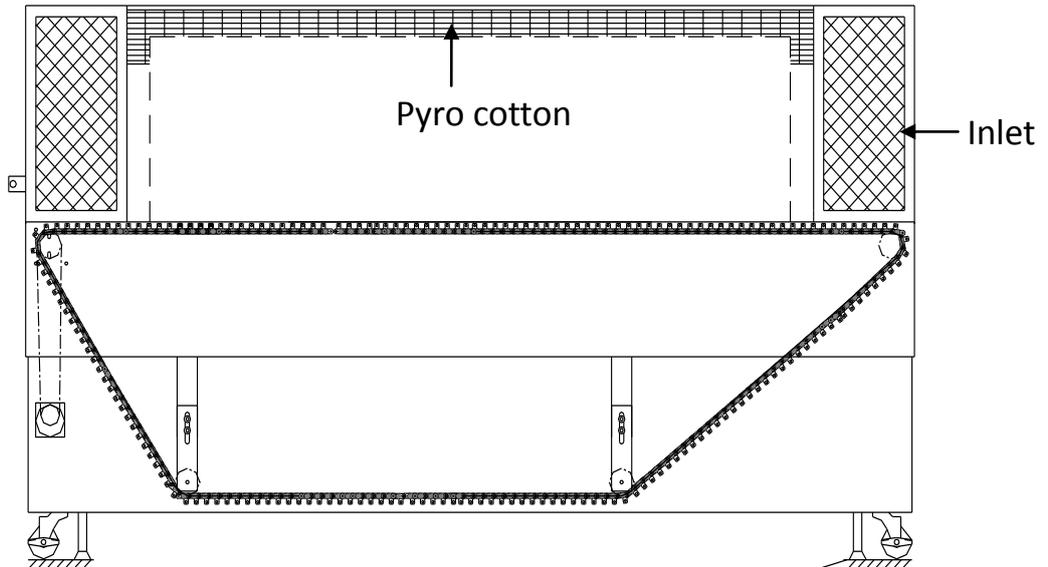
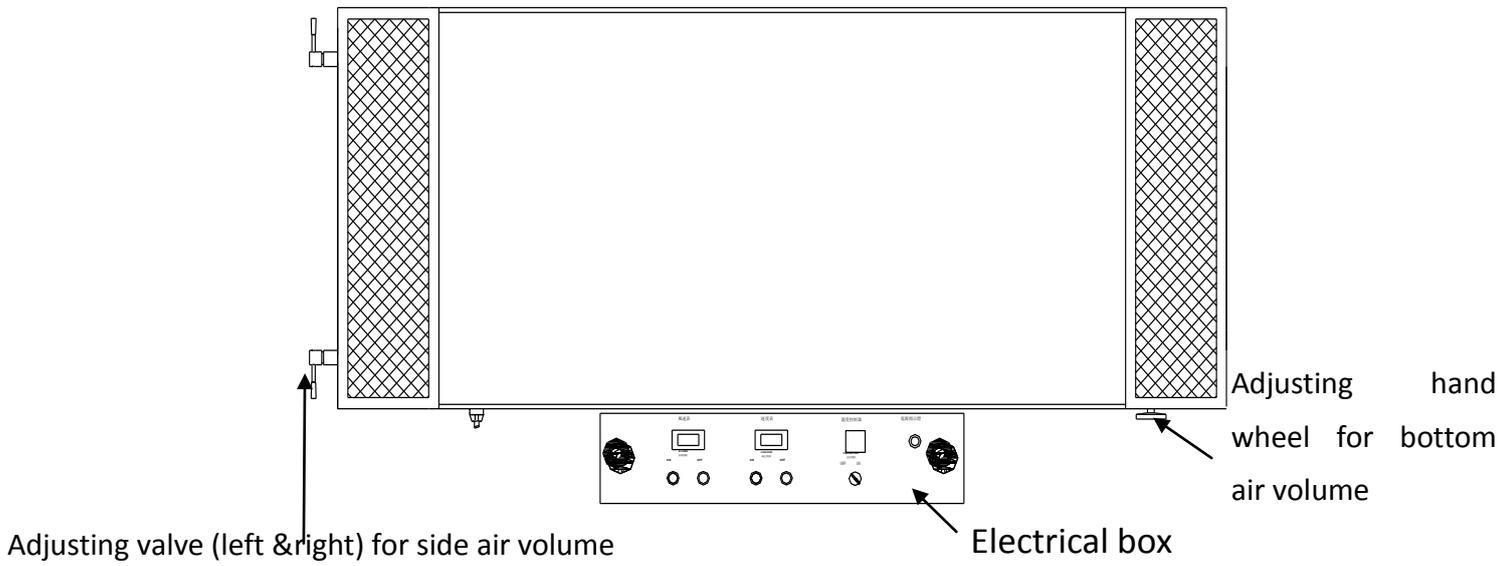


Unit: mm

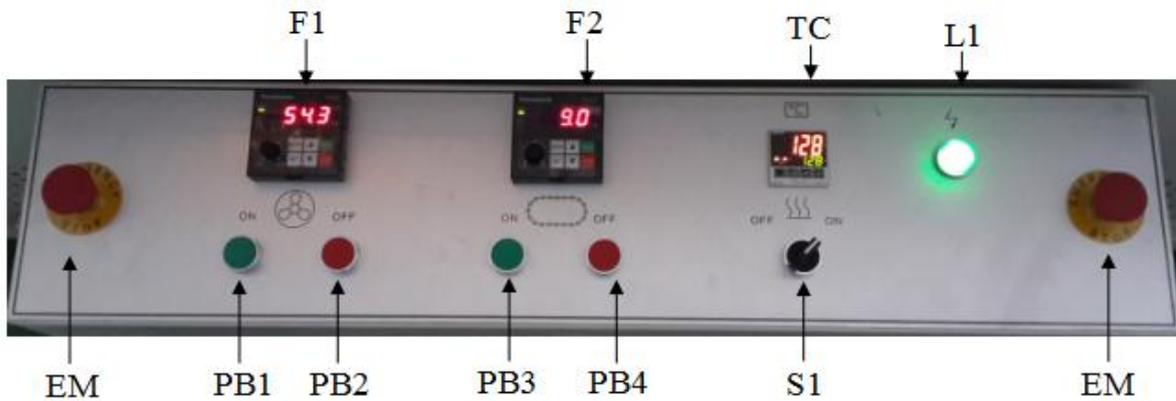
### 3、Description of Operation Panel



## 四、Name of All Parts of the Machine



## 五、 Names of All Parts of Control Panel



Remark: This control panel is just for reference and finally subject to the actual machine.

Code No.	Name for codes	Function of codes
PB1	Starting Fan	to start the fan
PB2	Ceasing Fan	to stop the fan
PB3	Starting Conveyor Belt	to get the conveyor belt start working.
PB4	Ceasing Conveyor Belt	To stop the conveyor belt running
S1	Switch of temperature controller	Turn on or off the temperature controller
EM	Emergency stop switch	After pressing the button, the machine will stop suddenly. After releasing the button the machine will run again.

L1	Signal light	Light for power indicator
TC	Temperature controller	To adjust the temperature parameter and get it under controlled.
F2	Speed meter for Conveyor belt	To indicate the running speed of the conveyor belt(Unit: m/min)
F1	Fan tachometer	To indicate the running frequency of motor(Unit: Hz)

## 六、 Installation

### 1、 the site selection of installation:

(1) To install this machine is necessary to consider about the operation convenience both in conveying process and space.

(2) This machine should be placed in bright, dry and cool site, instead of dark and humid places.

(3) The machine is not permitted to face the ventilation system, so as to avoid heat dissipation inside the shrinkage furnace, power waste, and reduction of the shrinkage benefits.

### 2、 Installation:

(1) After selecting the site, move this machine to the designated site and coordinate with the production line.

(2) Mechanical height adjusting: use a wrench to loosen the lock nut under the machine frame, and then adjust the height by adjusting the nut, until required mechanical height is reached. Last, turn tightly the lock nut. (Figure 4.1)

(3) Mechanical level adjusting: use a wrench to loosen the fixed nut under the machine frame, take the conveyor belt level of shrink oven as a benchmark to adjust the height by adjusting the nut, and make the conveyor belt in the horizontal plane. After that, lock the nut tightly.

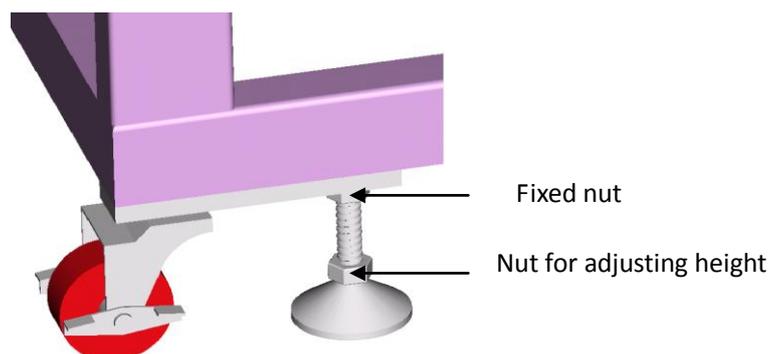


Figure 4.1

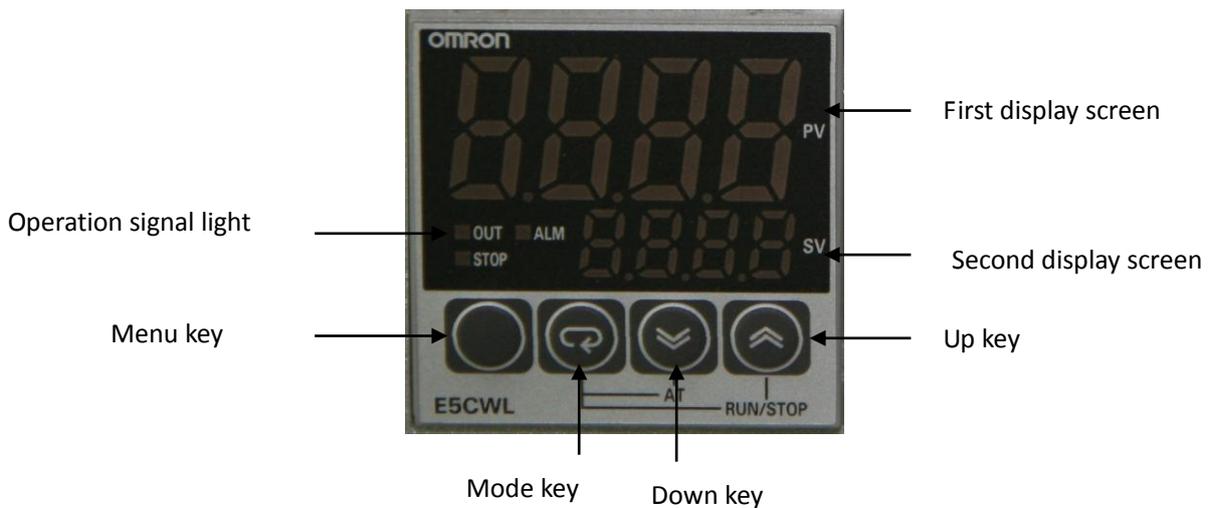
(4) This machine is supplied with three-phase and four-wire power. It should be selected no fuse switch control at 60A or above and it is better to install the power switch within 5 meters away from the machine.

(5) The phase sequence of power installation should be in accordance with the rotating directions of fan motor.

## 七、 Operations

### 1、 Start the machine:

- (1) About 10 minutes before use, first to open the power switch, the heater and the conveyor belt switches, so as to get the shrinkage furnace preheated.
- (2) Adjust the heating temperature and conveying speed. Heating temperature and conveying speed must be in appropriate collaboration. The conveying is faster, and the temperature must be higher. The general heating temperature for PVC film is about 120-150°C, and for POF film about 145-160°C. The conveying speed is coordinated with production line. The temperature controller panel is shown as below:



First display screen: indicate the actual temperature.

Second display screen: indicate the fixed temperature.

Menu key and mode key: both are fixed when going out of the manufacturer and non-professionals are forbidden to operate.

Up key and down key: adjust up or down the fixed temperature.

For example: fix the temperature at 160°C.



Press the up key  or the down key  till the temperature is 160°C.

- (3) When the temperature reaches the fixed value, try packaging one and adjust the heating temperature or conveying speed according to the actual shrinkage effect so as to make the packaging effect reach the best.

## 2、 Operation:

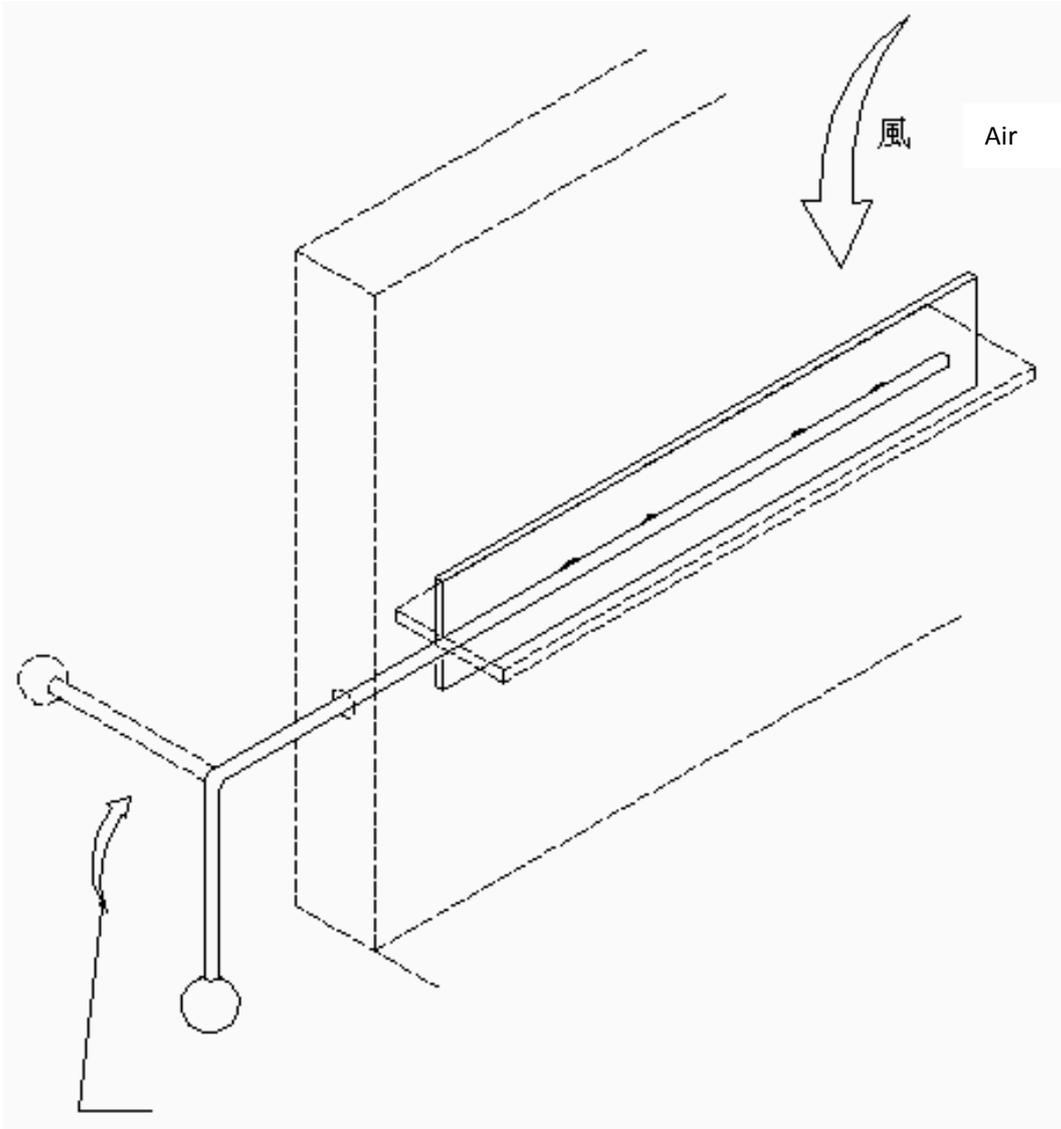
Put the item to be packed which is wrapped with plastic film at the conveyor belt on the upper side of the inlet of the shrinkage furnace. The conveyor belt delivers the item into the furnace and makes the film shrink and after that, deliver out the packed item.

## 3、 Power off the machine:

- (1) Firstly switch off the heater and raise up the shade at the entrance.
- (2) At this time the circulator should continue to operate to accelerate the heat radiation, to avoid injury to the conveyor chain
- (3) When the temperature is down after 10 minutes or so, switch off the conveyor and power supply.

## 八、Description of adjusting air volume

### 1、Diagram for side air volume adjustment



- (1) Rotate the adjusting valve for side volume to be vertical and the wind is flowing upside. Then package the thinner products.
- (2) Rotate the adjusting valve for side volume to be horizontal and the air power turns at  $90^\circ$ , flowing transversely towards the middle of the furnace. Normally, for packaging the higher products, the valve needs to be adjusted to be horizontal.

2、 Diagram for bottom air volume adjustment)

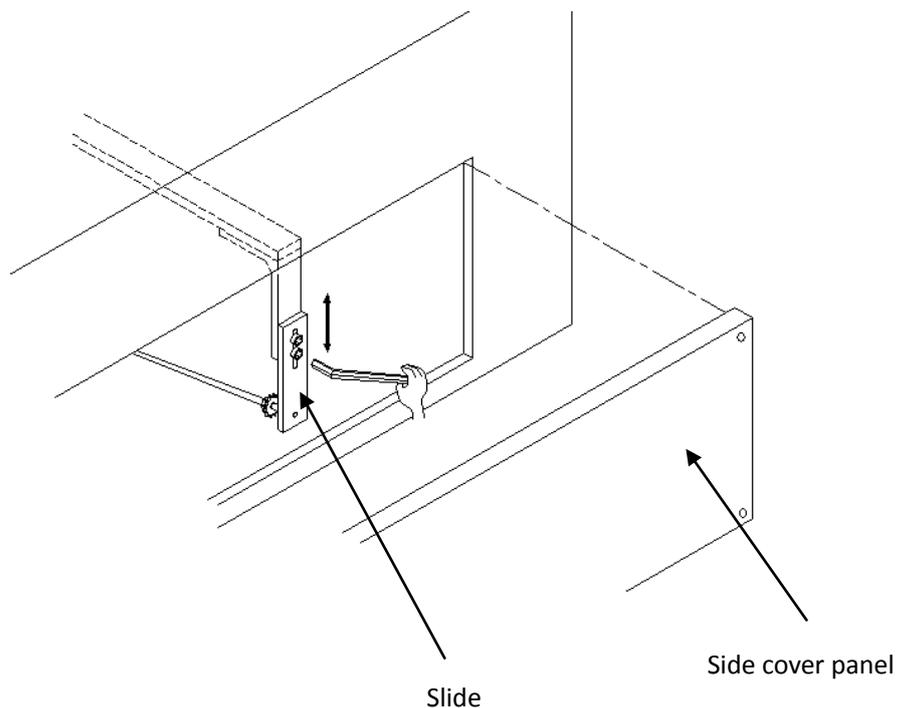


Rotate the hand wheel for adjusting the bottom air volume. At clockwise the bottom air volume becomes weaker gradually while at anticlockwise, it becomes stronger gradually.

## 九、Care & Maintenance

**Please keep the machine clean daily and pay attention that the roller position on the conveying chain and the connecting hole of the ledge on the conveying chain and carrier axle need to be kept lubricated. Apply the lubricant regularly ( the lubricant should be anti-high temperature, above 300℃. )**

- 1、 If the conveying chain is loose, please adjust it as per the below steps:
  - (1) Disassemble the side cover panels at the bottom of the shrinkage furnace.
  - (2) Loosen up the adjusting screw, and adjust the slide up and down, until the belt is tight moderately.



- (3) Tighten up the adjusting screw on the conveying belt.
  - (4) Fix up the side cover panel on the bottom of the shrinkage furnace.
- 2、 The cleaning of the net cover inside shrinkage furnace: when the net cover gets some shrinking film or other foreign bodies, it is need to disassemble it and clean it, so as not to affect the air volume of the furnace, and result in

poor shrinkage effect. The specific operations are as follows:

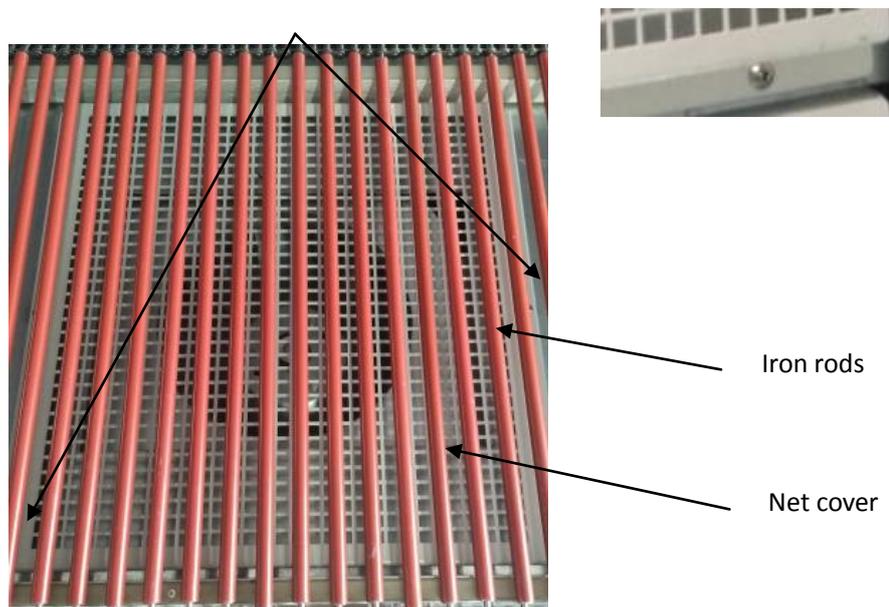
- (1) Just as the below figure shows, disassemble the roller and stainless steel plates on both sides.



Disassemble the roller and the stainless steel plates on both sides.

- (2) As the below figure shows, disassemble several iron rods from the conveying belt and move the part disassembled the rods to the net cover. Loosen up the screws which are fixing the net cover at two sides, take out the net cover and clean it.

Loosen up these screws and take out the net cover for a cleaning



- (3) After cleaning the net cover, install all the parts in right places successively.

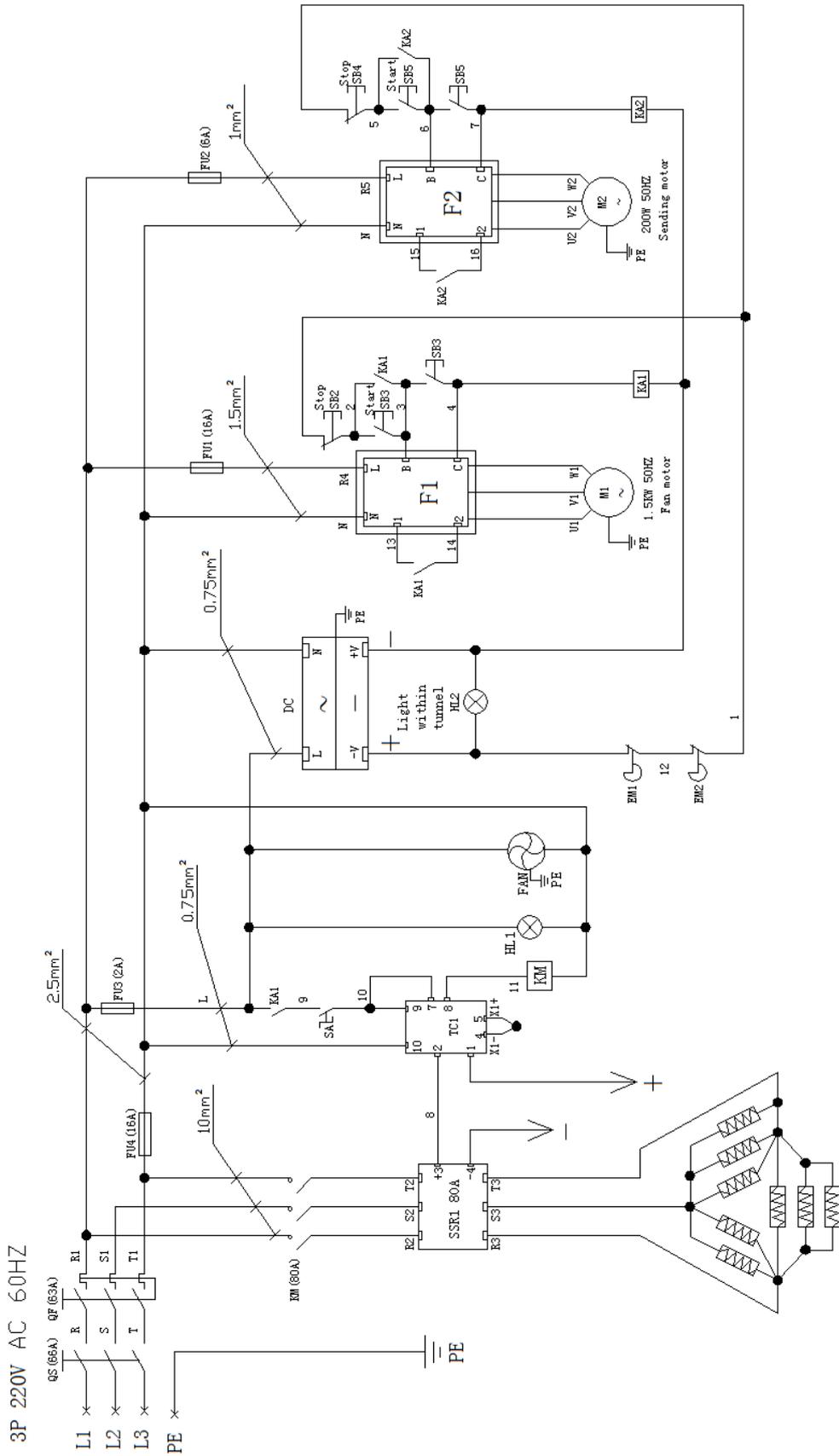
## 十、Trouble Elimination

Serial No.	Description of Troubles	Reasons	Maintenance Method
1	Electric heater does not heat	The switch is not turned on.	Switch on the heater.
		The temperature is at zero or so.	Adjust to the required heating temperature.
		The contactor to control the heating or the solid state relay is damaged.	Replace the contactor or the solid state relay.
		The temperature controller is damaged.	Replace the temperature controller.
		The wire has fallen off.	Connect it.
2	Shrinkage is not complete	The temperature is too low.	Adjust to the required temperature.
		The conveying speed is too high.	Slow down the speed.
		Part of the heater is damaged so the heating is not enough.	Replace the heater.
3	The plastic film is melted and broken	The temperature is too high.	Decrease the heating temperature.
		The conveying speed is too slow.	Accelerate the conveying speed.
4	The conveying belt is not running	The switch is not turned on.	Turn on the belt.
		The speed value is at zero.	Adjust to the required speed.
		The fixed screw for conveying chain is fallen off.	Tighten up the fixed screws.

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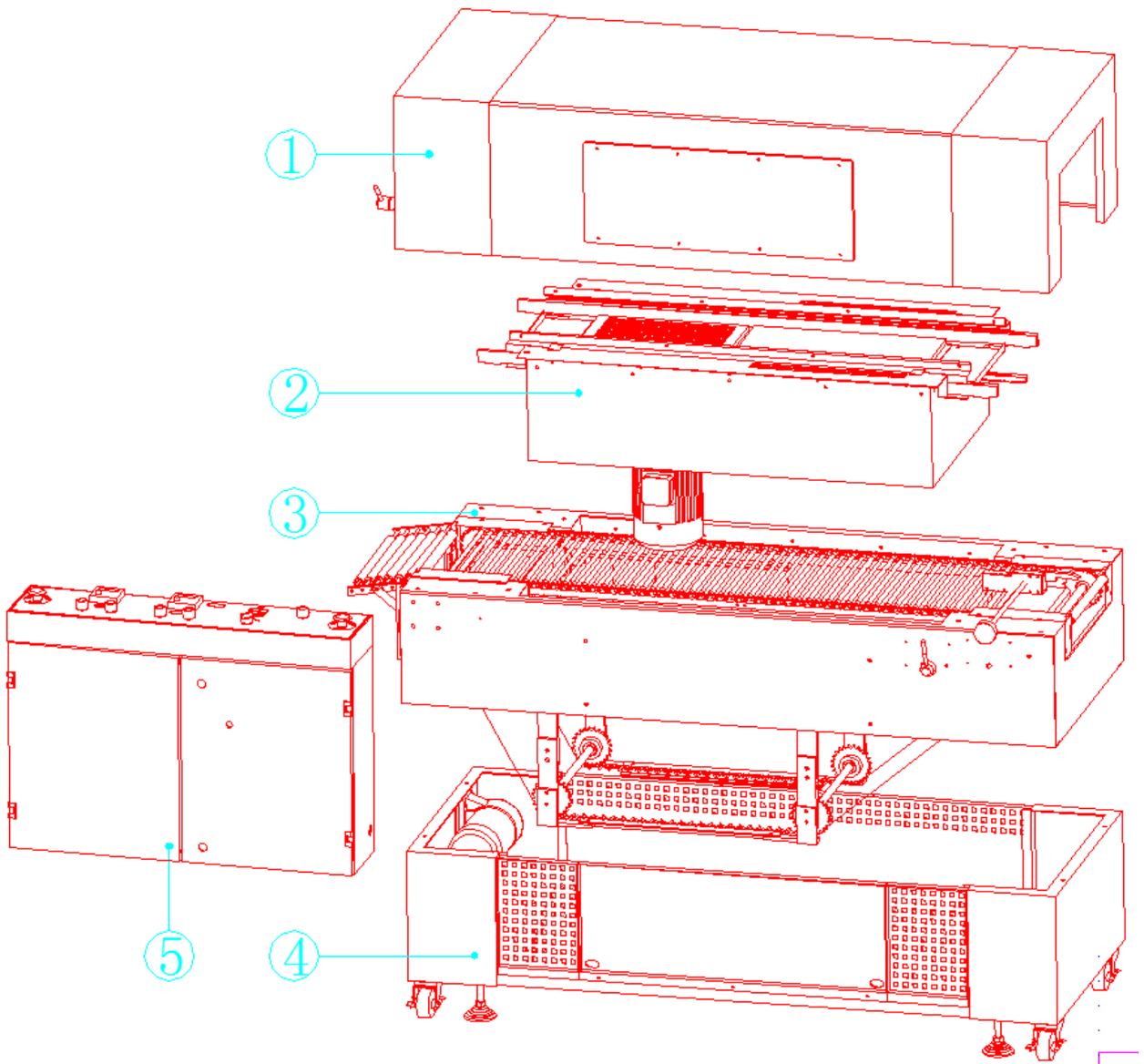
		The speed controller is damaged.	Replace the speed controller.
		The motor is damaged.	Replace the motor.
		The switch is damaged	Replace the switch.
		The power wire is fallen off.	Connect it.

# 十一、Circuit Diagram

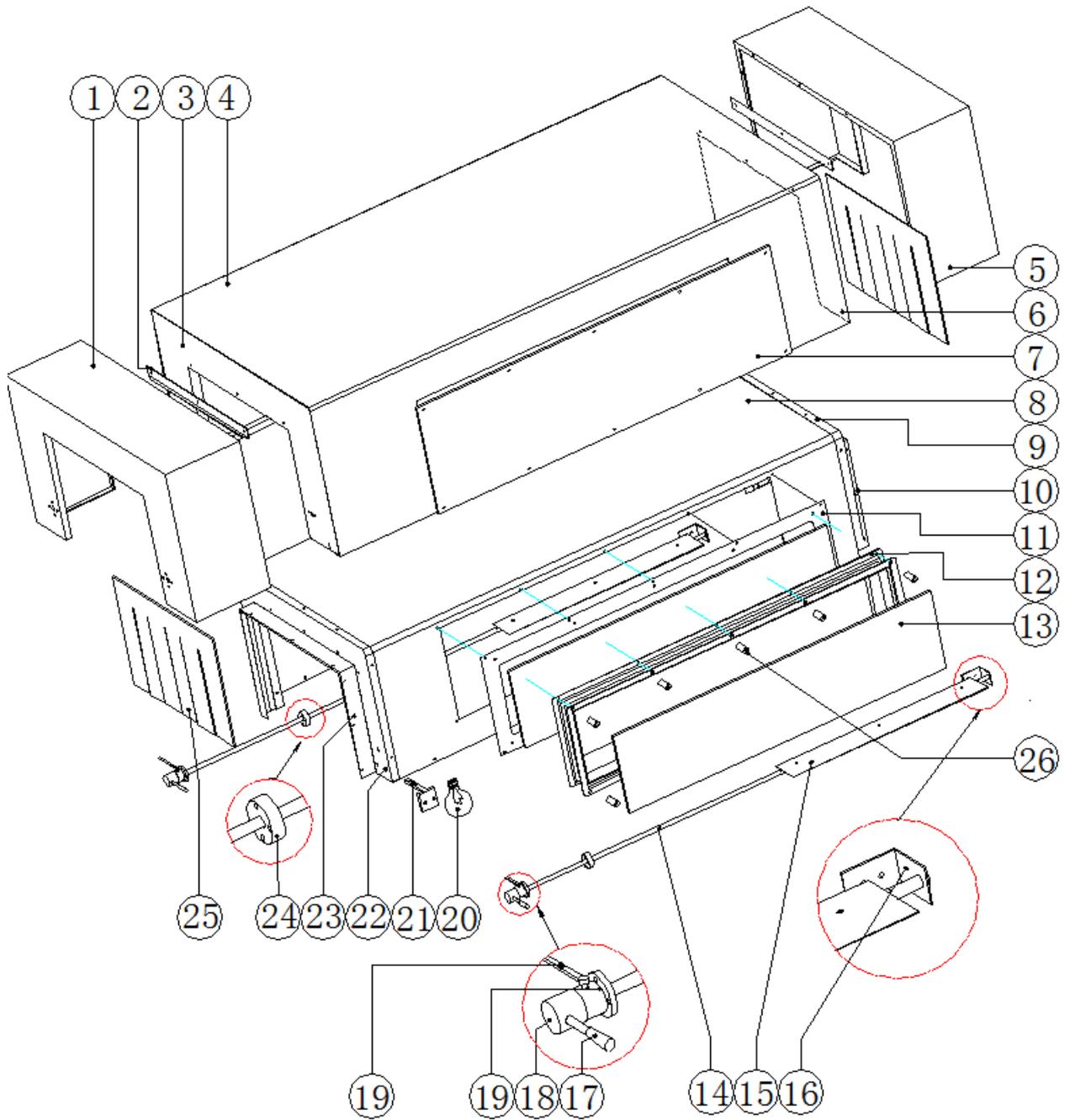


## 十二、Components

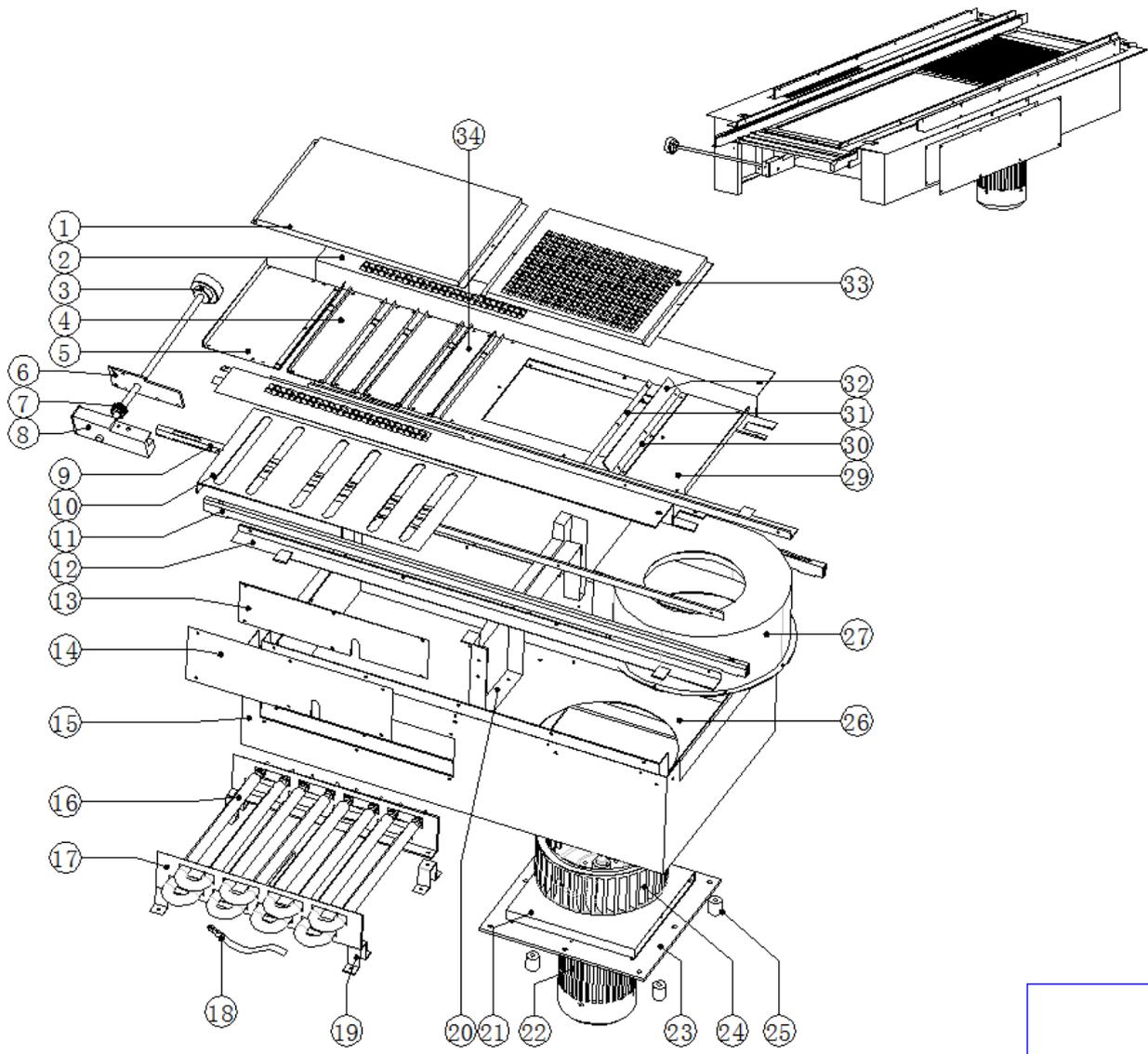
### 1、Assembly drawing



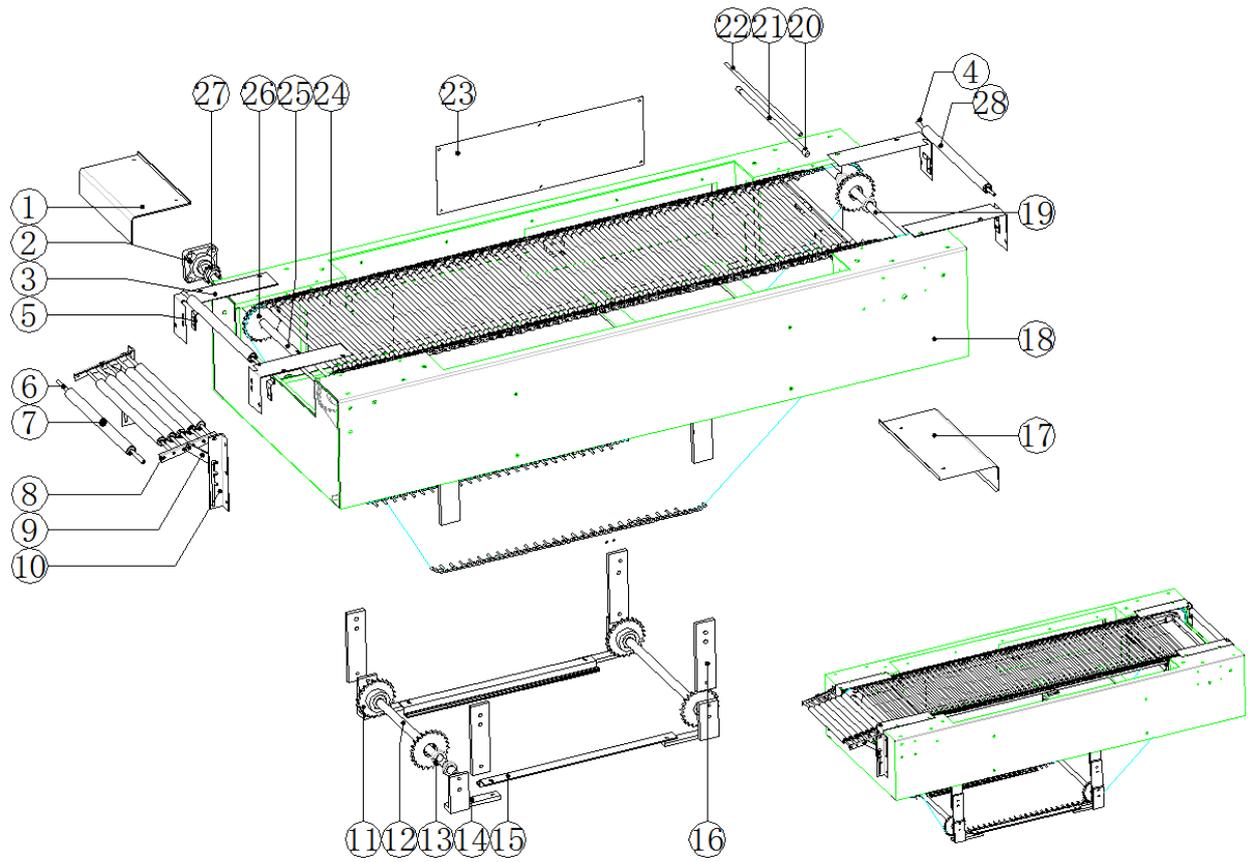
## 2、Upper cover components



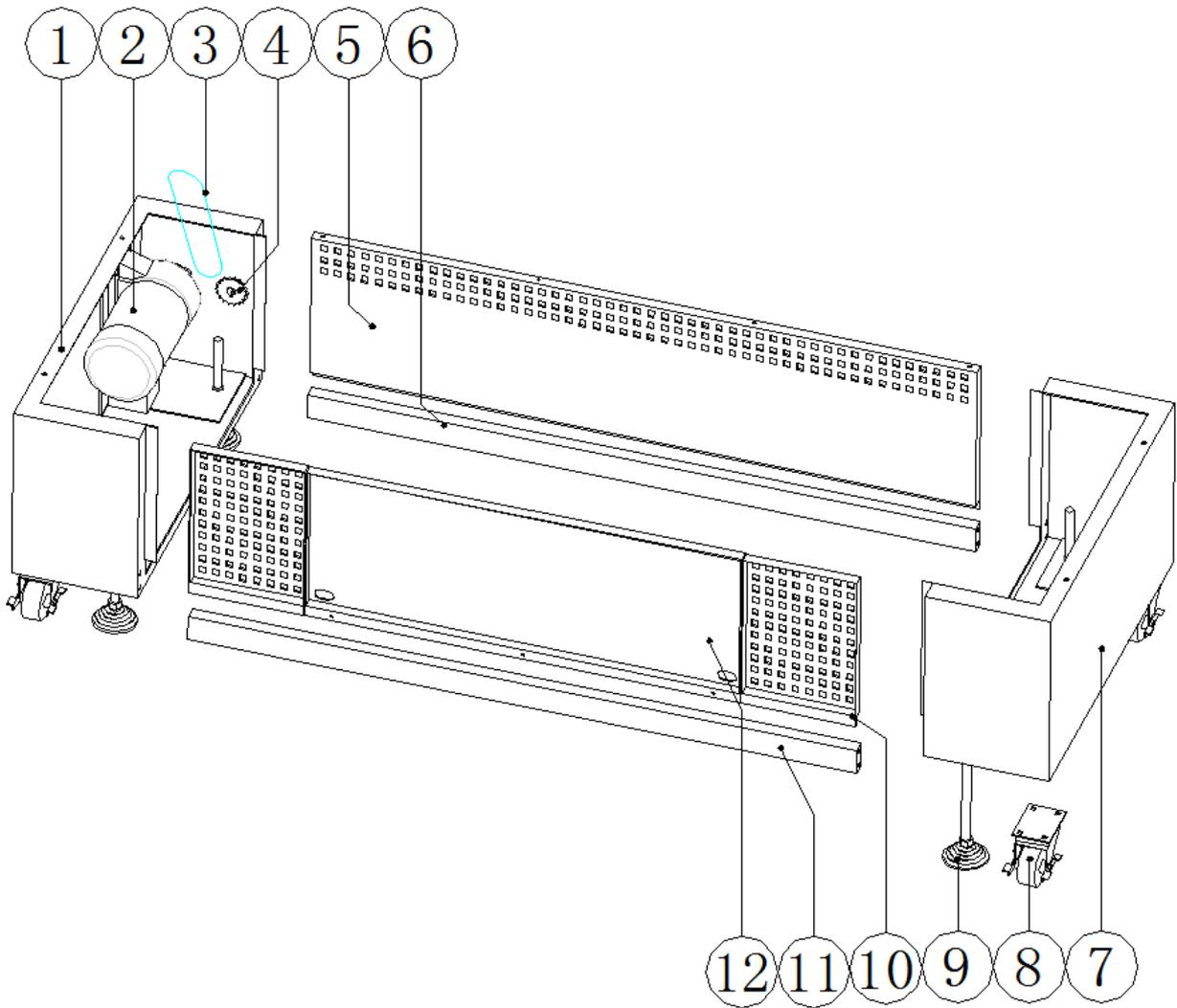
### 3、Inner tunnel components



#### 4、 Tunnel cover components



### 5、 Tripod components



## 6、 Electric box components

