



## Vertical Automatic Continuous Sealing Machine



## **1. PRODUCT PURPOSE**

The machine is suitable for sealing and bag-making with various plastic and compound films. The equipment offers superior sealing abilities across a wide range of sectors, including the food, pharmaceutical, and chemical industries, as well as cosmetics, local produce, vegetable seeds, electronic components, and many more.

## **2. PERFORMANCE AND CHARACTERISTICS**

With the electronic thermostatic control and the auto-transportation device, the machine can make various shapes of plastic film bags. It can be used for various packing lines with no limits to the length of the seal. Its key characteristics include a high efficiency of continuous sealing, high-quality and sturdy construction, and user-friendly operation.

There are 2 groups of machines; the horizontal type and the vertical type. The horizontal type is used for packing and sealing dry goods and the vertical type is used for liquid goods.

## **3. CONSTRUCTION AND WORKING PRINCIPLE**

The machine consists of a frame, speed regulator, sealing length regulator, temperature control, drive, and a transportation device.

When turning the device on, the electro-thermal component produces sufficient heat to make the temperature of both upper

and lower heaters promptly raise. From here, the temperature and speed can be adjusted as appropriate to the sealing material using the temperature control meter and the speed regulator. The plastic packing bag is transmitted by the conveyer belt with its sealing part positioned into the two running sealing braids. The seal is then subjected to the two heaters to make the plastic film melt and form a seal. Next, the bag is cooled in the cooling area, its sealing part is rolled by the pattern roller or the inker wheel to finish the job and form a tight seal.

The drive parts consist of sealing braids, a lead belt, and a conveyer belt which are all driven by a synchronized motor.

#### **4. MAIN SPECIFICATIONS**

Power supply: 110V, 60 HZ

Power: 500 W

Sealing speed: 0 ~ 12m/min (adjustable)

Sealing width: 6 ~ 12mm (adjustable)

Temp. range: 0 ~ 300°C(adjustable)

Single Layer Maximum Film Thickness:  $\leq 0.8\text{mm}$

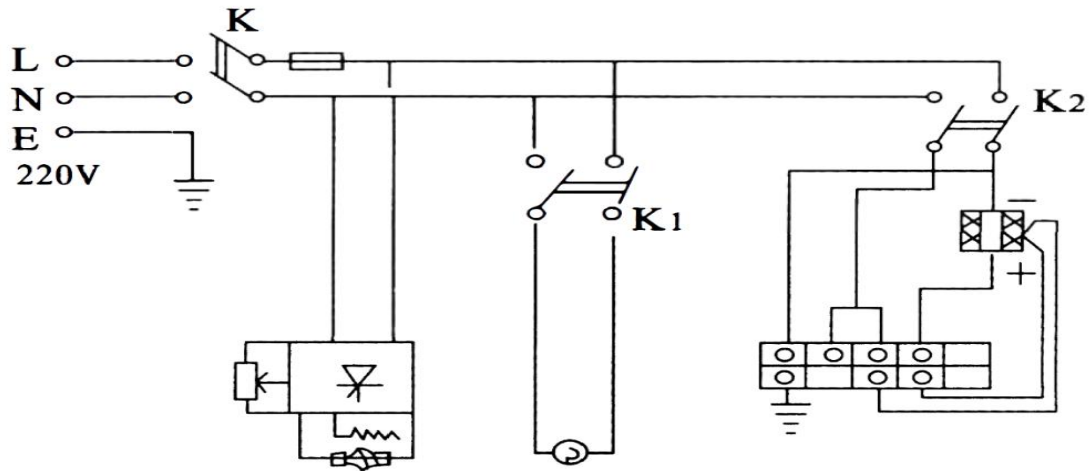
Conveyor Table Maximum Load:  $\leq 5\text{kgs}$

Machine Weight: 22kgs

Seal length: 110 ~ 220mm

No. of printing words: 13

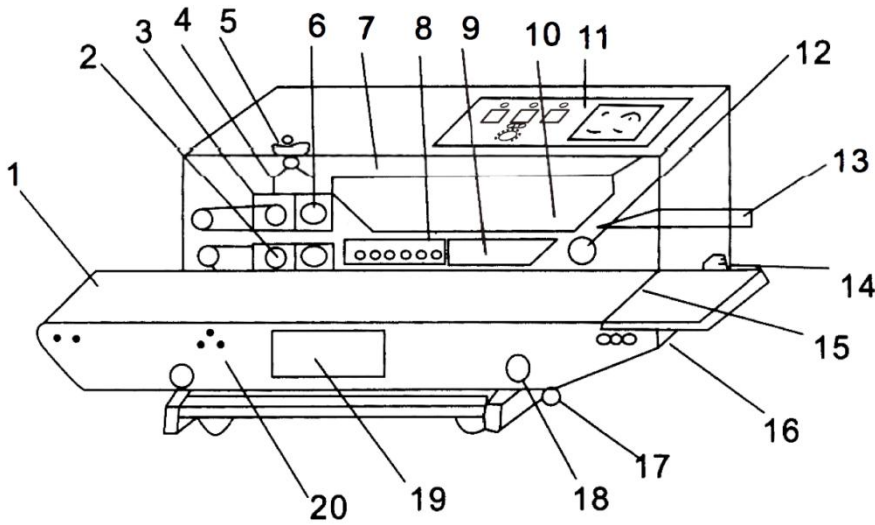
## 5. ELECTRICAL SCHEMATIC DRAWING



Symbol	Name
K	Power supply switch
BX	Insurance tube
W	Potentiometer
SW	Speed regulating plate
D1	Motor
D2	Blower
K1	Blower switch
K2	Electro-thermal switch
R	Electro-thermal tube
TDA	Temperature control meter
E	Electro-thermal couple

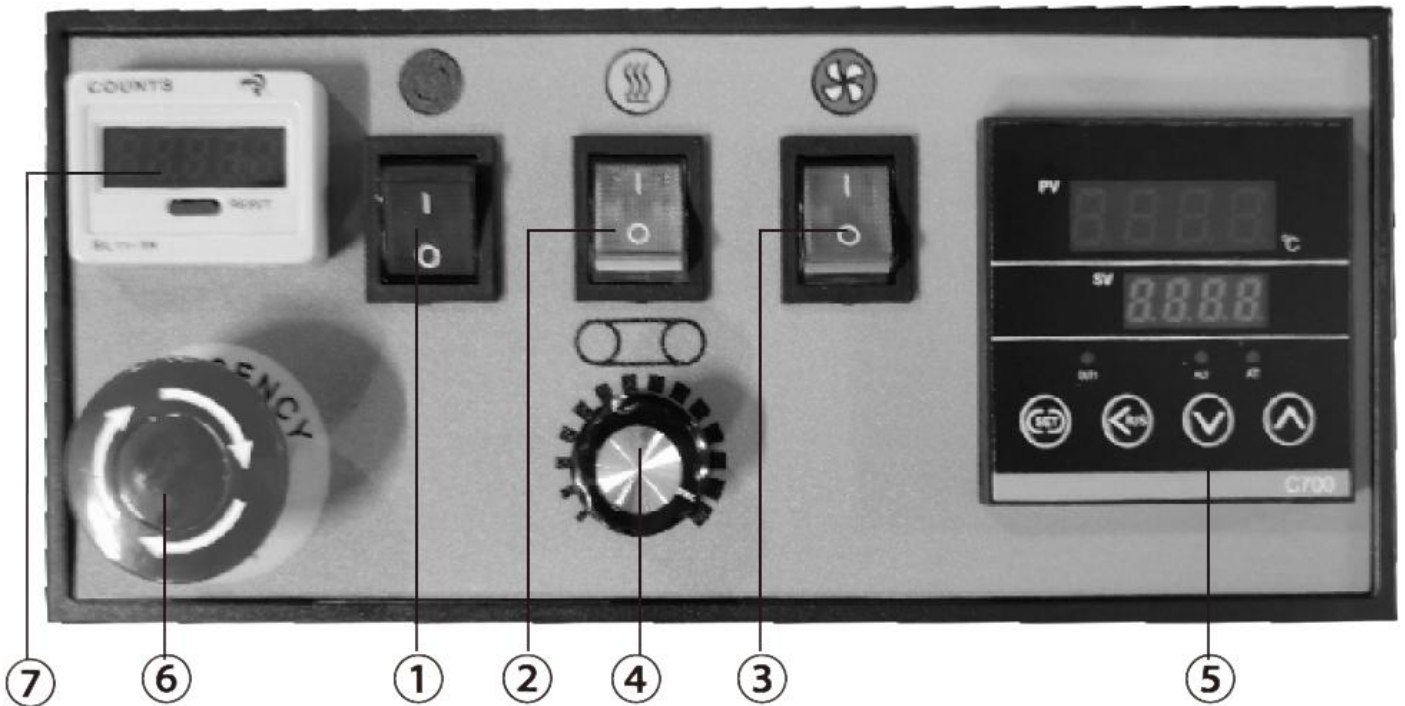
## 6. WAY TO USE

### (1) . Legend and description of the machine:



1	Conveyer belt	2	Rubber wheel
3	Pattern roller (inker wheel)	4	Inker wheel seat
5	Pressure regulating wheel	6	Driving wheel
7	Safety guard	8	Cooling block
9	Heating block	10	Sealing braid
11	Control box	12	Driven wheel
13	Guide place of sealing width regulation	14	Power socket and safeguard
15	Fixed working table	16	Regulation screw of conveyer belt's elasticity
17	Regulation knob of conveyer station's in-out	18	Regulation knob of conveyer station's height
19	Nameplate	20	Conveyer station
21	Vertical rack		

**(2) Name of control box:**



1	Power supply switch
2	Heating switch
3	Blower switch
4	Motor speed-regulation
5	Sealing temp indication
6	Emergency stop
7	Counter



Setting the temperature with the intelligent temperature control table:

A: The value displayed on the upper row (red) is the actual temperature. The value displayed on the lower row (green) is the set temperature.

B. Press the SET button in the lower left corner, and the value (green) in the lower row will begin flashing.

C. Then press the ▲ button to increase or the button ▼ to

decrease to set the desired temperature. The value of this temperature should be set according to factors such as the thickness of the bag. It is generally set at about 150C.

D. When the temperature is set, you must press the SET button again, and when the screen returns to normal, you can commence your work.

**(3). Preparation before starting the machine:**

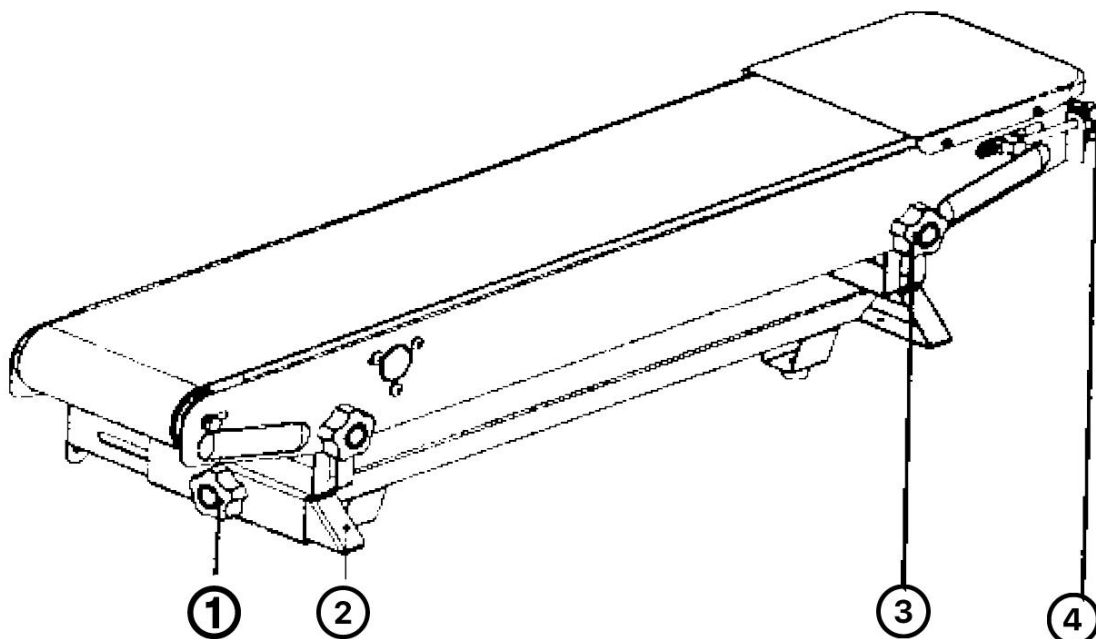
1. The machine is equipped with a shell-grounded triplex socket, which should be well-grounded to ensure safe use.
2. The electro-thermal component should be preheated at a low temperature for a few minutes before normal operation because it may be wet before initial use or after a long interval of being unused.
3. Adjust the height and the front-and-back position of the conveyer station to fit the size of the sealing bag.
4. Adjust the position of the guide place of sealing width regulation according to your requirements.
5. Adjust the spaces between the upper and lower heaters and the upper and lower coolers (i.e., the spaces between the resealing braids) according to the thickness of the sealing material.



#### **(4) Adjustment methods for each component:**

##### **I: The adjustment method for the conveyor belt:**

- ① Adjust the locking knob
- ② Tripod
- ③ Locking knob
- ④ Conveyor belt tension adjustment knob



Conveyor belt tension adjustment: When the conveyor belt is too loose or too tight, turn the two "conveyor belt tension adjustment knobs ④" at the same time (right-handed for tension, left-handed for loosening) until the conveyor belt is tight enough.

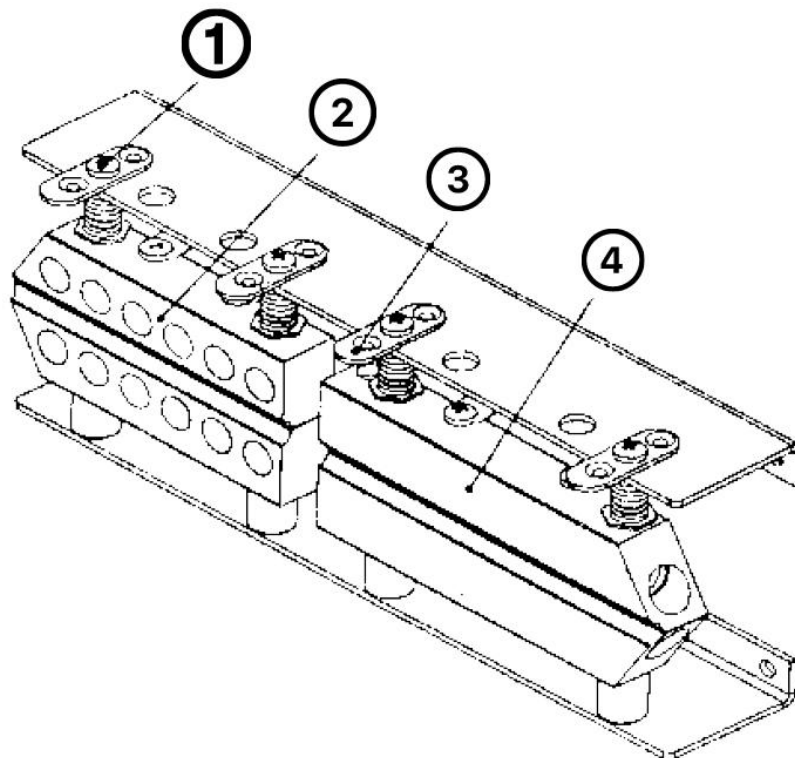
Front and rear fine-tuning adjustment of the conveying workbench:

When the conveying workbench needs to be adjusted back and forth, first loosen the "adjustment locking knob ①" on both sides, and then push or pull the workbench until the position is appropriate. Then, lock the "adjustment locks" on both sides respectively Tighten the knob ①

Up and down fine-tuning of the conveying workbench: When the conveying workbench needs to be adjusted up and down, first loosen the "locking knobs ③" on both sides, then move up or pull down the workbench to achieve the desired position. Secure it by locking the "locking knobs" on both sides respectively ③.

## II : Adjusting the sealing section

- ① Adjustment screw
- ② Cooling block
- ③ Lifting piece
- ④ Heating block

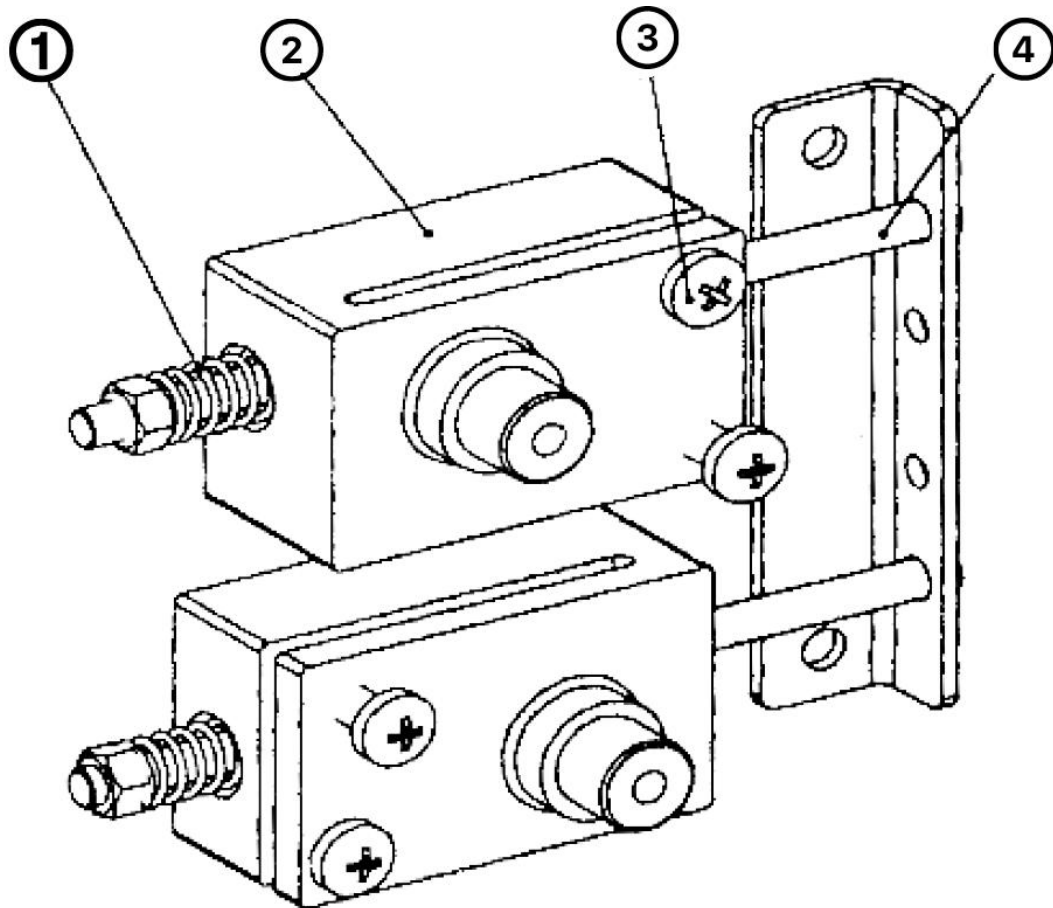


Adjustment of the distance between the upper and lower heating blocks and cooling blocks: Due to different sealing materials and their thickness, the distance between the upper and lower heating blocks and cooling blocks needs to be adjusted for each product that is sealed. This can be done by turning the upper adjustment screw ① to the left to reduce or increase the distance between the upper and lower heating blocks and the cooling block.

Sealing belt replacement method and adjustment: After the heating block cools down, remove the protective cover and rotate the lifting piece ③ on the heating block and the cooling block by 90°. Raise the two parts and loosen the embossing wheel and the middle pressing wheel. Remove the guide belt then push the passive wheel seat toward the heating block. Remove the sealing tape and replace it with new sealing tape. Finally, return the passive wheel, heating block, cooling block, embossing wheel, etc. to their original positions.

### III Passive pulley adjustment method:

- ① Spring
- ② Passive wheel seat
- ③ Adjustment screw
- ④ Sealing belt tension adjustment screw



If the sealing belt runs sideways, it can be adjusted through the adjusting screw on the passive wheelbase ②.

**(5) How to install the alphabet wheel and the vertical rack :**

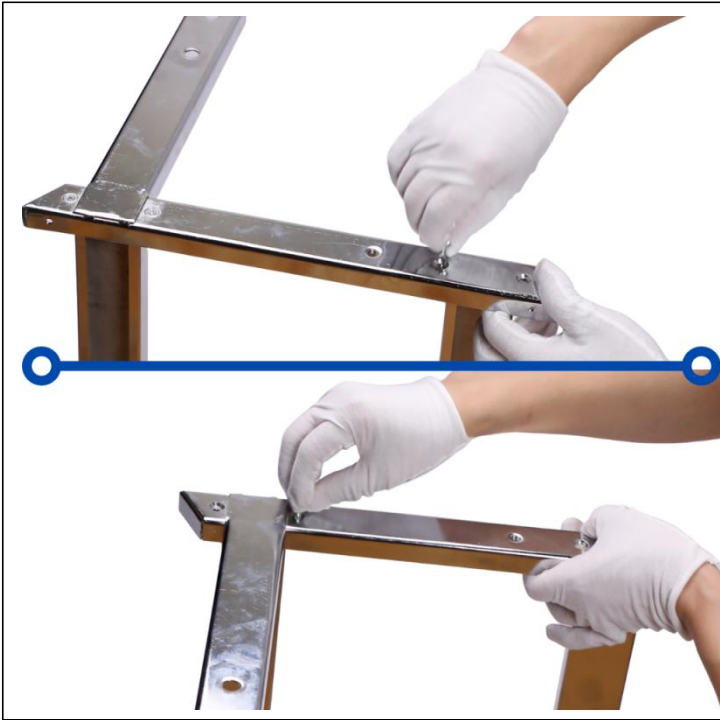
- ① Install the alphabet wheel.



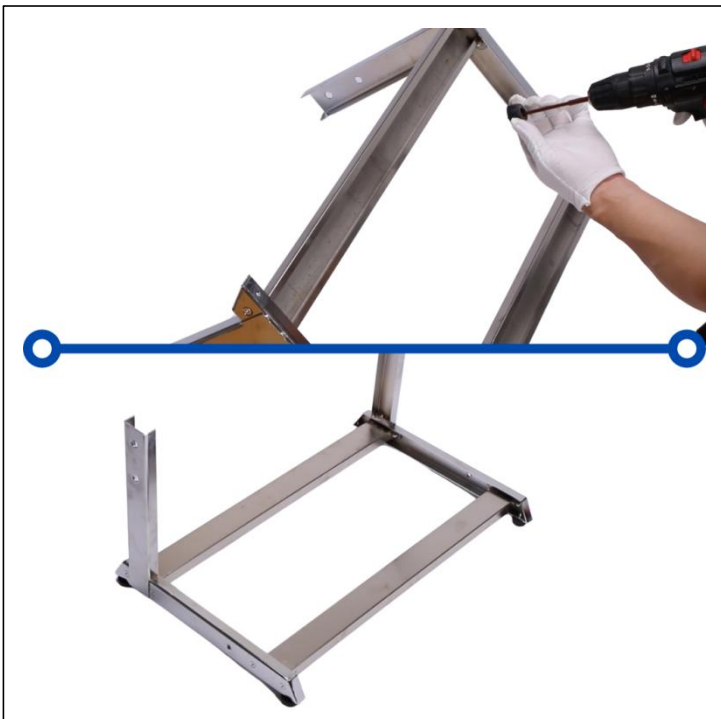
We have prepared a letter wheel for you which can be found in the accessory bag. This wheel can print numbers or letters onto the bag. You can use the small steel plate to unscrew the letter wheel and put the required letters into the letter wheel. Next, open the casing of the machine, remove the blank letter wheel with a screwdriver, and install the letter wheel you set.

PLEASE NOTE: For specific operations, please refer to the video on our product details page or email our customer service team to obtain videos of the machine operation and letter wheel installation.

② Install the vertical rack:



Attach the bracket connecting rods with screws.



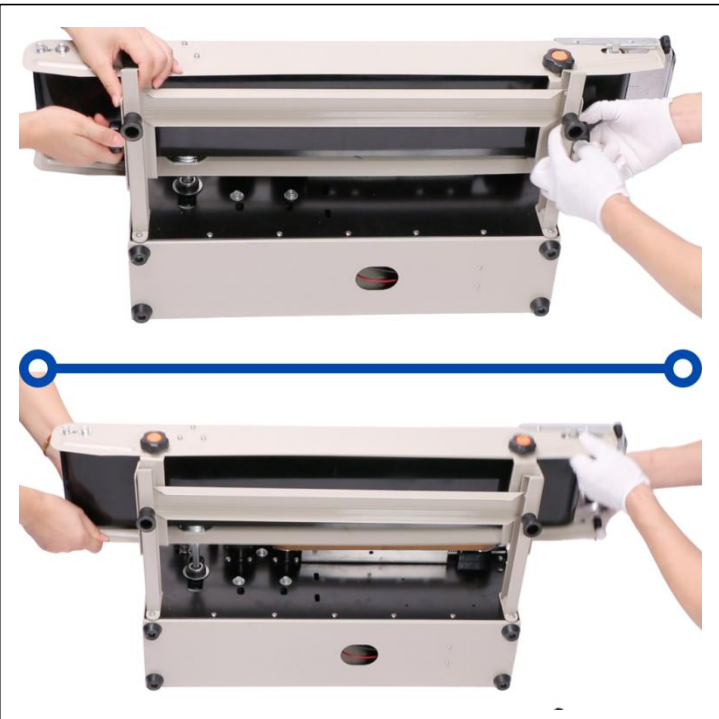
Install the non-slip feet to the bottom of the stand.

Bracket completed.



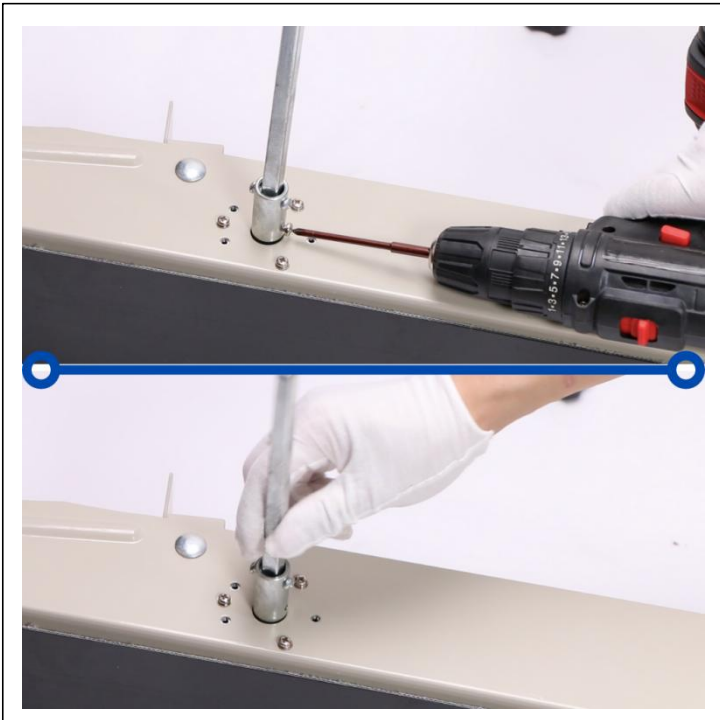


Turn the machine over.

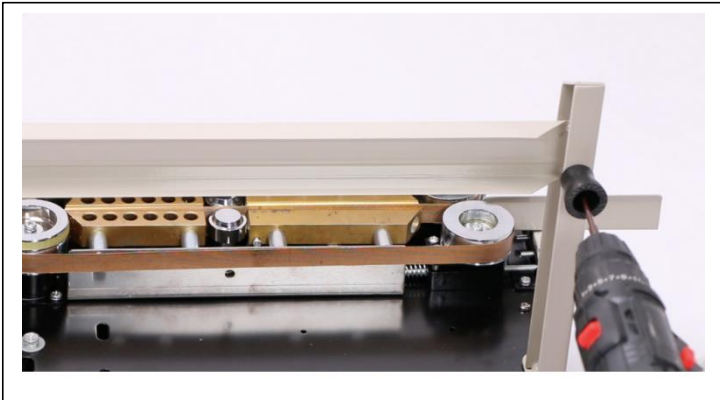


Remove the fasteners that secure the transfer table. These are found on the side of the machine.

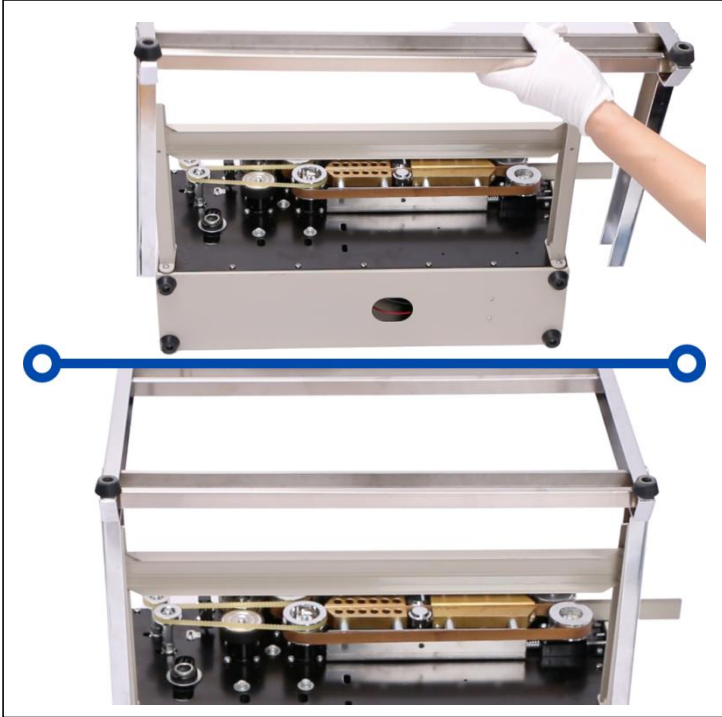
Remove the transfer table.



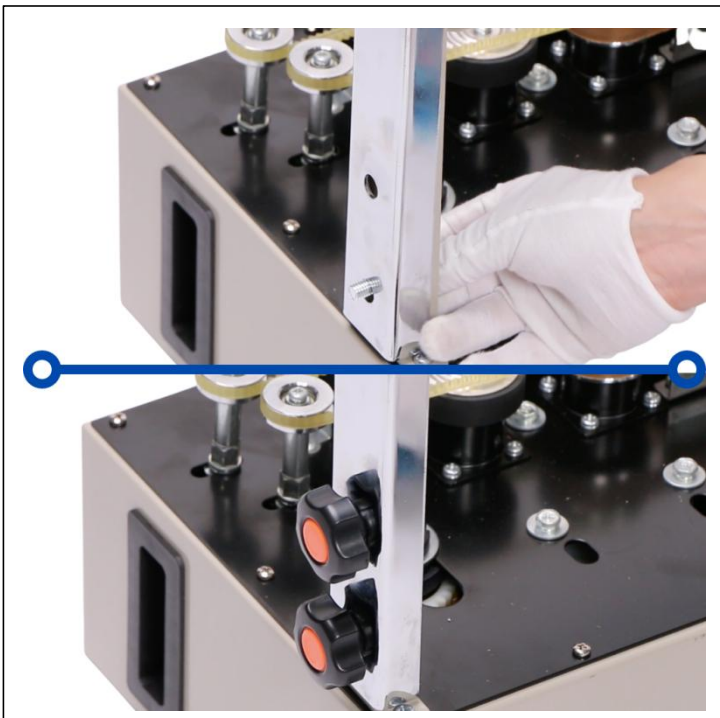
Remove the connecting rod screw on the side of the transfer table. This will allow you to release and remove the connecting rod.



Use a screwdriver (hand-held or electric) to remove the screws on the non-slip feet at the bottom of the fuselage.



Attach the assembled bracket to the fuselage.



Connect the bracket to the machine using the yellow and black fasteners and screws.

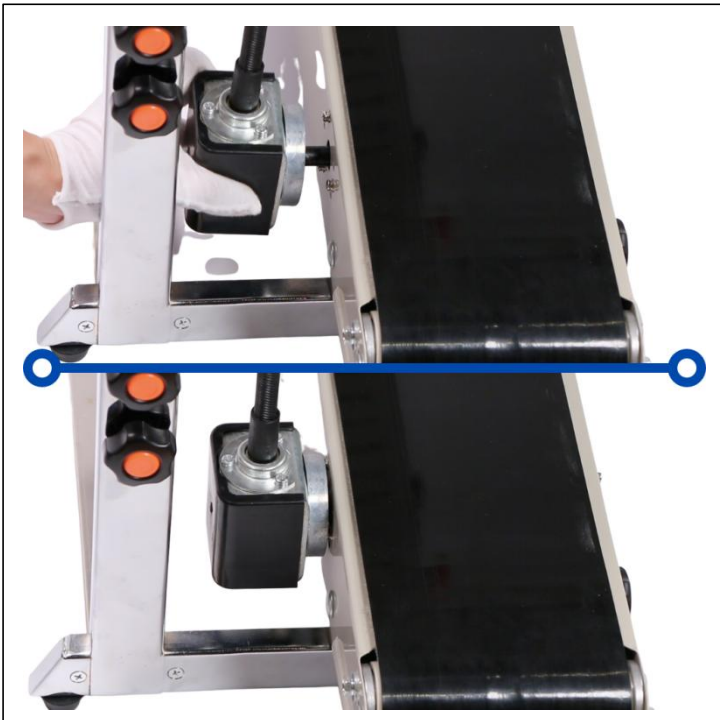


After connecting the bracket to the machine, place the machine down on the ground with the control panel of the machine facing up. Insert the control bar into the round hole as shown in the figure.



Stabilize the control lever using your hands and slowly raise the machine until upright.

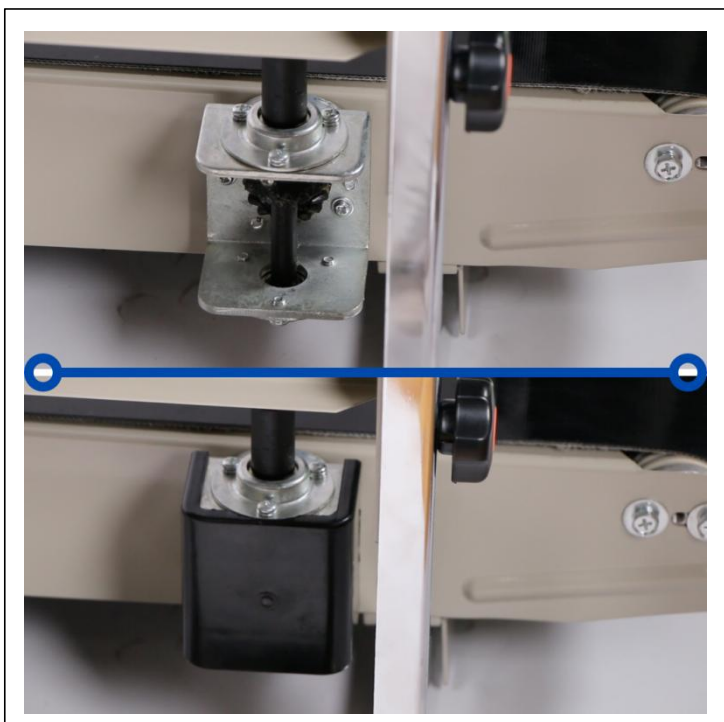
Put the transfer table on the machine.



Insert the lever into the round hole in the transfer table.



Take the black cover off the joystick. Using the screws provided, connect the joystick to the console.



After tightening the screws, re-attach the black cover.



The yellow and black fasteners on both sides of the bracket can be used to adjust the height. Use both fasteners simultaneously to achieve the height needed for the bag you plan to seal.



After setting the parameters of the control panel, the bag can be placed under the baffle to start the conveyor belt and begin the sealing process.

## **(6) Operation:**

### ***Please note:***

***Our machine is equipped with a photoelectric counter suitable for colored bags. If you need to count transparent bags, please replace the mechanical counters we prepared for you in the accessory bag. For the specific installation method, please refer to the video displayed on the product details page or contact us to obtain the installation video. If you don't need to count the bags you pack (whether your bags are clear or colored bags), you can use the machine straight away without changing the counter.***

1. Turn on the power - the indicator lights and all wheels will begin running.
2. Adjust the knob of the pattern roller to have it (or the inker wheel) rotated and regulated to a suitable pressure.
3. Turn on the heating switch. A green light will come on to indicate the electronic temperature control meter is active. Adjust the meter to achieve the necessary temperature according to the nature and thickness of the packing bag material. In general, the below temperatures can be used during operation at a room temperature of 20°C:



- a). Polyethylene: 150-- 160°C
- b). Polypropylene: 170-- 180 °C
- c). Polyolefine compound: 180--190°C

The temperature can be adjusted along with the speed.

The red light will illuminate after heating for a while indicating the required temperature has been reached. At this point, a sealing trial can be done with a preset packing bag to determine if the temperature, speed, and the pressure of the pattern roller (inker wheel) needs to be adjusted to achieve an ideal sealing result. Once this has been achieved, continuous sealing can begin.

4. You can determine if the blower needs turning on for cooling based on the thickness of the sealing material. In general, it should be turned on for common polyethylene (i.e., single-layer plastic films).

5. The sealing part of the bag should be aligned when laid flat. Push the regulation place for the sealing sides in. The part will be gripped by the sealing braids and moved forward without intervention. At this point, stopping or removing the bag cannot occur. If you attempt this, uneven sealing or faults may result.

## **(7) MAINTAINING AND REPAIRING**

### (1). Maintenance Method

- a). Push the driven wheel toward B and take out the sealing braid.
- b). Change for a new braid and install the upper and lower lead belt.
- c). Place the driven wheel, the heater, and the cooler in their original positions.
- d). Turn on the power to make the pulley rotate and the braid will start to move. You can now start a trial. The edge deviation on the sealing braid can be adjusted through the screw on the driven wheel.
- e). Install the safety guard. After doing so, continuous operation can commence after heating.
- g). To prolong the duration of the sealing braid, before stopping the machine, return the temperature adjustment dial to zero and turn on the blower. The temperature pointer will begin to slowly come down but the sealing braid will still be running. The blower and the master power switch cannot be turned off until the temperature falls below 100C, which can take a few minutes.

(2). Turbo case:

As an overall sealed turbo and worm unit, the turbo case has the features of low noise while delivering a large amount of power. It should be oiled with 50g 20#oil once a month. It should be cleaned and maintained only once a year based on a general usage of 8 hours per shift.

Care should be taken to keep the inside of the case clean to avoid it making noise.

### (8) Troubleshooting:

Symptom	Cause	Solution
Deviation of seal	The driving wheel is not parallel to the driven wheel.	Adjust the two screws on the driven wheel until it no longer deviates.
Sealing tape breaks easily	<ol style="list-style-type: none"> <li>1. The sealing tape is too tight.</li> <li>2. Too close to the running edge.</li> <li>3. The closure has a crease.</li> <li>4. There is film or other dirt on the surface of the sealing tape.</li> <li>5. The sealing tape burns easily.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust the longitudinal adjustment screw of the driven wheel seat so that the sealing belt is neither too tight nor too loose.</li> <li>2. Refer to the above item.</li> <li>3. Adjust or replace without creases.</li> <li>4. Remove the adhesive or dirt from the surface of the sealing tape.</li> <li>5. Adjust the gap between the heating blocks, or adjust to a suitable temperature if the temperature is too high.</li> </ol>
Knurling is not clear	<ol style="list-style-type: none"> <li>1. The roller is worn out.</li> <li>2. The compression spring of the roller seat is not pressed tightly</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the embossing wheel.</li> <li>2. Adjust the compression spring of the embossing wheel seat.</li> </ol>

<p>There is resistance when the sealing belt is conveyed.</p>	<p>The heating block or cooling block gap is too small which is generating too much friction.</p>	<p>Adjust the heating block or cooling block to make a moderate gap. Generally, the gap between two sealed bags is about the thickness of one layer of packaging, which can ensure the sealing fastness and embossing clarity without extending the two ends of the sealing part.</p>
<p>The packaging bag is stuck or turned when running to the middle pressing wheel or embossing wheel.</p>	<p>Intermediate or embossing rollers are too tight.</p>	<ol style="list-style-type: none"> <li>1. The pressure of the wheel or embossing wheel should be adjusted properly, and the gap between the two sealing belts is about the thickness of one layer of packaging bags. This ensures the sealing fastness and embossing clarity without extending the two ends of the sealing part.</li> <li>2. After the clearance is completed, adjust the limit screw.</li> </ol>

<p>Conveyor belt deviation</p>	<p>Active rod axis is not parallel to passive spoke axis</p>	<p>Adjust the two conveyor belt tension adjustment knobs on the passive roller shaft (rear shaft) of the conveyor table to ensure that the two shafts are parallel. At the same time, ensure that the conveyor belt is not too loose or too tight.</p>
<p>The conveyor belt is out of sync with the sealing belt.</p>	<p>Conveyor belt is not tensioned.</p>	<ol style="list-style-type: none"> <li>1. Properly tension the driving roller and the intermediate shaft conveyor belt so that they are fully in contact with the rollers.</li> <li>2. Properly tighten the conveyor belt.</li> </ol>

Contact:

Feel free to visit our website:

[www.ussolid.com](http://www.ussolid.com)

You can email us at [service@ussolid.com](mailto:service@ussolid.com)