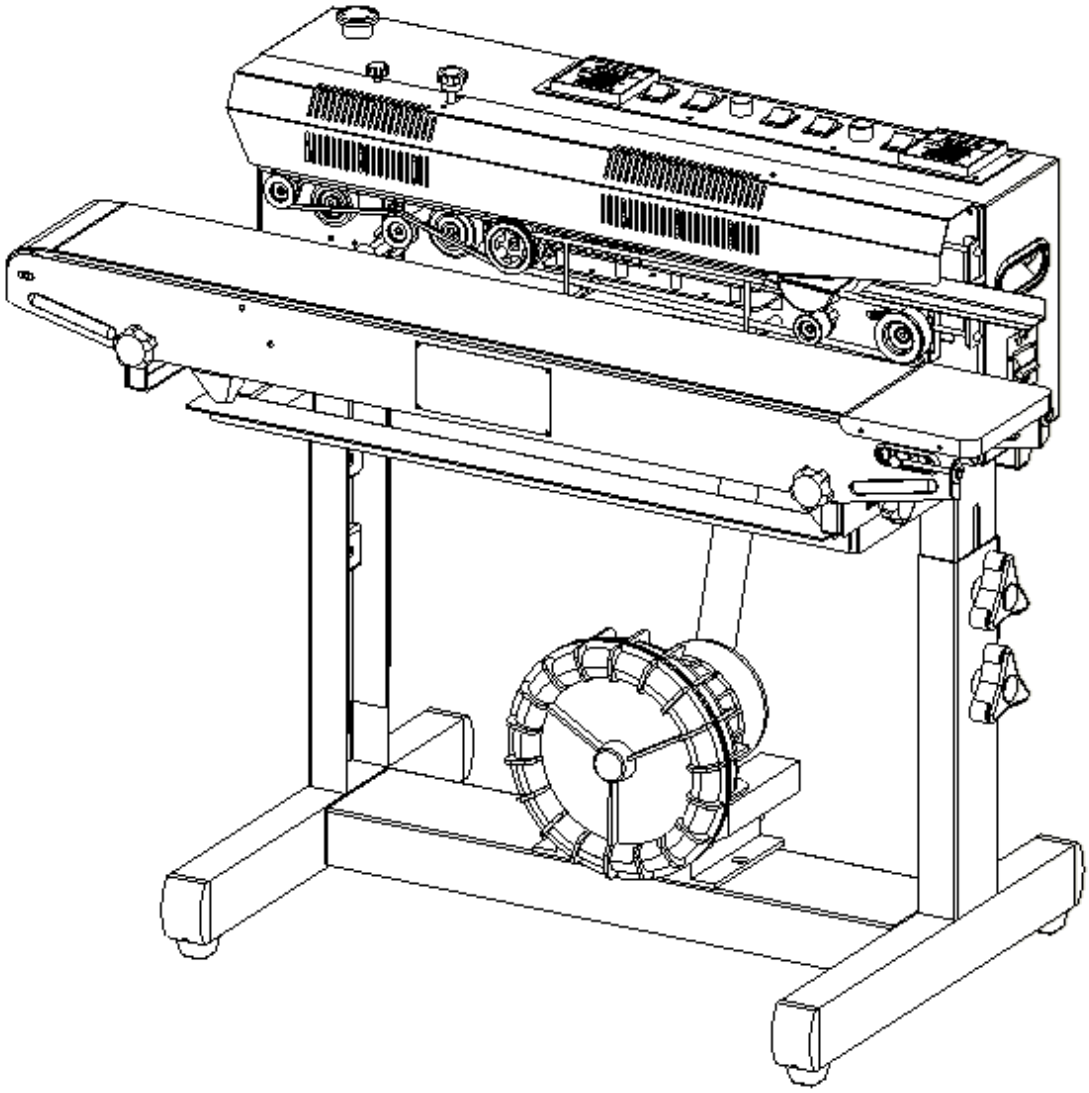
FRSC-10101L

INFLATING PRINTING SEALER

USER MANUAL



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ATTENSION：Probably there are modifications to the machine without prior notice.

I. INTRODUCTION AND USAGE

This machine is a new generation of continuous sealing machine that integrates inflation, sealing, and printing, designed in accordance with the latest market demand. It is suitable for sealing various plastic film bags and can be widely applied in the food, pharmaceutical, daily cosmetics, local specialty products, chemical, electronic components, vegetable seeds, and other industries. It is the optimal sealing equipment for batch use in factories, stores, and service industries.

II. FEATURES

- **Efficient Air Filling System**: Ensures quick and even inflation for enhanced protection.
- **Ink Roller Printing for Clear Marks**: Allows for clear and accurate printing of information such as production date, and batch number.
- **Advanced Temperature Control System**: Maintains a constant temperature for consistent and high-quality sealing.
- **Counting Function**: Provides added convenience for production and packaging management.
- **Compatible with Various Plastic Films**: Suitable for a wide range of plastic film materials, offering versatility in packaging.
- **Fragile and Puffed Foods Friendly**: Ideal for packaging delicate and puffed foods, prolonging their shelf life and ensuring their integrity during transportation.
- **User-Friendly Design for Easy Operation**: Intuitive interface and simple controls make it easy to operate, reducing the labor intensity of users.

III. STRUCTURE AND WORKING PRINCIPLE

i. This machine is composed of a housing, a speed regulating system, a temperature control system, a conveying system, a printing system, an inflation system, and other components.
ii. Working principle:

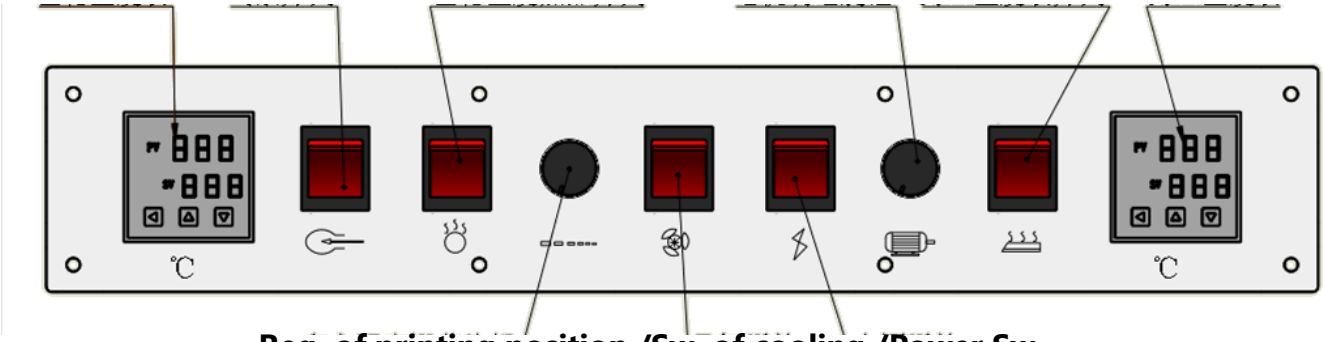
- The heating element generates heat, causing the upper and lower copper bricks to heat up.
- The required temperature and speed are adjusted through the thermostat and the speed regulator according to the material of the bag.
- The plastic bag is blown up at the trumpet-shaped blowing nozzle.
- The sealing part of the plastic bag is conveyed into the heating zone between the two running belts.
- In the heating zone, the bag is heated and sealed, and then enters the cooling zone.
- The sealing part of the plastic bag is embossed into a striped or reticulated pattern by the embossing wheel.
- The heated copper letters and numbers are printed with the melted solid ink.
- The conveyor and the sealing system are driven by a motor, so sealing and conveying are synchronous.

IV. PARAMETERS

Model	FRSC-10101L
Voltage	220V/50Hz 110V/60Hz
Power of motor	80W
Power of Printing	120W
Power of air filling	200W
Capacity of air filling	40m^3/H
Range of Temp.	0~300℃
Max. Loading	≤5Kg
Width of sealing	10mm （customizable）
Dimension	1020mm*540mm*770mm
G.W.	71KG

V. CONTROLLING PANEL

Temp. of printing / Sw. of air filling / Sw. of printing **Reg. of speed / Sw. of sealing / Temp. of sealing**



Reg. of printing position /Sw. of cooling /Power Sw.

VI. OPERATION INSTRUCTION

i. PREPARATION

(1) this machine is equipped with a three-pin socket with a grounding terminal. ensure proper grounding for safety.

(2) it should be preheated for several minutes before normal operation.

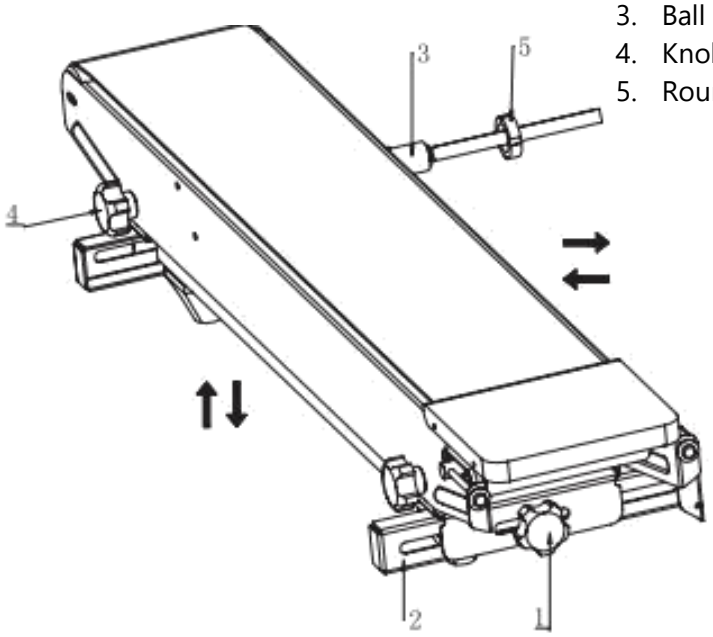
(3) adjust the height and position of the conveying table to suit the size and angle of the required sealing bag.

(4) adjust the position of the feeding port according to the required sealing width.

(5) adjust the position of the conveyor by loosening the knobs on both sides. push and pull the conveyor in and out as needed, and then tighten it.

(6) adjust the height of the conveyor by first loosening the knobs on both sides and the round nut. adjust the height as needed, and then tighten it.

1. Knob for in and out
2. Frame
3. Ball Joint
4. Knob for height
5. Round nut



ii. STARTUP OPERATION

a) After adjusting the positions, plug in the power cord and connect the air pipe.

b) Turn on the power switch, the sealing switch, the cooling switch, and the printing switch. Adjust the sealing temperature according to the material of the bag.

c) When the temperature reaches the set value, turn on the inflation switch to start working.

b) Turn on the heating switch, and the green indicator of the thermostat will light up. Adjust the temperature according to the material and thickness of the bag. At room temperature of 20°C, generally press the number to adjust the temperature (for reference only):

1) Polyethylene: 150 - 160°C

2) Polypropylene: 170 - 180°C

3) Polyolefin Composite: 180 - 190°C

Due to the adjustable speed, this increases the flexibility of adjustment.

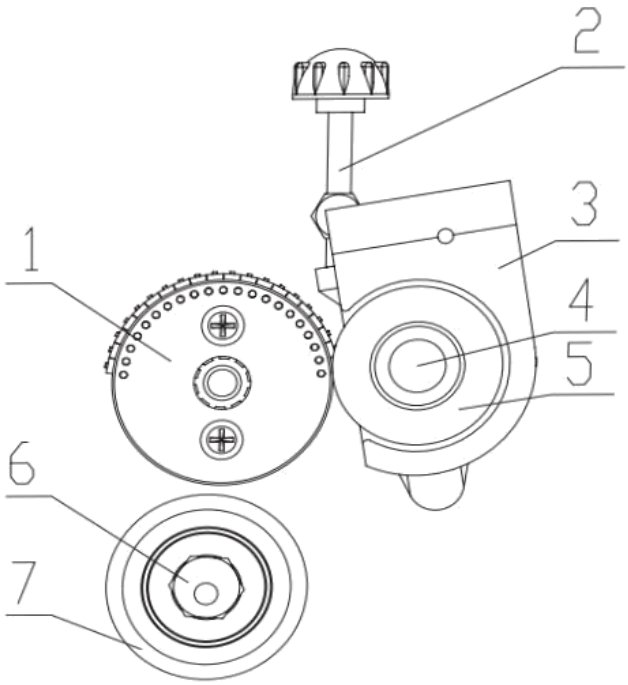
When the red light turns on, it means the required temperature has been reached. Please test it with a bag and re-adjust the temperature, speed, and pressure of the embossing wheel to achieve the ideal sealing quality. After that, you can proceed with continuous sealing work.

e) Turn on the fan for cooling based on the thickness of the sealed material. (For single-layer plastic film such as

polyethylene, the fan must be turned on for cooling).

f) The mouth of the bag should be placed against the air nozzle, and the sealing edge should be sent into the feeding port. When the sealing part is gripped by the belt, it will automatically move forward.

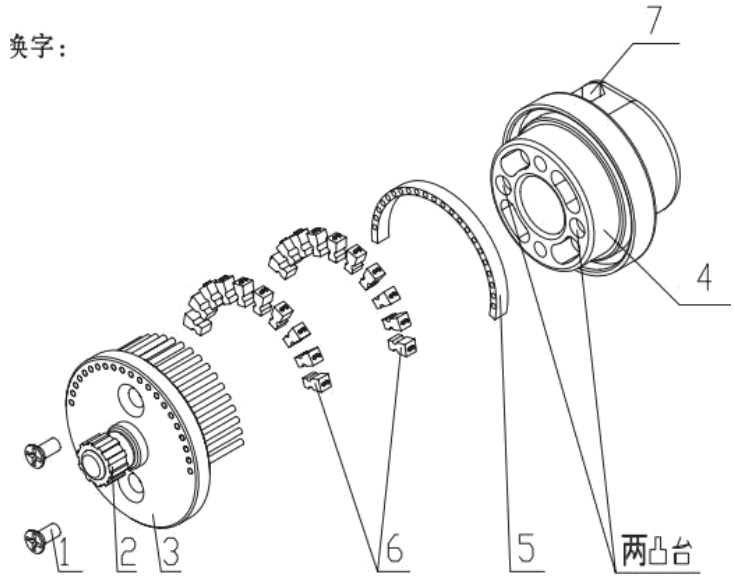
iii. ADJUSTMENT OF PRINTING



1.Printing Wheel 2. Printing density Knob 3. Ink Roller Seat 4. Ink Roller grip 5. Ink Roller 6. Eccentric Shaft 7. Silicone Wheel

a）changing the printing slug：

Remove the Printing Wheel (Outer) Fastening Screw, hold the latch and pull it outwards. Take off the printing wheel (outer) (3) to change the printing slug, install the silicon strip, and then re-install the printing wheel, paying attention to the concave and convex positions and tighten the two fastening screws.



1.Screw of Printing Wheel (Outer) Fastening / 2. Latch / 3. Printing Wheel (Outer)

4. Printing Wheel (Inner) / 5. Silicon Strip /6. Printing slug / 7. Printing Wheel (Inner) Fastening Screw

b) Adjustment of the Gap between the Ink Roller and the Slugs

Adjust the printing density knob, rotate the printing wheel so that the printing slugs and the ink roller have slight contact. The ink roller should be easily driven to rotate by hand when rotating the printing wheel.

c) Replacement of the Ink Roller

When the ink roller is used up, hold the ink roller grip and pull it outwards from the machine, remove the snap ring, gasket, and ink roller from the ink roller grip, re-install the ink roller, gasket, and snap ring, and push the ink roller grip onto the ink roller seat.

d) Adjustment of the Gap between the Printing Wheel and the Silicone Wheel

The printing slug on the printing wheel has no contact with the silicone wheel in idle time, and only comes into contact during printing. Loosen the screw at the front end of the silicone wheel, rotate the eccentric shaft (6) to make the slug have slight contact with the silicone wheel. If printing on thicker packaging bags, a larger gap may be needed. After adjustment, tighten the screw.

e) Adjustment of the Printing Temperature

When the machine leaves the factory, all the adjusting knobs are at the 0 position. Users need to adjust it themselves. For a new ink roller, the printing temperature can be appropriately lowered, and after a period of

use, it can be appropriately increased. The specifications of the ink rollers applicable to this machine are shown in the following table. There are colors such as white, yellow, red, blue, green, brown, and black for selection.

Type of ink roller	Outer Diameter (mm)	Height (mm)
Low temperature 120-150℃ （#935）	36	16
	36	32
	36	10
Medium temperature 135-165℃ （#932）	36	16
	36	32
	36	40
High temperature 150-175℃ （#930）	36	16
	36	32
	36	40

f）Adjustment of the Printing Position:

Users can adjust the printing position by the knob according to the length of the bag mouth.

g) Adjustment of the Printing Lines:

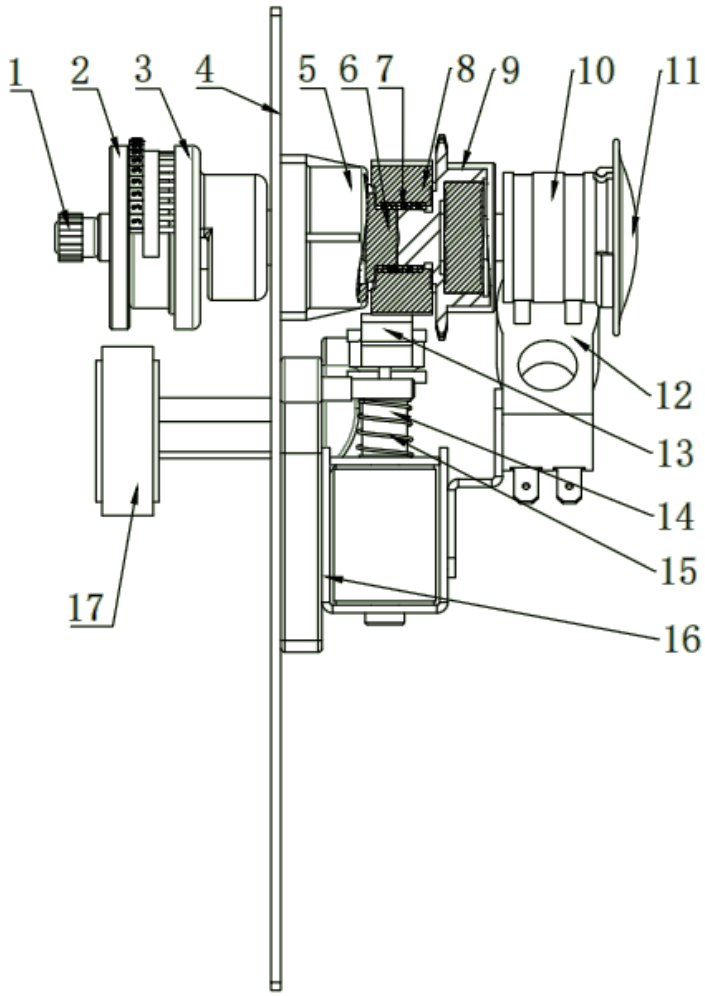
Use the provided silicone strip to fix the printing slug at the desired position.

h) Shutdown Procedure:

To protect the service life of the belts, it is required to return the temperature to 0°C, turn on the cooling fan, and at this time, the temperature will slowly decrease. The belts should still be running. After a few minutes, when the temperature drops below 100°C, the fan and the main power switch can be turned off.
(Notice: To extend the service life of the whole machine, if it works continuously for more than 8 hours, please stop for 0.5 - 1 hour before continuing to use.)

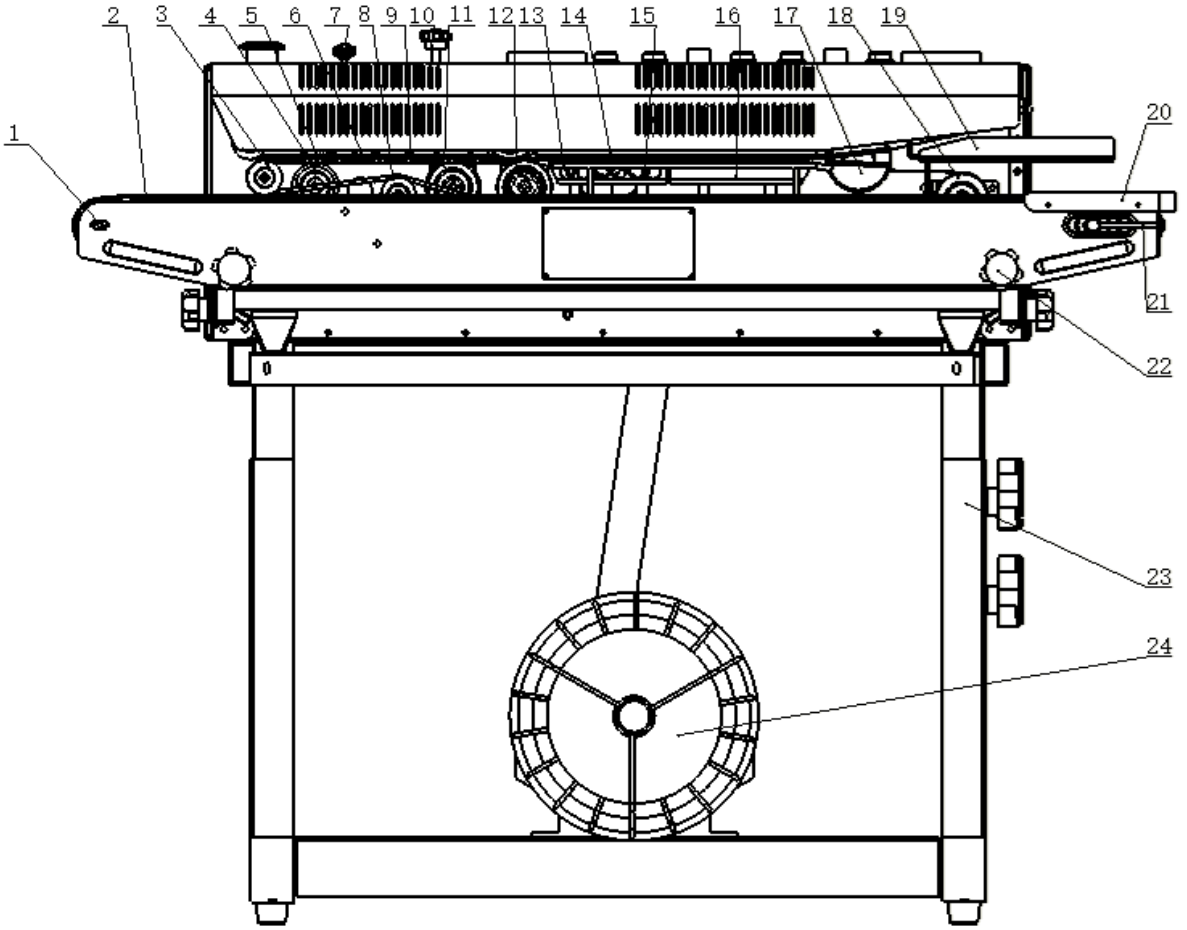
i) Working Principle of the Printing System:

By utilizing the friction between the passive wheel and the torsion spring, the printing shaft is driven to rotate by the rotational torque of the torsion spring. When the stop lever catches the stop wheel, the passive wheel slips with the torsion spring, and the printing shaft stops rotating; when the stop lever is pulled down by the electromagnet, the printing shaft starts to rotate under the action of the torsion spring.



1.Latch / 2. External Printing Wheel / 3. Internal Printing Wheel / 4. Machine Base Plate / 5. Bearing Seat
6. Driven Wheel / 7. Torsion Spring / 8. Stop Wheel / 9. Passive Sprocket/ 10. Conductive Wheel
11. Brush Cover / 12. Brush Box / 13. Stop Lever / 14. Electromagnet Core Shaft / 15. Return Spring
16. Electromagnet / 17. Silicone Wheel

VII. MAIN COMPONENTS AND NAMES



1.Driving roller of conveyor /2. Conveying belt /3. Leading wheel /4. Silicone wheel /5. Embossing wheel
6. Ink roller / 7. Printing density knob / 8. Transit wheel / 9. Optical sensor / 10. Embossing pressure knob
11. Rubber wheel / 12. Driving wheel / 13. Lower fence /14. Upper fence / 15. Cooling copper brick
16. Heating copper brick / 17. Inflating nozzle /18. Passive wheel /19. Feeding / 20. Plate of platform
21. Tightening bolt for conveying belt /22. Knob for height /23. Adjustable stand 24. Air pump

VIII. TROUBLESHOOTING AND MAINTAINING

i. TROUBLESHOOTING OF SEALING SYSTEM

Problem	Possible Cause	Solution
The machine fails to power on.	1.Power Supply disconnected. 2.Speed regulator is broken.	1.Check if the three-pin plug is plugged in correctly and firmly 2. Change the speed regulator.
No Speed Regulation	Speed regulator is broken.	Change the speed regulator.
No Heating	1. Heating Tube Broken. 2. Terminals for heating dropped or loosened 3. Thermostat is broken. 4.Thermocouple is broken	1、Change heating tube. 2、Fix or tighten the terminals. 3、Change the thermostat 4、Change the thermocouple

Electric leakage	1. The machine is moist due to humidity. 2. Wire for heating is in contact with the housing 3. No grounding devices	1. After switching on the heating for a few minutes, there will be no leakage. 2. An insulating sleeve must be added. 3、Ground the machine.
Guide Belt Falling Off	Upper and lower guide belts are too close or have loosened	Open the left side panel, loosen the M8 nut on the guide belt wheel shaft, adjust up or down, or tighten it to the left and fix the nut
Seal Pattern Not Clear	1. Pressure adjustment knob is too loose 2. Rubber wheel surface is uneven. 3. Accumulated debris on the seal surface 4. Insufficient sealing temperature	1. Adjust the adjustment knob appropriately. 2. Replace the rubber wheel. 3. Clean the seal wheel surface with detergent, ensuring no debris enters the bearing. 4. Increase the temperature appropriately
Belt Easily Broken	1. Gap between upper and lower heating rods is too small, causing high temperature 2. Debris between upper and lower heating rods and cooling rods. 3. Melting film debris on the surface of the sealing belt. 4. High temperature during shutdown. 5. B and B1 screws are too tight	1. Adjust the gap between the heating blocks according to the packaging material, allowing the sealer to heat up while running. 2. Remove debris. 3. Follow the manual for shutdown procedure. 4. Adjust the screws appropriately as per Figure

ii. TROUBLESHOOTING OF PRINTING SYSTEM

Notice：Before leaving the factory, the ink wheel printing system has been adjusted. Normally users do not need to adjust.

Problem	Possible Cause	Solution
Printing wheel not working or rotating weakly	1. Optical sensor contact stuck. 2. Optical sensor get dirty. 3. Printing position exceed the size of bag. 4. Electromagnet is stuck. 5. Electromagnet wire is broken 6. Clutch torsion spring is worn	1.Clean the optical sensor contact. 2.Chean the optical sensor. 3.Adjust the printing position. 4.Repair or replace the electromagnet. 5.Repair or replace the electromagnet. 6.Replace the torsion spring.
Printing wheel is not stopping	1.The printing position reg.is broken. 2.The shaft of electromagnet is stuck. 3.The returning spring is damaged. 4.The stopper and stopping wheel is worm.	1.Repair the printing position reg. or replace it. 2.Clean or lubricate the shaft of electromagnet. 3.Repair the returning spring or replace it. 4.Repair the stopper or stopping wheel or replace it.
The ink roller not heating	1.Heating tube is damaged. 2.Thermostat or sensor is damaged. 3. The carbon brush is dislocated. 4. Carbon brush is damaged.	1. Replace the heating tube. 2. Replace the thermostat or sensor. 3. Adjusted the position or fix it firmly. 4. Replace the carbon brush.

Printing position is out of control	1. The screw of printing wheel is loose. 2. Optical sensor is damaged. 3. Printing position regulator is damaged	1. Tighten the screw. 2. Replace the sensor. 3. Replace the regulator.

iii. SEALING BELT

Please clean the Teflon belts and heating brick regularly.

Method and adjustment for replacing the sealing belt:

a) Remove the guard plate, lift the upper heating brick and cooling ring (turn the lifting plate clockwise to raise).

b) Push the passive wheel in the opposite direction of the slide seat, them take off the belt.

c) Replace with a new Teflon belt and install the upper and lower toothed belts.

d) Re-fix the passive wheel and the upper heating brick and cooling brick back to their original positions.

e) Power on, rotate and drive the belts for a test run. If the sealing belt runs off track, adjust the adjustment screws on the passive wheel.

f) Install the guard plate.

g) To protect the service life of the belts, adjust the temperature to zero before stopping, turn on the fan to cool down. The sealing belt should continue to run until the temperature drops below 100°C, then turn off the power off.

iv. Gear Box

This high-power gear box is fully enclosed. For an eight-hour work shift, add 50g of 20# or higher engine oil monthly. Clean it yearly, to avoid noise.

IX. PACKING LIST

Name	Model	Quantity
Teflon belt	960*15*0.2mm	8units
Toothed belt	A660*5.5mm	2units
Power cable	3*0.5	1unit
Heating tube	Φ10*28 110V/60W	1unit
Ink roller	Φ36*15	1unit
0-ring	Φ35*ϕ5	2unit
Box for printing slugs	Normally"LOTEXPMNF12345..."	1box
Rubber ring	Φ39*ϕ28*12	1unit
Switch	KCD4	1unit
User manual		1unit
Wrench		1unit
Tweezers		1unit
Screw driver	3"	1unit