

# Manual

## Drip Coffee Bag Packing Machine (Inner & Outer Envelope - MD181)



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## Chapter I. Preface

Thank you for purchasing our automatic packaging machine. The Manual mainly describes the proper operation methods and simple troubleshooting of the packaging machine. In order to make full use of the function and maintenance of the machine, please read this manual carefully before use.

**Notes:**

1. Before leaving the factory, all devices and mechanisms of this machine have undertaken the rigorous debugging and inspection. The customer can debug or change any part of it according to their own materials and packing material properties, so as to ensure to meet the customer's packaging requirements. Any part of it should not be debugged or changed arbitrarily. If there are still somewhere unclear after reading this instruction, please contact our customer service department.
2. If the machine is partially improved, there will be some different contents in this instruction sometimes, please understand.
3. This instruction only makes simple description on the maintenance to ensure that the customer can debug and repair in accordance with the instruction. If mechanical failure occurs and can not be self-removed according to the instruction, please contact with our customer service department timely.

## Safety Note And Warning Note

**Note:** Do install the ground wire to prevent the electrical shock from hurting people and ensure safety.

**Note:** In the wiring, please note that the power change due to the load change shall not exceed  $\pm 10\%$ , that is, the machine must be used in case the supply voltage is within the scope of 200V to 240V. The normal use of the machine will be affected if beyond the range.

**Note:** The machine workbench shall not use the same power supply with the device which can send the noise.

**Note:** The machine workbench should be horizontally installed on the solid and jarless workbench surface. The machine workbench should not be installed at the shaking or tilting place in unstable state.

**Warning:** The machine should be placed in the appropriate environment and away from the humid location, the direct solar radiation and high-voltage power supply.

**Warning:** The electric wire should not be connected beside the hot apparatus.

**Warning:** When cleaning, inspecting and moving the machine workbench, do cut off all the power supply in advance.

**Note:** Please regularly clean and fill the lubricating oil and check whether each part of the machine is loosened or uncoupled in order to ensure that the machine is used in the best condition.

**Warning:** Do not operate the button and switch with wet hands.

**Warning:** In operation, the hand or article is prohibited to close to it. It is prohibited to touch the moving part and the parts marked as untouchable or place the hand in the safety cover.

**Warning:** In the working of the machine, it should be noted whether the machine sound coordinates, if there is the abnormal sound, the machine should be shut down and checked.

**Note:** Often clean the roller surfaces of vertical sealing and horizontal sealing with the copper brush to prevent the material from sticking on the surface and causing the poor hot sealing so that the sealing is bad.

## Chapter II. Description and Specification

### 2.1 Application Scope

Coffee powder and other small particles of material

### 2.2 Features

The special drip filter bag with three-side sealing is adopted, which can be directly hung against the cup edge to have a better brewing effect; moreover, the neat bag shape is a high fashion in the overseas markets.

The machine integrates automatic functions such as bag-making, measuring, filling, sealing, cutting, counting, batch number printing and the like.

The machine is controlled by a precise control system and is provided with an intuitive Human-Machine interface (HMI), featuring compact structure, convenient operation and adjustment and easy-to-maintenance.

The inner bag controller is driven by a servo motor for accurate positioning and stable bag length. As for the outer bag, the positioning is realized by a photoelectric switch for stepping film drawing and accurate and trim bag-making.

The drip inner bag, made of non-woven fabric, guarantees convenient and hygienic brewing.

The bag is sealed by the state-of-the-art ultrasonic sealer for perfect sealing and neat appearance.

## 2.3 Main Technical Parameters

Sealing type: 3-Side sealing

Sealing Method: Ultrasonic for inner bag, heat for outer bag

Measuring range: 8-12 g / bag (Other specification available upon request)

Dimension of inner bag: L 74mm \* W 90 mm (Other specification available upon request)

Dimension of outer bag: L 120mm \* W100 mm (Other specification available upon request)

Power supply: 220V/50HZ, single-phase

Total power: 3.7 kw

Total weight: 556 KG

External dimension: 1350\*850\*2200 (L\*W\*H, mm)

## 2.4 Requirements For Environment And Packing Material

1. Requirements of heat-sealable filter cotton paper: neat outer circle, outer diameter  $\leq$  450mm, inner diameter of frame = 75mm.
2. Requirements of composite film of outer bag: based on polypropylene, aluminum foil, coated with composite high-pressure polyethylene.
3. Operating conditions of the machine: free of heavy dust, 10 – 40°C, relative humidity  $\leq$  75%.

## Chapter III. Preparation Before Production

### 3.1 Preparation Before Startup

1. Clean up any dirt, debris or other unnecessary items on the machine; clean and sterilize all parts in contact with foods.
2. Check if any nut becomes loose due to transportation and if the machine is stuck; if any, find out the cause and eliminate accordingly.
3. Lubricate the guide pillar of horizontal sealer, cam, clutch of paper feeder and other moving parts with #36 engine oil. Check the oil level in the reduction box, and fill in #36 engine oil if it is lower than the midline of oil tank.
4. Use the supplied power cord to connect the machine to the power supply (220V, 50Hz).

**Note: the protective grounding wire must be provided!**

5. Switch on the main power switch, and then the leakage switch in the electrical box (see fig. 3-1).

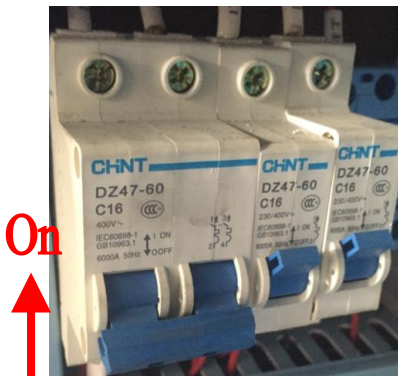


Fig. 3-1 Main power switch and leakage switch

### 3.2 Setting of Packing Film

#### 3.2.1 Inner Film

1. Slide the inner film through the film shaft, and put on the retainer seat and retaining rings. Align the film center with the center line of former, and then lock the left and right retaining rings.
2. Fold the film in half and make a inclined cut, as shown in fig. 3-2.

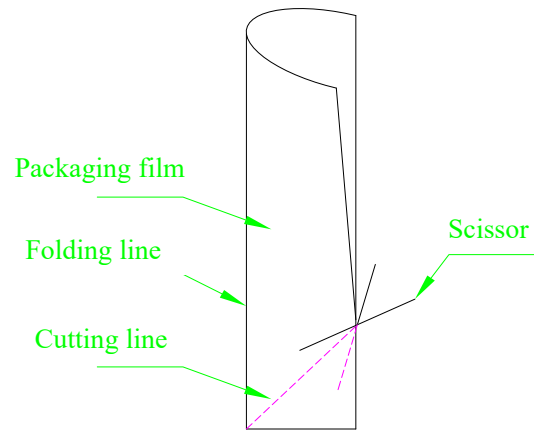


Fig.3-2 Schematic diagram of film cutting

3, Slide the inner film through the guide roller, pressure plate and then into the former, as shown in fig. 3-3.



Fig. 3-3 Inner Film Setting

4. Slide the inner film along the former into the vertical sealing roller, and adjust the red handles to open film drawing rollers, then to press against the film (see fig. 3-4).



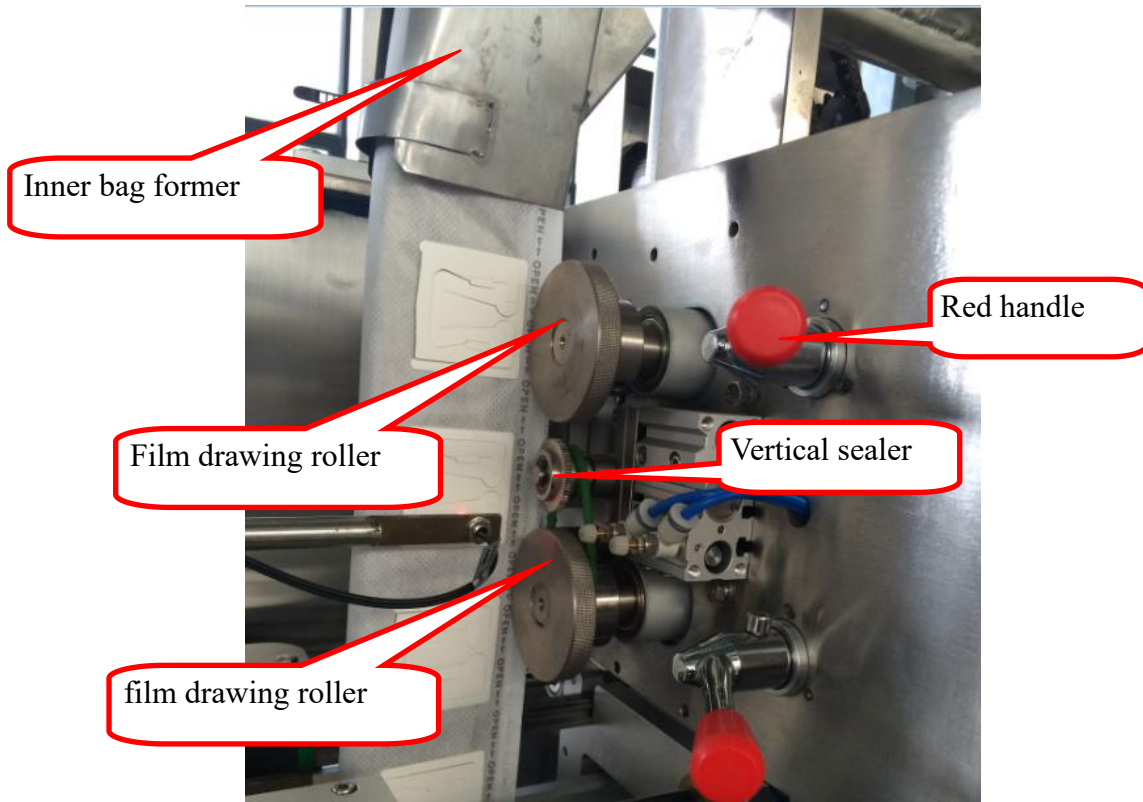


Fig. 3-4 Inner Film Drawing

5. Adjust the ultrasonic sealing pressure gauge with caution, since over-pressure could easily heat the ultrasonic exciter and cause it to stop working, whereas, low-pressure will lead to unreliable sealing and poor cutting of bag.

Pressure adjustment of vertical and horizontal sealing (see Fig. 4-1):

Vertical sealing pressure: 0.2~0.22MPa

Horizontal sealing pressure: 0.2~0.35MPa

6. When the film position and pressure gauge are adjusted as required, press the "Start Switch" on the control panel to start film moving;

Check if the film is fed smoothly;

Press the "Stop Switch" button to stop moving.

### 3.2.2 Outer Film

1. Slide the outer film through the guide roller, pressure plate and then into the bag former, as shown in fig. 3-5.



Fig. 3-5 Outer Film Drawing

2. Slide the outer film along the former into the vertical sealing roller, and adjust roller pressure to make film through it, then to press against the film (see fig. 3-6).

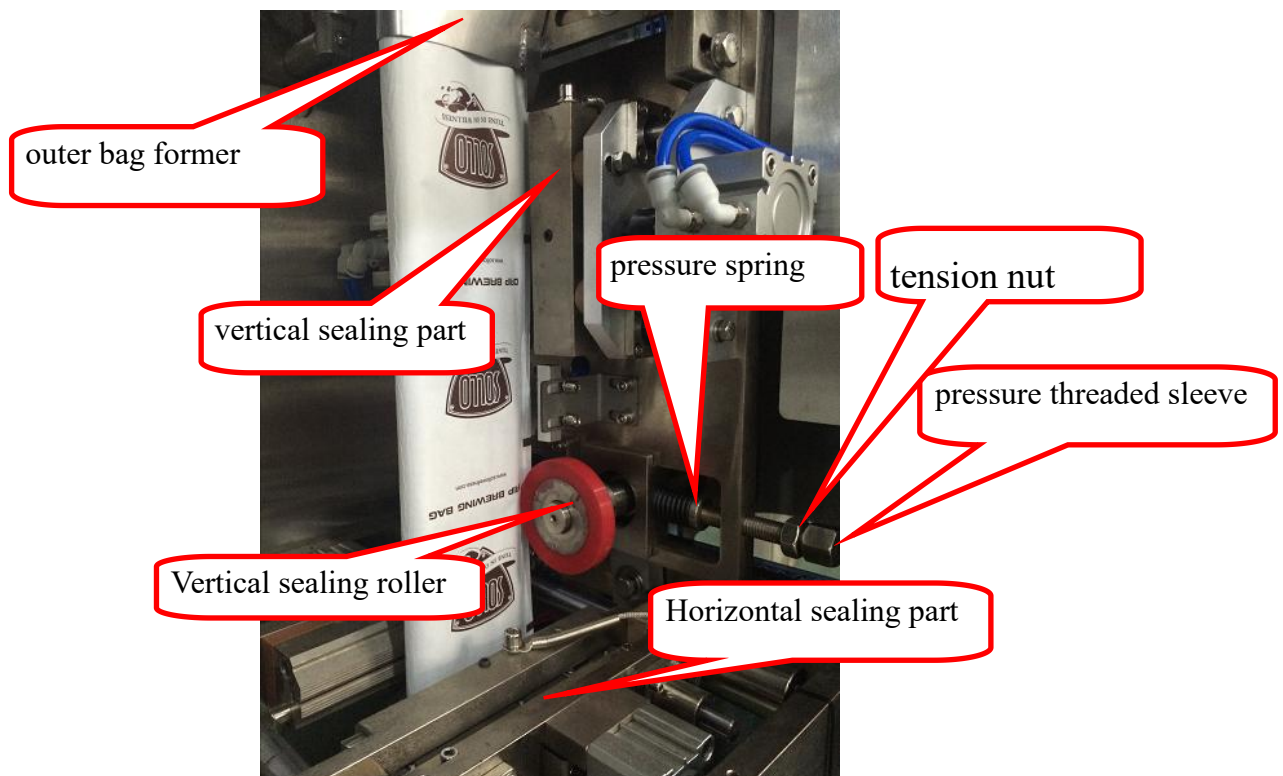


Fig. 3-6

- 1). To increase the pressure: if the impression of vertical sealing is not enough, turn the pressure threaded sleeve clockwise, and fix the tension nut;
- 2). To reduce the pressure: if the impression of vertical sealing is so deep to crush or break the film, turn the pressure threaded sleeve counterclockwise, and fix the tension nut;

3). If the impression of vertical sealing differs in depth, or the impression is deep on the outer edge but flat on the inner edge, which can not be solved by adjusting the pressure as described above, it indicates the sleeve is worn after long time running and shall be replaced.

3. Adjust the sealing temperature with caution, since over temperature could easily break the film, whereas, low-temperature will lead to unreliable sealing and poor cutting of bag.

Temperature adjustment of vertical and horizontal sealing (see Fig. 3-7):

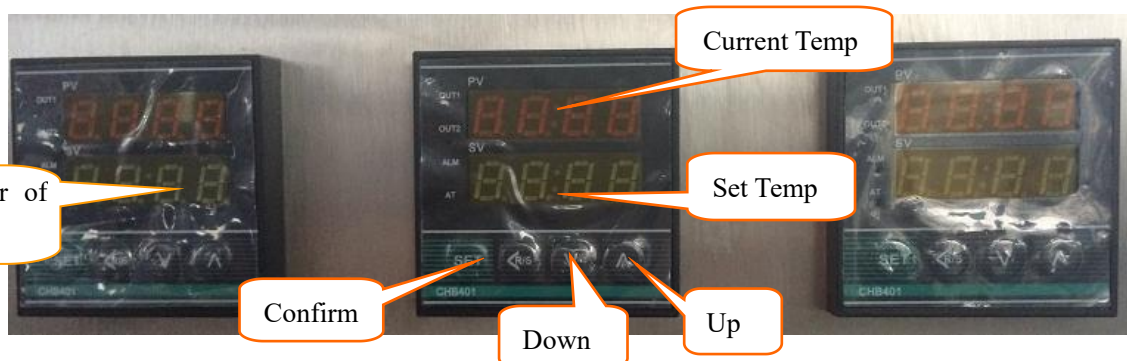


Fig. 3-7 Temperature controller

For example, if the set temperature is 120°C and the temperature deviation is 5°C, then the alarm will not be triggered when the temperature is between 115°C and 125°C. However, if the temperature is higher than 125°C, or lower than 115°C, an alarm will be generated. When the OUT lamp is lit, it indicates the current temperature is lower than the set temperature; if the OUT lamp is lit and the temperature controller fails to raise the temperature (lower than the set figure), check the relay.

4. When the film position and temperature are adjusted as required, press the “Start Switch” button to start film moving; Check if the film is fed smoothly; Press the “Stop Switch” button to stop moving.

### 3.3 Trial running

When all preparations are complete, press the “Start Switch” button on the control panel to start the machine, carry out empty inner and outer bag making and then check if the sealing is neat and stable, and if the cutting is correct.

Check if the discharging time and weight are correct.

## Chapter IV. Description of Electrical Control

### 4.1 Control Panel

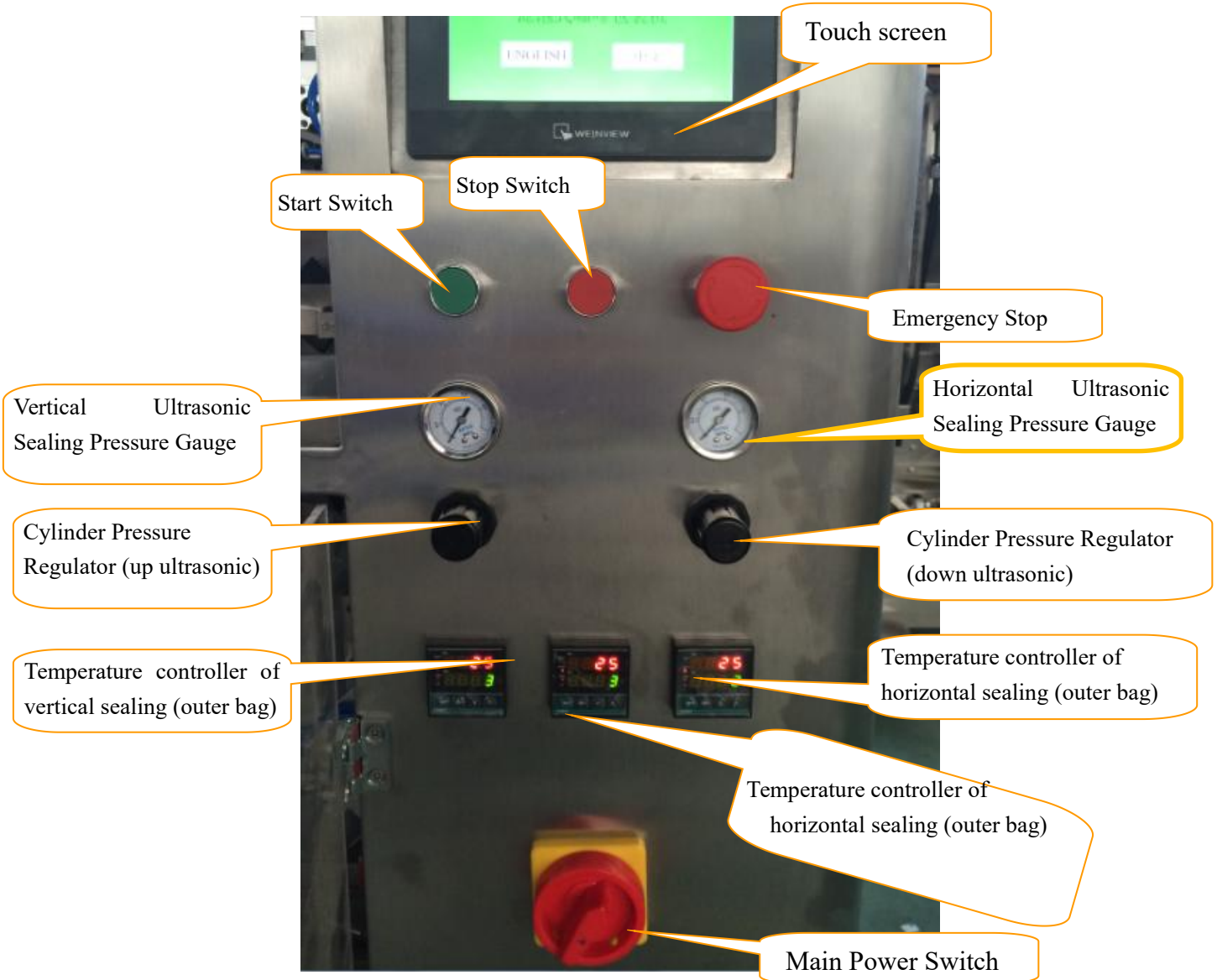


Fig. 4-1

## 4.2 Touch Screen

1. On the interface 4-1, choose the language according to your habits, for example, 'English', to go into the interface 4-2

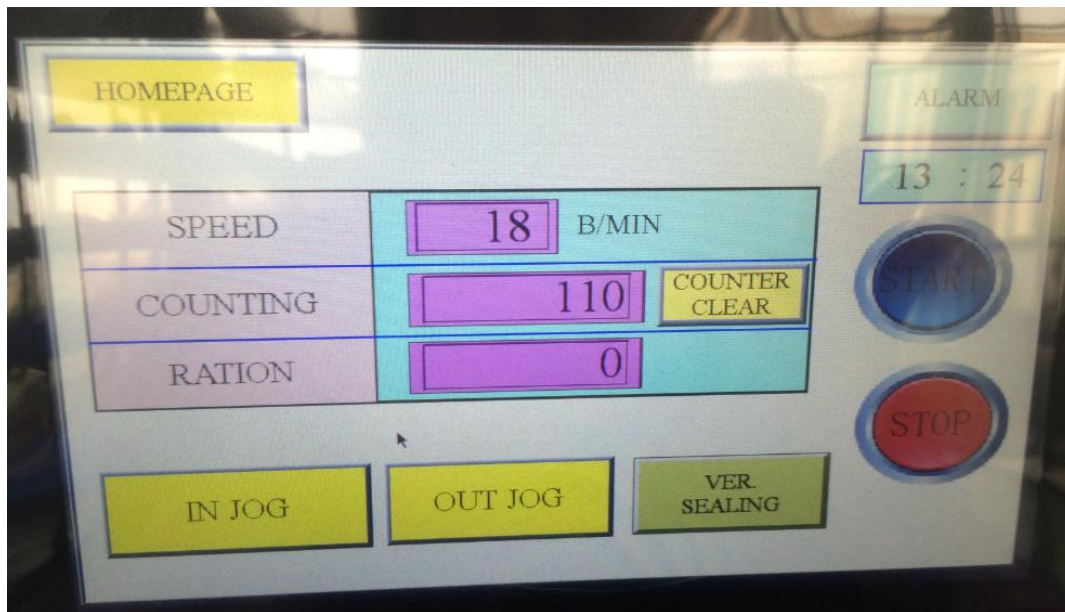


Fig. 4-2

2. On the interface 4-2, the functions and uses of various touch buttons are as follows:

**Speed:** displays the set speed of machine, click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Counting:** displays the total production. Press the 'Counter Clear' button to zero the displayed output. It can be cleared when pressing the "clean" as three seconds.

**Ration(limited stop):** displays the limited stop number. The machine will stop working when reach the set production, click in the '##.##' field, enter the required figure and then press 'ENT' to confirm.

**Capacity:** displays the production efficiency of the machine.

**In Jog (Inner Bag Manual):** when this button is clicked and held, the inner film pulling roller will start running to pull film by manual; and when it is released, it will stop.

**Out Jog (Outer Bag Manual):** when this button is clicked and held, the outer film pulling roller will start running to pull film by manual; and when it is released, it will stop.

**Vertical Sealing (Inner):** click it to turn on / turn off the inner vert. clamping.

**Alarm:**

**Start:** when the machine is in stop condition, click this button to start running the machine.

**Stop:** when the machine is in working condition, click this button to stop the machine.

**Homepage:** press homepage, to go into the interface 4-3

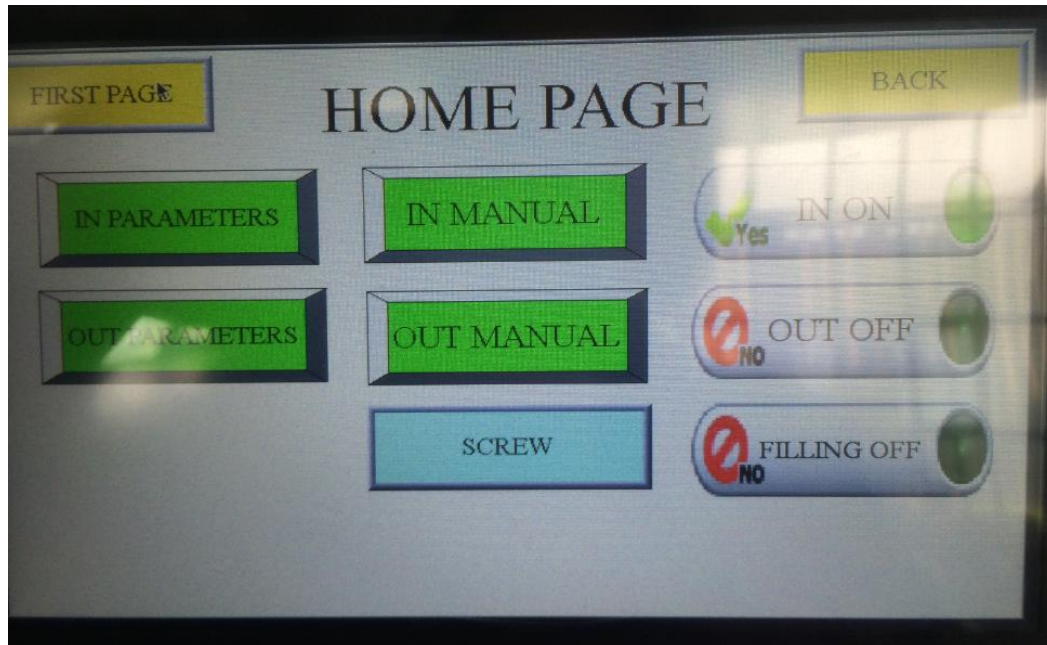


Fig. 4-3

3. On the interface 4-3, the functions and uses of various touch buttons are as follows:

**Inner Parameters:** click this button and enter the password “3258” for inner bag parameters setting to go into the interface 4-4 .(see Fig.4-4)

**Outer Parameter:** click this button and enter the password “3258” for outer bag parameters setting to go into the interface 4-5. (see Fig.4-5)

**Inner Manual:** displays the inner film sealing by manual. click this button to go into the interface 4-6. (see Fig. 4-6)

**Outer Manual:** displays the outer film sealing by manual. click this button to go into the interface 4-7. (see Fig. 4-7)

**Screw:** displays the screw condition and adjust the filling weight. click this button to go into the interface 4-8. (see Fig. 4-8)

**In On:** click it to turn on / turn off the inner bag sealing.

**Out Off:** click it to turn on / turn off the outer bag sealing.

**Filling Off:** click it to turn on / turn off the material filling.

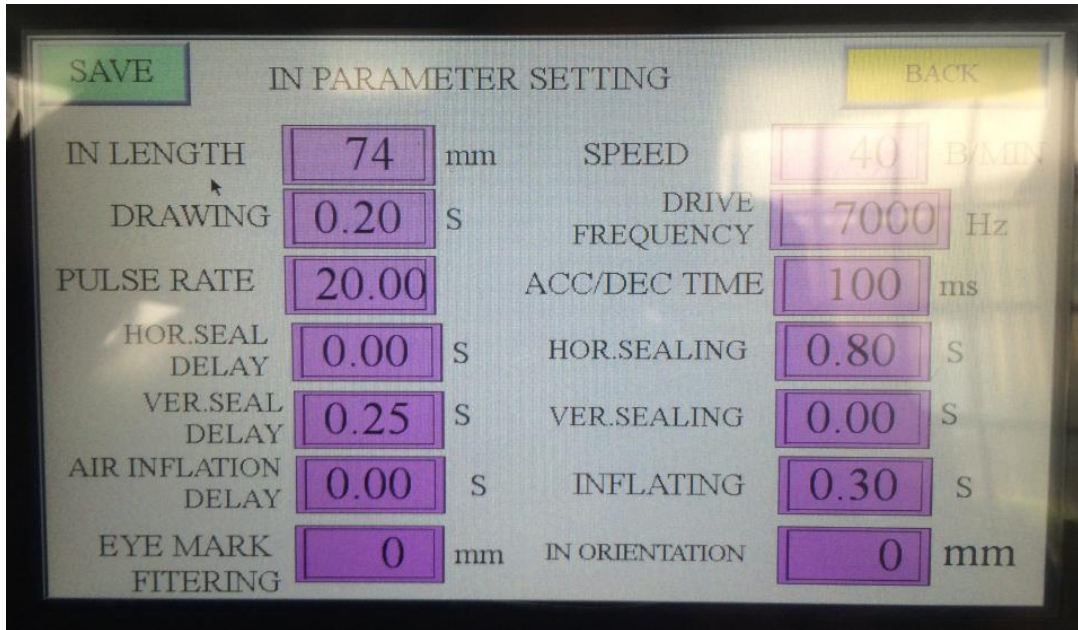


Fig. 4-4

On the interface 4-4, the functions and uses of various touch buttons are as follows:

**In Length:** displays the set bag length, click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Speed:** displays the set speed of machine, click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Drawing Delay:** displays the delay time of inner film drawing, click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Drive Frequency:** displays the drive frequency for film drawing, click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Pulse Rate:** displays the pulse rate for film drawing, click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**ACC/DEC Time:** displays the acceleration and deceleration time. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Hor. Seal Delay:** displays the delay time of horizontal clamping. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Hor. Sealing:**

**Ver. Seal Delay:**

**Ver. Sealing:**

**Air Inflation Delay:** displays the delay time of inner air inflation. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Inflation:** displays the inner air inflation time. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Eye Mark Filtering:**

**In Orientation:** displays the eye mark's location for inner bag. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

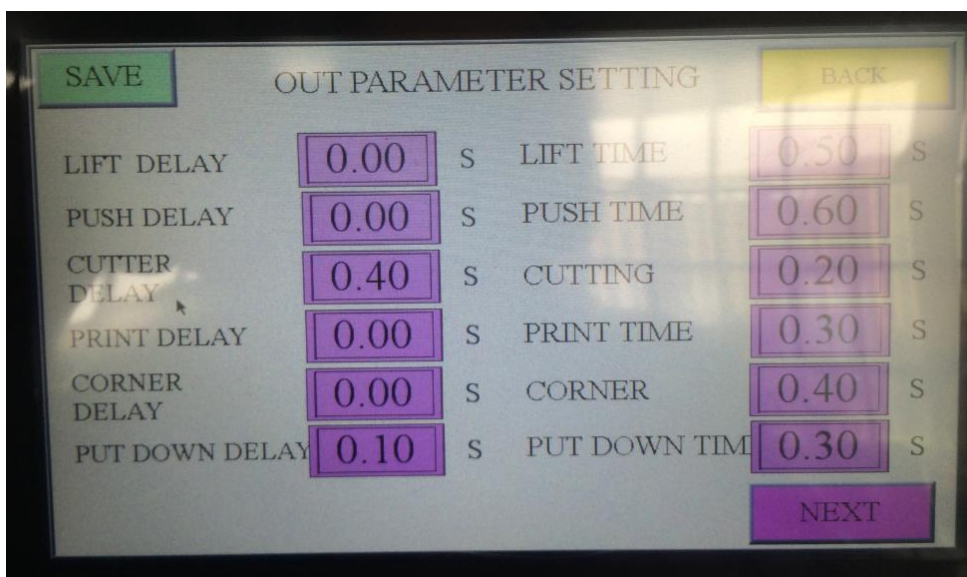


Fig. 4-5 (1)

On the interface 4-5(1), the functions and uses of various touch buttons are as follows:

**Lift Delay (Vertical):** displays the delay time of vertical sealing. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Lift Time:** displays the vertical sealing time. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Push Delay (Horizontal):** displays the delay time of horizontal sealing. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Push Time:** displays the horizontal sealing time. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Cutter Delay:** displays the delay time for out-bag cutter. click in the '###.#' field, enter the



required figure and then press 'ENT' to confirm.

**Cutting:** displays the cutting time for outer bag. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Print Delay:** displays the delay time for date printer. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Print Time:** displays the working time for date printer. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Corner Delay:** displays the delay time of inner bag-clipping. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Corner:** displays the the inner bag-clipping time. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Put Down Delay:** displays the delay time of inner dropping into outer bag. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Put Down Time:** displays the inner dropping time into outer bag. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

press "Next" to go next page as interface 4-5 (2)

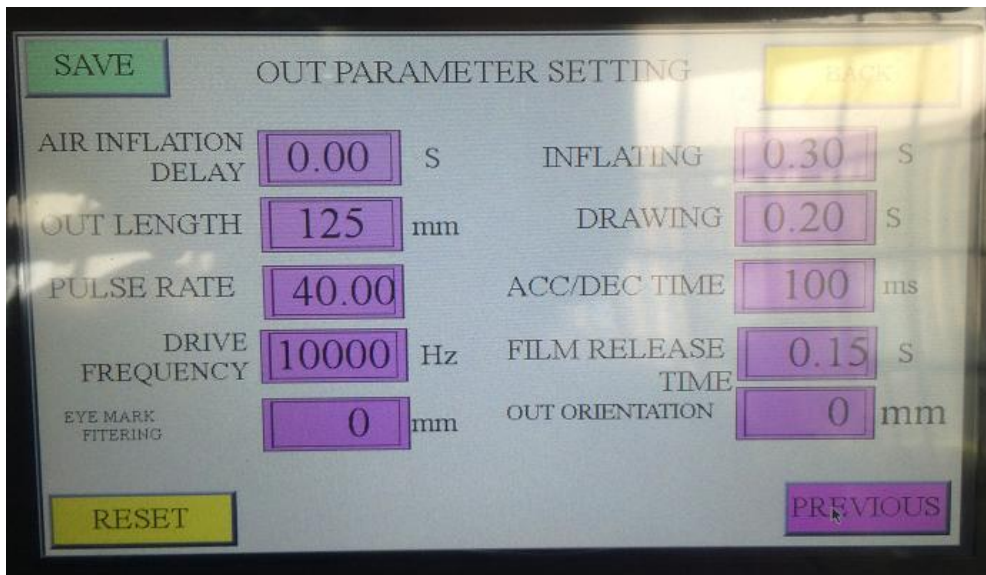


Fig. 4-5(2)

On the interface 4-5(2), the functions and uses of various touch buttons are as follows:

**Air Inflation Delay:** displays the delay time of outer air inflation. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Inflation:** displays the outer air inflation time. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Out Length:** displays the set length of outer bag, click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Drawing Delay:** displays the delay time of outer film drawing, click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Pulse Rate:** displays the pulse rate for outer film drawing, click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**ACC/DEC Time:** displays the acceleration and deceleration time. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Drive Frequency:** displays the drive frequency for outer film drawing, click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Film Release Time:** displays the outer film drawing time,

**Eye Mark Filtering:**

**Out Orientation:** displays the eye mark's location for outer bag. click in the '###.#' field, enter the required figure and then press 'ENT' to confirm.

**Reset:** restore factory settings

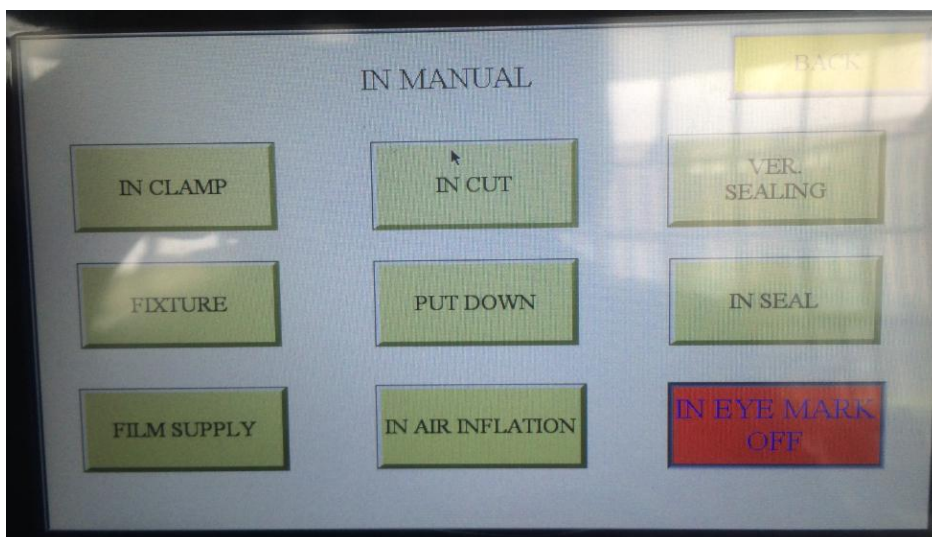


Fig. 4-6

On the interface 4-6, the functions and uses of various touch buttons are as follows:

**In Clamp:**click it to turn on / turn off the inner bag-clamping.

**In Cut:** click it to turn on / turn off the inner bag-cutting.

**Fixture:** click it to turn on / turn off the inner bag-clipping to put down

**Put Down:** click it to turn on / turn off the inner bag put down into outer bag.

**Ver. Sealing:** click it to turn on / turn off the vertical sealing.

**In Seal (Horizontal):** click it to turn on / turn off the horizontal sealing.

**Film Supply:** click it to turn on / turn off the inner film moving/drawing.

**In Air Inflation:** click it to turn on / turn off the air inflation.

**In Eye Mark Off:** click it to turn on / turn off the inner eye mark working.

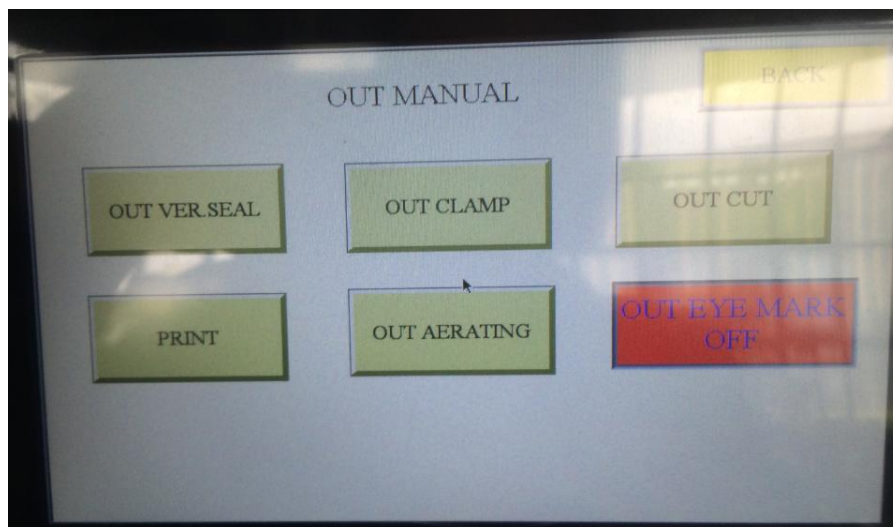


Fig. 4-7

On the interface 4-7, the functions and uses of various touch buttons are as follows:

**Out Ver. Seal:** click it to turn on / turn off the outer vertical sealing.

**Out Clamp:** click it to turn on / turn off the outer bag clamping.

**Out Cut:** click it to turn on / turn off the outer bag cutting.

**Print:** click it to turn on / turn off the printer.

**Out Aerating:** click it to turn on / turn off the outer bag aerating.

**Out Eye Mark Off:** click it to turn on / turn off the outer eye mark working.

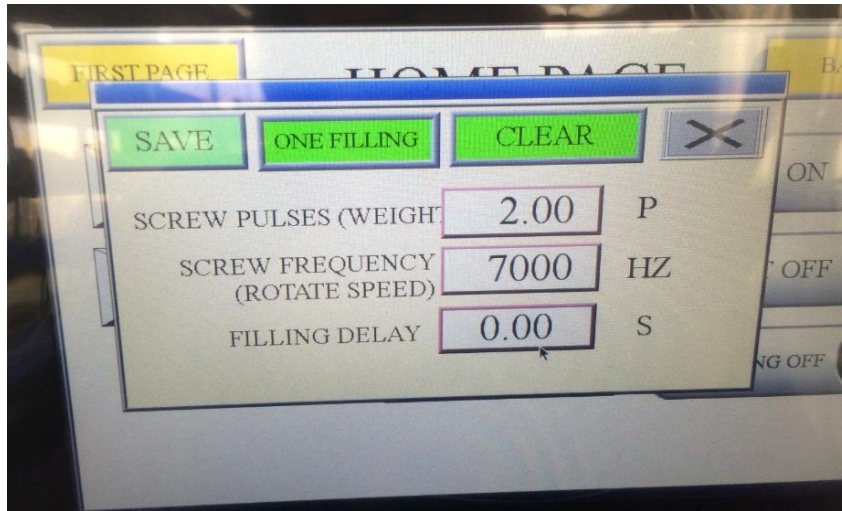


Fig. 4-8

On the interface 4-8, the functions and uses of various touch buttons are as follows:

**Screw Pulses (Weight):** displays the set number of screw rotation and adjust the filling weight. It is also decided by the screw size. Click in the '##.##' field, enter the required figure and then press 'ENT' to confirm.

**Screw Frequency:** displays the screw rotation frequency. Click in the '##.##' field, enter the required figure and then press 'ENT' to confirm.

**Filling Delay:** displays the delay time for material filling. Click in the '##.##' field, enter the required figure and then press 'ENT' to confirm.

**One Filling:** click it for material filling for one time by manual.

**Clear:** click it to start the clear out of material.

## Chapter V. Debugging of Inner Bag

### 5.1 Machine Speed

The default throughput of the machine is 20~40 bags/minute. However, the packaging speed can be regulated by changing the parameters on the touch screen according to the actual production conditions (See Fig. 4-4).

### 5.2 Bag Length Adjustment

The bag length can be set directly, refer to the setting of bag length described in the Chapter IV, Section 4.2 Touch Screen (See Fig. 4-4).

### 5.3 Adjustment of Former Position

1. Fix the packaging film according to the schematic diagram of film setting so that the center line in breadth of the packaging film approximately coincides with the central axis of former, and coincides with the sealing lines of the two vertical sealing rollers;

2. Carry out the pre-production preparation according to Chapter III, start up the machine and manually feed the packaging film into the vertical sealing rollers, and then make trials of empty bag, and check the bag-making process and results;

A. If any wrinkles occur on the left side of bag, loosen the screws on both left and right sides of the former, and move the former rightward moderately. On the contrary, if any wrinkles occur on the right side of bag, move the former leftward moderately; repeat the above steps till both sides of the bag are smooth and neat;

**B. For the uneven vertical seal edge:**

If any white edges occur on the right side of bag, move the former leftward; on the contrary, if any white edges occur on the left side of bag, move the former rightward.

3. When the former is tuned properly, retighten the 4 screws (see fig. 5-1).

4. As shown in fig. 5-2, loosen the screws on both left and right sides of the supporting seat, move the former rack inward appropriately to widen the vertical sealing margin; contrarily, move the rack outward appropriately to narrow the margin; such adjustments (generally 5-6 mm) can be carried out according to actual needs.

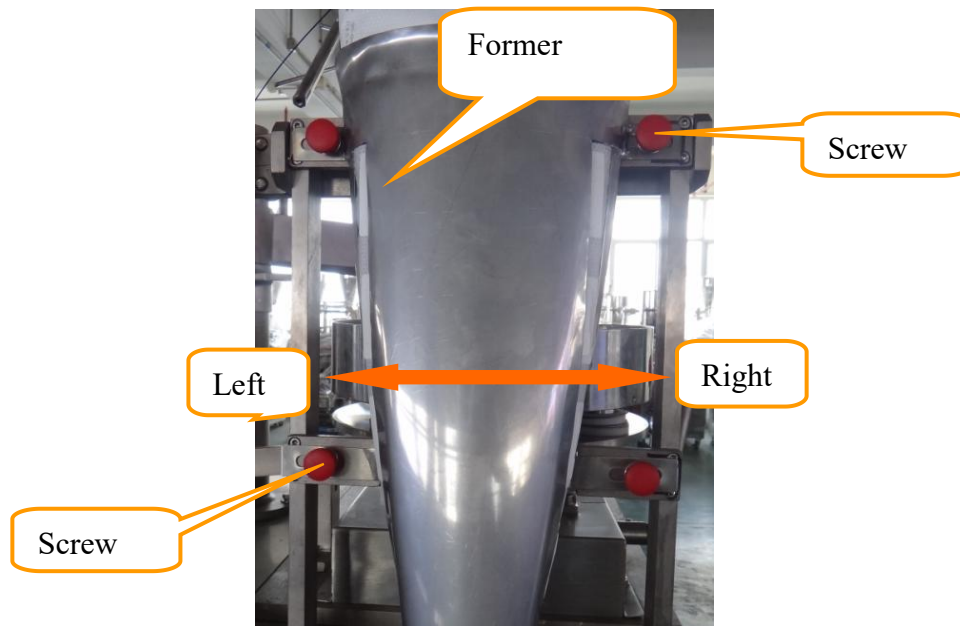


Fig. 5-1 Adjustment of former

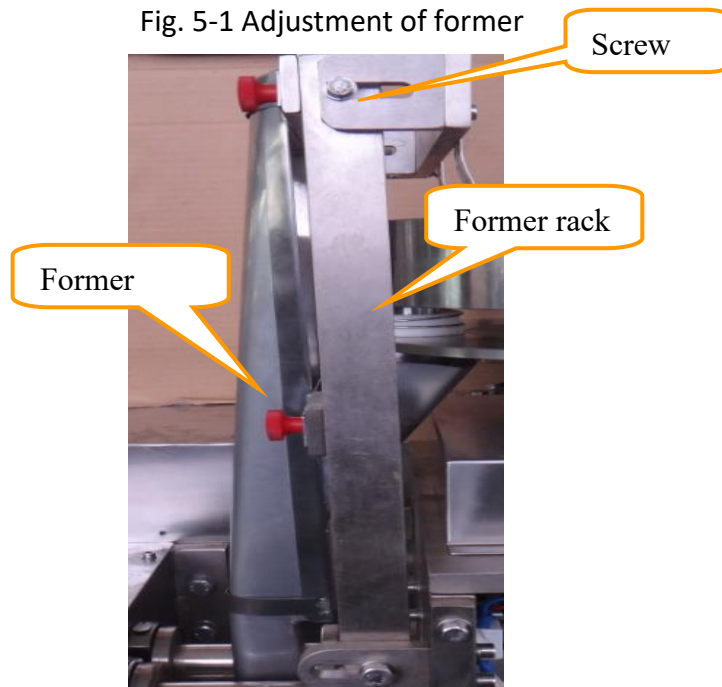


Fig. 5-2 Adjustment of former

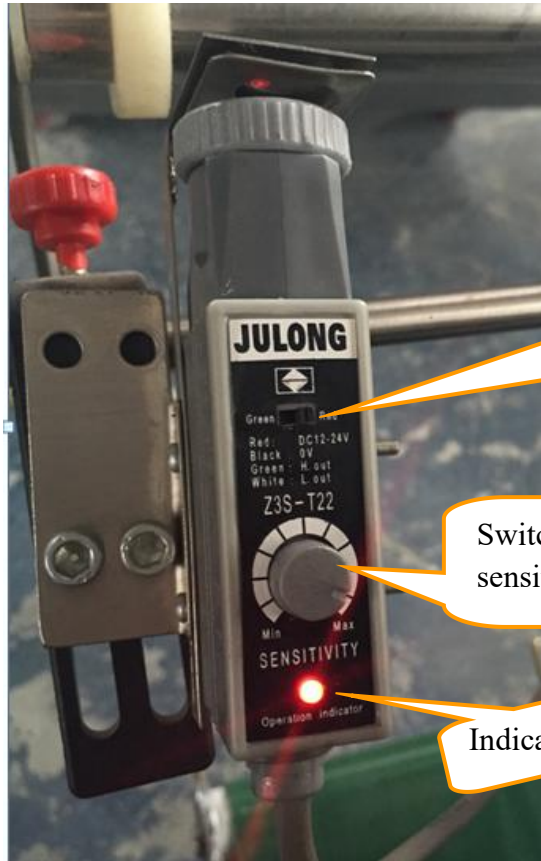
## 5.4 Photoelectric control

Due to the external pattern requirements of bag, the machine is provided with photoelectric control function to guarantee the integral and correct pattern on each bag.

### 1. Setup mode

Select the 'Mode ON/OFF Setup' – 'Light ON' mode, in which, click the 'ON' key to switch on Light, or click the 'OFF' key to switch it off (when the action conditions are met, the STAB indicator will flash once or flash 5 times), and then select 'Mode ON/OFF Lock'; now, the setup is completed.

## 2. Adjustment of photoelectric tracking sensitivity



Switch of the lights. The green and red lights are used to sense different kind of background film

Switch to adjust the sensitivity of the sensor

Indicator

The sensor will sense the film once the mark locating bar coming through the upper light. Once the sensor senses it, it will light up.

## 5.5 Sealing Parts

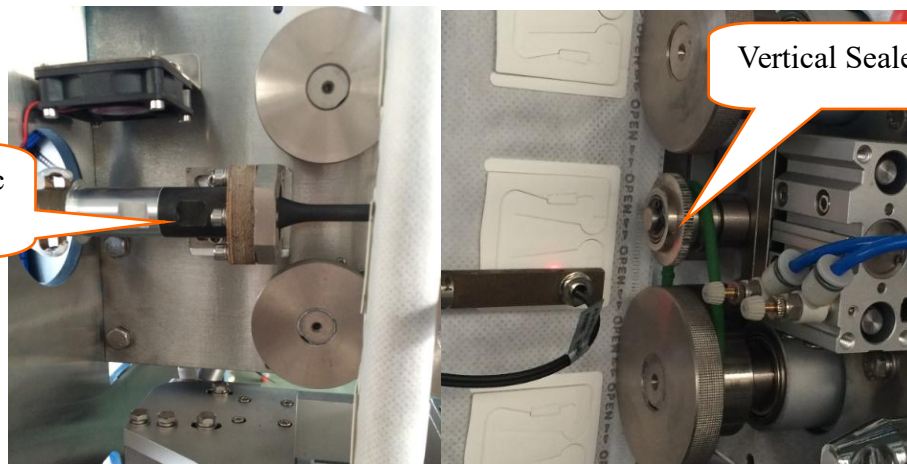


Fig. 5-4 Vertical Ultrasonic Sealing Parts

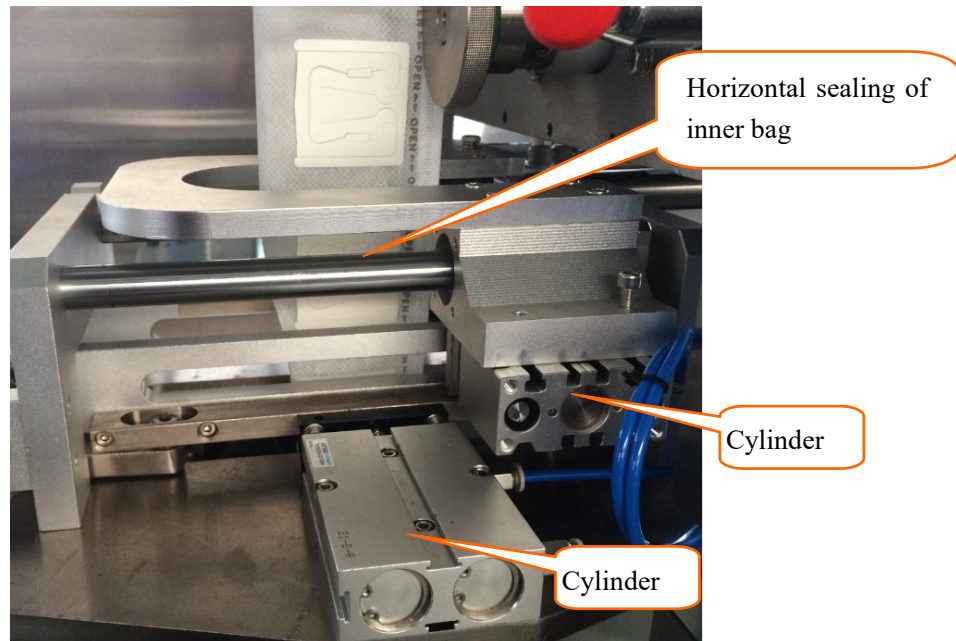


Fig. 5-3 Horizontal Sealing Turntable

Adjust the ultrasonic head to be centering with the sealer. Carry out the cutting based on the PLC setting, by means of the ultrasonic sealing & cutting, rather than the cutter, to realize the production of bags with sound draw-out effect and neat shape.

**Note:** When the machine is started up, the will be released and then move rightward; after the machine starts operation, the film retainer will move leftward, align with the cutter and then insert into the cutting slot.



## Chapter VI. Debugging of Whole Machine

### 6.1 Adjustment of outer bag

#### 1. Setting of outer bag film

According to the schematic diagram of outer bag film setting, fix the out bag film and mount the outer former, of which the film exit shall be in the middle of the vertical sealing rollers of outer bag (see Fig. 3-6).

#### 2. Adjustment of outer bag length

Set the required length directly in the interface Fig.4-5(2), and then adjust the eccentricity of outer bag based on the linear speeds of vertical and horizontal sealing so that the vertical sealing and horizontal sealing are carried out at the same speed.

#### 3. Debugging, check and adjustment

1. Made the preparation according to Chapter III and start up the machine. Feed the outer film into the vertical sealing roller with hands. Make empty bags to observe the bag making situation.
2. If the left side of the bag is creased, loosen the 4 fixing screws of the former to move the former rightwards. If the right side of the bag is creased, move the former leftwards until both sides of the bag are flat, and then tighten the 4 fixing screws.
3. If only side of the bag is formed, after excluding the fault of the former, the most possible cause is that the left and right of the former are not adjusted evenly.

#### 4. Adjustment of vertical seal edge of outer bag

1. Loosen the screws and move the former rack inward to widen the vertical seal edge; contrarily, move the rack outward to narrow the vertical seal edge; such adjustments (generally 6-8 mm) can be carried out according to actual needs.
2. If any diamond-shaped bag is found, loosen the upper screws on the former rack, and then move the former rack inward or outward to shape the bag back to square or rectangle.

#### 5. Adjustment of vertical seal edge width (see fig. 6-4)

1. Loosen the screws and move the former rack inward to widen the vertical seal edge; contrarily, move the rack outward to narrow the vertical seal edge; such adjustments (generally 6-8 mm) can be carried out according to actual needs.
2. If any diamond-shaped bag is found, loosen the upper screws on the former rack (fig. 6-5), and

then move the former rack inward or outward to shape the bag back to square or rectangle.

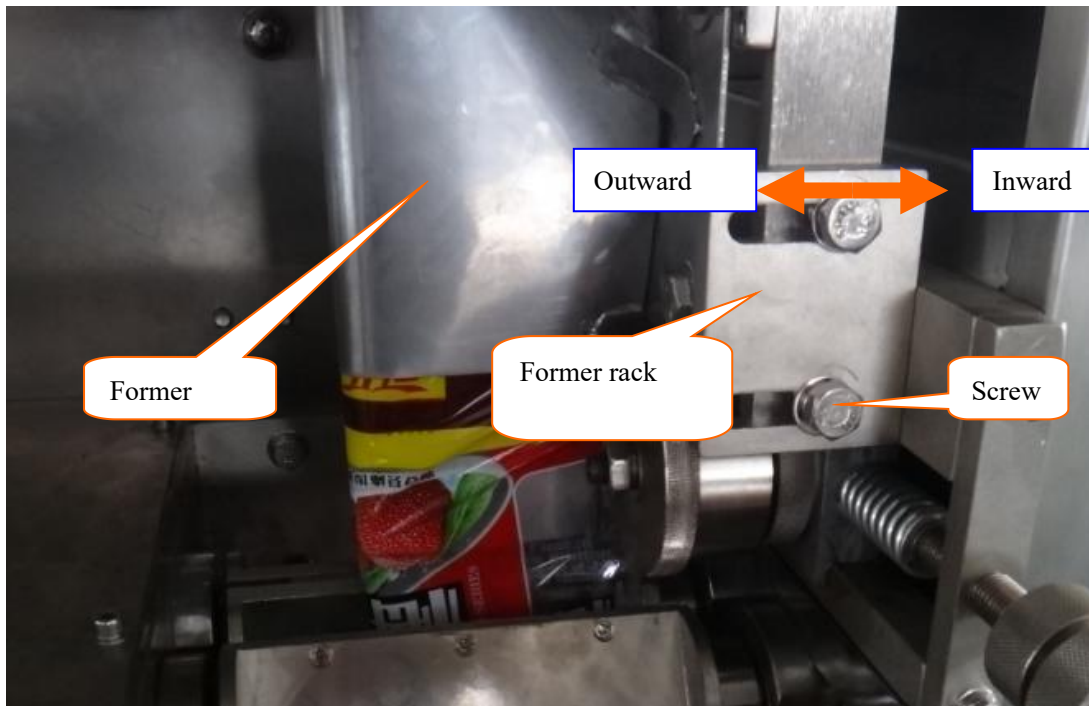
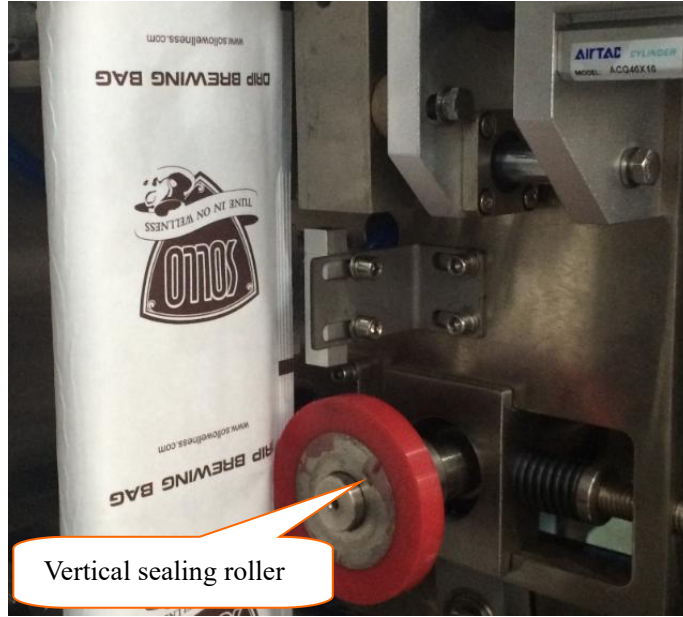


Fig. 6-4

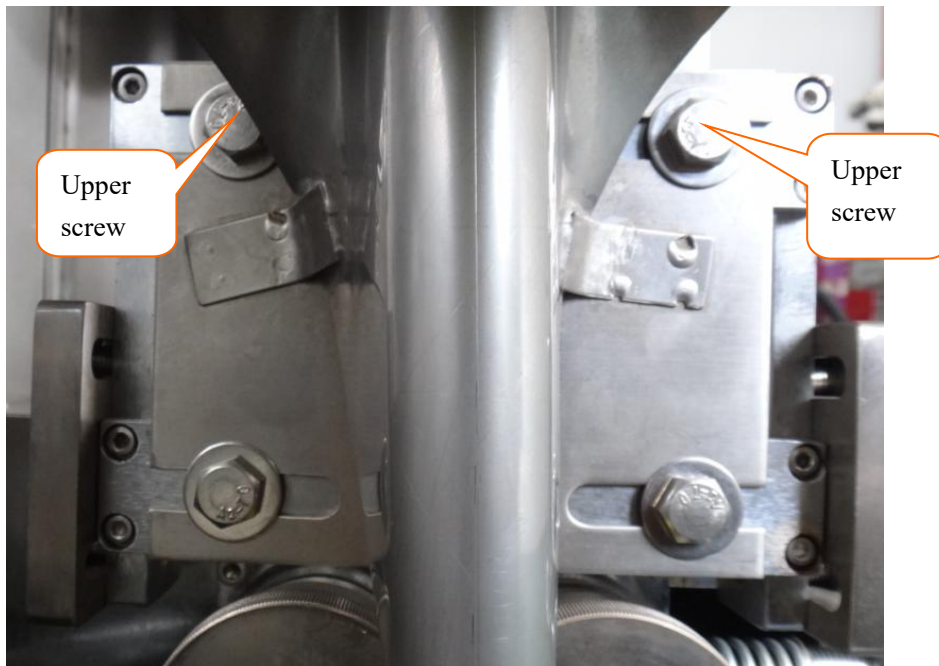


Fig. 6-5

#### 6. Adjustment of vertical sealing pressure of outer bag (see fig. 3-6)

Based on the impression of vertical sealing, adjust the vertical sealing pressure to have distinct impressed pattern without crushing the cotton paper or breaking the cotton thread.

- 1). To increase the pressure: if the impression of vertical sealing is not enough, turn the pressure threaded sleeve clockwise, and fix the tension nut;
- 2). To reduce the pressure: if the impression of vertical sealing is so deep to crush or break the film, turn the pressure threaded sleeve counterclockwise, and fix the tension nut;
- 3). If the impression of vertical sealing differs in depth, or the impression is deep on the outer edge but flat on the inner edge, which can not be solved by adjusting the pressure as described above, it indicates the sleeve is worn after long time running and shall be replaced.

#### 7. Adjustment of horizontal sealing pressure of outer bag (see fig. 6-7)

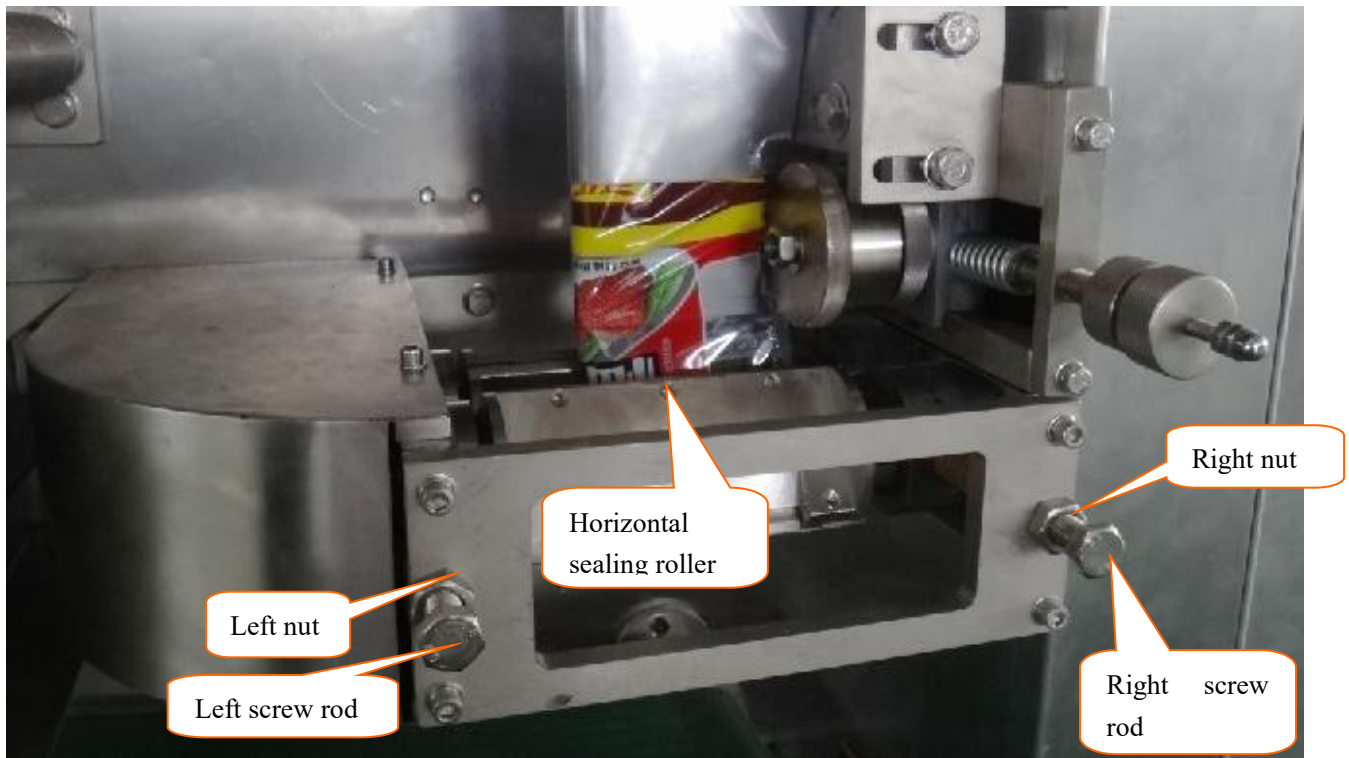


Fig. 6-7

As shown in fig. 6-7, before mounting the cutters in the horizontal sealing rollers, to adjust the horizontal sealing pressure, loosen the left and right nuts, rotate the screw rods clockwise to increase the pressure, or contrarily, rotate the screw rods counterclockwise to reduce the pressure. If the impression on the left side of horizontal sealing is not clear enough, rotate the left screw rod clockwise to increase the pressure on the left side; if necessary, adjust the pressure on the right side in this manner till the impression on both sides is clear, and then tighten the left and right nuts.

### 8. Adjustment of cutters of outer bag

After the horizontal sealing pressure is adjusted and the nut is tightened, carry out cutter debugging.

1. Generally, the surface of assistant cutter shall be 0.2-0.3mm lower than the roller surface; if there is any deviation, pad with ring-pull can cushion which is 90mm long and 3.8mm wide and then tighten the set screws and the adjusting screws.



**Warning**

**The surface of assistant cutter can not surpass the horizontal sealing surface.**

2. The main cutter shall be adjusted by making empty bag. Start the machine and make several empty bags to check the cutter.

A. If the film can not be cut off, loosen the set screws and take out the main cutter before padding. Pad until the film is cut off. Do not pad with more than 1 layer every time.



**Warning**

**The cutter can not be padded too high; otherwise, abnormal noise will be generated and the machine part will be worn. It is all right if the film can be cut off and the horizontal sealing roller will not be jacked out.**

B. After adjusting, tighten the set screws first, and then tighten the adjusting screws with proper force.

C. If the film still can not be cut off after repeated adjusting, change the cutter and adjust again.



**Warning**

**Be careful while adjusting the cutter. Be patient.**

## 6.2 Adjustment of Material Weight



click “Screw” : displays the set number of screw rotation and adjust the filling weight. It is also decided by the screw size. Click in the ‘##.##’ field, enter the required figure and then press ‘ENT’ to confirm. (see Fig. 4-8)

It need to pour material into hopper when material reach the volume window to avoid measuring not accurately .

## Chapter VII. Failure Phenomenon And Reasons

### 1. Inner bag vertical sealing is not solidly sealed

1. Check whether the temperature would reach the temperature required for solid sealing, may be appropriate to raise the temperature;
2. Check whether the vertical sealing pressure is large enough, it is better to have a clear sealing texture line;
3. Check whether the vertical sealing is heated (pay attention to the temperature-controlled gauge, fuse, solid state relay, heating element);

### 2. Inner bag horizontal sealing is not solidly sealed

1. Check whether the temperature would reach the temperature required for solid sealing, may be appropriate to raise the temperature;
2. Check whether the horizontal sealing pressure is large enough, it is better to have a clear sealing texture line;
3. Check whether the horizontal sealing is heated (pay attention to the temperature-controlled gauge, fuse, solid state relay, heating element);
4. Whether the cutter is adjusted too high, the sealing surface is struck to open;
5. Horizontal sealing copper cover is worn;

### 3. Temperature control of the temperature control gauge is not correct, thus the error is large

1. Check whether the thermocouple joint is loose, whether the contact of the temperature measurement head is good;
2. Replace the thermocouple;
3. Replace the temperature control gauge;
4. Whether there is the stain at the test position;

### 4. Counter can not count

1. Position proximity switch does not detect the cam;
2. Position proximity switch is damaged;
3. PLC program is damaged;

## **5. Non-correct label tracking, can not control the photoelectricity**

1. Tracking selection is not right, select and set up on the touch screen,;
2. Photometer head sensitivity is improperly adjusted;
3. The optical spot of the photometer head is not aligned to the movement locus of the packaging film where the color dot is located;
4. Packaging film printing is poor; there are a variety of colors at the edge with the color dot;
5. The contrast between the packing film background color and color of the color dot is too small;
6. Improper opto-electrical compensation adjustment;
7. Bounce too much when the packing film runs;
8. The detection of the position proximity switch and velometer are bad or they are damaged;
9. Position proximity switch and speed measurement gear are loosened;
10. PLC program is lost or damaged;
11. Photometer head is damaged;
12. Improper bag length setting;

## **6. Automatic shutdown**

1. Does not detect the speed measurement gear at starting instant;
2. Reach the output setting;
3. There is the set alarm shutdown;
4. There is the error about PLC system;
5. The error signal inputs PLC;
6. Cut off the total power 1 minute, then re-start the machine, so that PLC can reset;

## **7. Outer bag vertical sealing runs very fast**

1. Dial-switch setting of the stepping motor driver is error;



2. Does not detect the cursor point in case of electro-optical tracking;
3. Speed measurement device is damaged;
4. Position proximity switch is damaged;

## **8. Bag clamping and bag placing time is wrong**

1. Bag clamping and bag placing position settings are wrong, not matched with the machine in place;
2. The original position of the mechanical transmission structure is changed, for example, the jump chain, bag clamping, eccentric plate screw are loose;
3. In case of shutdown, turn the speed measurement gear or position cam due to the human reasons;
4. Replace the speed measurement device or move the speed measurement device, the position of the position proximity switch is changed;

## **9. Touch-screen is not displayed or shows blank screen**

1. Check the 240V power supply;
2. Touch-screen process is lost;
3. Touch screen and PLC communication can not be connected, check the wiring and connection;

## **7.10. Touch-screen keys do not work**

1. Touch screen and PLC are not connected;
2. Touch-screen is damaged;

## **11. Outer bag vertical sealing does not rotate**

1. Speed measurement device does not detect the speed measurement gear;
2. The bag length is not set;
3. Stepping drive is not powered or damaged;
4. Stepping motor current is set up too small, while the vertical sealing resistance is relatively large or locked;
5. Stepping motor is damaged;

6. PLC has not issued the step-by-step impulse;
7. PLC and the stepping drive connection are turned out, check whether the 2K resistor is opened;
8. Check whether the stepping motor and driver wiring are broken;
9. Position proximity switch does not send a signal to the PLC;

## **12. Main motor does not run**

1. PLC does not send signals to the inverter;
2. Host protective tube is burned out;
3. Inverter setting is improper;
4. The intermediate relay below the electric control box is damaged or line is off;
5. Inverter is damaged;
6. Main motor is damaged;
7. There is an error signal in the PLC or the PLC is disrupted;

## **13. The host frequency can not be changed**

1. Touch screen can not communicate with the inverter;
2. Inverter setting is improper;
3. Touch-screen is damaged;
4. Inverter is bad;

## **14. There is greater error between the actual bag length and setting bag length without tracking**

1. Large running resistance;
2. Dial setting of the stepping drive is wrong;
3. Compensation setting is wrong;
4. Heat contractibility of packaging film is large;

## **15. Run program is disorder**

1. Position settings such as bag length, optoelectronics, sustaining wire, bag clamping, bag feeding are wrong;
2. PLC itself is bad;

## **16. Inner bag will be stuck at the outer bag port**

The clamp running track of the bag clamping is adjusted in the wrong place, the inner bag should enter the outer bag forming device port in the vertical mode when placing the bag, and in the center of the outer bag forming device port, the specific contents see "Bag clamping manual adjustment"

## **17. Outer bag horizontal sealing press the inner bag**

1. Outer bag sealing time adjustment is wrong, it should be based on that the feed bag robot is placed just when the outer bag horizontal seal is closed;
2. There is obstacle in the outer bag forming device;

## **18. Inner bag vertical sealing is pulled and broken**

1. Inner bag eccentric adjustment is too much (see Figure 5-2);
2. Large inner bag paper throw resistance;
3. Inner bag horizontal bag sealing cutter is adjusted too high;
4. Inner bag eccentric mechanism angle is wrong;

## **19. Outer bag vertical seal is pulled and broken**

1. Bag length is set too small, beyond the limits;
2. Eccentric quantity is adjusted too large;
3. Dial switch of the stepping motor driver is set incorrectly, the bag length is less than the setting value;
4. Outer bag cutter is adjusted too high;
5. Outer bag eccentric mechanism angle is wrong;

## **20. Inner bag vertical sealing does not turn**

Bag length gear of the inner bag and transmission gears are not meshed;

## **21. Outer bag horizontal sealing does not turn**

The outer bag clutch is not closed;

## **22. Inner bag can not be cut off by the cutter**

- 1.Cutter is blunt;
- 2.Cutter adjustment is not enough;
- 3.The pressure is not enough;

### **23. Outer bag can not be cut off**

- 1.Cutter is blunt;
- 2.Cutter adjustment is not high enough;
- 3.The pressure is not enough;
- 4.The temperature may be appropriately risen under the circumstances of non-spoiling the packaging film;

### **24. Can not stop after pressing the stop button**

- 1.After replacing the PLC, "Shutdown position" is not set (see Figure A-8);
- 2.Touch-screen is damaged;
- 3.Inverter is damaged;
- 4.PLC is damaged, and does not send the stop signal to the inverter;
- 5.Does not actually touch the button;

### **25. Bag clamping robot does not act**

- 1.Bag clamping and bag placing positions are not set (see Figure A-8);
- 2.The air switch is not on (see Figure 3);
- 3.PLC has no output;
- 4.Solenoid valve is damaged;
- 5.Pneumatic clamp is damaged;
- 6.The reaction rate of the pneumatic clamp can not keep up with the mechanical speed;

### **26. Lamp on the fuse base is on**

The protective tube is burned;

## **27. Single edges deviation of the inner and outer bag vertical sealing**

1. Forming device is bad or there are obstacles about the internal forces;
2. Forming device adjustment is bad;
3. When mounting the packaging films, the central axis of the forming device is misaligned;

## **28. Unloading clutch does not disengage**

1. For the fixed unloading disc clutch, it can disengage only when shutting down the machine and turning the feeding tray;
2. There are failures about the clutch handle and conductive rod;

## **29. Feed tray and feed line do not act**

1. The clutch is not closed;
2. The feed line and unloading adjusting hand wheel are not pressed to mesh with the gear;
3. Two bevel gears are not meshed;

## **30. Bag clamping and bag placing clip moves in the opposite direction**

The air pipe is connected in the opposite direction;

## Chapter VIII. Common Failures and Troubleshooting

Failures	Cause	Troubleshooting
Some mechanisms do not rotate	Broken motor or disconnected circuit of motor	Replace or re-connect
Abnormal operation of machine	Foreign matters enter into gears or rotating parts	Shut the machine down to remove foreign matters
Scorching of heat-sealing area	The bearing of heat-sealing roller is not oiled	Tear apart the gear key, add oil and tighten it
Poor sealing of packaging	Uneven pressures on the left and right sides of heat-sealing roller	Adjust the pressures on the left and right sides of heat-sealing unit
	Wear-out of heat-sealing roller	Replace
	Contaminated sealing area of heat-sealing roller	Clean with a copper brush
	Poor quality of packaging material	Contact the manufacturer of the packaging material
	Wear-out of copper sleeve	Replace the copper sleeve
Failed sealing	Burn-out of heating unit	Replace the heating unit
	Defective electrical components	Check and replace
Creasing and untrimmed seal edge of packaging film	The center line of packaging film does not match with the size of heat-sealing roller	See the schematic diagram of former adjustment
	Problem of former adjustment	See the schematic diagram of former adjustment
Materials trapped in or leak out from the seal edge	The dropping time of materials are different (due to air resistance)	See the adjustment of timing of material feeding and thread feeding

	Poor coordination between packaging and heat sealing	See the adjustment and schematic diagram of horizontal sealing roller
Poor cuts	Worn gear of cutter	Replace
	Blunt or damaged cutter edge	Replace the blade or repair with a whetstone
	Improper gag between the movable and fixed cutters	Adjust the pressing bolt

## **Chapter IX. After-sale Service Guide**

- 1.** This product promises to offer a life-long follow-up service, and maintenance services delivered in the first year are free.
- 2.** During the warranty period, in case the quality issues are caused by the irrational design of the machine, our company will arrange the customer service personnel for maintenance. In case the quality issues are caused by the improper manual operation or unpredictable unexpected factors, our company will charge the appropriate fee.
- 3.** When leaving the factory, the machine is equipped with a certain wearing parts, the manufacturer can replace himself under the guidance of the instruction or phone service, if it is necessary to get more backup, can purchase from our company. (Our company will sell at the discount price)