



# AUTOMATIC BAG PACKAGING MACHINE

**Model-YL-8SW**

OPERATION INSTRUCTION



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Please read this instruction carefully before operation.



## Disclaimer

This instruction is edited only for machines from Qingdao Yilong Packaging Machinery Co., Ltd. And it is a direction that needs to combine with different situations including clients' maintenance plan, project judgment and safety procedures.

Our company is not responsible for results caused by using this instruction.



# 1. SAFETY

## 1.1 Safety Marks

- a) Electricity warning: It is on the outside of the electricity box and it is dangerous. Please don't touch.



- b) High temperature warning: It is on the outside of temperature controllers and notice that they are high temperature.



## 1.2 Matters need attention

- a) Proper staff should be arranged to operate on the machine after training.
- b) Please turn off all the power before maintenance.
- c) The machine is working under high electricity voltage. And it has many cables of different voltage. Cables of 24V and 120V need current protection.
- d) Be familiar with the position of the isolation switch (the photo is



following). Turn this switch to the stop position (in the counter clock wise direction) to stop the machine.



## 2. TECHNICAL FEATURES

### 2.1 Main features

Bag sizes: Width: 140-260mm Length: 100-380mm

Filling weight: Max. 1-2kg Speed: 20-50bags/min

Motor Power: three phase AC 380 $\pm$ 10% 50Hz $\pm$ 1%

Cost Power: about 2.5kw

Air compressor: about 5-8kg/cm<sup>3</sup>

Pouch Style: flat pouch, doypouch , zipper pouch

Machine size (L $\times$ W $\times$ H) : 1920mm $\times$ 2208mm $\times$ 1420mm

Machine weight: 1600kg

### 2.2 Environment conditions required

Suitable temperature: about 0 $\sim$ 40 $^{\circ}$ C

Humidity condition: about 65% $\pm$ 20%

Pressure: about 86-106kPa

## 3. INSTALL/ADJUST

### 3.1 Requirements to install

a) Solid ground is required.



b) over current protector spec: BM-63 D20

d) Power cable protection mode: over current relay

### 3.2 Install and adjust

#### 3.2.1 Bag feeder station

##### A. Process of bag feeder

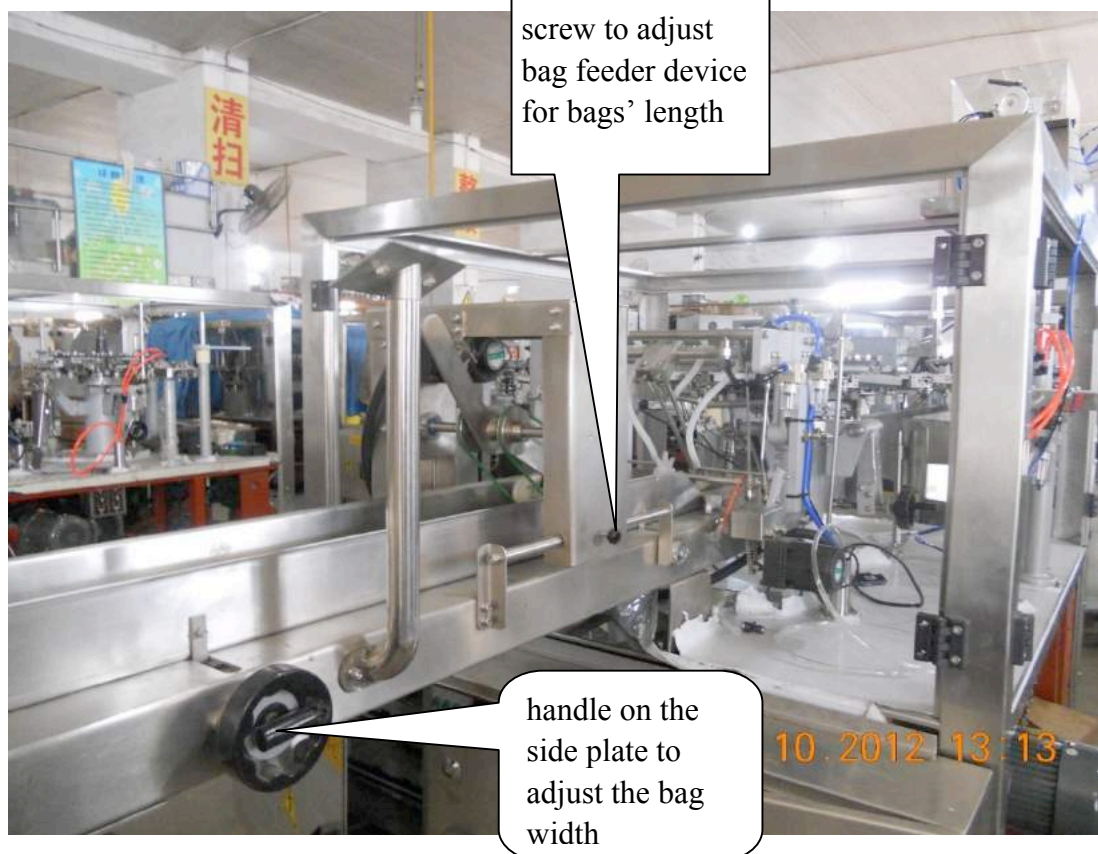
a) Put bags on the bag feeder conveyor.

b) Suction cups of first bag feeder pick up bags piece by piece.

c) Suction cups of second bag feeder transfer the bag to the flat bag clip.

d) The bag is transferred to the grips and then transferred to the next station.

##### B. Adjustment for the bag feeder devices





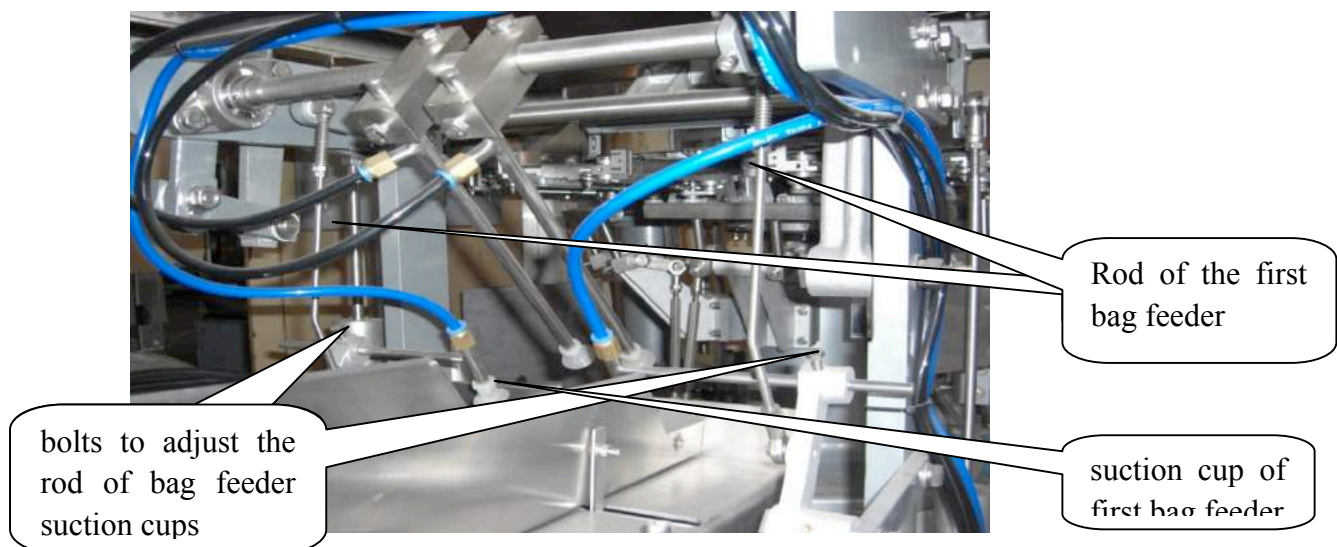
a) Put the side plate aligning with the bags width. The side plate could be adjusted by the handle on the side plate.

**Notice: Keep about 1mm distance between the side plate and the bag width.**

b) You could adjust the bag feeder device for bags' length to the proper place according to the length of bags after the screw has been loosened.

(The distance between the bag pressure device and the first bag should be 2 to 3 cm.) Then the screw needs to be tightened.

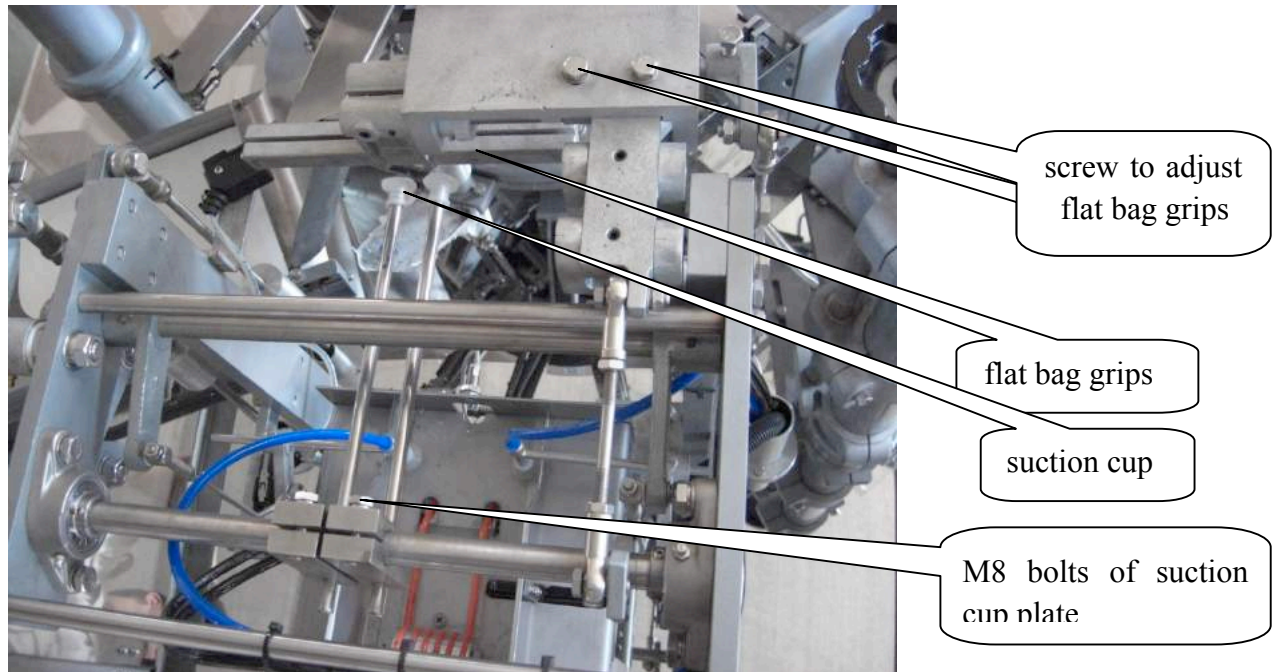
C. method to adjust first bag feeder and second bag feeder



a) Loosen bolts from the rod of bag feeder suction cups and then make the distance between the bag feeder suction cup and the bag edge at about 5mm.

b) Adjust the suction cup height by the rods of the first bag feeder.

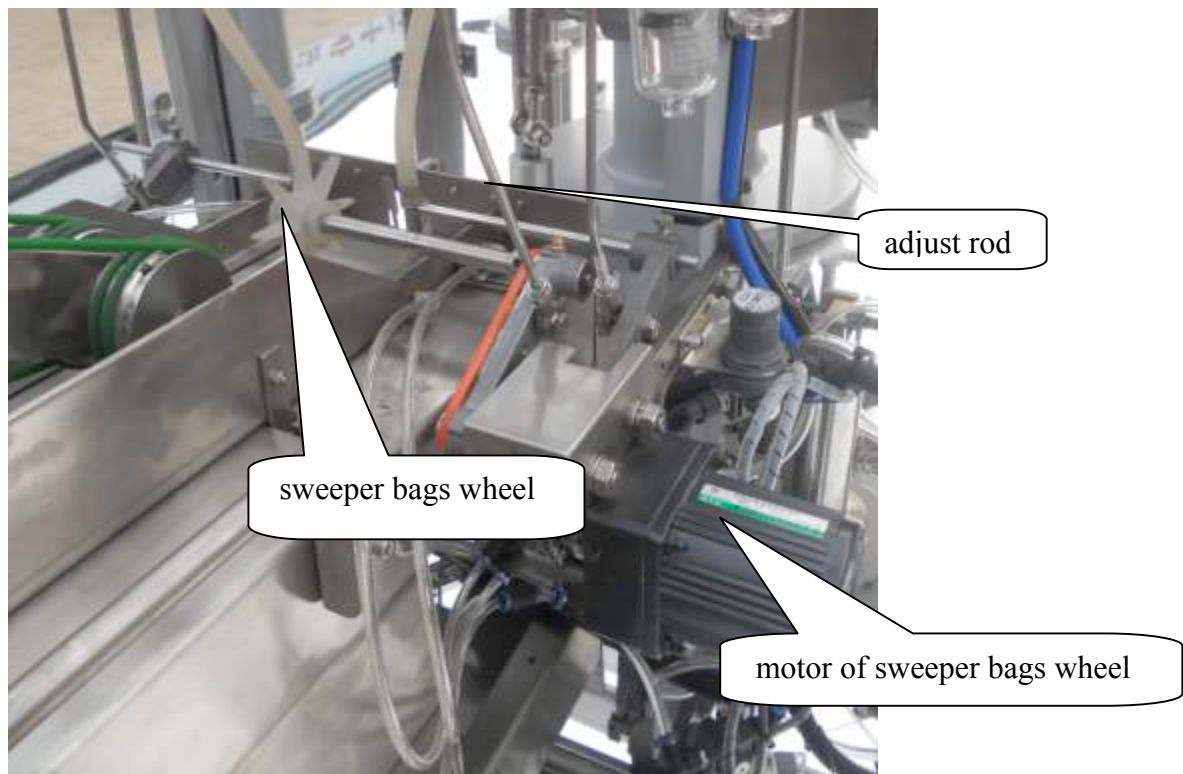




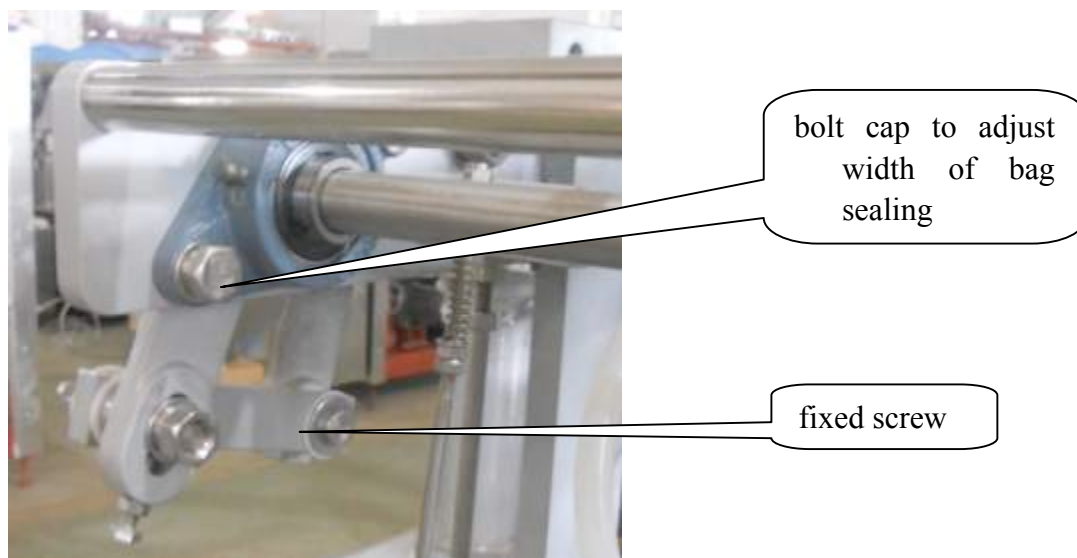
c) Loosen the M8 bolts of suction cup plate and adjust the distance between suction cups according to the bag sizes. And then tighten the M8 bolts up.

d) The distance between the flat bag grip and the suction cup should be at least 4mm. If it is less than 4mm, suction cups will touch the flat bag grip and cause more damage.



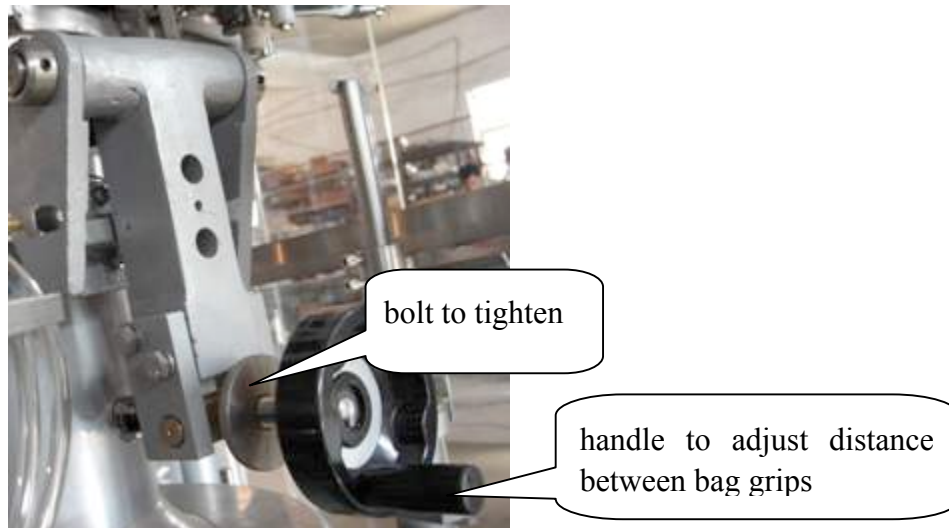


e) motor of sweeper bags wheel: This motor drives the bag sweeper wheel to rotate and push bags to the bag feeder baffle plate, which warrants the accuracy of bag feeder heights. (Please adjust the rod when bags creases or are not in the right position.)





f) Adjust the sealing width of bags. Loosen the fixed screw and turn the bolt caps. If you turn the bolt cap upward, the sealing will turn more wide. If you turn the bolt cap downward, the sealing will be turn more narrow. Please tighten the fixed screw after adjustment.

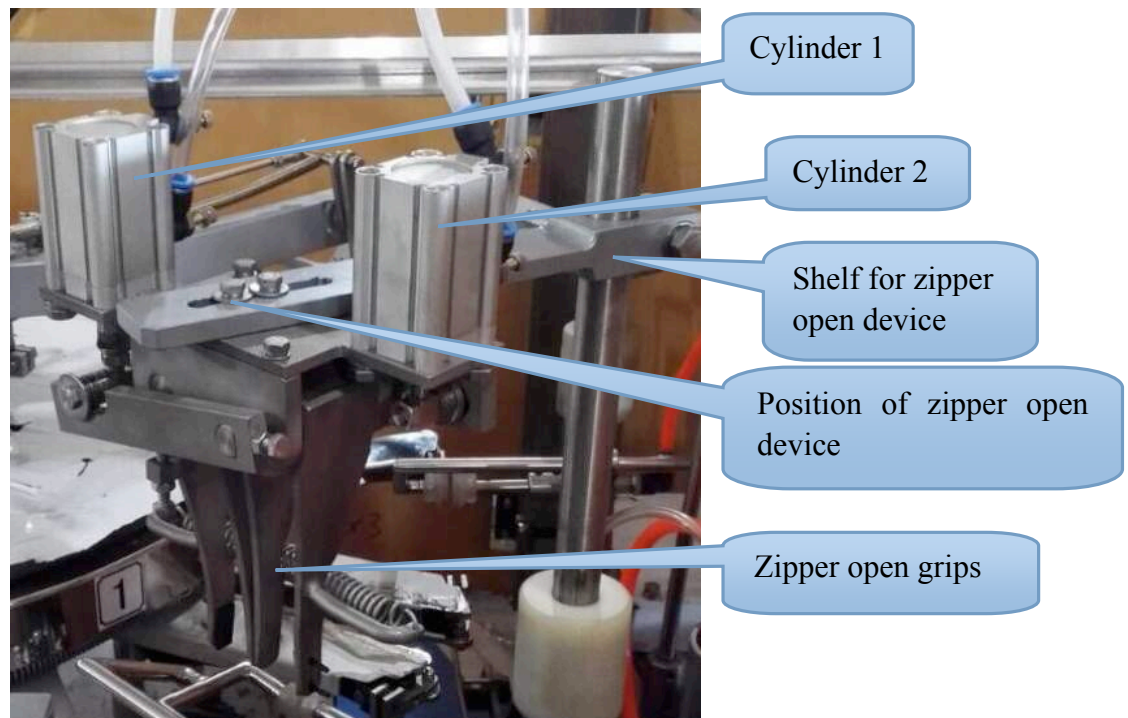


g) Adjust the distance between bag grips. Wrest the handle in the upper picture to adjust all the distance between pairs of bag grips. The best distance for the grips to hold could be 10mm from the bag edges.

### 3.2.2 Zipper open station

The bag is transported to the zipper open station after the bag feeder station has gripped it. And the following is the instruction of part for the zipper open device.





### **The process of zipper open.**

The pouch is transferred to the zipper open station→Open bag edge above the zipper. Then the zipper open grips open the zipper.(like the following two photos)





Zipper open device

Zipper open outer grip

Zipper open inner grip

Bag edge open sucker

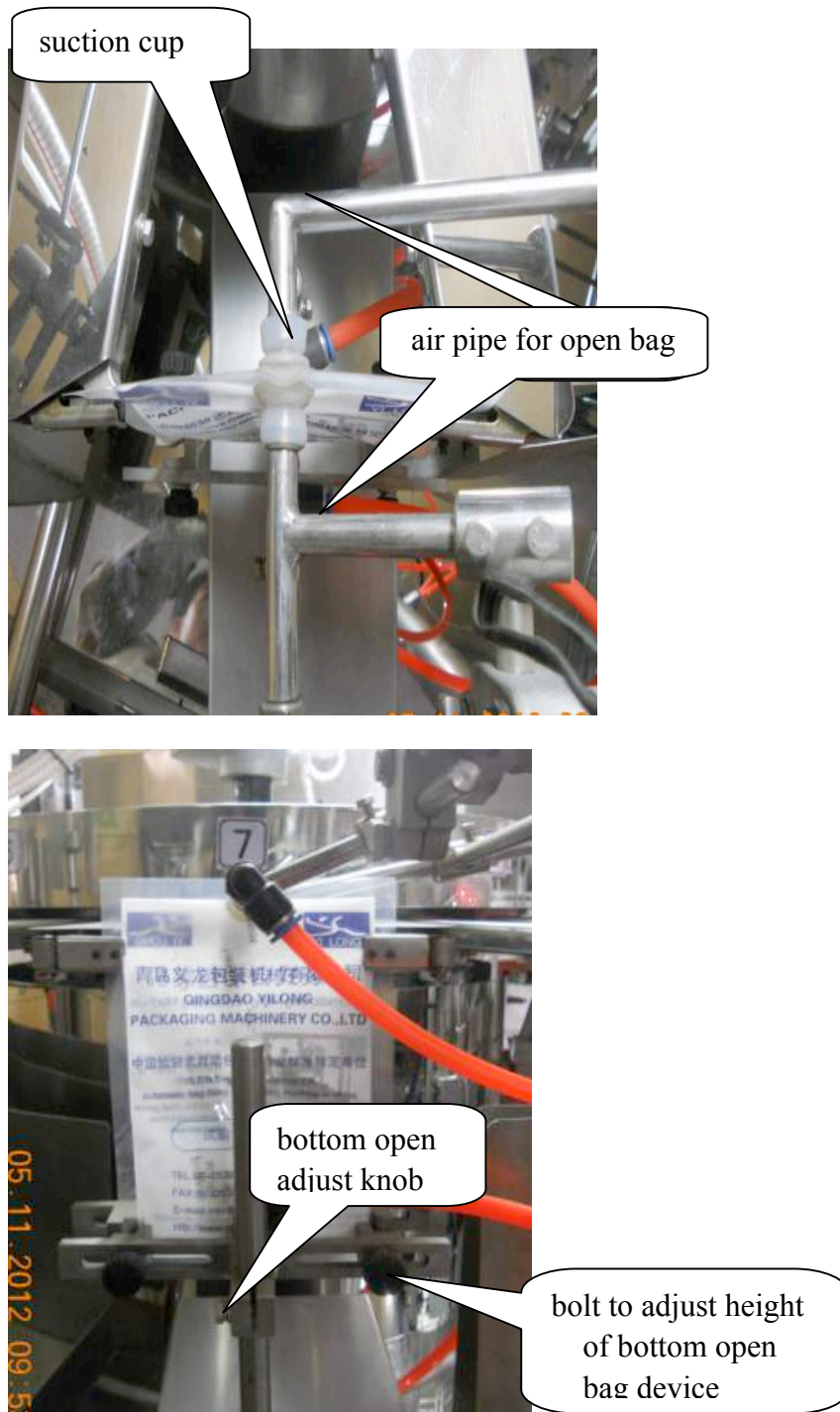
Bag edge open air tube1

Bag edge open air tube 2





### 3.2.3 Bag open station



A. Adjust bag open on the upside (upper photo).

Loosen screws (in the below left photo) of open bag air pipe. Adjust suction cups to the middle of the bag edge. Make sure suction cups touch

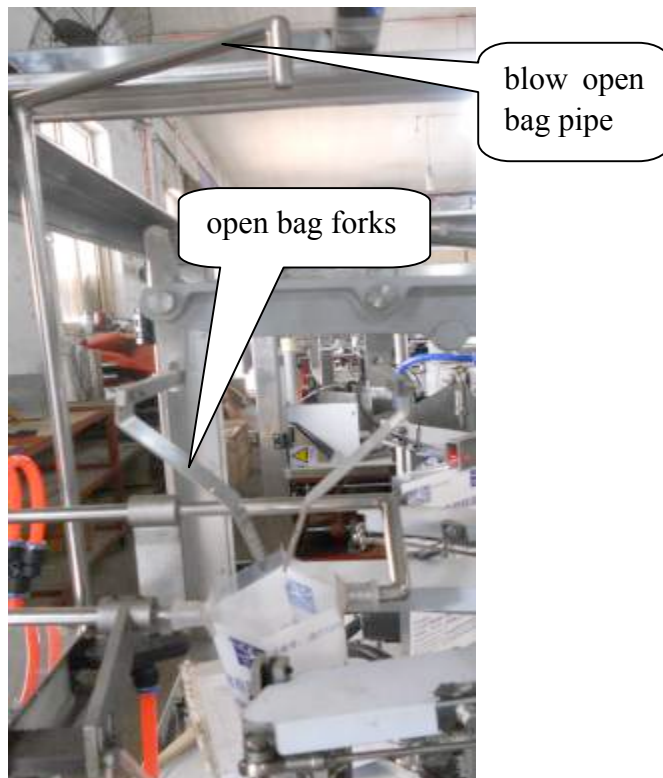


the two sides of the bag.

#### B. Adjust bottom open bag.

Adjust the bottom open knob to make sure that grips hold at the distance of 5-10mm from the bag edges and suction cups are at the distance of 5mm from the bag bottom while the machine is packaging stand up bags.

(You could adjust the position of bottom open bag according to the real situation.)



Suction cups open the bag mouth and the open bag air pipe blow air into the bag to fully open the bag.

After the bag is fully open, the open bag forks get down into the bag and keep it open to the next process.



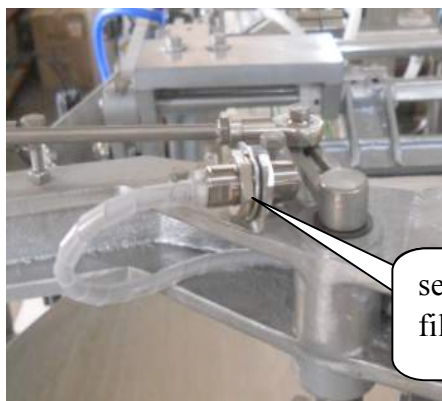
**Notice:** The vacuum filter valve needs to be cleaned after work every day.



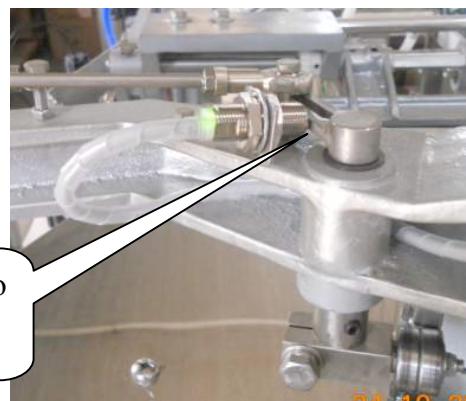
sensor for the height  
of the bag feeder

Notice: The open bag mouth device works only after the sensor has detected the bag.  
And this device is an option according to clients' requirements.

### 3.2.4 Filling station and vibration station



sensor to  
fill







#### A. Adjustment for the filling funnel

**Warning: Do not touch the funnel during operation.**

When the filling funnel is at the lowest position, loosen the bolt on the funnel bearing and make the funnel inside the bag part at about 20mm. Then tighten the bolt.

Notice: a) If the funnel inside the bag part is less than 20mm, material will come out of the bag during filling process, which results in bad



sealing.

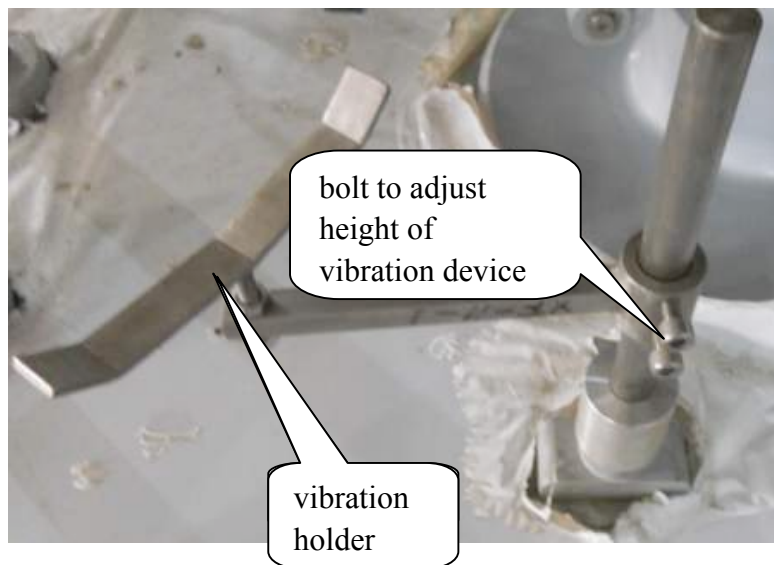
b) Put the bag center line along with the filling funnel center line during the funnel install.

c) Open bag forks should not touch the funnel during filling.

d) Be careful when you install the funnel to in case of falling and distortion.

e) The sensor for filling will work only when the automatic filling signal in on at the man-machine interface.

#### B. Adjustment of vibration station



a) Adjust the vibration holder by adjust the bolt to adjust height of vibration device (as in the upper photo).

b) The distance should be 10mm from the bag bottom to the holder when the vibration holder is at the lowest position.

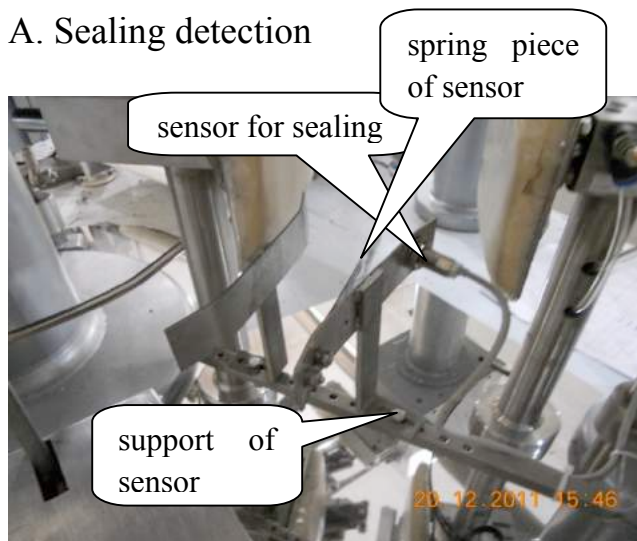


c) Turn off the vibration switch at the man-machine interface when the filling materials don't need vibration.

d) The holder should be line with the bag bottom.

### 3.2.5 Stations including hot sealing, cold sealing, discharge and no filling alarm

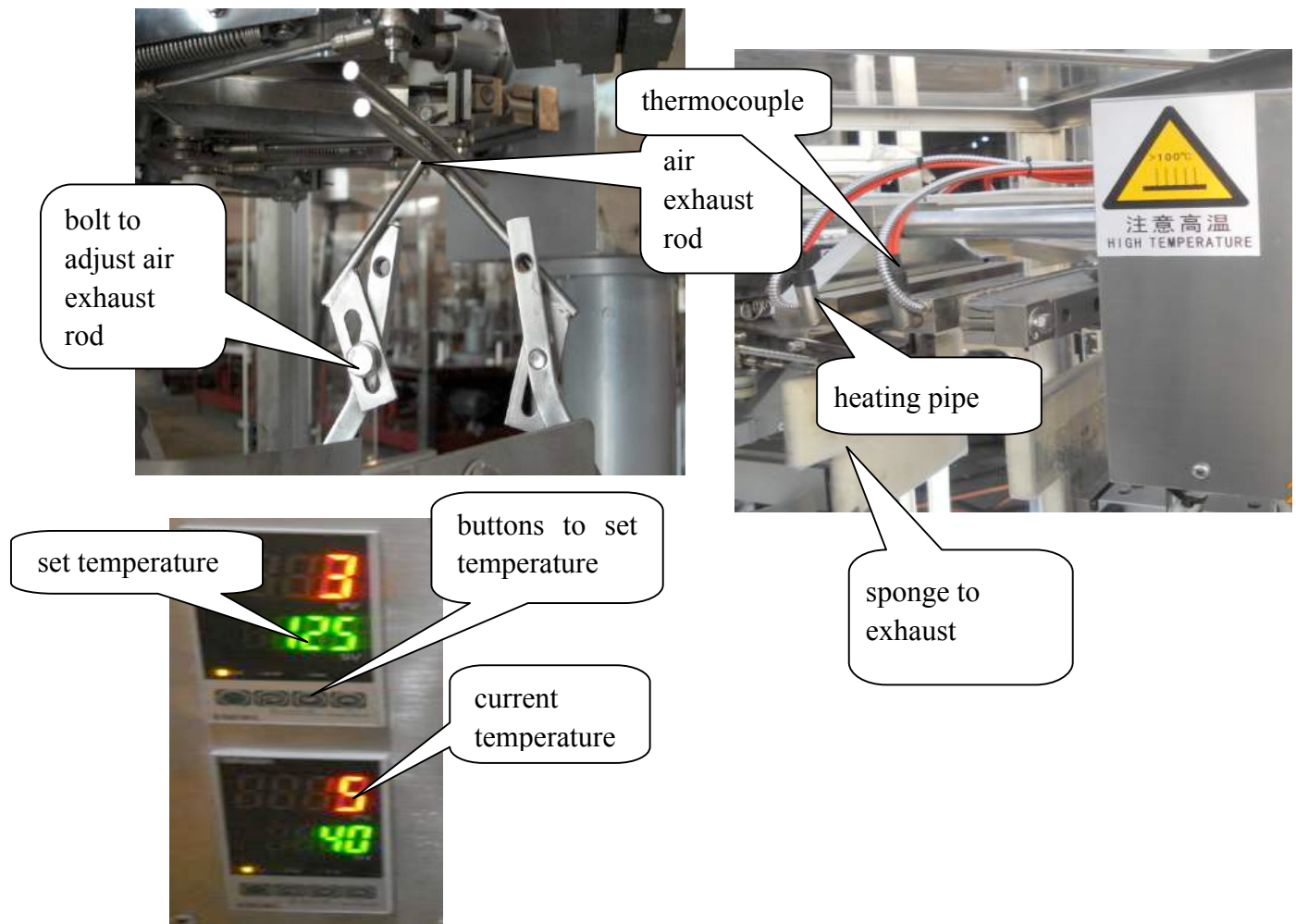
#### A. Sealing detection



The distance between the sensor for sealing and the spring piece of sensor should be 5-10mm for the best. If there is material in the bag, the sensor will detect it and the sealing will work. If the bag is empty, the sensor will know it and the sealing will not work.

#### B. exhaust and sealing device (air exhaust rod or air exhaust sponge)





a) sealing temperature adjustment: click on the buttons on the temperature controller to set the proper temperature.

b) There is a bolt to adjust air exhaust rod which could be used to adjust the position of air exhaust rod according to requirements.

c) Sealing works after air exhaust and the bag is transferred to second sealing.

Notice:

a) The sealing mouth has been precisely adjusted and mustn't be stripped down. If the sealing effect is not good, you could contact us.



- c) Don't wipe the sealing mouth with water.
- d) Make sure the heating switch is on at the man-machine interface.
- e) The thermocouple is the thermometer to detect the sealing mouth's temperature. It is fixed to the sealing mouth. And the temperature of the sealing mouth is displayed on the temperature controller.

**Warning:**

- a) The machine must be stopped when there is material on the sealing mouth. It must be cleaned by the iron brush in the tool box. Hand touch is forbidden.
- b) The machine must be stopped first before changing the thermometer or heating pipe. Meanwhile the heating switch at the touch screen must be turned off. Workers need to wait until the sealing mouth turns cold as the normal temperature to start to change.
- c) Don't use water to cool the sealing mouth in case of sealing mouth out shape.





C. If the bag doesn't fall down, the sensor will know it and the machine will stop meanwhile the alarm will sounds. You just need to pick out the bag and then restart the machine.

**Warning: Don't touch any part during operation in case of danger.**

### 3.3 Adjustment for man-machine interface

**Warning: Please be very careful about the adjustment for the parameters in case of disordered operation processes.**



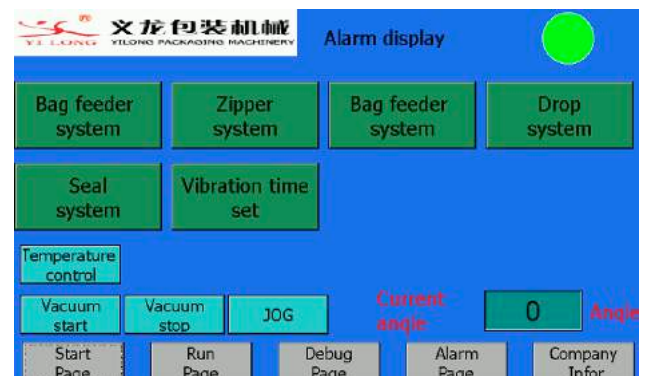
With the power on for the machine: It will show the standby page on the screen. Please click the debug page and insert the password"12345678" to enter the adjust page.

Click on the vacuum start to start the vacuum pump. And click on the vacuum stop to make the vacuum pump stop.

In the debug (adjust) page, you can set the first bag feed, second bag feed, vacuum open bag, air blow open, fill angle and first seal etc. You can click on the back button to go back to the main page.



**start page**



**debug page**

The packaging speed could be set by clicking on the packaging speed button and inputting the exact number you need. Originally the buttons are off including bag feeder signal, funnel switch, temperature control, print signal, drop signal and vibration signal. They will be on after you click on the buttons.





**run page**

The current angle is the angle at which the machine is working right now. It could be changed between 0-360° at any time.

The start angle means the time when all the solenoid valve start to work while the stop angle means the time when the solenoid valve stop.

The angles could be set or changed by clicking the number according to your requirement



**bag feeder adjust**

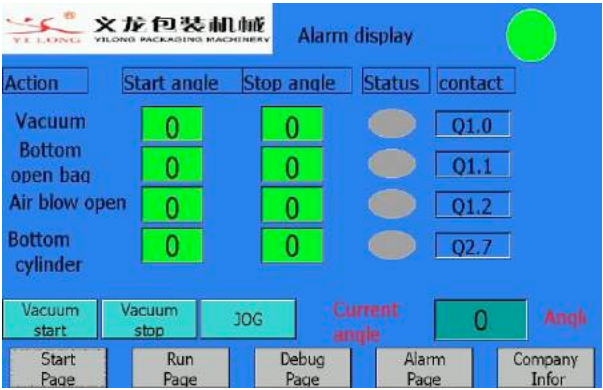


**open zipper adjust**

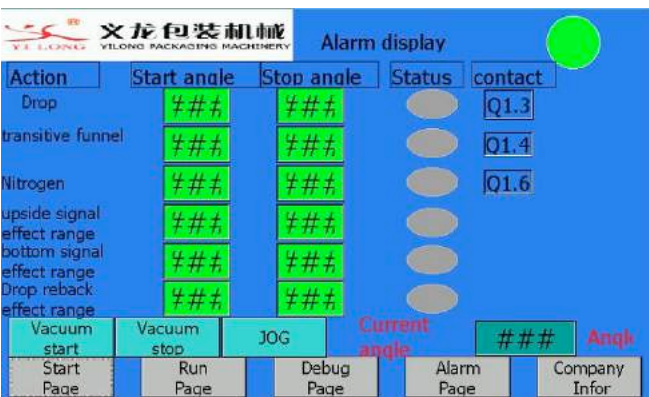
For example: If the start angle of the first bag feed is 140° and its stop angle is 280° ,it means that the machine starts first bag feed at the angle of 140 degree and stops first bag feed at the angle of 280° . If the start angle of the second bag feed is 260° and its stop angle is 120° , it



means that the machine starts second bag feed at the angle of 260° and stops second bag feed at the angle of 120° . As it needs time to connect between first bag feed and second bag feed, so the second bag feed starts at the angle of 260° and stops at 120° of the next circle.



**open bag adjust**

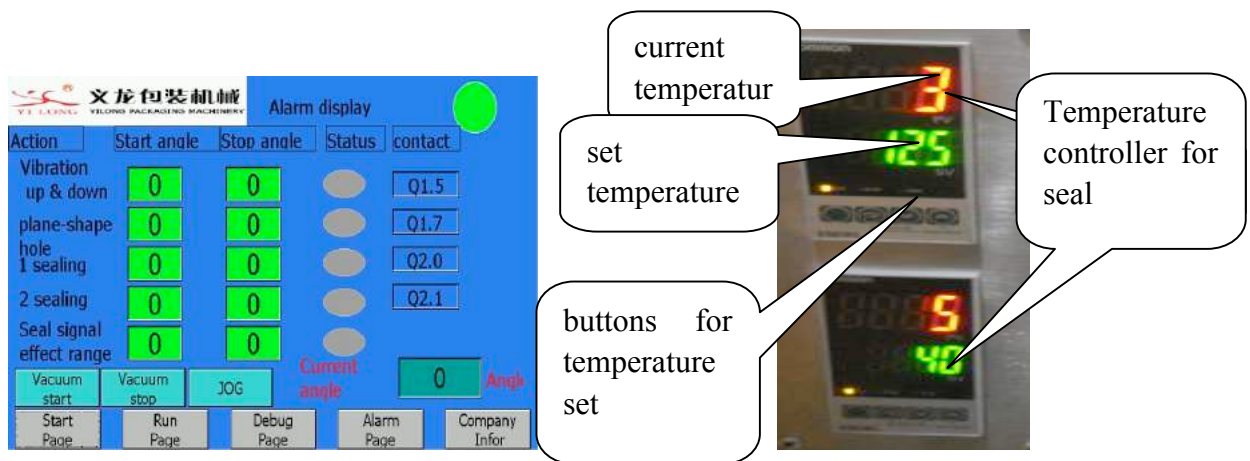


**drop adjust**

Open bag adjust: the effective angle ranges for signals of vacuum open, bottom open and air blow open

Drop adjust: the effective angle ranges adjust for signals of first drop, transitive funnel, second drop, top signal, bottom signal and drop feedback





**seal adjust**

**temperature adjust**

Seal adjust: the effective angle ranges adjust for signals of first seal, second seal, air discharge cylinder and seal

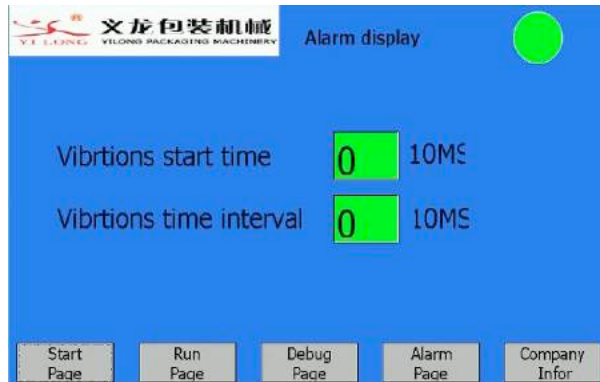
Temperatures adjust: to set the temperature of the two heating pipes

Current temperature is the temperature of the two heating pipes right now.

Set temperature is the temperature set according to practical needs that relates to bag material, bag thickness, packaging speed and temperature in the factory.

The two numbers of set temperature could be different. If needed, workers just need to click on the set button. It will start to heat up after set and automatically stop when the temperature gets to the required temperature.





**time set page**



**warn page**

Time set: to adjust the frequency of vibrations

Warn page: Notice: Please make sure the safety before debugging.

The original state of warning is open and will turn to off after click. When the warning is open, it will send out alarm sound if there is error during machine's operation. Then the machine stops automatically. And there is a dialog box with the name of the error on the touch screen. Operators should find out the error and adjust according to this error name. Click on the "back" button to be back on the run page and start the machine again.

## 4. OPERATION

### 4.1 Machine start

A. Check the grounding state of the machine. Make sure that it is good grounded.

B. Put the main power switch at the on state and its indicate light is on.



C. Make sure that the temperature on the temperature controller is in the dimension needed.

D. Make sure that the air pressure reaches 5-8kg/m<sup>3</sup>.

E. Make sure that bags are put in the bag feeder station in order.

F. Make sure that the current temperature (of sealing mouth) reaches the set temperature.

G. After the above points, check the direction of the motor by the inching switch. Make sure that the motor rotates in the right direction.

H. Click on the bag feeder, print, filling and vibration buttons at the touch screen. Then press the start button on the machine to start the machine.

#### 4.2 Machine stop

A. Click on the vacuum stop button.

B. Press the stop button after the last bag has been transferred out.

C. Put weigher switch to the off state.

D. Cut off the power of packaging machine and weigher. Then clean the machine.

### 5. ERRORS AND SOLUTIONS



## Alarm for pressure not enough.

- Low pressure and the pressure meter alarms.



Pressure meter: The number must be at least 500.



Adjustment device: to adjust inward air volume, needs to be cleaned termly in case of too much water in it.

## No suction or too small suction at the bag feeder station

Check the vacuum pump is fine or not.

- Make sure it work well.

The air pipe is blocked.

- Check and clean all the air flow pipe from the vacuum pump to suction cups .

Wrong angle of suction

- Adjust the suction time of first and second bag feeder.

No pressed air

- The volume of input air from air press should be 5-8kgf/cm<sup>2</sup>.

The filter of the vacuum pump is blocked.

- Clean or change the filter.

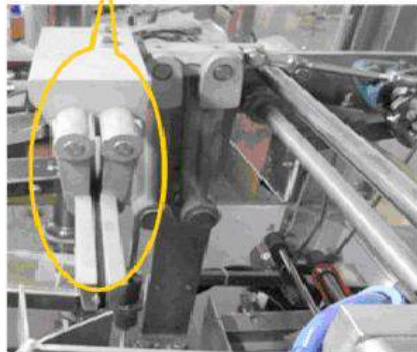
The vacuum pressure is too small.

- Adjust the number on the vacuum pump and make sure that the black needle is between 40-60.



## The flatten grips couldn't hold the bag.

- There is space between two pieces of flatten grips.



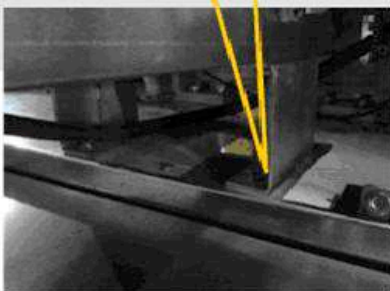
- Too long time for suction of second bag feeder
- Get to the debug page of the touch screen and make the second bag feeder angle smaller.



## Both of the grips couldn't hold the bag well.

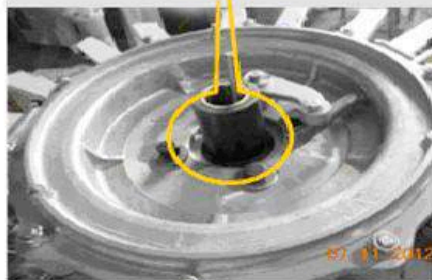
different steps of the horizontal bag feeder and the big turn plate

- Adjust the horizontal bag feeder to the left or the right.



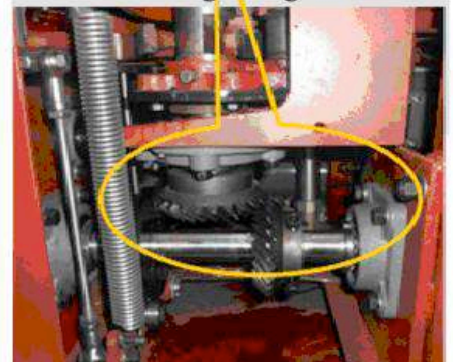
The big turn plate goes out of its normal way.

- Loosen screws under the cover of the big turn plate and adjust its position to make sure the same step of the bag feeder and griping.



loose screw or off tracking of gears

- Put the gears in good connection. Adjust the big turn plate according to bags and then tighten gears' screws.

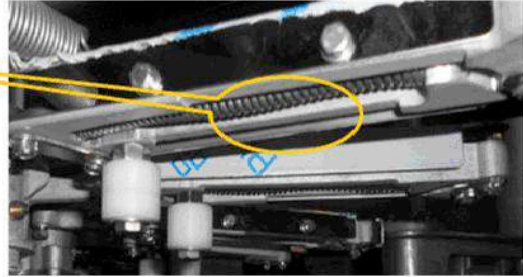




## Grips couldn't hold bags.

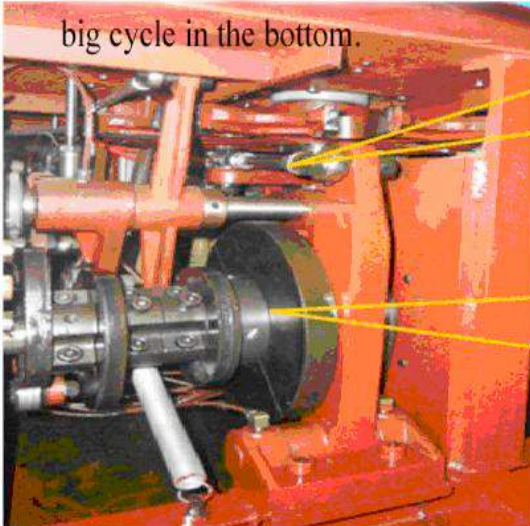
- Small or no pull of the spring.

- Change the spring.



## The open bag forks are not in the middle of the bag during operation.

- different speed of open bag forks and the big cycle in the bottom.

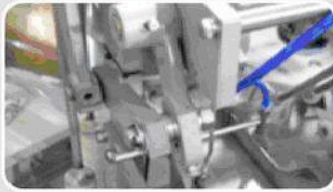


- Stop the machine when open bag forks comes to the bag open station. Loosen the adjust rod of open bag forks and adjust the forks to the middle.

- If the open bag forks are slower than the cycle in the bottom, adjust the open forks cam to the front along the rolling direction of the bearing. If faster, adjust the cam back.



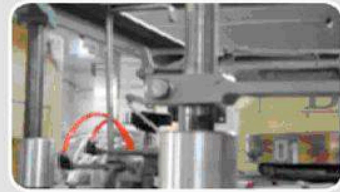
The funnel couldn't fill into bags.



The bag feeder is too high.  
Adjust the height of the bag feeder.

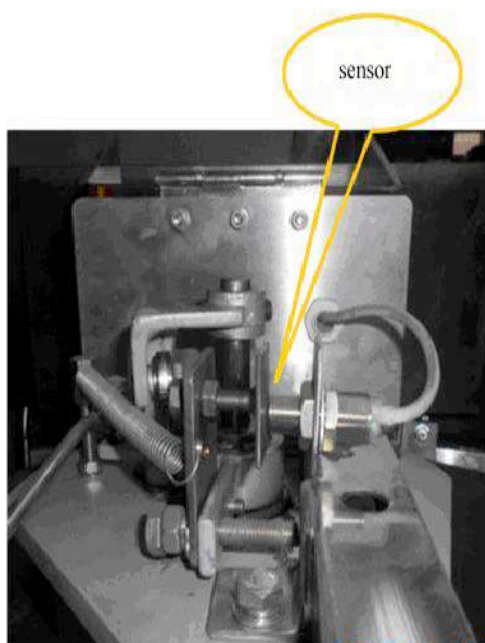


Wrong position of the cam of the funnel. Adjust its position. Make sure that the funnel, when is at its top position is 1.5-1cm higher than the bag mouth.



The funnel is installed too high or too low. Adjust the position of it.

No filling from the weigher



The weigher switch is not on.

- Click on the weigher switch.

The weigher hasn't started to work.

- Make the weigher start to work.

The wire of signal is not well connected.

- Check wires between the machine and corollary machines.

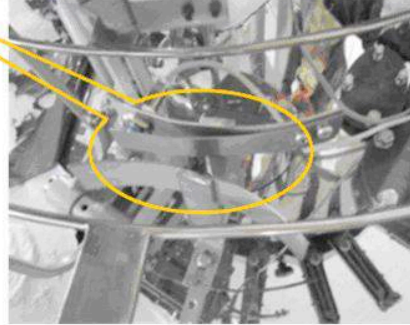
The signal of weigher is not detected.

- Check the sensor for open bag forks. Make sure that the light is on when the bag is open. Adjust its position.



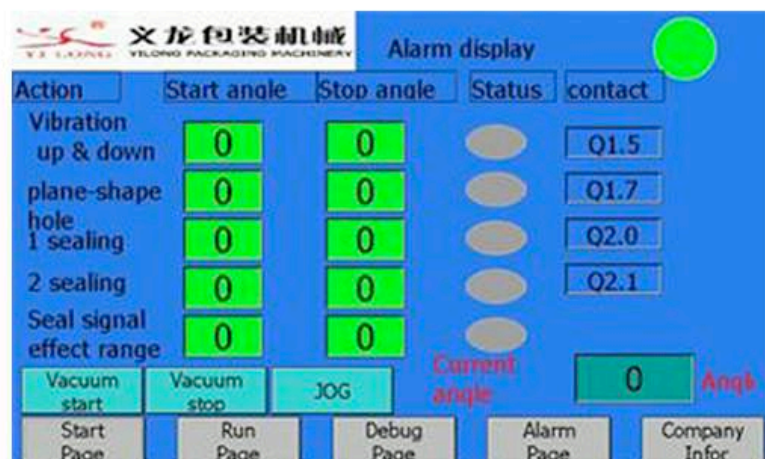
## Seal empty bags

- The weigher is off or slower than the machine. The sensor of seal is on the state of full material( The light is on all the time).
- Adjust the speed and pneumatic pressure of the weigher.  
Adjust the light to be on while there is material and off while no material.



## No sealing after filling

- Wrong set of seal signal effect range. The sensor couldn't detect filling.
- Open the debug page and get to the seal adjust page. Make sure that the seal signal effect range at the range of 0-100 or 0-150.

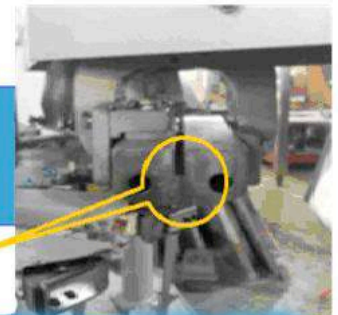




## Sealing is not flat or good.

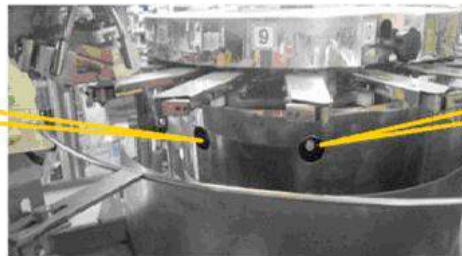
There is too much space between the sealing mouth plates.

- Adjust the sealing mouth to make the two plates touch well.



The bag is too tight or not flattened during sealing. Adjust the proper bolts of it.

- second sealing adjust



- first sealing adjust

## The printer doesn't work well.

The head of the date printer is not in the right place.

- The air pressure is too small. Adjust the valve on the printer's pump and make the pressure bigger.

The pump works slowly and has leakage.

- Clean sundries in the pump. Add oil to the pump. Or change the obturating ring in the pump.

The ribbon belt in the printer is not good.

- Change the ribbon belt.

The head of the date printer is not parallel with the plate.

- Change the angle of the plate.

There is space between the head of the date printer and the plate during print.

- Adjust the position of the plate or the printer.

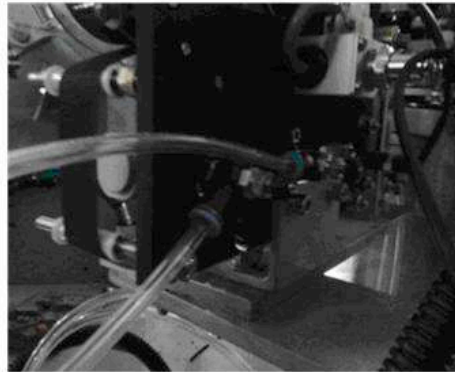
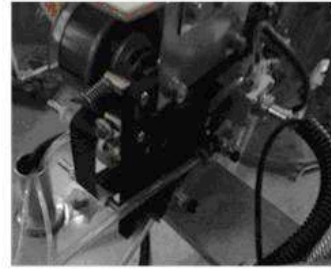
The head of the printer is not heated.

- Make it larger by the screw of the temperature controller.



## Printer doesn't work.

Wrong angle or air pump error of the printer



Check the angle or the pump

**The date printer is an option according to clients' requirements.**

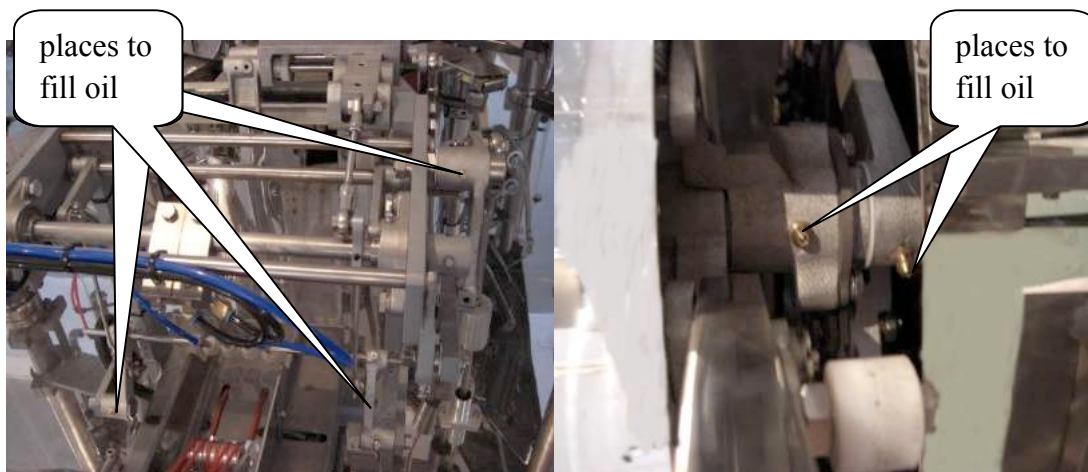
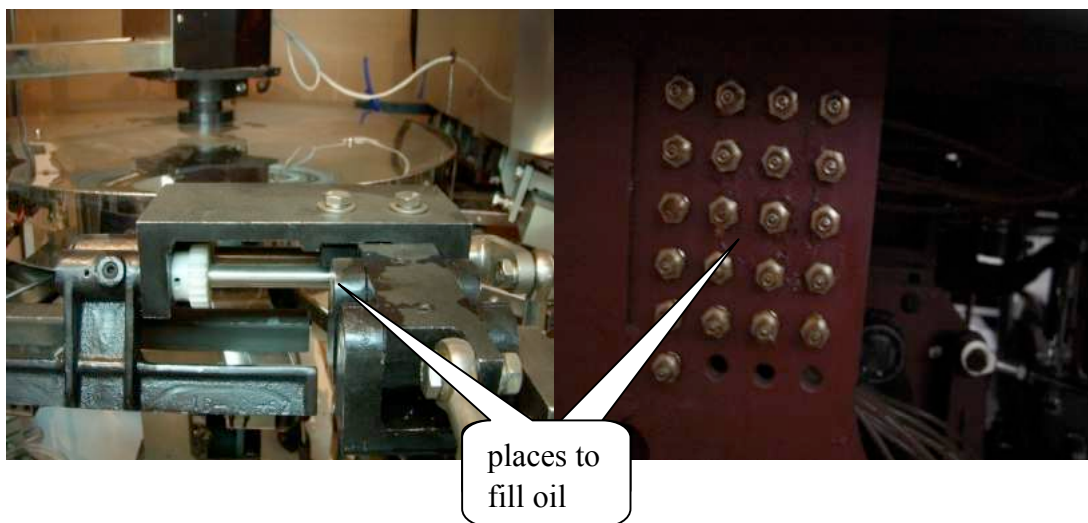
## 6. MAINTENANCE

Notice: When the machine is start to work, please operate it at the low speed of 15-23 bags per minute for about 20 days at first. After that you could raise the speed.

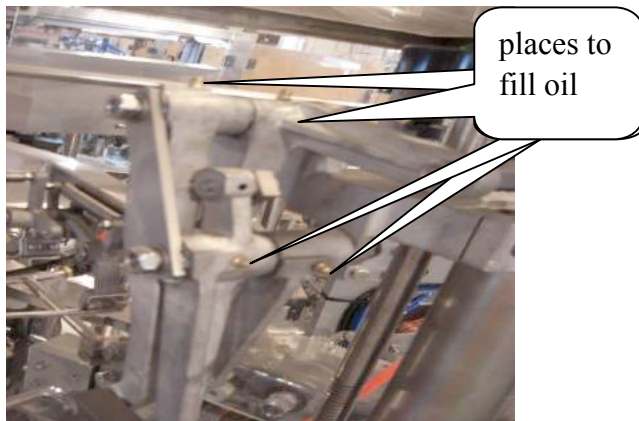
### 6.1 Places need to be oiled

A. Parts in the bottom of the machine require to be oiled every 10-15 days. Parts including cams, link levers, the big turn plate, bearing and the chain require lubricant.









B. You must add oil to the oil filling hole before the machine working and production everyday. The type of the oil should be Turbine oil 32nd or oil of the similar viscosity.

## 6.2 Overhaul and maintenance

A. Check if it is normal of all connected parts of the machine or not.

B. Check if the screws of the transmission part and the vibration part are loose or not every 10-15days. And tighten them in time.

C. Check by inching feed if the machine is rotating reversely or not and every part is working in good state or not every time you start the machine.

D. After work everyday:

a) Cut off the power.

b) Clean the machine.

c) Clean the dust in suction cups or change the suction cups.

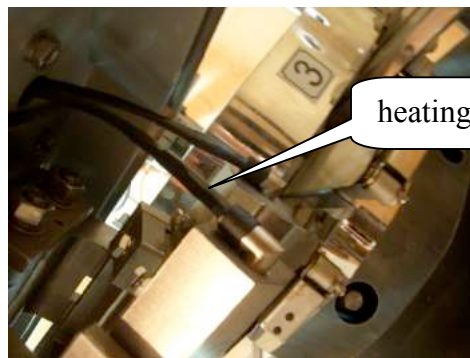
d)Clean the sealing mouth by the iron brush and check if the mouth is damage or not.



### 6.3 Wearing parts



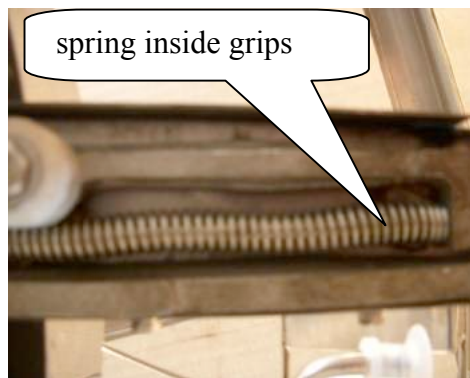
thermometer



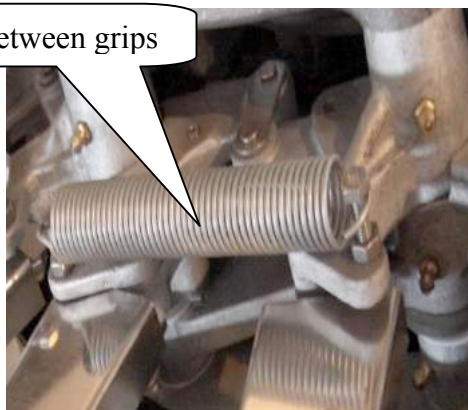
heating pipe



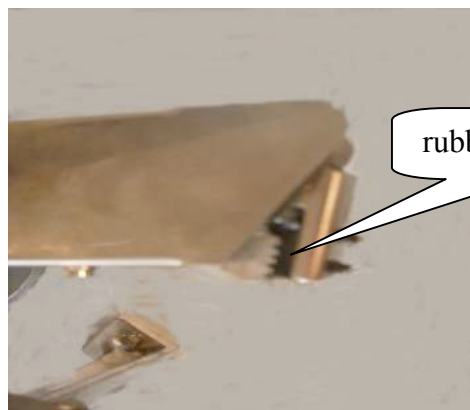
spring on the top of open bag forks



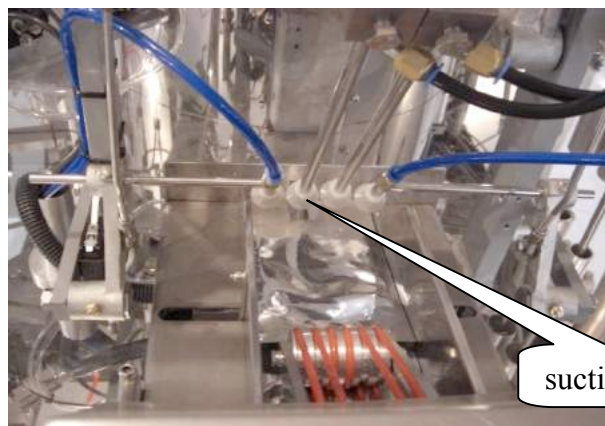
spring inside grips



spring between grips



rubber inside grips



suction cup