



东莞市飞科自动化科技有限公司  
Dongguan Fineco Automation Technology Co.,Ltd

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# INSTRUCTION MANUAL



**FINECO**  
Labeling machine

**Model:FK805**

**Name: Automatic Round Bottle Labeling Machine**



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## Chapter 1 Statement

### 1.Matters need Attention

1. As this labeling machine is an industrial equipment, only trained workers are expected to operate it.
2. Operating this equipment need to be in accordance with the instructions in the manual or under our technician's guidance. Notice that some mechanical parts described in this manual are used for instruction only, not included in the standard configurations.
3. This operation manual applies to this equipment ONLY and aims to ensure correct operation and adjustment. And we hold the final explanation right of this manual.

### 2.Rights Reserved

1. We will provide service of updating the mechanical parts, electrical parts and the software, but charge fees accordingly.
2. We will not responsible for any machine problem that caused by your arbitrarily movement, and you should not change the machine without our engineers' suggestion.
3. Optional function :hot stamp printer and other needed functions. We will provide technical support for you but hold no responsibility for the optional functions.
4. We hold intellectual property rights for this machine and machine

instruction,

we will look into legal responsibility if copyright or something like that occurs.

### 3.Safety Considerations

- 1.Electric shock Caution! Earth wire is indispensable for operating this machine, make sure you have one.
- 2.Caution! Voltage overloaded is dangerous.
- 3.Caution! Do not touch the circuit in the electric box without our technician' guidance.
- 4.Caution! Do not touch the running mechanical parts.

### 4.Operation Cautions

Only trained worker are allowed to install, operate and maintain the equipment.

The operator should equipped with these qualities:

- be able to operate the machine safely by himself.
- be able to fix the small mistakes by himself.
- there should be at least 2 people at hand to provide guidance for him .

### 5.Operating Environment

Please do not use this machine in the following environment:

- great temperature variation
- high humidity



- strong vibration or impact
- dusty
- where there is water, oil, chemical splashes
- Where there is a risk of explosive, flammable items

## 6.Run-in period

This machine are tailor-made according to your product and production line, being nonstandard equipment and the operator must be well-trained, so there would be a run-in period of 1 month or so. During the run-in period, you can ask us for technical support if the machine can not reach to your requirements.

## Chapter 2 Introduction

### 1.Application

Applies to the circumferential surface of the round bottle labeling, can achieve single-labeling and double labeling, the labeling position can be adjusted easily. Widely used in cosmetics, food, pharmaceuticals, disinfectant and other industries. Optional peripheral location detection means can be realized in the circumferential surface labeling the specified location.

Optional Tape printer and inkjet printer to print the production date, batch number, and expiry date.



## 2. Technical Parameters

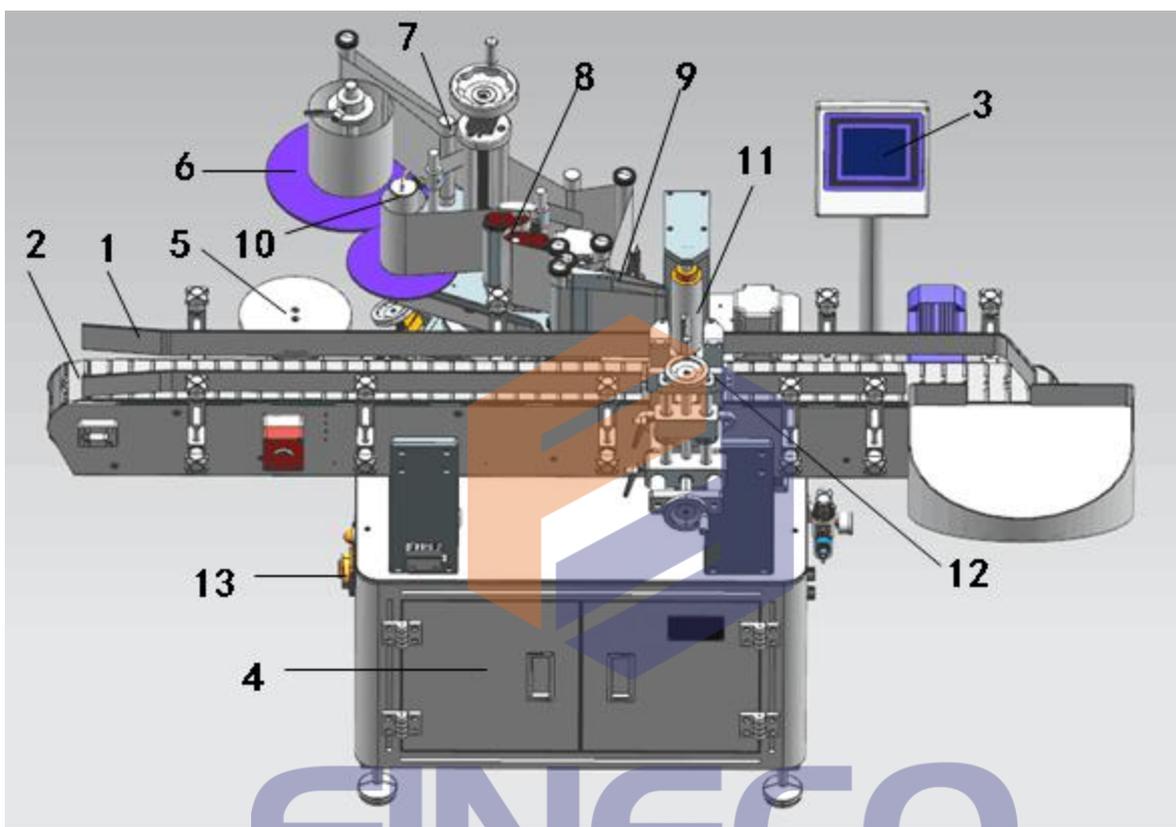
- \* labeling accuracy:  $\pm 1\text{mm}$  (errors caused by product and label are not concerned);
- \* labeling speed:  $25\sim 60\text{pcs/min}$ , depends on the length and material of the product);
- \* Applicable Product: Diameters:  $\phi 30\text{mm}-\phi 100\text{mm}$
- \* Applicable Label Size(mm): length:  $20\text{mm}-250\text{mm}$  width (the release paper):  $20\text{mm}-150\text{mm}$ ;
- \* Device dimensions (mm) (L  $\times$  W  $\times$  H):  $1800\times 900\times 1300\text{mm}$ ;
- \* Voltage (V): 220V
- \* Weight: about 185 kg.
- \* Air Pressure:  $0.2-0.5\text{ Pa}$

## 3. Labeling Process

Feeding→Spacing (Bottles are separated one by one to ensure labeling time for each bottle)→The product sensor detects the bottle→ PLC receives product signal and starts labeling program, air cylinder works→ labeling & strengthening completed, air cylinder backwards→ Collection/Connect to production line.

## Chapter 3 Configuration

### 1. Overview



1.Guiding Rails: keep the bottles goes straightly, can be adjusted according to the diameters of the bottles.

2.Conveyor Belt: transmits the bottles until labeling completed.

3.Touch Screen: Control the machine by setting parameters here.

4.Electric Box: places the electronic configurations, such as PLC and motor drivers.

5.Spacing Device: separates the bottles one by one to ensure enough labeling time for each bottle.

6.Label Tray: places label reel.

7.Pressing Piece: presses the label to keep tension of the label.

8.Traction Device: driven by a stepper motor, draws the release paper out.

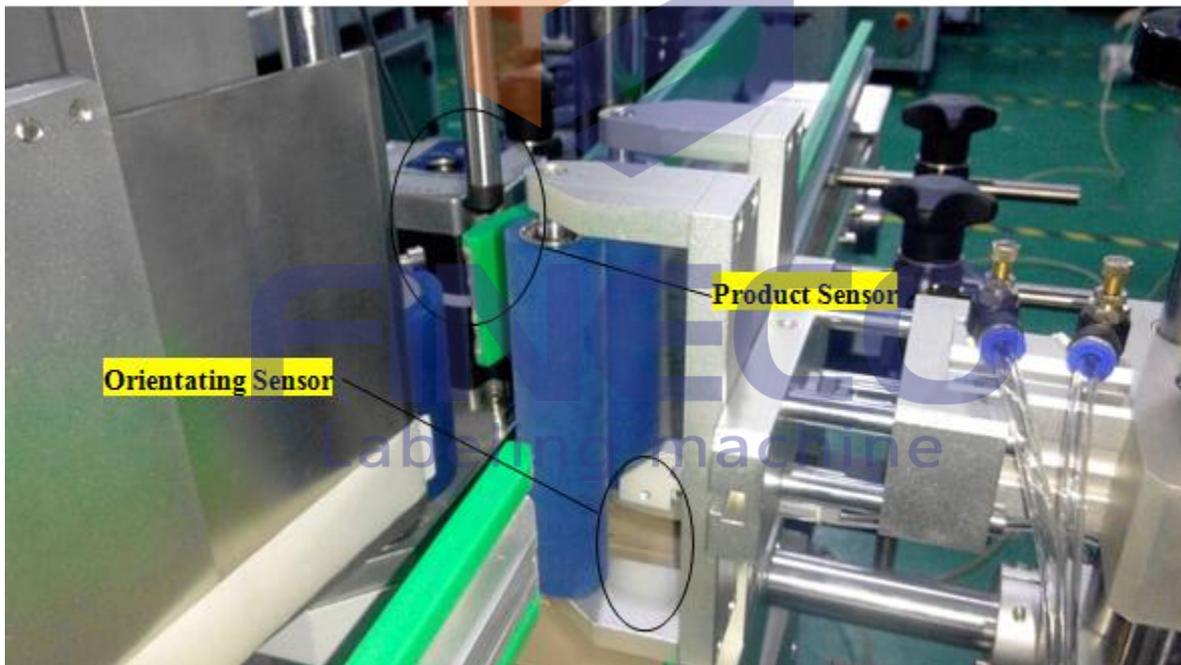
9.Label-peeling Plate: peel the label from the release paper.

10.Recycling Device: recycles the release paper.

11.Label-strengthening Device: after labeling,presses the label to make it more tighter.

12.Fixing Device:fixes the bottles while labeling.

## 2.Detailed Drawing



2.1 Product Sensor: consists of launcher/receiver and a reflector. It detects product and can be adjusted in horizontal directions.

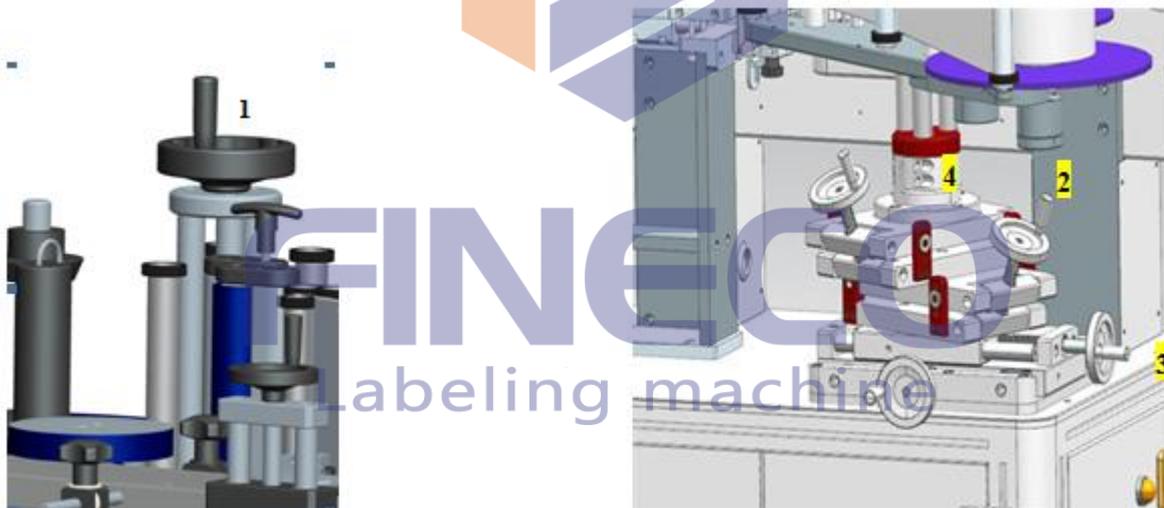
2.2 Orientating Sensor:consists of launcher/receiver and a reflector. It detects the position to be labeled and send signals to PLC, then the label would stick

to the designated position.



Label Sensor

2.3 Label Sensor: U shaped,it detects the label. You can adjust the label's length that stretches out from the label-peeling plate by adjusting the position of the label sensor.

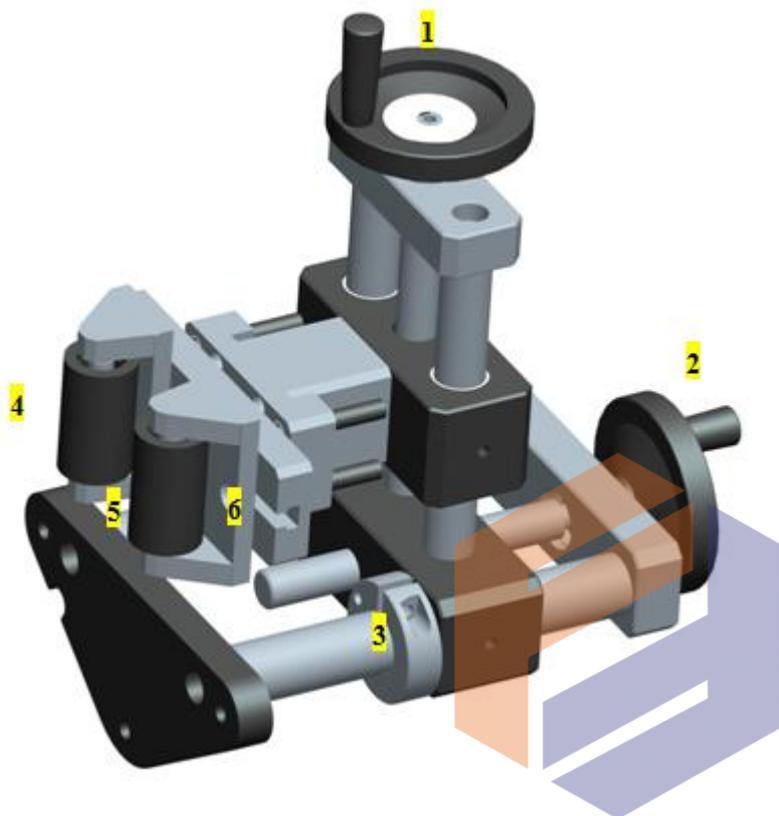


2.4 Adjusting Device: There are Four wheels to adjust the whole labeling head.

Wheel 1:adjust the height of the labeling head.

Wheel 2:adjust the angle of the label-peeling plate.It is usually used for tapered bottles.

Wheel 3: Adjust the labeling head forward and backward.



2.5 Fixing device Adjustment:

Wheel 1: adjust the height of the fixing device.

Wheel 2: Adjust the labeling head forward and backward to adapt to bottles of different sizes.

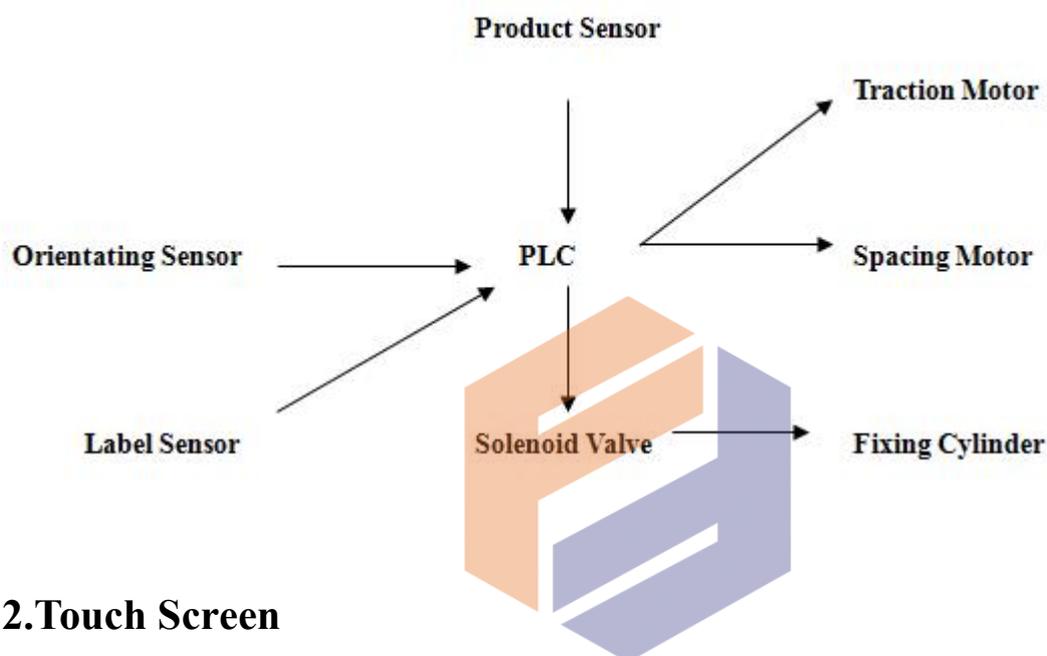
Screw 3: Fasten screw 3 after adjustment done.

Roller 4&5: The distance and angle of these 2 rollers are adjustable to adapt to bottles of different sizes.

Screw 6: loose screw 6 to adjust roller 4&5.

## Chapter 4 Electrical Configuration

### 1. The principle of electric control



### 2.Touch Screen

2.1 Turn on the machine to enter this supplier's information page.



**FINECO**  
Dongguan Fineco Automation Technology Co.,Ltd

labeling machine  
Welcome to use

**FK805 Automatic Round Bottle Labeling Machine**

Tel:0769-33354884  
Fax:0769-85829481

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

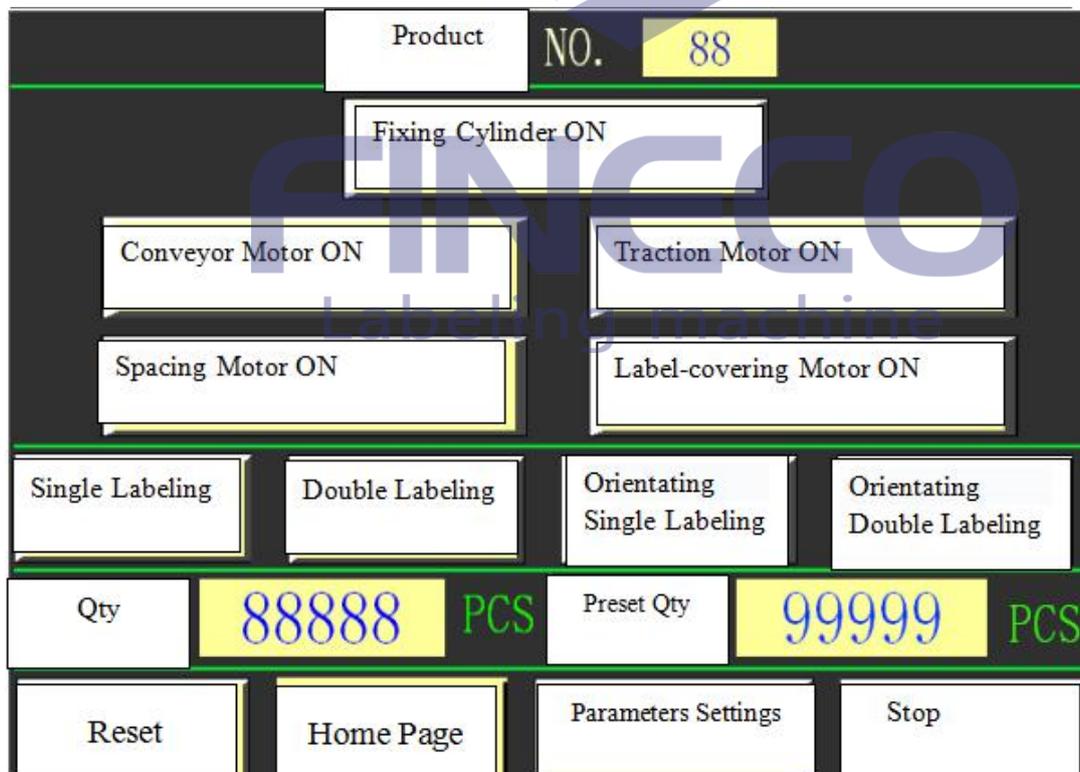
Add:No 11, Zhenchang Road, Wusha, ChangAn Town,Dongguan City,  
Guangdong Province, China.

12. 03. 20                      Sunday                      18:30

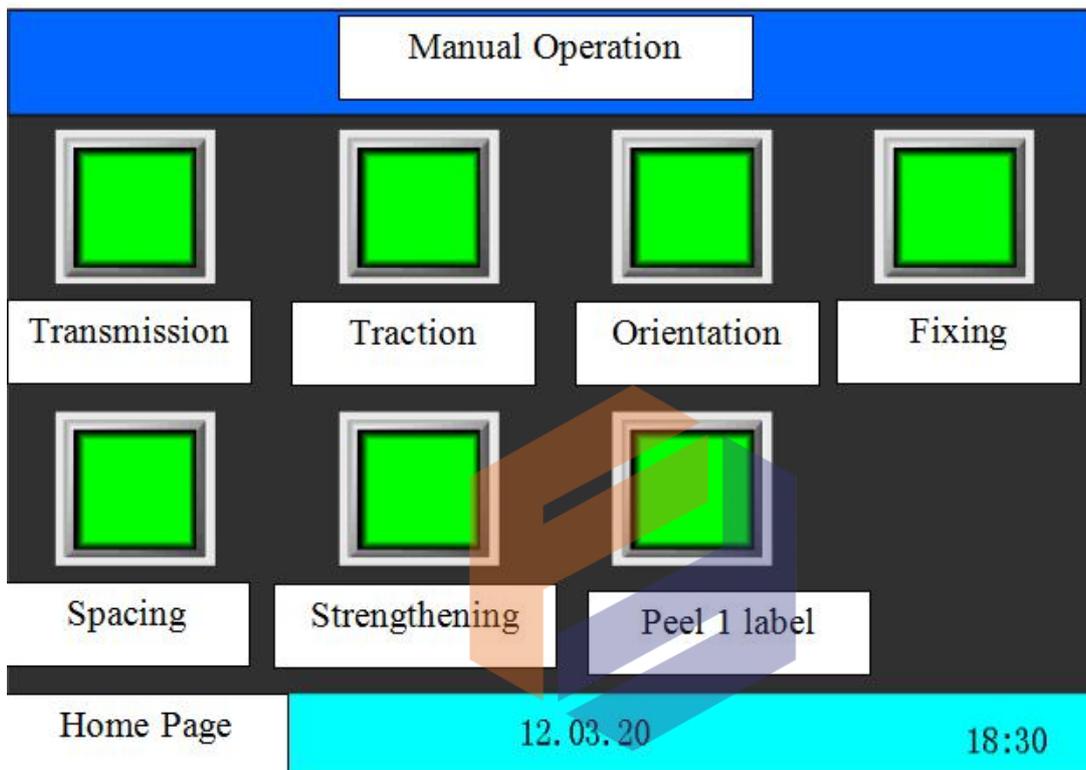
2.2 Home Page: click to enter different sections.



### 2.3 Production



2.4 Manual Control: click the options to complete the movements.



2.5 Parameter Loading: input the password to modify and set parameters.

FINECO  
Labeling machine

Parameter Loading

Modify parameters with care please:

Password

Home Page 12. 03. 20 18:30

2.6 Parameter Settings: Modify each parameter here

Product NO.

Traction Speed	<input type="text" value="99999"/> HZ	2 <sup>nd</sup> Label Delay	<input type="text" value="9.999"/> S
Strengthening Speed	<input type="text" value="99999"/> HZ	1 <sup>st</sup> Label Delay	<input type="text" value="9.999"/> S
Fixing Delay	<input type="text" value="9.99"/> S	2 <sup>nd</sup> Label Delay	<input type="text" value="9.999"/> S
Strengthening Speed	<input type="text" value="9.99"/> S	1 <sup>st</sup> Label Detection	<input type="text" value="9.999"/> S
Filter Product Signals	<input type="text" value="99.99"/> S	2 <sup>nd</sup> Label Detection	<input type="text" value="9.999"/> S



-Traction Speed: Under automatic production condition, the speed of the labels come out from the label-peeling plate. Setting Range:200 HZ— 32000 HZ

-Strengthening Speed:Under automatic production condition, the speed of the label-strengthening roller. Setting Range:200 HZ— 32000 HZ

-Fixing Delay:Under automatic production condition, after product detected, the positioning cylinder would move to fix the products, this setting means to delay the movement of the cylinder.

-Filter Product Signal :Under automatic production condition, usually be 0.After the last labeling process completed, the next labeling will not start after this set time.

-2nd Label Delay:Under double-labeled condition, after the first labeling completed, the second label will come out after the set time.

-1st Label Orientating Delay

:Under double-labeled condition, after the product is detected, the first label would come out after this time, thus to adjust the position of the first label.

-2nd Label Orientating Delay:Under double-labeled condition, after the first labeling completed, the second label would come out after this time, such to adjust the position of the 2 labels.

-1st Label Detection:under double-labeling positioning condition ,if the label is too long to come out at at once ,we need to prolong the detecting time to let

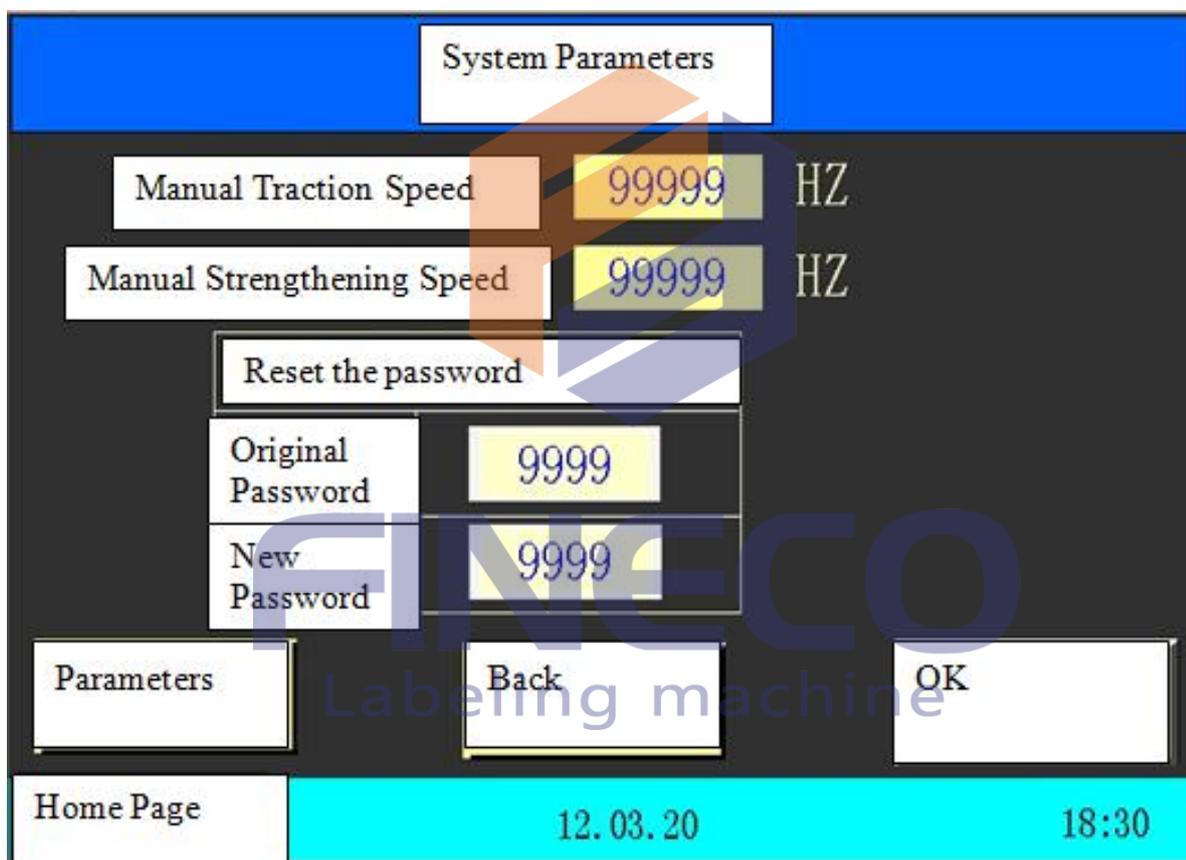
the label comes out completely in time .

-1st Label Detection: the same as above;

-Save parameters :save the parameters of the current product ,it can save 20 sets to the most.

-Select parameters:select parameters set before.

2.7 System Parameters:reset the loading parameters here.

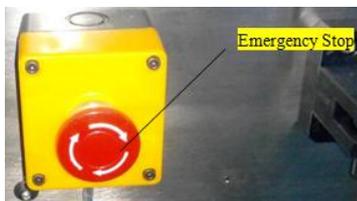


-Manual Traction Speed: under manual condition ,the speed of labels coming out by clicking “Traction”.

-Manual Strengthening Speed: under manual condition ,the speed of the Strengthening rubber roller.

### 3.Control Buttons

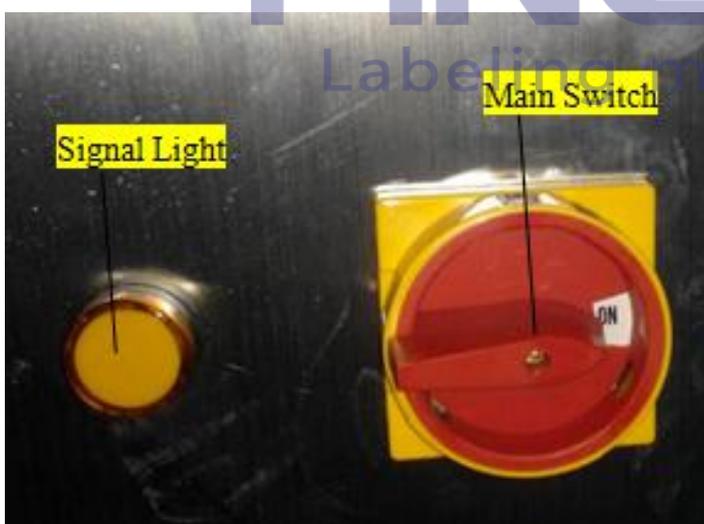
3.1 Emergency stop switch ,stop the machine when emergency appears.Press and turn clockwise to start the machine ,there is also one in the touch screen.



3.2 Two Speed controller ,installed on the surface of electric box,control the speed of conveying and strengthening .Turn clockwise to speed up.



3.4 Main Switch



#### 4.Connection

4.1 Power:plug in to turn on the machine.

4.2 Gas circuit:connect this part like this,the working air pressure is usually be

0.2 Mpa.



## Chapter 5 Adjustment

### 1.Mechanical Adjustment

1 .Conveying adjustment:the standard is -the bottles can stand on their own steadily and straightly.adjust the height and distance of the rods on the 2 sides to adapt to different bottles.

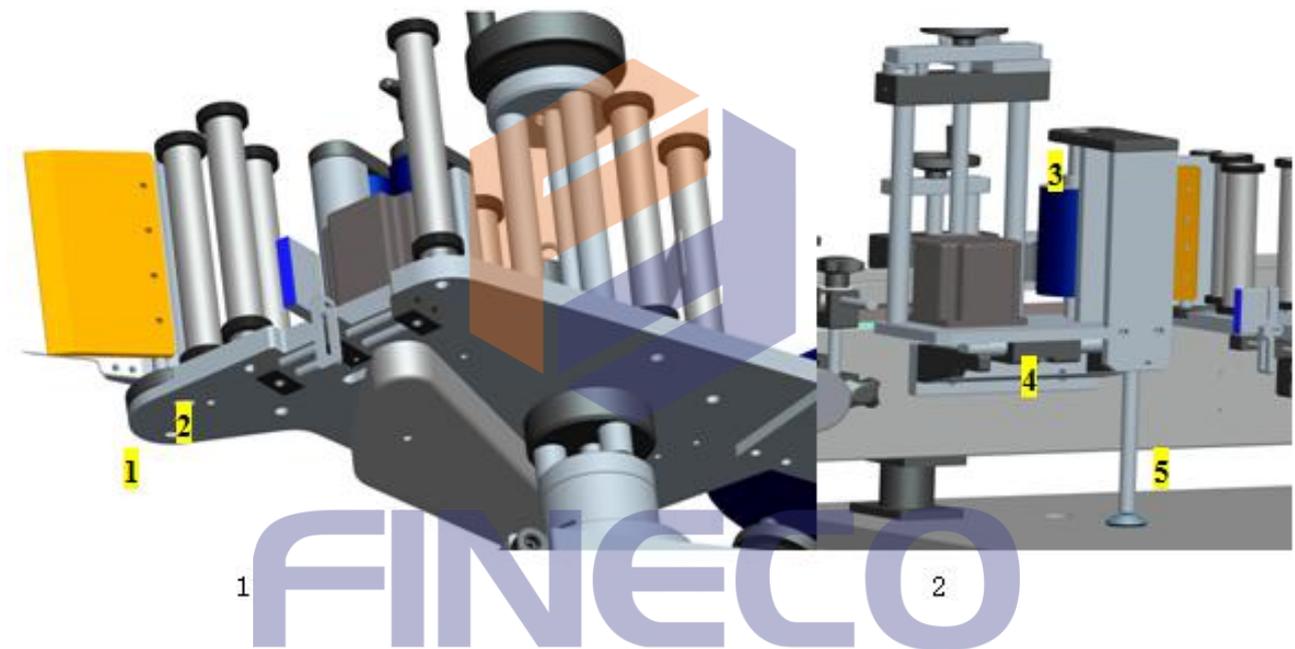
2. Spacing device adjustment, adjust the distance of every 2 bottles to make sure every bottle's labeling time is enough,the standard is -the bottles won't fall down when separation.

3 . Labeling head adjustment:loose the screws to adjust ;and the labeling head can be adjusted in horizontal ,vertical directions,besides,the inclination of

the labeling head can be adjusted too.

4. Strengthening device adjustment:loose the screw in “4” to adjust perpendicularity of the strengthening rubber roller;and loose the screw in “3” to

5 Label-peeling plate adjustment.loose the 2 screws on the plate to adjust the angle of it.



## 2. Electric sensor adjustment

This machine is equipped with 2 sensors:product detect sensor and label sensor,you can adjust them according to your product and labeling requirement.

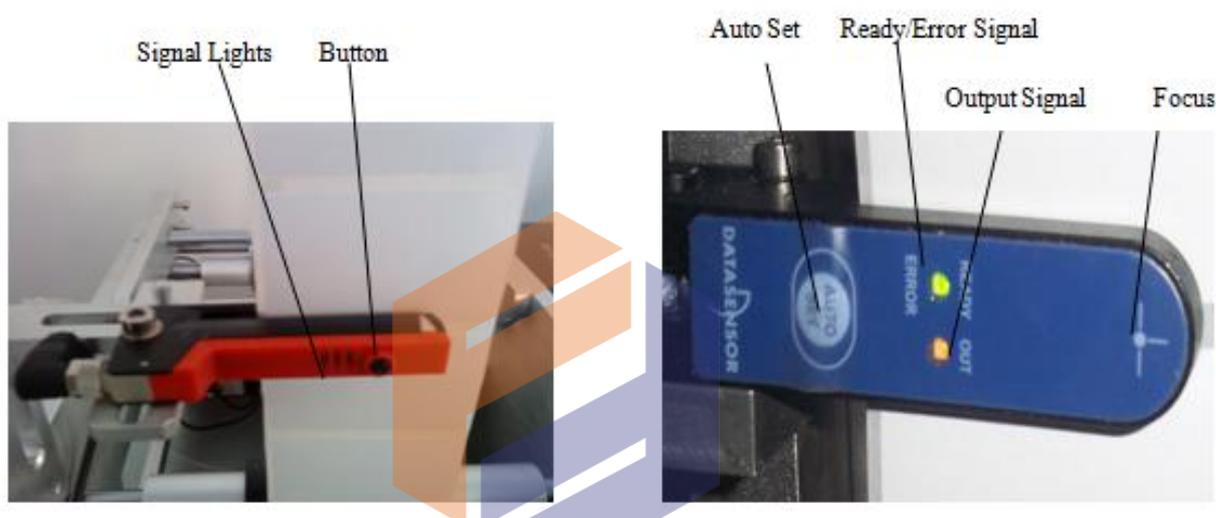
### 2. Position Adjustment

You can adjust them by adjusting the sensor frame,we have talked about this in the mechanical configuration part.

## 3.The Setting of Sensors

The standard configuration of this machine is MTS-2 slot-shaped sensor other kinds of sensors are optional.

**3.1 Label Sensor:** (just for instruction use,not means the it being the sensor of your machine)



### 3.1.1 the Adjustment of Leuze GS-63:

① Work principle: light penetrability,the light penetrability of the label is different from the gap between two label,suitable for paper label or the label has certain thickness.

② About the signal lights and the adjustment button:

Green signal light : power light;

Yellow signal light: status light ( it lights up when output signal ) ;

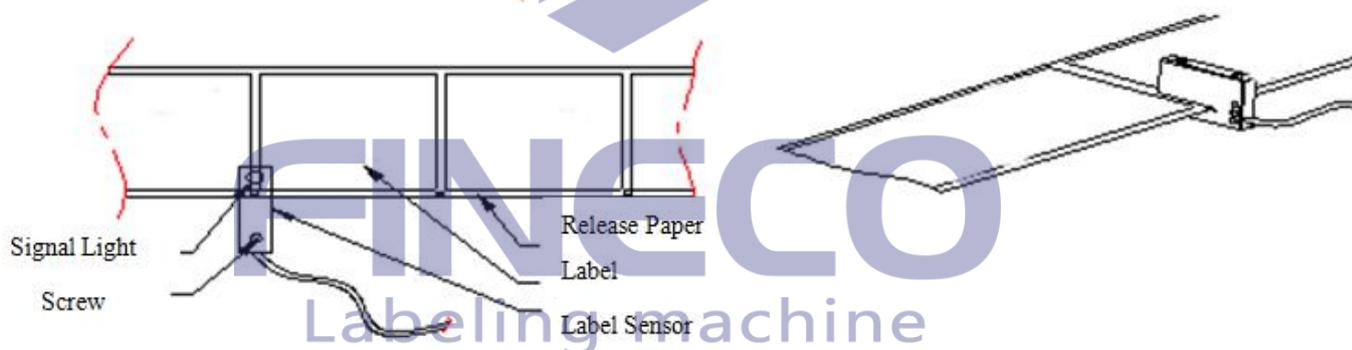
Adjustment Button:used for setting detect parameters of different labels;

③ Setting Method:

Make the label pass through the slot of the sensor and pull it,if the yellow the label sensor works well and can be put into use directly.If not,you need to

reset the label sensor: firstly, put label in the slot of the sensor, press the adjustment button for 3 seconds and you will see the yellow signal light flickers, then release the button, pull the label to make the gap between two labels

in the slot, press the adjustment button again for 8 seconds, then release it, thus adjustment completed. Pulling the label, you can see the yellow signal light up and put out when the gaps and the labels alternately appear. labels in the slot, press the adjustment button again for 8 seconds, then release it, thus adjustment completed. Pulling the label, you can see the yellow signal light up and put out when the gaps and the labels alternately appear.



### 3.1.2 the Adjustment of Datasensor SR21-IR(Italy)

- ① Work principle: the penetrability of light, one side of the sensor launch light and the other side receives, the intensity of the received light changes when the label and the label gaps alternately appears, suitable for the label that made of
- ② Setting Method:

3.2 Product Sensor:( just for instruction use, not means the it being the

sensor of your machine )

When the “ready” signal lights up, put the label on the focus of the sensor, pull the label to make the gaps and labels go through the focus alternately to see if the output signals change. If so, the sensor can be put into use directly. If not, pls set the sensor as following steps:

(1) Make sure label reel goes through the sensor slot, ‘focus’ on label. Press the ‘auto set’ button, the Ready/Error and Output lights would put out, it means the sensor is capturing the signal of the label on its focus. Do not move the label until the Ready/Error light flickers.

(2) When Ready/Error light flickers, draw the label to make the ‘focus’ on the gap between 2 labels..

(3) Press the ‘AUTO SET’ button again, Ready/Error light puts out. It means the sensor is capturing the gap signal. Do not move the label until the Ready/Error lights up.

(4) Pull the label back and forth to see if the ‘out’ signal lights up when ‘focus’ on the border of gap and label. Thus adjustment done.

(5) “Ready/Error” signal lights up shows that the sensor is working.

3.2 Product Sensor:( just for instruction use, not means the it being the sensor of your machine )

① the connection method of FX-301 series : please connect the product detect sensor as the picture.



## ② Work Principle:

The detect sensor identifying objects according to the amount of the light reflection.it launches light on the object and the object reflects light to the sensor,when the amount of light reflection reaches to the set number,the sensor can detect the object and send signal out.

## ③ Status Switching:

Press the button, the green signal changes among the “L/D”“mode/cancel” “CUST”、 “PRO”, representing different working conditions.

## ④ Settings:

a. Not laying any product on the detecting place ,open the transparent cover of the amplifier,press the “+”button and adjust the green number to at least 2 times bigger than the red number.just as the following picture.

b. Laying the product on the labeling place,make sure that the product stays close to the locating rod on the left.You can adjust the labeling location of the product by adjusting the locating rod.

c. Close the transparent cover,setting completed.



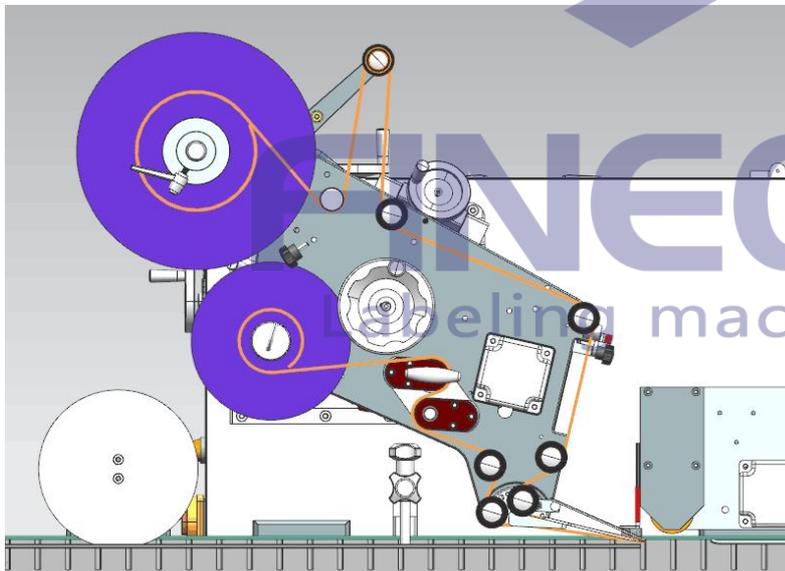
d.Put product on the labeling location,the product detect sensor sends signals to PLC,then the PLC direct the relevant parts to operate,labeling start.

## Chapter 6 Operation

### 1.Label Winding

Please winding the label as following:(key point:keep the intensity and balance of the label)

Label Winding Diagram



### 2.Mechanical Operation

1.Conveyor Mechanism Adjustment: please refer to the adjustment section we talked before.

2 .Labeling Location Adjustment: laying the product below the label-peeling

plate,adjust the labeling head or the locating rod to make the plate stop at the designated labeling location.

3 .Anteroposterior Adjustment: if moving the labeling head or the locating rod can not realize labeling requirement,there are three methods to achieve your requirement.the first one is moving the product sensor forward or backward,thus advance/delay the detection;the second one is setting delay labeling time; the third one is setting the automatic high speed length.

### 3.Electrical Operation

Power on—Turn on the Main Switch and Emergency

Switch—Production Page—Connect air compressor—Production

## Chapter 7 Maintenance

### 1.Maintain and Clean

1.1 This machine is powered by AC power,so it needs replace the fuse for overload protection .

1.2 Please use alcohol to clean the machine; and use commercial neutral cleaning fluid to clean the electric box.

Matters need Attention:

Do not use cleaning tool that would damage the surface of the machine.

Do not use corrosive plastic utensils;

Do not use acid soluble liquid.

## **2. Routine Maintenance**

Regular inspection is necessary ,especially the following parts:

- 1.The conveyor belt's speed and accuracy (after extended periods of use )
- 2.Clean up waste paper scraps and pieces.
- 3.Remove oil residue from the rollers and the machine edges.
- 4.Clean the sensor lens with a soft brush or cloth.

## **3.Surface Maintenance**

This machine have chrome plating processed,equipped with antirust function.However, you still need to pay Attention to rust in the placing processes,using anti-rust oil to spray the stainless steel and iron parts from time to time.



### **Chapter8 Common Problem Solution**

#### **1.Release Paper Broken**

Possible causes: poor quality of the release paper;mechanical parts scratches the release paper;label adhesion.

①:Check the release paper,if it is already broken or cut heavily during label production,contact your label provider to improve their

craftsmanship. Glassine material is recommended as release paper.

②: Check if there any part scratch the label in the traction process and adjust them.

③: Adjust the pre- peeled length in case label stick to the already pasted product.

## 2. Labeling deviation more than 2 mm

Possible causes: Label-winding deviation; the label-peeling plate is not parallel to the conveyor belt; the traction wheel skid; Unqualified product.

① Label-winding deviation: Loose the traction device, pull the label back and forth, correct the label route automatically. Then mark the right route with the equipped circles on roller.

② The label-peeling plate is not parallel to the labeling surface: Adjust the labeling head to make it be paralleled to the labeling surface.

③ The traction wheel skid: Fasten the traction device.

④ Unqualified product: Tolerance happens in the product manufacture process also bring about labeling deviation, so the product quality must be strictly controlled.

## 3. Labels come out incessantly at a time

① Label Sensor: reset the sensor according to the instruction manual. If the problem still exists, maybe the sensor is not applicable to the label or it has broken, contact your labeler supplier in this situation.



②Label- winding:If label bypasses the label sensor's focus the sensor would not be able to detect labels.

#### **4.The Release Paper is Loose at the Label-peeling Plate**

①Slow traction speed:Speed up the traction speed;

②The traction device loosed:Fasten the traction device and check if the drive belt behind the release paper recycling axis is broken.



**FINECO**  
Labeling machine

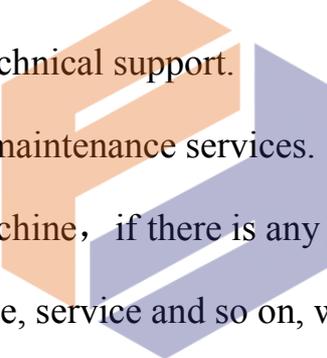


### Service Commitment

Fineco based on the principle of customer first,dedicated to provide thorough pre-sales and after-sales service.

1. Professional technical consultation service
2. Professional training service.
3. Responsible for providing technical support.
4. One year warranty, provide maintenance services.

Thank you for using our machine, if there is any dissatisfaction with equipment quality, performance, service and so on, welcome to put forward valuable suggestions!



**FINECO**  
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