



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

INSTRUCTION MANUAL



Model: FK615

Name: Semi-automatic Plane Labeling Machine



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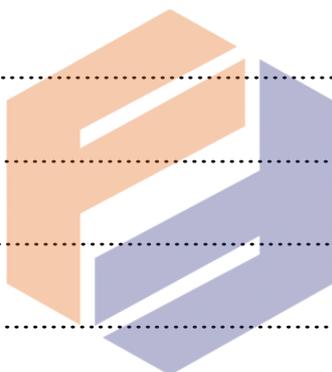
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Labeling machine



1.Matters need attention

1.1 615 is equipped with single and double labeling functions and you can switch manually with ease.Please refer to relevant chapter.

1.2 As this labeling machine is a non-standard equipment, only trained workers are expected to operate it.

1.3 Operating this equipment needs 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 configuration.

1.4 This operation manual applies to 615 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's guidance.

4. Caution! Do not touch the running mechanical parts.

4. Operation Cautions

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

The operator should be 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:

- with great temperature variation
- with high humidity
- with 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 is tailor-made according to your product, being nonstandard equipment

and the operator must be trained,so there would be a run-in period of 1 month or so.In the run-in period,you can ask us for technical support if the machine can not reach to your requirement.

Chapter 2 Introduction

1.Application

Suitable for different kinds of plane labeling, small taper flat bottle labeling, such as xylitol, cosmetics square bottles, boxes and so on. Can achieve single /double labeling, front and back labeling.Widely used in food, cosmetics, chemical, pharmaceutical and other industries; Optional ribbon coding machine or hot stamp printer, print production batch labeling and other information at the same time, reduce packaging processes, improve production efficiency.

2.Application Scope

1.For label: self-adhesive labels, self-adhesive film, electronic supervision code, bar code, etc.

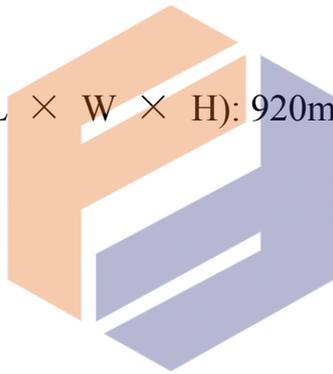
2.Application: Requirements in the plane surface, conical surface of the attached label product.

3.Industry: Widely used in food, pharmaceutical, cosmetic, electronic, metal, plastics and other industries.



3. Technical Parameters: (The following are the standard technical parameters, other special requirements and functions can be tailor-made)

- ◆ Suitable label size (mm): L:15mm ~ 100mm W:15mm-110mm
- ◆ Applicable Products: L:20mm-200mm W:20mm-150mm H:20mm-120mm
- ◆ Applicable standard roll diameter (mm): ϕ 240mm
- ◆ Applicable standard roll diameter (mm): ϕ 76mm
- ◆ Labeling accuracy (mm): \pm 0.5mm
- ◆ Labeling speed (pcs / min): 15 ~ 30pcs/min
- ◆ Weight (kg): about 45kg
- ◆ Frequency (HZ): 50HZ
- ◆ Voltage (V): 220V
- ◆ Power (W): 330W
- ◆ Device dimensions (mm) (L \times W \times H): 920mm \times 470mm \times 500mm

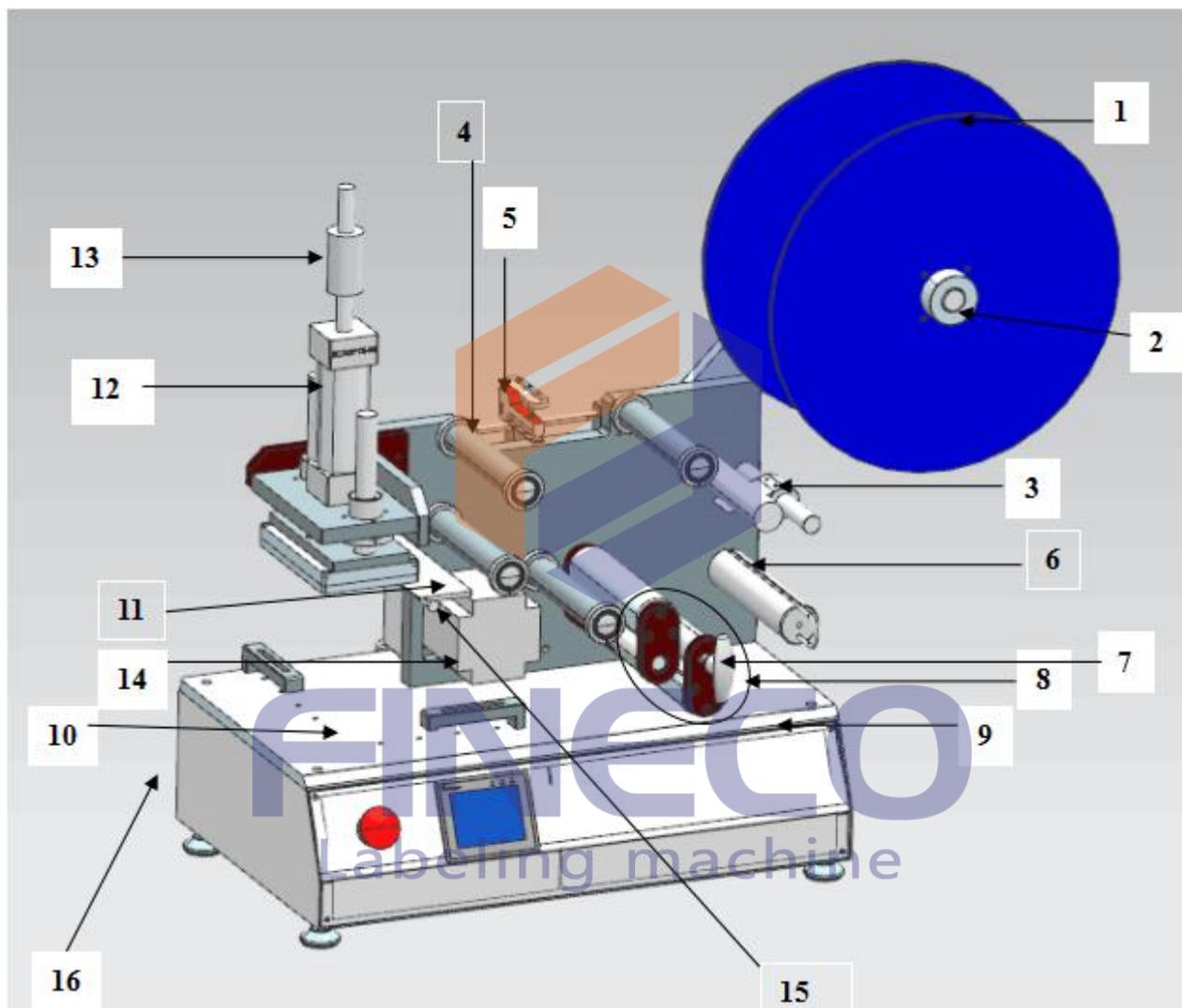


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Chapter 3 Configuration

1.Overview

The configuration and function of each part are as following:



1.label tray:placing the label roll;

2.Locking screw: lock the label tray, fix the label reel.

3.Pressing plate:press the label,balance the label.

4.roller: keep the tension of label.



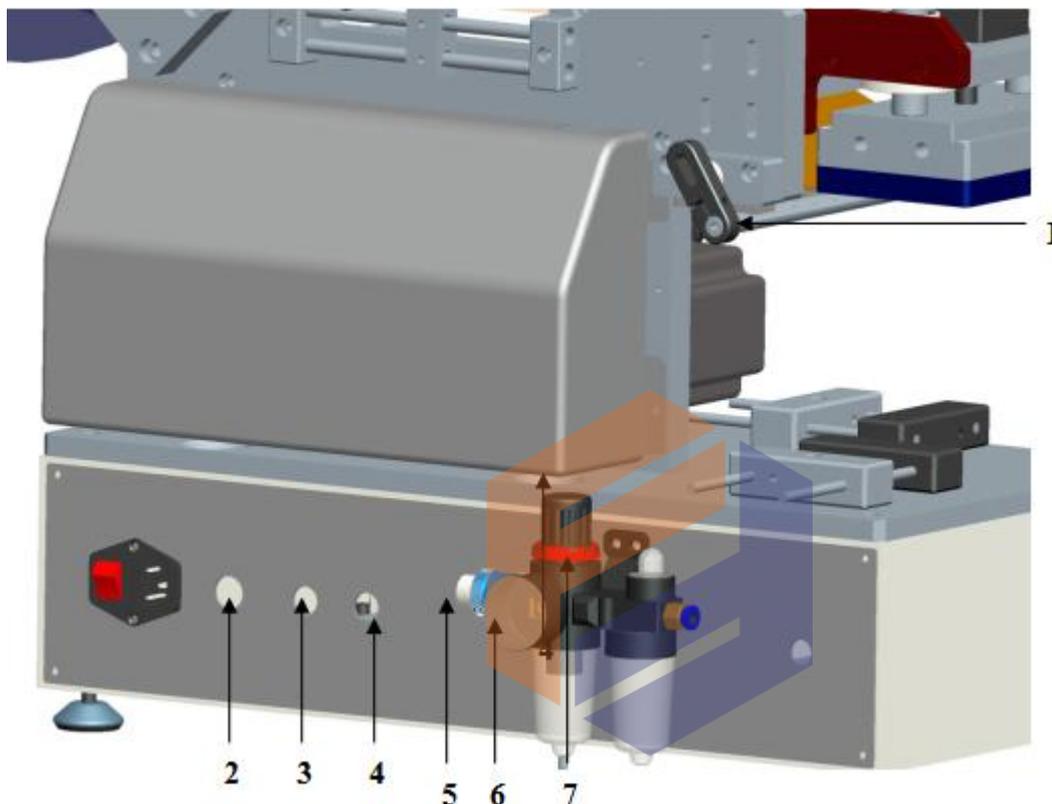
- 5.label sensor:detect and distinguish every label
- 6.Recycling device: recycle the Release paper.
- 7.T-shaped screw:lock the traction device,tract the label out.
- 8.Traction device:drawing the label.
- 9.Electric box:place the electronic parts.
- 10.Platform:placing the mold that used to fix product.
- 11.Label-peeling plate:peel the label from the Release paper.
- 12.Air cylinder:controlling the labeling head.
- 13.Adjustment screw: adjust the travel of the cylinder.
- 14.Traction motor:motivate the traction device.
- 15.Blowing pipe:blow the peeled label up to the labeling head till the label be peeled totally.
- 16.Foot switch:press the foot switch to start labeling.

A large, semi-transparent watermark of the FINECO logo and the text "FINECO Labeling machine" is centered on the page. The logo is a stylized orange and blue shape, and the text is in a bold, blue, sans-serif font.

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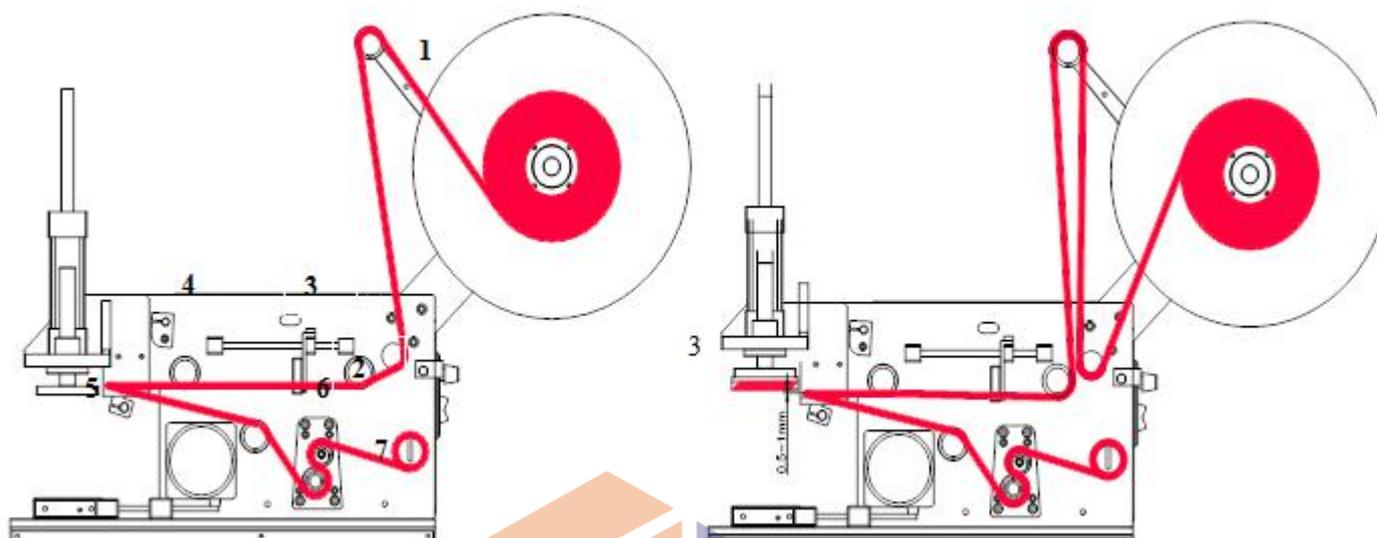
2.Detailed Picture

2.1 Rear View:



1.blowing pipe 2 foot switch interface 3 spare interface 4 standby interface 5
blowing pipe interface 6Barometer 7Air pressure control valve

2.2 Label Winding



1 It depends on which sides the labels on,if the labeling is in the inner side,see the left picture;and if the labels are on the outer side,see the right picture.

2 Loose the pressing plate first and lock it after labels get through.

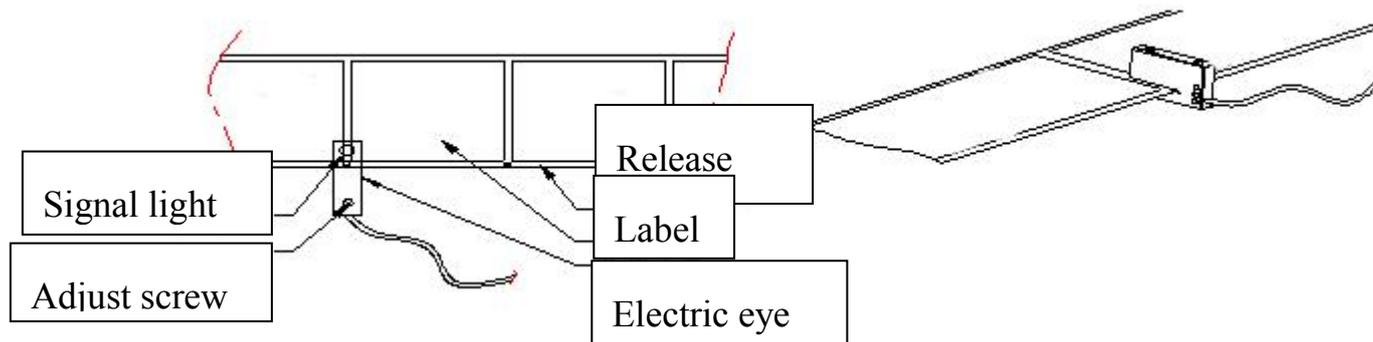
3 Observe the label-peeling plate(5),make sure the peeled the label is can be blew up and absorbed by the labeling head.。

4 The label sensor is between “3” and “4” , make sure the labels go through the slot of it.the setting method will be talked later.

5 When the baking paper goes through the traction device,it should be an “S” and the T shaped screw should be locked ,or it will cause labeling error and can't not draw the label.

6 The Release paper is recycled by “7” -the recycling device.

3. Label Sensor Installment



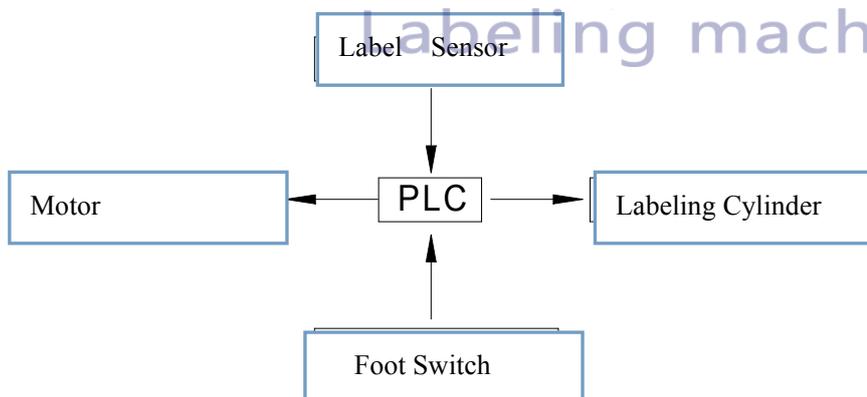
Attention:

- a. The label must go through the detective slot and doesn't touch the sensor.
- b. Tighten the traction device after the Release paper goes through.
- c. Tighten the pressing plate to keep tension of the label easier to be detected by the sensor .

Chapter 4 Controlling System



1. Work Principle



The core of the machine is PLC, which receives and outputs signals to start the traction motor and the cylinder.

2.Labeling Process

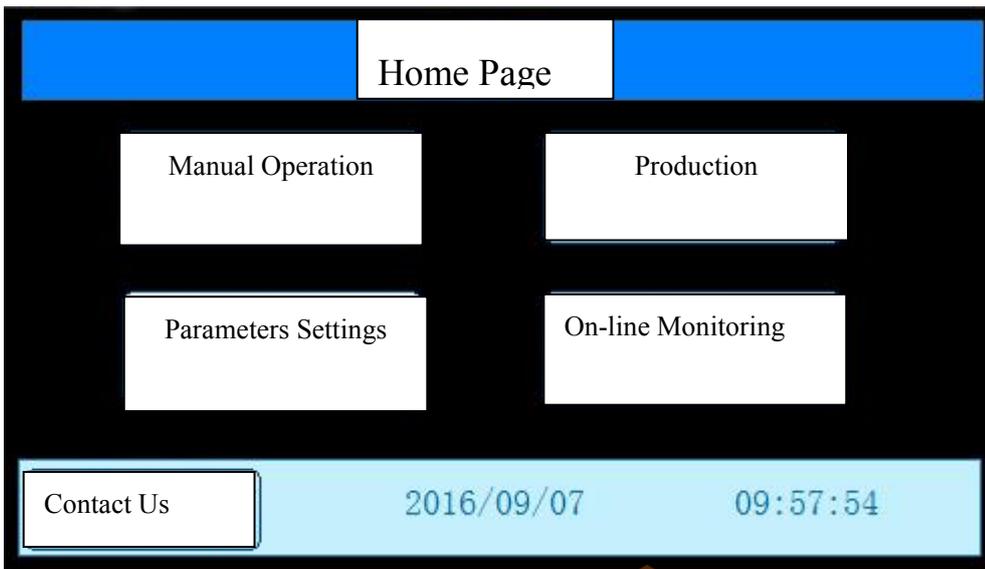
1. Motivation: The motor controls the traction device and recycling device by the synchronous belt,motivating the label-peeling and Release paper recycling processes.
2. Controlling system:615 is controlled by electrical and pneumatic system,the sensor and the foot switch send signals to the PLC,then pre-set programme would be conducted. to complete label-peeling,label-drawing,labeling strengthening,and counting functions.

3.Touch Screen

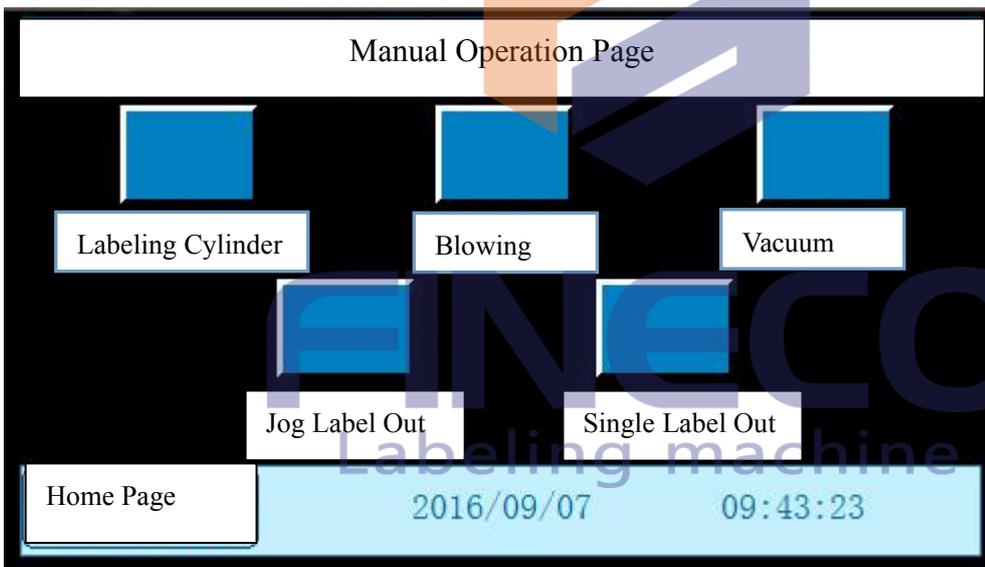
3.1 Welcome Page: click the screen to enter the home page.



3.2 Home Page:there are four sections of the home page,click to enter the different interfaces.



3.3 Manual Operation Page:

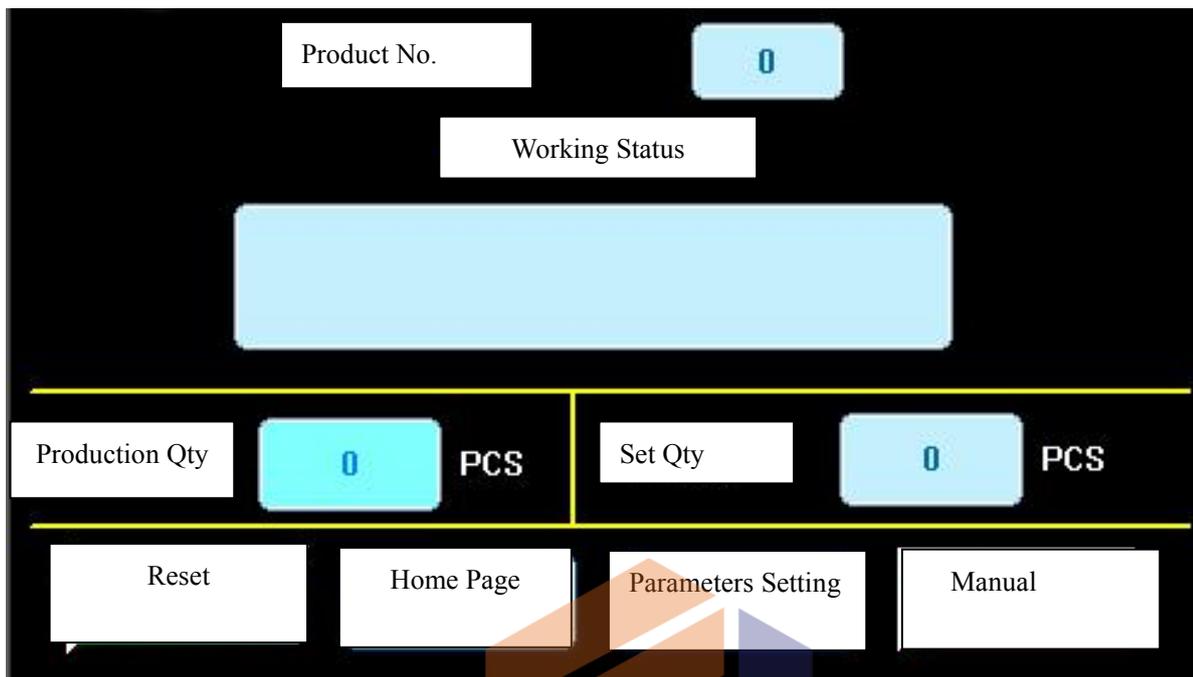


-Labeling Cylinder: under manual condition, click to operate the cylinder.

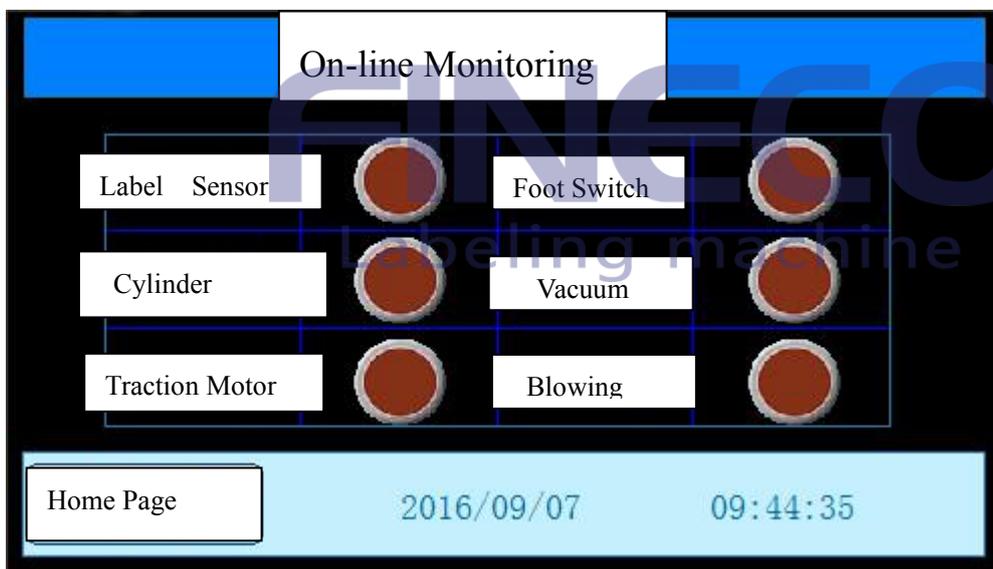
-Blowing: under manual condition, clear the air circuit.

-Vacuum: under manual condition, vacuum the labeling head to draw the label from the Release paper.

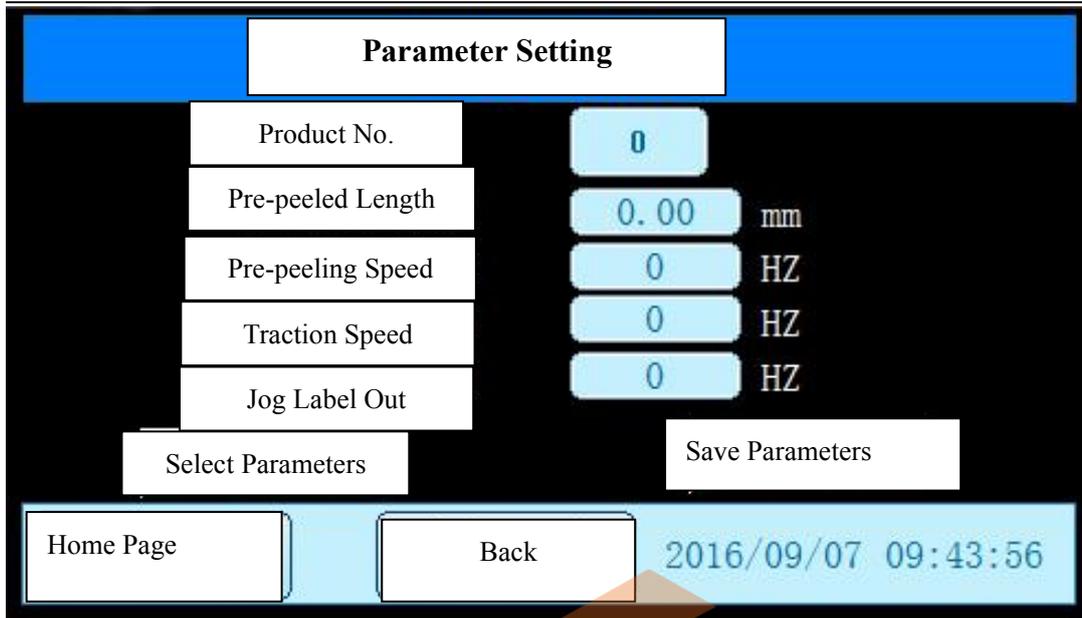
3.4 Production Page: Monitoring production condition and selecting labeling type.



3.5 On-line Monitoring: monitor the conditions of each configuration,if the small circle turns blue, it means the corresponding configuration is working, this page is used in fault detection.



3.6 Parameter Setting: Setting parameters.



The screenshot shows a 'Parameter Setting' screen with a blue header. Below the header, there are five rows of parameter settings, each with a label on the left and a value on the right. The values are: Product No. (0), Pre-peeled Length (0.00 mm), Pre-peeling Speed (0 HZ), Traction Speed (0 HZ), and Jog Label Out (0 HZ). At the bottom of the parameter list are two buttons: 'Select Parameters' and 'Save Parameters'. Below the parameter list is a navigation bar with three buttons: 'Home Page', 'Back', and a timestamp '2016/09/07 09:43:56'.

Parameter	Value	Unit
Product No.	0	
Pre-peeled Length	0.00	mm
Pre-peeling Speed	0	HZ
Traction Speed	0	HZ
Jog Label Out	0	HZ

-Pre-peeled Length:after a labeling process finished,the next label will be pre-peeled for next labeling.

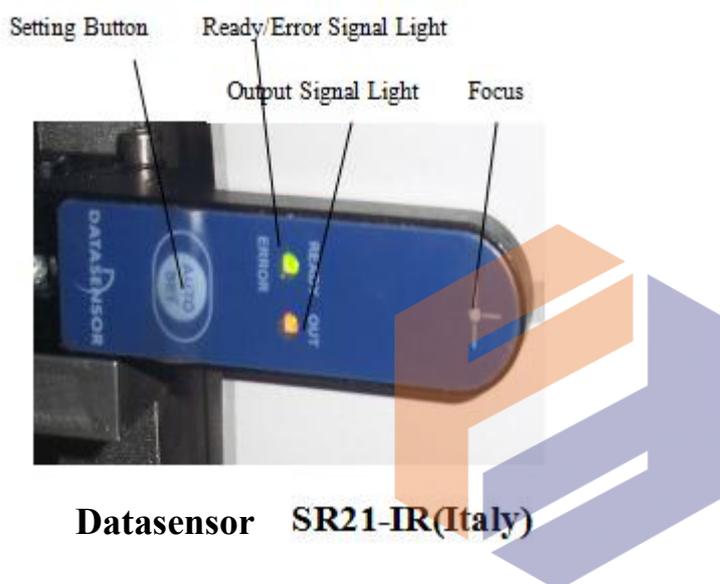
-Pre-peeling Speed: the speed of the pre-peeling process.

- Traction Speed: under automatic mode, the speed of label be sent to the detection position.

- Jog Label Out: the traction speed under manual condition.

Chapter 5 The Setting of Sensors

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



Datasensor SR21-IR(Italy)

1.2.1 Work principle: the intensity 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 different material from the Release paper.

1.2.2 Setting Method:

- ①When the “ready” signal lights up,put the label through the slot of the sensor,pull the label back and forth,if the output signal lights change,the sensor can be put into use directly.
- ②Press the automatic setting button,the green and yellow signal lights would put out and the sensor begin capture signal of the medium(the Release paper) in the slot,you

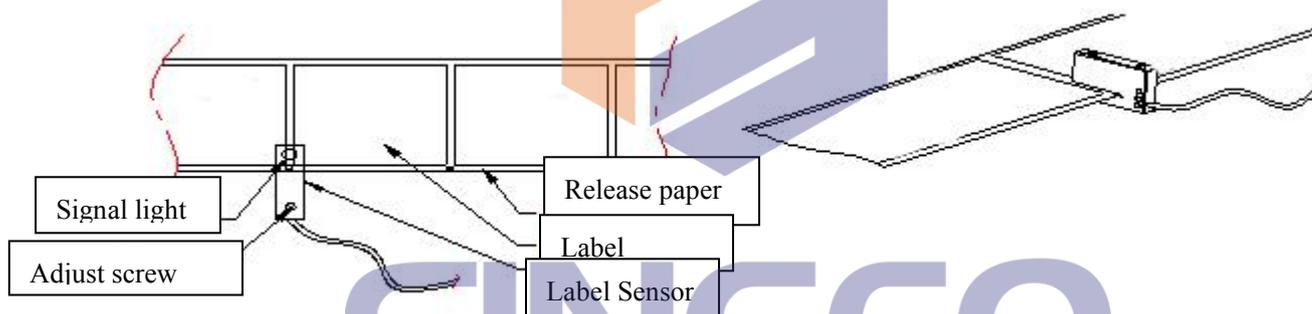
can not move the label until the green signal light flickers.

③When the green signal flickers,pull to make the second medium(the label) on the focus of the sensor.

④Press the “ AUTO SET” button and the green signal put out,the sensor begin to capture signal of the label,do not move the label until the green signal lights up.

⑤Pull the label back and forth , the output signal light up in the gap of the two mediums,thus the setting completed.

⑥ “READY” signal lights up shows that the sensor can work under the condition in which two mediums alternately appear.



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

2.1 the connection method of FX-501 Series:

please connect the product detect sensor as the picture.



2.2 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.

2.3 Status Switching:

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

2.4 Settings:

2.4.1 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 twice bigger than the red number.just as the following picture.

2.4.2 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.

2.4.3 Close the transparent cover,setting completed.

2.4.4 Put product on the labeling location,the product detect sensor sends signals to



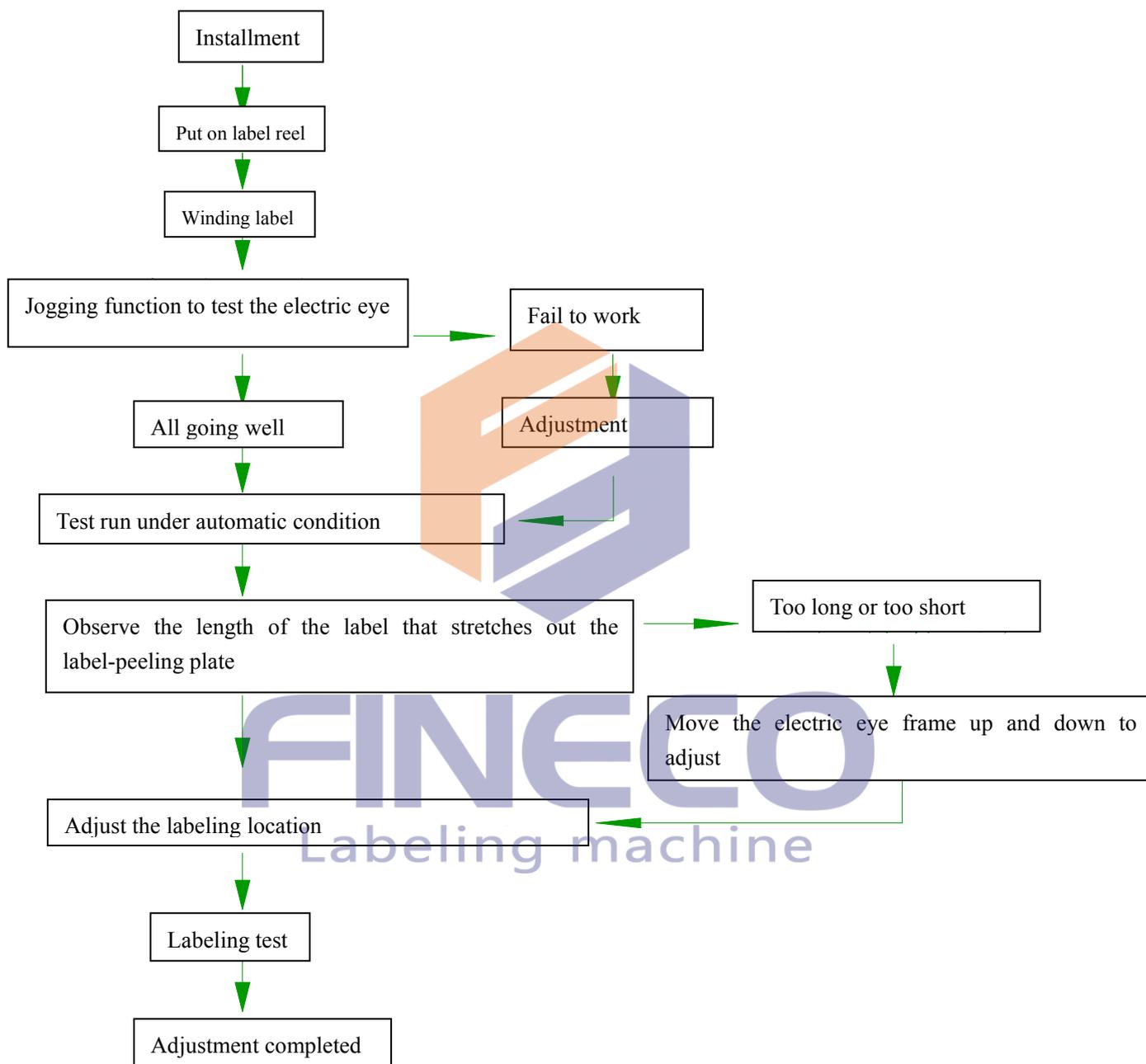
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PLC,then the PLC direct the relevant parts to operate,labeling start.



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Chapter 6 Operation



1. Installment

Please refer to the packing list to install machine; you can put it into use directly if it is packed as a whole.

2.Put on label reel

2.1 loose the handle on the label tray,put on the label reel and lock the label tray.(notice that do not lock it too tight,it's suitable when you can pull the label out by hand).

3.Winding label

Please winding label according to the method we talked before.

4.Adjustment

Under jogging condition,observe the sensor,the red signal (output signal)light up in the intervals between every two labels.If the sensor fails to work,please adjust the sensor according to the method we talked before.

5.Test Run

Under automatic run condition,press the foot switch,observe label on the labeling-peeling plate.

6.Label Position Adjustment

6.1 control the length of the peeled label that stretches out of the label-peeling plate,it should be 0mm-2mm(if it is too long,two labels would stick to a product;while it is too short, the label has not be completely peeled but the product has already passed.)

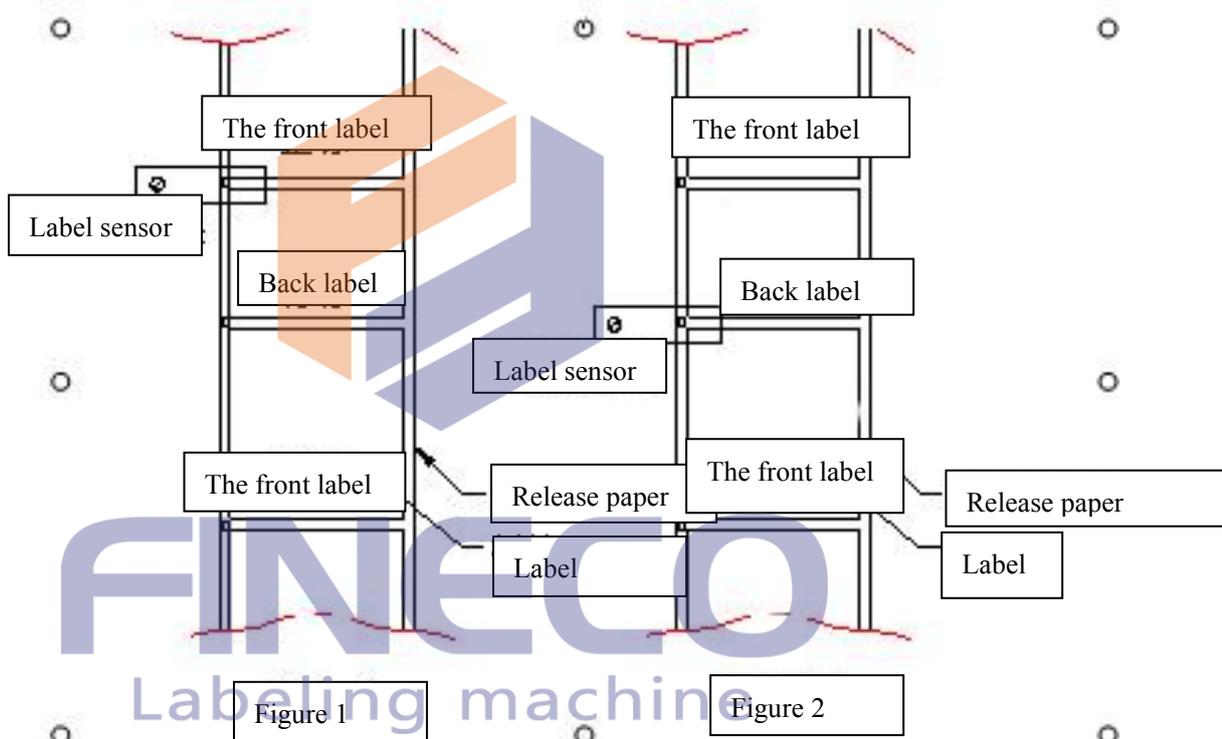
6.2 adjust the sensor frame,make sure that the label sensor stop at the intervals.Switch to automatic condition,press the foot switch,observe the length of peeled label.

-Move the label sensor up,then the sensor would detect label in advance,and the length of the peeled label that stretches out of the label-peeling plate shorten;

-Move the label down,delay the detection,thus lengthen the peeled label that stretches

out of the label-peeling plate.

6.3 Under double-labeled condition, pay attention to the location of the sensor, if the front label comes out first, then the label sensor must stop at the front labels, as shown in figure 1; if the back label comes out first, then the label sensor must stop at the back labels, as shown in figure 2. Then use “jog label out” function to adjust the distance between the front and the back labels.



7. Test Labeling

Put the product on the labeling position, observe the relative position of the product and the label, adjust the labeling location by adjusting the positioning model on the

platform of the machine.

With these steps completed,the machine is well-adjusted.

8.Power Off

Remember to turn off the machine after labeling completed,unplug it when not in use for a long time.

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.

Chapter 8 Common Problem Solution

1.Labeling Unsteadiness

- 1.1 Tighten the label-pressing device .
- 1.2 Tighten the traction device,do not screw so tight that Release paper wrinkles.
- 1.3 Control the product quality,remove the labeling error caused by product.
- 1.4 The product should be paralleled to the label.
- 1.5.The product should rotating smoothly and do not touch the label-peeling plate.If the product is too light to stay,use the coping device to fix the product.

2. Labeling Deviation

Maybe the label-pressing device is too tight,loose it slightly.

Label correction is needed before automatic operation.

3.Bubbles and Wrinkles

- 3.1 Slow the labeling speed so that the label-covering device can strengthen the labels.
- 3.2 It appears if the label is transparent or too soft.

4.The machine won't work

4.1 Check the electric circuit.

4.2 Check the fuse circuit.

4.3 Maybe the circuit interface loose in the electric box.

5.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.

6.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.



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!



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