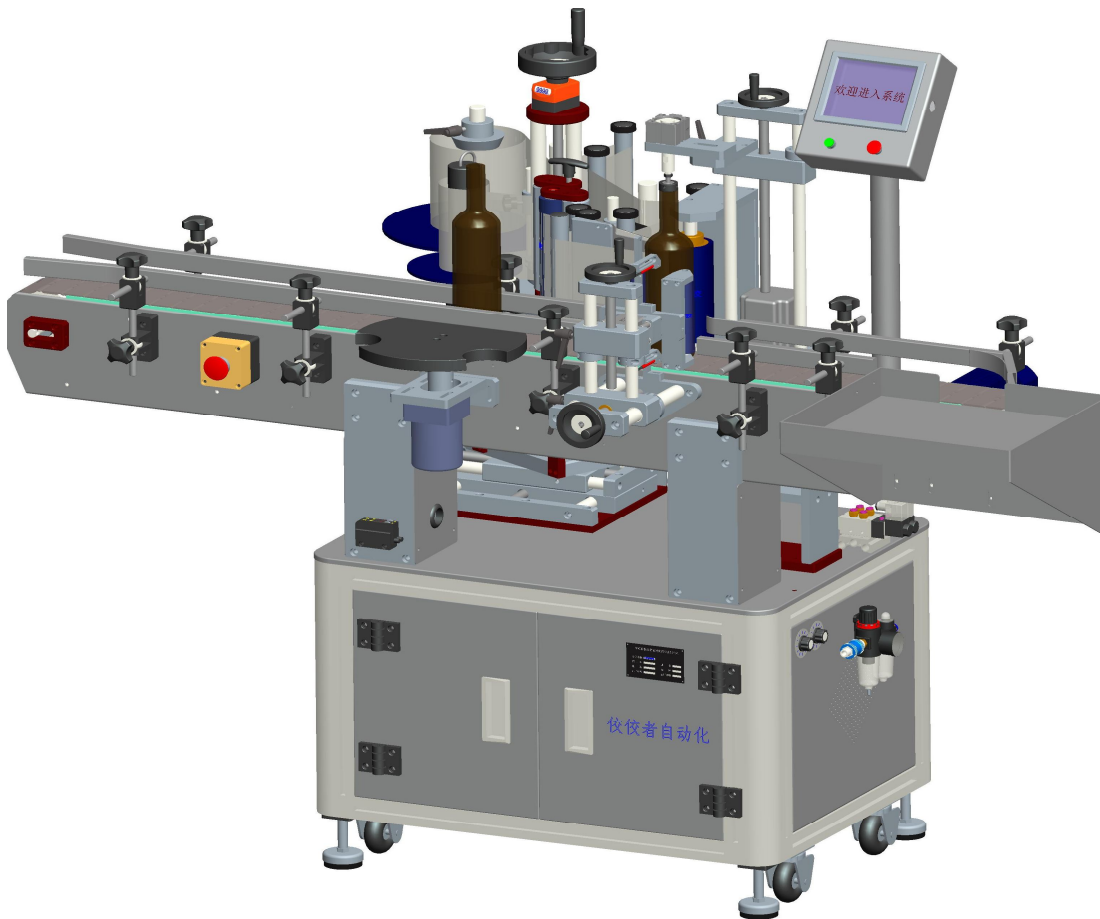


# 使用说明书

## Instruction Manual



**设备名称：全自动立式圆瓶贴标机**  
**Equipment Designation: Automatic Vertical Labeling Machine for Round Container**  
**设备型号：JJZ-T-21200**  
**Type: JJZ-T-21200**

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# 第一部分 郑重声明

## Part I Statement

### 一、 常规事项

#### I. Regular Items

1. 贴标机属于非标设备，其操作需要一定的专业技术水平，否则，将直接影响到设备的高效和正常使用，操作本贴标机务必由接受过操作培训的技术员执行。

This labeling machine is non-standard equipment and needs certain techniques to operate it. Or the high efficiency or normal use of the machine will be affected. The operation of this labeling machine must be complemented by a trained technician.

2. 操作本设备请按照说明书中指示进行，或在我司技术员指导下进行。

The operations of this equipment should be accord with the instruction manual or under the instructions from the technicians from our company.

3. 该技术手册专用于 JJZ-T-21200 贴标机（以下简称贴标机），其目的是为了保证正常的使用和调整该设备。

This instruction manual is applied to JJZ-T-21200 labeling machine (Abbreviation is labeling machine in the following sections.). The purpose is to ensure the normal use and adjustment of this machine.

### 二、 安全事项

#### II. Safety Items

- ❖ 危险！务必保证有接地线的情况下使用，防止触电。

Danger! Make sure the machine in operation is earthed to the ground to prevent electrical shock.

- ❖ 危险！务必确保电压不过载。

Danger! Make sure the voltage is not overloaded.

- ❖ 警惕！电箱部分，线路部分需在电工或专业人员的指导下方可操作。

Warning! The operations to the electrical boxes and circuits should be under the instructions from electrical technicians or professional personnel.

- ❖ 警惕！转动部位需要特别的留意，防止压伤。

Warning! Pay attention to the rotating parts to prevent compression crush.

### 三、 操作权限

#### III. Operation Rights

1. 确保只有受过培训的及有权限的人操作、布置和维护该设备。

Make sure operation, location and maintenance of this machine must be performed by trained and authorized personnel.

- 
2. 仅允许有资格的人、专业人员和设备工程师去完成布局。

Only allow certified or professional personnel and equipment engineer to accomplish the layout.

3. 操作机器需要确保：

Operation to the machine needs to make sure:

——操作人员应得到厂家的专业培训合格后进行。

——Operator is trained professionally and certified by our company.

——操作的人员须具备修复或处理设备操作运行过程中所出现的基本异常知识。

——Operator has the knowledge to repair or deal with basic malfunctions during the process of the machine operation.

——在设备使用过程中，请按规定的要求作业。

——Work according to the requirements in this manual in the operation to this machine.

#### 四、 操作环境：

#### IV. Operation Environment

- ❖ 请不要在以下环境中使用：
- ❖ Do not use under following circumstances:
- ❖ 温度变化激烈的地方。
- ❖ Severe temperature variation.
- ❖ 湿度过高而产生露水的地方。
- ❖ Humidity or high moisture.
- ❖ 振动或冲击很强烈的地方。
- ❖ Intensely vibration and shock
- ❖ 粉尘多的地方。
- ❖ Too much dust
- ❖ 有水、油、化学药品飞溅的地方。
- ❖ Water, oil and chemicals spray
- ❖ 有易爆、易燃危险物品的地方
- ❖ Explosive, flammable, and dangerous things

#### 五、 磨合期

#### V. Tune-in Period

---

本贴标机是根据客户产品特别订做，并非标准产品，且对操作人员有技术和经验要求，需要有一个月左右的磨合期。磨合期内，设备的操作方面，达不到技术参数方面的情况，需要及时向厂家反映，以获得技术支持。

This labeling machine is made based on customer's products specifically and is not standard equipment, has technical and experience requirements to operators, and needs one month duration to tune in. In tune in period, if the technical parameters are not achieved in equipment operations, feedback to our company to get technical support.

## 第二部分 产品介绍

### Part Two Machine Introduction

#### 一、 基本用途：

##### I. Basic Function:

本贴标机专门设计，具有专一性，专用于**圆瓶**的圆周侧面与顶部贴标或定位贴标（定位贴标需增加相应配件）。熟悉本设备后，可应用于其他行业圆瓶的贴标，如食品罐头、化妆品圆瓶、医药瓶等的贴标。

This labeling machine is specifically designed, has the characteristic of uniqueness and is used for labeling on circumference and top of the cylinder or on assigned position (labeling on assigned position needs to add accessories). When getting familiar with the machine, the machine can be also used for labeling on round container in other industries, such as canned food, round container for tinned food, cosmetics, medicine and so on.

#### 二、 技术参数：

##### II. Technical Parameters

- ❖ 贴标精度：±1mm (不含产品、标签误差)，调整水平明显影响到贴标精度。
- ❖ Labeling precision: ±1mm (Errors of products and labels are not included.) and adjustment level will influence labeling precision obviously;
- ❖ 贴标速度：20~45 件/分钟（与产品标签尺寸有关）。
- ❖ Labeling speed: 20~45 pcs/min (related with product label dimensions).
- ❖ 适用产品：客户所提供的瓶子。
- ❖ Applicable product: containers provided by customer.

- 
- ❖ 适用标签：客户所提供的卷装标签。
  - ❖ Applicable label: rolled label provided by customer.
  - ❖ 整机尺寸：1930×1110×1520mm（长×宽×高）。
  - ❖ Machine dimension: 1930×1110×1520mm (length×width×height).
  - ❖ 适用电源：220V 50/60HZ。
  - ❖ Applicable power: 220ACV 50/60HZ.
  - ❖ 整机重量：约 185Kg。
  - ❖ Machine weight: 185Kg.

### 三、 贴标过程解析：

#### III. Label recovering process description:

放瓶→分瓶→输送→产品检测→贴标，覆标→收瓶。

Place container →separate container→ conveyor→ product detection→ Label recovering→ Collect container.

1. 放瓶子到输送带。

Place product on the transportation belt.

2. 分瓶机构将瓶子的间距分开。

Container separating mechanism separates the containers in certain distance.

3. 瓶子在输送带的带动下，自动向右侧贴标机构运行。

Under the dragging of the transportation belt, the container runs to the right side of the labeling mechanism automatically.

4. 进入到检测位置，电眼检测到瓶子，测物信号反馈到 PLC。

Container comes to the detected position and be detected by the electrical sensor which will feedback signals to PLC.

5. 牵引电机转动，送出标签，贴到产品上。

Traction motor rotates, sends out and pastes label on the product.

6. 覆标机构将瓶子进行搓滚式覆标。

Labeling recovering mechanism twists and rolls label on the container.

7. 瓶子被输送收集在收料盘。

Containers are transported and collected in the collecting container.

## 第三部分 机构部分

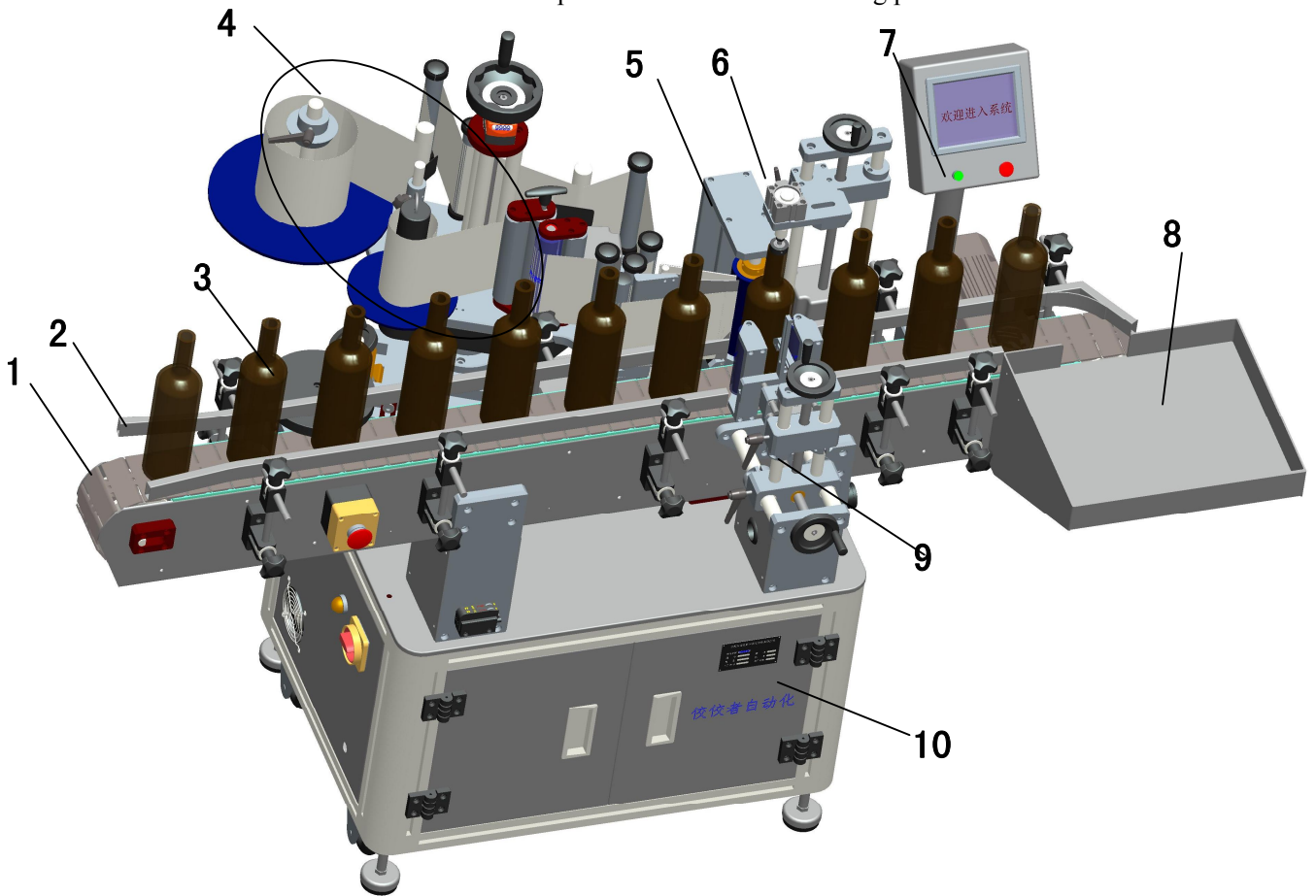
### Part Three Mechanism

#### 一、 总视图:

##### I. Overall view

贴标机的机械结构和各部分功能，如下图所示:

Mechanical structures and functions of each part are indicated in following picture:



【设备 3D 图】/[Equipment 3D Model]

1. 输送机构：将产品输送到贴标位置，贴标后，输送到收料机构。

Transportation mechanism: transmit products to labeling position and to the collecting mechanism after labeling.

2. 过渡调整：承接流水线输送过来的产品，可以做一定调整。

Transition adjustment: receive products from the flowing line and do certain adjustment.

3. 分瓶机构：通过调节电机的速度来调整产品的间距，满足前产品贴标需要的时间。



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Container separating mechanism: adjust the distance between products to satisfy the time needed for labeling on previous product by adjusting motor speed.

4. 贴标头：贴标的核心部件，实现贴标功能。

Labeling head: core component of labeling to implement function of labeling.

5. 覆标机构：对贴附在产品上的标签进行搓滚式覆标。

Label recovering mechanism: twisting and rolling the label covered on the product.

6. 压顶机构：将产品压住，防止产品跳动。

Top-press mechanism: press product to avoid moving up and down.

7. 人机界面：人机对话窗口，进行各种参数调节。

Human-machine interface: human-machine communication window adjusts different parameters.

8. 收料盘：在产品完成贴标后，提供一定的缓冲区，能收集一定的产品。

Product collecting plate: provide certain buffer area after labeling and can collect certain products.

9. 定位机构：用于产品的定位。

Position mechanism: used for fixing product at certain position.

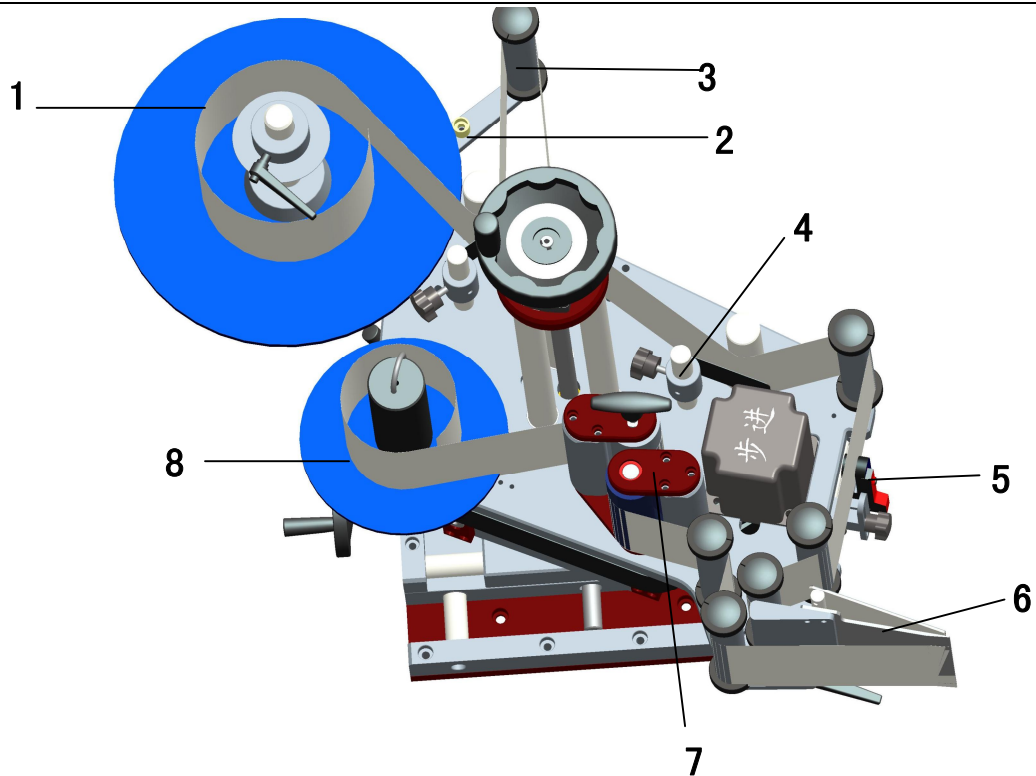
10. 控制电箱：贴标机电气控制中心，排布各种控制器和 PLC。

Electrical control box: centre of the motor of the labeling machine, to arrange kinds of controller and PLC.

## 二、 局部视图

### II. Detail views

#### 1. 贴标头/labeling head



【贴标头】

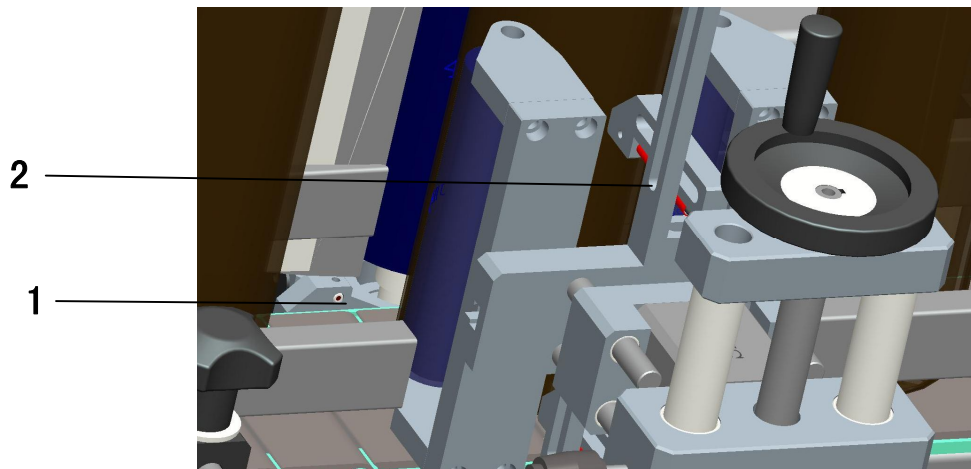
[Labeling Head]

- 1) 放料机构：用于放置卷装标签。  
Material placing mechanism: used to put label in rolls.
- 2) 刹车：用于刹住标签，防止标签松开，保持标带的张力。  
Brake: used to stop labels to keep label from loose and keep the tension force of the belt.
- 3) 滚筒：绕行标签，保证标签的张力。  
Roller: wind labels to keep tension force of the label.
- 4) 压标机构：压紧标签，保证标签的张力。  
Press mechanism: press label tightly.
- 5) 电眼架：安装测标电眼，前后移动电眼。  
Electric sensor frame: install label identification electric sensor and move it forth and back.
- 6) 剥标板：剥离标签。  
Dispenser board: spilt label.
- 7) 牵引机构：牵引标带底纸，提供剥标动力。  
Traction mechanism: drag base paper of the label strip, and provide power to split label.
- 8) 收料机构：回收标签底纸。

---

Material collecting mechanism: recycle the label base paper.

## 2. 测物电眼架/Product detection electric sensor frame



【测物电眼架】

### [Product detection electric sensor frame]

- 1) 测物电眼：直射对射型光纤，一个发信号，另一个接收，通过信号的隔断来检测物体有无。

Product detection electric sensor: direct correlation optical fibers: one emits signals, and the other optical fiber receives signals. Detect objects existing or not by partition of the signals.

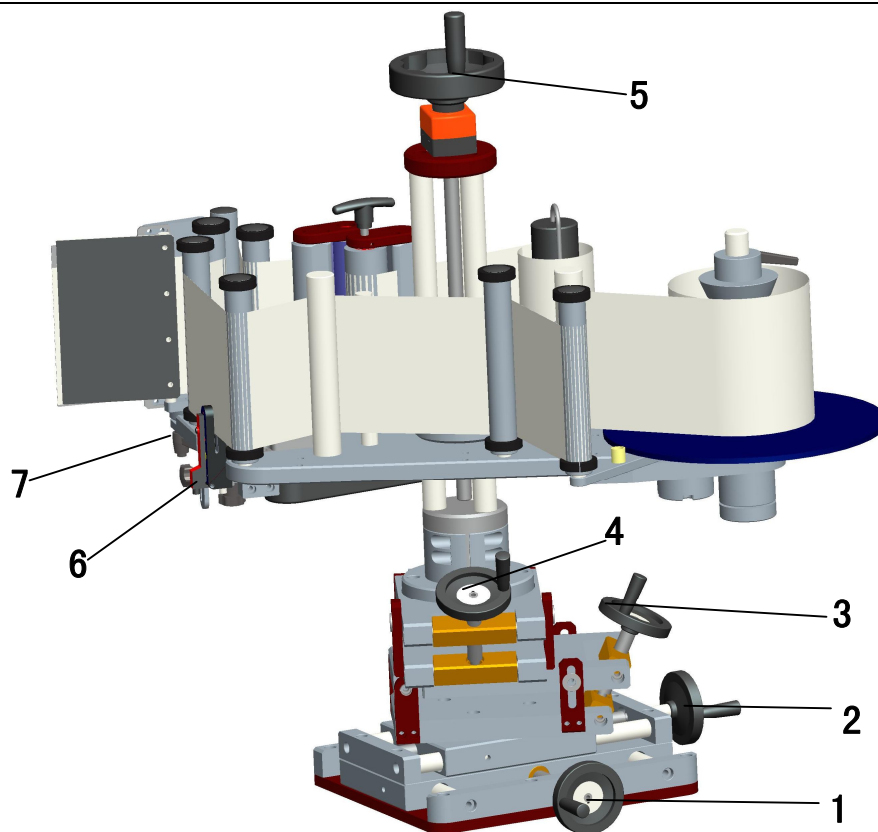
- 2) 定位贴电眼(选配)：漫反射型光纤，作定位贴标使用，通过反射光的变化，检测物体有无。

Positioning electric sensor: diffused reflection optical fiber, to position the labeling, to detect the existence of the product by the changes of the diffused reflection.

## 3. 调整机构：/Adjustment mechanism:

调整机构的所有调整，均需先行松开相对的锁紧螺丝，调整完毕后，锁紧螺丝，保持固定。

Adjust all adjustment mechanism. Related locking screws must be loosed first. Tighten locking screws after adjustment to keep fixation.



【调整机构简图】

- 1) 前后调整杆：调节末端手轮，可以前后调整贴标头位置。  
Forward and backward adjustment lever: adjust the labeling head forward and backward with the end of hand wheel.
- 2) 左右调整杆：调节末端手轮，可以左右调整贴标头位置。  
Left and right adjustment lever: adjust the position of the labeling head left and right with the end of hand wheel.
- 3) 左右倾斜调整：调节手轮，可以进行贴表头与输送带的平行度调整。  
Left and right inclination adjustment: adjust parallelism between labeling head and transportation belt by the hand wheel.
- 4) 前后倾斜调整：调节手轮，可以进行贴表头与输送带的平行度调整。  
Forward and backward inclination adjustment: adjust parallelism between labeling head and transportation belt by the hand wheel.
- 5) 上下调整杆：调节顶端手轮，可上下调整贴标头。  
Up and down adjustment: adjust labeling head up and down by the hand wheel on the top.
- 6) 测标电眼调整：松开五星握轮，可左右、上下调整电眼的位置。

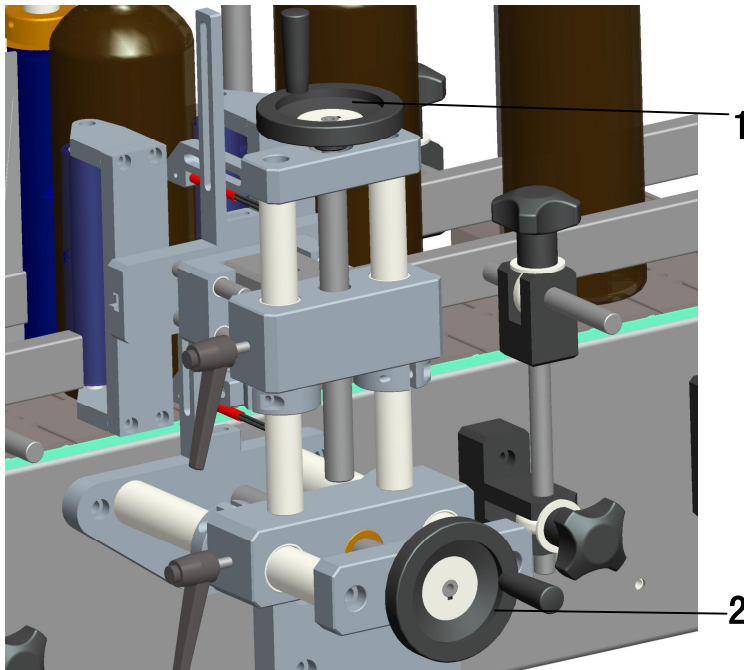
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Label identification electric sensor adjustment: release the 5-start wheel to the position the electric sensor left and right and up and down.

- 7) 剥标板角度调整: 松开相应的定位螺丝, 可以摆动剥标板的角度。

Dispenser board angle adjustment: swing the angle of the dispenser board by loosening relative positioning screws.

#### 4. 定位机构/Positioning mechanism



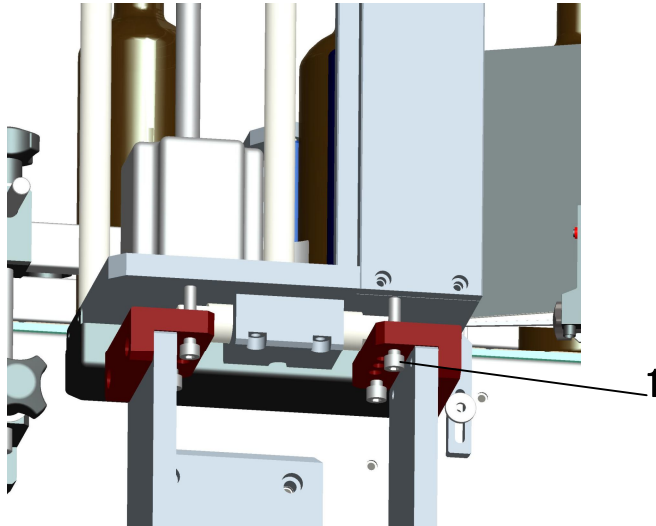
- 1) 前后调整: 调节顶端手轮, 可前后调整定位机构。

Forward and backward adjustment: adjust the positioning mechanism forward and backward by adjusting the hand wheel on the top.

- 2) 上下调整: 调节顶端手轮, 可上下调整定位机构。

Up and down adjustment: adjust the positioning mechanism up and down by adjusting the hand wheel on the top.

#### 5. 覆标机构/Label recovering mechanism



- 1) 倾斜调整：旋出(旋入)前排的两个螺丝，且旋入(旋出)后排的两个螺丝，可以进行覆标机构与输送带的角度调整

Inclination adjustment: screw out (screw in) the 2 screws at the front and screw in (screw out) the 2 screws at the back to adjust the angle between label recovering mechanism and transportation belt.

## 6. 压顶机构/Top pressing mechanism



- 1) 上下调整：调节顶端手轮，可上下调整压顶机构。

Up and down adjustment: adjust the top pressing mechanism by adjusting the hand wheel on the top.

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## 第四部分 电气部分

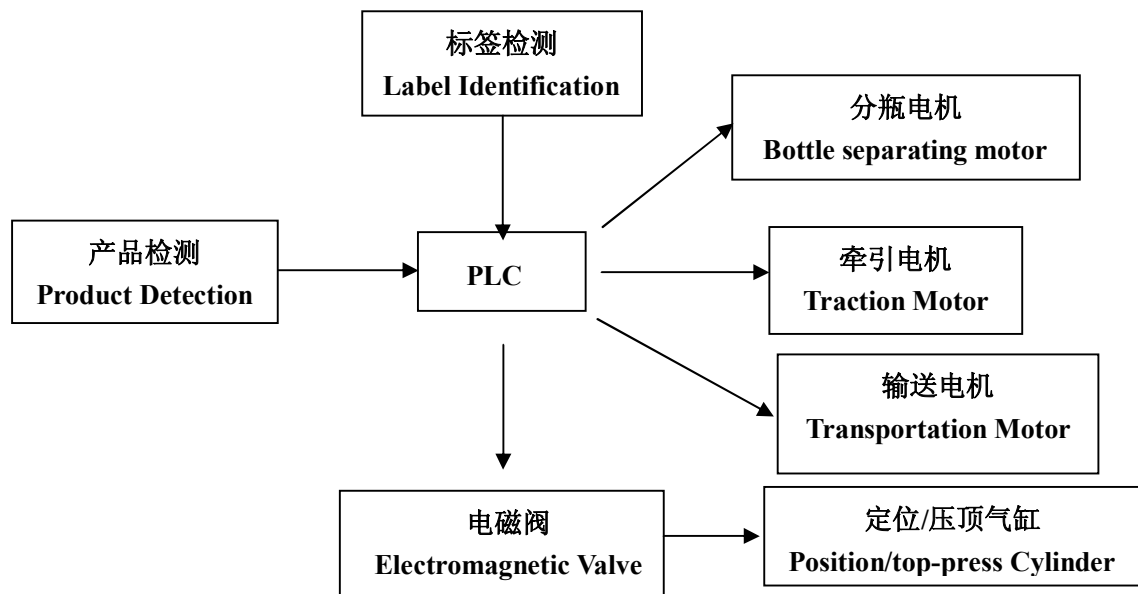
### Part Four Electrical Part

#### 一、 电控原理:

##### I. Electrical control principle:

通过产品检测、贴标检测、标签检测三类信号的输入，经过 PLC 处理后，输出为牵引电机、电磁阀的控制信号，分别控制气缸的伸缩与牵引电机的转动，从而完成产品的定位贴标动作。

Input signals are product detection signal, labeling detection and label identification signal, after processed in PLC, output signal is the control signals of traction motor and electromagnetic valve to control the flex of the controlling cylinder and traction motor, to finish the positioning labeling of the products.



#### 二、 人机控制界面

##### II. Human-machine control interface

1. 启动页面：启动贴标机触摸屏首先进入该页面：

Start screen: start touch screen of the labeling machine and enter this screen

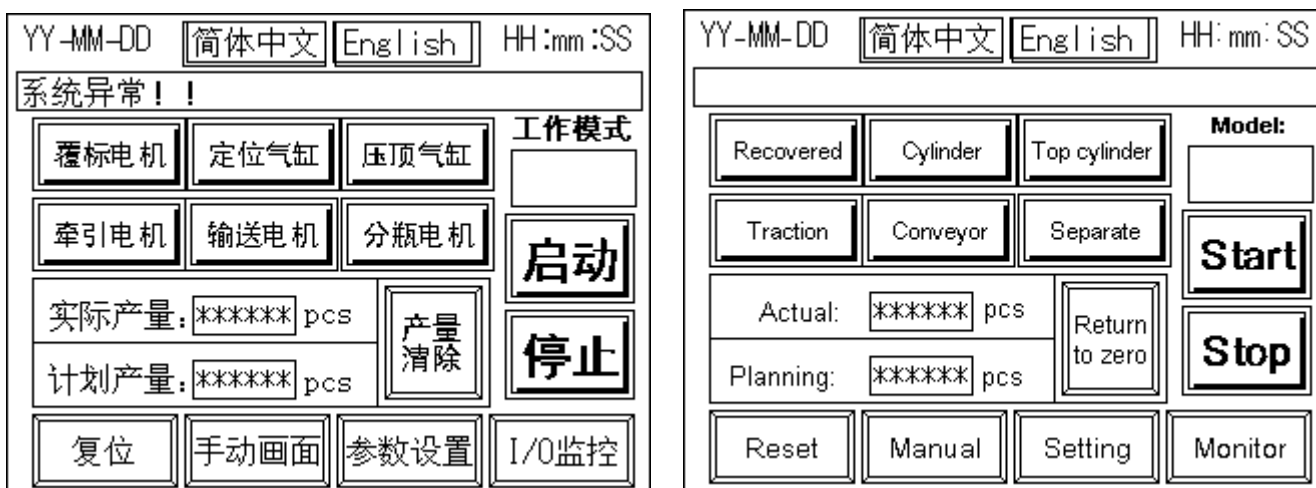
全自动圆瓶贴标机  
Automatic stand-up wrap around  
labeling machine

【启动页面】/[Start Screen]

点击“**进入系统**”进入工作页面，或 5 秒钟后自动进入工作页面；

Click ‘ENTER SYSTEM’ to enter working screen or automatically after 5 seconds.

2. 自动页面/Automatic screen:



【自动页面】/[Automatic screen]

“**覆标电机**”，选择“覆标电机”是否在自动运行状投入运行；

‘Recovered’, choose to run or not in automatic status;

“**牵引电机**”，选择“牵引电机”是否在自动运行状投入运行；

‘Traction’, choose to run or not in automatic status;

“**压顶气缸**”，选择“压顶气缸”是否在自动运行状投入运行；

‘Top cylinder’, choose to run or not in automatic status;

“**输送电机**”，选择“输送电机”是否在自动运行状投入运行；

‘Conveyor’, choose to run or not in automatic status;

“**定位气缸**”，选择“定位气缸”是否在自动运行状投入运行；



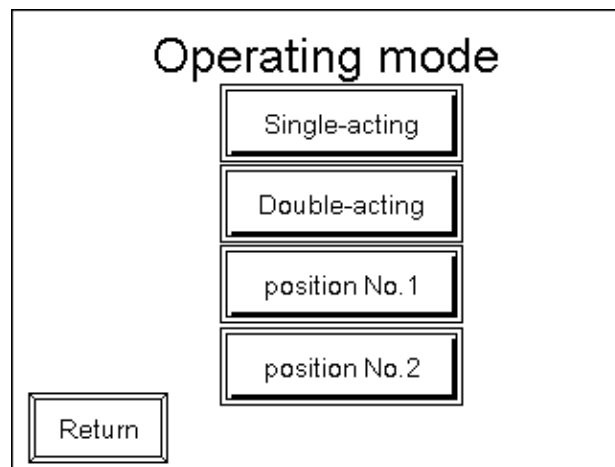
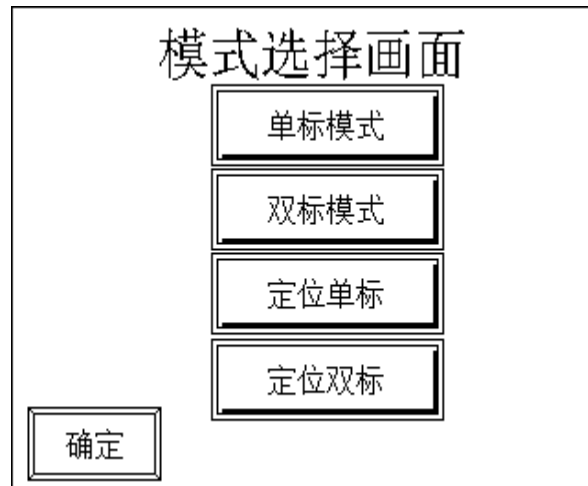
‘Cylinder’, choose to run or not in automatic status;

“分瓶电机”，选择“分瓶电机”是否在自动运行状投入运行；

‘Separate’, choose to run or not in automatic status;

“工作模式”，选择“工作模式”，非自动运行状下，点击将进入：

‘Model’, chose ‘Model’ in non-automatic status, then enter:



【模式页面】/[Model screen]

“实际产量”，累计生产总数，最大 999999PCS；

‘Actual’, accumulated production amount, max 999999PCS;

“计划产量”，计划生产总数，最大 999999PCS；

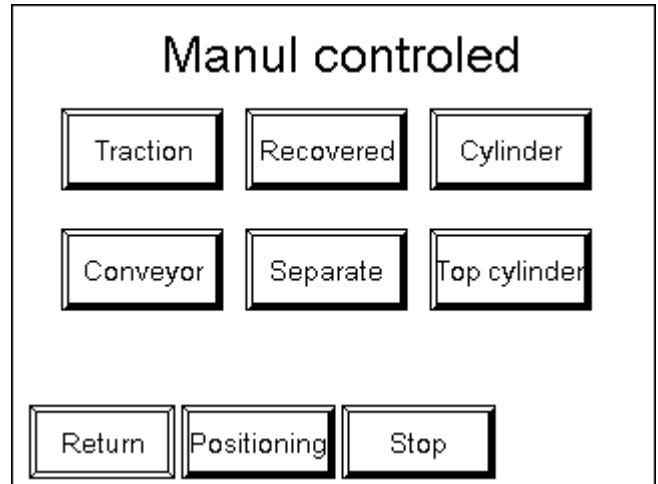
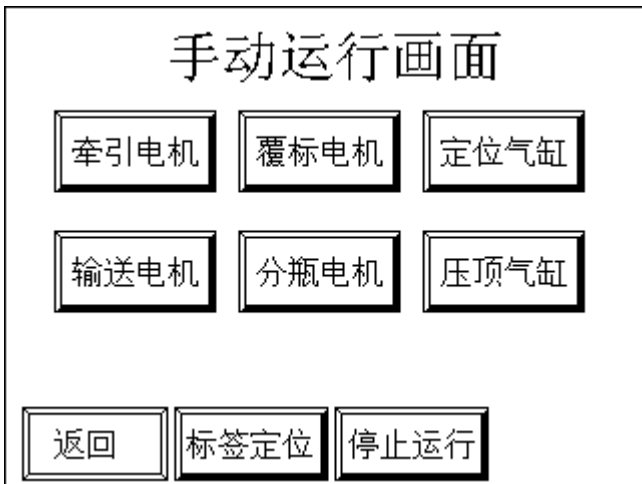
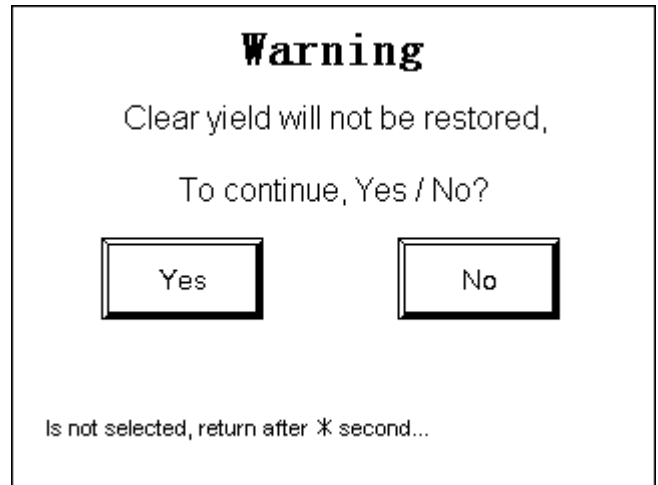
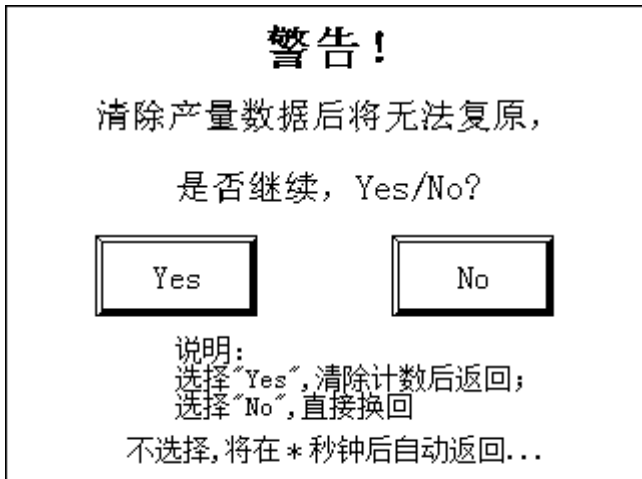
‘Planning’, planned production amount, max 999999PCS;

“复位”，出现故障时，该键闪烁，点击时复位发生故障；

‘Reset’, when malfunction occurs, this key blinks. Click to reset.

“清除产量”，点击进入：

'Return to Zero', click to enter:



【手动页面】/[Manual Screen]

此画面用于调试设备时,进行各个动作的测试,配合各机械机构调整

This screen used for commissioning of the equipment, test each actions and assist mechanical mechanism adjustment.

“牵引电机”,非运行状态下,点击时牵引电机运转;

‘Traction’, click to run traction motor under non-operating condition;

“覆标电机”,非运行状态下,点击时覆标电机运转;

‘Recovered’, click to run recovering motor under non-operating condition;

“输送电机”,非运行状态下,点击时输送电机运转;

‘Conveyor motor’, click to run conveyor motor under non-operating condition;

“分瓶电机”,非运行状态下,点击时分瓶电机运转;

‘Separate motor’, click to run separating motor under non-operating condition;

“压顶气缸”，非运行状态下，点击时压顶气缸压下；

‘Top cylinder’, click to press top cylinder under non-operating condition;

“定位气缸”，非运行状态下，点击时定位气缸推出；

‘Cylinder’, click to propel positioning cylinder traction motor under non-operating condition;

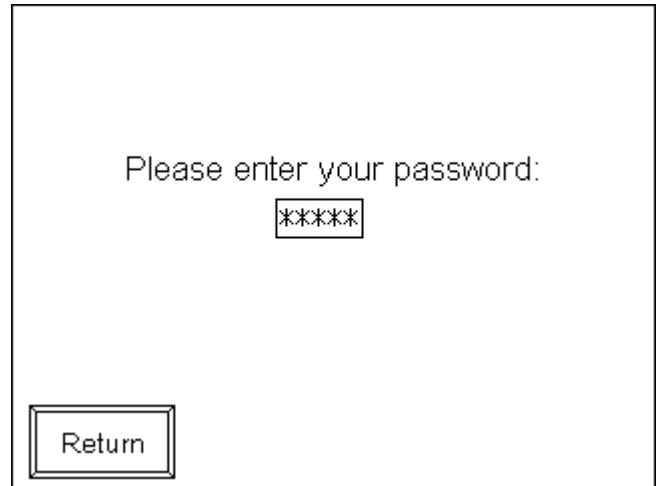
“停止运行”，运行状态下，点击时运行停止；

‘Stop’, click to stop under operating condition;

### 3. 参数页面/Setting screen:

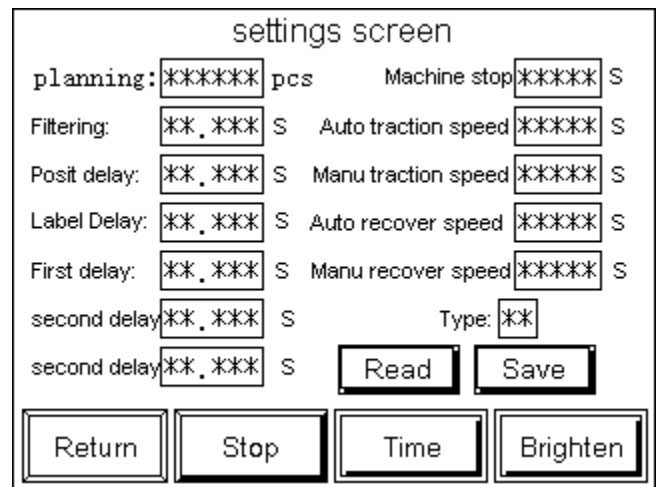
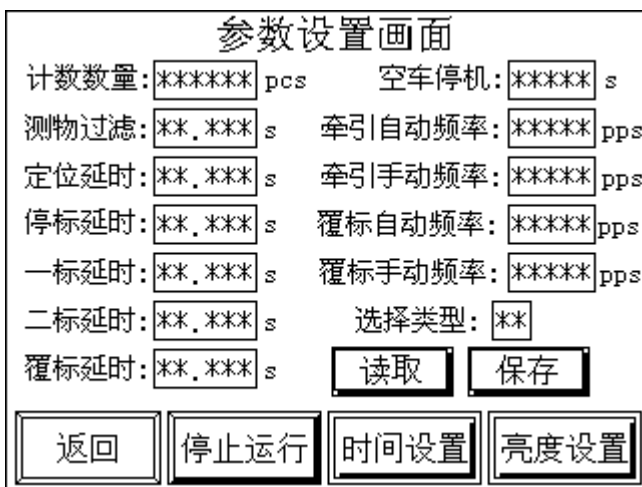
“参数设置”，点击进入；

‘Setting’, click to enter:



输入正确密码后，自动进入：

Enter automatically after inputting correct password:



【参数页面】/[Setting screen]

“计数生产数量”，计划生产总数，当实际生产数量≥计划生产数量时，将停止运行；

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‘Planning quantity’, planned production amount. Stop operation when actual production amount  $\geq$  planned production amount;

“空车停机时间”，机器在空车停机时间内未有产品投入生产，将停止运行，（ $1 \leq$ 设置值 $\leq 32767$  单位：秒）；

‘Unit off to empty load’, stop the machine when no product enter ( $1 \leq$ setting value $\leq 32767$  Unit: second);

“测物过滤”，设定两个产品生产周期最小间隔时间，任何模式有效，（ $0.0 \leq$ 设置值 $\leq 32.767$  单位：秒）；

‘Filtering to check object signal’, set the min interval time between the two products time, effective in any modes ( $0.0 \leq$ setting value $\leq 32.767$  Unit: second)

“定位延时”，设定从测物传感器感应到产品后，至定位气缸动作前的时间，任何模式有效，（ $0.0 \leq$ 设置值 $\leq 32.767$  单位：秒）；

‘Positioning time delay’, set time from product detection sensor detecting the product to cylinder action, effective in any modes ( $0.0 \leq$ setting value $\leq 32.767$  Unit: second)

“停标延时”，设定从测标传感器检测出标完成一张后，延时停止出标的时间，任何模式有效，（ $0.0 \leq$ 设置值 $\leq 32.767$  单位：秒）；

‘Label output time delay’, set the label output time delay when the last label accomplishment detected by the sensor, effective in any modes ( $0.0 \leq$ setting value $\leq 32.767$  Unit: second);

“一标延时”，设定从定位传感器感应到后，延时出标的时间，“定位单标”模式和“定位双标”模式有效，（ $0.0 \leq$ 设置值 $\leq 32.767$  单位：秒）；

‘First delay’, set the label out delay when positioning sensor has the detection, effective in ‘position single label’ mode and ‘position double labels’ ( $0.0 \leq$ setting value $\leq 32.767$  Unit: second);

“二标延时”，设定出完第一张标签后，延时至第二张出标的时间，“定位双标”模式有效，（ $0.0 \leq$ 设置值 $\leq 32.767$  单位：秒）；

‘Second delay’, set delay time for second label out after the first label out, effective in ‘position double labels’ modes ( $0.0 \leq$ setting value $\leq 32.767$  Unit: second);

“双标延时”，设定出完第一张标签后，延时至第二张出标的时间，“双标”模式有效，（ $0.0 \leq$ 设置值 $\leq 32.767$  单位：秒）；

‘Dual-label delay’, set time delay from first label out to second label out, effective in ‘double labeling’ modes ( $0.0 \leq$ setting value $\leq 32.767$  Unit: second);

“牵引自动频率”，设定牵引电机自动运转速度，（ $100 \leq$ 设置值 $\leq 30000$  单位：PPS）；

‘Auto traction speed’, set auto speed of the traction motor, ( $100 \leq \text{setting value} \leq 30000$  unit: PPS);

“牵引手动频率”，设定牵引电机手动运转速度，( $100 \leq \text{设置值} \leq 30000$  单位: PPS);

‘Manu traction speed’, set manual speed of the traction motor, ( $100 \leq \text{setting value} \leq 30000$  unit: PPS);

“覆标自动频率”，设定覆标电机自动运转速度，( $100 \leq \text{设置值} \leq 20000$  单位: PPS);

‘Auto recover speed’, set auto speed of the recover motor, ( $100 \leq \text{setting value} \leq 20000$  unit: PPS);

“覆标手动频率”，设定覆标电机手动运转速度，( $100 \leq \text{设置值} \leq 20000$  单位: PPS);

‘Manu recover speed’, set manual speed of the recover motor, ( $100 \leq \text{setting value} \leq 20000$  unit: PPS);

“类型”，根据产品需要，可调用 0#~29#，共 30 组当中任何一组数据；

‘Type’, choose data from 0#~29# in 30 groups based on the needs of products;

每一组数据包含以下 10 个数据：

Each group contains following 10 data:

“测物过滤”、“定位延时”、“停标延时”、“一标延时”、“二标延时”、“双标延时”、“牵引自动频率”、“牵引手动频率”、“覆标自动频率”、“覆标手动频率”

‘Filtering to check object signal’, ‘Positioning time delay’, ‘Label output time delay’, ‘First delay’

‘Second delay’, ‘Dual-label delay’, ‘Auto traction speed’, ‘Manu traction speed’, ‘Auto recover speed’,

‘Manu recover speed’

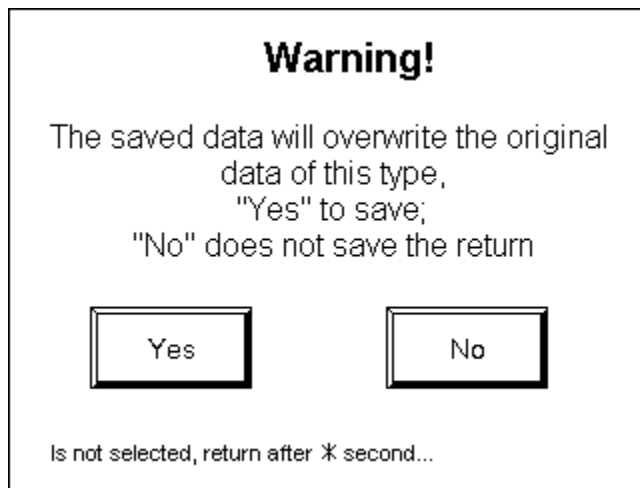
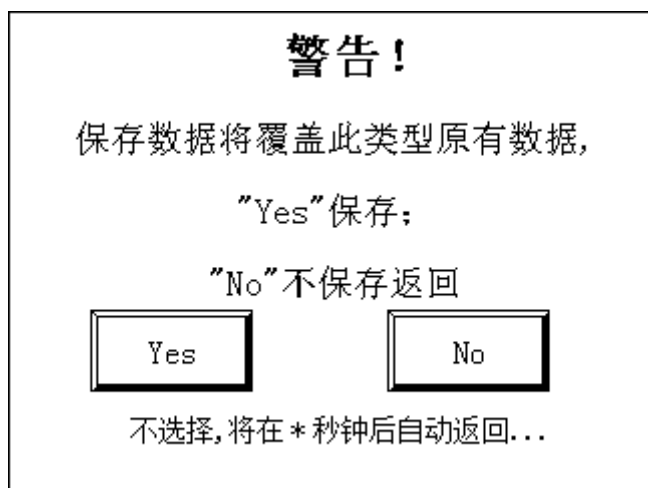
“读取”，设定想读取类型编号后，点击此键，将读取对应编号数据组至界面；

‘Read’, set the type want to be read and click this key to send the related data to the screen;

“保存”，根据产品需要，修改或设定合适数据后，点击此键，保存参数时，会弹出：

‘Save’, modify or sent proper data based on the needs of products, click this key and save the data.

Pop-out:



“**Yes**”，点击将保存数据组至人机界面后返回参数设置画面；

‘Yes’, click to save data to human-machine screen and return to setting screen;

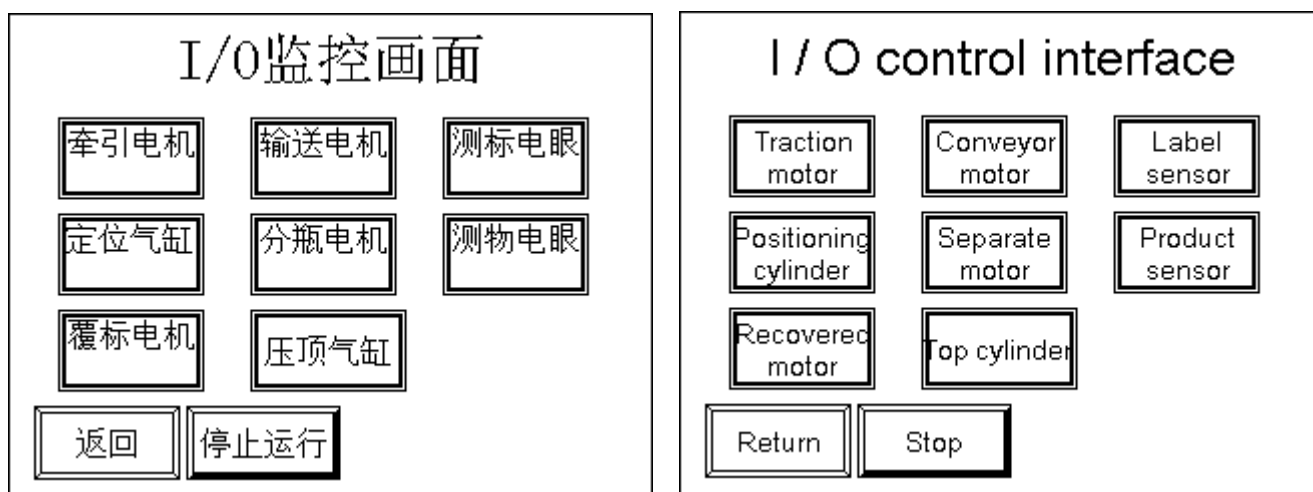
“**No**”，点击将放弃保存，并返回参数设置画面；

‘No’, click to give up saving and return to setting screen;

#### 4. 监控页面/Control interface screen:

“**I/O 监控**”，点击进入 I/O 监控画面；

‘I/O control’, click to enter I/O controlling screen;



【I/O 监控页面】/[I/O control interface]

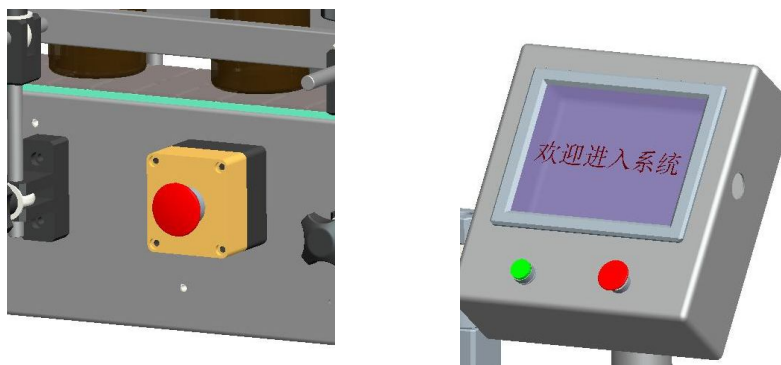
此画面用于监控传感器与电机工作状态；

This interface is used to control the status of sensor and motor in operation;

#### 5. 控制按钮/Control button:

5.1 急停开关：用于紧急停机，向下按压即停机，顺时针扭转则开机。如下图：

Emergency switch: used for emergency shutdown. Press it to shutdown the machine. Turn it clockwise to start the machine. As shown in the following fig.:



【急停开关】/[Emergency switch]

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左图为主急停开关，控制整台机的电源；按下切断整机的电源。

Left picture is the main emergency stop switch which controls the power of the whole machine. Press to cut off the power of the whole machine.

右图为副急停开关，控制人机界面的电源；按下切断人机界面的电源。

Right picture is the vice emergency stop switch which controls the power of the human-machine interface. Press to cut off the power of the human-machine interface.

5.2 **调速器**：调节调速电机的速度。

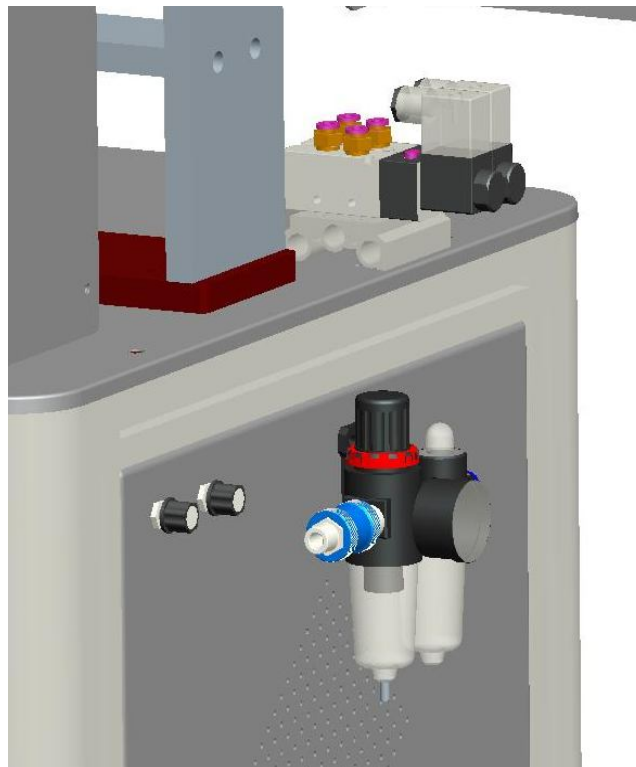
**Speed controller**: adjust the speed of the motor.

**空压开关**：气体的开关。

**Air compressor switch**: switch for air.

**调节阀**：调节气压的大小。

**Control valve**: adjust the air pressure.



## 第五部分 调整部分

### Part Five Adjustment

#### 一、 机械调整

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## **I. Mechanical adjustment**

### **1. 导向机构/Guiding mechanism:**

导向机构调整，根据产品的大小，前后移动导向条，保证产品在输送过程中不跑位，调整以产品能顺利通过，两边偏移不超过 0.5mm 为宜。

Adjust orientation mechanism. Move guiding block forth and back according the size of the products to assure that the products will not go to the wrong direction in transportation. Adjust to let products go through smoothly and it is well that the misalignment on the 2 sides within 0.5mm.

### **2. 覆标机构/Recovering mechanism:**

覆标机构调整，将覆标包胶轮与产品调整平行，保证在产品上的受力均匀，同时应该保证覆标轮能覆到标签，保证贴标位置的稳定性。

Adjust the recovering mechanism to make the rubber wheel parallel with the product, which ensure that the stress on product is even, recovering wheel can touch the label and labeling position is stable.

### **3. 贴标头/Labeling head:**

每个调整，需松开相应的锁紧螺丝，调好后，锁紧螺丝。可通过手轮进行上下、前后位调整；可以水平调整机构进行旋转调整，实现贴标位置的调节。

Related lock screw must be loosed first for each adjustment. Tighten lock screw after adjustment. Adjust up and down, forth and back by hand wheels. Could be adjusted parallel or rotationally to implement the adjustment of the labeling position.

### **4. 剥标板/Label dispenser board:**

剥标板调整，拧松剥标板连接机构上的 7 字把手，剥标板可摆动一定角度，匹配产品的需要。在不同厚度，材质的标签中，有可能要进行角度的调整来达到标签的顺利剥离。

Adjust label dispenser board, loose the 7 shape handle on the connection mechanism of it, and swing label dispenser board for a certain angle to match with the product needs. Maybe need to adjust the angle for smooth label splitting for labels with different thickness and materials.

## **二、电眼调整:**

## **II. Electric sensor adjustment**

本设备配置 2 套电眼，分别为测物电眼和测标电眼，根据产品检测和标签检测需要进行调整。

The machine has 2 sets of electric sensors: product detection electric sensor and label identification electric sensor which can be adjusted according to the needs of product detection and label identification.



## 1. 位置调整 Position adjustment:

通过电眼架，可进行前后、高低位置调整，以适应不同的产品和标签。调整方法参考机械机构介绍部分。

Adjust electric sensor frame forth and back or up and down to adapt different products and labels.

Adjustment methods refer to mechanical introduction section.

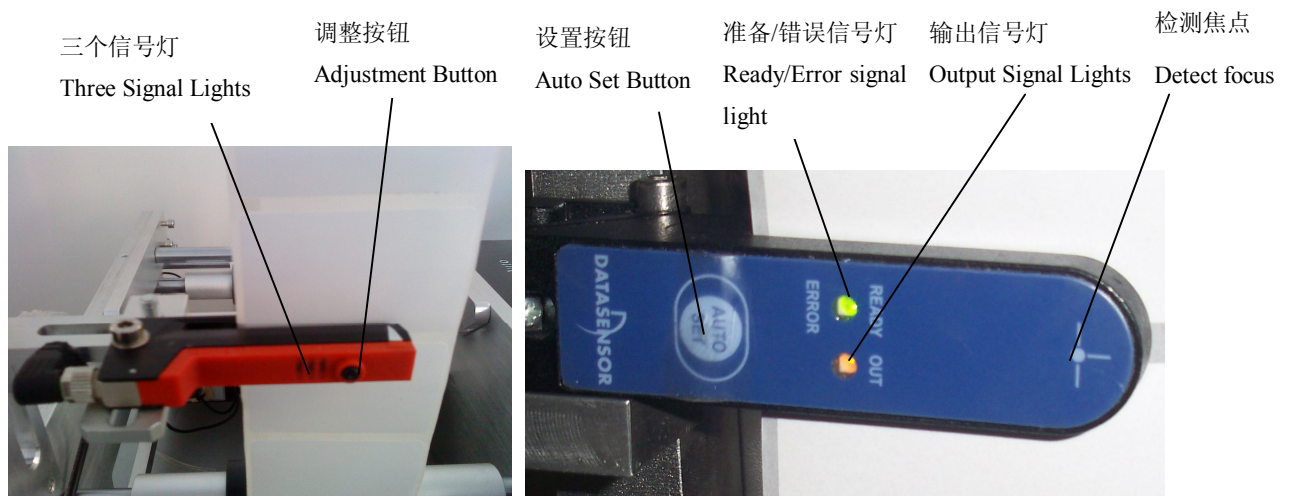
## 2. 电眼设置/Electric eye setup:

本贴标头标准配置为弥特槽型电眼，可选配其他款式的测标电眼，也可选配测物电眼。

The original electric sensor is MT groove electric sensor. Other label identification or product detection electric eyes are optional.

**2.1 测标电眼：**用来检测标签的（在这里仅作为说明之用，不代表是本机器的配置）。

Label identification electric sensor: to detect labels (Only as model introduction, don't represent real type of this machine)



【德国劳易测 GS-63 的电眼】

[German LEUZE GS-63 electric sensor]

【意大利蒂斯 SR21-IR 电眼】

[Italian DATALOGIC SR21-IR electric sensor]

### 2.1.1 劳易测 GS-63 电眼的调整: / LEUZE GS-63 electric sensor adjustment:

(一)工作原理说明：根据厚度的不同来识别标签之间的缝隙。（通过光线穿透没有标签的地方与不穿透有标签的地方来识别）适用于纸质的标签或者其他有一定厚度的标签。

Operating Principle Description: To identify the gap between labels depending on different thickness.

(Base on the light penetrating to identify place with and without labels). It is adaptable for paper

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labels or other labels with certain thickness.

(二) 三个信号灯说明：绿色信号灯：电源灯

Three signal lights: Green signal light: Power Light

黄色信号灯：识别状态灯（黄灯亮起，表示有信号输出）

Yellow Signal Light: Status indicator light (Yellow light on, indicating signal output)

红色信号灯：出错或警告灯

Yellow Signal Light: Status indicator light (Yellow light on, indicating signal output)

(三) 调整按钮：用于设置不同标签的检测。

Adjustment Button: adjust to set up different labels detection.

(四) 电眼使用的方法： / Operation instruction of the electric sensor:

- 1) 将标签穿过电眼 U 型槽，如下图所示。

Drag labels to go through the U groove of the electric sensor as shown in the following fig..

- 2) 如果拉动标签，黄色信号灯会在标签与标签间的间隔中亮起，在有标签的地方熄灭，这时就表示正常，可以直接使用。

Dragging labels, yellow signal light is on in the gap between labels and is off at the place with labels, so it is normal and can be used directly.

- 3) 当黄色信号灯是常亮或者常灭的情况下，就需要重新设置电眼。

When yellow signal light is on or off all the times, reset the electric sensor.

- 4) 电眼设置方法如下：

Methods of setting up electric sensor are as follows:

- a. 将标签穿过电眼的 U 型槽，如下图所示

Drag labels through U-shaped groove as demonstrated in the following picture.

- b. 将有标签的地方置于电眼的槽里面，持续按住调整按钮 3 秒钟左右，可以看到电眼的黄色信号灯闪烁，然后松开按钮，将没有标签的地方（只有标签的底纸）置于电眼槽内，持续按住调整按钮 8 秒钟，然后松开按钮，此时，设置完成。

Put the base paper with label into the groove of electric sensor, press the adjustment button for 3 seconds till yellow signal light blinking, then release button, put the base paper without label into the groove of electric sensor, press adjustment button for 8 seconds, then release the button. Then the reset process is completed.



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b. 短按自动设置按钮【“AUTO SET”】，绿灯和黄灯熄灭，电眼捕捉介质信号，此时不可移动标签，直到绿灯快速闪动为止。

Press the 【“AUTO SET”】 button shortly, green light and yellow light are off, electric sensor will capture medium signal, and don't move label till green light blinking quickly.

c. 当绿灯闪亮的时候，把第二种介质放入到电眼焦点位置。

When green light is on, put the second medium in the central focus place of electric sensor.

d. 短按“AUTO SET”，绿灯熄灭，电眼开始捕捉第二种介质信号，此时不可移动标签，直到绿灯持续亮起。

Press 'AUTO SET' button, and green light turns off. Electric sensor starts to capture the second medium signal. Don't move label till green light turning on and sustain.

e. 来回移动标签，在两种介质分解地方，输出信号灯亮起，电眼设置完毕。

Move the label back and forth, in the gap between two mediums interfaces, if output signal light turns on, so that electric sensor setting process is completed.

f. “READY”持续亮，表示电眼以可以在两种介质的切换情况下使用。

'READY' keeping on, that means electric sensor can be used under both mediums interchange status.

## 2.2 测物电眼：（在这里仅作说明之用，并不代表客户所购买机型配置）/Product Detection Electric sensor: (Only as model introduction, don't represent real equipment type)

### 2.2.1 FX-301 系列电眼接线方法/Connection of FX-301 Series electric sensor:

测物电眼必须保证正确的安装才能使用，“IN”连黑线，“OUT”连银色线，如下图所示。

Product detection electric sensor only can be used via proper connection. Follow the connection instruction as below. 'in' connects to black wire, and 'out' connects silver wire.



【 FX-301 系列电眼】/[FX-301 Series electric sensor]

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### 2.2.2 测物电眼检测原理: /Product detection electric sensor detecting principle

测物电眼是根据光反射量辨别物体。电眼发出光照射到物体，物体会反射一定量的光回电眼，当物体反射的光量达到设定值时，电眼信号变化，发出信号到控制系统。

The product detection electric sensor identifies the object according to light reflection amount. Electric sensor emits the light to object, object can reflect certain light to electric sensor, when the amount of reflection light achieves to setting value, electric sensor signal changes and sends signal to control system.

### 2.2.3 状态切换: / Status switch

按“MODE/CANCEL”键，绿色灯在“RUN”、“TEACH”、“ADJ”、“L/D”、“TIMER”、“PRO”数个档之间切换，指示不同的工作状态。

Press 'mode/cancel' key, green light switch with 'run', 'teach', 'ADJ' 'L/D' 'TIMER' 'PRO' several modes, indicating different work status.

- ❖ “RUN”表示运行状态;
- ❖ 'RUN' means operation status;
- ❖ “TEACH”为教学状态;
- ❖ 'TEACH' means teaching status;
- ❖ “ADJ”为调节状态;
- ❖ 'ADJ' means adjustment status;
- ❖ “L/D”为升降信号状态;
- ❖ 'L/D' means Up/Down signal status;
- ❖ “PUSH”键按下去为确认，左右拨动为微调功能。
- ❖ Press down 'Push' key for confirmation, toggling for fine-tuning function.

### 2.2.4 测物电眼设置: /Product detection electric sensor setup

- a 在没有产品在工位上的前提下，打开电眼放大器透明盖，按“MODE/CANCEL”键，调到“TEACH”档，数显框显示一个数值，此数值为空白信号，如下图中的“67”，数值稳定后，按“PUSH”键确认。

When there is no product on the work station, open transparent cover of electric sensor amplifier, press 'MODE/CANCEL' key, and switch to 'TEACH' mode. Digital display window shows a value which is blank signal, as '67' in the picture as below. When the value is stabilized, press 'PUSH' to

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confirm.

- b 然后将产品放到贴标的工位上，靠紧左边定位杆，观察位置，通过调整定位杆的位置来达到标签在产品上的指定位置。

Then put product on the labeling station, close to left positioning lever, observe position, and locate the position of label on the product via adjusting the positioning lever.

- c 标签位置调整好后，可以看到数显框中显示另外一个数值，此数值为检测到产品时的信号，如“1900”，稳定后，按“PUSH”键确认。完成后，数显框中显示 GOOD 的提示，按“MODE/CANCEL”键返回“RUN”运行状态。

After adjusting the position of label, a new value is on the digital display window which is the signal while detecting the products, like '1900'. If the value is stable, press 'PUSH' to confirm. After completing that, digital display shows the 'GOOD' tips. (Press 'MODE/CANCEL' key back to 'RUN' operation status).

- d 调到“ADJ”档，显示框中显示的数值=空白信号+（检测信号-空白信号）/2，系统默认此值为临界值，即信号值大于临界值，则默认为有物体，小于临界值，默认为无物体。信号反馈到 PLC，发出相应的指令。临界值可调整，通过左右拨动“PUSH”的左右键，增大或减少数值，改变临界值（一般不需要调整），然后按“PUSH”键确认。

Switch to 'ADJ' model. Digital display shows the value=blank signal + (detecting signal-blank signal)/2. System defaults this value as threshold value. If signal value is greater than threshold value, it means there is object in default, and less than threshold value, it means on object in default. Signal feedback to PLC. PLC will send corresponding command. Threshold value is adjustable. Via toggling the left/right key of 'PUSH', you can increase or decrease value, and change the threshold value (no adjustment required normally). Finally, press 'PUSH' to confirm.

- e 按“MODE/CANCEL”键，调回到“RUN”运行状态（任何的设置完成后都要返回到“RUN”运行状态）。

Press 'MODE/CANCEL' key, back to 'RUN' operation status. (Back to 'RUN' operation status after completing any settings.)

- f 把透明盖合上，设置结束。

Close the transparent cover and finish settings.

- g 当产品放到贴标工位时，测物电眼检测到信号，反馈到 PLC，PLC 发出指令后，贴标机相关

部件开始运行工作。

When product is put on the labeling position, PRODUCT DETECTION electric sensor detects signal, and feeds back to PLC. PLC sends command and corresponding parts of labeling machine start to work.



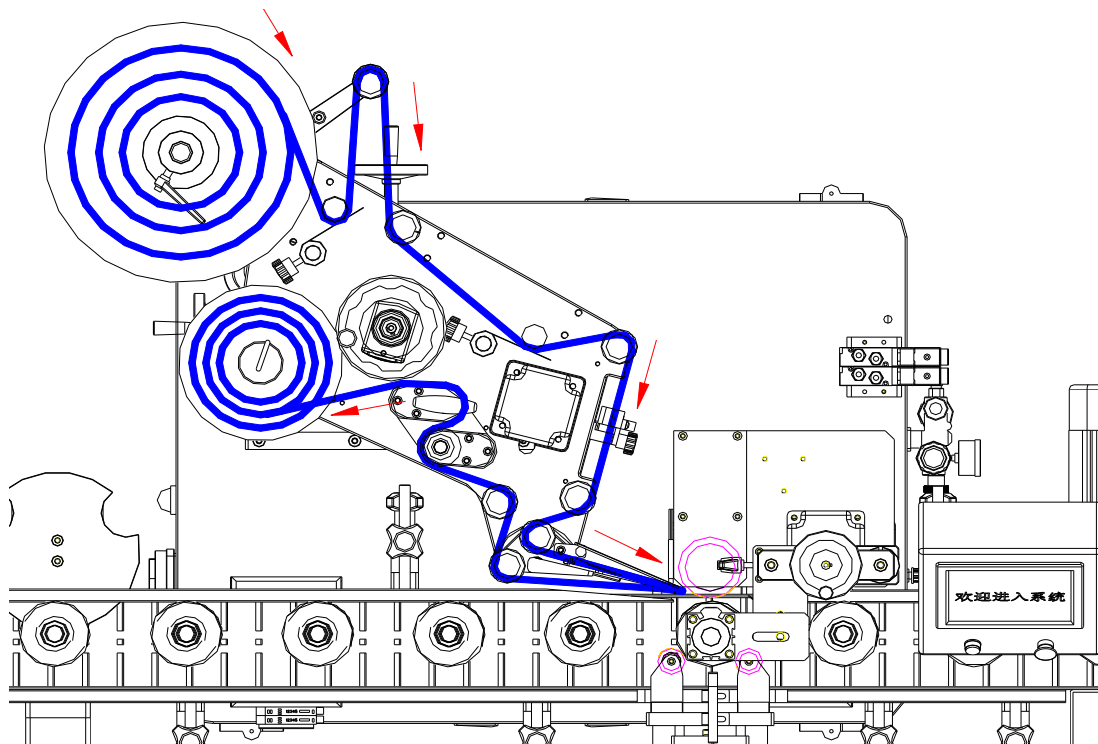
【 FX-301 系列电眼】/[FX-301 Series electric sensor]

## 第六部分 操作部分

### Part Six Operation

#### 一、 绕标签

##### I. Winding Label



【绕标图】/[Label winding picture]

1. 扭松三角形料盘上的可调把手，把三角形料盘取出；

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Loose the adjustable handle on the triangle material plate and take out the triangle plate;

2. 按图示出标方向，把标签料卷装入，再把三角形料盘套上并装好扭紧；

As indicated on the picture, put in the roll of labels, install the triangle material plate and tighten the handle.

3.按顺时针方向，把牵引机构上的 T 字把手约扭半圈，牵引两轴松开间隔，然后把两处压标锰片也松开；

Turn the T shape handle on the traction mechanism for half a cycle in clockwise direction, loose the traction axis, and loose the manganese shims at the 2 places;

4. 按图示红色箭头方向把标签绕好（注意整个标带尽量保证平行不偏斜），然后把压标锰片轻压标带，再把牵引上 T 字把手顺时针扭约半圈，感觉压紧落位即可，绕标完成。

Wind the label according to the direction indicated by the red arrow (pay attention to keep the whole label strip parallel without skew.). Press the manganese shim on the label strip slightly, and then turn the T shape handle on the traction mechanism for half a cycle in clockwise direction. If the label is pressed in position, label winding is finished.

## 二、 机械操作：

### II. Mechanical operations

机械操作一般在连通电源情况下，先在手动状态下进行相关动作配合调整。

Mechanical operations run usually when the machine is powered on. Adjust in manual status in the assist of relative movements.

1. 输送机构：调节输送机构，保证产品的顺利输送到贴标位置，并顺利送出，在输送机构左右两侧放置须贴标的产品进行微量调整，具体的操作方法，请参考“第五部分 调整部分”相关章节，贴标部位和收料部位的输送调整采用同样的方法。

Transportation mechanism: Adjust transportation mechanism to make sure products be transmitted to and sent out the labeling position successfully. Put products to be labeled on the 2 sides of the transportation mechanism for minor adjustment. Specific operation methods please refer to relative chapters in 'Part Five Adjustment'. Adjustments of labeling position and material recycling position are using similar method.

2. 贴标位置调整：将待贴产品放置剥标板下旁边，上下、前后、左右调整贴标头，保证标签剥离部位对准贴标位置；调节导向机构，保证标签贴到产品的指定位置；综合以上两种方法调整。



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Labeling position adjustment: put products to be labeled under the label dispenser board, adjusting the labeling head up and down or forth and back, to ensure the label splitting position align with the label pasting position. Adjust guiding mechanism, to ensure the label pasting on the indicated position. Use above 2 methods integrally for adjustment.

### 三、 电气操作:

#### III. Electrical operations

接通电源→ 打开两个急停开关, 启动贴标机→ 人机界面设置→ 开始贴标。

Connect power → open 2 emergency switches; start labeling machine → human-machine interface setup → start labeling.

## 第七部分 设备的维护和保养

### Part Seven Routine Maintenance of Equipment

1. 设备的安装使用环境: 要求为室温, 不易长期在高温、潮湿、有酸碱性的环境中使用, 以免影响设备的使用寿命、效率和精度。

Equipment installation and operation environment: room temperature, not suitable to use in high temperature, humidity and acid-base environment for a long term to avoid the effects of shortening the operation lifetime, efficiency and precision.

2. 保持清洁: 使用后应对设备的机构, 如摩擦滚筒、电器箱等进行清理。可以使用酒精或商用中性清洗液进行清洁维护。

Keep clean: clean the mechanism of the equipment after use, eg, friction roller, electrical box and etc. Alcohol or commercial neutral cleaning liquid could be used for cleaning and maintenance.

3. 清洁需要注意事项:

Attentions in cleaning:

- ❖ 勿使用对机械表面有损伤的清洗工具。
- ❖ Do not use cleaning tools which may damage mechanical surface.
- ❖ 勿使用带腐蚀性的塑料器具。
- ❖ Do not use erosive plastic container.
- ❖ 勿使用酸性溶解液。
- ❖ Do not use acidic dissolution liquid.

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4. 定期的检查和维护：应对机器进行周期的检查，以便维护机器的正常运做，包括但不限于以下方面。

Periodic check and maintenance: check the machine periodically in order to keep the machine work well, including but not limited to followings:

- ❖ 清理掉废弃的纸屑与碎片。
- ❖ Clean out the discarded scraps of paper and debris.
- ❖ 从滚筒与边缘清除油渣。
- ❖ Clean out the oil residue from the side of the roller.
- ❖ 用软刷或者是布料清理感应器的镜头。
- ❖ Clean the lens of the sensor with soft brush or cloth.
- ❖ 定期更换保险丝，本设备使用的是交流电源，要使用保险丝来防止过载。
- ❖ Replace fuse periodically. This equipment uses AC power and a fuse to prevent overload.
- ❖ 防锈，使用防锈油喷各个不锈钢和铁器部件，用软布轻轻擦匀，建议使用噢姆-40 防锈油。
- ❖ Rustproof: Spray rustproof oil on stainless steel and iron parts and rub evenly with soft cloth.

The recommended rustproof oil is WD-40 rustproof oil.

## 第八部分 常见故障处理

### Part Eight Settlement of Common Malfunctions

#### 1. 底纸断/Base paper broken:

底纸断与标签底纸质量、标签牵引途径中刮伤底纸、标签粘连这三个因素几个关系密切。

The base paper broken is closely related to the quality of the base paper, scrapping the base paper in the label traction and label adhesion.

- a. 检查底纸是否有砍伤情况，如砍伤底纸，则需要更换质量优质的底纸。建推荐使用格拉辛底纸，且要求标签供应商控制模切深度，不能伤害到底纸。

Check the base paper damage, if it is cut down, change to base paper with better quality. The recommended paper is the Gelaxxindi, and requires the label supplier to control the depth of die cutting.

- b. 检查标签绕行中是否有刮伤情况，消除刮伤因素。

Check the label scratching during winding to eliminate factor of scratching.

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c. 如标签粘连，标签容易撕断。控制下一张出标长度，保证不粘连到贴好标签的产品即可。

If label adhesive, it is easily to be broken. Control the output length of the label, and ensure no adhesion to the labeled products.

## 2. 贴标偏差超过精度要求/Labeling deviation more than precision requirement:

标签偏差与标带走偏、标带走向与产品输送走向不平行、牵引轮打滑、产品定位检测不准、标签没有沿着覆标滚轮贴到产品上，产品误差几个因素有关，检查以上几个因素，再行针对性解决。

label deviation and label strip off position, label strip direction not parallel with product transportation direction, traction wheel slipping, incorrect detection of product position, label not pasting on the product aligning with label pasting wheel, product tolerance and so on are the factors needed to be checked and be solved respectively.

- ❖ 标带走偏，放松牵引机构，来回拉一下标签，让其自动走正。标签走正后，夹紧两侧限位圈，导正标签。
- ❖ If label strip is off position, release the traction mechanism and drag the label back and forth to make it go correctly. After label going correctly, tighten the limit circles at 2 sides and guide out the label.
- ❖ 标带走向与产品输送走向不平行，通过调节贴标头的倾斜度可以实现平行。
- ❖ If label strip direction not parallel with product transportation direction, adjust the inclination of the labeling head to realize parallelism.
- ❖ 牵引轮打滑，牵引轮磨损、牵引轮锁紧螺丝松脱有关，两种原因均可拧紧牵引轮锁紧螺丝。
- ❖ Traction wheel slipping and worn out relate to the clock screw on the traction wheel. The 2 problems can both be solved by tightening clocking screw.
- ❖ 产品误差，产品制作过程中，边缘误差会引起贴标偏差，只有控制好产品质量才可以解决。
- ❖ In product manufacturing process, edge tolerance causes labeling tolerance. Product tolerance can only be solved by product quality control.

## 3. 连续出标/Output label continually:

连续出标和出标不完全与电眼检测灵敏度有关，调节灵敏度即可，调节方法请参考前面的电眼调整章节。

Continuous and incomplete outputs of labels related with the detection sensitivity of the electric sensor and could be solved by adjusting sensitivity. Detail instructions refer to aforesaid chapter for electric eye adjustment.

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- ❖ 如调节电眼仍无法解决，则可能为标签超出选用电眼的适用范围，或者电眼损坏，需要向厂家咨询。
  - ❖ If it can not be solved after electric eye adjustment, it may be the reason that label is not in detection scope of the electric eye or it is damaged. Consult our company.
  - ❖ 另一种原因为标带走偏，电眼没检测到标签，前后调节电眼到检测位置即可。
  - ❖ Another reason is that the label strip is off position and is not detected by the electric eye. Adjust the detection position of the electric eye back and forth.

#### **4. 剥标板处底纸松弛/Base paper loose at the position of the label dispenser board**

底纸松弛与牵引速度过低与牵引机构打滑有关，若为牵引速度过低，则提高牵引速度可解决；

Base paper loose relates to too low traction speed or traction mechanism slipping. If the traction speed is too low, speed up to solve it;

- ❖ 若牵引机构打滑，则扭紧牵引滚轴的锁紧螺丝至底纸不打滑即可。
- ❖ If the traction mechanism slips, tighten locking screw on the traction axis until base paper not slipping.
- ❖ 另外，注意收料轴背后的传动皮带是否断裂。
- ❖ Additionally, pay attention to the transportation belt behind the material recycle shaft broken or not.