

# Manual for Vacuum Vertical Packaging Production Line

## Foreword

Before installing and using the fully automatic material handling line, please be sure to familiarize yourself with the contents of this "User Manual". It will help you understand the basic performance, structure, operation, and maintenance methods of this fully automatic material handling line, and assist you in how to use the machine correctly to maximize its performance, reduce malfunctions, and extend its service life. During the trial period, operators should operate under the guidance of our company's staff and quickly master the use of this machine.

### 1. Safety precautions for using this machine

1. Before each startup, check that there are no tools or any debris on the workbench or conveyor belt, and observe whether there are any abnormalities around the machine;
2. During the operation of the machine, it is strictly prohibited for any part of the body to approach or come into contact with the moving parts!
3. When the machine is working normally, it is strictly prohibited to frequently switch the function buttons on the touch screen, and it is strictly prohibited to arbitrarily and frequently change the important parameter settings of the touch screen;
4. It is prohibited for two or more people to operate various switch buttons and mechanisms of the machine simultaneously; Power should be cut off during maintenance and repair; When multiple people are debugging and repairing machines simultaneously, attention should be paid to mutual communication and coordination to prevent accidents caused by lack of coordination;
5. When inspecting and repairing electrical control circuits, it is strictly prohibited to work with electricity on! Be sure to cut off the power! It should be completed by electrical professionals;
6. When the operator is unable to stay awake due to drinking or fatigue, it is strictly prohibited to carry out operation, debugging or maintenance work; Other untrained or unqualified personnel are not allowed to operate the machine;
7. It is strictly prohibited to modify the machine without the consent of our company, and do not use the machine under conditions outside the designated environment;
8. The insulation resistance and grounding resistance of this machine meet national safety standards when it leaves the factory.

**Warning: For the safety of yourself, others, and machinery, please**

**follow the above requirements. Our company is not responsible for any**

**accidents or incidents caused by non-compliance with the above**

requirements.

## **2. Installation and debugging**

### **Installation**

#### **1. Horizontal position**

When installing the machine on the same horizontal plane, you should use the product transport plane as a reference to make the machine horizontal. To install the machine horizontally, place a level on the reference plane (i.e. the plane where the product is transported), adjust the bottom foot adjustment screw of the machine to make the product transport plane horizontal. At the same time, all conveyor belts on the equipment should be kept in a basic horizontal state to ensure that materials can pass smoothly without getting stuck.

#### **2. Non direct sunlight exposure**

Installing the machine in a place with direct sunlight or strong light can cause the photoelectric switch to malfunction

3. Places where the temperature is not too high or too low, or where the space is too narrow

The suitable operating environment temperature for this machine is 0-45 °C;  
Humidity: No condensed water, 10-90% RH value.

#### **4. Non harsh environment**

The machine should not be installed in locations with seismic sources, near ventilation equipment and air conditioning vents, or in harsh environments with corrosive gases or dust that are not suitable for machine use and maintenance.

#### **5. Connect the power supply**

Insert the plug on one end of the power cable into the socket of the power supply and ensure reliable grounding. (The power supply must comply with safety regulations)

**Attention: For safety reasons, this machine must be powered by 220V 50Hz AC and must have a reliable grounding wire. This machine is strictly prohibited from being**

**connected to a 380V AC power supply or other power sources that do not meet the above requirements. To ensure safety, the connection work should be completed by electrical professionals**

## **Debugging**

1. Turn on the power air switch inside the electrical box of the machine. Check if the touch screen is in normal working condition. After the first power on, the machine must be checked
2. Firstly, the packaging speed and the operating speed of each servo station should be adjusted to a lower speed, and then check whether the parameters on the touch screen are set reasonably
3. After ensuring the safety around the machine, please press the reset button and observe whether the machine can be reset normally. After the reset is completed, you can press the touch screen start button to observe whether the various components of the machine are running normally and whether each workstation has corresponding correct actions. After ensuring that everything is normal, you can gradually increase the operating speed. After pressing the touch screen stop button and completing the current action cycle, the device can stop running. Attention: In case of emergency, please immediately press the red emergency stop button

## **3.Parameter description and operation instructions**

The parameters and display status are completed by operating the touch screen. The touch screen includes a series of display interfaces to facilitate user parameter operations and status queries. The touch screen mainly includes several operating components: main interface, manual interface, parameter interface, function switch, alarm information, IO monitoring, etc.

**Attention: The operation of this machine should be reasonably adapted to the overall speed of the machine, and it is not advisable to have too fast a previous process that may result in insufficient processing time for the rear**

# 1. Main interface

博伽·梵歌

2025/05/26 15:11:43

整机:	复位中	复位完成	运行中	停止中	实际包装速度	0	
立式机:	复位中	复位完成	运行中	停止中	制袋数	0	清零
转盘:	复位中	复位完成	运行中	停止中	填充数	0	清零
理料:	复位中	复位完成	运行中	停止中	当前左进料个数	0	
真空:	复位中	复位完成	运行中	停止中	当前右进料个数	0	
成型:	复位中	复位完成	运行中	停止中			

立式机启用

转盘启用

理料启用

真空启用

成型启用

夹膜

复位

启动

停止

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1. The interface is mainly divided into three parts. The upper box is the basic monitoring area of the system, the middle is the system control buttons, and the bottom is the menu bar

2. The system monitoring area is divided into left and right sides, with the left side for status monitoring. Each part of the system can be individually selected whether to enable it or not, which is convenient for debugging. The parts that are not enabled will not run, making debugging flexible and highly secure. However, after debugging is completed, please enable all parts so that the system can operate normally. The system has four states, namely reset in progress, reset completed, running, and stopping, and each state is displayed separately for quick location in case of problems.

On the right side of the system monitoring area is the packaging data monitoring area, where the current packaging data can be viewed

a. Actual packaging speed: The actual packaging speed of the current packaging machine, how many packages are packed per minute

b. Bag making quantity: How many bags have been produced by the current packaging machine

c. Filling quantity: What is the current quantity of material packaging on the packaging machine

d. Current left/right feeding quantity: The current quantity of materials on the left and right sides of the 1/2 material handling conveyor belt

4. In the middle control button area, there are four buttons: film clamping, reset, start, and stop.

a. When the film clamping button is pressed, the film clamping cylinder on the

packaging machine will open, allowing the film pulling servo to tightly adhere to the packaging film for smooth film pulling.

b. When the reset button is pressed, the device will perform a system reset. At this time, all enabled parts in the status monitoring area above will enter the reset in progress state, which will light up. When the system reset is completed, the state will switch to the reset complete state, which will turn off and light up

c. When the start button is pressed, the reset completed part will be started, and the system will enter the running state, which will light up during operation

d. When the stop button is pressed, the currently running part will be stopped. The system status will be triggered during the stop, and it will light up during the stop. When the current action cycle is completed, the device will stop running, and the indicator lights for running and stopping will be turned off

5. In the menu bar below, there are buttons to enter each interface. Clicking on each button will take you to the corresponding interface

## 2. Manual interface

In the manual interface, each part will be subdivided into corresponding interfaces, which can be switched to in the menu bar above. The button functions of each interface will be described in detail below

### Packaging machine section

博伽·梵歌

2025/05/26 15:51:20

立式机

转盘

分料

真空

成型

运膜一次

制袋一次

下料一次

横封开

横封合

纵封

切刀

打码

插角

站袋

吹气

上料机手动

左纠偏

右纠偏

搅拌手动

手动清料

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1. Film transport once: When this button is pressed, the film transport motor will rotate the corresponding length. When the film clamp is opened, the film will be pulled to the set bag length

2. Bag making once: When this button is pressed, the vertical machine will make

an empty bag, which can be used to test whether the vertical machine operates abnormally

3. Cutting once: When this button is pressed, the upper cutting mechanism will operate, and the next cutting will be done

4. Horizontal sealing opening: When this button is pressed, the horizontal sealing mechanism will open to its original position

5. Horizontal sealing: Press this button to close the horizontal sealing mechanism to the set closing position, so as to press and seal the horizontal part of the packaging bag

6. Vertical sealing: When this button is pressed, the vertical sealing mechanism will be triggered, allowing the middle of the packaging film to be hot pressed and sealed

7. Knife: When this button is pressed, the knife cylinder will operate to cut the packaging bag

8. Code printing: When this button is pressed, the code printer will operate once to print the code

9. Corner insertion: When this button is pressed, the corner insertion cylinders on the top and bottom of the horizontal seal will operate to process the bag shape

10. Station bag: When this button is pressed, the station bag cylinder above the horizontal seal will move to shape the bottom of the bag

11. Manual feeding machine: After selecting the feeding machine mode as manual on the function switch interface, press this button to run the feeding machine for feeding. Pressing it again will stop feeding

12. Left correction: When this button is pressed, the correction motor runs and the film stick moves to the left

13. Right correction: When this button is pressed, the film stick moves to the right

14. Manual mixing: After selecting the mixing mode as manual on the function switch interface, press the next button to start the mixing motor. When pressed again, the mixing motor will stop running

15. Manual cleaning: When this button is pressed, the screw servo runs and the screw rotates, and the material will be gradually cleaned out

## **Rotary part**



1. Next workstation: After pressing this button, the turntable will rotate one workstation, and all corresponding workstations will also have actions, which can also be understood as one action

2. Rotary belt: This button controls the start or stop of the rotary belt

3. Rotary table - vertical bag support: After pressing this button, there is a cylinder at the connection between the vertical machine and the rotary table at this workstation. When pressing this button, the cylinder rises to support the bag that comes down from the vertical machine. Press this cylinder again to descend

4. Folding - Up and Down: After pressing this button, the up and down cylinders of the folding station on the turntable will move. After pressing, the cylinder will go down, and then press it again to go up

5. Folding edge retraction: After pressing this button, the left and right cylinders of the folding station on the turntable will retract. Pressing it normally will open it

6. Folding Push Clamp: After pressing this button, the push clamp cylinder at the folding station on the turntable will close, and pressing it again will open it

7. Pre sealing: After pressing this button, the pre sealing cylinder in the folding station will perform hot pressing and sealing. Pressing the pre sealing button again will open it

8. Bag Pulling Bottom Support: After pressing this button, the cylinder below the bag pulling station on the turntable will rise to lift the material, and then press the cylinder again to descend

9. Pulling bag - clamping bag: After pressing this button, the clamping cylinder on the bag pulling station on the turntable will clamp and clamp the bag opening. Pressing it again will open it

10. Bag Pulling and Lifting: After pressing this button, the lifting cylinder on the bag pulling station on the turntable will descend to straighten the bag opening.

Pressing it again will raise it

11. Folding once: After pressing this button, the folding station will move once

12. Pulling the bag once: After pressing this button, the bag pulling station will move once

13. Vibration material frequency conversion: After pressing this button, the vibration material station on the turntable will run, shaking the material from the inner wall of the bag and flattening the material in the bag

## Material division section



1. Horizontal movement of material distribution: Press this button to move the material distribution cylinder to the left, aligning the left conveyor belt with the vacuum chamber

2. Material Distribution - Left Stop: Press this button to retract the stop cylinder on the left conveyor belt, allowing the material to be smoothly fed into the vacuum chamber

3. Material distribution - Right stop switch: Press this button to retract the stop cylinder on the right conveyor belt

4. Left pushing forward: When this button is pressed, the left pushing station will move forward. When this button is released, it will stop running. When using this button, attention should be paid to the interference of the station to see if it can move forward

5. Left pushing backward: The same as the left pushing forward, but in the opposite direction, this button can make the pushing station backward

6. Right pushing forward: The pushing station on the right serves the same purpose as the left pushing forward

7. Right pushing backward: The pushing station on the right has the same function



as the left pushing backward

8. Left front belt advance and retreat: After pressing this button, the belt in front of the left vacuum chamber will extend into the vacuum chamber to transport the material to the pallet of the vacuum chamber

9. Right front belt advance and retreat: The right belt has the same function as the left front belt advance and retreat

10. Left rear belt advance and retreat: After pressing this button, the belt behind the left vacuum chamber will extend into the vacuum chamber to transport the material to the rear conveyor belt

11. Right rear belt advance and retreat: The right belt has the same function as the left rear belt advance and retreat

12. Left package extension: Press this button to extend the cylinder on the material pushing station, so that the material can be pushed

13. Left - Package up and down: Press this button to lower the up and down cylinders on the material pushing station, so that the pushing plate can be placed in the lower position of the material, facilitating the pushing force

14. Right bag delivery extension: The right workstation functions similarly to the left bag delivery extension

15. Right bag up and down: The right workstation functions similarly to the left bag up and down

16. Sorting belt left: Press this button, and the left belt for sorting will run. Press it again to stop

17. Material distribution belt right: The right workstation functions the same as the material distribution belt left

18. Left feeding once: Pressing this button will activate the workstation on the left side once to complete the feeding process. Please pay attention to the interference of the workstation when using this button

19. Right feeding once: The right workstation functions the same as the left feeding once

## **Vacuum section**



1. Vacuum - Left flap cylinder: After pressing this button, the flap cylinder of the left vacuum chamber will be pushed in, allowing the flap motor to smoothly shape the side of the packaging bag

2. Vacuum - Left flap in: When this button is pressed, the flap motor of the left vacuum chamber will enter inward, and it will stop when the button is released

3. Vacuum - Left flap retraction: When this button is pressed, the flap motor of the left vacuum chamber will retract outward, and it will stop when the button is released

4. Vacuum - On the left tray: When this button is pressed, the tray of the left vacuum chamber will rise and stop when released

5. Vacuum - Under left support bag: When this button is pressed, the support plate of the left vacuum chamber will descend and stop when released

6. Vacuum - Left Compression Cylinder: When this button is pressed, the side compression cylinder in the left vacuum chamber will extend and compress, and when pressed again, it will retract

7. Vacuum - Left Welding Seal: When this button is pressed, the welding seal cylinder in the left vacuum chamber extends and presses the welding seal, and then retracts when pressed again

8. Vacuum Left Blocker: When this button is pressed, the blocking cylinder in the left vacuum chamber clamps to block the material as much as possible below

9. Vacuum - Left Vacuum Chamber: When this button is pressed, the left vacuum chamber closes and covers, and when pressed again, it opens

10. Vacuum - Left Vacuum Pump: When this button is pressed, the left vacuum pump starts running. Please pay attention to whether the vacuum valve is open when using this button, and the vacuum pump should not run for a long time

11. Vacuum - Left Vacuum Extraction: When this button is pressed, the left vacuum

extraction valve will open to facilitate vacuum extraction inside the vacuum chamber

12. Vacuum - Left Vacuum Breaker: When this button is pressed, the left vacuum breaker cylinder will open, filling the vacuum chamber with air to balance the internal and external pressures. Only then can the vacuum chamber be opened

13. Left vacuum action once: Press this button, and the left vacuum chamber will perform a complete action

**Attention: The function of the vacuum right xxx button is the same as that of the vacuum left xxx button**

## Forming part



1. Forming - Left Pushing: Press this button, and the left pushing cylinder on the end forming station will extend, sending the material into the cutting and forming station

2. Forming Right Pushing: The right workstation functions similarly to the Forming Left Pushing station

3. Forming and bag clamping: Press this button to activate the bag clamping cylinder at the cutting and forming station, clamping and sealing the bag opening to wait for the cutting blade to cut

4. Forming Cutting Knife: When this button is pressed, the cutting cylinder on the forming station will operate to cut off the excessively high part of the bag

5. Molding blowing: When this button is pressed, the blowing on the cutting station will be triggered to blow out the waste material cut by the cutting blade

6. Molding - Blocking: When this button is pressed, the blocking cylinder on the

cutting molding station will open, allowing the material to be removed from the conveyor belt. Resetting this cylinder will block the material on the cutting molding station for cutting

7. Forming - Left Belt: When this button is pressed, the formed left belt will run, and when pressed again, it will stop running

8. Forming - Right Belt: When this button is pressed, the formed right belt will run, and when pressed again, it will stop running

9. Forming discharge belt: When this button is pressed, the discharge belt under the cutting forming station will run, and pressing it again will stop running

10. Forming Cutting Forming: After pressing this button, if the feeding sensor senses the material, the cutting forming station will perform a complete action

### 3. Parameter interface

The parameter interface will be subdivided into corresponding interfaces according to each part. You can switch to the corresponding interface in the menu bar above. The parameter functions of each interface will be described in detail below

**Note:** There may be slight deviations in the position and physical distance of parameter settings with units in millimeters

### Vertical machine section

博伽·梵歌

2025/05/28 10:25:06

立式机	转盘	分料	真空	成型
袋长	0.00	拉膜延时	0.00	s
一次袋长	0.00	多次拉膜间隔时间	0.00	s
二次袋长	0.00	包装速度	0	包/分钟
色标偏移	0.00	横封合位置	0.00	
拉膜速度	0.00	横封开位置	0.00	
拉膜加减速时间	0	ms	横封速度	0.00

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1. Bag length: This parameter controls the length of the packaged bag, measured in millimeters

2. Primary bag length/secondary bag length: This parameter is used to set the primary bag length when the required bag length is longer than the longitudinal seal

length and cannot be pulled in one go. In this case, multiple film pulls are required. If further stretching or intermediate subdivision is needed, the secondary bag length is set. After setting this parameter, **the length of the pulled out bag is the bag length+primary bag length+secondary bag length. When a secondary film pull is required, please prioritize setting the primary bag length.**

3. Color Mark Offset: This parameter is used to determine how much distance to walk after touching the color mark before cutting and sealing, in order to ensure the integrity of the packaging pattern

4. Film pulling speed: This parameter controls the speed of the film pulling motor during film pulling, measured in mm/s

5. Film pulling acceleration and deceleration time: This parameter is used for the acceleration and deceleration time of the film pulling motor during operation. Its purpose is to prevent excessive movement and jumping of the film during the start stop phase. The larger the setting, the slower it will be, measured in milliseconds

6. Film pulling delay: This parameter controls the film pulling delay operation and is used in conjunction with other actions, in seconds

7. Interval time for multiple film pulling: This parameter is used to delay the completion of longitudinal sealing before starting the next film pulling process. The purpose is to allow the longitudinal sealing cylinder to leave the film surface. The cylinder has a certain action time, so pulling the film directly may cause damage to the film due to incomplete detachment of the longitudinal sealing from the film surface. The unit is s

8. Packaging speed: This parameter controls the maximum speed of the packaging machine during operation. As it needs to be linked with the turntable below, this speed is also affected by the turntable. The actual operating speed is less than or equal to this parameter, in units of packages per minute

9. Horizontal sealing position: This parameter controls where the horizontal sealing servo should run during sealing. When the sealing position is already tightly attached to the bag, this parameter should be adjusted slightly to avoid an alarm for excessive torque caused by excessive adjustment of the servo at once. The unit is mm

10. Horizontal sealing position: This parameter controls where the horizontal sealing servo returns after the sealing is completed. The default is 0, in millimeters

11. Horizontal sealing speed: This parameter controls the speed of the horizontal sealing motor during movement, in millimeters per second

博伽·梵歌
2025/05/28 10:22:01

立式机	转盘	分料	真空	成型
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横封延时	0.00	打码延时	0.00
横封封合时间	0.00	打码时间	0.00
纵封延时	0.00	S 插角延时	0.00
纵封时间	0.00	S 插角时间	0.00
切刀延时	0.00	站边关延时	0.00
切刀时间	0.00	站边开延时	0.00

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主界面	手动界面	参数界面	功能开关	报警信息	IO监控
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- Horizontal sealing delay: This parameter is used to control the delay before the horizontal sealing action and is used in conjunction with other actions
- Horizontal sealing time: This parameter is used to control how long the horizontal seal stays in the sealing position for hot pressing and sealing
- Longitudinal sealing delay: This parameter is used to control the delay before the longitudinal sealing action and is used in conjunction with other actions
- Vertical sealing time: This parameter is used to control the time for vertical sealing to close
- Knife Delay: This parameter is used to control the delay before the knife action, and is used in conjunction with other actions
- Cutting time: This parameter is used to control how long the cutting blade extends out. It takes time for the cylinder to operate, so it is necessary to wait for a cutting time to ensure cutting before resetting the cutting cylinder
- Code Delay: This parameter is used to control the delay before the code action and is used in conjunction with other actions
- Coding time: This parameter is used to control the timing of coding output
- Corner insertion delay: This parameter is used to control the delay before the corner insertion action and is used in conjunction with other actions
- Insertion time: This parameter is used to control the timing of the insertion output
- Station side delay: This parameter is used to control the delay before the station side cylinder action, and is used in conjunction with other actions
- Station side open delay: This parameter is used to control the output time of the station side, after which the station side cylinder resets

立式机	转盘	分料	真空	成型
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吹气延时	0.00	上料延时启	0.00	S
吹气时间	0.00	上料延时停	0.00	S
下料延时	0.00	S	螺杆圈数	0.00
下料时间	0.00	S	螺杆速度	0.00 圈/S
最大丢标长度	0.00			

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主界面	手动界面	参数界面	功能开关	报警信息	IO监控
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1. Maximum lost label length: If the color code cannot be found beyond this length, a lost label alarm will be reported
2. Delayed start of feeding: After the material induction electric eye in the feeding bin detects a shortage of material, it delays the start time to avoid frequent start stop
3. Delayed feeding stop: After the material induction electric eye in the feeding bin detects full material, it delays this time to stop and avoid frequent start stop
4. Number of screw turns: the number of screw rotations during feeding
5. Screw speed: the speed at which the screw rotates

## Rotary part

博伽·梵歌2025/05/28 10:22:17

立式机	转盘	分料	真空	成型
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转盘工位距离	0.00	拉袋-底托延时	0.00	S
转盘运行速度	0.00	拉袋-夹袋延时	0.00	
立式托袋下降延时	0.00	拉袋-伸缩延时	0.00	S
立式托袋下降时间	0.00	拉袋-动作时间	0.00	
折边-预封延时	0.00	吹气下降延时	0.00	
折边-预封时间	0.00	吹气下降时间	0.00	

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主界面	手动界面	参数界面	功能开关	报警信息	IO监控
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1. Distance between turntable workstations: This parameter is the distance between two workstations on the turntable, usually a fixed data, measured in millimeters

2. Rotating speed of the turntable: This parameter is the speed at which the turntable rotates, measured in mm/s

3. Vertical bag lowering delay: This parameter is used when the turntable receives a signal from the vertical machine, and after a delay of this time, the bag cylinder is lowered. The turntable can only run when this cylinder is at the origin

4. Vertical bag descent time: This parameter is the time required for the bag cylinder to descend. After this time, it is considered that the bag cylinder has descended to the original position, and the turntable is allowed to run. This parameter should be adjusted according to the actual air pressure, and should not be too short, which may cause the turntable to start running before the actual cylinder has fully descended, resulting in a collision

5. Folding Pre sealing Delay: This parameter is the delay before triggering the prevention of the folding station

6. Folding Pre sealing Time: This parameter is the time for pre sealing at the folding station, and how long is the pre sealing time

7. Bag pulling - Bottom tray delay: This parameter refers to the delay time of the bottom tray when the bag pulling station is running

8. Bag pulling - bag clamping delay: This parameter is the delay triggered by the bag clamping cylinder at the bag pulling station

9. Bag pulling - Telescopic delay: This parameter is the delay triggered by the telescopic cylinder at the bag pulling station

Bag pulling - Action time: This parameter is the action time of the bag pulling station and how long it takes to move during the bag pulling process



立式机	转盘	分料	真空	成型
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折边-侧边进延时	0.00
折边-推夹关延时	0.00
折边-动作时间	0.00
折边-整体上延时	0.00
振料变频速度	0.00

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主界面	手动界面	参数界面	功能开关	报警信息	IO监控
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1. Folding edge - side feed delay: This parameter is the closing delay of the cylinders on both sides of the folding station
2. Folding pushing clamp closing delay time: This parameter is the delay time after the material enters, and the pushing clamp cylinder on the side workstation will act accordingly
3. Folding - Action Time: This parameter is a holding time after all folding cylinders are in place, after which the cylinder at the folding station is allowed to reset
4. Folding - Overall Delay: This parameter represents the delay time for the upper and lower cylinders of the folding process to go up
5. Vibration material frequency conversion speed: This parameter controls the speed of vibration material frequency conversion, but it only takes effect when the frequency conversion control mode is 485 communication

## Material division section

博伽·梵歌2025/05/28 10:22:42

立式机	转盘	分料	真空	成型
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分料-左进料个数

0

推料变频速度

0.00

分料-右进料个数

0

分料横移时间

0.00

分料-挡料退延时

0.00

分料-送包上下延时

0.00

分料-推料返回延时

0.00

主界面	手动界面	参数界面	功能开关	报警信息	IO监控
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1. Material distribution - Number of left feed: This parameter is the number of feed required for the action of the material distribution belt. When the current number of feed reaches this set number, the material distribution cylinder switches and the left side starts feeding into the vacuum chamber

2. Material distribution - Number of right feed: The right workstation functions similarly to the material distribution - Number of left feed

3. Horizontal movement time of material distribution: This parameter is the time for switching the horizontal movement of the material distribution cylinder. At this time, it is considered that the switching of the material distribution cylinder is complete and subsequent process actions can be carried out

4. Material distribution - material blocking return delay: This parameter is the delay for the material blocking cylinder on the material distribution belt to retract

5. Material distribution - package delivery up and down delay: This parameter is the delay for the pushing up and down cylinders to go down, in order to avoid hitting the guide rails on the belt too early. It should be done after the pushing cylinder is fully extended before coming down

6. Material Distribution - Pushing Return Delay: This parameter indicates how long it takes for the material to be pushed into place before returning, in order to avoid incomplete pushing of the material

7. Material pushing frequency conversion speed: This parameter is the speed of material pushing frequency conversion, which is only valid when the frequency converter control mode is 485

## Vacuum section

立式机	转盘	分料	真空	成型
真空启动延时	0.00	真空-托袋电机上时刻	0.00	
真空动作周期	0.00	真空-托袋电机下时刻	0.00	
真空-翻板气缸开始时刻	0.00	真空-正面压紧气缸进时刻	0.00	
真空-翻板气缸结束时刻	0.00	真空-正面压紧气缸退时刻	0.00	
真空-翻板电机进时刻	0.00	真空-阻断关时刻	0.00	
真空-翻板电机退时刻	0.00	真空-阻断开时刻	0.00	

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主界面	手动界面	参数界面	功能开关	报警信息	IO监控
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1. Vacuum start delay: This parameter is the delay before the vacuum chamber starts to operate. When the pushing material returns to the second photoelectric device, the vacuum action is triggered. After this delay, the vacuum truly starts to operate, avoiding premature operation but incomplete return of the pushing material, which may cause collision

2. Vacuum action cycle: This parameter is the complete cycle time of the entire vacuum chamber. During this cycle, all actions of the vacuum chamber should be completed. After the time is up, anything that has not been reset should be reset directly, and all actions should be within this cycle time. The various moments set later should be within the action cycle time

3. Vacuum flap cylinder start time: This parameter is the starting time of the flap cylinder in the vacuum chamber, which is based on the current time of the vacuum action cycle. For example, if the vacuum action cycle is 10 seconds and the flap cylinder starts at time 3, then when the vacuum starts running, the flap cylinder starts to move at the 3rd second

4. Vacuum flap cylinder end time: This parameter is the end running time of the flap cylinder in the vacuum chamber, which can only be ended after the flap motor is retracted to its position. The current time of the vacuum action cycle is also used as the standard, but it cannot exceed the vacuum action cycle

5. Vacuum flipping motor entry time: This parameter is the time when the flipping motor enters the vacuum chamber, based on the current time of the vacuum action cycle. When setting this time, please pay attention to the start and end time of the flipping cylinder. Please ensure that the flipping cylinder has been pushed in during the flipping motor entry cycle, otherwise interference may occur and the machine may be hit

6. Vacuum flap motor retraction time: This parameter is the ejection time of the

flap motor in the vacuum chamber, based on the current time of the vacuum action cycle, and cannot exceed the vacuum action cycle time

7. Time on vacuum bag motor: This parameter is the time when the tray in the vacuum chamber rises, based on the current time of the vacuum action cycle, and cannot exceed the vacuum action cycle time

8. Vacuum bag motor down time: This parameter is the time when the tray in the vacuum chamber descends, based on the current time of the vacuum action cycle, and cannot exceed the vacuum action cycle time

9. Vacuum front compression cylinder entry time: This parameter is the time when the front compression cylinder in the vacuum chamber is triggered to enter, based on the current time of the vacuum action cycle, and cannot exceed the vacuum action cycle time

10. Vacuum front compression cylinder withdrawal time: This parameter is the time when the front compression cylinder in the vacuum chamber withdraws, based on the current time of the vacuum action cycle, and cannot exceed the vacuum action cycle time

11. Vacuum blocking off time: This parameter is the time when the blocking plate in the vacuum chamber closes, based on the current time of the vacuum action cycle, and cannot exceed the vacuum action cycle time

12. Vacuum - Blocking Time: This parameter is the time when the blocking plate in the vacuum chamber is released, based on the current time of the vacuum action cycle, and cannot exceed the vacuum action cycle time

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立式机		转盘		分料		真空		成型
真空-焊封开始时刻		0.00		真空-破真空开始时刻		0.00		
真空-焊封结束时刻		0.00		真空-破真空结束时刻		0.00		
真空-真空腔关时刻		0.00		左翻板电机进位置		0.00		
真空-真空腔开时刻		0.00		左翻板电机退位置		0.00		
真空-抽真空开始时刻		0.00		左托袋电机上位置		0.00		
真空-抽真空结束时刻		0.00		左托袋电机下位置		0.00		

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主界面	手动界面	参数界面	功能开关	报警信息	IO监控
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1. Vacuum welding sealing start time: This parameter is the time when the welding sealing knife in the vacuum chamber is closed. When the current time of the vacuum action cycle reaches this time, hot pressing welding sealing is carried out. The current time of the vacuum action cycle is used as the standard and cannot exceed the

vacuum action cycle time

2. Vacuum welding sealing end time: This parameter is the time when the welding sealing knife in the vacuum chamber opens, based on the current time of the vacuum action cycle, and cannot exceed the vacuum action cycle time

3. Vacuum - Vacuum chamber closing time: This parameter is the time when the vacuum chamber is closed. At this time, the vacuum chamber is closed, and the current time of the vacuum action cycle is used as the standard, which cannot exceed the vacuum action cycle time

4. Vacuum - Vacuum chamber opening time: This parameter is the time when the vacuum chamber is opened, based on the current time of the vacuum action cycle, and cannot exceed the vacuum action cycle time

5. Vacuum - Vacuum pumping start time: This parameter controls when vacuum pumping starts, based on the current time of the vacuum action cycle, and cannot exceed the vacuum action cycle time

6. Vacuum - End time of vacuum pumping: This parameter controls when the vacuum pumping ends, based on the current time of the vacuum action cycle, and cannot exceed the vacuum action cycle time

7. Vacuum - Start time of vacuum breaking: This parameter controls when the vacuum breaking starts, based on the current time of the vacuum action cycle, and cannot exceed the vacuum action cycle time

8. Vacuum - End time of vacuum breaking: This parameter controls when the vacuum breaking ends, based on the current time of the vacuum action cycle. It should not exceed the vacuum action cycle time, and the time for breaking the vacuum should not be too short. If it is too short, the pressure difference inside and outside the chamber cannot be balanced, resulting in the inability to open the vacuum chamber

9. Position of the left flap motor: This parameter controls the position of the flap motor in the left vacuum chamber

10. Left flap motor retreat position: This parameter controls which position the flap motor in the left vacuum chamber retreats to

11. Position on the left bag motor: This parameter controls where the pallet in the left vacuum chamber is placed

12. Lower position of left bag motor: This parameter controls where the pallet in the left vacuum chamber is lowered to

立式机		转盘		分料		真空		成型
右翻板进位置	0.00	右翻板电机进退速度	0.00					
右翻板退位置	0.00	右托袋电机上下速度	0.00					
右托袋上位置	0.00							
右托袋下位置	0.00							
左翻板电机进退速度	0.00							
左托袋电机上下速度	0.00							
								上一页
主界面	手动界面	参数界面	功能开关	报警信息	IO监控			

- 1. Right flipping position: This parameter controls which position the flipping motor in the vacuum chamber on the right enters
- 2. Right flap retraction position: This parameter controls which position the flap motor in the vacuum chamber on the right should retract to
- 3. Position on the right tray: This parameter controls where the tray in the vacuum chamber on the right rises to
- 4. Lower position of right support bag: This parameter controls where the support plate in the vacuum chamber on the right side descends to
- 5. Left flap motor advancing and retreating speed: This parameter controls the speed of the flap motor advancing and retreating in the left vacuum chamber
- 6. Left bag motor up and down speed: This parameter controls the speed of the pallet up and down in the left vacuum chamber
- 7. Right flap motor advance and retreat speed: This parameter controls the speed of the flap motor advancing and retreating in the right vacuum chamber
- Right bag motor up and down speed: This parameter controls the speed of the pallet up and down in the right vacuum chamber

Forming part

博伽·梵歌2025/05/28 10:23:20

立式机		转盘		分料		真空	成型
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成型-入料延时时间	0.00		成型-切断次数	0
成型-夹袋延时	0.00		成型-多次切断间隔时间	0.00
成型-切断延时时间	0.00		成型-堵料开放时间	0.00
成型-切断时间	0.00	S	成型-推料延时	0.00
成型-吹气延时	0.00		成型-推料动作时间	0.00
成型-吹气时间	0.00		成型-推料复位时间	0.00

主界面	手动界面	参数界面	功能开关	报警信息	IO监控
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1. Forming feeding delay time: This parameter is used to delay the clamping and cutting actions only after sensing the incoming material at the cutting blade forming station, in order to ensure that the material smoothly reaches the cutting station

2. Molding bag clamping delay: This parameter serves as a delay before the bag clamping is triggered, and is used in conjunction with other actions

3. Molding cutting delay time: This parameter is used for the delay before the cutting blade is triggered. Due to the travel time of the bag clamp, it is necessary to delay for a while before triggering the cutting blade to ensure that it can be cut

4. Forming cutting time: This parameter is used to determine the time when the cutting blade is triggered. After the cutting blade is triggered, this time is delayed before resetting

5. Molding blowing delay: This parameter is used to delay the blowing process before blowing, avoiding the inability to blow out the waste material smoothly due to blowing air immediately after triggering the cut-off

6. Molding blowing time: This parameter is used to determine the blowing time and duration

7. Molding cutting times: This parameter is used to control how many times the cutting blade is triggered, avoiding some thicker materials from being unable to be cut smoothly

8. Forming - Multiple cutting interval time: This parameter is used to ensure that the knife can only be removed after receiving a certain degree of force, forming an effective cutting

9. Molding blockage opening time: This parameter is used to retract the blockage cylinder after the cutting molding station action is completed, in order to allow the material to pass out

10. Molding pushing delay: This parameter is used to delay the pushing process

when material is detected, in order to ensure that the material is in place before pushing. The photoelectric sensing range for material detection is relatively far

11. Forming pushing action time: This parameter is used to delay the time for the pushing cylinder to retract after being pushed out. This parameter can be appropriately matched with the rhythm of the entire action to ensure that the pushed out material is cut and formed in an orderly manner

12. Molding pushing reset time: This parameter is used to determine the time required for the pushing cylinder to return. After the pushing process starts to reset, delaying this time will consider the pushing process to have been reset to completion and reached the origin

### 3. Function switch

博伽·梵歌

2025/05/28 16:50:33

包装机下料模式

螺杆

调试

先拉膜

色标跟踪

编码器跟踪

搅拌一直转

上料机手动

上料机关

折边推夹启用

送包上下启用

主界面

手动界面

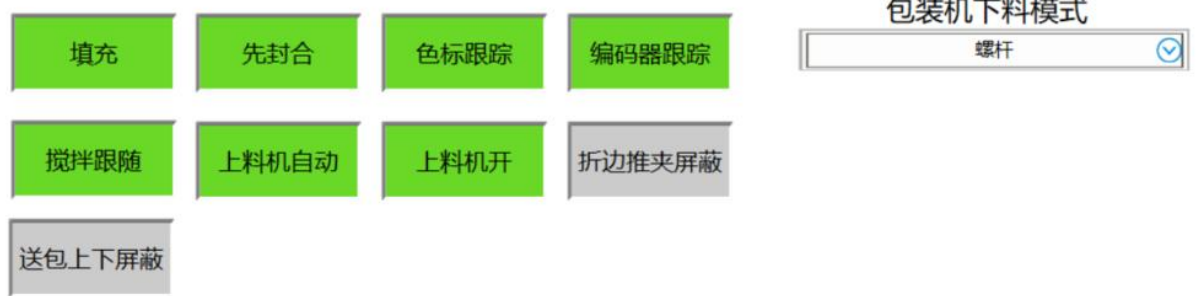
参数界面

功能开关

报警信息

IO监控





1. Debugging: This button can control the working mode of the packaging machine. When it is debugging, the material will not be cut and packaged. When it is displayed as filling, the material will be cut and packaged

2. First pull film: This button can control the action mode of the packaging machine. When it is displayed as first pull film, the pull film action will be taken first, and when it is first sealed, it will be sealed first. Note that the first sealing mode should be selected when feeding the screw

3. Color code tracking: This button can control whether the packaging machine uses fixed length packaging or tracks color codes for packaging. To activate this button, it is necessary to ensure that the color code sensor is normal

4. Encoder tracking: When there is an encoder, turn on this button to use the encoder to track the position, avoid slipping during film pulling, and ensure accurate bag length

5. Continuous rotation of mixing: This button can control the following mode of the mixing motor. When it is displayed as continuous rotation of mixing, the mixing motor will continue to rotate. When it is displayed as continuous rotation of mixing, the mixing motor will follow the movement of the screw, and when the screw rotates, the mixing will also follow the rotation

6. Manual feeding machine: This button can control the operation mode of the feeding machine. When it is displayed as manual feeding machine, it can control when to feed and when to stop feeding on the manual interface. When it is displayed as automatic, the feeding is automatically carried out through the status of the bin sensor

7. Feeding mechanism: This button must be turned on and displayed as the feeding machine on before it can operate, including manual operation

8. Folding Push Clamp Enable: This button controls whether the push clamp

9. Enable upper and lower package feeding: This button controls whether the upper and lower package feeding cylinders are activated during the operation of the material feeding station. When it is displayed as enabled, the upper and lower package feeding cylinders will be activated during the pushing action. When it is displayed as blocked, the upper and lower package feeding cylinders will not be activated

博伽·梵歌

2025/05/28 16:51:04

报警信息

报警清除

主界面

手动界面

参数界面

功能开关

报警信息

IO监控

**Attention: Some alarms cannot be cleared directly on the upper computer and must be powered off, restarted, or the abnormal state must be resolved in order to clear the alarm. For example, sensors cannot sense normally, servo communication is interrupted, etc. The abnormal state must be resolved in order to clear the alarm**

## 6. IO monitoring

X0	编码器A	X7	真空-右翻板原点	X16	理料-左送包退到位
X1	编码器B	X10	备用	X17	理料-左送包减速光电
X2	编码器Z	X11	真空-右托袋原点	X20	理料-左送包进到位
X3	色标传感器	X12	备用	X21	理料-右送包退到位
X4	真空-左-托袋原点	X13	真空-左-托袋原点	X22	理料-右送包减速光电
X5	真空-右-正面压紧原点	X14	真空-右-正面压紧原点	X23	理料-右送包进到位
X6	备用	X15	备用	X24	分料原点
<div> <div>下一页</div> </div>					
<div> <div>主界面</div> <div>手动界面</div> <div>参数界面</div> <div>功能开关</div> <div>报警信息</div> <div>IO监控</div> </div>					

This interface is mainly used for input/output monitoring, where X is input and Y is output. You can check the status of each input/output through this interface

## 4. Methods for troubleshooting common problems

- Horizontal sealing servo alarm
  - Check if the empress dowager has been horizontally sealed and encountered mechanical limits, causing servo alarm
  - If it is prone to alarm during sealing, the horizontal sealing position should be slightly reduced
- There is material in the horizontally sealed bag opening
  - Check if too much material has been cut, causing it to get stuck
  - Check the relationship between the vertical seal delay and the horizontal seal delay to see if the material falls off when the vertical seal is placed close to the horizontal seal, causing the horizontal seal to close
- Horizontal seal leakage
  - Check if the temperature is too low and not tightly sealed
  - Check if the horizontal sealing position is not set enough to press the bag
  - Check if there is any material at the sealing area
- Longitudinal seal leakage
  - Check if the temperature of the longitudinal seal is too low and if it is not securely sealed
  - Check if the film deviates during stretching, resulting in poor longitudinal sealing during sealing
- When the conveyor belt is feeding, the material tilts
  - Check whether the conveyor belt is flat and whether the two conveyor belts are level

- b. Check if the guiding mechanism of the conveyor belt is centered and guided
- 6. Vacuum pallet servo alarm
  - a. Check if the servo descent is too deep, causing the motor to choke
  - b. Check if the movement speed is too fast and reduce the servo running speed of the bag during testing
- 7. The material bucket is filled with material but cannot be properly unloaded
  - a. Check if the screw is blocked and unable to discharge properly. At this time, the screw can be cleaned
  - b. Check if the material has clumped in the material bucket, and start stirring to solve the problem
- 8. The belt is not running
  - a. Check if the relay has tripped
- 9. Vacuum flap motor alarm
  - a. Check if the combination with the flipping cylinder action is unreasonable, if the cylinder is not fully extended before the motor moves, or if the motor is not fully retracted before the cylinder is retracted
- 10. The vacuum flap motor cannot be closed properly
  - a. Check if the motor has reached the reverse position. Normally, the flipping motor should be closed inward and opened outward. If the direction is opposite, please contact the manufacturer to recheck the origin