

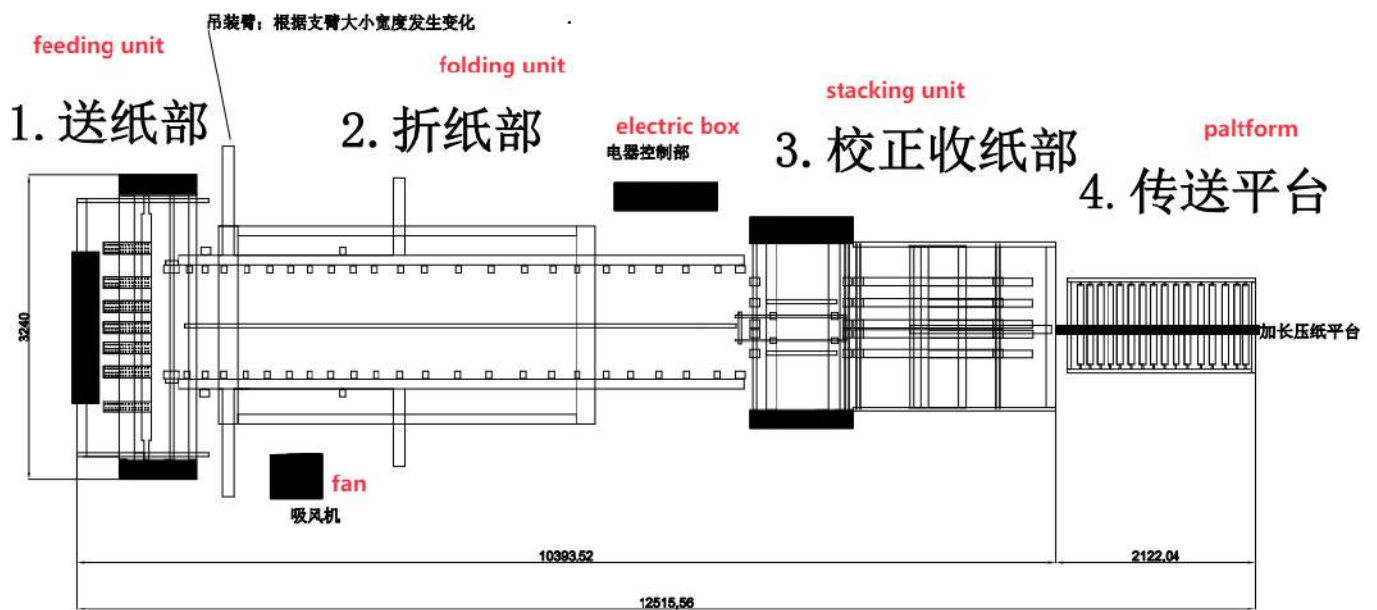
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Manual of Automatic Carton Folder Gluer Machine

Model JL-2800X1400



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2、 Machine Introduction:

The fully automatic box gluing machine is a fully computerized high-speed box gluing machine, which is an economical and durable model. After years of experience and practice, it has been continuously independently developed and consists of three parts: the paper supply part, the glue folding part, and the counting and stacking part. It has digital speed regulation, computer amplitude modulation, and has a simple, fast, reliable, and precise control mode. It has automatic paper supply, glue folding, counting, and stacking output, with an average box gluing speed of 150 meters/minute and a maximum speed of 220 meters/minute. Efficiency, labor saving, energy saving, and environmental protection are our highest pursuits。

Functional features:

1. This machine has automatic deposit certificate, memory function, automatic document exchange, one click adjustment, convenient and fast.
2. Wide range of applicable cardboard boxes, easy and fast adjustment for different sizes of cardboard boxes.

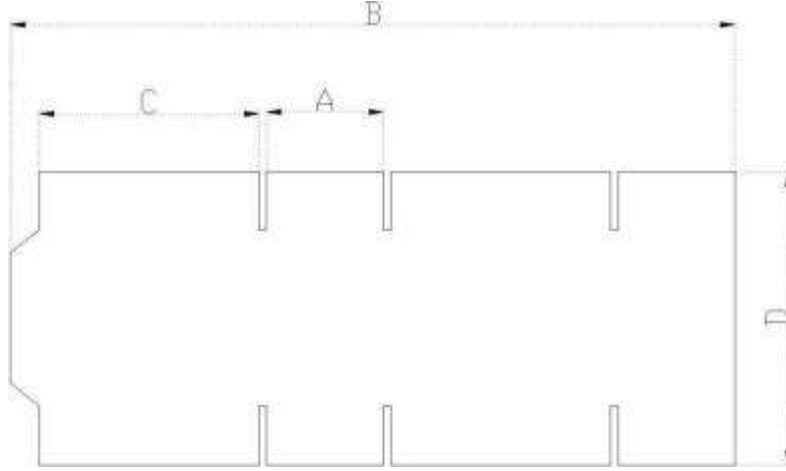
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3. The whole machine runs smoothly and reliably, and the packaging effect is firm and beautiful.
4. The equipment is easy to operate and maintain.
5. Automatically correct the right angle of the cardboard box, this machine has two pressure lines.
6. Automatically complete the top folding and twisting process, and can simultaneously apply adhesive tape to both the upper and lower parts, saving labor and time.
7. The local machine model is of a universal size.
8. Corresponding carton size for the model (refer to the table below for dimensions)

3.Main technical parameters:

Model	2400	2600	2800
size A (mm)	80-850	80-850	80-850
size B (mm)	440-2000	440-2400	440-2600
size C (mm)	130-840	130-840	130-840
size D (mm)	170-1100	170-1100	170-1100
Installation floor size (mm)	4000 X 15000	4200 X15000	4400*15000
Total power KW	12KW	12KW	12KW
Max cardboard size	2200x1100	2400x1100	2600x1100
Min cardboard size	440x170	440x170	440x170

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Note: Special specifications can be customized according to customer needs.

4 .Equipment installation and computer control system usage instructions

- (1) . Installation requires a space of 15 * 5 * 3 on the site. For the convenience of operation and production, both sides should be at least 1 meter away from the wall, the ground should be flat, and the equipment working surface should be horizontally adjusted.
- (2) . This device uses a 380V (440V) AC power supply. The power supply is directly connected to the input end of the distribution box. Please refer to the circuit schematic for details, and the wires must be grounded.
- (3) . Before starting the equipment for testing, make sure that all parts are installed and connected correctly, there are no foreign objects on the chains and belts, and the operation is normal before proceeding. Attention: The internal parameters of the microcomputer have been set and locked. Please do not modify them without authorization, as it may cause malfunction.

Safety precautions

To ensure the safety of personnel and equipment during use, please carefully read the following: Before powering on the product, make sure to install it in a safe area to prevent high temperatures, moisture, and water droplets from splashing. The operator must carefully read this manual and follow the correct usage method before use.

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After the product is powered on, there is high voltage inside the system control cabinet. Non debugging personnel are prohibited from opening the control cabinet to avoid danger.

Within three minutes after cutting off the power, there is still high voltage in the system control cabinet. Non debugging personnel are prohibited from opening the control cabinet to avoid danger. Within three minutes after cutting off the power, do not start the equipment to avoid damage caused by high voltage in the capacitor.

During system shutdown, the 380V power supply should be disconnected. Environmental temperature: -10 °C -40 °C. The grounding wire must be properly grounded, with a ground resistance of no more than 5 ohms to maintain good ventilation. Before operation, check the operating condition of each cooling fan to ensure good operation and keep the installation area clean

When moving the unit, prevent severe vibration, pay attention to protecting the touch screen surface from damage, keep the signal detection equipment clean, prohibit water, oil, etc. from entering, reduce sensitivity, regularly check the bearing heating and oil leakage, keep the motor clean, prohibit water, oil, etc. from falling into the encoder wiring, power line, and proximity switch wire inside the motor. The shielding layer must be kept intact.

Product Introduction

The computer fully automatic box gluing machine control system adopts Delta PLC as the main control component, 7-inch Kunlun on state color touch screen operation and display, photoelectric switch and high-precision rotary encoder for signal detection.

Operating instructions

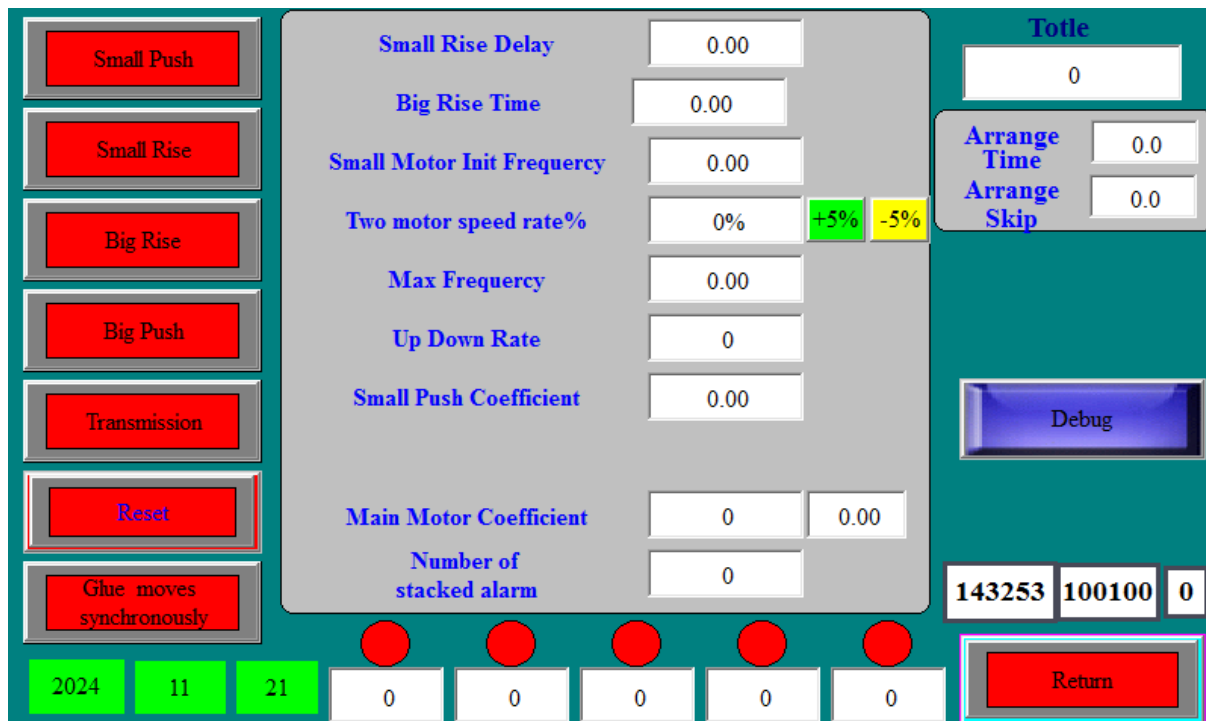
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Main interface:

Display the current production speed, current production quantity, and required quantity; Current stacking quantity, stacking base, belt transmission time, and cylinder control

Several parameters can be entered simultaneously into the system parameter control interface; At the same time, manual and automatic switching of paper output and forced reset have been added.



Debugging main interface:

Based on the actual production situation, input parameters such as the waiting time for the high position of the bracket and the time for the bracket to descend; Input the automatic small push coefficient, offset detection coefficient, and delay stop host coefficient; To facilitate and better operate the machine; This interface allows manual operation of cylinders such as small push and small lift, large push and large lift; Manually operate the compression process; Can be forcibly reset; Can enter the process coefficient interface and process size interface; Some parameters need to be displayed by clicking on the purple square in the upper right corner of the touch screen;

Y27	0	Coefficient	Zero Point	Encoder Counter	Check	Current
Glue	0.0	0.0	0	0	Check	0.0
Left Arm	0.0	0.0	0	0	Check	0.0
Right Arm	0.0	0.0	0	0	Check	0.0
Left Baffle	0.0	0.0	0	0	Check	0.0
Right Baffle	0.0	0.0	0	0	Check	0.0
Check Value	0	current size	0.0L	0.0W	One Key Check	

mode 2
Calculate Position

Glue Outward

Glue Inward

Left Arm Outward

Left Arm Inward

Right Arm inward

Right Arm Outward

Left Baffle Outward

Left Baffle Inward

Right Baffle Inward

Right Baffle Outward

LEFT Software Limit

left baffle max

0.0

left Baffle Min

0.0

Right software limit

right baffle max

0.0

right baffle min

0.0

return

Process coefficient interface:

The calculation coefficient is used to adjust the accuracy of the left and right arm paste heads and left baffle positions. It is the number of millimeters adjusted when the motor returns 10000 pulses; The zero point parameter is used to write the actual value after measuring it (for correcting the current position) and click the correction button; Reset the counter to zero and confirm the input correction value as the

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current value. This interface displays the value of the counter, which is used to detect whether there is an encoder problem.

	Glue	Left Arm	Right Arm	Left Baffle	Right Baffle	
Require	0.0	0.0	0.0	0.0	0.0	Stop
Current	0.0	0.0	0.0	0.0	0.0	
	Adjust	Adjust	Adjust	Adjust	Adjust	

mode 2

One Key Adjust

Calculate Position

0.0

0.0

<<==

==>>

<<==>>

==><==

Order No.

0

READ

WRITE

Order List

Technological Coefficient

return

Process dimension interface:

Display the current position of the left and right arm glue head left baffle;

Enter the tracking number and confirm according to the tracking number; The original stored process dimensions can be retrieved; And switch to the required position; Then, enter the automatic adjustment button to perform adjustment operations (you can click adjust separately or use one click adjustment); Special attention should be paid to not leaving the post during automatic adjustment of each unit to avoid collision; Memory order: The adjusted current phase value can be written into the order; For future use.

When adjusting, the current value changes to facilitate observation of the adjustment situation; During the adjustment process, the adjustment stop button can be pressed at any time to pause the adjustment; Please note that if the current position of the left baffle of the left and right arm paste heads does not change during adjustment, please observe the encoder value on the process

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coefficient interface. There may be a problem with the encoder, and it is not ruled out that the parameter settings may be incorrect;

Special Reminder: When changing orders, please be sure to press the adjustment stop button at any time to stop the matching operation.

Special Reminder:

1. Please ask the on-site operators to record the working parameters in the corresponding positions of this manual, so that they can be manually inputted and restored to use in case of confusion!

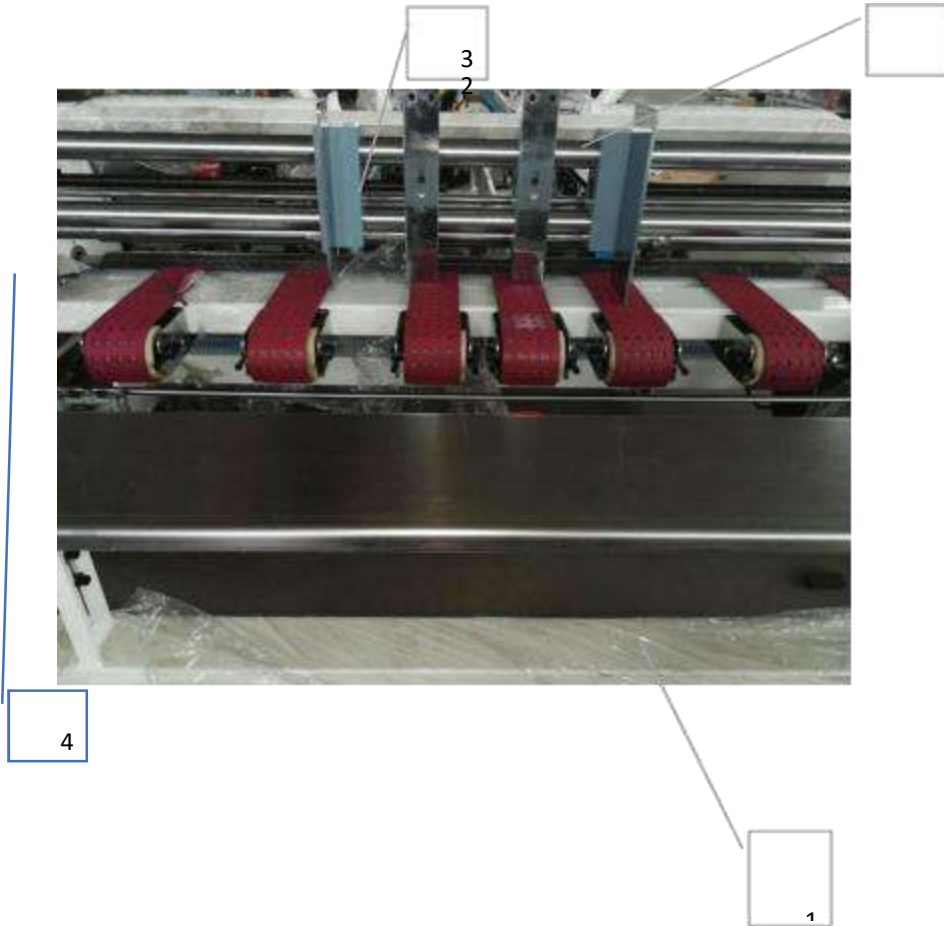
When changing orders for adjusting the boom or sticking head, it is necessary to manually monitor and not leave the post to avoid mechanical damage caused by limit faults or encoder signal errors!

5. Specific operating instructions:

Paper feeding adjustment;

- (1) Adjustment of cardboard width
- (2) Adjustment of cardboard length
- (3) Adjustment of cardboard thickness
- (4) Paper feeding belt adjustment mechanism

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Adjustment instructions:

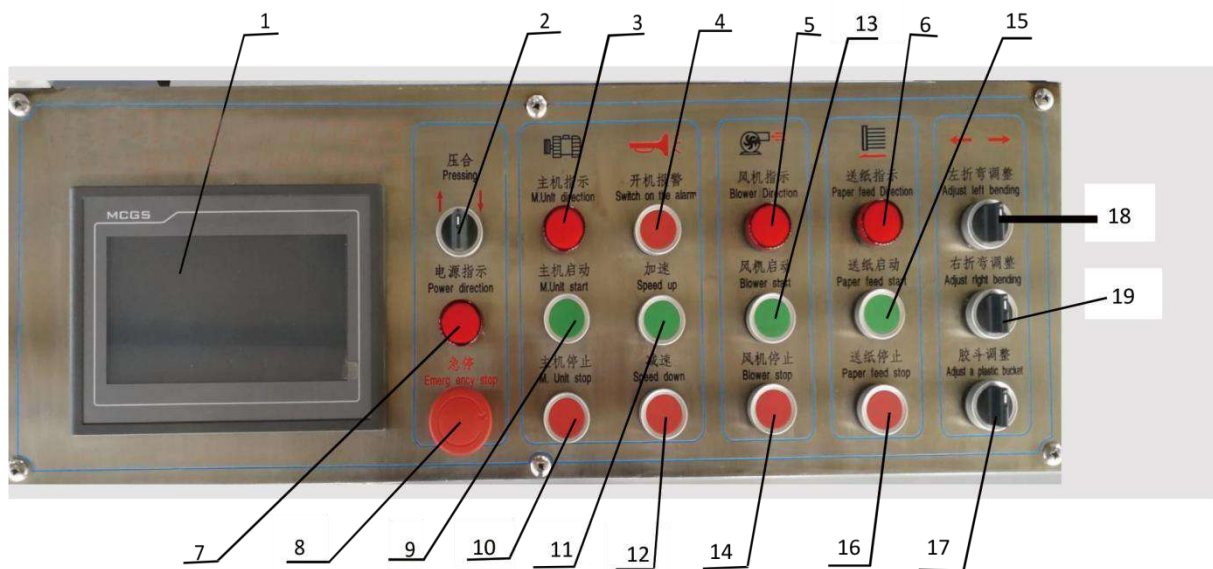
- (1) Location: Adjust according to the width and softness of the cardboard, and the inclination of the cardboard should not be too large, otherwise it will affect the paper feeding effect.
- (2) Location: Adjust according to the length of the cardboard, and avoid being too tight, which may cause deformation of the cardboard.
- (3) Location: Except for the balanced cardboard on both sides, the bottom height should be 0.5-1.5mm higher than the cardboard height.
- (4) Location: According to the operation of the belt, if there is a deviation in paper feeding, the adjustment bolts on both sides can be adjusted appropriately. In addition, the tension of several belts should be kept the same and not too high. If this causes damage to the components, our company will not be exempt from compensation. According to the size of the cardboard, block or shrink the excess or unsuitable vacuum suction holes under the belt with an iron plate.

Use of host panel

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(1) Control Instrument Department:

Simple touch screen operation input, variable data without stopping, production speed, data input, and various screen change functions. You can adjust or set the position of the left and right workstations, paper feeding speed, stacking number, and so on.



1. Touch screen 2. Pressing 3. Host prompt 4. Power on alarm 5. Fan prompt 6. Paper feeding indicator 7. Power indicator
8. Emergency stop 9. Host start 10. Host stop 11. Acceleration 12. Deceleration 13. Fan start 14. Fan stop
15. Paper feeding start 16. Paper feeding stop 17. Rubber hopper adjustment 18. Left bending adjustment 19. Right bending adjustment

Adjustment instructions:

Correct operation sequence:

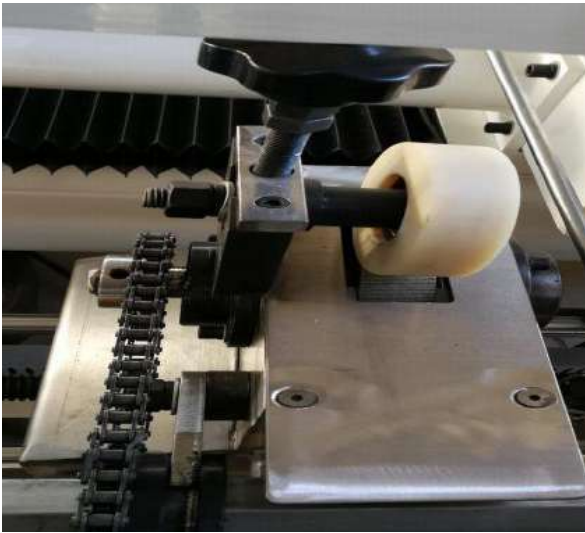
1. Connect the power supply and turn on the air switch inside the electrical box.
2. Check if the emergency stop button is working and enable reset.
3. In sequence, start the host - adjust the left support arm - start the fan - start the paper feeding. The device is starting to work normally.

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Attention: Before normal operation, it is necessary to adjust the paper feeding, paper feeding station, and tapping position to confirm that they are correct. It can be adjusted or tested through the electric buttons on the host. When there is a malfunction in the cardboard, it can also be electrically adjusted or removed by the main unit. Non professionals should not adjust computer parameters, otherwise the consequences will be borne by themselves.

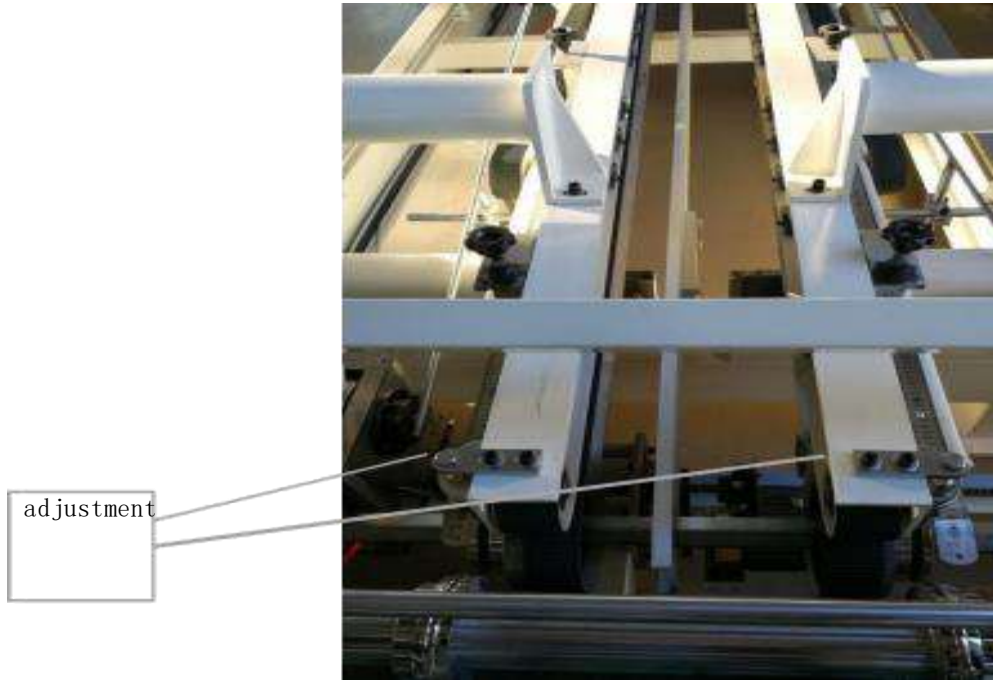
Glue application adjustment operation:

- (1) Adjust the height of the upper pressure wheel
- (2) Automatic circulation gluing of the dual pump head diaphragm pump
- (3) Adjust the amount of gluing
- (4) Glue box



Conveyor belt adjustment:

- (1) Adjust the gap between the conveyor belts



Adjustment instructions:

The gap between the two belts can be adjusted according to the thickness of the cardboard. When there is no paper feeding, the gap can be adjusted appropriately according to the situation. If it is caused by low pressure on the middle belt pressing wheel, the U-shaped bracket screw of the belt pressing can be adjusted to adjust the appropriate pressure. When there is a deviation in the paper feeding, depending on the situation, the tightness or looseness of the side can be adjusted appropriately. The overall gap should not be too tight and balanced, and should be consistent before and after

(2) Adjust the tension of the conveyor belt



皮帶張緊調
節

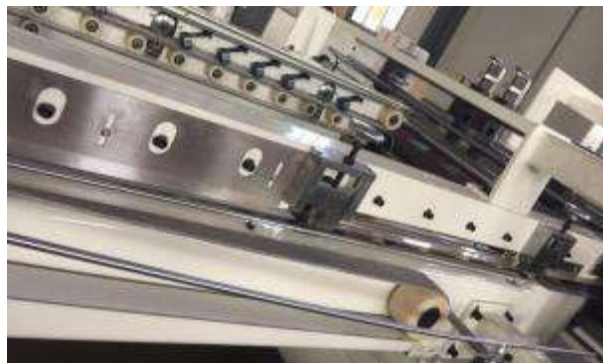
紙板導向
軸

Adjustment instructions:

Due to the excessive length of this belt, it is inevitable that the belt will stretch during use. We need to adjust this area in a timely manner to maintain the appropriate tension of the belt, otherwise it may cause paper feeding failure or even belt breakage. Adjust the cardboard guide tube appropriately to ensure smooth and reasonable transportation.

Line pressure adjustment:

(1) Adjust the depth of the pressure line



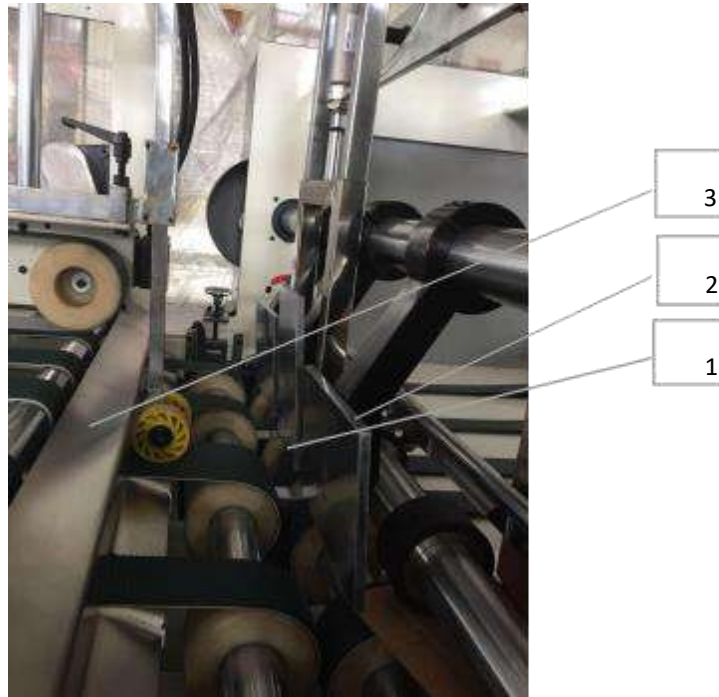
Adjustment instructions:

If the indentation correction or deviation at the bending point of our original cardboard is small, we can adjust it to not work here. If the indentation deviation is large, we can correct it by adjusting the pressure line strength at this point. (Based on the structure of the machine, refer to this diagram)

Automatic calibration department:

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The automatic correction unit can forcibly and effectively correct phenomena such as fish tail scissors deviation.



Adjustment instructions:

- (1) The tapping board plays the main tapping role, and
- (2) it mainly presses the cardboard and is generally located closer to the tapping board.
- (3) Adjust the minimum distance between (1) and (2) according to the size of the cardboard. If the distance is too large, it will not have a tapping effect, and if the distance is too small, it will cause deformation of the cardboard.

Counting and stacking section:

Finished product boxes automatically count, stack neatly, and output accurate codes. The speed can be adjusted and controlled separately, with a stacking speed of 130 meters per minute.



Adjustment instructions:

(1) The gap between the upper edge of the baffle opening and the lower conveyor belt is 1-3mm. The smaller the gap, the better, without grinding the belt. If the gap is too large

Difficulty in paper application and reduced lifespan of belts with small gaps.

Paper feeding and conveying adjustment:

Adjustment instructions: Adjust the upper pressure feeding part according to the quantity and height of the bundled cardboard, using a motor adjustment instead of manual operation, which is convenient and fast. The paper feeding and conveying time are systematically set.

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Adjustment the height



Remote control system:

Remote control function within 100 meters, realizing remote host start and stop, host acceleration and deceleration, fan start and stop, paper feeding start and stop, emergency stop, left and right arm adjustment, glue box adjustment and other functions.



Dual frequency converter control:

This machine adopts (5.5KW 2.2KW) dual frequency converter control, which can effectively achieve single control, asynchronous, and greatly reduce the cardboard waste rate

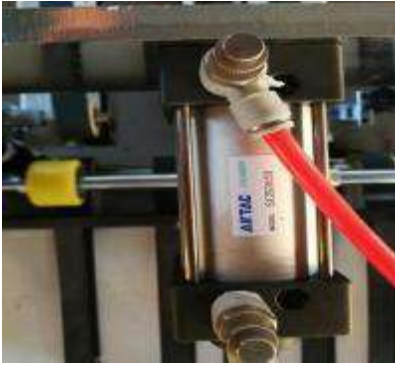


Explanation:

The 5.5KW frequency converter mainly controls the paper feeding section, while the 2.2KW frequency converter mainly controls the tapping section. Two frequency converters prevent the tapping section from stopping and the paper feeding section from working, greatly reducing cardboard waste.

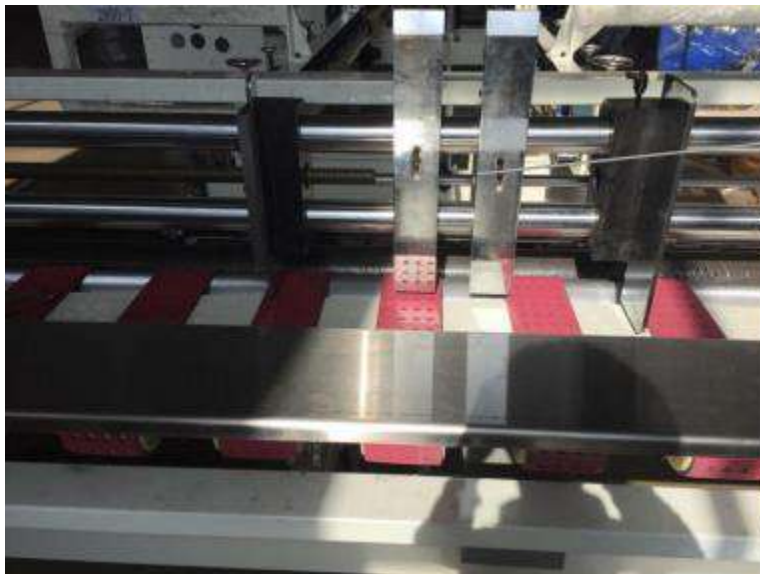


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This machine has an automatic deposit memory function:

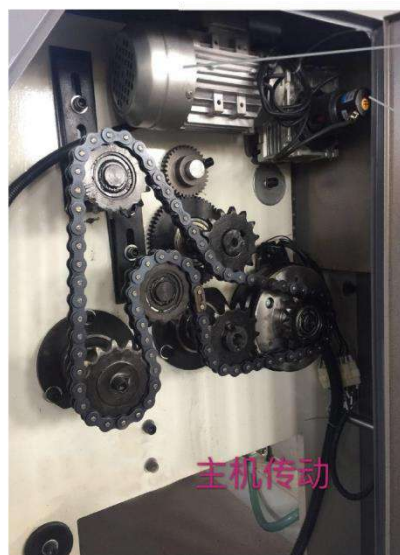
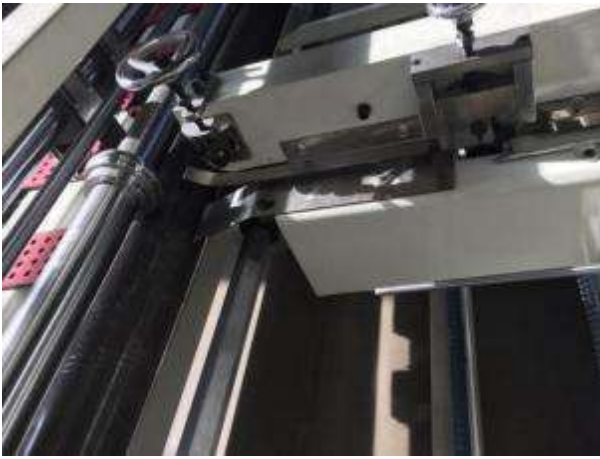
after each adjustment of the cardboard box specifications, it can be directly retrieved for the next order change. With one click adjustment, the distance between the baffle and the boom can be automatically adjusted.



自动调节
丝杠

There is a probe added in front of the folding part of the equipment to prevent paper stacking due to improper adjustment after paper output, and to give an early alarm to avoid cardboard scrap.

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微调按钮

急停

Installation land instructions:

For more convenient and flexible work, the land for machine installation is very important. The total length of this machine is 12.5 meters. When installed with a width of 3.22 meters, the distance between the two ends and the wall should not be less than 2 meters, and the distance between the side and the wall should not be less than 1.5 meters. Please refer to the attachment for the foundation diagram,

6. Equipment maintenance and upkeep:

1. When used within the maximum adjustment range of the equipment, the transmission handle, handwheel, and screw should be kept flexible and lubricated.
2. Regularly check the tightening position of each transmission gear, sprocket, pulley, and the tension of each spring.
3. All conveyor belts must be kept clean. If necessary, a small amount of low concentration detergent can be used for wiping, and the use of solvents is strictly prohibited.
4. After each shift, the glue wheel must be cleaned to prevent the glue from drying and affecting normal operation.
5. Each shift must add lubricating oil to the chain transmission parts, and lubricate the seat bearings every two months. Before starting the device, make sure that all parts are correct and functioning properly before operating it.

7. Steps for changing the order of the glue box machine

Before starting to adjust the machine, ensure that the glue and air pump are turned on and check the air pressure. If the glue is too viscous, you can add an appropriate amount of water to achieve a moderate viscosity. And start the diaphragm pump to extract glue

Ring the alarm before starting the machine for safe operation

1. Paper feeding department:

Before changing the order, manually find the center position. Align the center line of the folded cardboard with the center pole of the machine and unfold it naturally. Do not move the position. Adjust the left baffle (electric) and the right baffle manually to leave an appropriate gap. Pay attention to adjusting the suction of the paper feeding belt below the belt. Adjust the height of the two front gears (adjust it appropriately according to the thickness of the cardboard to be 0.5-1.5 mm higher than the cardboard). If the second cardboard cannot pass through, the rear gear can be adjusted according to the

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softness and hardness of the cardboard, and the inclination should not be too large. The front and rear auxiliary wheels should not be too tight or too loose. Adjust the pressure wheel to make sure the creases are correct, and adjust the pressure appropriately. Adjust the adhesive amount to the required position for proper alignment of the adhesive head.

2. Folding Department

If the cardboard deviates in this area, adjust the U-shaped column bolt and feed the paper to the steel blade line so that the steel blade line aligns with the crease. Continue to feed the paper (adjust the auxiliary iron rod for large cardboard). Adjust the auxiliary pressure wheel of the folding part so that the cardboard at the glued part falls down first. The pressure of all auxiliary wheels should be moderate, not too tight or too loose. Send it to the end of the folding part and check the closed gap. Adjust the left and right folding arms appropriately when the bearings on both sides are not in contact with the cardboard.

3. The counting and stacking section, the correction wheel is mainly used to correct the paper scissors mouth, and the height adjustment of the correction wheel cannot be pressed on the glue coated area. Don't forget to adjust the pressure and lock the eccentric shaft behind the board. The leveling effect should not be too tight or too loose. The paper pressing yellow wheel should act on one-third of the cardboard. Before starting the machine, a cardboard should be placed below. The compression height corresponds to an increase or decrease in the number of stacks. Stacking quantity Stacking base Adjust according to the number of cardboard layers, insert without moving, and push out according to the cardboard size adjustment value of approximately 0.37-1.2. It can be pushed out without touching the paper pressing yellow wheel.

4. Alarm Ringing Handling:

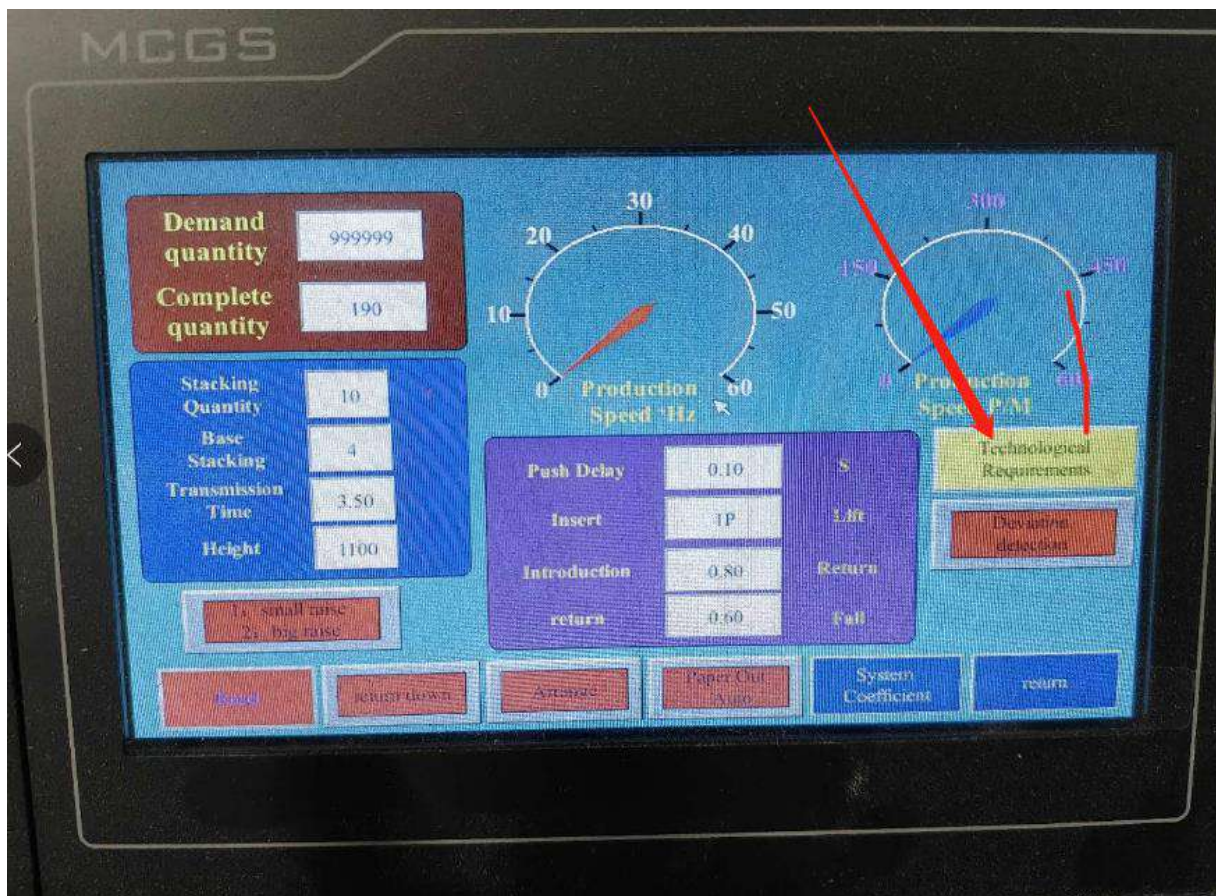
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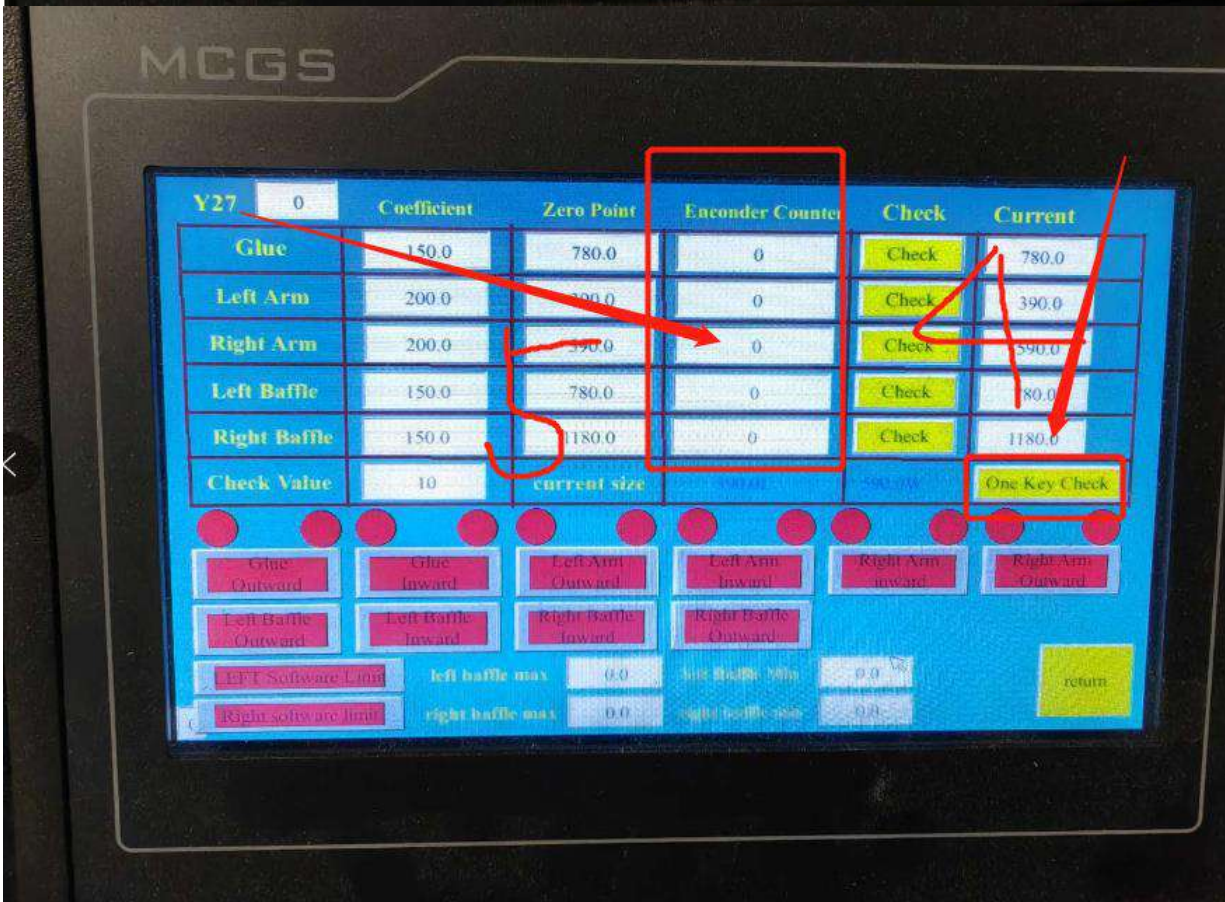
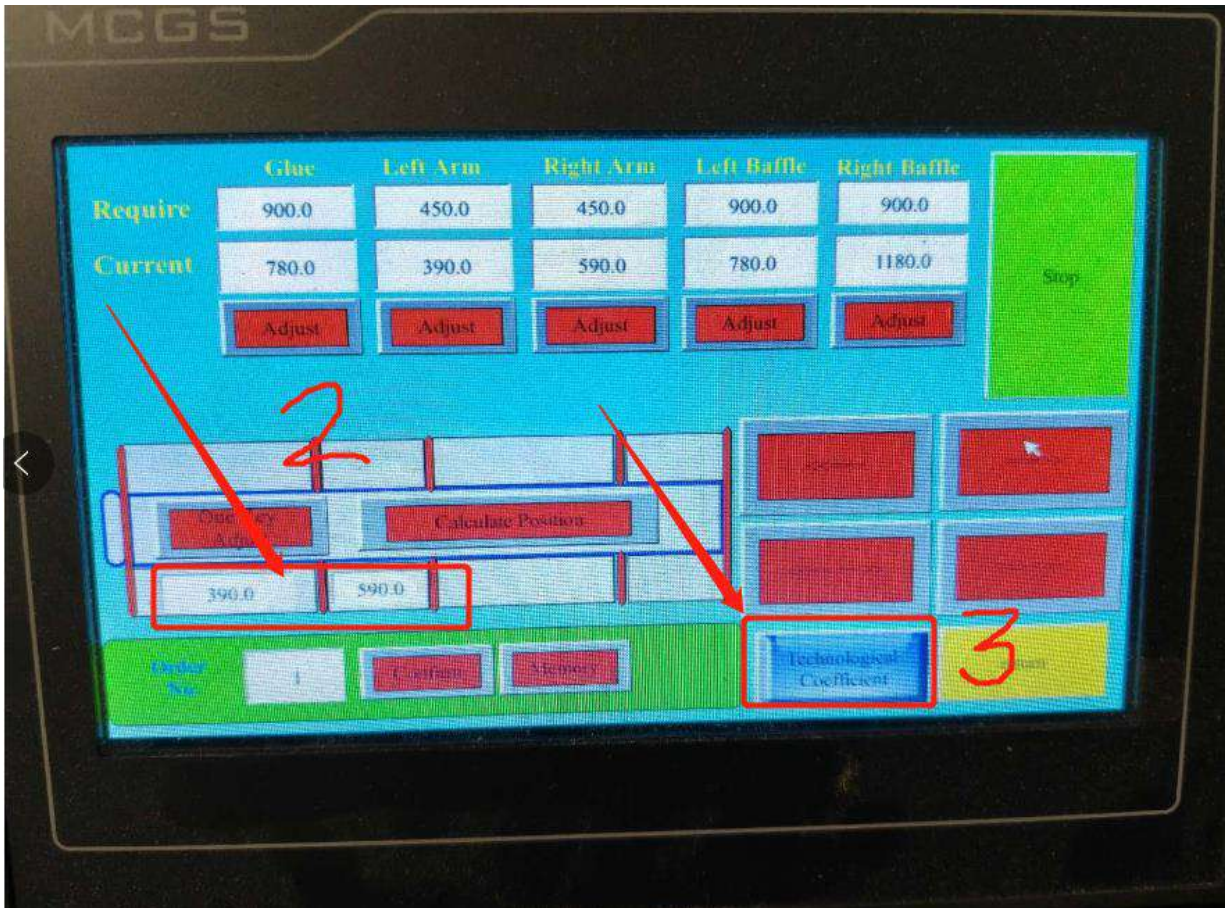
The paper stacking bell machine stops running and removes the blocked paper. If there is no cardboard panel under the probe, press the forced reset button first, then press the green paper stacking alarm button. After the bell stops, restart the machine. There is cardboard under the probe Pressing both host startup and acceleration simultaneously will force a startup. The correction detection bell stops feeding paper to the paper feeding section. Press the green correction detection alarm on the screen, and press the green button without stopping the bell to check if there are any obstructions on the probes on both sides of the folding section. Remove the skewed cardboard and handle it as described above if it enters the stacking section.

8. Calibration, intelligent order replacement operation

Be sure to manually adjust all dimensions when using the machine for the first time. After confirming completion, proceed to the next step of calibration. Enable the computer to remember the correct dimensions of various parts. Paper feeding unit baffle, left and right arms, glue head.

The calibration process is as follows.



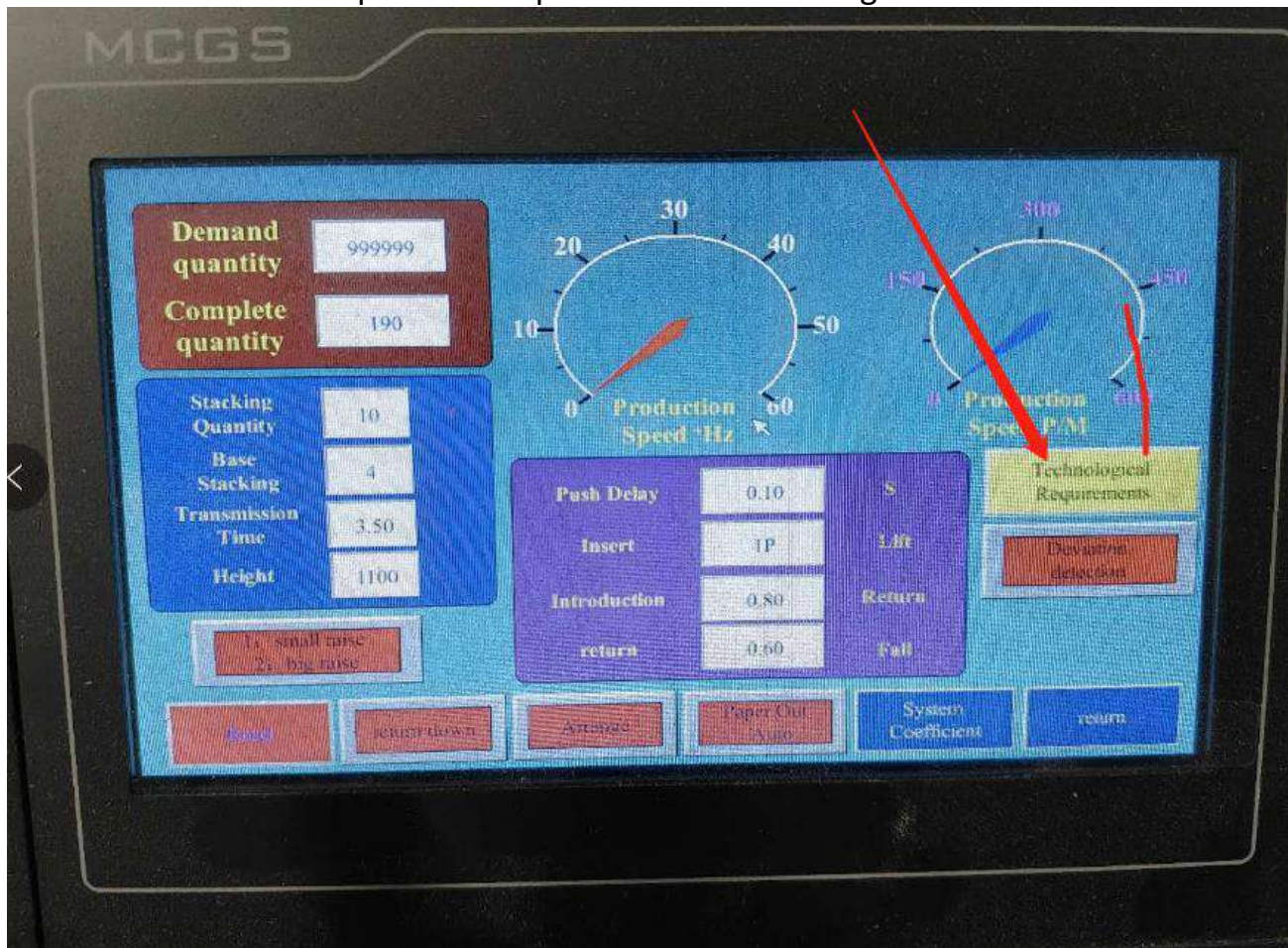


- 1: Click on position 1 to proceed to the next page.
- 2: Enter the cardboard box size for the completed order. The length and width of the cardboard box.
- 3: Then click and hold for two seconds at position 3 to enter the next page.

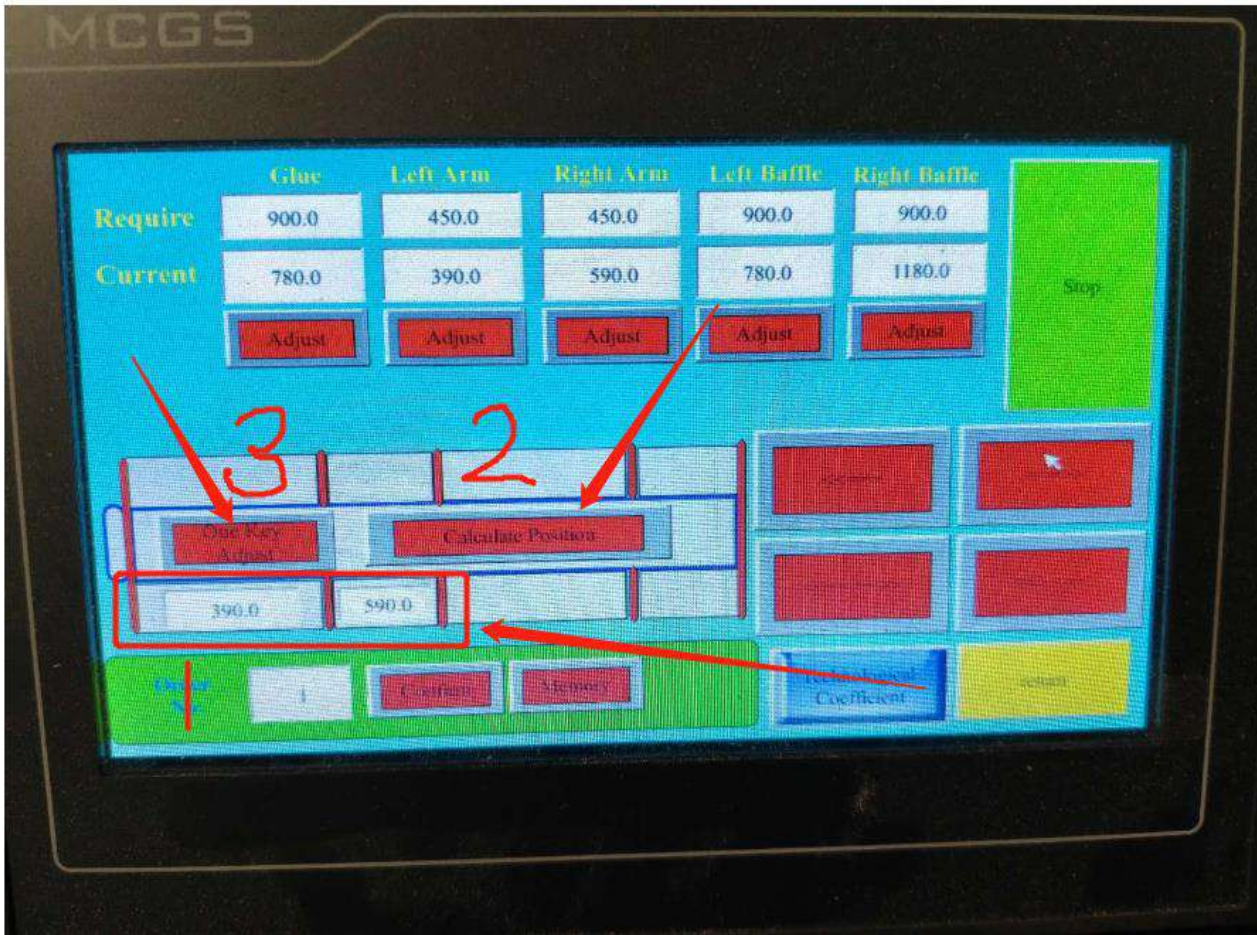
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- 4: Press position 4 for one click calibration.
5. Check if the position of 5 has already displayed 0. After successful calibration, all values are 0.

After calibration is completed. The process for re entering a new order is as follows:



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- 1: Click on position 1 to proceed to the next page. After entering the new page, first enter the length and width of the new order carton in position 1.
- 2: Then click on position 2 for automatic computer calculation. Please note whether the values at the top 5 positions on the page have changed. After the change, it is considered successful.
- 3: Click on the position of 3 to make an adjustment. The machine will automatically adjust.