



# LP-C2

## Paper Cushion Machine User Manual



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## Preface

Thank you for using Locked Wave paper cushion machine. In order to ensure that you use the equipment correctly, please read this manual carefully before operation!

**Note:** The operation of different models is slightly different, please pay attention to the tips in the manual.

## Disclaimer

The manufacturer and its authorized distributor are not liable for any accidents or damages resulting from the failure to comply with warnings or instructions depicted on this machine or contained in this operator manual, including:

- Improper use or maintenance
- Use for applications or under conditions other than those outlined in this operator manual
- Use of unauthorized parts
- Repairs or modifications made without the permission of the manufacturer
- Unauthorized alterations to the machine such as:
  - a) Alterations to the control system;
  - b) Welding, mechanical treatments etc;
  - c) Extensions to the machine or the control system;

The manufacturer and its authorized distributor are not liable for:

- Indirect damages caused by errors or malfunctions of the machine (e.g. damages to products, company interruptions, delays, etc.)

## Safety

This machine has been well designed for safe use in accordance with the application, conditions and rules describe in this operator manual. Anyone that works with or on this machine must read the operator manual and follow the instructions carefully.

## Operator

Only those who read and understand the Sections "Safety" and "Installation and Use of the Machine" should operate the machine. Special training is not required.

Operator tasks include:

- Operating the machine
- Regular maintenance (see Section 7)
  - Remove paper scraps
  - Remove excessive paper dust

## Service Technicians

Only service technicians employed by Locked Wave or Locked Wave distributor are permitted to conduct the service on the machine. For these individuals, a separate service manual is available.

## Rules of Safety

- a. The power used for the machine must be consistent with the parameters on the nameplate on the machine, misconnection is strictly prohibited. In order to prevent damage to the machine, please only use the power cord provided with the machine.
- b. Always plug the machine into a ground-type wall socket.
- c. When transporting and moving, please pay attention to the occurrence of short circuit or open circuit of the wiring inside the safety switch.
- d. Safety devices are not allowed to be switched off or removed.
- e. Do not remove or cover warning labels (see Machine Warnings).
- f. Keep the working area clean and free of obstacles.
- g. Unplug the machine and gather all loose cords before moving the machine.
- h. Pay attention when using hand tools such as knives or scissors to avoid injuring your hands due to the risk of cutting.
- i. Ensure that:
  - Cords cannot be damaged

- The working area is sufficiently lit
- The working area is sufficiently ventilated

## Machine Warnings

- a. When the machine is working, it is strictly forbidden to touch any rotating parts.
- b. To ensure the safety of equipment during maintenance, the machine will not work when the front or rear covers are opened.
- c. Non-technicians are prohibited from opening the machine maintenance cover.
- d. During maintenance or repair, it is strictly forbidden to touch the blades near the marks in the figure below to avoid hand cutting.



- e. During maintenance, it is strictly forbidden to put your fingers inside the paper feeding slot to avoid hands injuring.



- f. When the machine is functioning smoothly, if there are motor abnormalities, paper jams or other faults, the sensor will detect these issues, alarm sounds and machine stops.

- g. In following situations, please press the Emergency Stop Switch to cut off the main power of the machine:

- Any unusual objects in the inlet
- Unusual sounds inside the machine
- Other abnormal operating conditions

## Improper Use

The following applications or acts are not suitable for the machine and constitute improper use of the machine:

- Use of materials other than those produced by Locked Wave and intended for use in the machine
- Use outside or in a humid area
- Use in areas subject to an explosion hazard
- Washing or cleaning the machine with excessive quantities of water
- Standing on the machine
- Placing objects against or on top of the machine
- Moving the machine while it is functioning or connected to the AC power supply

## Storage

- The storage room must be dry.
- The machine must not be set up or stored in a place where it is subject to moisture or water.
- Before using the machine after a long-term storage period, it must be inspected by a trained service technician.

If the machine is taken from a cold to a warm area, temporary condensation (both internally and externally) can form on the machine. In this case, turning the machine on right away may damage the machine and create problems for the operator. Let the machine reach room temperature and wait for the condensation to evaporate before turning it on.

## Transport

- The machine should not have severe vibration and shock during transportation;
- The machine should not be exposed to the sun or rain, and should be stored under the required temperature and humidity range.

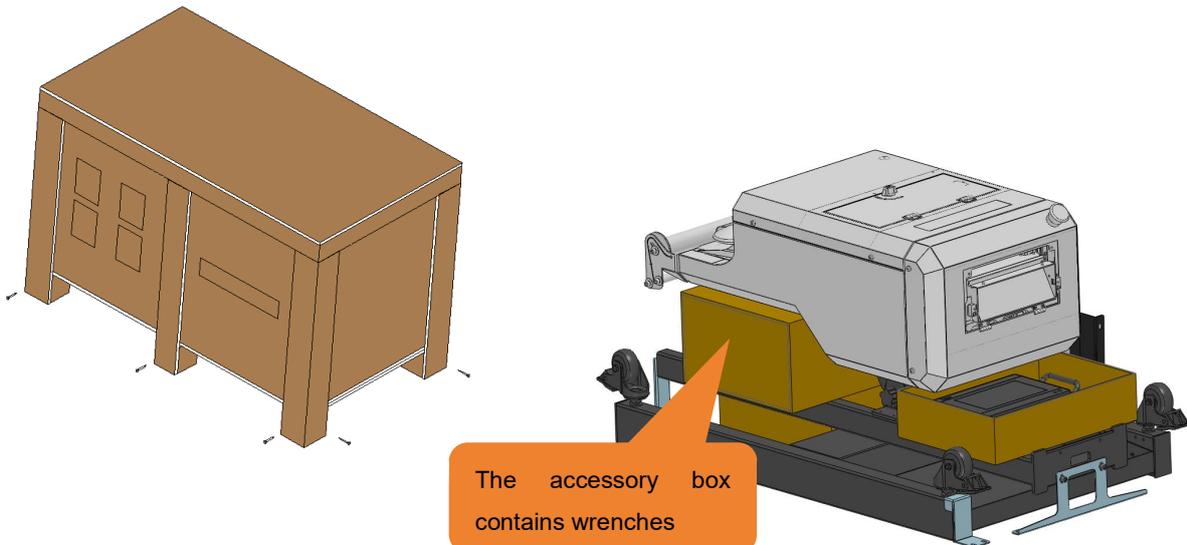
# 1. Machine Installation Guide

## 1.1. Unbox the package

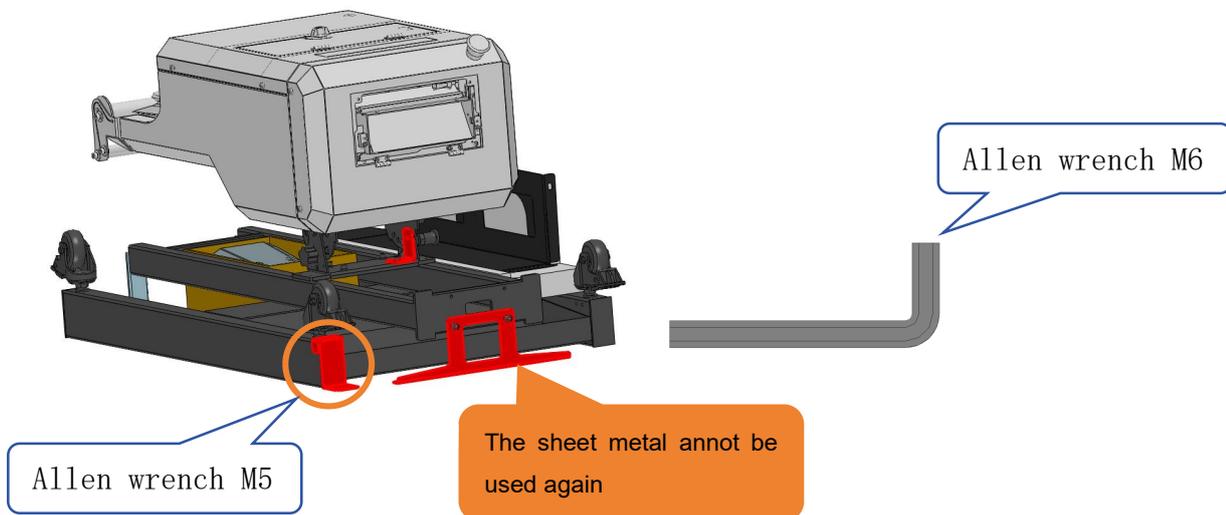
**Attention:**Unpacking screws can not be used again.

STEP1:After unpacking, please check the contents against the packing list.

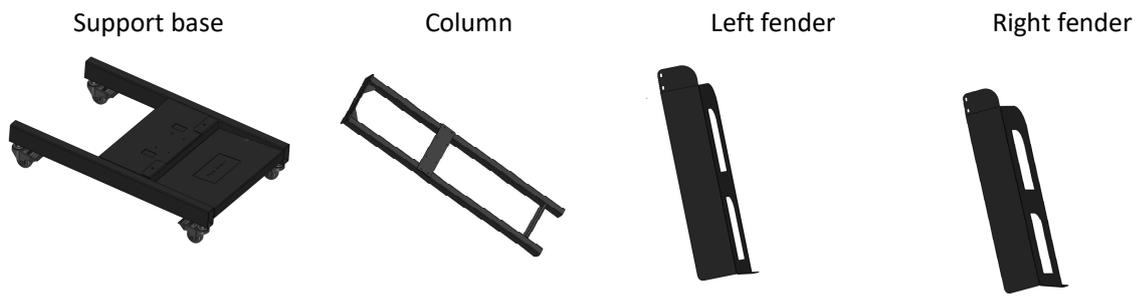
Reference Document: Part List of LP-C2



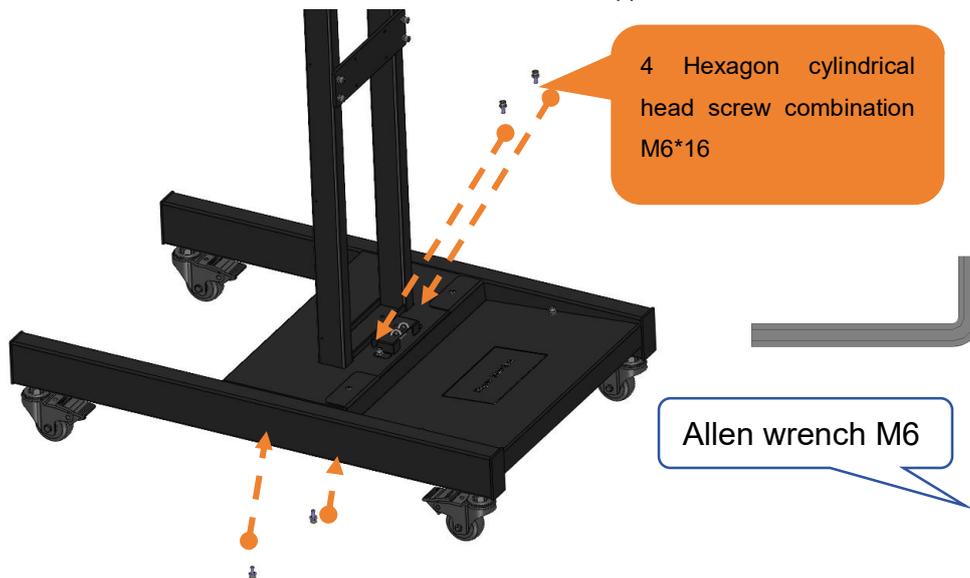
STEP2:Remove the accessory cardboard box and dismantle the metal fixing pieces



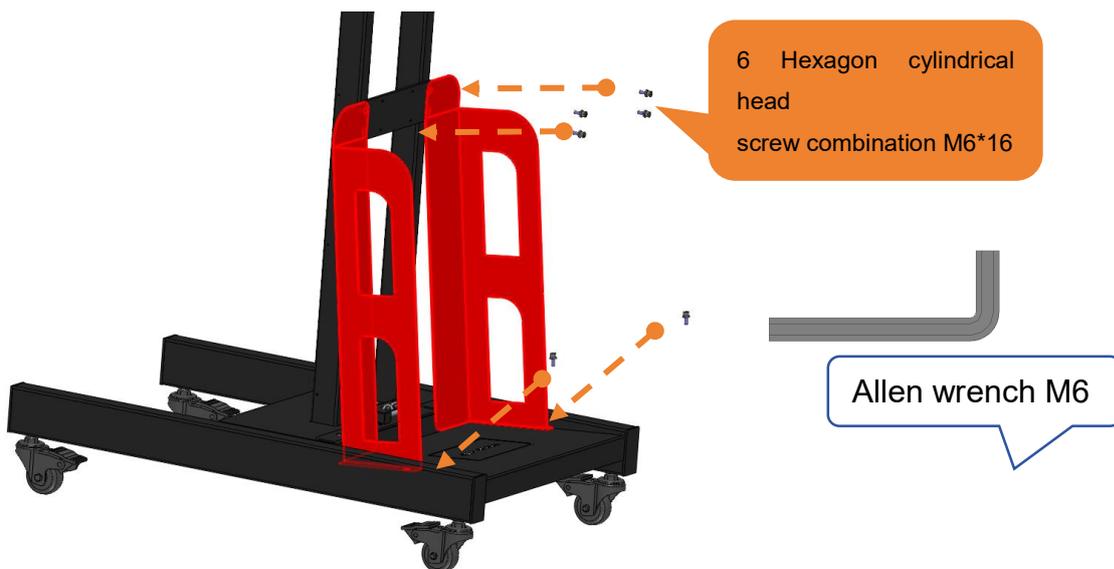
## 1.2. Assemble the stand.



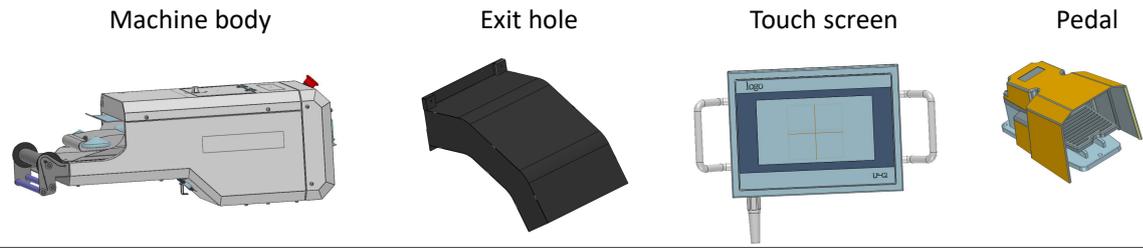
STEP1: Use M6\*16 combined screws to secure the column to the support base



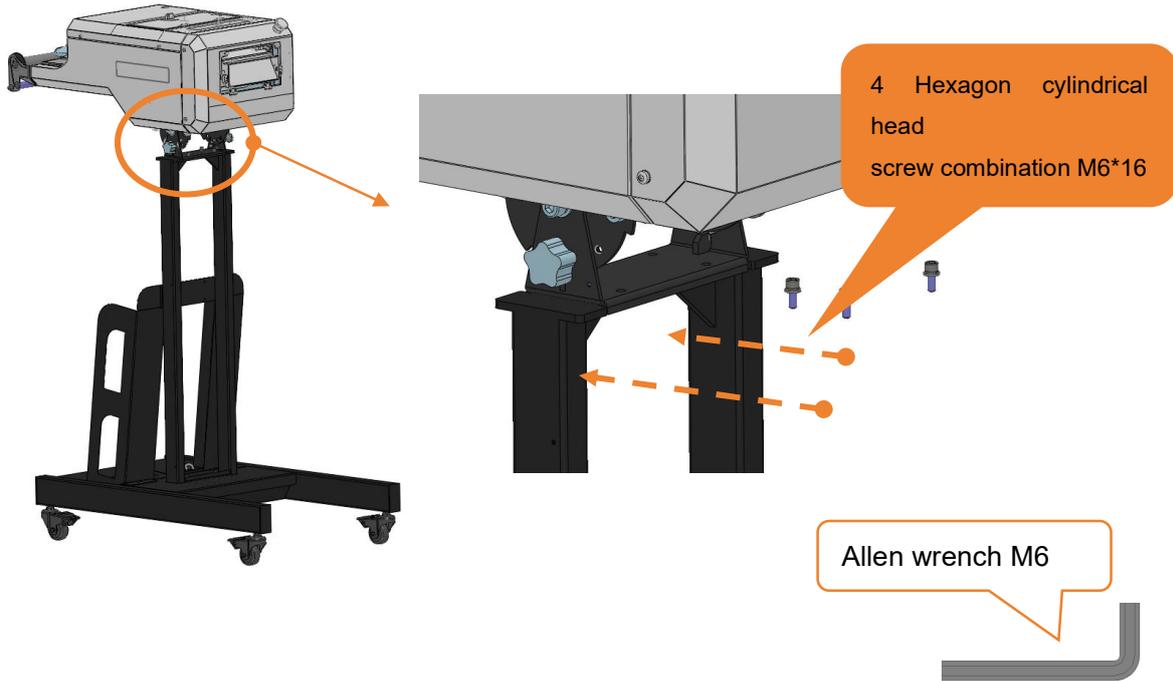
STEP2: Use M6\*16 combined screws to secure the left fender and right fender



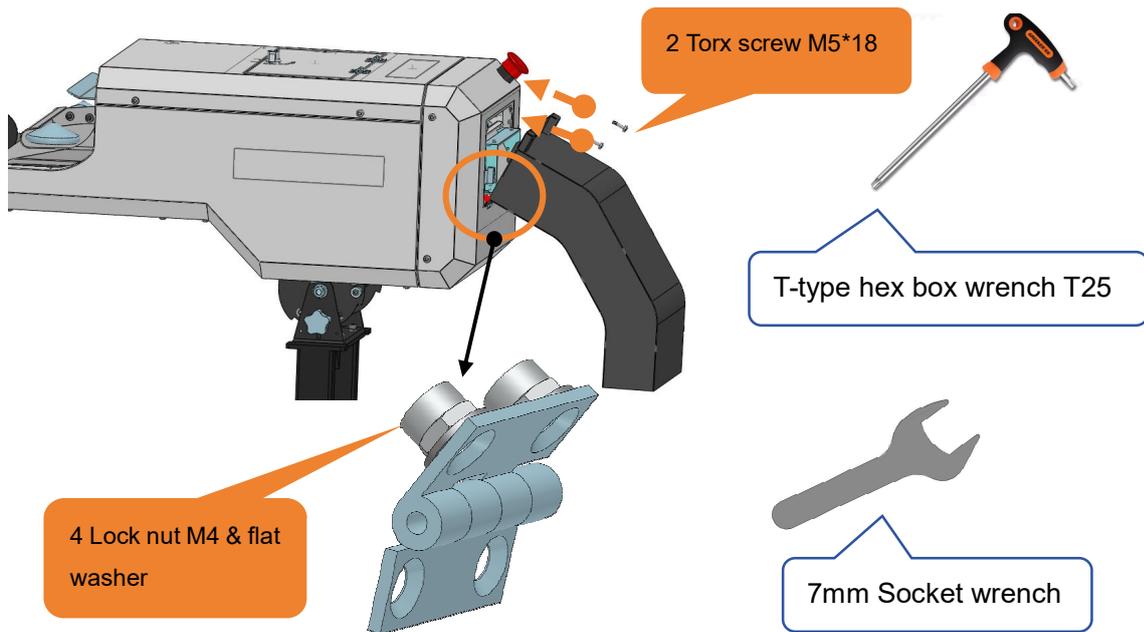
### 1.3. Assemble the machine



STEP1: Use M6\*16 combined screws to secure the machine body to the bracket



STEP2: Secure the exit hole to the machine body using 2 Torx screws M5\*18, tighten the hinge first

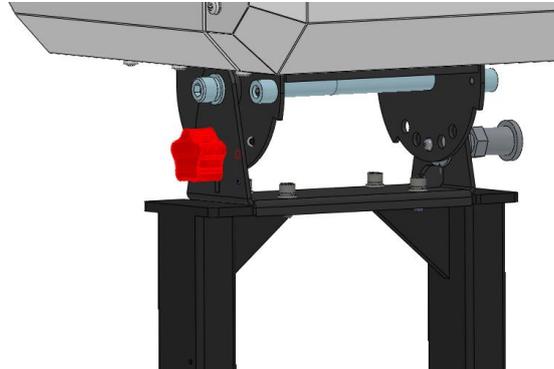


## 1.4. Adjusting the Angle

**Warning:** Before performing any operation, ensure safety by following the steps below:

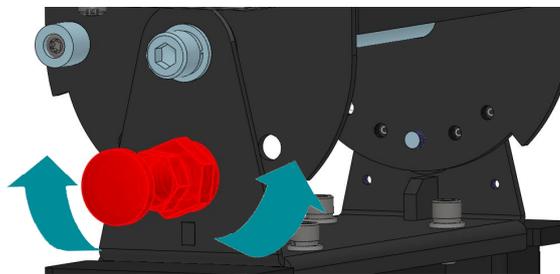
### (1) Remove the hexagonal screws:

Before adjusting the machine angle, first remove the hexagonal screws securing the machine angle.



### (2) Angle adjustment:

Adjust the machine angle as needed by using the angle adjustment locking pin (-40°~+40°)



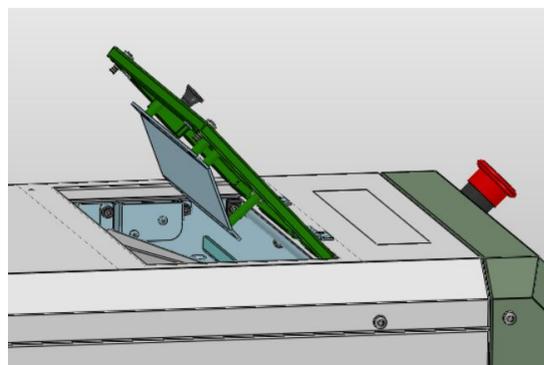
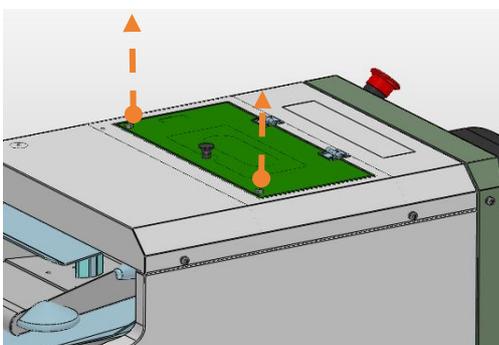
**Note:** Ensure all adjustments are securely in place to prevent any potential hazards.

## 1.5. Method for Adjusting Width

**Warning:** Before adjusting, please ensure that the main power of the machine is turned off.

### (1) Open the top cover:

Use a hexagonal wrench to loosen the two hexagonal screws on the top cover, then lift the top cover.



### (2) Width Adjustment

Lift the width adjustment pin upwards.

Insert the pin into the corresponding notch according to the required setting.

The adjustable width ranges are as follows:

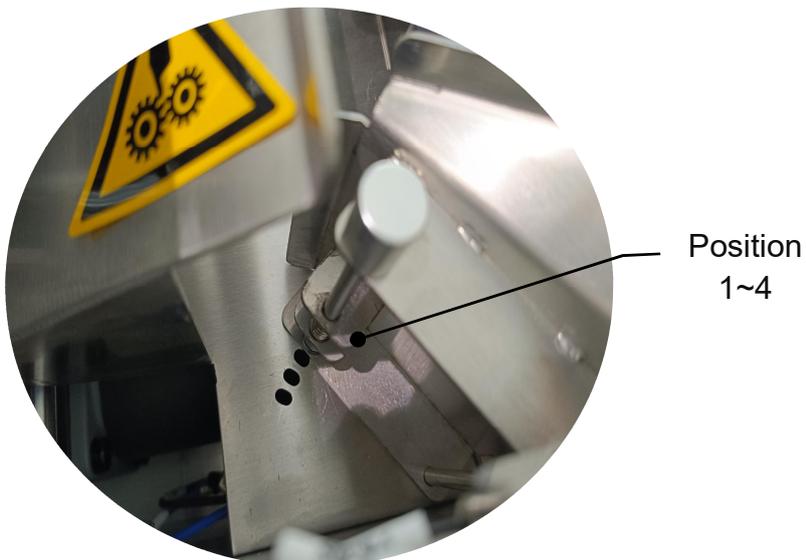
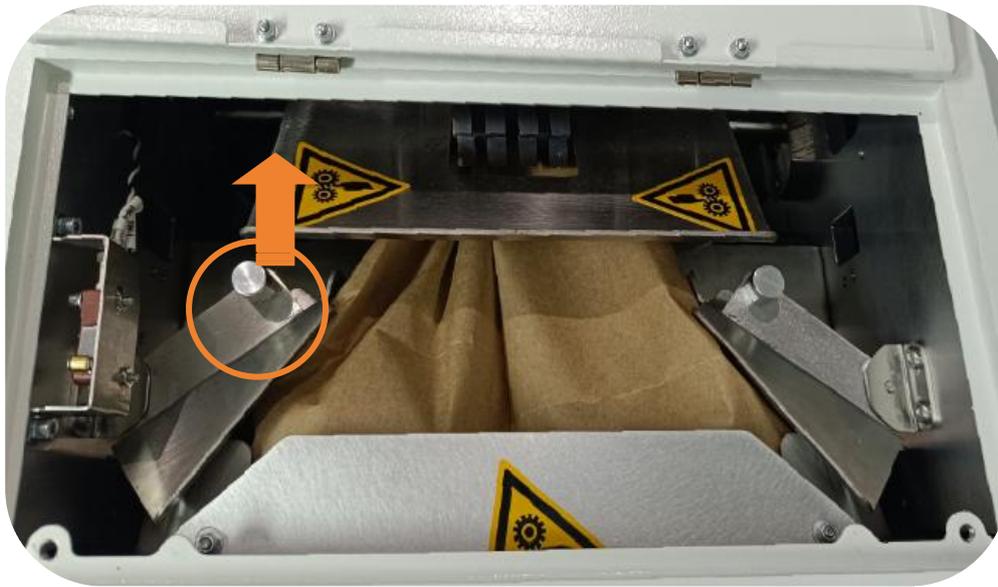
Position 1: 130-145

Position 2: 145-160

Position 3: 160-175

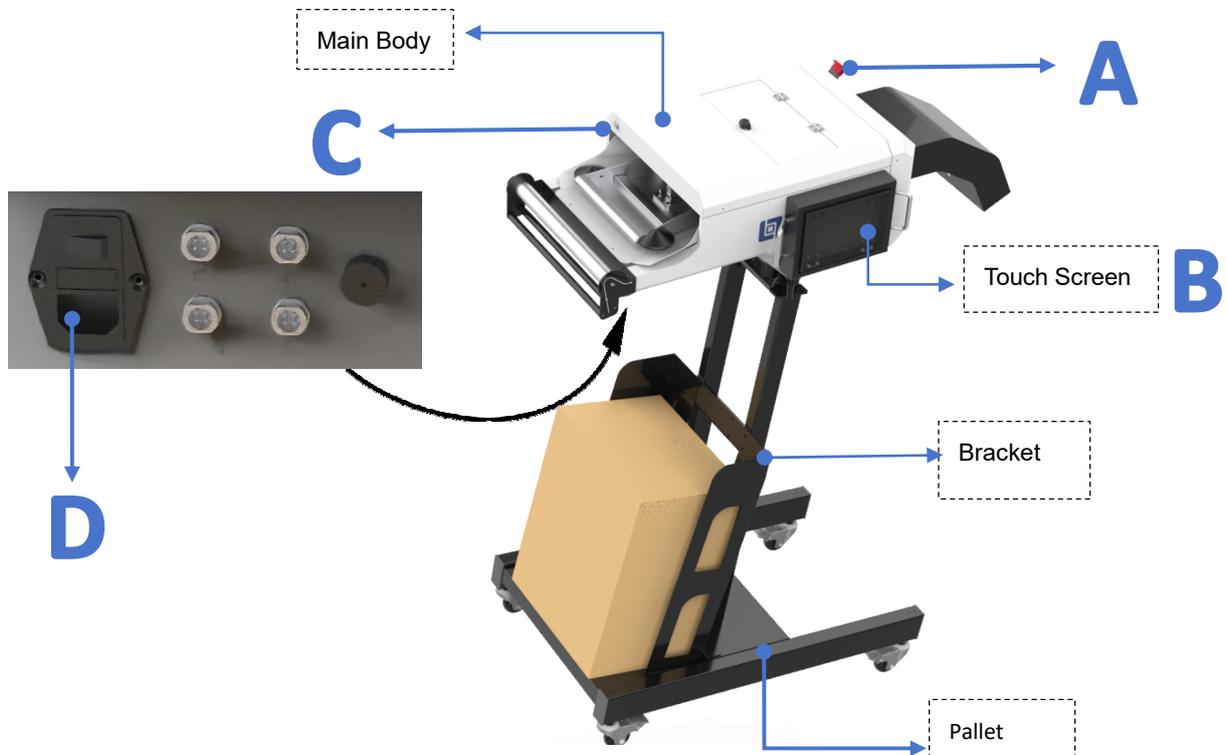
Position 4: 175-190

**Note:** To ensure even paper feeding and output, it's essential to keep the adjustment positions on both sides consistent.



## 2. Introduction

### 2.1. Product Introduction



### 2.2. Control system

#### A. Emergency Stop Button (E-Stop)

These red buttons when pushed disables the drive and cut functions.

Note: To reset the E-Stop, twist and release it and then press the reset button.

#### B. Touch Screen Control Panel

This panel is used to operate and program the system

#### C. Paper Loading Button

Press to turn the Auto Load function on

#### D. ON / OFF Power Switch

This switch controls power to the system.

### 3. Operate

#### 3.1. Turn the machine on

First, check that the machine meets the followings:

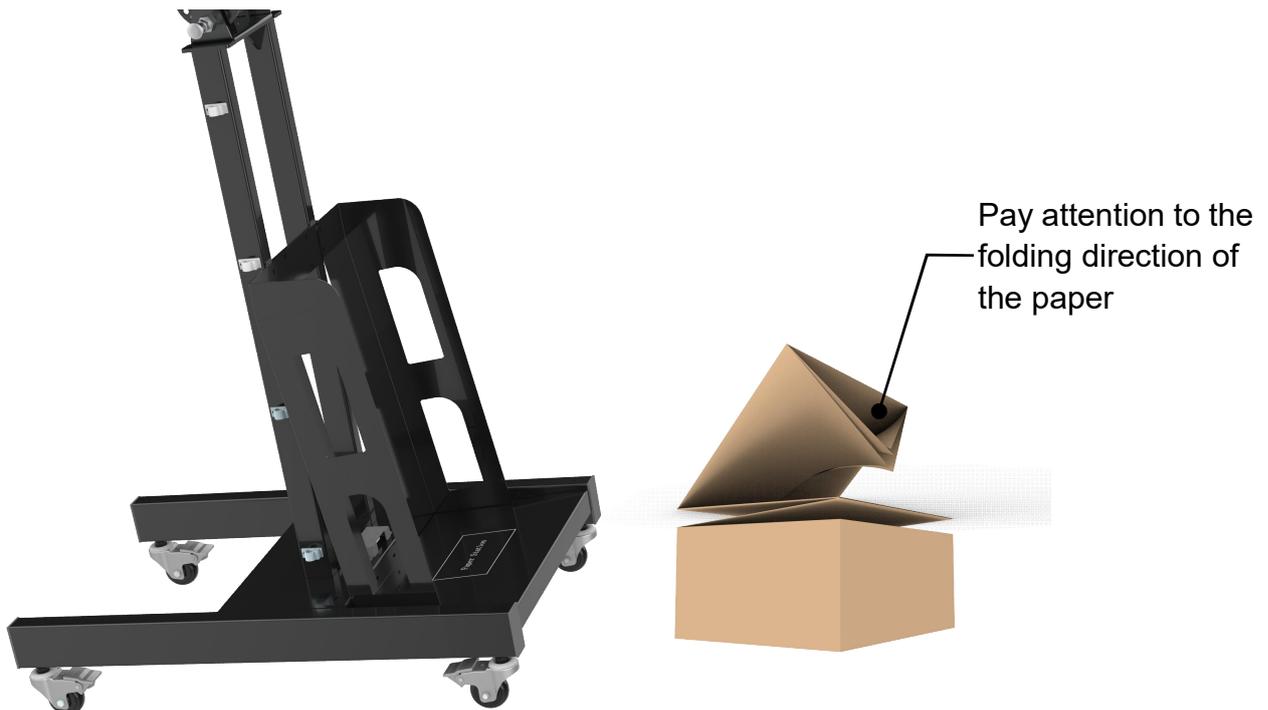
- Plug in the touch screen
- Plug in the pedal switch
- Emergency switch button is locked
- All protective covers are closed
- Keep your hands away from the paper outlet of the machine (there is a cutter inside)

Then, do the following:

- 1) Plug in the power supply
- 2) Turn on the switch

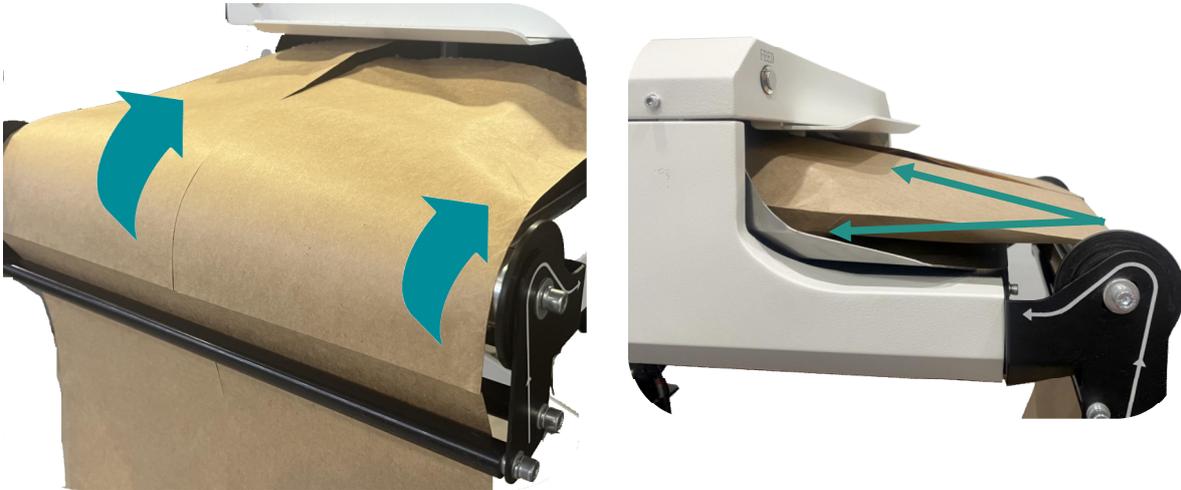
#### 3.2. Feeding

(1) Place the folded kraft paper on the tray following the direction of the arrow.



## (2) Insert into the feeding channel

Follow the feeding arrow guide for material loading

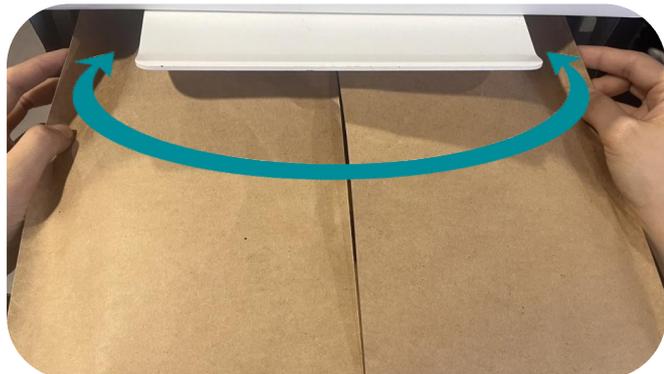


## (3) Feeding

### Step1:

Push inward, Roll up both sides simultaneously.

Until it can't be pushed any further.



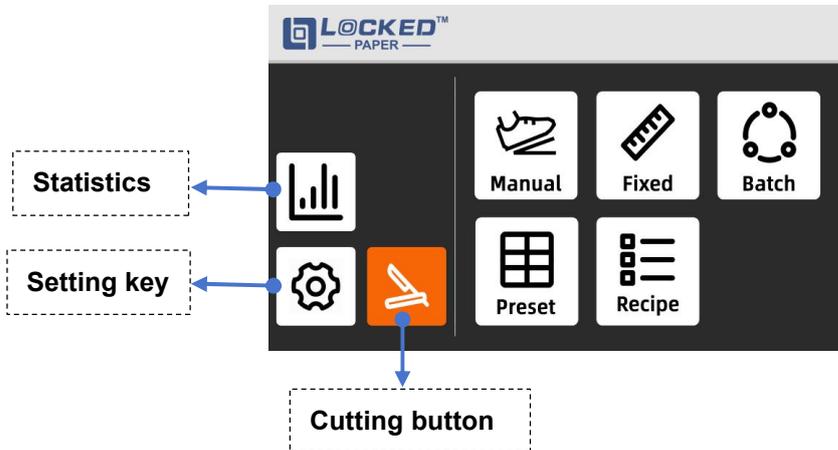
### Step2:

During the feeding process, short press the feeding button until the transmission gears grip the paper



### 3.3. Menu Bar

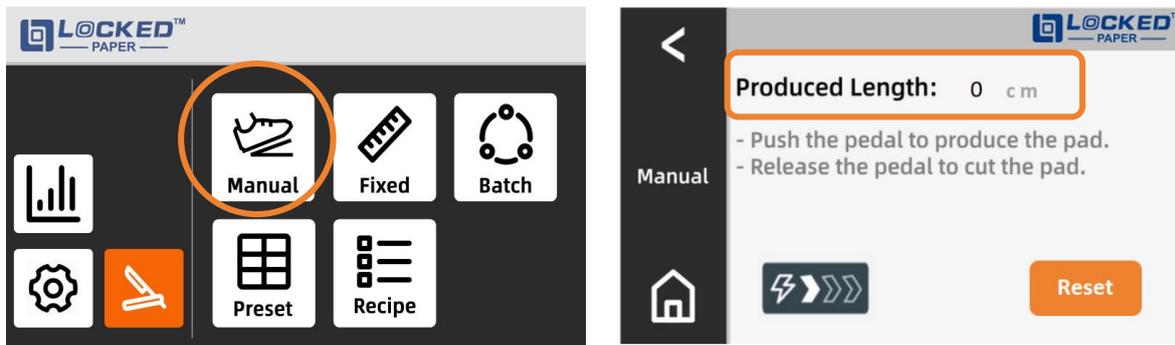
Use the Menu Bar to select and press to enter different modes.



### 3.4. Manual Mode

Manual Mode allows a manually dispensed length.

- (1)  : Click on the menu bar to enter manual mode.

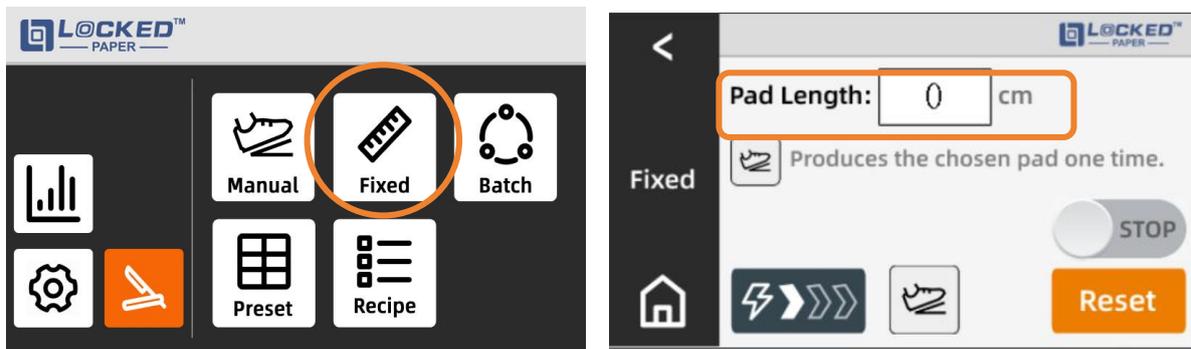


- (2)  : Speed adjustment has three levels: 60%, 80%, and 100%.
- (3) Use the foot pedal: Press the foot pedal switch and adjust based on the duration of the press. The longer the press, the longer the material length.
- (4) Releasing the foot pedal switch stops material feeding and cuts it off. The length range is 50 to 3600 centimeters (20 to 1417 inches).
- (5) "Produced Length" displays the length of the material fed (in centimeters/inches).
- (6)  : You can return to the previous level or the main interface.

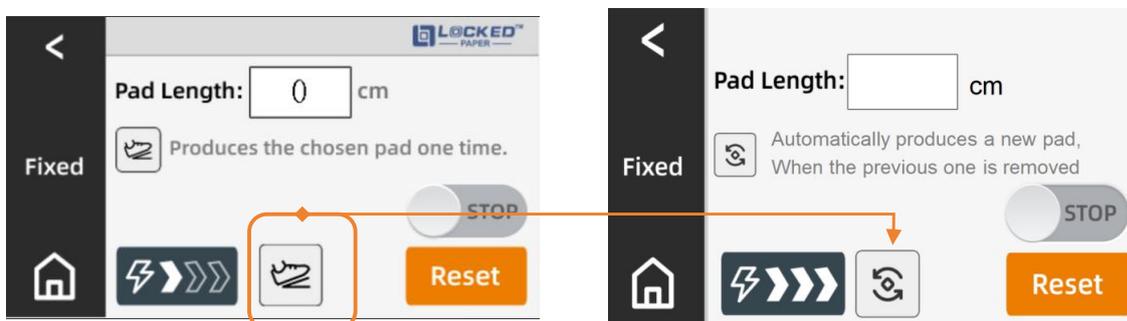
### 3.5. Fixed Mode

This mode is used for producing paper pads of pre-set lengths. You can configure it as needed to automatically dispense one paper pad after each press of the foot pedal.

- (1)  :Click on the menu bar to enter Fixed Mode.



- (2) Pad Length: Pad Length: Set the length (50~3600cm/20~1417inch).
- (3)  : Three-speed adjustment (60%, 80%, 100%).
- (4) When you click "STOP" or press the foot pedal to start paper pad production, the screen will display "RUN".
- (5) When you click "  " or press the foot pedal, it displays "  ". After completing the current paper output, stopping, and then clicking "  " again or pressing the foot pedal will immediately tear off the paper pad.
- (6) Feeding method: Every time you press the foot pedal switch or click the STOP button, one paper pad will be produced.
- (7) Switch to automatic mode by pressing the  button to switch to  mode. Then, trigger the machine by short-pressing the 'STOP' button or stepping on the foot pedal. The machine will start feeding paper, and after taking one segment, it will automatically feed the next one.



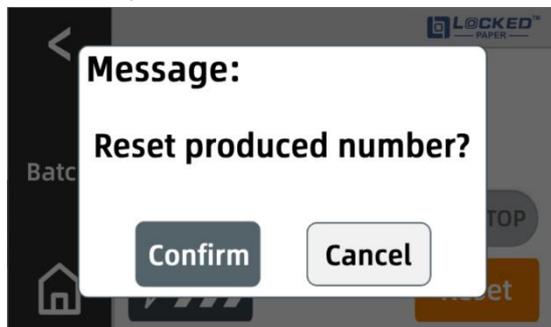
### 3.6. Batch Mode

This mode allows you to set the length and quantity of paper pads and achieve automatic continuous paper output until the set number of paper pads is reached.

- (1)  : Click on the menu bar to enter Batch Mode



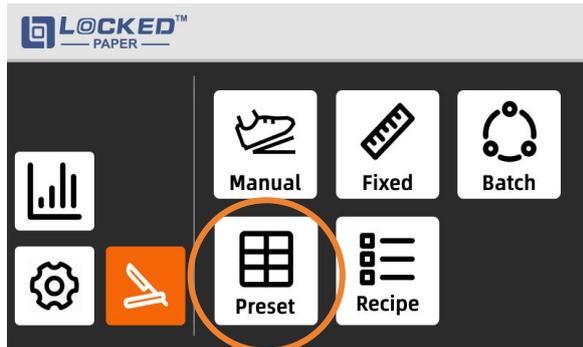
- (2)  : Three-speed adjustment (60%, 80%, 100%).
- (3) Pad Length: Pad Length: Set the length (30~3600cm/12~1417inch).
- (4) Amount: Set the quantity of paper pads (1~99999).
- (5) Produced: Displays the produced quantity, not editable.
- (6) Click "STOP" or press the foot pedal to start paper pad production, and it will display "RUN".
- (7) Click "RUN" or press the foot pedal, and it will display "RUN". After completing the current paper output, stopping, and then clicking "RUN" again or pressing the foot pedal will immediately cut off the paper pad.
- (8) Once this mode is initiated, the machine will automatically start producing paper pads of the set length. The "Produced" box will track the number of paper pads produced. After producing the set quantity of paper pads, the machine will automatically stop.
- (9) When there are no alarm alerts on the screen and the machine is paused, you can choose whether to clear the record value in "Produced" using the "Reset" option. If you select "Confirm," the count will start from 0 when you restart.



### 3.7. Preset Mode

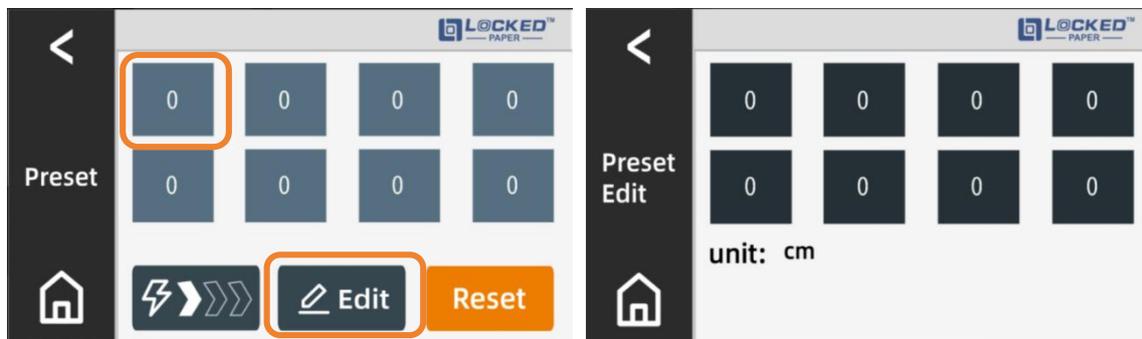
This mode allows you to pre-set multiple paper pad lengths, and when in use, you can simply click on the corresponding value to generate paper pads of the desired length, meeting various packaging requirements.

- (1)  : Click on the menu bar to enter Preset Mode



- (2)  : Three-speed adjustment (60%, 80%, 100%)

- (3) Click on any empty box, then click "Edit" to access the editable length interface. Here, you can preset multiple paper pad lengths as needed (50~3600cm/20~1417inch).

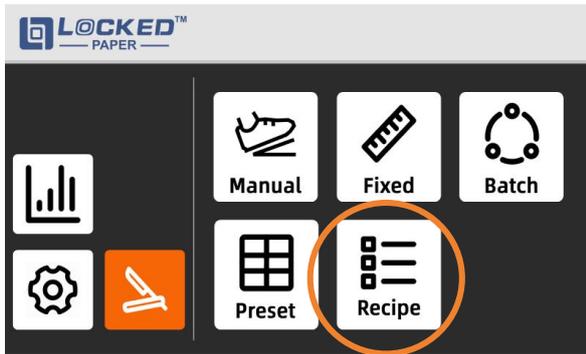


- (4) After setting is completed, press the back button to return to the previous interface.
- (5) In this mode, by pressing the number keys, paper pads will be produced according to the corresponding lengths. Even if you don't remove the paper pad, you can click the next number to continue producing the next segment of paper pad. This operating method allows you to select and continuously produce paper pads of different lengths as needed.
- (6) If you need to continuously produce paper pads of the same length, you can use Batch Mode or Fixed Mode.

### 3.8. Recipe Mode

This mode allows you to pre-arrange a series of paper pads with various quantities and lengths. With a single press, you can efficiently complete the entire series of production, saving time. It is suitable for packaging tasks that require frequent changes in paper pad length and quantity.

- (1)  : Click on the menu bar to enter Recipe Mode



- (2)  : Three-speed adjustment (60%, 80%, 100%)

- (3) In the Recipe mode setup interface, you can click on any # number box and then click "Edit" to enter the editing interface for quantity and length:



- (4) If you set the data for #1, the screen will display 'Recipe # 1' at the top. In the setup interface, you can set different paper pad lengths (50~3600mm/20~1417inch) and quantities (1~99999) from NO.1 to NO.8, with each number (NO) corresponding to a set of data. When the quantity is set to 0, the machine will automatically skip this number during operation and move to the next set of data. After setting, press the back button to return to the previous interface.

- (5) When you select one set of data, the # number box will turn black, indicating that the machine will run the pre-set data within that group.:

- (6) In the Recipe mode interface, when the machine is in a stopped state, you can choose the paper output method:

- (7) A  Foot pedal switch control      B  automatic switch control

- (8) C  single-cycle paper output      D  multi-cycle paper output

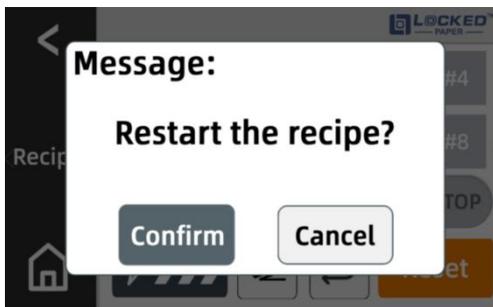
- (9) In the case of switching to  and  combination or  and  combination, the paper output method is such that with every foot pedal press, a paper pad segment will be automatically generated. The length and quantity settings within the recipe will cycle automatically, even if the paper is not removed from the outlet; the machine will continue producing the next segment automatically.

- (10) When switching to the  and  combination, the selected recipe will execute once and then stop automatically. Click the "RUN" button to start the machine. It will feed one pad, and then the next, in the

order of NO.1, following the set length (50~3600mm/20~1417inch) and quantity. After all the pads in NO.1 are produced, the machine will automatically proceed to NO.2, and then continue to NO.3, and so on, looping through until all the predetermined sets of pads within the current recipe have been continuously produced. The machine will stop automatically. If you need to pause in the middle of this process, simply click the "STOP" button.

(11) When switching to the and combination, the selected recipe will execute in a loop until manually stopped. Click 'RUN' to start the machine, and the paper output sequence and method will be the same as in the and combination.

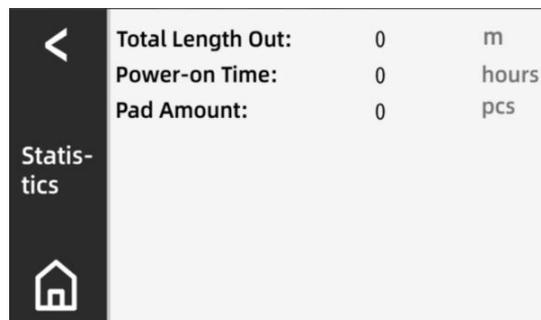
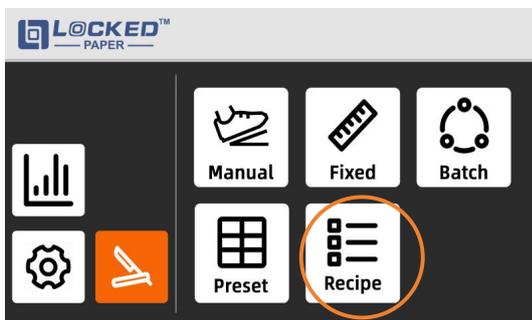
(12) When there are no alarm reminders on the interface and the machine is paused, you can choose whether to start again with 'Reset'. If you choose 'Confirm,' the next start will begin with the first set of data.



### 3.9. Statistics

This interface displays the machine's data records, including total length, total running time, and total pad quantity.

(1) : Click on the Home page to enter the statistics interface



(2) "Total Length" displays the total length of paper produced by the machine.

"Power-on Time" displays the total operating time of the machine.

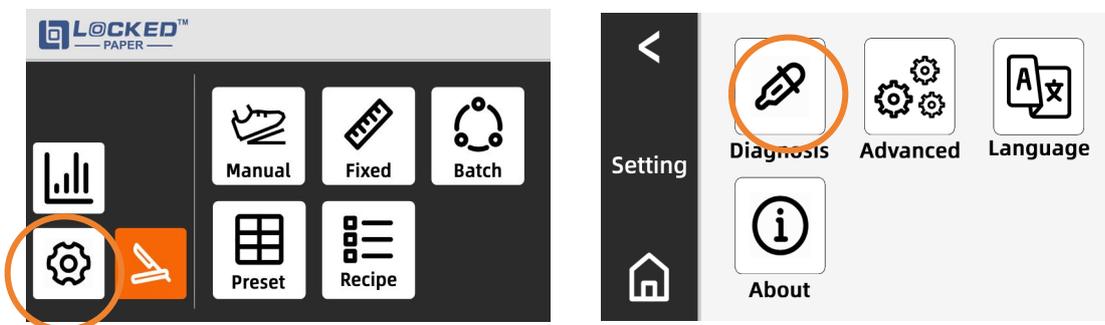
"Pad Amount" displays the total number of pads produced by the machine.

### 3.10. Setting

The settings function includes: diagnostics, advanced settings, Language and About;

#### 3.10.1. Diagnosis

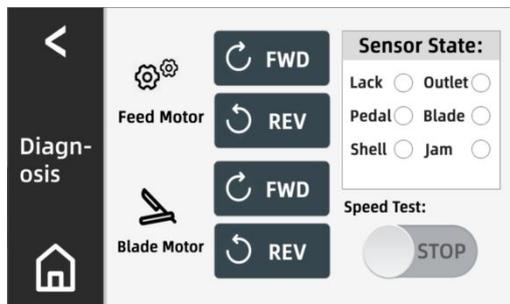
(1)  :Click on the menu bar to access the settings interface



(2)  :Access the diagnostics interface from the Settings menu



This interface is used for diagnosing the gear and cutter's operational status. Please operate under the guidance of a professional



(3) Under Diagnosis interface, the Feed Button is unavailable to work, will alarm with buzzers. To diagnose the Feed Motor's operation,

long-press , the transmission gear will continue rotating in forward, then stop when released;

Long-press , the drive gear will continue rotating in reverse, then stop when released.

(4) To diagnose Blade Motor's operation:

click FWD, the blade will rotate forward;

click REV, the blade will rotate in reverse.

### 3.10.2. Advanced

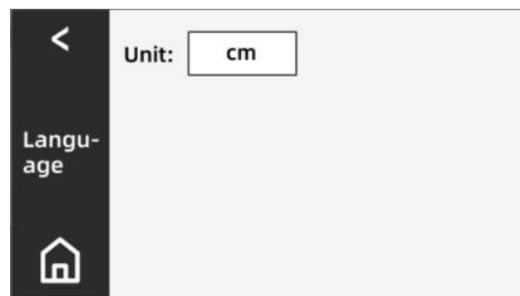
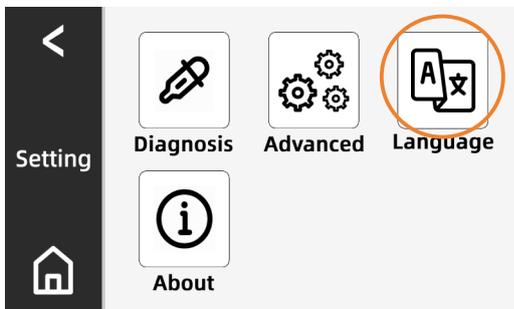
This interface is for temporary troubleshooting solutions. Please operate with the assistance of a professional technician. Contact our after-sales support for further assistance



### 3.10.3. Language Interface

This interface is used to switch the unit of length;

(1) : Click on the Home page to enter the **Setting** interface



(2) Click on the **Setting** interface to enter the Blade interface;

(3) Unit displays current status, click  to switch to  ;

### 3.10.4. About

(1) : Click on the Setting interface to enter the About interface



(2) Use your mobile device to scan the QR Code to access into [LOCKED™ PAPER](#) website for related information.

### 3.11. Blade interface

(1) Press  on Home to enter Blade interface;



(2) The screen default displays  NO

**STEP1:** Press  NO converts to **Confirm**;

**STEP2:** Long press  and Feed Button at the same time, will trigger  animation effect;

Exit the interface, **Confirm** will convert to  NO automatically;

When the blade isn't at the original position, if you feed paper manually, either Diagnosis interface or Feed Button, an alarm for abnormal blade position would be triggered.

## 4. Troubleshooting

The machine will provide specific reasons for any faults or failures, regardless of the cause, in the form of pop-up alerts.

ERROR FIGURE	PROBLEM	SOLUTION
	E001:No paper in outlet	<ol style="list-style-type: none"> <li>1. Check if the shape of the output paper is uneven, if the length has become shorter, and if the dashed lines are torn;</li> <li>2. Check if the outlet cover is deformed;</li> <li>3. Check the installation of sensors or cables, and replace if necessary: Sensor - Exit sensor interface board - Front cover signal bus B - Front cover signal bus - Sensor interface board - Sensor signal bus - Control board;</li> <li>4. If temporary use of the machine is required, you can deactivate the exit detection sensor option in the advanced settings interface.</li> </ol>
	E002:No paper in inlet.	<ol style="list-style-type: none"> <li>1. Check if the paper is used up or if the paper is torn</li> <li>2. Inspect the consumables for normalcy, such as checking if the material is excessively soft, too thin, or prone to breakage.</li> <li>3. Check whether the current has been calibrated in the advanced settings interface, or recalibrate if necessary.</li> <li>4. If temporary use of the machine is needed, you can disable the entrance detection option in the advanced settings interface.</li> </ol>
	E003:No paper on the tray.	<ol style="list-style-type: none"> <li>1. Press "Back" to clear the fault and replenish the paper;</li> <li>2. Translation: "Inspect the installation of sensors or cables, replace if necessary, and check if the 'out-of-material detection' option is enabled in the advanced settings interface: Out-of-material detection sensor - Out-of-material detection control line - Aviation plug interface board - Aviation plug signal bus - Control board.</li> </ol>

	<p>E004:Shell is open</p>	<ol style="list-style-type: none"> <li>1. Close the top cover or front cover, then click the "Retry" button.</li> <li>2. Check if the top cover or front cover is deformed or incorrectly installed, causing the switch to be pressed down.</li> <li>3. Inspect the installation or replacement of switches/cables: Front cover switch - Front cover harness - Exit sensor interface board - Front cover signal bus B - Front cover signal bus - Sensor interface board - Sensor signal bus - Control board; or Top cover switch - Top cover harness - Sensor interface board - Sensor signal bus - Control board.</li> </ol>
	<p>E005:E-stop is pressed.</p>	<p>Resetting the Emergency Stop Button</p> <ol style="list-style-type: none"> <li>1. Verify that there are no other faults with the machine.</li> <li>2. Lift or turn the emergency stop button to deactivate the emergency stop condition and restore normal machine operation</li> </ol>
	<p>E010:Blade IS NOT at zero position</p>	<ol style="list-style-type: none"> <li>1. Enter Warning interface If click Back, it will keep flashing until recovered.</li> <li>2. Click Reset, follow the steps on the interface to clear the Warning.</li> </ol> <p>Notes: Under Warning, you can't enter the Blade interface.</p>
	<p>E011:Blade FAILED to leave zero position.</p>	<ol style="list-style-type: none"> <li>1. Check if the PCB, motor, motor cable connector, and cutter position detection sensor connector are abnormal.</li> </ol>
	<p>E012:Blade FAILED to return to zero position.</p>	<ol style="list-style-type: none"> <li>1. Enter Warning interface If click Back, it will keep flashing until recovered.</li> <li>2. Click Reset, follow the steps on the interface to clear the Warning. Notes: Under Warning, you can't enter the Blade interface.</li> <li>3. Check if the cutting position sensor sensing piece is properly installed.</li> </ol>

<p><b>E010:Blade IS NOT at zero position.</b> <b>Keep your hands away from the cutter.</b></p> <p>Step1: <input type="checkbox"/> NO</p> <p>Step2:  +  <b>to recovery</b></p> <p><input type="button" value="Back"/></p>		
<p><b>Warning!</b></p> <p><b>E020: Paper Jam</b></p> <p><input type="button" value="Back"/></p>	E020: Paper Jam	<ol style="list-style-type: none"> <li>1. Solve paper jam issue according to the alarm guidance to Recovery</li> <li>2. Power off and clear the jam</li> <li>3. Check paper jam sensor</li> </ol>
<p><b>Warning!</b></p> <p><b>E021: Paper Jam</b></p> <p><input type="button" value="Back"/></p>	E021 : Paper Jam. Errcode:	<ol style="list-style-type: none"> <li>1. Solve paper jam issue according to the alarm guidance to Recovery</li> <li>2. Power off and clear the jam</li> <li>3. Check if the circuit board, paper feeding motor, or the cable plug of the paper feeding motor is abnormal</li> <li>4. Verify if the ambient temperature is too low, and it is recommended to let the machine run without load for preheating.</li> </ol>
<p><b>Warning!</b></p> <p><b>E022:Feed Driver ERROR, Please reboot</b></p> <p><input type="button" value="Back"/></p>	E022:Feed ERROR, Driver Please reboot.	According to the pop-up window prompt, Feed Driver ERROR, Please reboot.
<p><b>Warning!</b></p> <p><b>E023:Feed Driver is offline</b></p> <p><input type="button" value="Back"/></p>	E023:Feed Driver is offline.	<ol style="list-style-type: none"> <li>1. Check if the blue dip switch on the motor drive board is consistent with the image (refer to page 6).</li> <li>2. Check if the signal line, motor wire, and control board of the puncture wheel brushless motor are abnormal.</li> <li>3. Faults that cannot be handled by non-professionals should be reported to the after-sales personnel for timely assistance</li> </ol>

## 5. Maintenance

Please be sure to unplug the power plug.

- Please be careful of the sharp edges and corners of the machine to avoid injury.
- Never operate the machine when safety devices is off or removed.

The machine should be maintained at least once a week:

- Open the top cover
- Remove paper scarp
- Wipe off paper dust with a dry or slightly damp cloth
- Close the top cover
- The machine must be inspected by a qualified person at least once a year

The following points should be checked:

- Various adjustments
- The operation of various safety facilities
- If the warning label clear and legible
- Abrasion and tear of components
- Clean the molding area
- The quality of the paper pad

### 5.1. Repair/Replacement Parts

Repair should only be performed by a qualified service technician.

- When replacing parts, only  supplied parts can be used.
- Parts can be ordered by 's distributors.
- Failure to strictly follow the above instructions may affect the safety of the machine. The manufacturer disclaims no responsibility if the above instructions are not followed.

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