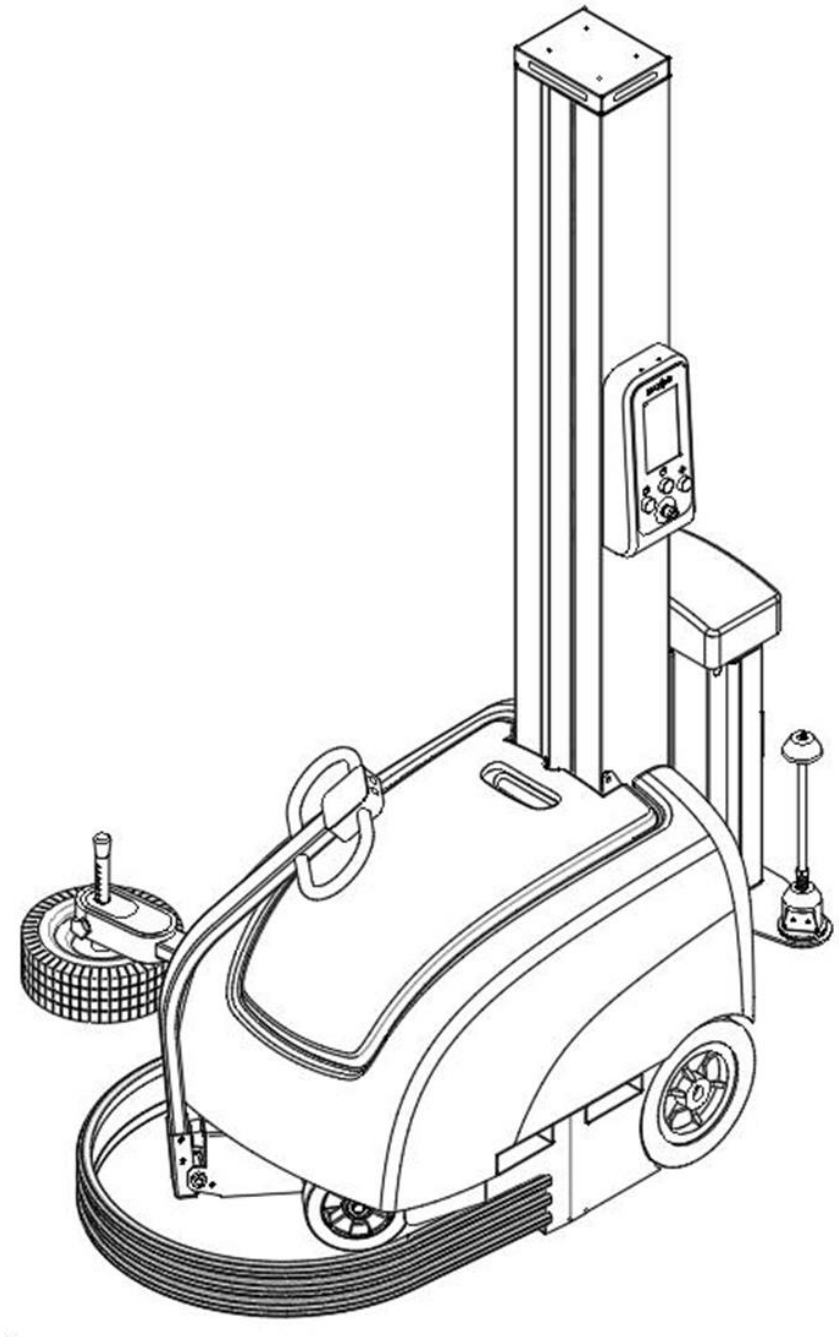
Mobile Robot Stretch Wrap Machine

User's manual	Manual del usuario	Manuel de l'utilisateur
Customer Service US: 1-800-645-2986	Servicio de atención al Cliente US: 1-800-645-2986	Service à la clientèle Canada: 888-645-2986

Models: 412684



CATALOGUE

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Note: To ensure you use this device correctly and efficiently, please read this instruction manual carefully before operation and keep it safe for future use.

1. Basic Information

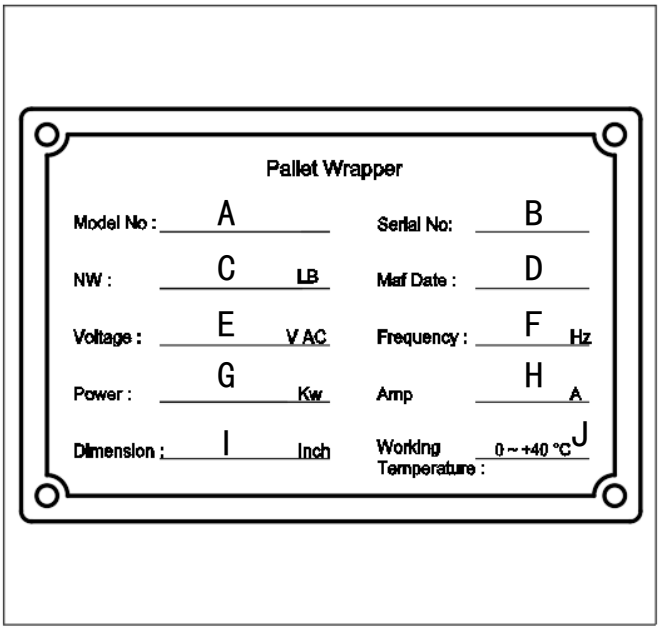
1.1 Purpose of the Manual

- This manual is part of the equipment. Its purpose is to provide operators with operating guidelines, usage and prevention safety strategies, and the necessary operational descriptions to minimize the dangers that may occur during human-machine interaction.

- This manual should be placed in a prominent location throughout the equipment's lifespan for easy access whenever needed.
- Some information may not be entirely consistent with the delivered equipment configuration.
- Subsequent additions of information do not affect the readability of this manual or compromise the security level.
- The manufacturer reserves the right to update the content of this manual without prior notice if the updates do not change the corresponding security level.
- To draw the reader's attention to specific sections of the text or important technical parameters, we have used a series of markings as shown below.

1.2. Equipment Nameplate Information

A) Equipment Model
B) Equipment Part No
C) Equipment weight
D) Production date
E) External power supply voltage
F) Frequency of external power supply
G) Total power of equipment
H) Current during charging
I) Equipment Dimensions
J) Allowable operating ambient temperature



1.3. Included Documents

Unless otherwise agreed commercially, the following documents are provided with the equipment.

- Certificate of Conformity
- Battery Charger Operation Manual
- Equipment Operation Manual
- Wiring Diagram and Parts List

2. Attention and Safety matters

2.1 General Safety Warnings

- Please carefully read the operating procedures contained in this manual and the instructions on the labels directly affixed to the equipment. To minimize risks and avoid malfunctions and accidents, please read this operation manual in detail.
- Before handling the equipment, the operator should ensure that they have fully understood the contents of the operation manual.
- Please fully comply with the warnings, avoid misuse of the equipment, and assess the remaining risks.
-Always pay attention. All personnel who come into contact with the equipment during its entire lifespan are responsible for safety.
-Only personnel with relevant proven experience in the field can intervene or operate the equipment.
-The manufacturer shall not be held responsible for any damage to the products inside the packaging caused by the wrapping film and product fixing operation.

_Failure to comply with the safety regulations provided in this manual may pose a security threat to participants and result in economic losses.

2.2 Operation and use safety warning

-Operators performing tasks should undergo rigorous training and possess the necessary knowledge and skills to operate the equipment.
-Before using the equipment for the first time, the operator should read this manual to determine the control device and its functions, and simulate the equipment operation control, especially the start and stop procedures.
-Ensure that there are no obstacles around the equipment and that it is in good condition to ensure its proper operation.
-This device is only used for wrapping and fixing goods with regular shapes or that can be fixed to pallets in packaging (boxes, liquid containers, etc.). The packaging for storing liquids or fragile items must be completely sealed tightly to prevent leakage of the packaging; Do not wrap loose goods, irregularly shaped or scattered goods with film.
- Never overstretch the wrapping film or use excessive amounts of wrapping film to prevent damage to the packaging or the goods contained therein.
- No one should pass through or remain in the equipment operating area while it is in operation.
- Never leave the equipment unattended while it is in operation; after operation, remember to shut down the machine and place it in a safe area.
- Do not interfere with the machine's operation unless absolutely necessary. Before intervening, shut down the equipment and place it in a safe environment.
- This equipment may only be operated by one operator authorized by the employer.

_Failure to comply with the safety regulations provided in this manual may pose a security threat to participants and result in economic losses.

2.3 Maintenance and Adjustment Safety Warnings

- To ensure the equipment is in optimal operating condition, perform routine maintenance according to the prescribed schedule and procedures.

-Mark the surrounding area according to current work safety regulations to ensure safe conditions and minimize risks to the greatest extent possible.

-Before intervening for maintenance and adjustment, please cut off the power and unplug the quick plug between the battery and the main circuit.

-The personnel responsible for daily maintenance (adjustment, replacement, etc.) of the equipment should possess proven professional skills and expertise.

-Only original spare parts can be used to replace the equipment components, and standard parts (such as bearings, screws, etc.) should have components of the same grade and specification. Using similar, but non-original spare parts may result in performance defects, machine damage, or safety hazards.

-Please use lubricants (lubricating oil and grease) recommended by the manufacturer.

-Do not use corrosive media to clean the equipment, as it may damage its components.

_Failure to comply with the safety regulations provided in this manual may pose a security threat to participants and result in economic losses.

2.4 Misuse Safety Warning - Predictable Misuse

-Foreseeable misuse refers to the situation where the equipment is not used in the manner specified in the operating manual due to obvious human reasons.

This device is only used for wrapping and fixing goods with regular shapes or that can be fixed to pallets in packaging (boxes, liquid containers, etc.).

The packaging of goods storing liquids must be tightly sealed to prevent leakage.

-If the safety device is not installed correctly or cannot operate, do not use the device.

-Do not tamper with, cover or remove the safety devices installed on the device.

-Do not alter the manufacturing and functional features of the device in any way.

-Do not use the equipment as a tool for transporting goods or personnel.

-Do not wrap or fix organisms (animals and humans) with this device.

-Do not wrap loose goods, irregularly shaped or improperly stacked goods with film.

-Do not over wrap to prevent damage to the packaging or the goods inside.

-If there is a malfunction, do not continue to use the device. Stop immediately and wait until it returns to normal before using it.

-During device operation, do not interfere. Before intervention, the device should be turned off and placed in a safe environment.

_Failure to comply with the safety regulations provided in this manual may pose a security threat to participants and result in economic losses.

2.5 Operating Environment

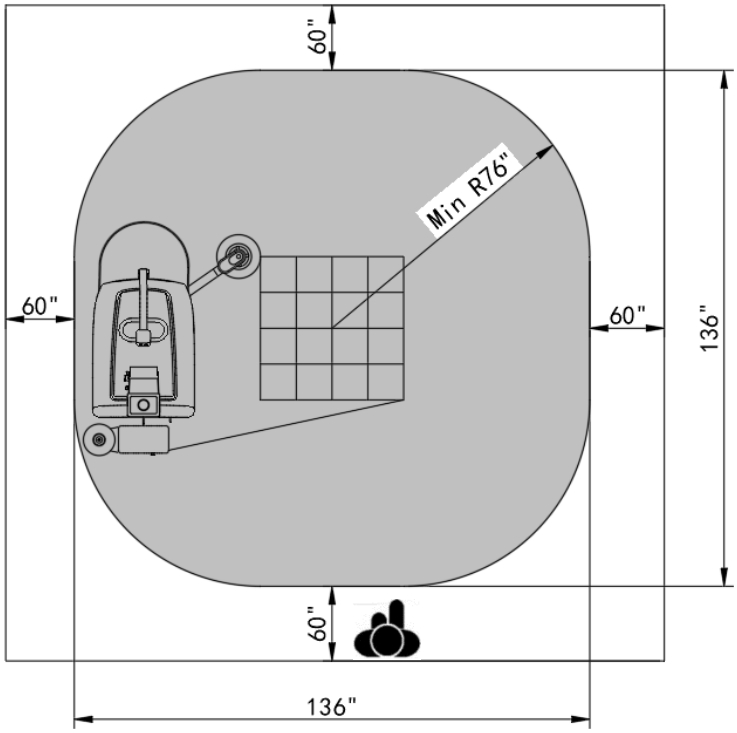
-Do not use this equipment in harsh weather, exposure to corrosive substances, or environments with explosion, fire hazards, high temperature and humidity.

-This device is suitable for indoor use in workshops, factories, etc., and the usage area must be flat. Do not use this device on uneven or sloping surfaces.

-The battery charging environment must be outside the work area and well ventilated.

-When the device is not used for a long time, the battery should be fully charged before use and ensure that it is charged every 60 days to prevent battery damage.

-Equipment working area and boundary area. To ensure safety, it is recommended to keep the boundary as shown in the following figure.



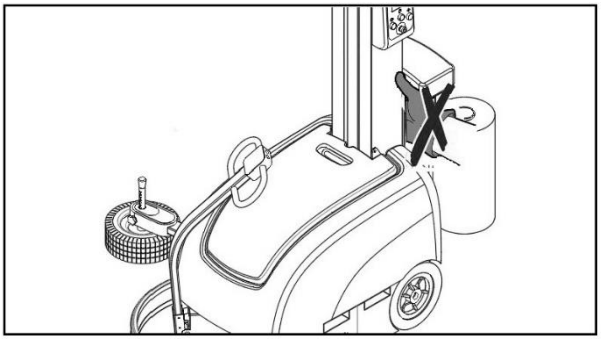
2.6 Residual Risk Safety Warning

-Residual risk refers to 'although safety measures have been adopted during the design phase'

The entire plan, but there are still risks.

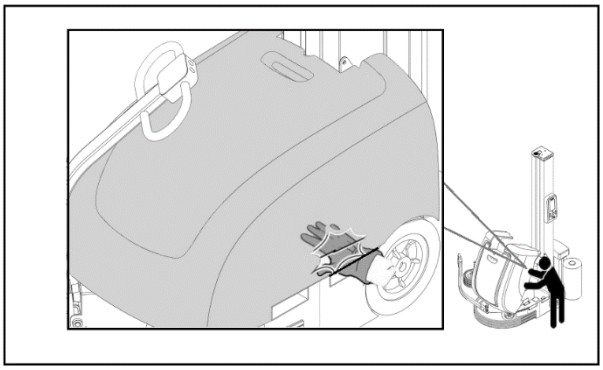
-Clamping or cutting danger:

Do not put your hands into moving parts.



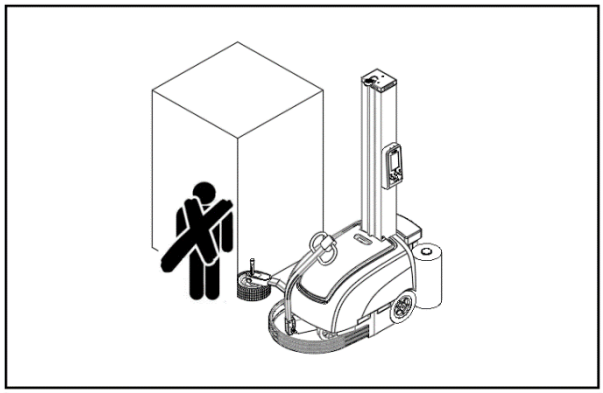
-Clamping or cutting danger:

Close the cover and do not place your head, hands, or limbs underneath. Place it down slowly to avoid getting caught.



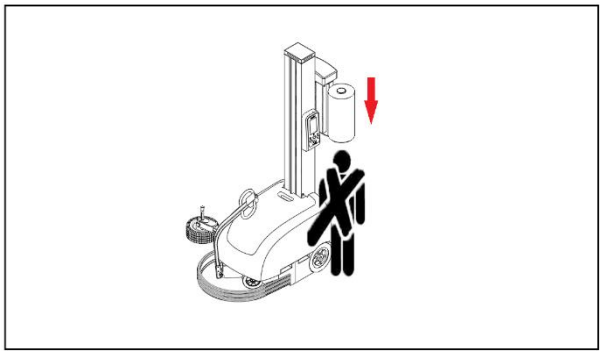
-Impact hazard:

Do not stay within the operating area of the equipment to avoid injury.



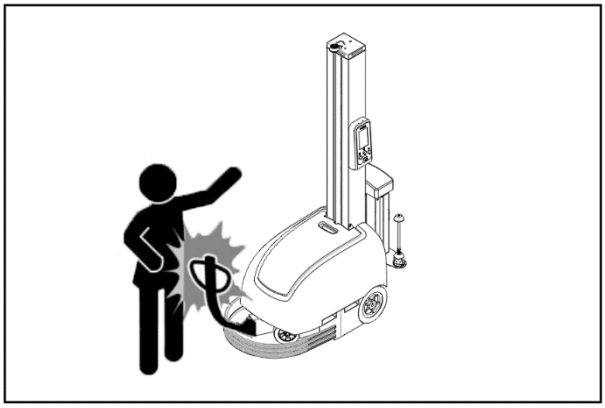
- Danger of downward impact

Do not stay within the operating area of the film carriage to avoid crushing injury.



-Impact hazard:

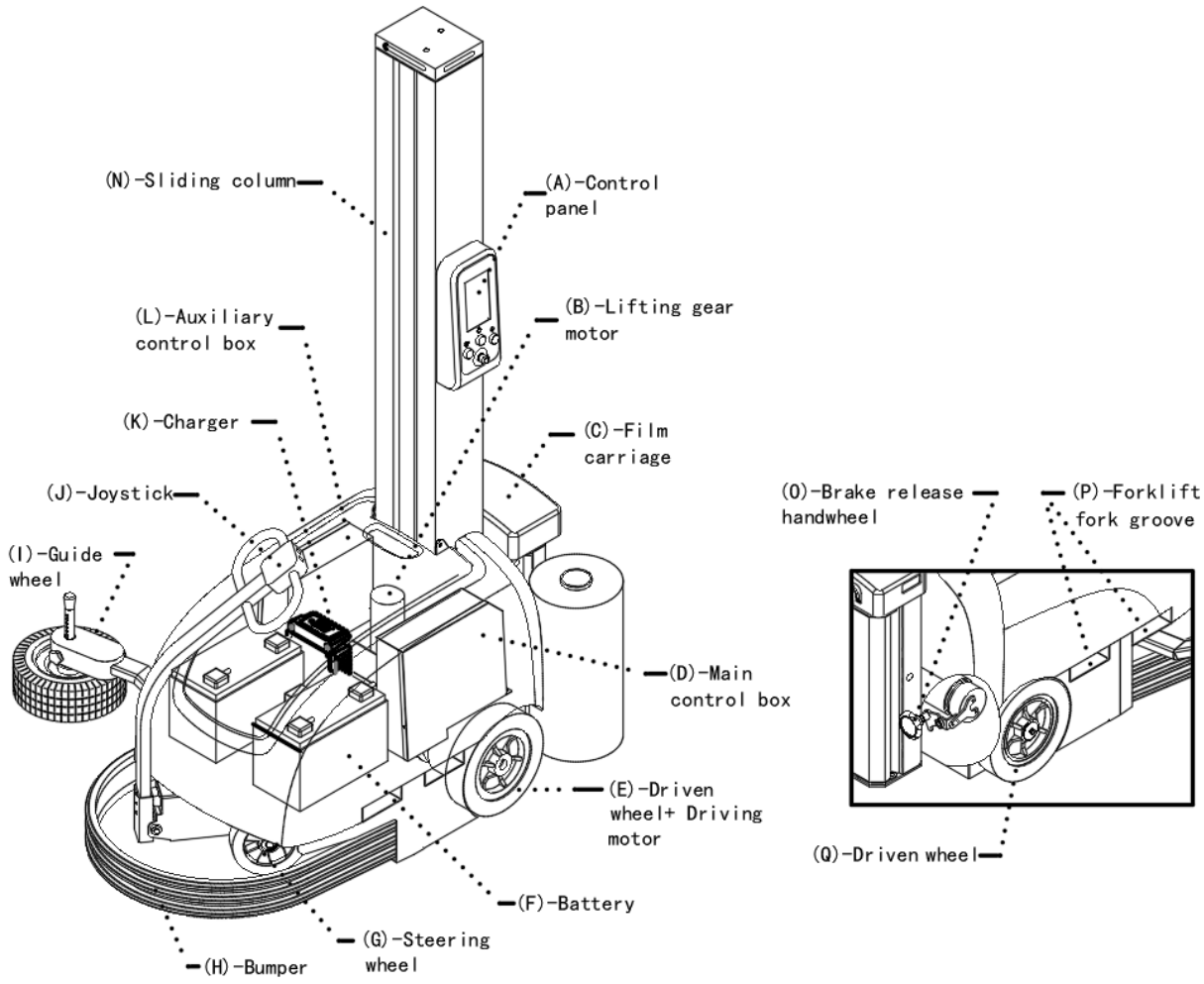
Do not stay within the area where the joystick is open. Avoid injury.



3. Technical Information

3.1 Equipment Overview

- This equipment is a self-propelled stretch film wrapping machine that uses stretch film to wrap and secure palletized goods.
- This equipment is suitable for installation in factories and should not be exposed to outdoor operation in inclement weather. The installation ground must be flat to allow the equipment to easily rotate around the goods.
- Only one operator is needed to deliver the equipment to the goods to be packaged and complete the work of applying film, wrapping, cutting film, and changing film.
- This equipment is only used for wrapping and securing goods with regular shapes (polygons, cylinders) or those that can be fixed to pallets.
- Goods containing liquids or fragile materials must be completely sealed tightly, and the containers must be sturdy and not loose, or secured to a pallet.
- **If the equipment is equipped with an automatic film-cutting device, the film will be automatically cut after each wrapping cycle.**
- A forklift position is provided on the side of the machine for easy forklift movement.



A-Control Panel: Used for overall machine operation control, function selection, packaging program writing and adjustment. Uses a touch-screen color display.

B-Lifting gear motor: used for driving the lifting/lowering movement of the film frame.

C-Film carriage: an actuator used to place thin films and stretch them, with a stretching ratio of 300%.

D-Main Control Box: Contains a programmable PLC control system, relays, air switches, etc.

E-Drive Wheel + Driving Motor: Used for driving the entire machine; this motor is equipped with a power-off brake.

F-Battery: DC12V 100AH, 2 units, providing power to the entire machine. Avoid battery depletion when the machine is not in use for extended periods. Charging interval: 1 month. It is recommended to unplug the battery connector when the machine is not in use.

G-Steering wheel: used for turning the entire machine during operation, with a total of 2 wheels.

H-Bumper: When an obstacle collides with it, the equipment will immediately stop operating (program terminates) and sound an alarm (remove the obstacle, clear the alarm, and press the start button on operation panel A to resume wrapping).

I-Guide Wheel: During machine operation, it will move along the edge of the pallet or goods.

J-Joystick: equipped with steering wheels (G) for manual short distance movement of equipment.

K- Charger: Used to charge the battery (F). Note that the charging voltage and frequency must match the markings.

L-Auxiliary Control Box: Contains a driver for controlling the operation of the motors of each mechanism.

N-sliding column: provides tracks for the lifting/lowering movement of the film carriage frame.

O-Brake Release Handwheel: When the battery is severely depleted or malfunctioning and the machine needs to be moved, rotate this handwheel clockwise to drag the machine. After moving, this handwheel must be rotated counterclockwise to reset it to the default state.

P-Forklift Fork groove: Used for mobile forklift handling machines. When the machine needs to move over a long distance, it can be forked into the two fork slots here (note: before forking, please lower the film frame to the bottom, and the forklift legs must extend out of the machine fork slot).

Q-Driven Wheel: The driven wheel is connected to the drive wheel (E).

3.2 Technical Parameters

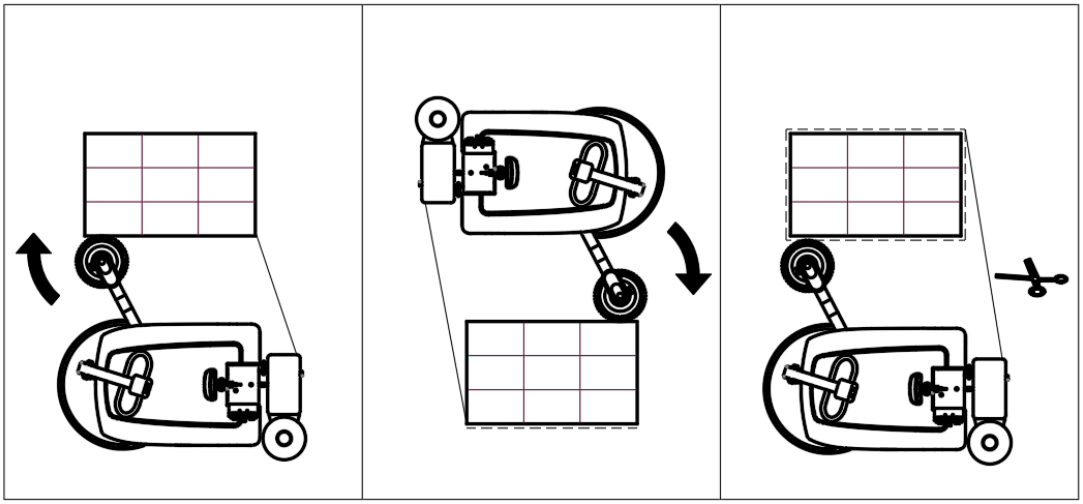
Name	Standard Configuration	Optional Configuration
Packaging Height	84in	100in/120in
Charge Power Supply	AC 100-240V 50/60H	
Storage Battery	2x 12V, 100Ah	
Number of Pallets that Can Be Wrapped Per Full Charge	≈250 pallets (L40*W48*H83in, from base to top and from top to base, reciprocating wrap once)	
Goods(pallet) Size:	Polygonal: ≥24*24in Cylindrical: ≥¢24in	
Minimum weight of goods	80kg	
Applicable Room Temperature	0-40℃	
Wrapping Film	Film diameter: ≤10in, core inner diameter: 3in, film height: 20in (machine stretch film)	
Traveling Speed	0—262ft/min	
Lifting Speed	0—10.5ft/min	
Film Stretching Ratio	1 ： 3	
Total Equipment Power	1.0kw	
Overall Dimensions	L52*W50*H98in	
Equipment Net Weight	315Kg	
Film Break Alarm	Equipped	

3.3 Working Cycle

- Step 1: Drag the equipment until the guide wheels contact the pallet. The operator pulls a section of film from the film holder and ties it to the pallet, beginning the wrapping cycle.

- Step 2: The equipment rotates clockwise around the pallet, and the film carriage rises, falls, and releases film according to the parameter settings.

- Step 3: After wrapping is complete, the equipment stops. After cutting the film, move the equipment to the next pallet.



3.4 Safety Devices

A. Bumper: In the event of a collision with an obstacle, the bumper will stop. The lever will stop the equipment and terminate the wrapping process.

Equipment Restart: Remove the obstruction and clear the fault alarm before restarting the equipment.

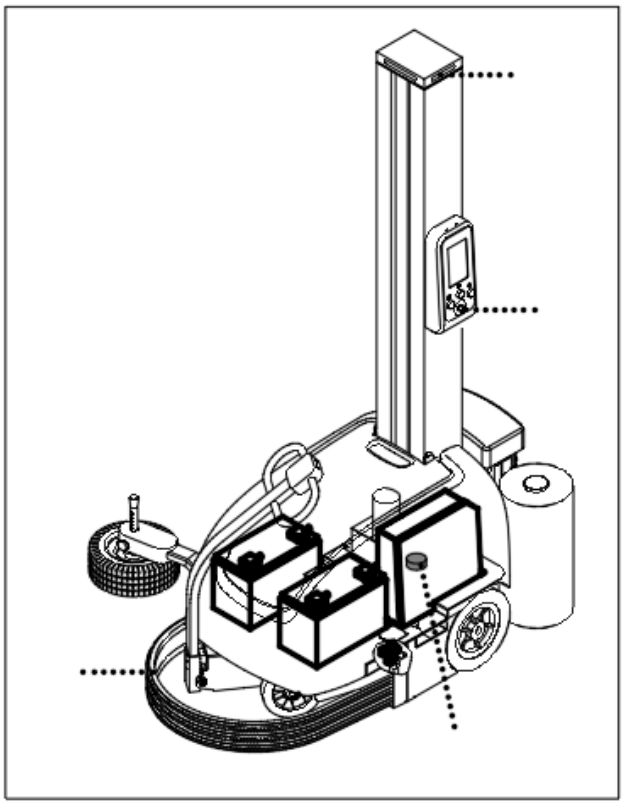
B. Three-Color Indicator Light:

Red light: Equipment fault or alarm status;

Yellow light: Equipment is paused;

Green light: Equipment is in normal operation;

Light off: Packaging process completed, equipment is stopped.



C. Emergency stop button: In case of emergency, the operator should immediately. Pressing this key will immediately stop the equipment and terminate the packaging process.

This button must be in the "locked" state before returning to normal.

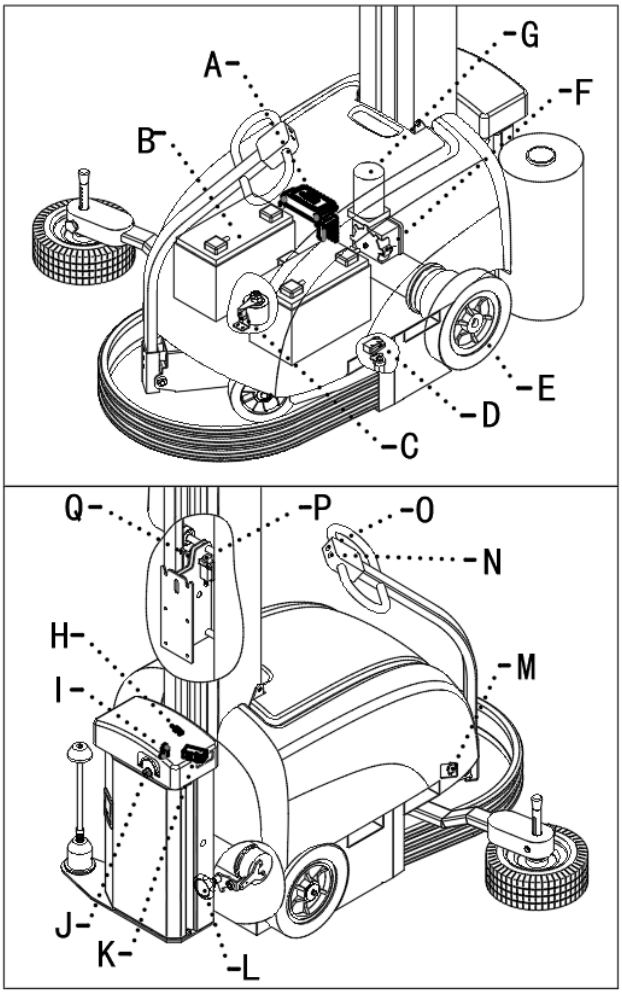
D. Buzzer:

Continuous alarm sound: Equipment fault;

Three alarm sounds: Before the wrapping process starts, it indicates that the operation has begun.

3.5 Electrical and Control Components

A. Battery Charger: Used to charge the battery.



B. Battery: Provides power to the motor and circuit.

C. Counting sensor: used to detect the number of film wrapping cycles that have been carried out.

D. Anti-collision detection switch: When the bumper collides with an obstacle. This switch triggers, the equipment stops operating.

E. Drive motor: used to drive equipment to rotate.

F. Distance detection switch: used to measure the height of the film rack lifting/lowering.

G. Lifting motor: used to drive the lifting/lowering movement of the film frame.

H. Film Break Detection Switch: Used to detect whether the pulled-out film is broken.

I. Film Carriage Door Safety Switch: When the film carriage door is opened, the equipment stops running. Alarm prompts are also present.

J. Film tightness adjustment knob: Used to adjust the tightness of the pulled film.

K. Electric eye: used to detect goods that need to be wrapped with film and the height of the goods.

L. Electromagnetic Brake: Turn the handwheel clockwise to release the brake; turn counterclockwise, brake operation. **(For moving the device when it is no power)**

M. Joystick opening/closing detection switch: When the joystick is open, the switch triggers an alarms and stops operation

N. Forward button: (green) Press and hold this button to move the device forward, release the button to stop moving forward.

O. Back button: (red) Press and hold this button to move the device backwards, release the button to stop moving backwards.

Caution: Do not press this button when the film carriage is suspended at a high position to prevent tipping over.

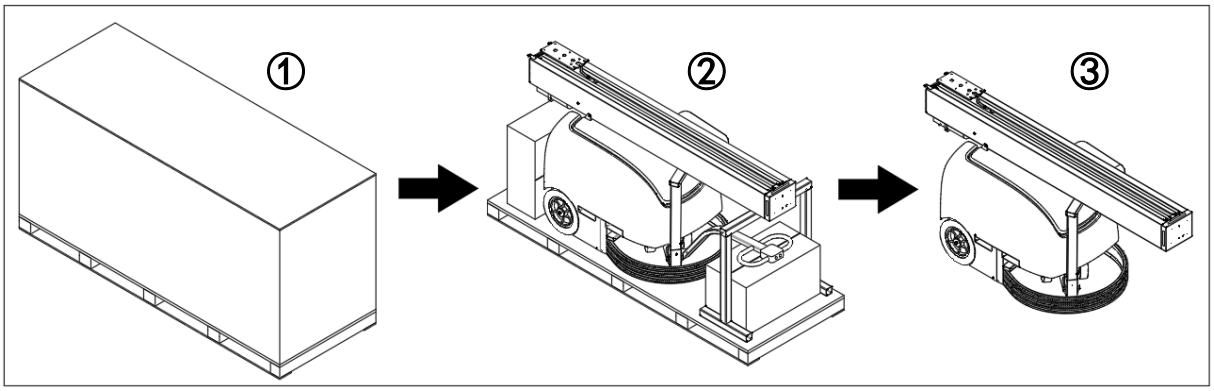
P. Upper Limit Detection Switch: When the film carriage reaches the highest wrapping height, this switch is triggered, and the film carriage stops rising.

Q. Lower Limit Detection Switch: When the film carriage reaches the lowest wrapping position, this switch is triggered, and the film carriage stops descending.

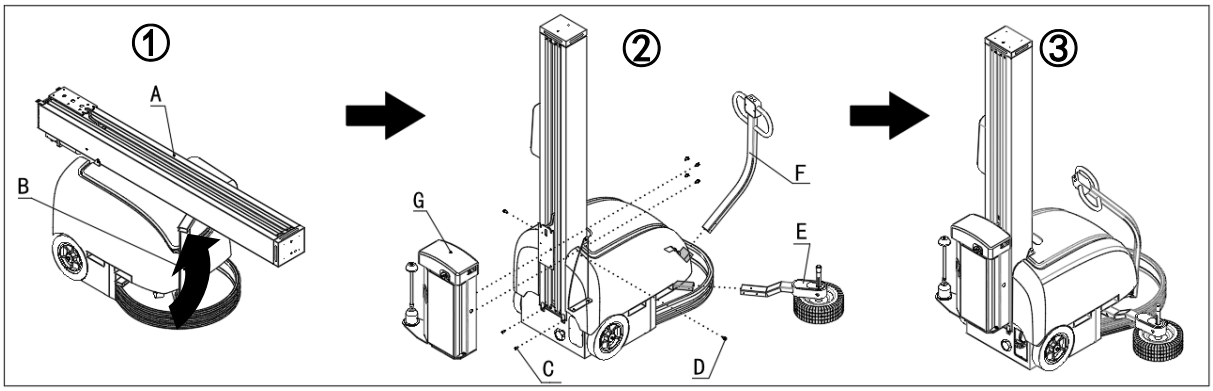
4. Transportation and Installation

4.1 Packaging and Transportation

- For ease of transportation, some parts can be removed and properly protected and packaged before transportation;
- Before long-term non-use or long-distance transportation, the power switch must be turned off and the battery connector plug disconnected;
- Long-distance transportation requires moisture protection; desiccant must be placed in the packaging box;
- During unpacking, please check the integrity and exact quantity of the parts.



4.2 Installation of Disassembled Components

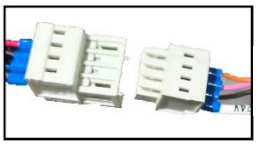


— Push the **column A** upwards to make it stand on the machine chassis, and tighten **screws C** and **D**.

— Take the **guide wheel assembly E** out of the carton, install it as shown in the diagram, and tighten the screws.

— Connect the **joystick F** to the main unit cable plug (FF); as shown in the diagram.

Install and tighten the screws.

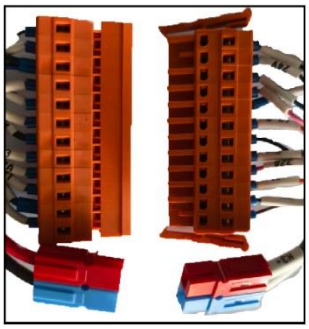


FF

— Take the **film frame G** out of the carton, install it as shown in the diagram, and tighten the bolts.

— Plug in the cable connector (GG) connecting the **film carriage G** to the **column A**.

— Connect the battery connection cable plug as shown in the diagram (PP).



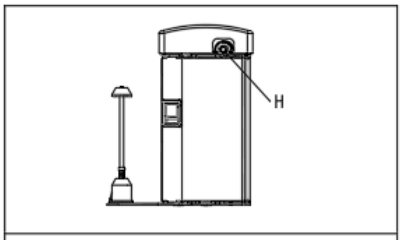
GG



PP

5. Adjustment Instructions

5.1 Stretch Film Tightness Adjustment

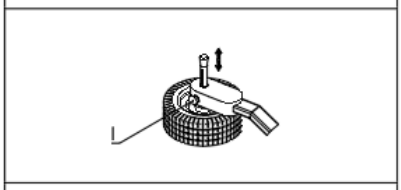


Adjustment Method: Turn right (i.e., turn to **LOOSER**), the film will become tighter;

Turn left (i.e., turn to **TIGHTER**), the film will become looser.

Warning: Over-tightening the film may damage the packaging or the goods inside.

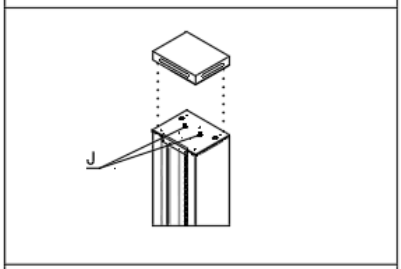
5.2 Guide Wheel Height Adjustment



- To accommodate different pallet heights, the guide wheel height may need to be adjusted so that the guide wheels

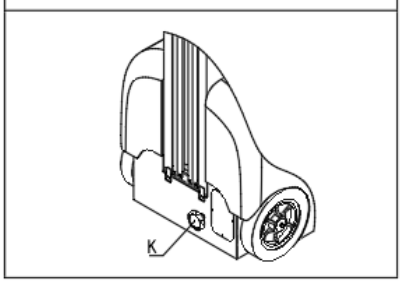
are flush with the edge of the pallet or goods.

Adjustment Method: Loosen the **star handle I** counterclockwise, move the guide wheel up and down to the appropriate position, and then tighten the **star handle I** clockwise.



Tighten the star shaped handle I clockwise to the appropriate position.

5.3 Lifting Mechanism Chain Tension Adjustment



Rotate the two **nuts J** shown in the diagram. The screw moves upward, and the chain tightens; conversely, it loosens.

5.4 Machine Walking Motor Manual Brake Adjustment

- When the equipment cannot start due to a malfunction and the equipment needs to be moved, the walking motor needs to be adjusted.

The machine can only be manually driven after the motor brake is released.

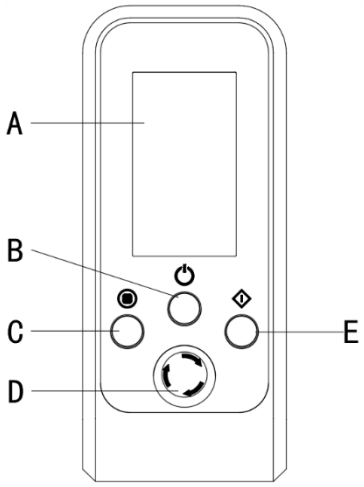
Adjustment Method: As shown in the figure, turn the **handle K** clockwise to release the brake, and wait for the film to move.

After the movement is completed, the **handle K** must be rotated counterclockwise to return to its initial position.

6. Equipment Operation Instructions

6.1 Control Panel Instructions

-A: Touch screen (HMI)



Used to display various function interfaces and packaging parameters, and can be used to select functions, select packaging programs, and edit packaging parameters as needed.

-B: Power button

Press this key to power on the machine. The touch screen HMI and control button lights illuminate.

Press this key again to power off the machine. The touch screen HMI turns off.

-C: Pause button

Press this key to stop the machine and terminate the program;

After the fault is cleared, press this key to turn off the alarm prompt and alarm sound.

-D: Emergency stop button

Used for emergency stop, when this button is pressed, all power is cut off and the machine immediately stops working. Release this key to activate power button B.

-E: Start button

After editing and selecting the packaging program, press this key to start the machine according to the program settings until the packaging program ends;

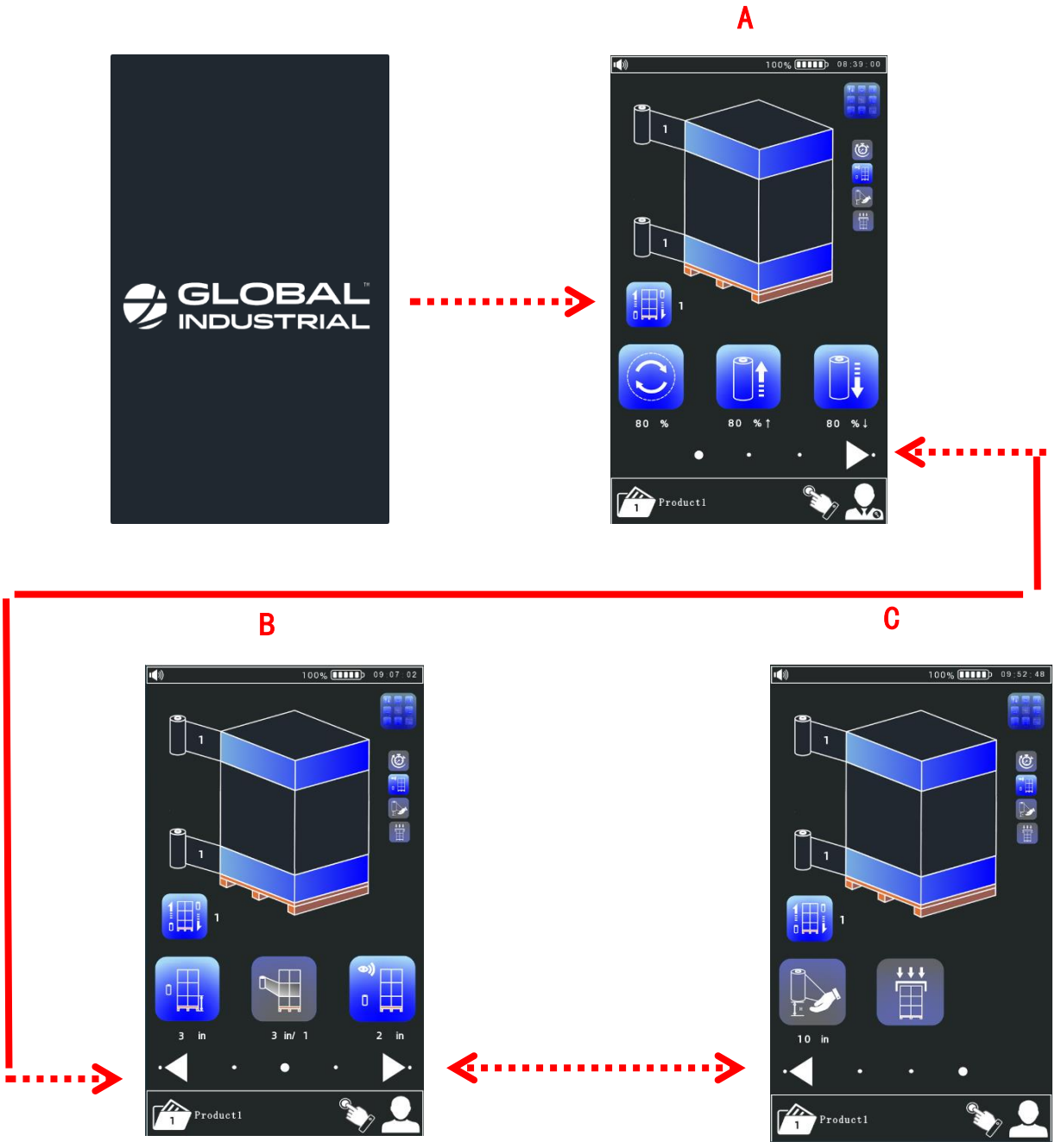
When the **top covering function** is selected, the machine will pause after wrapping the packaging to the top of the goods. The display screen will prompt for manual film covering. After the operator completes the film covering, the start button must be pressed again for the machine to continue running.

6.2 Control Interface (HMI interface operation instructions and program settings)

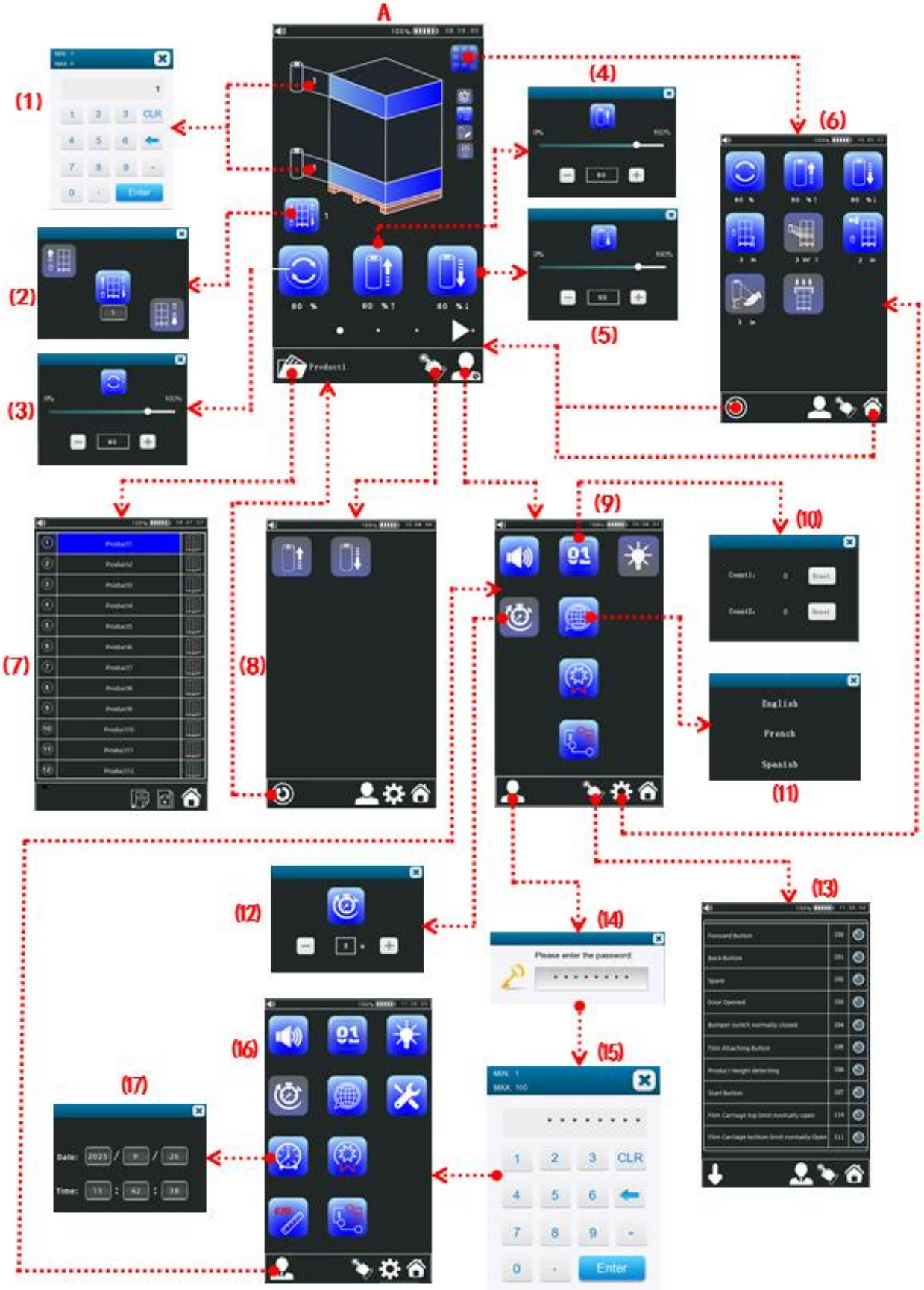
- The function key color **gray** indicates that the function is off. Tapping the icon will turn it blue to activate it.
- The function key color **blue** indicates that the function is on. Tapping the icon turns it gray to disable.
- Function keys and parameter information are saved immediately after input (in the packaging program for the current part no.).
- This device can store 12 packaging programs, which can be preset.
- Functions and parameter information requiring a password should not be changed arbitrarily.

6.2.1 Startup Interface

Press the power button to display the startup interface. Tap anywhere on the screen to enter the main interface (A). Tap the white arrow in the lower right corner of the main interface (A) to navigate to interface (B) and interface (C).



6.2.2 Main Interface A Description

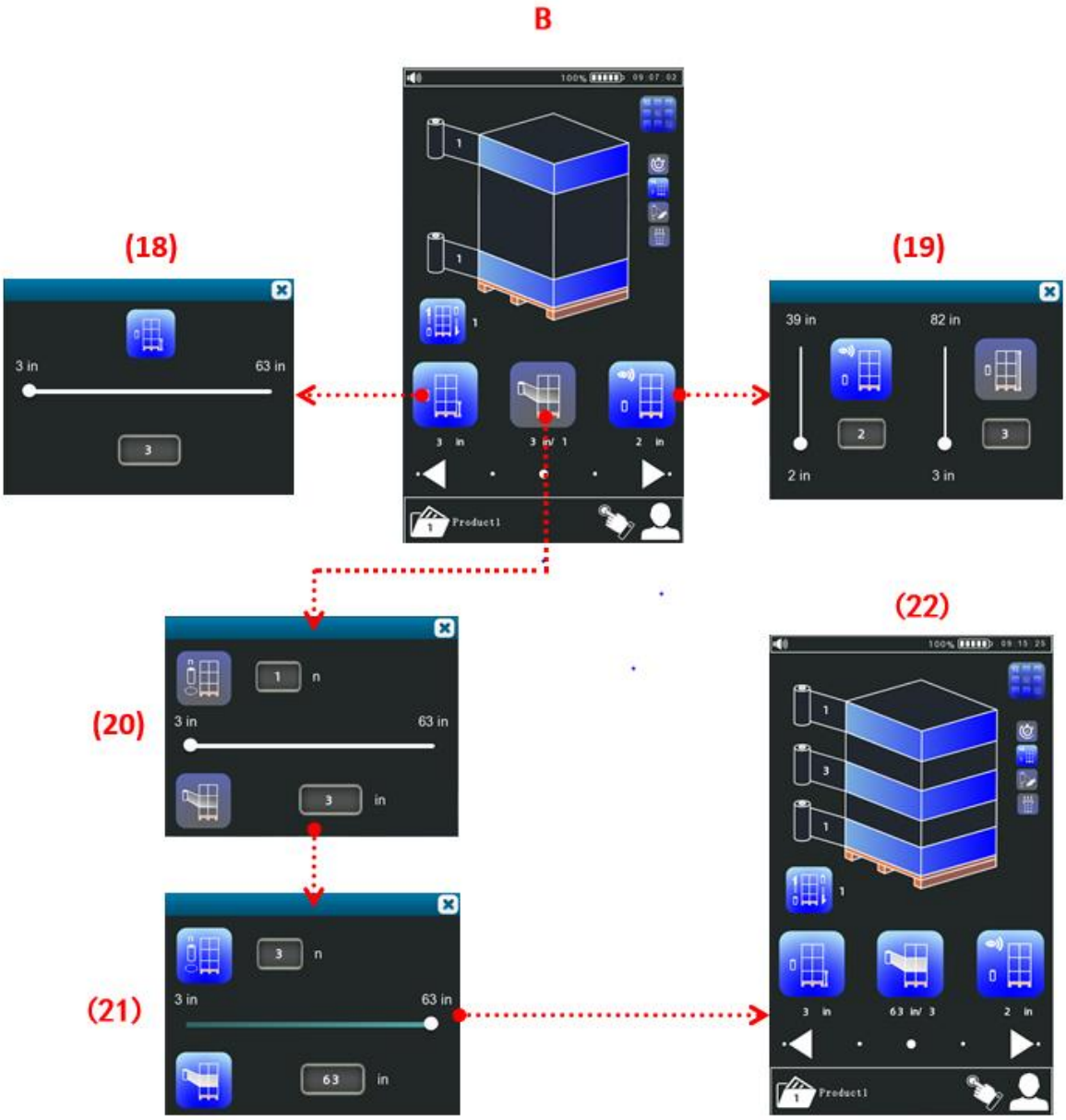


No.	Name	Function Description
A	Main Interface A - Homepage	This page displays the wrapping program and parameters currently in use, and allows access to other pages.
1	Numerical Input Page	This page allows setting the number of wraps at the bottom and top; input is saved immediately.
2	Wrapping Mode Selection Page	This page allows for the selection of wrapping modes: single top wrapping, reciprocating wrapping, and single bottom wrapping. The default is reciprocating wrapping (reciprocating wrapping can be set in the numerical box below).
3	Rotation speed setting page	This page allows setting the rotation speed of the device (0-100%), with 100% being full speed and 0% being stationary.
4	Rising speed setting page	This page allows you to set the rising speed of the film rack (0-100%), with 100% being full speed and 0% being stationary.
5	Descent speed setting page	This page allows you to set the descent speed of the film rack (0-100%), with 100% being full speed and 0% being stationary.
6	Function parameter expansion page	This page gathers all the functional parameter keys for easy setting together.
7	Wrapping program selection page	This page provides options for selecting pre-set wrapping program (a total of 12), renaming wrapping programs, and copying and pasting program parameters. At the same time, the "multi-layer wrapping mode" can be activated on this page.
8	Manual operation page	This page can be manually operated by tapping the corresponding function key to achieve the rise and fall of the film rack.
9	Auxiliary function page	This page has function keys for alarm switch, special wrapping mode, production capacity count, language selection, software version number, IO, etc., which can be accessed for corresponding settings.

10	Capacity count page	This page displays the quantity of completed packaging, with two sets of statistics. Tap RESET to clear the count.
11	Language selection page	This page provides multiple language options, tap to select the desired language.
12	Special wrapping mode activation page	This page can activate a special wrapping mode, using time to measure the number of rotations. Setting it to 10 means that 10 seconds of rotation equals 1 wrapping.
13	IO Page	This page displays the current working status of each control component (for easy inspection during maintenance and repair).
14	Password prompt input page	This page prompts for a password to enter the advanced feature settings page. (Password: 123456)
15	Password input page	Enter password (password: 123456).
16	Advanced power Level Settings page	This page adds time settings, unit selection, source code, etc. to "Sequence Number 9".
17	Time setting page	This page allows you to reset the date and time; the settings are saved immediately after input.

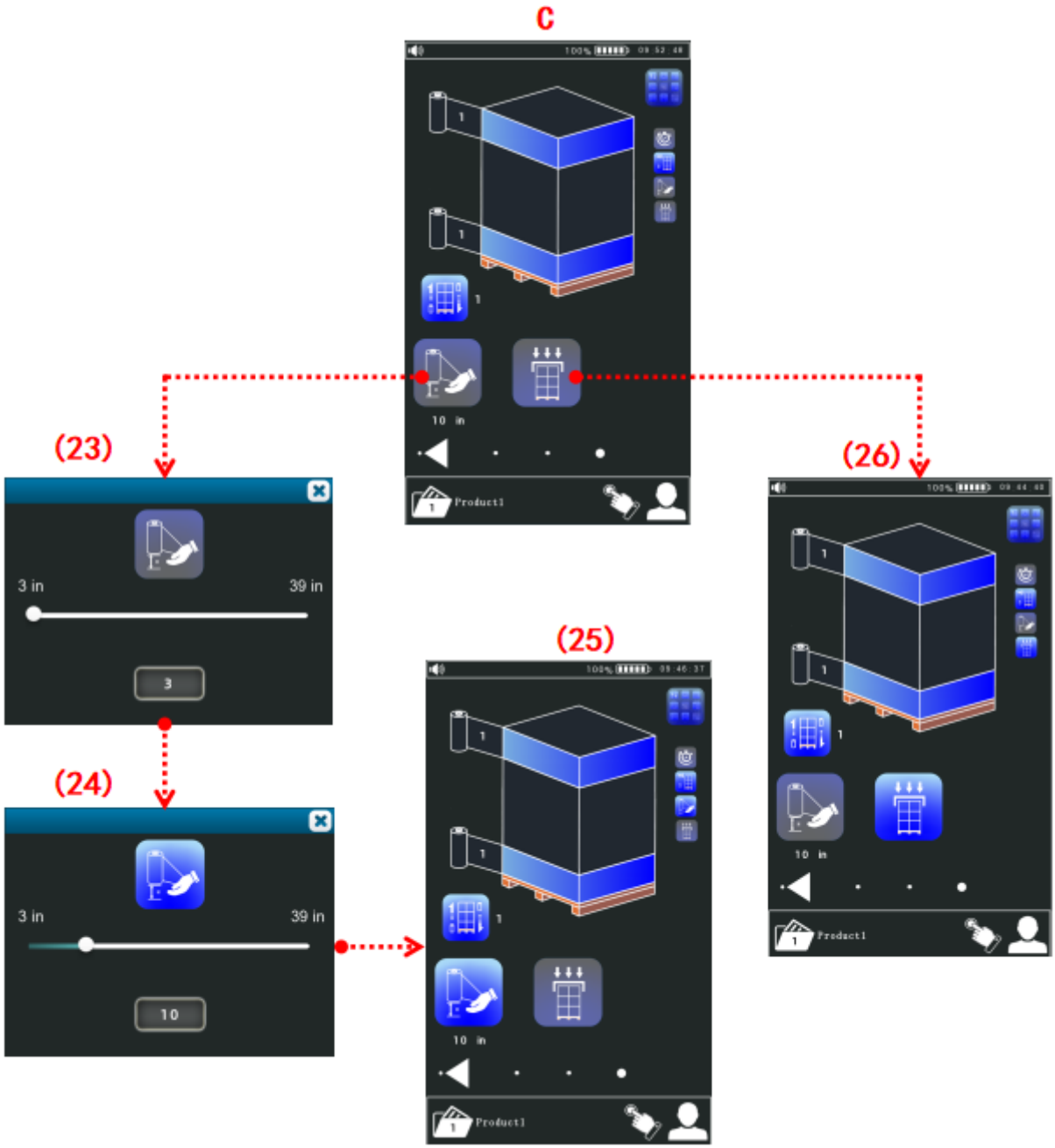
For details on each page listed, please refer to the descriptions cited in the specific chapters.

6.2.3 Main Interface B Description



No.	Name	Function Description
B	Main Interface B	This page displays the currently used packaging program and parameters, and you can access other pages from here.
18	Starting Height Setting Page	After setting the value, the equipment will start wrapping from the set height until the wrapping is finished.
19	Wrapping Height Detection Mode Selection Page	Detection Mode: Automatic Photoelectric Eye Detection Mode, Manual Wrapping Height Setting Mode. The blue icon indicates the current status. The value below Photoelectric Eye Detection: The height the film frame continues to rise after the photoelectric eye detects the highest position of the goods; the value below Manual Wrapping Height Setting: The set wrapping height value.
20	Middle Reinforcement Activation Page	Tapping the icon turns it blue to activate, tapping it again turns it gray to deactivate. **This function can only be activated in "Reciprocating Lifting Mode"**.
21	Center Reinforced Wrapping Setting Page	Center Reinforcement Parameter Setting: The lower value box sets the height of the reinforcement wrapping **(the value refers to the distance from the ground to the bottom of the film)**, and the upper value box sets the number of wrapping turns.
22	Central Reinforcement Activation Display Page	The main interface display status after the central reinforcement wrapping function is turned on. The reinforcement number of turns can be modified by tapping on the corresponding values.

6.2.4 Main Interface C Description



No.	Name	Function Description
C	Main Interface C	This page displays the currently used packaging program and parameters, and you can access other pages from here.
23	Adjustable Film Cartridge Stop Height Function Activation Page	This page can turn the film cart stop height control function on and off. Tap the icon to turn it blue to turn on the function, and tap it again to turn it gray to turn it off.
24	Stop Height Setting Page	After setting the value, the film carriage will stop at the set height after the wrapping is finished.
25	Main Interface C	Main interface display status when the film carriage stop height adjustment function is enabled.
26	Top Covering Function Activation Page	Tap the icon shown in the diagram on the main interface C. The icon turns blue to activate the overlay function. Tap it again, and the icon turns gray to deactivate the overlay function. **(This function can only be activated in "lifting and reciprocating mode")**

6.2.5 Icon Meaning Explanation

A) Button: Top wrapping number setting.

Setting range: 1-9.

B) Button: Strengthen the wrapping number setting

in the middle.

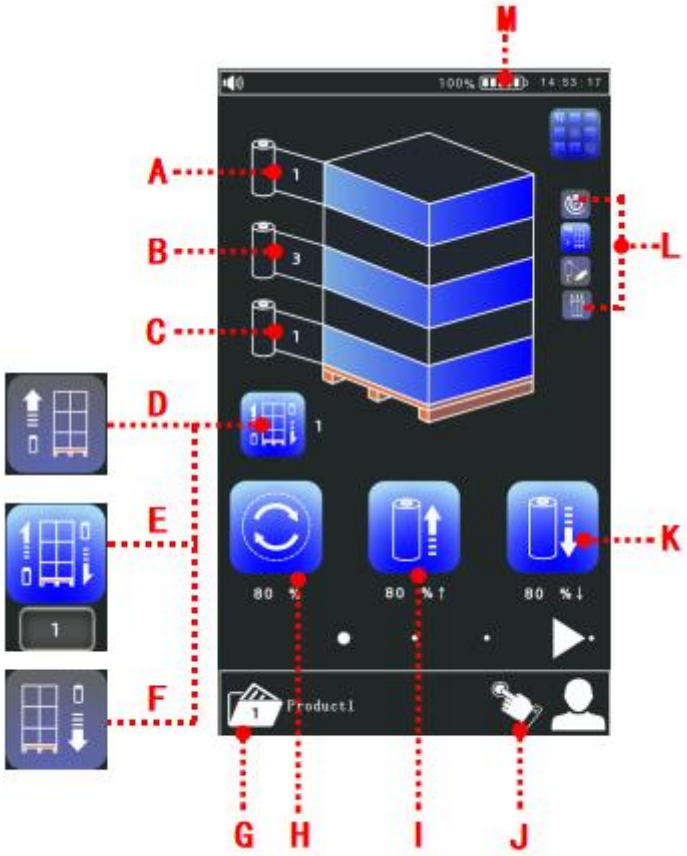
Setting range: 1-9.

C) Button: Set the number of wrapping loops at the bottom.

Setting range: 1-9.

D) Button: Single wrapping mode. Tap to activate icon (blue). After wrapping from the bottom of the pallet to the top, the equipment rotation and film output stops, and the film carriage automatically descends to the bottom.

E) Button: reciprocating wrapping mode, tap to activate icon (blue). Input value to set the number



of cycles you'd like for the program to run. In one cycle, the machine wraps the pallet from the to the top, and then returns to the bottom of the pallet.

F) Button: Single wrapping mode, tap to activate. Icon should be blue when function is activated.

After the film carriage rises from the bottom of the tray to the top, the HMI screen displays "Pause".

After the operator taps, the wrapping operation begins, and the equipment stops after the film carriage descends to the chassis.

G) Button: Display as the current wrapping program, which can be selected and edited by tapping (there are a total of 12 programs to choose from).

H) Button: Device rotation speed setting. Setting range: 0-100%. 0 stop, 100% fastest speed.

I) Button: Setting the lifting speed of the film rack. Setting range: 0-100%. 0 stop, 100% fastest speed.

J) Button: Tapping this button enters the manual operation interface. For safety, the manual forward/backward and lifting speeds are factory-set to a fixed value of 50%.

K) Button: Setting the descent speed of the film rack. Setting range: 0-100%. 0 stop, 100% fastest speed.

L) Button: The auxiliary function activation display bar displays a blue icon, indicating that this function is turned on. If it displays gray, it indicates that it is turned off.

M) Button: Battery level display, which will turn red when the battery level is low.

N) Button: Start wrapping height, set from this height

Start wrapping operation.

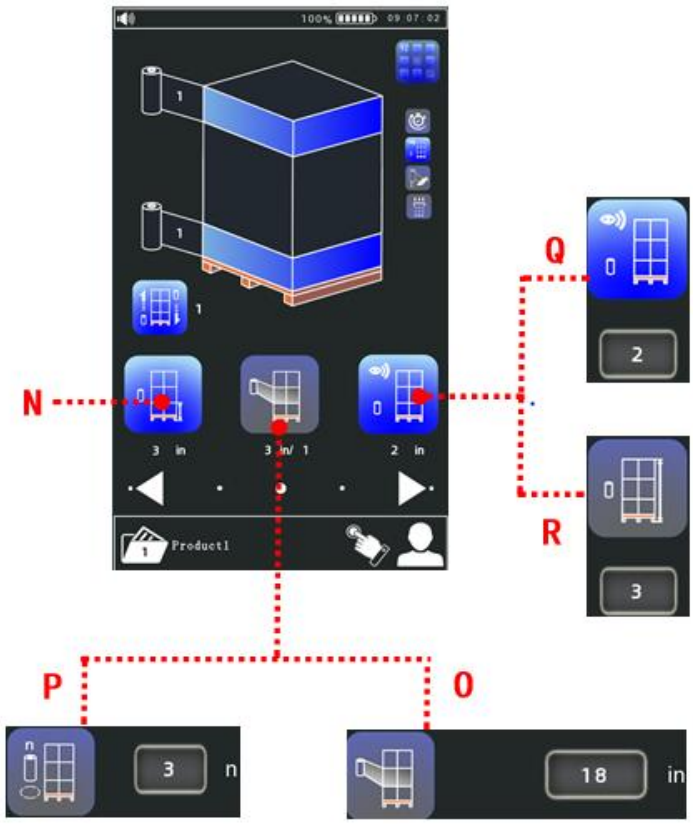
O) Button: Central wrapping strengthens the activation key. Tap to activate. The icon turns blue when activated; tapping again deactivates this function.

Right-hand numerical input: Sets the height of the center wrapping reinforcement **(referring to the distance from the ground to the bottom of the film).**

Note: The center wrapping reinforcement function can only be activated and used in "Reciprocating Lifting Wrapping Mode".

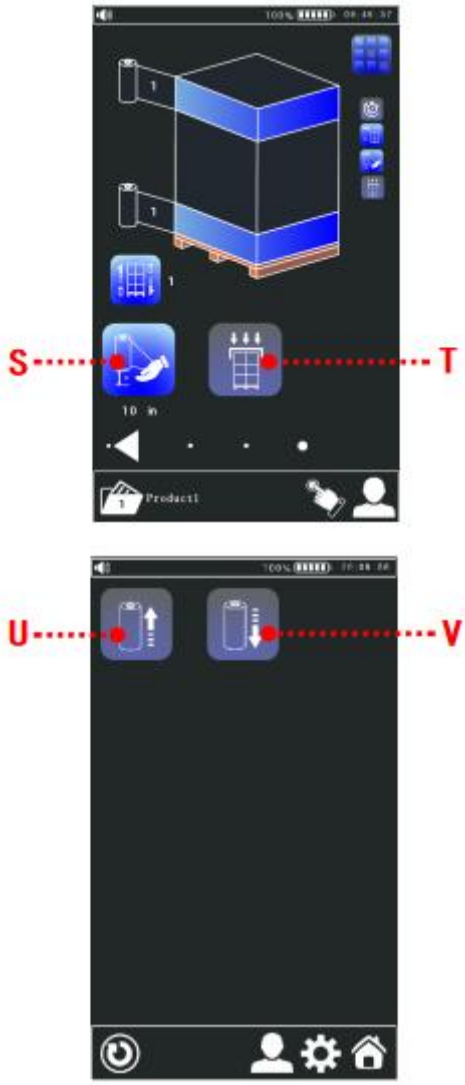
P) Button: Strengthen the number of turns wrapped in the middle. Set the middle wrapping after setting

Wrapping reinforcement runs in this number of revolutions.



Wrapping height detection mode:

Detection mode needs to be activated; the icon turns blue when activated.



Q) Button: Electric eye detection mode (default)

The equipment automatically detects the height of the goods during wrapping; when

the goods are not detected, the film carriage stops rising.

Value box: The photoelectric sensor cannot detect the cargo film carriage continuing to rise.

Height value. This value is set by the user according to requirements.

R) Button: Self setting wrapping height mode.

After setting the value, the film wrapping machine will move at the set height.

After reaching the set height, the film frame will stop rising.

S) Button: Selects the film frame stop height function. Requires activation; the icon

turns blue after activation. After activation and setting the value, the film frame will finally stop

at the set height position after the wrapping operation is completed.

T) Button: Top covering function selection. Tap to activate; the icon will turn blue after activation.

After the film carriage rises to the top, the equipment pauses, and the HMI screen displays the top view.

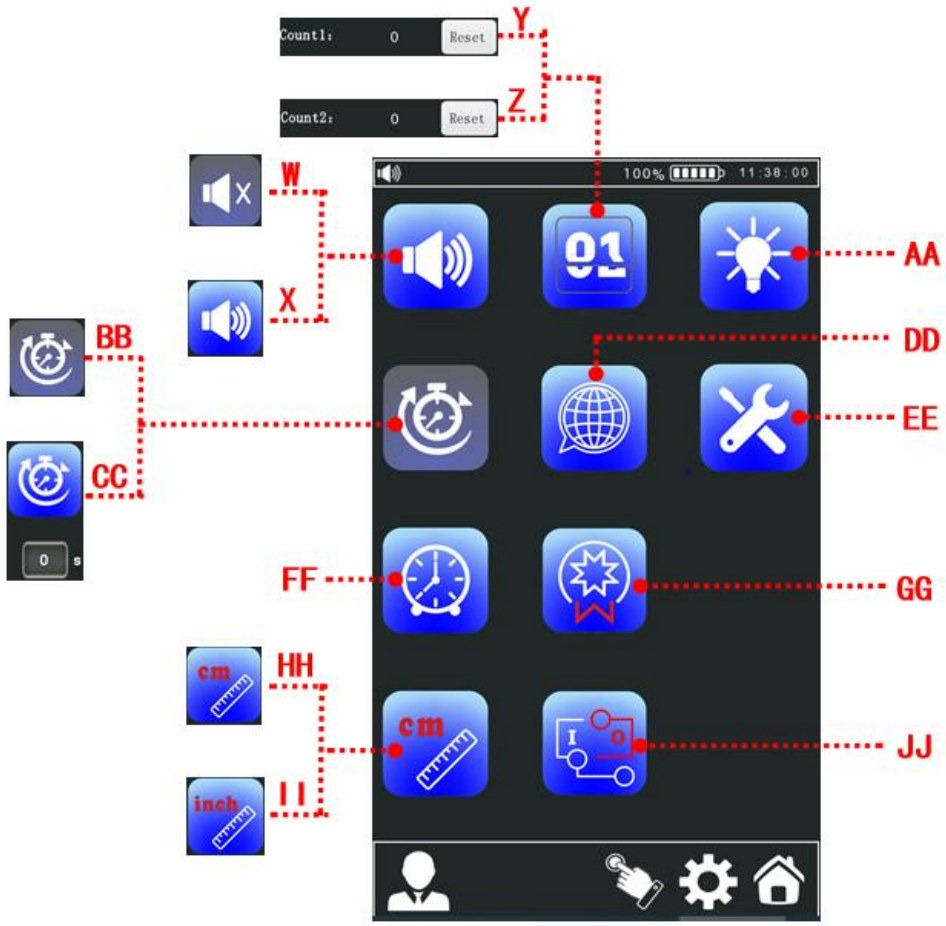
After the operator has finished covering the area, press the start button, and the equipment will continue the wrapping operation, until the program ends.

Note: The center wrapping reinforcement function can only be activated and used in "Reciprocating Lifting Wrapping Mode".

U) Button: Manually raise. Tap once to raise the film carriage, then tap again to stop; the speed is fixed.

V) Button: Manual descent. Tap once to lower the film carriage, then tap again to stop; the speed is fixed.

Note: Manual raising and lowering cannot be used when the automatic program is running.



W) Button: Alarm sound off. Tap to turn on.

X) Button: Alarm sound on (default is on). Tap to turn it off.

Y) Button: Wrapped Packaging Statistics 1, tap Reset to reset to zero. Can be used as the packaging record for the day, reset to zero before packaging for the day.

(Z) Button: Wrapped Packaging Statistics 2, tap Reset to reset to zero. Can be used as a total packaging record.

AA) Button: Three-color light on/off button, tap to turn on and off.

BB) Button: Special wrapping mode is turned off. Tap to open, and the icon will turn blue when opened.

CC) button: Special wrapping mode is activated. Tap to close; the icon will turn gray after closing.

This wrapping mode can be used when the goods are cylindrical or other irregular shapes.

Value box: Indicates the time required for the equipment to wrap the goods once. This value needs to be set by the operator according to the size of the goods.

DD) button: language switch key. Users can switch between English, French, and Spanish as needed.

EE) button: Tap to enter the internal register status page.

Note: This page is for maintenance purposes only. Do not modify the parameters on this page during use.

FF) Button: Tap to modify the date and time.

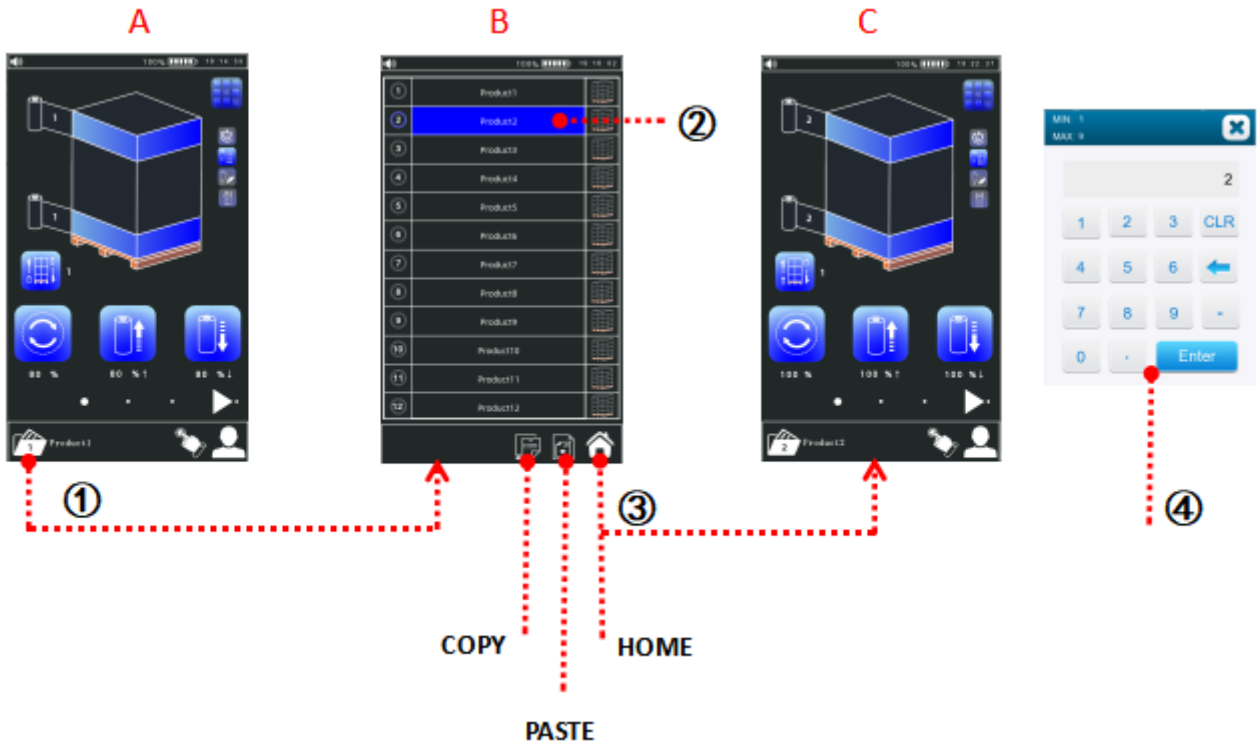
GG) Button: Tap to view software version information.

HH) Button: Tapping this button switches the unit of measurement. Tapping the “cm” icon switches it back to “inch”.

II) Button: Tapping this button switches the unit of measurement. Tapping the “inch” icon switches it back to ”cm”.

JJ) Button: Tap to view IO information. The IO information page can view the workpiece status of each control element.

6.2.6 Selecting and Saving Programs



① In the main interface (A), tap lower left folder icon to enter the wrapping program library (B).

② In the wrapping program library (B), tap the wrapping program name to run it.

Selecting a wrapping program highlights the name and part number in blue.

The wrapping program name can be customized.

③ In the wrapping program library (B), tap the home button to return to the main interface (C). The main interface (C) displays the parameters of the currently selected program.

④ In the main interface (C), set each parameter according to the wrapping requirements, enter the value, and tap Enter to exit (the parameter is then saved).

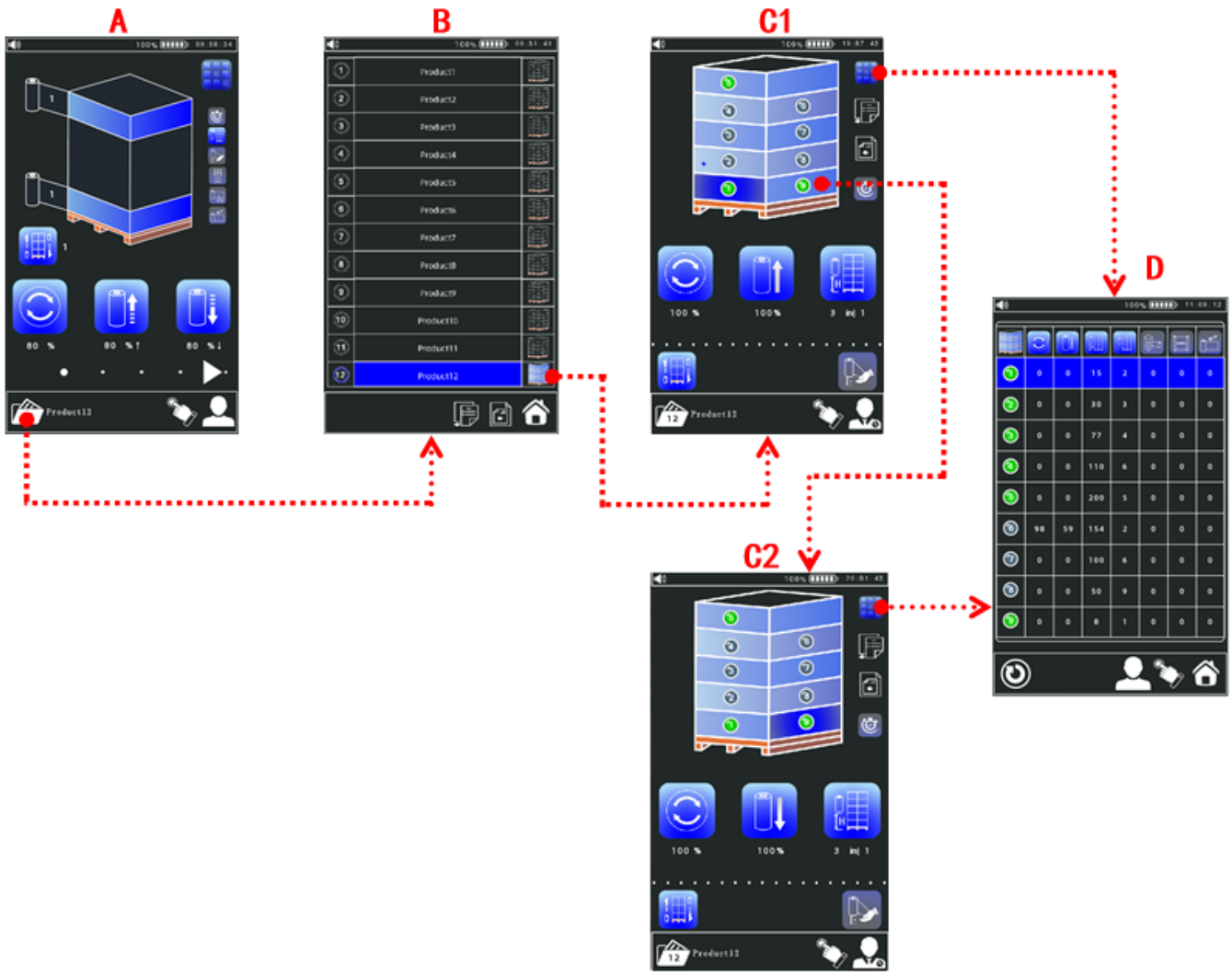
Note:

a) All parameter modifications and function selections will be saved in real time to the currently selected wrapping program.

b) The program can be copied: Select the program (copy source) – tap the copy button - select the program number you want to paste - tap the paste button.

6.2.7 Multi-layer Wrapping Mode Description

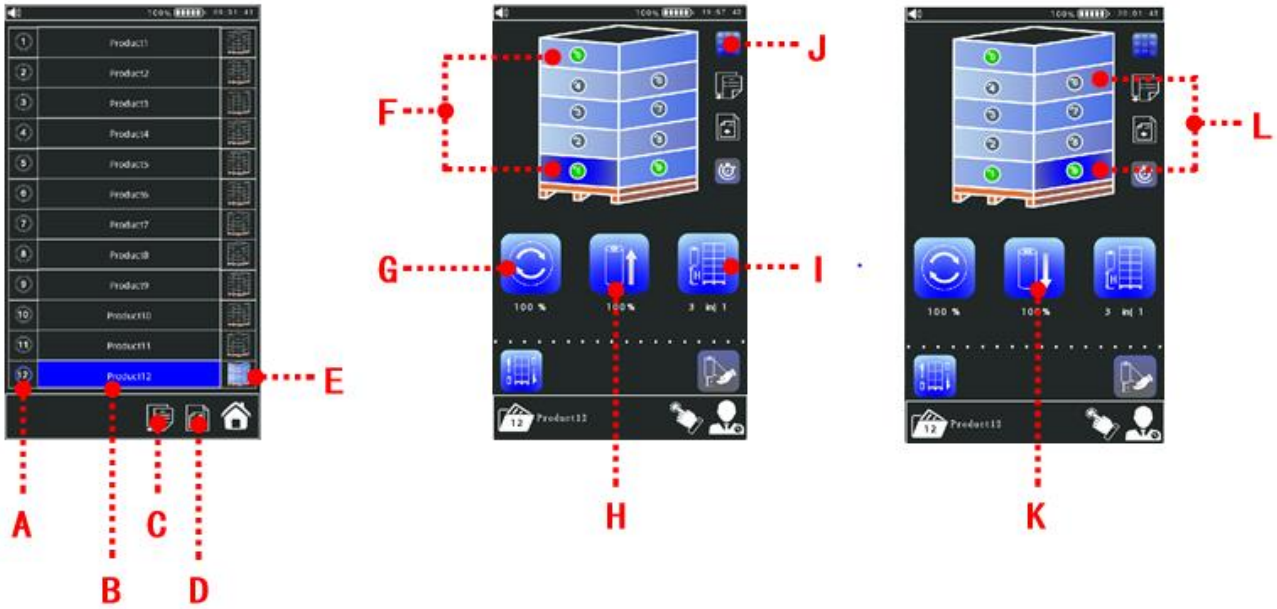
Multi-layer Wrapping Mode: This wrapping mode can be used when large goods need to be wound at different heights.



No.	Name	Function Description
A	Main Interface A	This page displays the wrapping program and parameters currently in use, and allows access to other pages.
B	Wrapping program selection page	This page offers a selection of preset wrapping program (12 in total). The wrapping program can be renamed, and the program parameters can be copied and pasted. The "Multi-Layer Wrapping Mode" can also be activated on this page.
C1	Multi-Layer Mode Main Interface 1	After the multi-layer mode is activated, this page displays the currently used wrapping program and parameters. ①②③④⑤ represent the rising wrapping levels. Green indicates that the current level is active, and gray indicates that it is in a shielded state.
C2	Multi-layer mode main interface 2	After multi-layer mode is activated, this page displays the currently used wrapping program and parameters. ⑥⑦⑧⑨ are descending wrapping levels. Green indicates that the current level is active, and gray indicates that it is in a shielded state.
D	Multi-layer mode parameter summary page	This page is the multi-layer wrapping mode parameter expansion page, which is convenient for unified settings. The wrapping parameters of each ascending and descending level can be displayed and edited.

Note: In ascending layers, the wrapping height values for each layer should meet the following requirements: ① < ② < ③ < ④ < ⑤;

In descending layers, the wrapping height values for each layer should meet the following requirements: ⑥ > ⑦ > ⑧ > ⑨.



A) Button: Wrapping program sequence number.

B) Button: Wrapping program name, can be tapped to modify.

C) Button: Wrap program copy key. After selecting the program, tap this button to copy the program.

D) Button: Wrap program paste key. After selecting the program bar, tap this button to copy the Paste the program here.

E) Button: Multi-layer wrapping mode activation key, the icon turns blue after activation.

F) Button: Ascend the hierarchy number, with 5 layers to choose from. Activation required, presented after activation Green, shielding is gray. When a level is selected, its frame is highlighted in blue.

G) Button: The rotation speed of the device when wrapping at the current level. Range: 0-100%.

H) Button: The speed at which the film holder rises when wrapping at the current level. Range: 0-100%.

I) Button: Current level wrapping height. The height values of each level should meet the following requirements: ① < ② < ③ < ④ < ⑤.

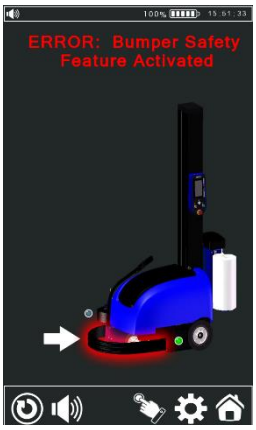
J) Button: Tapping it will bring up a parameter settings page, where you can set parameters for each level in a unified manner.

L) Button: Downgrade level number, with 4 levels to choose from. It needs to be activated, and after activation, it will turn green, while blocking will turn gray. When selecting a level, the level box is highlighted in blue. The height values of each level should meet the following criteria: ⑥ ＞⑦＞⑧＞⑨

K) Button: The speed at which the film carriage descends during the current layer wrapping. Range: 0-100%

6.3 Alarm prompts (start, pause, stop, alarm, etc.)

When a fault occurs during operation, a fault prompt will appear on the control panel display screen. After the fault is manually cleared, the fault prompt will disappear, and the machine can start and run normally.



ERROR 1



ERROR 2



ERROR 3



ERROR 4

ERROR 1: The anti-collision switch is triggered, the machine stops working (program terminates), a beeping alarm sound is emitted, and a fault message appears on the screen.

At this time, the operator needs to intervene, remove the obstruction, and tap the button or the "stop" button to clear the alarm.

ERROR 2: When the joystick is open or the opening/closing detection switch malfunctions, the equipment will not start, and a fault message will appear on the display.

The equipment can only start normally after the joystick is closed and the opening and closing detection switch is normal (not triggered). When the joystick is open during operation, the machine pauses. Close the joystick and press the "Start" button to resume operation.

ERROR 3: When the film frame door is opened during equipment startup or operation, a fault message appears on the display screen, and the machine stops running. Maintenance required

After closing the film holder door, press the "Start" button to resume operation.

ERROR 4: When the stretch film breaks during operation, the machine stops running, emits a beeping alarm sound, and a fault message appears on the display screen.

As shown. After re-threading the film, press the "Start" button to resume operation.

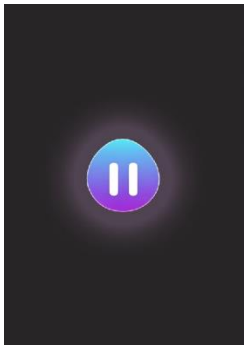


Figure1-8



Figure 1-9

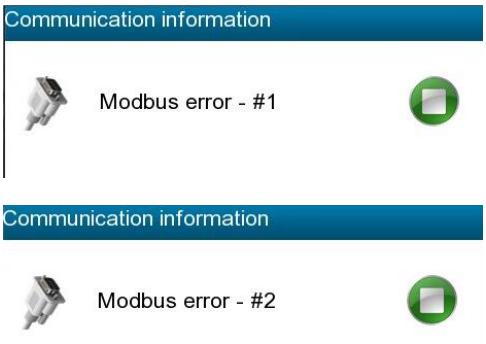


Figure1-10

When the alarm picture shown in (Figure 1-10) appears, Modbus error-#1 indicates a communication fault in the walking motor; Modbus error-2# indicates a communication fault in the lifting motor. At this time, check whether the corresponding communication line (485 bus) is broken or has poor contact.

When the machine is running normally, the display screen will show an icon as shown in (Figure 1-8). Double-tapping any point on the screen will pause the machine. Pressing the start button on the control panel will resume operation according to the original program until the program ends.

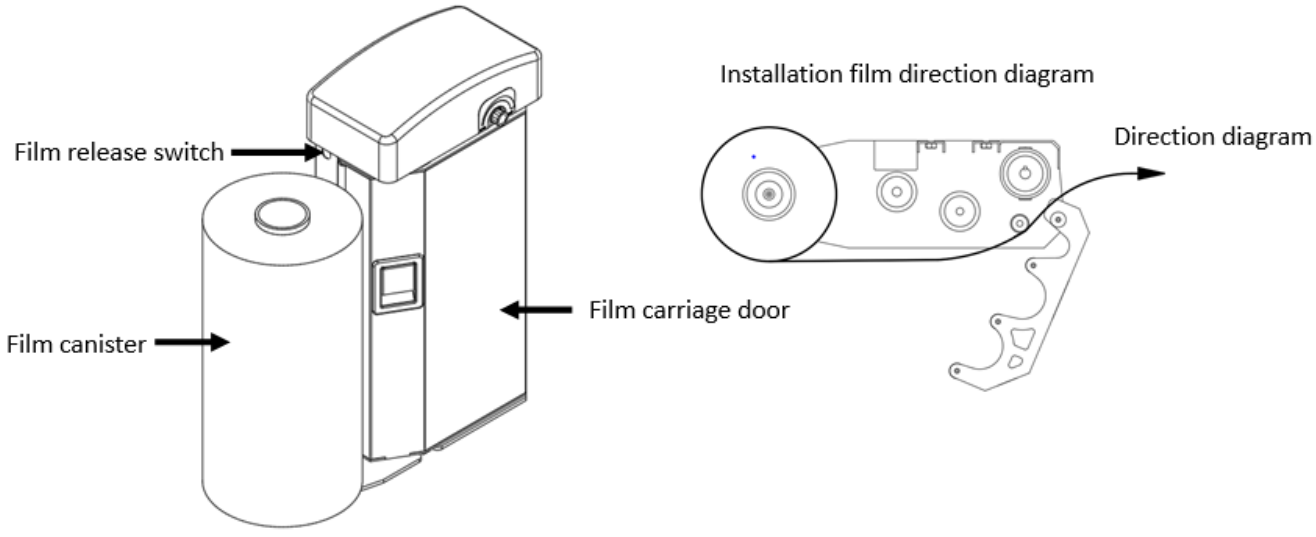
When the machine's battery is low, the display screen will display an icon as shown in (Figure 1-9), prompting the user to stop working and charge immediately. During charging, the display screen will show a battery level indicator. Charging will be complete after 10 hours.

When the machine is turned on, if the display screen briefly shows the icon as shown in (Figure 1-9) and then displays the normal battery level, this is a battery detection lag, which is normal.

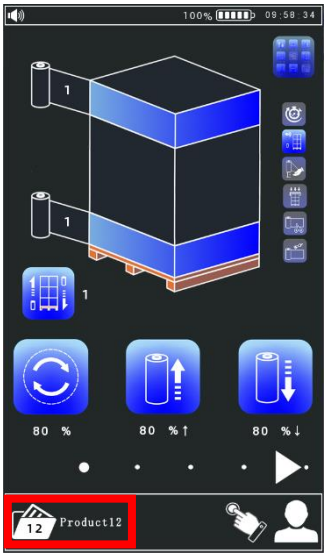
When the machine is running normally, pressing the stop button on the control panel will immediately stop the machine (program terminates).

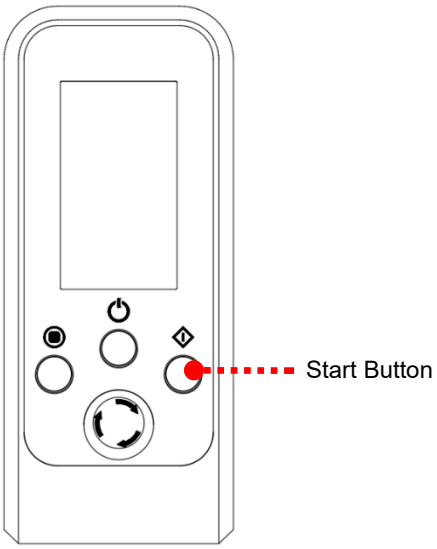
6.4 Film Installation and Packaging Instructions

- Machine-grade stretch film should be used, and the stretch ratio of the film should be >3;
- As shown in the diagram, insert the film. If the two ends of the film core protrude at different heights, insert the end with the smaller protrusion at the end. Open the film holder door, pull out the film in the direction shown in the diagram, close the "film carriage door", press and hold the film release switch, pull out a section of film, and attach the film to the goods or tie it to the pallet.



Adjust to the appropriate film stretch tightness. **Note: Do not adjust the stretch tightness too much, otherwise the packaged goods may be damaged due to excessive wrapping, or even the film may break, resulting in wrapping failure.**





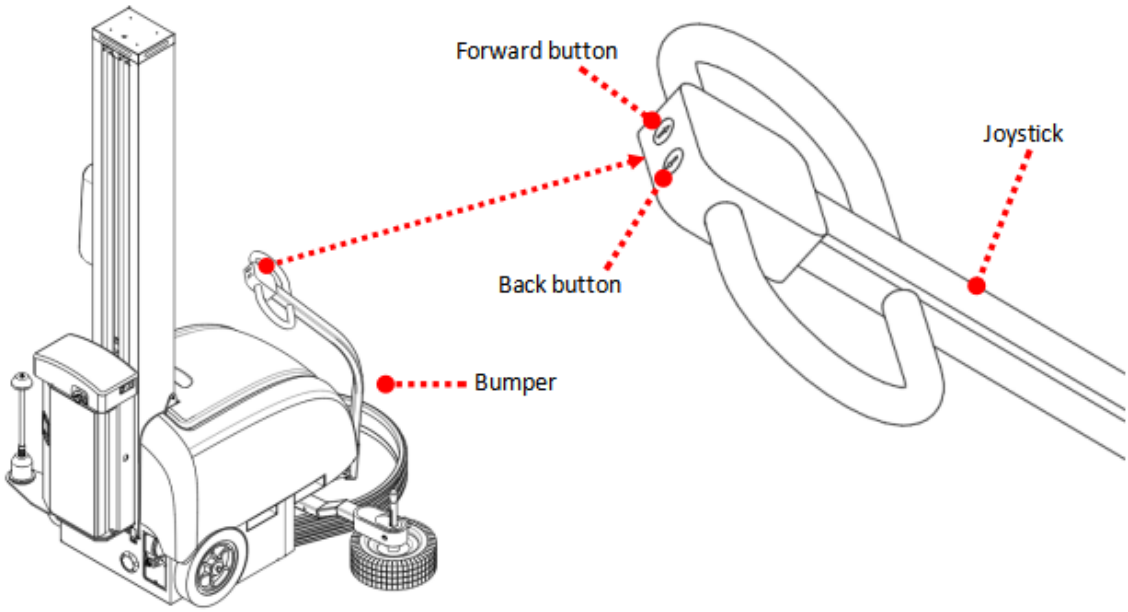
After editing and selecting the packaging program (program 12 shown in the diagram), press the start button on the control panel. The machine will run automatically according to the selected program until the packaging program ends.

6.5 Instructions for Use of the Joystick and Bumper

When close-range movement of the machine is required, manually press the forward and back buttons on the joystick to move the machine forward or backward.

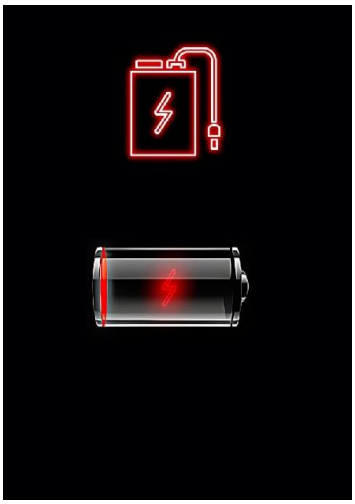
Warning: The film carriage must be lowered to the bottom before reversing, otherwise there is a risk of tipping over.

When an obstacle collides with the bumper, the machine will immediately stop (program terminates), sound an alarm, and display a fault message on the screen. The fault message will disappear after the obstacle is removed. Pressing the start button on the control panel will restart the wrapping operation until the program finishes running.



6.6 Battery Charging

-- When the screen displays the image shown on the right, stop the wrapping operation and charge immediately;



-- The charging power cord is located inside the machine; open the blue cover to remove it;

-- Before charging, you must confirm the charging power voltage and frequency. Charging can only proceed after confirming that everything is correct;

-- Before charging, ensure the charging environment is clean, dry, spacious, free of clutter, and well-ventilated;

Do not charge in a humid environment;

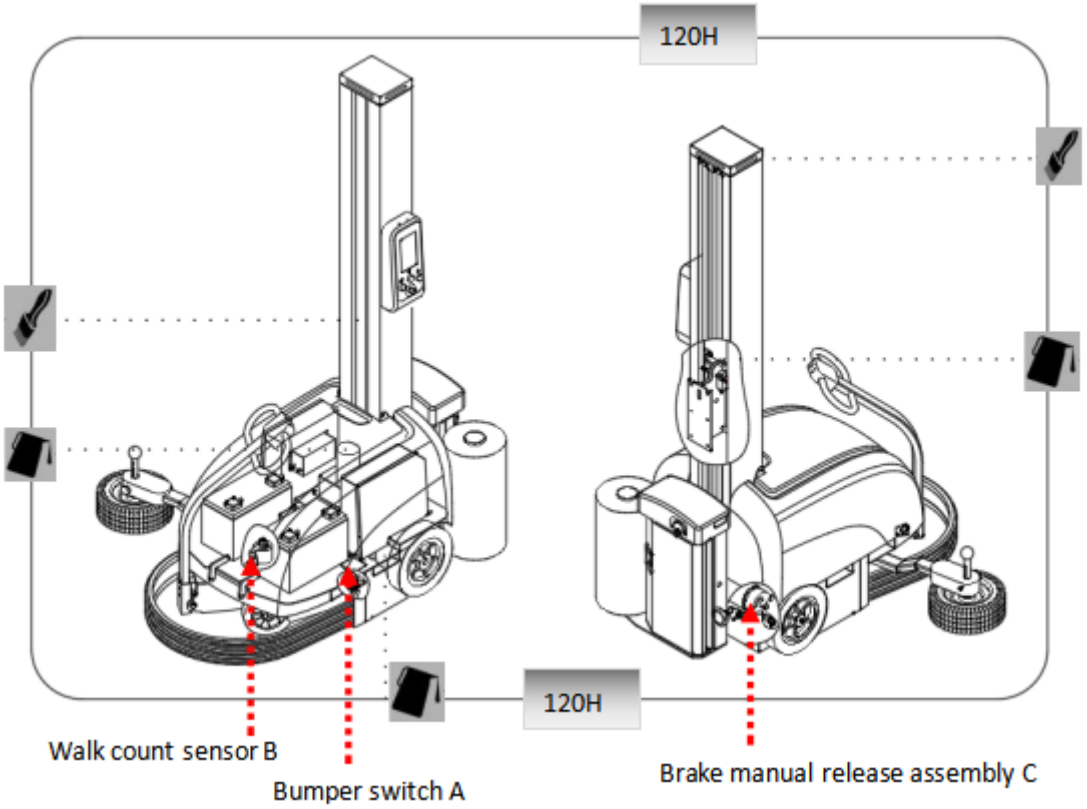
-- During charging, the charging level indicator will display a cyclical icon on the screen;

-- After charging is complete, unplug the charging plug promptly. Do not charge for extended periods;

-- To extend battery life, do not continue wrapping operations after the image shown on the right appears to prevent excessive battery depletion.

7. Maintenance Information

7.1 Lubrication Points



7.2 Maintenance Items and Cycles

Frequency	Maintenance Items	Maintenance Type	Maintenance Method
Every 40H	Inside of blue cover	Cleaning	Wipe with alcohol-soaked cloth and dry with compressed air
	Rubber-coated roller		
	Photoelectric sensor for inspecting goods on the film carriage		Wipe with an alcohol-soaked cloth
Every 200H	Film carriage frame pulley transmission	Synchronous belt tension inspection	Adjust tension or replace timing belt
	Lifting chain tension status	Chain tension check	Adjust tension; replace if worn
	Lifting guide wheel assembly	Lubrication and clearance check	Apply grease and adjust clearance

	Gearbox (motor end)	Lubricating oil check	If the gearbox is below half full, add lubricating oil.
	Bumper switch A	Sensitivity check	Check and adjust switch position and detection sensitivity
	Walking count sensor B	Sensitivity check	Check and adjust sensor position and sensitivity
	Brake manual release component C	Sensitivity check	Check and adjust brake sensitivity
Every 720H	All moving parts	Connection reliability	Check and tighten each part with a wrench
Every 1500H	Drive and driven wheel inspection	Wear and bearing flexibility	Replace if necessary
	Front steering wheel inspection		
	Guide wheel inspection		
	Battery	Charging and discharging	Charge once a month for long-term storage

8. Fault Information and Troubleshooting

Fault	Cause Analysis	Fault	Troubleshooting Methods
Equipment not moving	Low battery power	Charging indication on display	Charge battery
	Bumper anti-collision switch triggered.	Alarm Fault Indication	Remove obstacle. Adjust switch position or replace Switch.
	Walking speed parameter set too low		Increases walking speed, adjust display parameter settings.
	Walking motor fault		Repair or replace walking Motor.
	Walking Motor Speed		Repair or replace Walking
	Fuse fault	Modbus error-#1, driver power light off	Replace fuse.
	485 communication fault	Modbus error-#1	Check if the driver power indicator is on and if the 485 communication line is normal.
	Brake malfunction	High forward resistance. Unable to push.	Observe for sound of brake release when manually moving forward or backward
	PLC system malfunction.		Repair or replace the PLC.
The equipment's walking speed has slowed down significantly.	Low battery level	Low battery level displayed on the screen	Charge battery
	Walking speed parameter value set too low.		Increase walking speed, adjust display parameter setting.

	Walking motor brake malfunction.	Obvious friction sound during walking.	Repair or replace the motor brake components.
	Speed controller (walking) malfunction.		Repair or replace the speed controller (walking).
The film carriage does not rise.	The film carriage rising speed parameter value set too low.		Increase the film carriage rising speed and adjust the display parameter settings.
	Walking count sensor damaged or malfunctioning.	Film carriage does not rise. Machine keeps moving.	Adjust sensor position or replace sensor.
	Lifting upper limit switch triggered.	Can descend.	Remove triggering obstruction, adjust or repair upper limit switch.
	Photoelectric sensor on film carriage malfunction, cannot detect goods.		Clean and adjust photoelectric sensor; replace photoelectric sensor or repair wiring.
	Lifting guide wheel mechanism jammed.		Adjust or repair lifting guide wheel mechanism.
	Lifting speed controller malfunction.		Repair or replace lifting speed controller.
	Fuse fault.	Modbus error-#2, driver power light	Replace fuse.
	485 communication fault.	Modbus error-#2	Check if the driver power indicator is on and if the 485 communication line is normal.

	PLC system malfunction.		Repair or replace the PLC.
	Lifting motor malfunction.		Repair or replace lifting motor.
Film carriage does not descend	Film carriage descent speed parameter value set too low.		Increase the film carriage descent speed, display screen parameter settings.
	Lifting lower limit switch triggered.	Can rise.	Remove obstruction, adjust or repair the lower limit switch.
	Lifting guide wheel mechanism jammed.		Adjust or repair lifting guide wheel mechanism.
	Lifting motor malfunction.		Repair or replace lifting motor.
	Lifting speed controller malfunction.		Repair or replace lifting speed controller.
	Fuse Fault.	Modbus error-#2, driver power light	Replace Fuse.
	485 Communication Fault.	Modbus error-#2	Check if the driver power indicator is on and if the 485 communication line is normal.
	PLC system malfunction.		Repair or replace the PLC.
Film carriage lifting is not smooth or vibrates.	Lifting guide wheel mechanism is worn, causing increased		Adjust, repair or replace the lifting guide wheel mechanism.
	Chain is worn or too long.	The chain is noticeably loose when turned.	Adjust or replace the chain.
	Lifting motor malfunction.		Repair or replace the motor.
Film is easily broken.	Magnet detached at the tensioning PC board		Install the magnet on the adjusting shaft, paying attention to the SN poles.
	Film carriage motor malfunction.	Motor does not rotate or rotates slowly.	Repair or replace the motor.

	Poor film quality.		Replace with machine stretch film with a stretch ratio ≥3.
	Tightness adjustment potentiometer is set too high or damaged.	The film is taut after being pulled out.	Adjust the tension potentiometer to a lower setting or replace the potentiometer.
	There are impurities on the rubber roller.		Remove and clean the rubber roller.
	Tensioning PC board failure		Replace the tensioning PC board.
The film stretch ratio is too low.	The adjusting roller spring is too loose.		Tighten the spring at the adjusting roller.
	Tensioning PC board failure.		Replace the tensioning PC board.
The battery cannot be charged.	The charging circuit is faulty.	No charging sound, the relay light does not illuminate.	Check the circuit.
	The charger is damaged.	No charging sound. The relay light does not illuminate.	Check or replace the charger.
	The battery is aging or damaged.		Replace the battery.

9. Parts Replacement Information

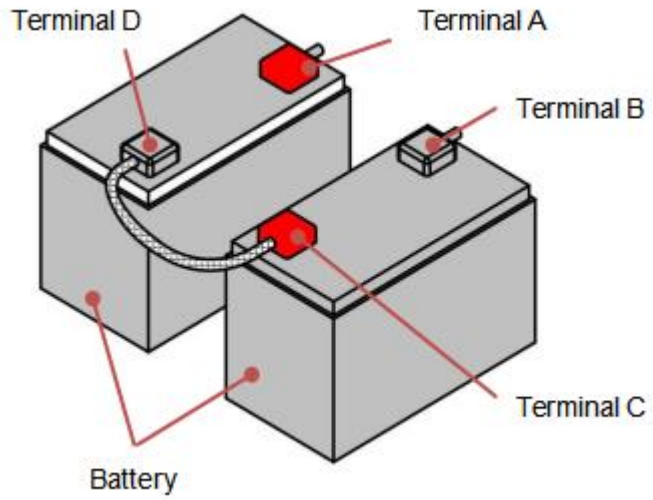
9.1. Parts Replacement Recommendations

- Before operation, authorized maintenance personnel should ensure they fully understand the operating procedures;
- Mark the surrounding area and ensure adequate safety conditions to prevent and minimize risks, in accordance with current work safety regulations;
- Do not arbitrarily dump materials, contaminate liquids, or handle maintenance waste. Please refer to local regulations for disposal.
- Only use genuine spare parts. Standard parts can be replaced with components of equivalent specifications and grade. Using similar but non-genuine spare parts may result in performance degradation and damage to related parts.

9.2. Battery Replacement

- Open the cover;
- Disconnect the battery connector;
- Remove battery connection terminals A, B, C, and D;
- Remove and replace with a new battery, reconnecting the terminals and battery connector in reverse order.

Note: Ensure correct polarity when connecting battery terminals.





Note: This battery is a lead-acid battery and should not be discarded carelessly (otherwise it will cause environmental pollution). It should be disposed of according to local regulations.