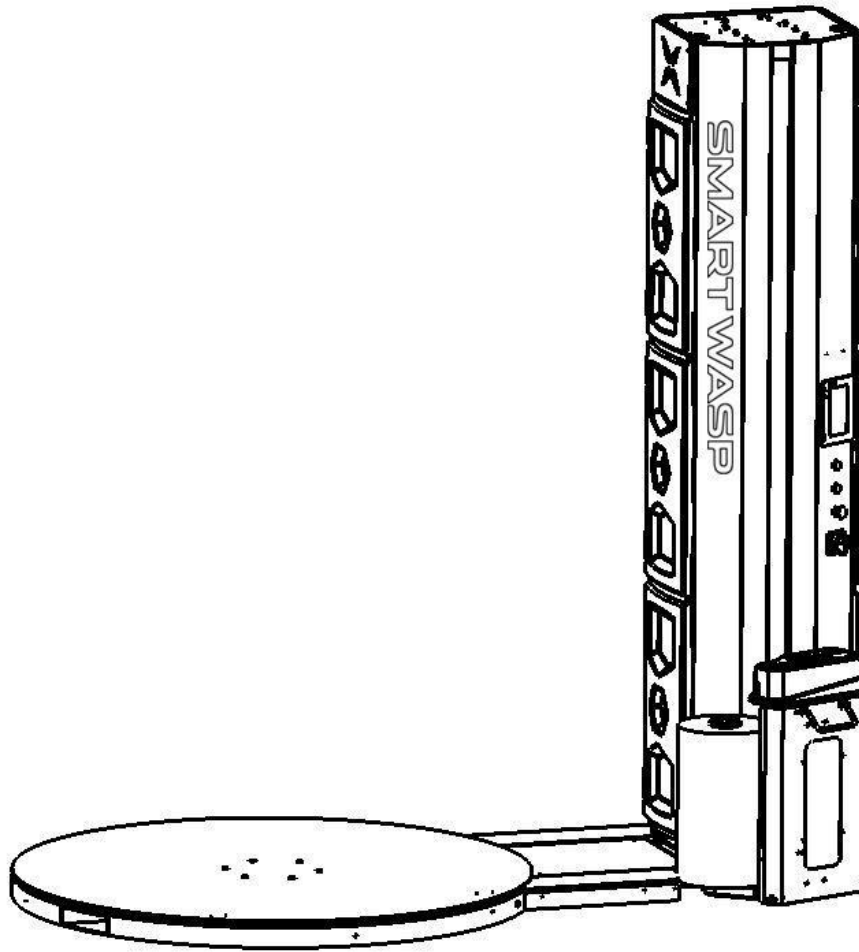


Smart Wasp Standard Pallet Wrapping Machine X1 Operation Manual



Jiangsu Smart Wasp Intelligent Technology Co.,Ltd

File No: SC_SM_000005

File version: X1_1.0

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1 General Information

1.1 Manual purpose

This manual is intended for training professional users and operators. With the help of this manual, you will be familiar with the pallet wrapping machine and its optional functions, enabling you to use, operate, manage and maintain the machine in a safe and effective manner.

User notice:

- The user must operate the machine in accordance with all safety instructions and procedures and all safety procedures in the work area in this manual ;
- To ensure that the machine is properly installed, debugged, operated and maintained, these operations can only be performed by fully and appropriately trained personnel;
- Ensure that the use of the machine is in full compliance with laws and regulations which have the force of law.

1.2 To operator

This manual is part of the equipment. This information helps machines operate safely and efficiently.



Notice:

Please read this manual thoroughly before operating the machine or executing any procedure.

1.2.1 Primary contents

The source language of this manual is Chinese. The source Chinese text will be legally binding to prevent any discrepancy between the other translated text and the source text.



Notice:

As we continue to improve and develop our products, it is not always possible to provide real pictures of every detail of the machine. Therefore, the illustrations always show a typical standard machine.

1.2.2 Supplements and other information

This manual has been carefully written based on our experience and the latest knowledge. Therefore, the information in this manual is valid and correct at the time of publication (see cover).

As we continue to improve and develop our products, modifications to the machine are part of the internal process. This means that you may receive supplements and other information later, including corrections or improvements.

Notice:



Add these supplements to this manual to ensure that the customer always has the latest version of the manual.

1.3 Agreement

This user manual uses the following agreement

1.3.1 Warning

This user manual lists the following warnings:



Warning

It indicates a risk of personal injury or even death.



Warning

It marks the risk of malfunction or damage to the machine.



Notice

Used to highlight some information.

1.3.2 Printing and creation agreement

- There is always a bullet between lists and enumerations that do not have a specified order.
- It must be performed in the order specified by the number in the process.
- Abbreviations are defined when the manual is first used (except in the title)

1.4 Environmental protection

Please comply with the disposal of used or replaced parts and materials described in this document. All recycling should be in accordance with local environmental laws and regulations.

1.5 Machine label

SMART WASP		Serial No.: XXXXXXXXXXXXX	
Suzhou JiaJun Auto-well Industrial automation Co.,LTD			
Name	Model	Version	Date
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Voltage	Phase	HZ	Machine Size
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Total Power	Max Load	Weight	Control Model
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
(PSI T BAR)		Air Requirement (CFM I /min)	
<input type="text"/>	<input type="text"/>		
<input type="text"/>	KA	SCCR	Max V
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Original			
Shanghai	<input type="checkbox"/>	Shenzhen	<input type="checkbox"/>
Suzhou	<input checked="" type="checkbox"/>	Beijing	<input type="checkbox"/>

1.6 Additional help and information

Smart Wasp is committed to providing the highest level of support to its users and operators.

Depending on the product, the support provided mainly includes:

- Training
- Service management system
- 24-hour global support
- Maintenance agreement
- Tool service
- Repair and update

For more information, please contact your dealer.

2 Safety instructions

2.1 Standards and instructions

The machine is designed and manufactured in accordance with the requirements of the Machinery Directive 2006/42 / EC and meets the legal requirements applicable on the date of construction:

- Mechanical instruction: 2006/42/EC
- Low voltage directive: 2014/35 / EC
- EMC Directive: 2004/30 / EC

The machine is designed with safety in mind and includes protection against injury and damage. However, all powerful machines can be dangerous if not used properly.

2.2 Safety regulations

2.2.1 General safety instructions

·The tasks described in this manual apply only to appropriately trained personnel with the required skill level (see section 2.3) who are familiar with all safety instructions and regulations mentioned in this manual.

·We are not responsible for any damage or personal injury caused by failure to comply with the safety instructions in this document or the warnings, caution and care described in this manual.

·Other security instructions may also apply, depending on the specific environment in your workspace. Since we have no direct control over these specific working conditions, it is the user's responsibility to ensure compliance with local environmental and safety regulations. If you encounter an unknown security situation not described in this manual, please inform us immediately.

The machine may also contain third-party components. Please refer to the appropriate manual for specific security instructions for these third-party components.

·Please ensure that children and other unauthorized persons cannot enter the work area.

·Please ensure that the working area has adequate light and ventilation.

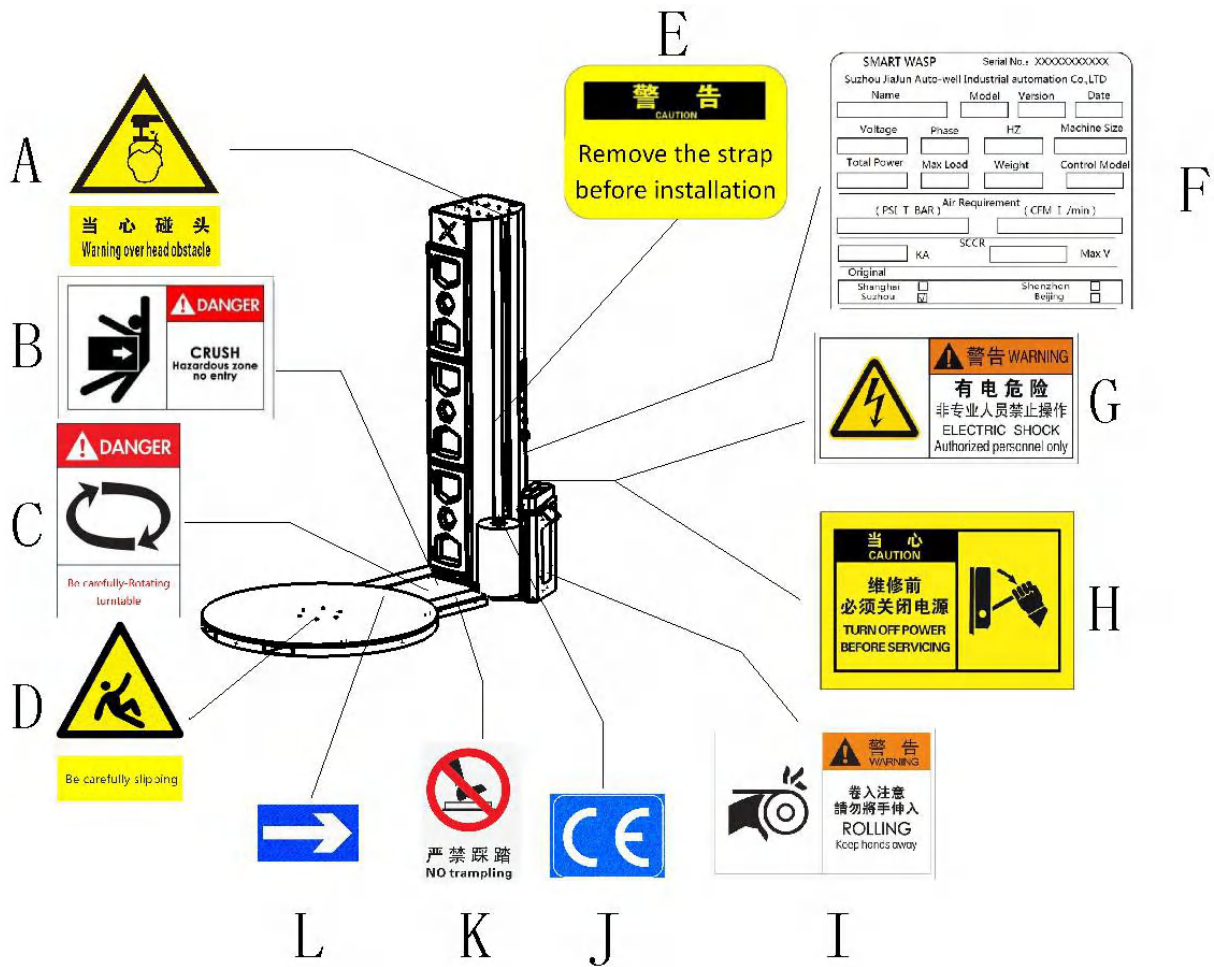
- Dressed correctly. Do not wear loose clothing. Remove jewelry, watches, etc. to prevent them from getting stuck in moving parts.
- Please wear protective equipment (e.g. protective clothing, protective shoes, gloves, helmet, goggles, earmuffs) according to the user's operating environment.
- Before performing any tasks on the machine, check that the machine is safe and clean.
- Always be vigilant and pay attention to your own operations. Do not work on the machine when you are tired or have drunk or have taken medicine.
- Do not change the structure of the machine. See section 2.2.5.
- Do not open the power distribution cabinet unless authorized.
- Do not graft unless you are authorized to temporarily disable the security features of the machine.

2.2.2 Manual guidance

- Please keep this instruction manual in a safe place near the machine. Ensure that the manual is always accessible.
- Please read this instruction manual thoroughly before using the machine or performing any of the tasks described. Be sure to always have the latest version of this instruction manual.
- Perform the steps in the order given. Do not change the order of the steps.

2.2.3 Marks and instructions on the machine

- Marks or instructions on the machine are part of the security feature. They must not be covered or removed and must be clearly visible throughout the life of the machine.
- Damaged or illegible signs and instructions must be replaced or repaired immediately.



A Warning: Be careful with head injuries

B Warning: Squeeze danger, do not enter the machine during operation.

C Danger: Pay attention to danger when the turntable rotates

D Warning: Beware of falling near the turntable

E Warning: Remove the strap before installation

F Instruction: Label of machine

G Warning: Non-professional personnel are not allowed to operate the electric cabinet, there is electrical danger

H Warning: Power must be turned off before repair

I Warning: please do not put your hand into the roller of film carriage

J Instruction: CE

K Warning: Do not stand on the turntable

L Indication: the rotational direction of the turntable

2.2.4 Alteration



Warning

Do not attempt to make any modifications or changes to the machine or program without the prior express consent of Smart Wasp. Unauthorized modifications or alterations to the machine may result in serious personal injury or death.

Smart Wasp is always willing to discuss improving the value of the machine by modifying it for the user. See section 1.6

2.2.5 Guarantee

•The machine is warranted for 12 months after installation. To exclude components and electrical components that may wear out during normal use, the customer must notify the dealer of the defect and the machine serial number. The customer must be able to hand over the defective component to the dealer. The dealer will resolve the defect within a reasonable time.

•When problem must be resolved at the customer's location, the customer bears the additional cost. The extra cost is for labor, travel or accommodation.

•The dealer is not responsible for any accidents or delays in the production process. When the customer adjusts the machine with components that are not recommended by the dealer, the dealer cannot guarantee that the machine meets the EC requirements.

2.2.6 Safety-transport



Notice

Usually the machine is shipped by dealer or with the help of instructions provided by the dealer. When relocating the machine, please observe the safety instructions provided in Chapter 4.

2.2.7 Safety - installation

Notice



Usually the machine is installed and adjusted by the dealer or with the help of the instructions provided by the dealer. When relocating the machine, please observe the safety instructions provided in Chapter 5.

2.2.8 Safety-operation

- Please follow the general safety instructions. See section 2.2.1
- Make sure the machine and its vicinity are kept dry.
- Keep away from moving parts
- Do not stand on the turntable even if the machine is turned off.
- Do not touch the area between the turntable and the machine floor (Be careful of finger crush)

When the machine is running:

- Please do not touch the turntable.
- Keep away from the area between the pallet.
- Do not try to manually stop or drag the tray, please use the emergency stop button
- Please wear personal protective equipment as specified or recommended by the user.
- The film carriage moves up and down during operation. Keep away from the the plate slide (to prevent finger crush or foot injury).

2.2.9 Safety-maintenance

- Please follow the general safety instructions. See section 2.2.1
- Before starting any maintenance (even cleaning):
 - Put the switch button in the "OFF" position
 - Remove the power plug
 - Wait at least two minutes
- Do not wash the machine with water (electric shock hazard)
- Do not use solvent cleaning machine. Only use dry cloth and neutral cleaner to clean the machine.
- If the security feature is temporarily disabled, the security feature is reactivated or enabled as soon as the maintenance work is completed. After cleaning the machine, please make sure to check the normal function of the safety function before production.
- Do not leave anything inside or on the machine.
- The sensor's detection range has been set by the manufacturer. Do not change the setting.

2.2.10 Safety - repair

- Please follow the general safety instructions. See section 2.2.1
- Before starting any repair:
 - Put the switch button in the "OFF" position
 - Remove the power plug
 - Wait at least two minutes
- If the security feature is temporarily disabled, the security feature is reactivated or enabled as soon as the maintenance work is completed. After cleaning the machine, please make sure to check the normal function of the safety function before production.
- Do not leave anything inside or on the machine.

2.3 Operating skill

2.3.1 Operator

- Only licensed operators are allowed to work on the machine.
- All operators can only perform their trained, executable operations.
- All operators using the machine must be familiar with the instructions.
- Operators must be familiar with all possible situations so that they can act quickly and effectively in an emergency.
- This machine is only for people over the age of 16. The corresponding national occupational safety and health regulations must be observed.

2.3.2 Operator skill

The operator can be trained:

- Loading and unloading turntable
- Use the control panel and remote control to control the machine.
- Parcel pallet
- Prepare for loading and unloading film rolls



Notice

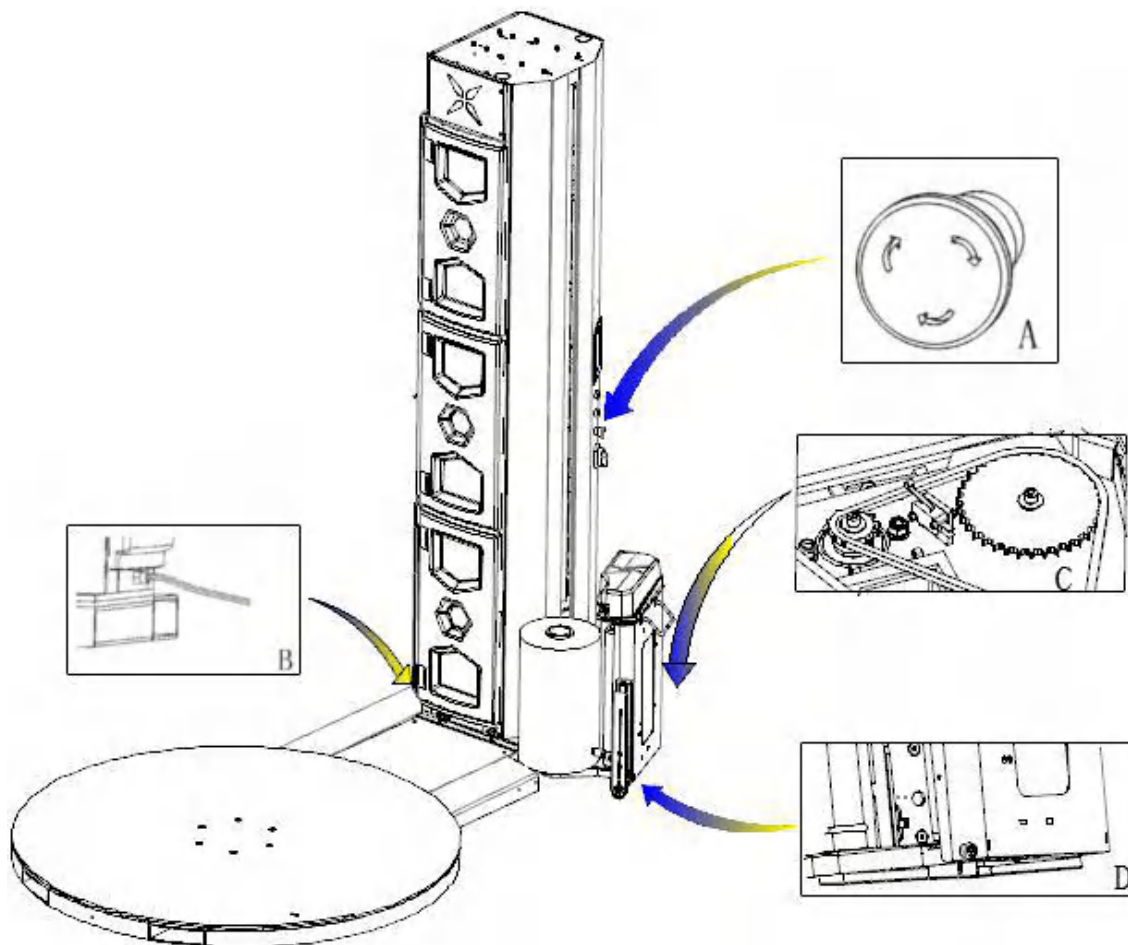
It is the user's responsibility to ensure that the machine operators are adequately trained in their operational tasks before starting work again.

2.4 Safety features

2.4.1 Security function overview

This pallet wrapping machine has the following safety features:

- Emergency stop button (Please see section 2.4.2)
- Safety marks and instructions (Please see section 2.2.3)
- Film carriage bottom safety device (Please see section 2.4.3)
- Ground lead (Please see section 2.4.4)



A Emergency stop button

B Ground lead

C and D Film carriage bottom safety device

2.4.2 Emergency stop button

The emergency stop button is in the control panel.



Notice

In case of emergency, press the emergency stop button to stop the machine.

2.4.3 Film carriage bottom safety device

The film carriage bottom anti-drop protection switch is located under the film carriage. The machine will stop once the lower plate touches the protection switch.

2.4.4 Ground lead

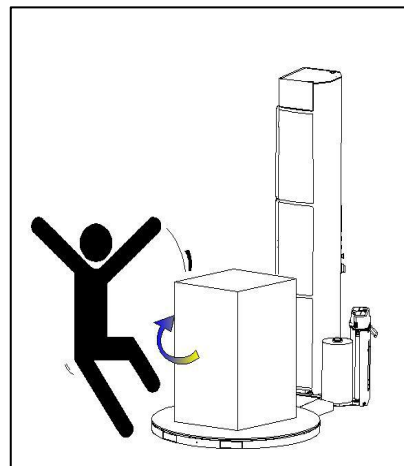
The electrical system is grounded. A continuity test has been performed on the ground wire. The electrical system was tested for insulation and dielectric strength at the factory.

2.5 Main operational risk safety warning

Operators must pay attention to the following safety warnings during the normal operation of the equipment.

- Physical collision and hazard:

Do not touch the machine parts while the machine is running.



- Keep away from operation area:

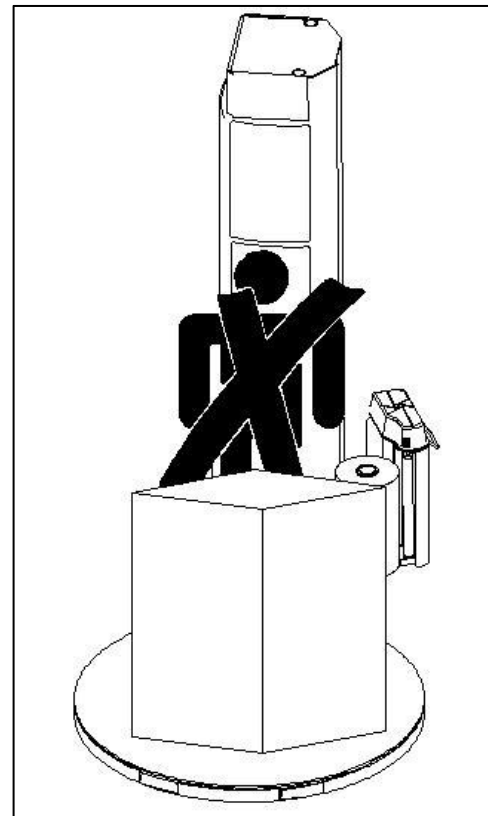
Do not stay in the operating area of the machine



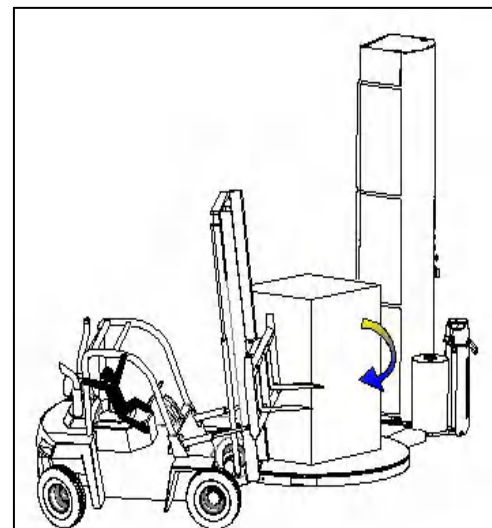
- Risk of collision:
do not stand under the film carriage



- Danger of collision at start-up:
Do not stand near the disc when starting to avoid danger



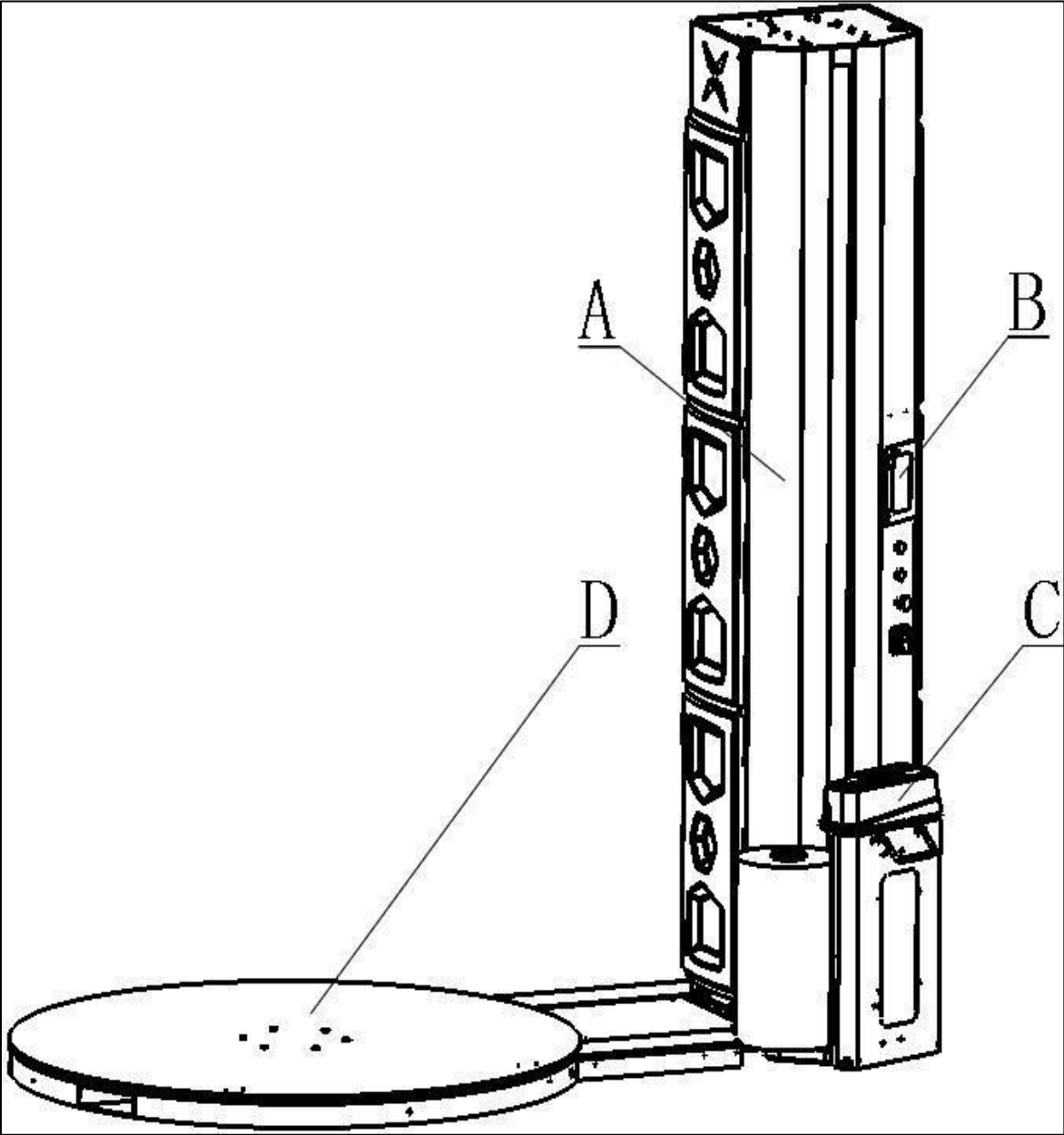
- Other dangerous situations at startup:
When moving goods, the forklift is far away from the machine cargo



3 Technical parameter description

3.1 Main component composition

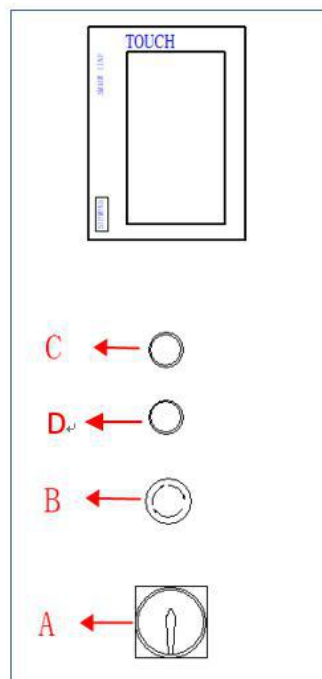
The X1 standard wrapping machine uses a special film to package the pallet goods. The wrapping film can be evenly attached to the pallet goods in the winding mode. The main components are shown below.



- A Column
- B Control panel
- C Film Carriage
- D Turntable

3.2 Control panel

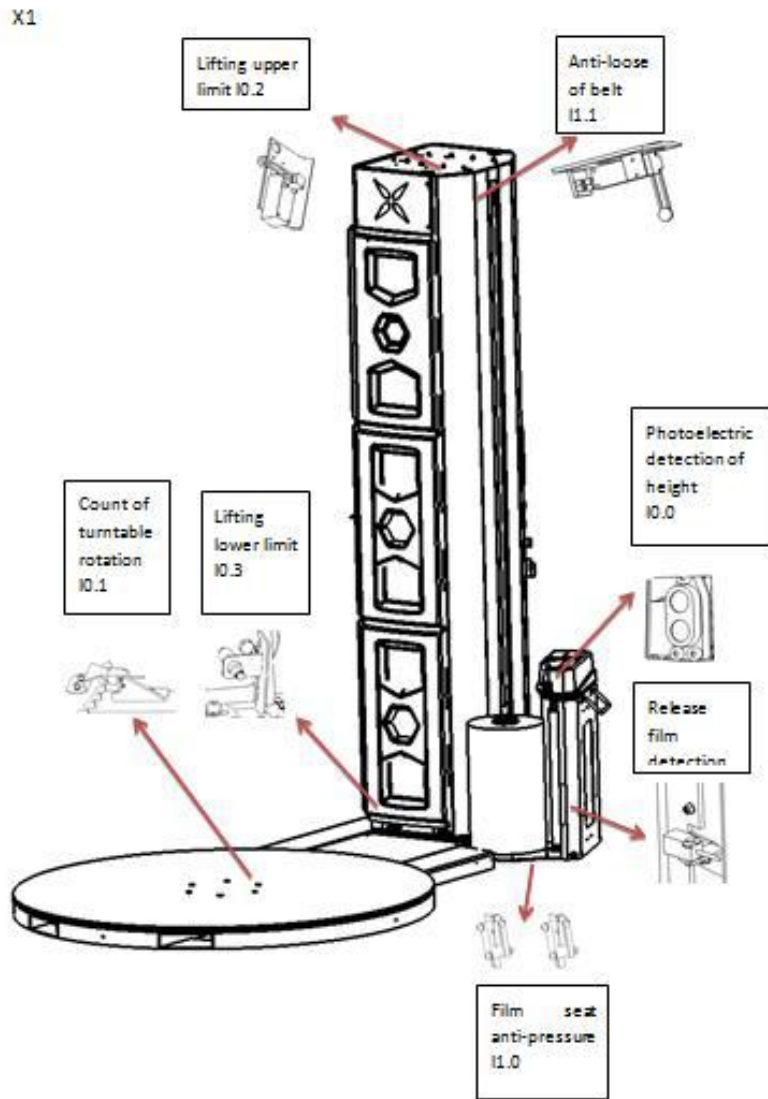
3.2.1 Main control panel



Serial number	Name	Function
TOUCH	Touch Screen	It is used to operate the operation of the device and set the operating parameters. Refer to section 5.7
A	Main power switch	Turn the main switch clockwise to energize the power supply of the equipment. Turn the main switch counterclockwise to turn off the power.
B	Emergency stop switch	Press the emergency stop switch, the equipment will stop running immediately in any state; Turn the button clockwise to release the emergency stop switch.
C	Power indicator	When the main power switch is turned on, the power indicator lights.
D	Start button	Operate the start button and the machine starts to run automatically.

3.2.2 Sensor position

The following figure shows the sensor location and access information of the device for convenient maintenance.



3.3 Working principle

The operation of the X1 standard winding machine can be completed by one operator. The basic working principle is as follows.

1. The goods are transported by forklift to the standard wrapping machine, put on the film roller and the film is manually affixed to the first surface of the goods (See 5 operating instructions for details).

2. Start the wrapping machine, and the cargo starts to rotate from the initial position (original position). At the same time, the film carriage cooperates with the speed of the turntable to release the film. The film is wrapped on the cargo under the rotation of the turntable.
3. According to the packaging requirements of different goods, the film begins to rise after winding a certain number of turns at the bottom of the cargo. The rise of the film carriage, the rotation of the turntable and the film release together to achieve the overall packaging of the goods.
4. When the film is wrapped to the top of the cargo, the photoelectric sensor senses the height of the cargo, and the film carriage begins to descend after completing the top winding.
5. When the film carriage is lower to the bottom, the turntable begins to decelerate, and the film is cut under the cooperation of the electromagnet and the turntable. At this point, a packaging cycle ends, the machine is in a standby state, waiting for the winding of the next pallet.

3.4 Optional configuration

3.4.1 Pit configuration

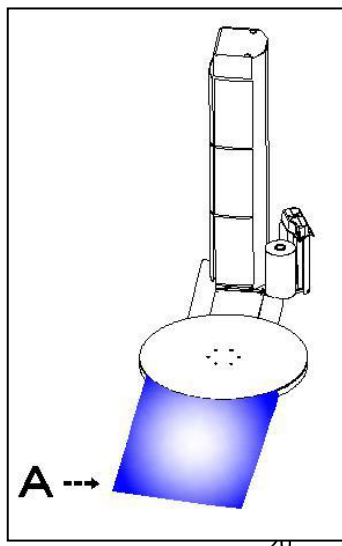
Notice



According to the site conditions of different users, the working face of the equipment is parallel to the working face of the turntable, and the pit is used as an option to facilitate the use of specific customers.

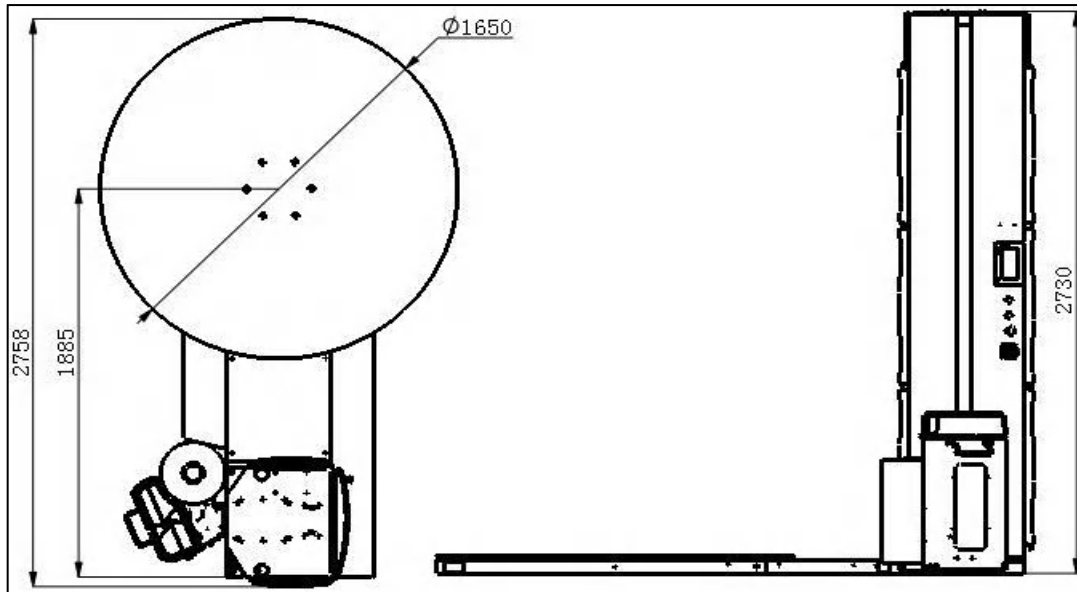
3.4.2 Ramp configuration

The ramp is available as an option to suit specific customer needs.



3.5 Technical parameters and main configuration

3.5.1 Mechanism parameters



Model	X1	Brand	Smart Wasp
Machine size	See the figure above	Film thickness	14mic
Film width	500mm	Film paper core	250mm
Release film mode	Dynamic pre-stretch	Standard pre-stretch rate	250%
Max packing speed	30~40 pallets/hour	Intelligent sensor	standard
Max wrapping height	2350mm	Max wrapping weight	1500KG
Turntable speed	3-12RPM(adjustable)	Film carriage up&down speed	0-2.6m/min (adjustable)
Turntable	Optional	Automatic cutting film	Have
Machine weight	750Kg	Place film mode	Manual
Weighing scale	Optional	Wrapping force	Adjustable

3.5.2 Electrical parameters

Machine voltage	220V-240V/50/60Hz Single-phase	Total power	1.5KW
PLC	Siemens	Touch screen	Siemens
Motor	SMARTWASP	Inverter	Siemens
Contactors	Siemens	Sensor	Germany SICK

3.5.3 Working environment parameters

Temperature range	0°~ +40°	Humidity range	≤70%(relative humidity)
Noise	70dB	Pneumatic environment	No

4 Transportation and installation instructions

4.1 Security transport



Notice

- 1. Please note that for the transport of machines must follow general safety practices and the safety instructions given in this section.***
- 2. The packaging material is composed of plastic film, three-ply, etc. (please follow the local advice or regulations on disposal and recycling of packaging materials)***
- 3. Pay attention to waterproofing and violent vibration during transportation.***

4.2 On-site transportation

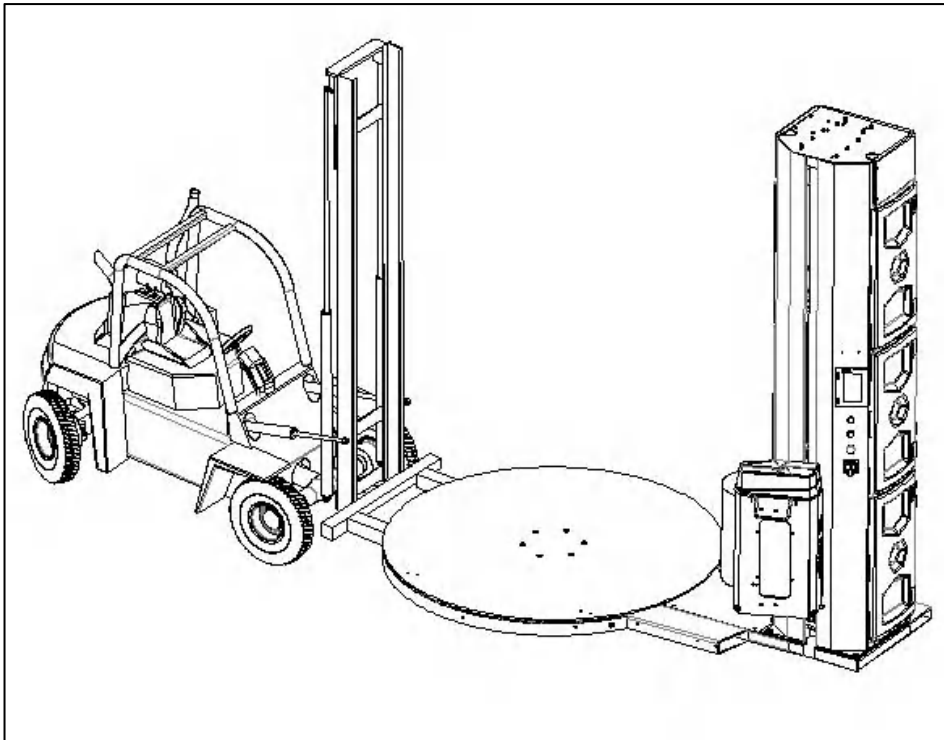


Notice

There is no need to disassemble the machine, the machine can be moved as a whole.

1. Turn on the power and move the film carriage up a distance(See the operation instructions section 5 for details)

- a. Turn on the machine
 - b. Click on the touch screen to input the password to enter the main interface.
 - c. Select manual mode
 - d. Click on the film carriage to rise, rise to the suitable height and stop
2. Turn off the machine
 3. Remove the power plug
 4. Insert the forklift into the bottom of the machine to raise the machine by about 50mm



5. Move to a new place.



Notice

During transportation, pay attention to obstacles on the top of the machine and obstacles on the floor, such as sinks.

4.3 Temporary storage

If the machine must be stored temporarily, please follow the steps below.

- 1. Protect the machine from dust
- 2. Store the machine in a clean, dry place. The environmental conditions required for installation also apply to storage.
- 3. Please don't put anything at the top of the machine.

4.4 Preparation before installation

Please read the entire installation section before you start, then follow the instructions to install it step by step.

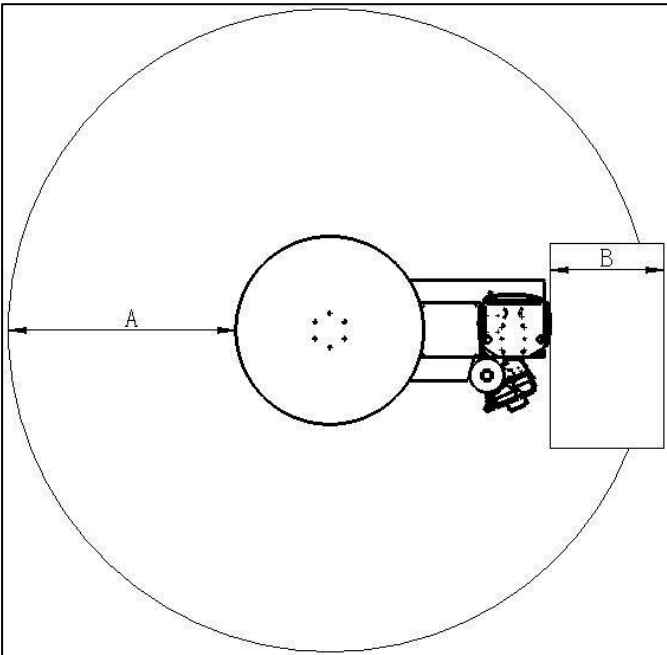
Notice



- (1) *Finish each step before moving on to the next!*
- (2) *The device has multiple security measures. Operating in the right way will ensure safe operation. Please observe all safety signs. Do not turn on the power before completing the installation.*

4.4.1 Preparation area

The installation area of this machine must meet the following space



requirements.

- A 2000mm
- B 1000mm

- Leave some space around the machine for daily operation, maintenance and repair.
- To get the machine running at its best, place the machine on a flat surface. If necessary, level

the machine with a gasket.

4.4.2 Ground confirmation

The ground must be able to withstand the weight of the equipment, the maximum load of the equipment and its impact, so it is required:

Ground bearing capacity \geq (total weight of equipment + weight of goods) \times 1.5.

4.4.3 Film carriage installation

The system requires a dedicated single phase grounded power supply

220V/AC; 10A; 50/60Hz; 1PH



Notice

For specific electrical requirements, please refer to the machine identification label or electrical drawings.

Notice



(1) Use of extension cords and any other changes may result in damage to the circuit or affect device performance and may void the warranty. For changes, please call after-sales service.

(2) To avoid damage to the equipment, check the voltage in the electrical drawing before starting the equipment.

4.4.4 Equipment, tools and personnel requirements

- Standard wrapping machine one set
- One set of tools (in the toolbox), one forklift
- 1-2 mechanical/electrical technicians and 1 user

4.4.5 Loading and unloading

(1).Main body (the turntable and it's column) Part loading, unloading and handling

Equipment used: forklift.

Method of operation: Use a forklift to remove the equipment and transport it to the installation site.

(2).Other spare parts: Before handling the disassembled main body, other parts and

components shall be manually moved.

4.4.6 General hardware fastening torque reference

The torque and performance specifications of the fasteners provided and recommended by this product are shown in Table 4.1.

Metric fastener torque comparison table		
Nominal size of fastener	Performance level	Torque (Nm)
M6	8.8	14
M8	8.8	24
M10	8.8	54
M12	10.9	102

Table 4.1

4.4.7 Installation and service conditions

Humidity ≤ 70% Temperature 0-40°C

4.5 Equipment installation

4.5.1 Equipment installation preparation

- (1) Move the equipment to the installation area with a forklift, and remove the items used for outer packing, tying materials and fixing equipment.
- (2) Take out the attached tools, check whether the equipment is complete and put in order.
- (3) Make sure the trolley is locked on the stiffener plate of the support frame, to prevent the lifting body from colliding with the base and damaging the parts during the erection process.

As shown in figure 4.5.1.

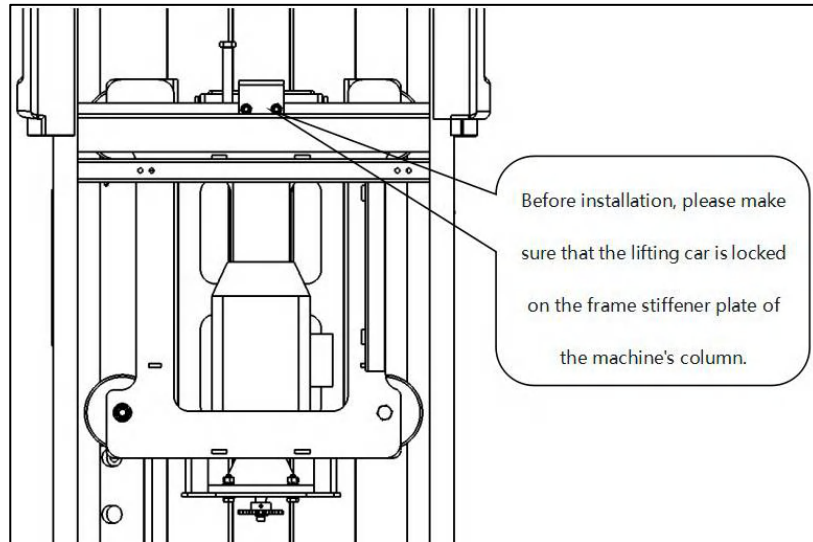


Figure 4.5.1 Locking trolley

4.5.2 Column installation

Raise the column and be careful during operation. Before installation, the surface of the chassis should be placed with soft material base pad, and then erect the column. During the erection process, take care to avoid bumps and impacts between the column and the turntable to prevent damage to the parts. Ensure that the rotating center screw is loose before erecting, ensuring smooth rotation when the column is erected. After erecting the column, lock it to the chassis and then lock the rotating center screw. Note: If the equipment is transported far away or sent overseas, the column and turntable are packaged separately.

(1) Use the attached tools to mount the column to the turntable (see Figure 4.5.2.1 for the installation of the column)

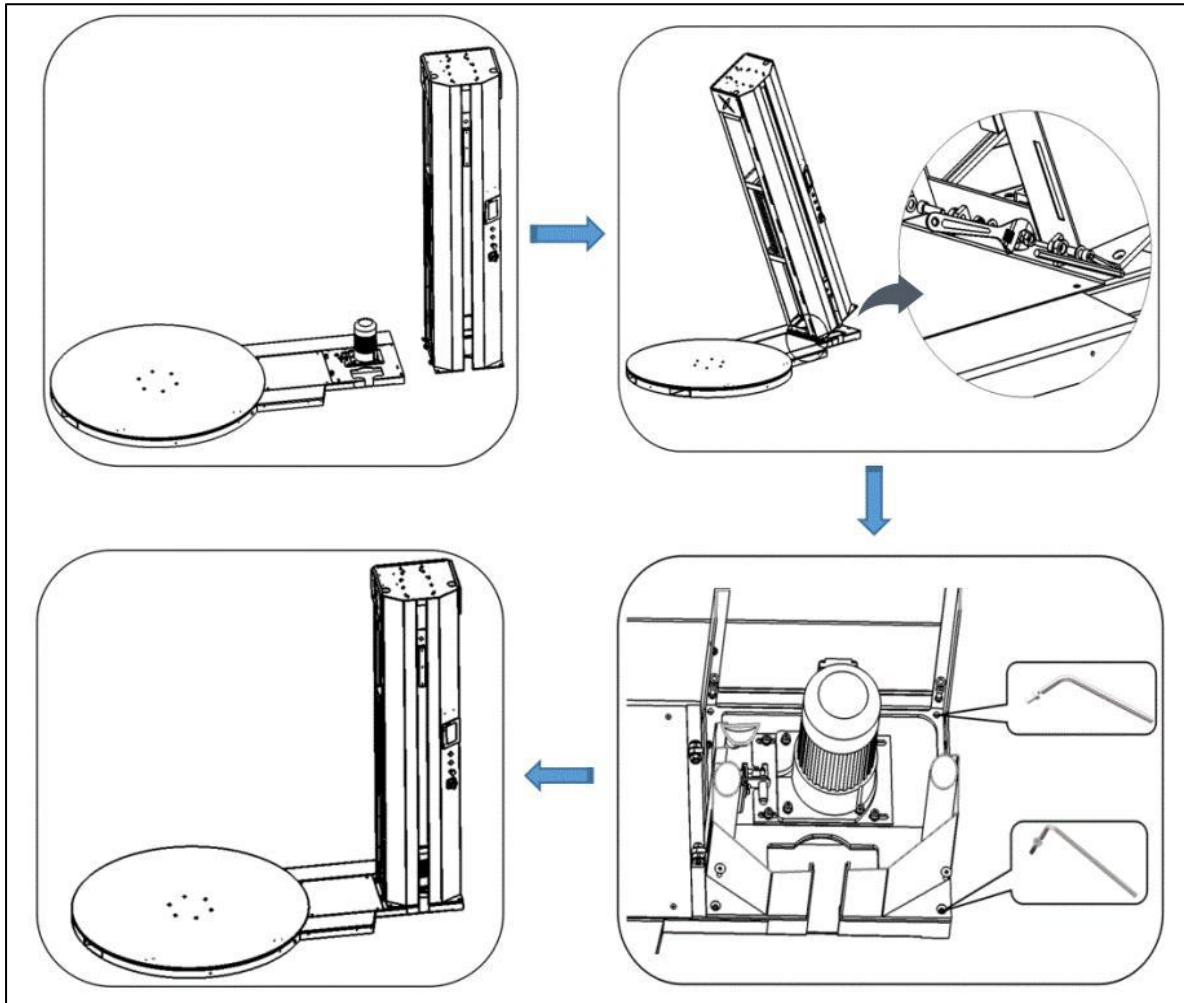


Figure 4.5.2.1

(2) Connection between quick plug of power cord of chassis motor and reserved quick plug of column is shown in figure 4.5.2.2.

(3) The connection between the chassis sensing wire and the column quick-connect plug is shown in Figure 4.5.2.2.

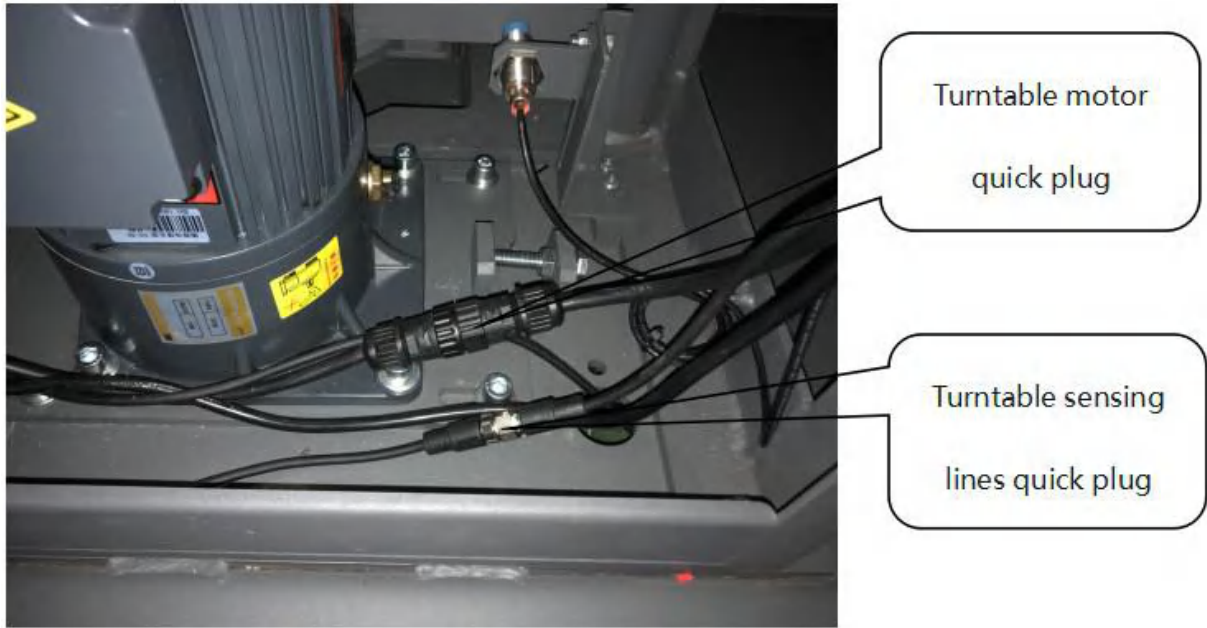


Figure 4.5.2.2

4.5.3 Film Carriage installation

(1) Unlock the trolley from the stiffener plate, and check that the cloth belt anti-loosening switch is properly pressed by the cloth belt. As shown in the figure 4.5.3.1 below.

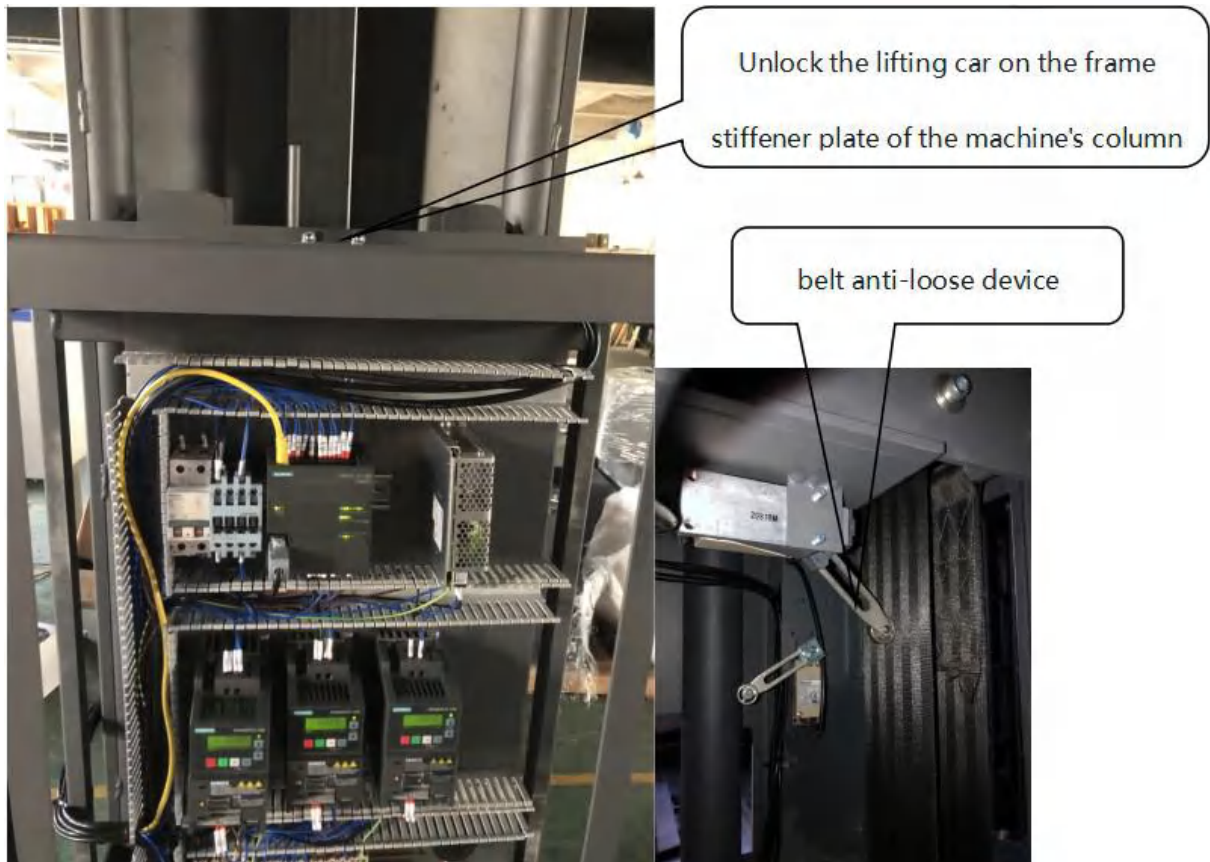


Figure 4.5.3.1

(2) Turn on the power and manually reset the cart to the lower limit. Rotate the main power switch to turn off the machine as shown below.

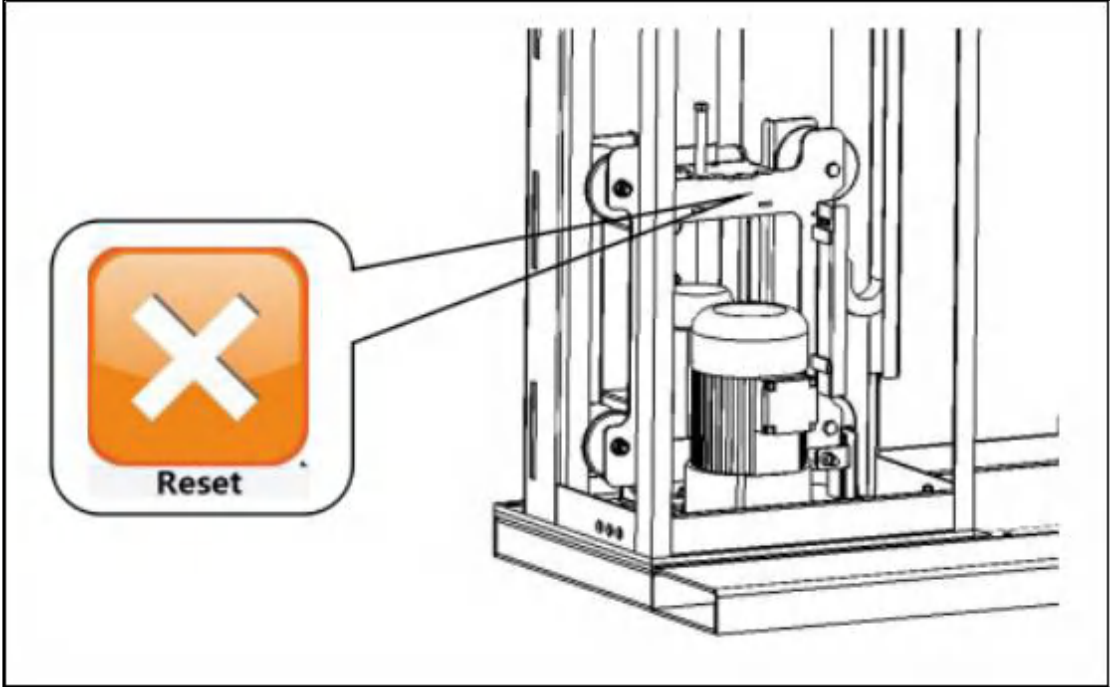


Figure 4.5.3.2

(3) Manually hang the film carriage from the outside of the column on the trolley, and pay attention to lead the connecting wire to the lifting body through the threading hole below the hanger plate. Use the corresponding installation bolt to lock the film carriage and the trolley. As shown in the figure below.

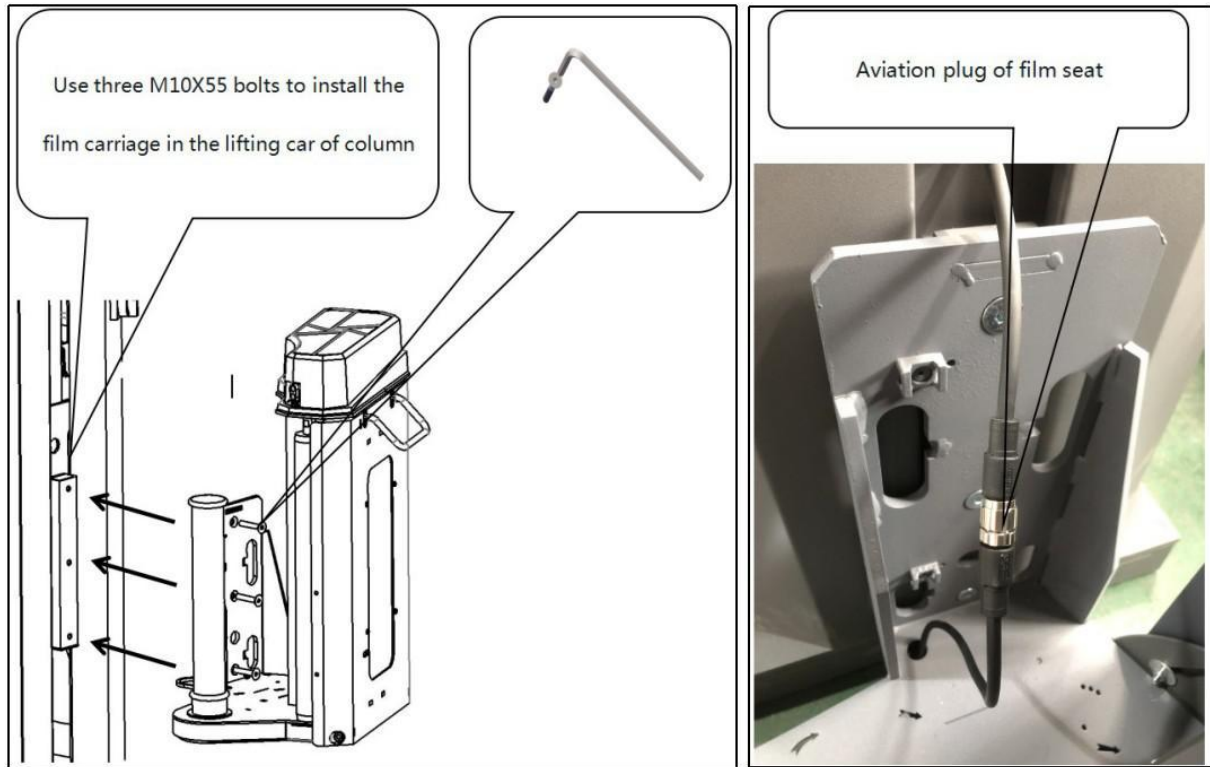


Figure 4.5.3.2

(4) Rotate the main power switch clockwise, raise the film holder to a suitable height with manual mode, rotate the main power switch counterclockwise, and turn off the machine.

(5) Install the film tensioning sprocket and connect the film seat film tensioning drive chain, as shown in the following series of figures.



Figure 4.5.3.3 Tensioning chain wheel and chain

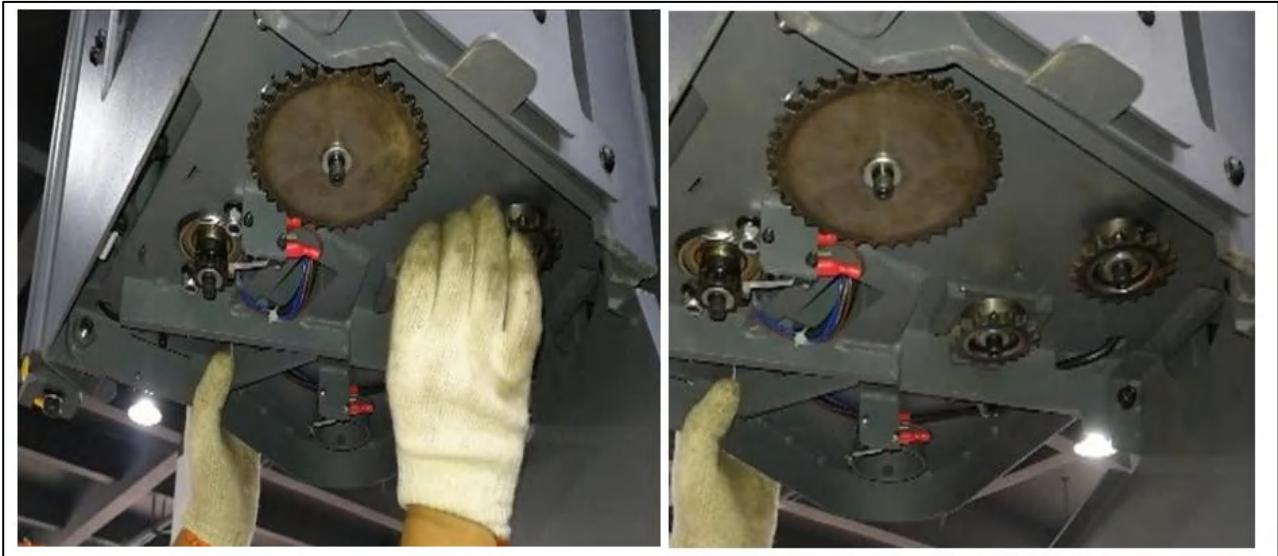
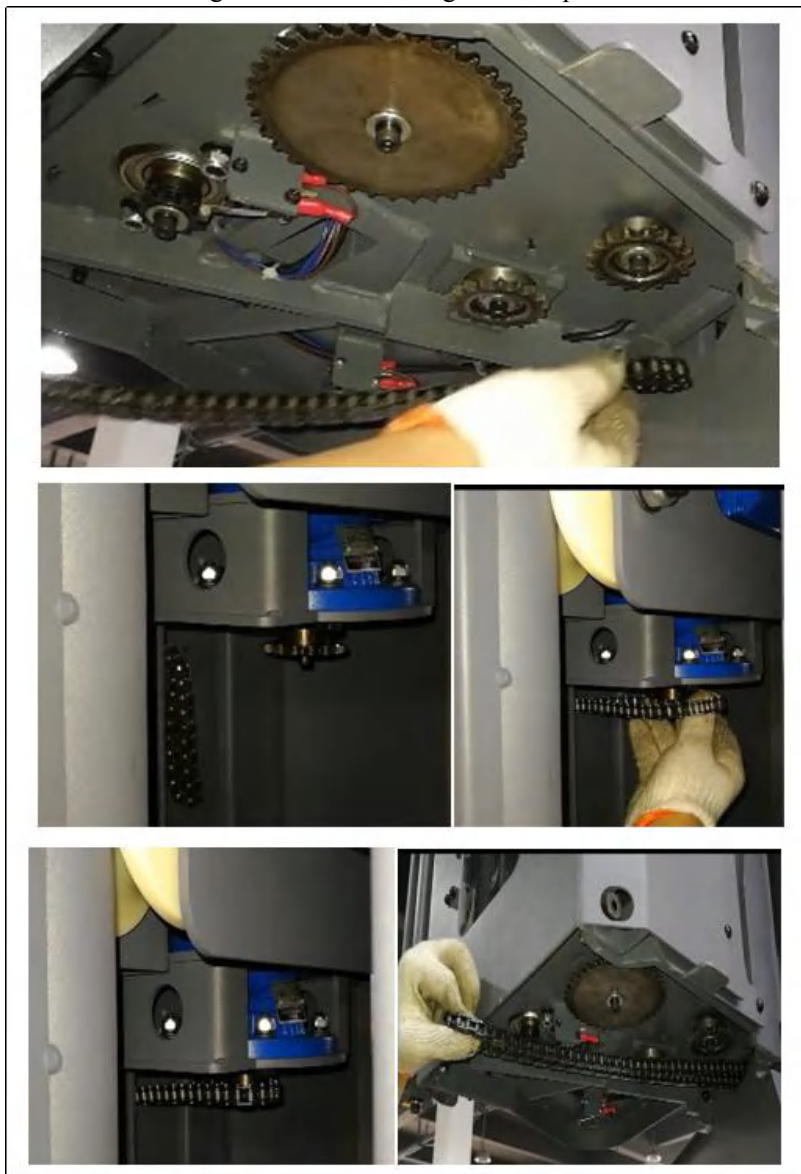


Figure 4.5.3.4 Installing tension sprocket



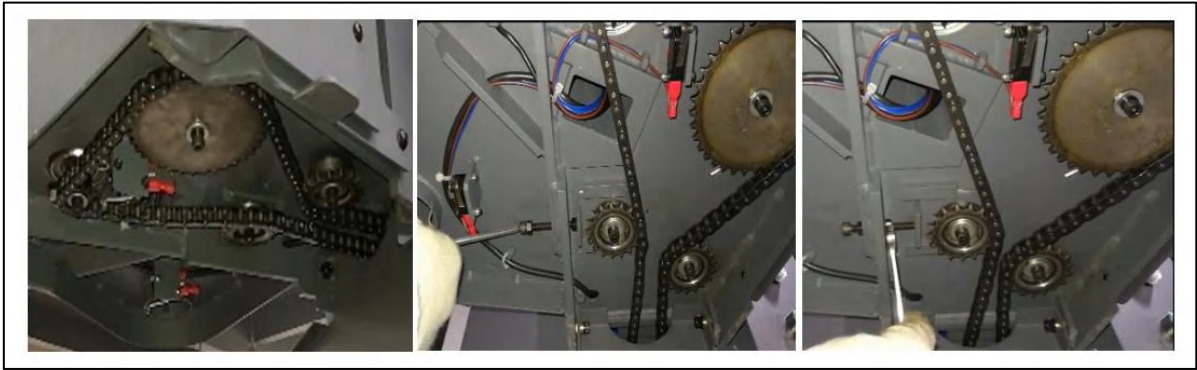


Figure 4.5.3.5 Install drive chain and tighten

(6) Close the membrane seat safety plate and rotate the membrane seat safety plate screw into the elongated hole.

(7) Turn the power on, manually reset the film carriage to the lower limit, then turn off the equipment and disconnect the power.

4.5.4 Column door installation

Schematic diagram of the column door installation process. Note the installation sequence of the door as shown in figure 4.5.4.1

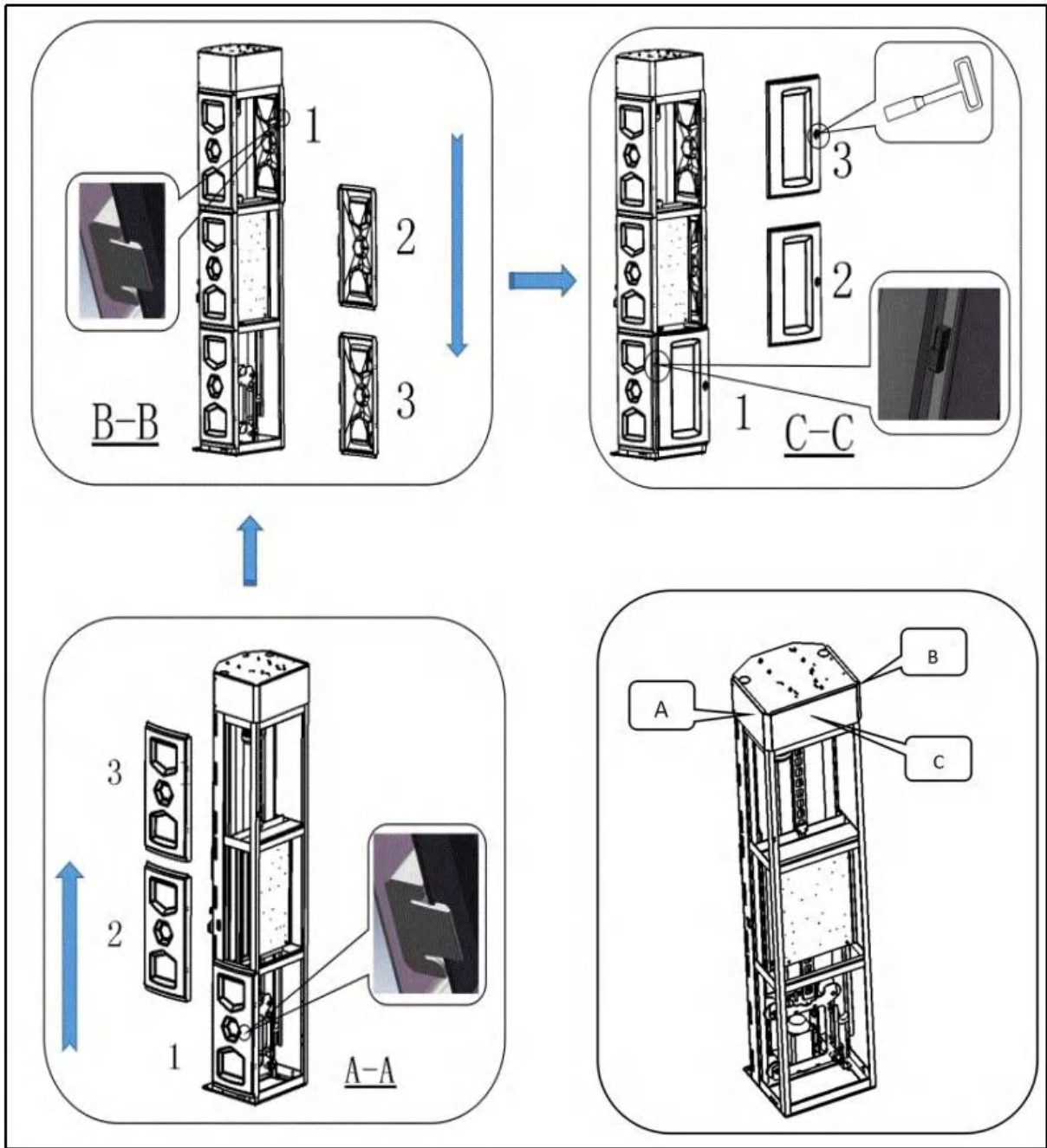


Figure 4.5.4.1

5 Operating instructions

5.1 Safety instructions



Notice

Strictly follow the operating safety procedures (see section 2) and the instructions given in this chapter.

5.2 The task of the operator

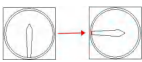
1. Turn on the machine. See section 5.3.
2. Install and replace film. See Section 5.4.
3. Put a pallet on the turntable. See section 5.5.
4. Fix the end of the wrapping film to the pallets. See section 5.6.
5. Select a mode (See section 5.10) or to continue the current packaging mode.
6. Please refer to section 5.7 for starting the wrapping procedure.
7. The machine will complete a completed packaging cycle. When this cycle is completed, the pallet will stop at the original position.
8. Remove the pallet from the turntable.
9. Turn off the machine (see Section 5.8).

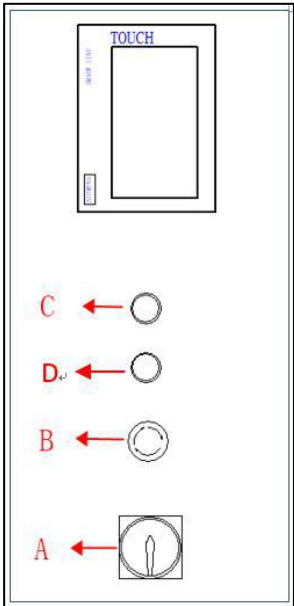


Note: *the above tasks of the operator are performed in accordance with the standard working process.*

Standard working process please refer to the following sections.

5.3 Start the machine

1. Turn the main switch clockwise (A) 
At this point, the power indicator (C) will be on.
2. In case of emergency, press the emergency stop button(B).

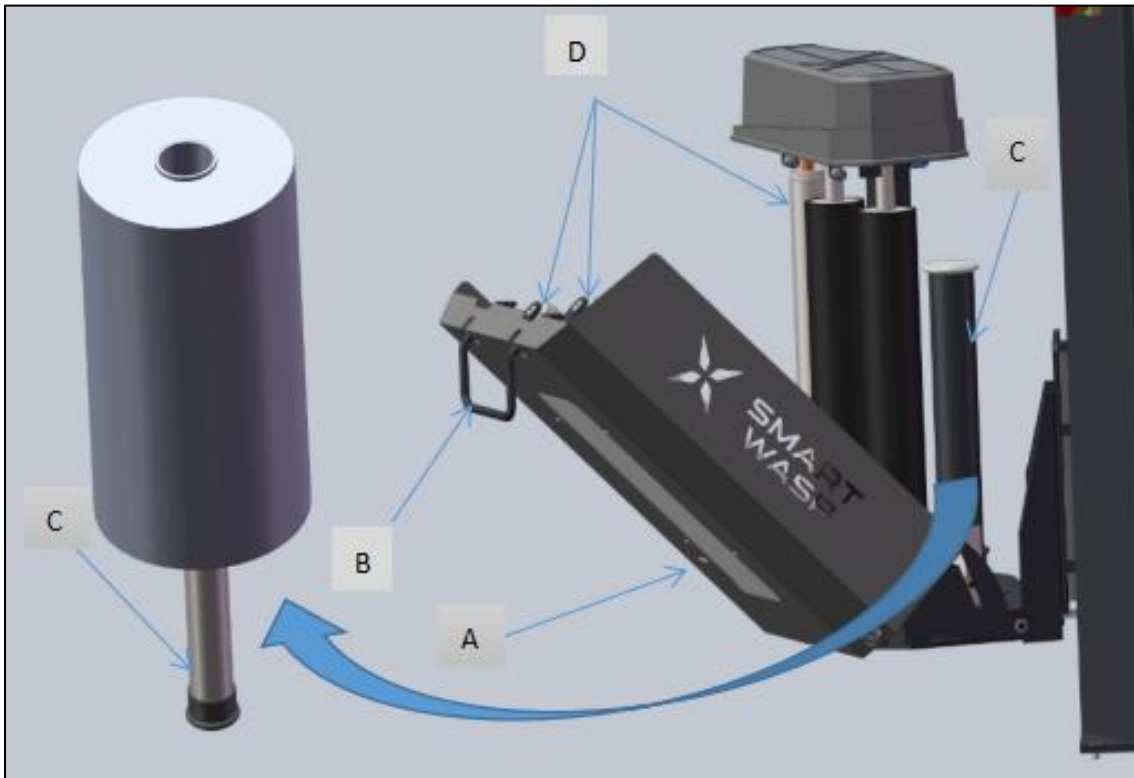


5.4 Install and replace wrapping film



Notice

Please use the same type of film roll as given in section 3.5.1.



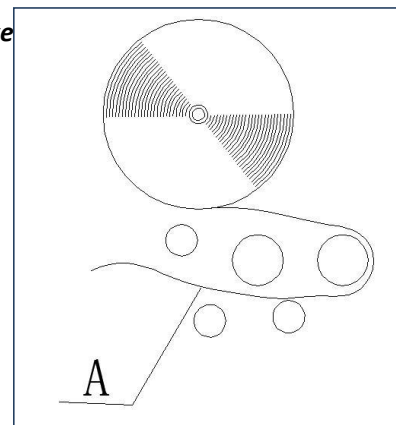
1. Lift the handle (B) up to open the film carriage door (A).
2. Place the stretch film on the film roll holder (C).
3. Pull out the stretch film through the guide roller (D) as indicated on the diagram at the top of the film roll.

Notice



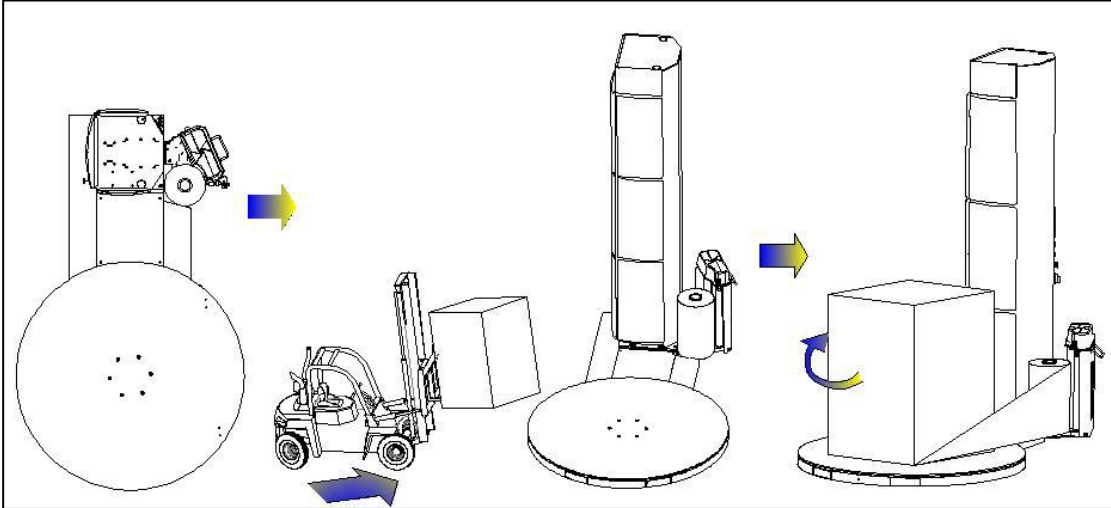
Most types of stretch film have an adhesive surface (A), so called adhesion side. Since the inner side of the pallet must be covered with sticky material, make sure that this side is glued to the surface. If not, place the stretch film as shown on the right picture.

4. Close the film carriage door.
5. Attach the end of the pulled film to the pallet and the machine is now ready to wrap.



5.5 Place pallet instructions

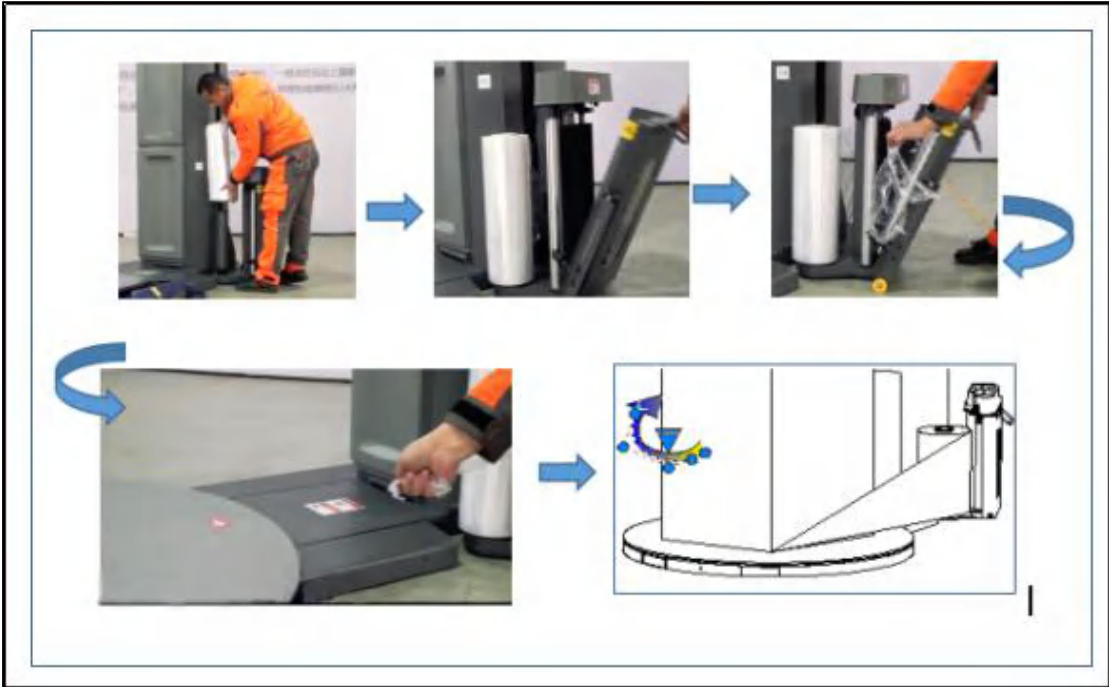
The operation of the standard wrapping machine can be done by an operator, and the basic flow is shown in the following figure.



- 1. Please first make sure there are no people or obstacles within 1 meter of the machine.
- 2. The pallets are transported by forklift to machine and placed it as far as possible in the center of the turntable.

5.6 First put film operation

After the pallet is placed, the wrapping film needs to be manually placed on the machine film roll holder. The operation flow is shown in the figure below.



1. After the film roll is placed, manually stretch the film to a sufficient length.
2. Make the film unfold.
3. Pull out the film and attach it to the pallet, firmly stick or tie it to the bottom of the pallet so that it does not fall when it is rotated.

5.7 Turn on the equipment

1. Check for an error message. See section 7.2.
2. Multiple buttons to start the machine:

- The start button on the column
- The start button on the screen screen

Press the start button and the voice speaker will make a start sound. After 2 seconds, the turntable began to rotate, and as the film holder rose, the pallet was wrapped. At the end of the wrapping cycle, the turntable stops at the original position.

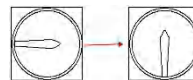


Notice

In the wrapping process, the machine can be paused.

5.8 Turn off the equipment

If you don't use the machine for a long time, please shut down the machine.



Turn the right switch counterclockwise.

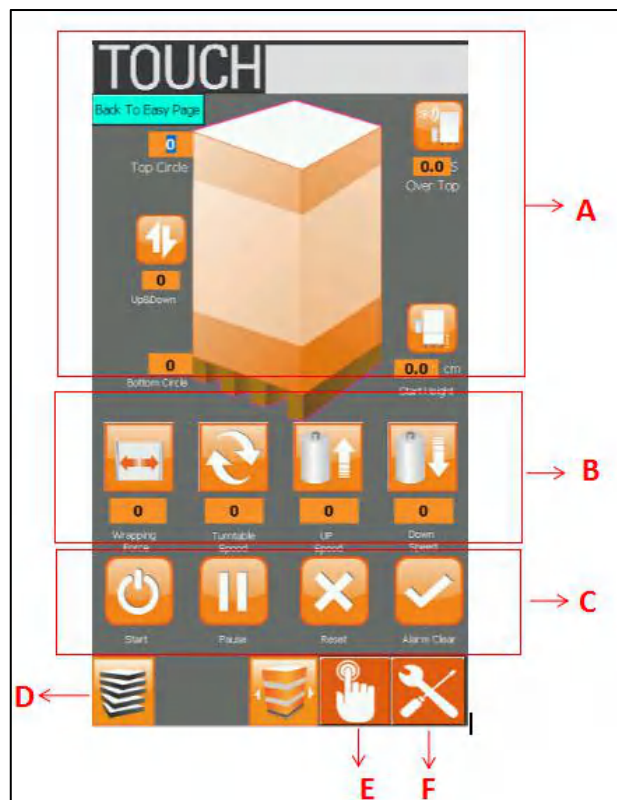
5.9 Touch screen homepage

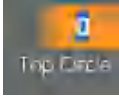
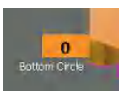







1. Click to “enter the system” to enter the touch screen easy page operation. Normally it is for single layer wrapping.








2. Touch screen password:

• administrator: 131419

• operator: 123456



NO.	Name	Icon	Descriptions in single layer
A	Wrapping mode setting		The wrapping number of stretch film required at the top (reference value is 2)
			The wrapping number of stretch film required at the bottom (reference value is 2)
			The number of times the pallets are wrapped up and down (reference value is 1)
			This value indicates the time to continue rising after detecting the height of the cargo (reference value of 2.5).
B	Speed setting		Wrapping speed: The speed at which the film is released from the film. As the turntable speed increases, the film exit speed also increases to control the film tension (set range 0-100).
			Turntable speed: the rotation speed of turntable(setting range 0-100)
			Up speed: the rise speed of film carriage
			Down speed: the descending speed of film carriage
C	Basic operation		Start: Control machine runs automatically

	button		Pause: pause the current action of the machine. Press any button to end the pause state
			Reset: move the turntable to the original position, and the machine can only be started at the original position
			Alarm clear: Clear alarm when an alarm occurs.
D	Mode selection		Multi-layer control: It has 4 modes. According to the pallet needs, enter different package parameters. Select the corresponding mode before starting. Detail see section 5.16.
			Single layer, which also means easy mode.
E	Manual		Independent control of different parts of the device
F	Setting		The administrator's operation of parameters on controlling device stability.

5.10 Pause packaging (normal stop)

During the packaging cycle, the machine can be temporarily stopped.

1. Press the pause button on the touch screen and the machine will gradually slow down and stop.



2. Restore the package state by pressing any one of the start buttons.

Notice

After pressing the Pause button and starting again, the machine will continue to run from where it left off until the packaging process is completed.

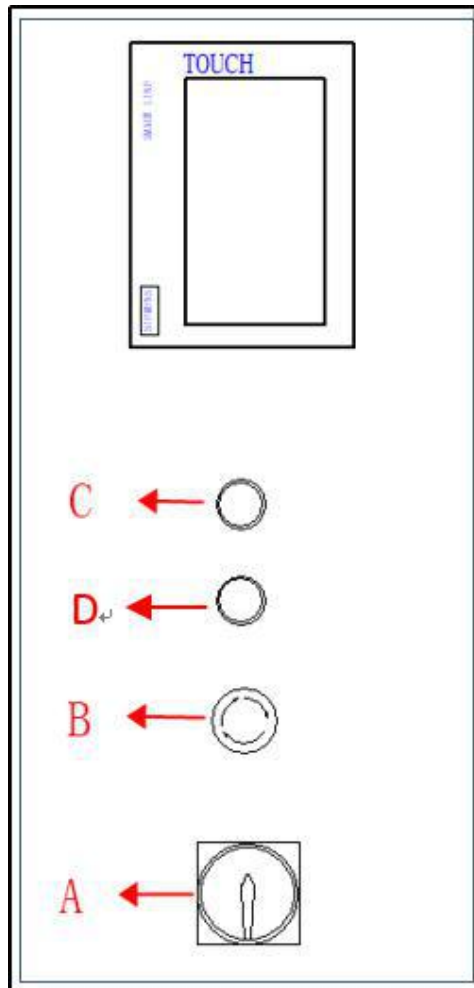
5.11 Stop in automatic mode (emergency stop)

In emergency circumstances:



Press the emergency stop button (B).

The machine will stop immediately and the packaging program will stop.



Notice

After pressing the emergency stop, the packing cycle could not be resumed.

5.12 Reset to the origin position

When the turntable is not at the origin position:

Press the reset button ,

the machine will automatically reset to the home position.

5.13 Select packaging mode

There are single layer and multi-layer to wrap different pallets.

In single layer, there are 5 modes. In multi-layer, there are 4 modes.

5.14 Single layer Page

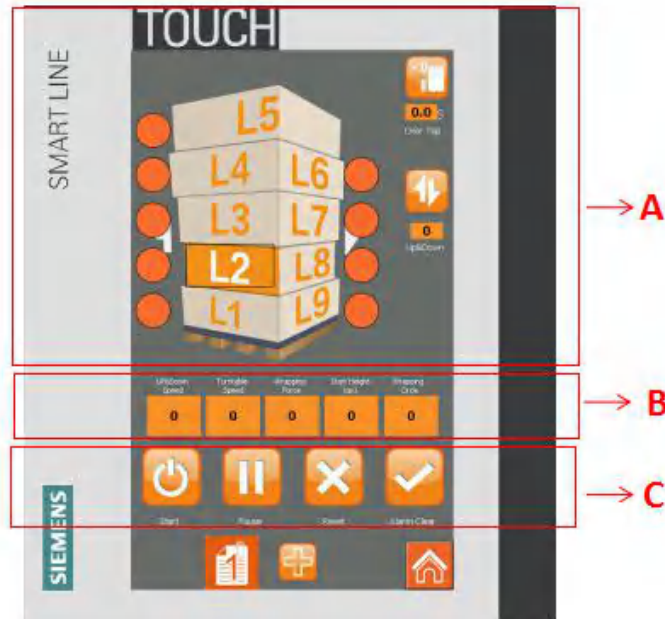
Click  and  can be switched between five modes of single layer.







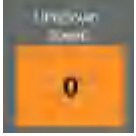
After switching to the selected mode, press the home page to select the automatic wrapping, which is the corresponding mode the operator choose before.

5.15 Multi-layer Control System

1. Touch screen operation interface

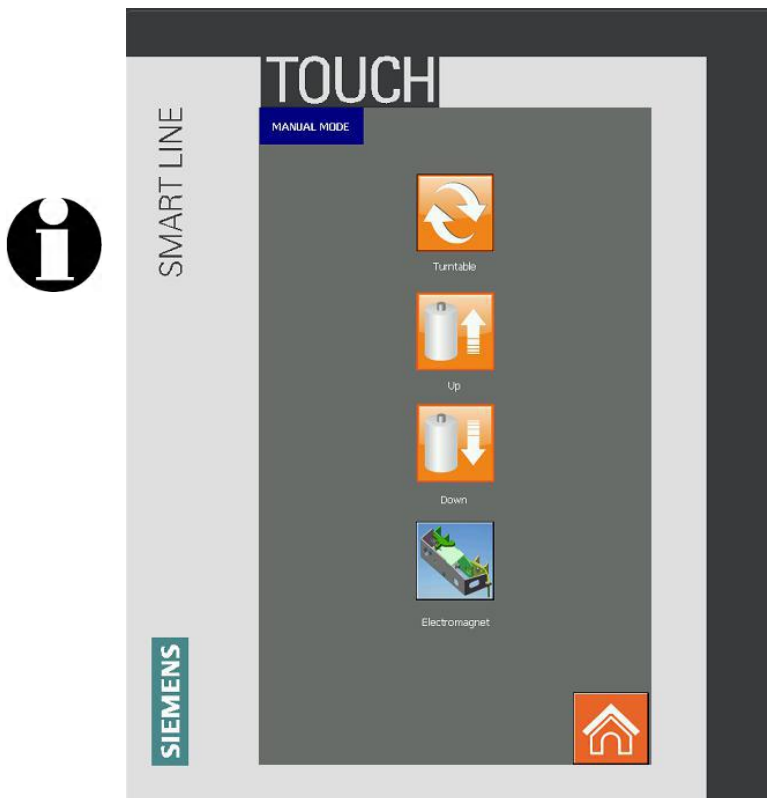


1. Detailed description of the touch screen interface

NO.	Setting	Icon	Description
A	Wrapping mode setting		From L1 to L9, select the corresponding number of layers and set it's speed and height.
			Click to activate the corresponding layer, red is activated
			The number of times the goods are wrapped up and down (reference value is 1)
			<ol style="list-style-type: none"> When it is 0, the starting height set by L5 is the highest height. When it is not 0, the height of the cargo is automatically detected. This value indicates the time to continue rising after detecting the height of the cargo (reference value of 2.5).
B	Corresponding layer parameter setting		Film carriage rise or fall speed (setting range 0-100)




			Turntable speed: turntable rotation speed (setting range 0-100)
			Tension of film (setting range 0-100)
			Height setting of corresponding layers (unit CM) L1-L5 height increases layer by layer, L5-L9 height decreases layer by layer
			Set wrapping number of corresponding layers
C	Basic operation button		Start: Control machine runs automatically
			Pause: pause the current action of the machine. Press any button to end the pause state
			Reset: move the turntable to the original position, and the machine can only be started at the original position
			Alarm clear: Clear alarm when an alarm occurs
	Mode number display		There are 5 cargo modes, showing the current mode number
	Mode switching		Switch between 5 modes

5.16 Manual operation

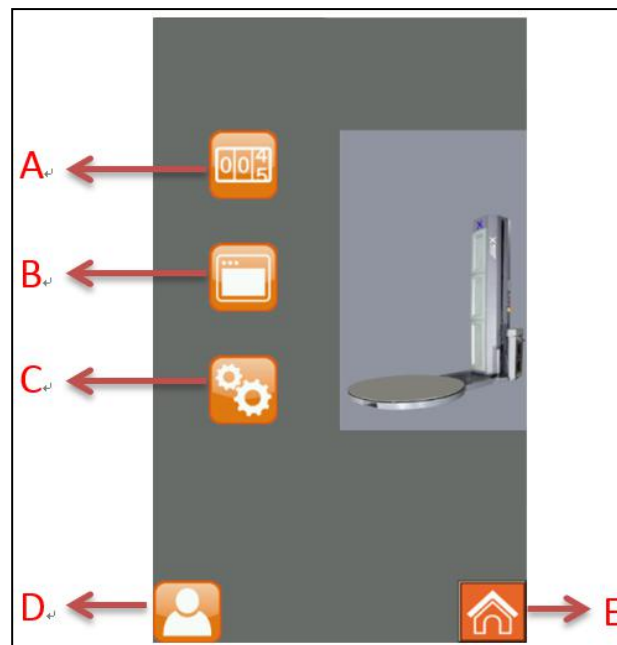


Operate can select manual mode of operation on the screen.

Notice The speed of the machine running in manual mode will run at the speed set on the automatic screen.

1. Click  , enter into the manual page.
2. Press  , the turntable starts to rotate. Press again, the turntable stops rotating.
3. Press  , the film carriage starts to start rise. Press again or touch the upper limit, it will stop rising.
4. Press  , the film carriage starts to descend. Press again or touch the lower limit, it will stop falling.
5. Press the electromagnet  and the blocking piece will spring up.

5.17 Setting overview



NO.	Name	Icon	Description
A	Count statistics		Winding number statistics
B	General setting		Language switching, alarm information, IO monitoring, version information
C	System parameter		Enter this page will require password to prevent the operator from setting it.
D	Password modification		Change or add a password
E	Homepage		Return to the automatic page

6 Maintenance and repair instructions

6.1 Maintenance and repair instructions



Notice

Strictly follow the applicable safety instructions during maintenance (see section 2.2.10) and the instructions given in this chapter.

6.2 Maintenance preparation

·Please follow the general safety instructions.

Before starting any maintenance work (or cleaning):

- Turn off the machine
- Remove the power plug
- Wait at least two minutes

6.3 End maintenance check

1. After the maintenance work is completed, please reactivate or enable (temporarily) disable the features of the security facility immediately.
2. After cleaning the machine, please check whether the safety facilities function can be used normally before production.

6.4 Maintenance schedule

Maintenance Tasks	chapters and sections	Maintenance interval			
		Daily check	Monthly Check	Annual inspection	Check every 3 months
Check the function of the safety facility	6.5	√			
Cleaning machine	6.6		√		
Cleaning the drum on the membrane seat	6.7		√		
Lubricate the film carriage drive chain	6.8				√
Check whether the cloth belt on the upright post is worn	6.9				√
Lubricate the belt bearing seat	6.10				√
Lubricate the turntable drive chain	6.11				√

Check the tension of the drive chain in the column	6.12				√
Check the wheel of the turntable	6.13			√	

6.5 Check the function of safety facilities



Notice

Please be extremely careful with the machines that need to be run during the inspection of safety facilities.

1. Check that all safety labels and instructions are legible.
2. Check whether the wire is damaged.
3. Please check the following facilities.
 - Emergency stop button (Please see section 2.5.2) ;
 - Safety switch for film carriage door (Please see section 2.5.3) ;
 - Safety film carriage button anti-drop device

6.6 Cleaning machine

1. Check that the device is safe, see section 6.2.
2. Clean the machine with a dry cloth or a mild detergent.



Notice

Do not use solvent, gasoline and other items cleaning machine

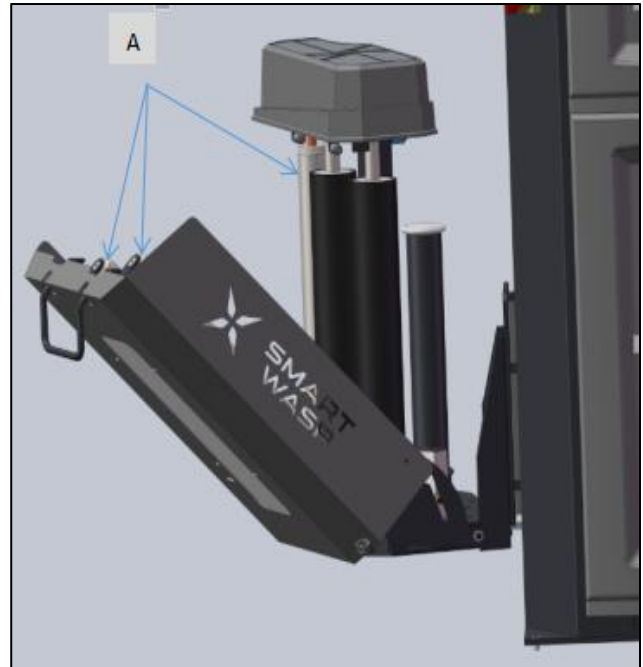
6.7 Clean the roller on the film carriage



Notice

Some types of film leave a layer of adhesive on the surface of the drum, which causes the film to slide on the drum.



1. To check that the device is safe, see section 6.2.
2. Rubbing the surface of the drum (A) with alcohol will restore adhesion between the drum and the film.



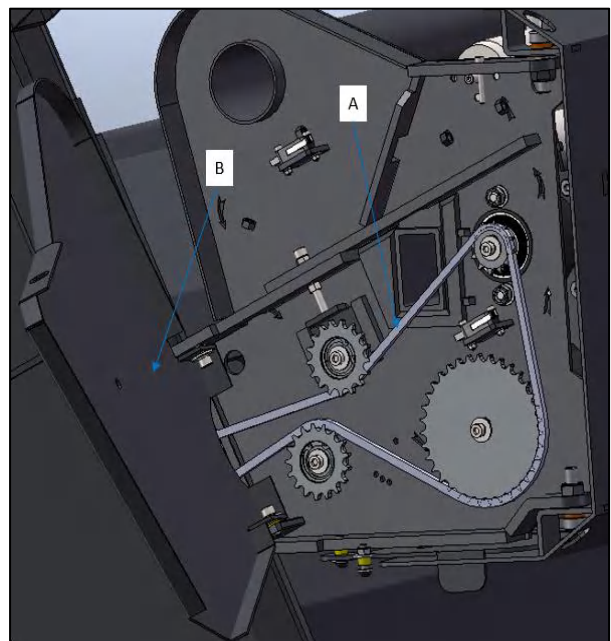
6.8 Lubricate film carriage bottom drive chain



Notice

Before leaving the factory,  lubricating oil has been added to the drive chain of the film seat. Lubricating oil  is still needed for long-term use.

1. Please refer to section 6.2 to check that the device is safe and correct.
2. Raise the film carriage to a suitable height and open the bottom safety plate (B).
3. Lubricate the drive chain with chain grease (A).
4. Close the bottom safety board (B).



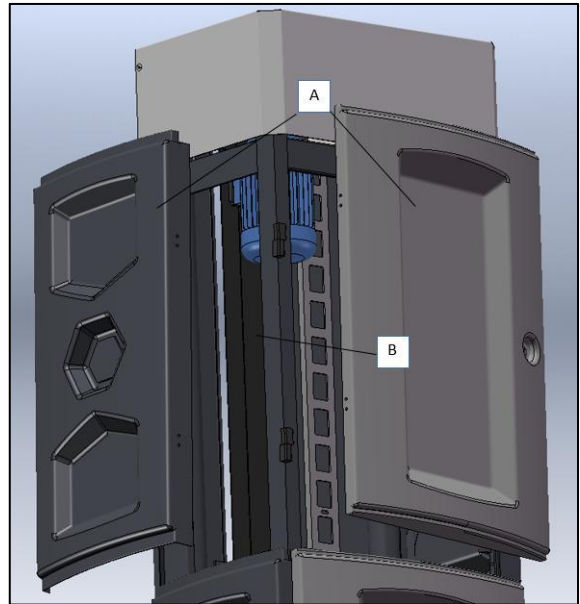
6.9 Lubricate film carriage bottom drive chain



Notice

If the belt on the column is severely worn or cracked, please replace it immediately.

1. Check that the system is safe and correct, please refer to Section 6.2.
2. Open the top coaming and open the door plate. Please refer to the door plate (A) installation in the transportation and installation instructions for the removal process.
3. Check the degree of wear of the belt (B), whether there is a crack.





6.10 Lubricate the belt bearing seat

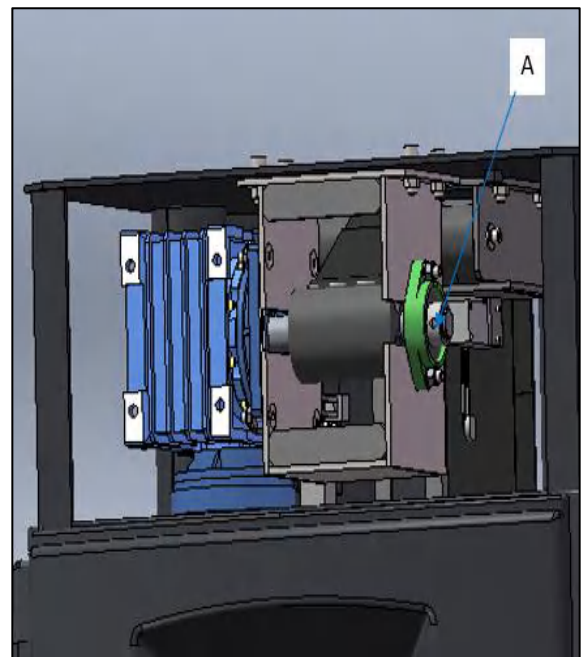
Notice



If the belt on the column is severely worn or cracked, please replace it immediately.



Before leaving the factory,  lubricating oil has been added to the bearing block of the column.  Lubricating oil is still needed for long-term use.

1. Check that the system is safe and correct, please refer to Section 6.2.
2. Open the top coaming and open the door plate. Please refer to the door (A) installation of column in the transportation and installation instructions for the removal process.
3. Add lubricating oil to the filling port of the bearing seat (A) of the lifting power frame.

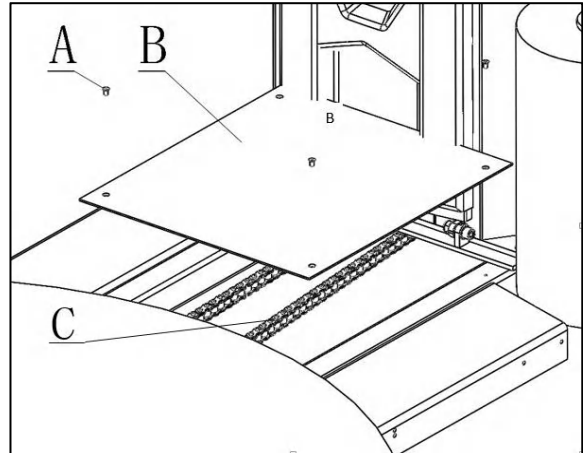


6.11 Lubricate the turntable drive chain



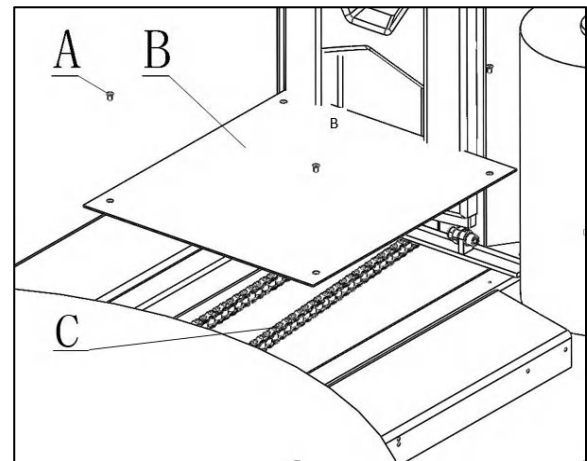
Before leaving the factory,  lubricating oil has been added to the drive chain of the film seat. Lubricating oil  is still needed for long-term use.

1. Check that the system is safe and correct, please refer to Section 6.2.
2. Loosen the fastener (A).
3. Remove the chain cover (B).
4. Remove the chain cover (B).
5. Install the chain cover.

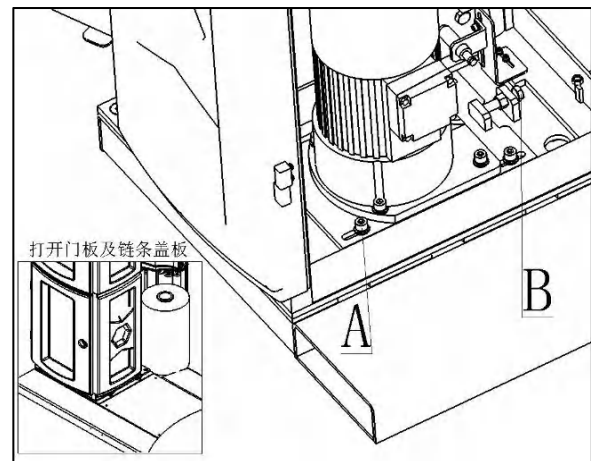


6.12 Check the chain tension of the turntable drive chain

1. Check that the system is safe and correct, please refer to Section 6.2.
2. Loosen the fasteners (A) on the chain cover (B).
3. Remove the chain cover (B).
4. Check the tension of the drive chain (C).

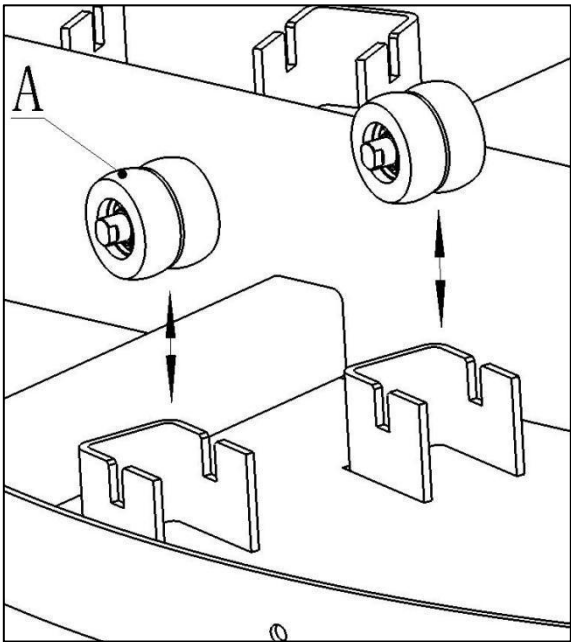
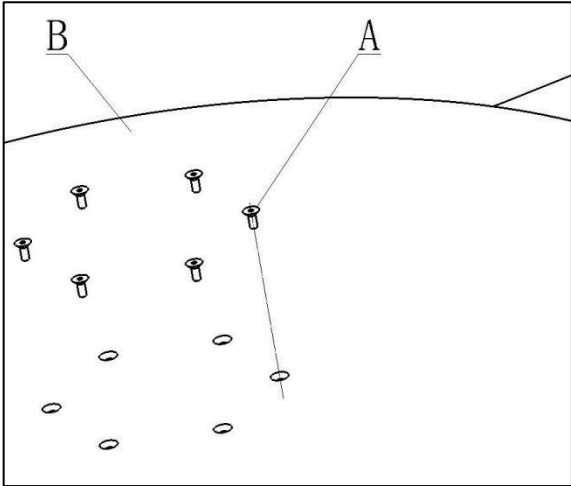


5. Open the door of the column.
6. Loosen the four fasteners of the motor mounting plate weldment (B).
7. Adjust the chain tension with the chain tension bolt (B).
8. Tighten the four fasteners (A).
9. Check the tension of the drive chain again.
10. After the adjustment is complete, operate in reverse order, reinstall the removed parts.



6.13 Check the wheel of the turntable

1. Check that the system is safe and correct, please refer to Section 6.2.
2. Loosen the six fasteners of the motor mounting plate weldment (A).
3. Remove the turntable (B) .
4. Check the condition of the lower wheel (A).
5. Replace wheel assembly.
6. After the adjustment is complete, operate
7. in reverse order, reinstall the removed parts.



7 Troubleshooting instructions

7.1 Safety precautions



Notice

Strictly observe safety regulations

Please refer to section 2.2.11 for repair and troubleshooting.

7.2 Troubleshoot

7.2.1 Touch screen (HMI) alarm condition description

The possible causes of the alarm information prompted by the touch screen and the solutions to be taken are as follows.

NO.	Problem description	Possible reasons	Solution
1	Lack of material alarm	1) The stretch film is out. 2) Stretch film is broken when the machine is in operation	1) Change film 2) Pull the film out and put it on the goods.
2	Lifting upper limit alarm	The film carriage reaches the upper limit	Manually descend the film carriage
3	Abnormal alarm of anti-pressure switch of film carriage	1) anti-pressure switch press some objects 2) The wire of anti-pressure switch falls off. 3) Anti-pressure switch is broken.	1) Check that there's something under the film seat. 2) Check whether the anti-pressure switch wire is falling off or not. 3) Check whether the anti-pressure switch element is in good condition. 4) Press the anti-pressure switch at the same time to observe whether the

			PLCI1. O is on or not, and if not, replace the anti-pressure switch.
4	Belt anti-loose switch abnormal alarm	<p>1) The travel switch is not in the center of the belt.</p> <p>2) The mounting between the membrane seat and the column is not removed.</p> <p>3) The travel switch is broken.</p>	<p>1) Adjust the center of the belt and travel switch</p> <p>2) Remove the mounting parts between the film seat and the column</p> <p>3) Replace travel switch</p>
5	Emergency stop alarm	<p>1) Emergency stop button is pressed</p> <p>2) Emergency stop button is broken.</p>	<p>1) Release emergency stop</p> <p>2) Replace new emergency stop button.</p>
6	Prohibit operation after lifting up to the upper limit	The film seat reaches the upper limit and cannot rise again.	Control the film seat to fall down in manual mode
7	Manually lowering the film carriage, prohibiting rising it.	When the film seat is lowered in manual mode, click on the rise operation.	Do not click rise in manual mode when the film seat is manually go down.
8	Do not click go down in manual mode when the film seat is manually rise.	When the film carriage is going down in manual mode, the operator click on the rise button.	Do not click go down in manual mode when the film seat is manually rise.
9	After the film seat reaches the lower limit, it is forbidden to continue to descend.	The film seat reaches the lower limit when it is manual mode.	The film seat reaches the lower limit when it is manual mode, and cannot continue to descend.
10	Prohibit click start button in touch screen in manual action.	Automatic state start cannot be activated in manual state	Reset first, and then start.

11	Manual mode is prohibited when the machine is running in automatic mode.	Manual mode is prohibited when the machine is running automatically	Wait until the automatic run is complete and then manually operate it.
12	The safety door of the film seat is open.	1) The safety door of the film seat is open. 2) The circuit of proximity switch is damaged.	1) Check that the safety door is closed. 2) Check that the wire is in good condition.
13	Lifting motor alarm	Inverter alarm	Check the inverter code to find the reason
14	Film seat motor alarm	Inverter alarm	Check the inverter code to find the reason
15	Turntable motor alarm	Inverter alarm	Check the inverter code to find the reason
16	Touch screen show “##”.	1) Connection cable is damaged 2) Network cable plug is not plugged in	1) Replace the network cable 2) Check the plug

7.2.2 Description of inverter alarm

The possible causes of the alarm information prompted by the inverter and the solutions to be taken are as follows.

NO.	Fault	Cause	Remedy
1	F1 Overcurrent	<ul style="list-style-type: none"> • Motor power (P0307) does not correspond to the inverter power (r0206). • Motor lead short circuit • Earth faults r0949 = 0: Hardware reported r0949 = 1: Software reported r0949 = 22: Hardware reported	<ul style="list-style-type: none"> • Check the following: • Motor power (P0307) must correspond to inverter power (r0206). • Cable length limits must not be exceeded. • Motor cable and motor must have no short-circuits or earth faults. • Motor parameters must match the motor in use. • Value of stator resistance (P0350) must be correct. • Motor must not be obstructed or overloaded. • Increase ramp-up time (P1120) • Reduce starting boost level (P1312)
2	F2 Overvoltage	<ul style="list-style-type: none"> • Main supply voltage too high • Motor is in regenerative mode r0949 = 0: Hardware reported r0949 = 1 or 2: Software reported	Check the following: <ul style="list-style-type: none"> • Supply voltage (P0210) must lie within limits indicated on rating plate. • Ramp-down time (P1121) must match inertia of load. • Required braking power must lie within specified limits. • Vdc controller must be enabled (P1240) and parameterized properly. Note: Regenerative mode can be caused by fast ramp downs or if the motor is driven by an active load. Higher inertia requires longer ramp times; otherwise, apply braking resistor.
3	F3 Undervoltage	<ul style="list-style-type: none"> • Main supply failed. • Shock load outside specified limits. 	Check supply voltage.

		r0949 = 0:Hardware reported r0949 =1 or 2:Software reported	
4	F4 Inverter overtemperature	<ul style="list-style-type: none"> • Inverter overloaded • Ventilation inadequate • Pulse frequency too high • Surrounding temperature too high • Fan inoperative 	<p>Check the following:</p> <ul style="list-style-type: none"> • Load or load cycle too high? • Motor power (P0307) must match inverter power (r0206) • Pulse frequency must be set to default value • Surrounding temperature too high? • Fan must turn when inverter is running
5	F5 Inverter I2t	<ul style="list-style-type: none"> • Inverter overloaded. • Load cycle too demanding. • Motor power (P0307) exceeds inverter power capability (r0206). 	<p>Check the following:</p> <ul style="list-style-type: none"> • Load cycle must lie within specified limits. • Motor power (P0307) must match inverter power (r0206) <p>Note: F5 cannot be cleared until the inverter overload utilization (r0036) is lower than the inverter I2t warning (P0294).</p>
6	F6 Chip temperature rise exceeds critical levels	<ul style="list-style-type: none"> • Load at start-up is too high • Load step is too high • Ramp-up rate is too fast 	<p>Check the following:</p> <ul style="list-style-type: none"> • Load or load step too high? • Increase ramp-up time (P1120). • Motor power (P0307) must match inverter power (r0206). • Use setting P0290 = 0 or 2 for preventing F6.
7	F11 Motor overtemperature	<ul style="list-style-type: none"> • Motor overloaded 	<ul style="list-style-type: none"> • Check the following: • Load or load step too high? • Motor nominal overtemperatures (P0626 - P0628) must be correct. • Motor temperature warning level (P0604) must match.
8	A501 Current limit	<ul style="list-style-type: none"> • Motor power does not correspond to the inverter 	See F1.

		<p>power</p> <ul style="list-style-type: none"> • Motor leads are too long • Earth faults 	
		<ul style="list-style-type: none"> • Small motors (120 W) under FCC and light load may cause a high current 	Use V/f operation for very small motors
9	A502 Overvoltage limit	<p>Overvoltage limit is reached. This warning can occur during ramp down, if the Vdc controller is disabled (P1240 = 0).</p>	If this warning is displayed permanently, check inverter input voltage.
10	A503 Undervoltage limit	<ul style="list-style-type: none"> • Main supply failed. • Main supply and consequently DC-link voltage (r0026) below specified limit. 	Check main supply voltage.
11	A504 Inverter overtemperature	<p>Warning level of inverter heat sink temperature, warning level of chip junction temperature, or allowed change in temperature on chip junction is exceeded, resulting in pulse frequency reduction and / or output frequency reduction</p>	<p>Note: r0037[0]: Heat sink temperature r0037[1]: Chip junction temperature (includes heat sink)</p> <p>Check the following:</p> <ul style="list-style-type: none"> • Surrounding temperature must lie within specified limits • Load conditions and load steps must be appropriate • Fan must turn when inverter is running

		(depending on parameterization in P0290).	
12	A506 IGBT junction temperature rise warning	Overload warning. Difference between heat sink and IGBT junction temperature exceeds warning limits.	Check that load steps and shock loads lie within specified limits.
13	A511 Motor overtemperature I2t	<ul style="list-style-type: none"> • Motor overload. • Load cycles or load steps too high. 	<p>Independently of the kind of temperature determination check:</p> <ul style="list-style-type: none"> • P0604 motor temperature warning threshold • P0625 motor surrounding temperature • Check if name plate data is correct. If not, perform quick commissioning. Accurate equivalent circuit data can be found by performing motor identification (P1900 = 2). • Check if motor weight (P0344) is reasonable. Change if necessary. • With P0626, P0627, and P0628 the standard overtemperature can be changed, If the motor is not a SIEMENS standard motor.
14	A922 No load applied to inverter	No Load is applied to the inverter. As a result, some functions may not work as under normal load conditions.	Check that motor is connected to inverter.

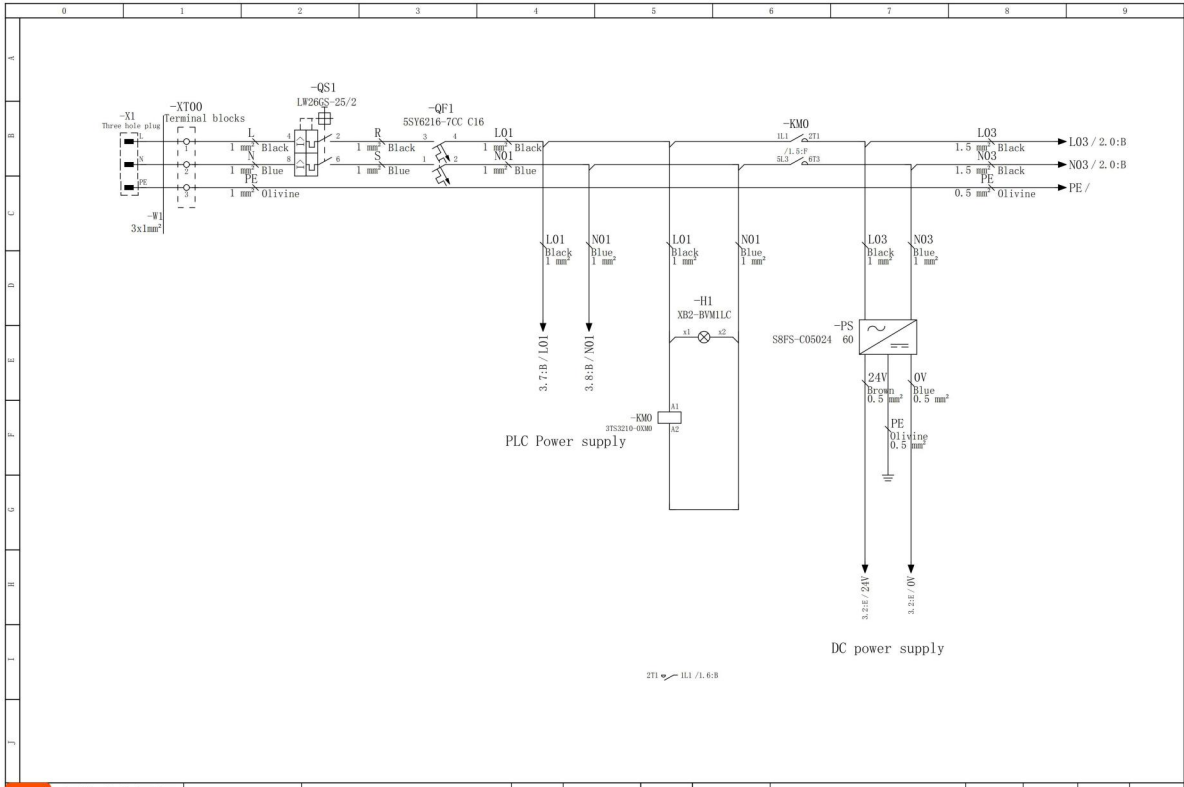
7.2.3 Mechanical common faults and elimination

NO.	Problem description	Possible reasons	Solution
1	The turntable does not rotate after starting.	1. Emergency stop button has been pressed. 2. The chain falls off or breaks	1. Rotate the “Emergency Stop Button” on the operation panel to eliminate the “Emergency Stop Alarm” and the red light at the top will be eliminated. 2. Open the turntable, replace the chain, adjust the chain tension
2	Abnormal noise or difficulty in starting the turntable	1.The machine is placed on uneven ground 2.Bottom roller damaged 3.The chain is short of lubricating oil 4.The goods are overweight	1.Place the equipment on the flat ground and ensure the floor is clean. 2.Reinstall the bottom roller or replace it. 3.Filling of lubricating oil. Details refer to Maintenance instructions. 4.Check if the bottom roller is loose or damaged, check the weight of the load(The goods should be selected within the approved load range, and the detailed range values refer to the technical parameter list.)
3	The turntable has no reset action or the reset is not accurate.	1.The bottom sensor of the turntable is loose and damaged. 2.Power lines were damaged.	1. Adjust the distance between sensor and sensor plate or replace sensor. 2. Check circuit and replace faulty circuit
4	Abnormal noise in film carriage	1.Chain lacks lubricant 2.There are something in the chain.	1.please see section 6 Maintenance and Repair Instructions for details. 2. Clean the matter in the chain
5	The top of the goods can't be packed.	1. Sensor detection position deviation 2. The sensor is damaged. 3. Over top time setting is too short.	1.Adjust the sensor to detect the distance or position 2. Change sensor 3. Increase the times of over top (Please see section 5 Operating Instructions for details.)
6	Film carriage	1. Sensor detection position	1.Adjust the sensor to detect the distance

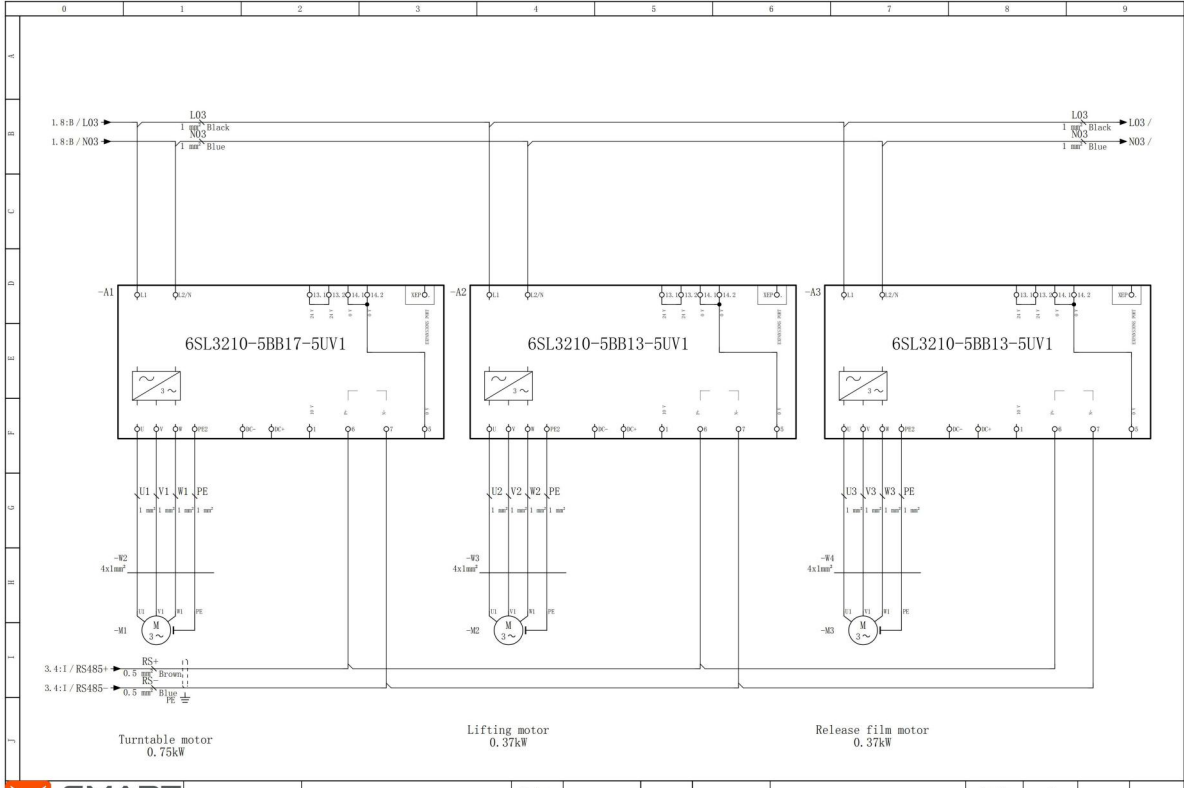
	abnormality	deviation 2. The sensor is damaged. 3. Chains fall off, break, or have something in the chain	or position 2.Change sensor 3.Clean up the things or reinstall the chain
7	Film winding too tight / too loose / broken / have broken hole	1.The film roll is bonded with debris 2.The film release speed is too inconsistent with the turntable speed.	1. Clean the surface of the film roller with alcohol (do not use sharp tools such as a knife to clean it) 2.Adjust the motor speed (Please see 5 Operating Instructions for details)
8	Film carriage roller reverse rotation	1.film carriage power drum reversal 2. The film is not tensioned during operation.	1.Check the circuit and exchange U2/V2 if necessary 2.Tightening film to prevent returning film when operating.
9	No action after the machine starts	1.The power supply is not plugged in. 2.Iverter alarm 3.Emergency stop button has been pressed.	1.Plug in the power plug 2.Press the "OK" button of the inverter. 3.Release emergency stop button

8 Appendix

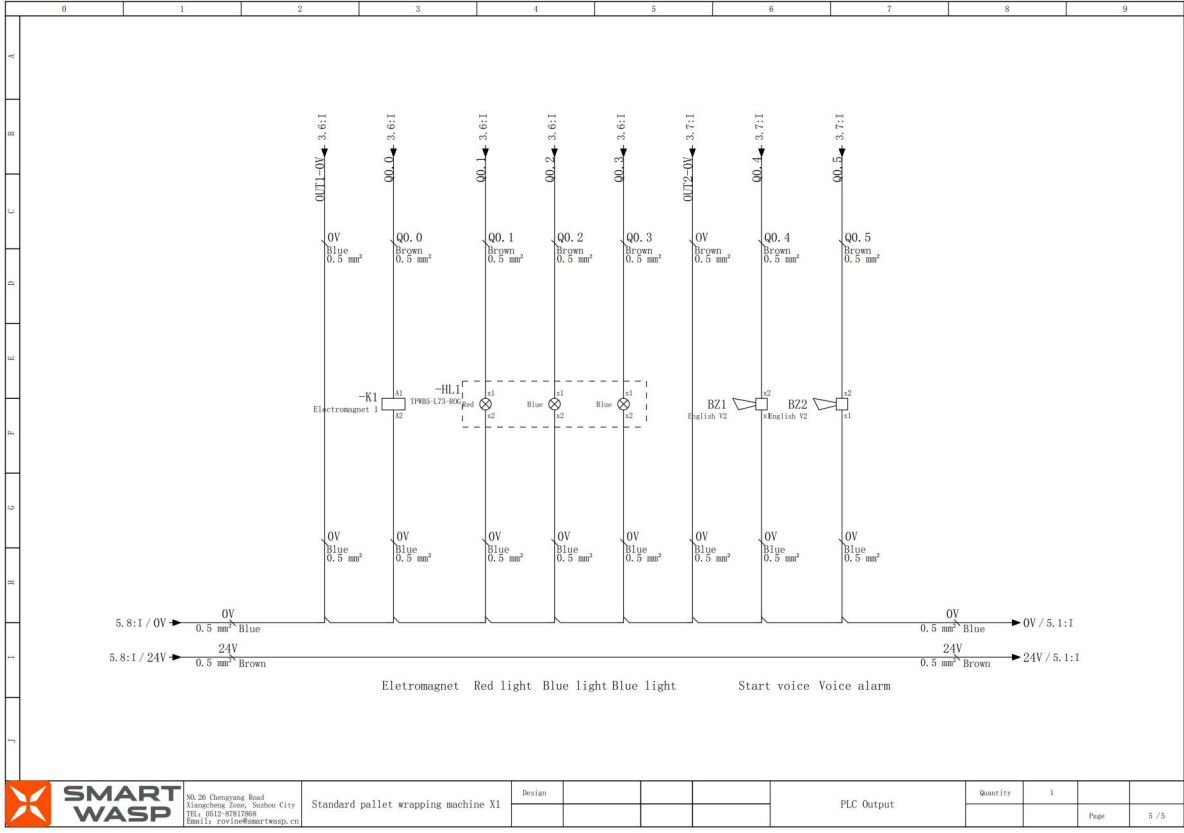
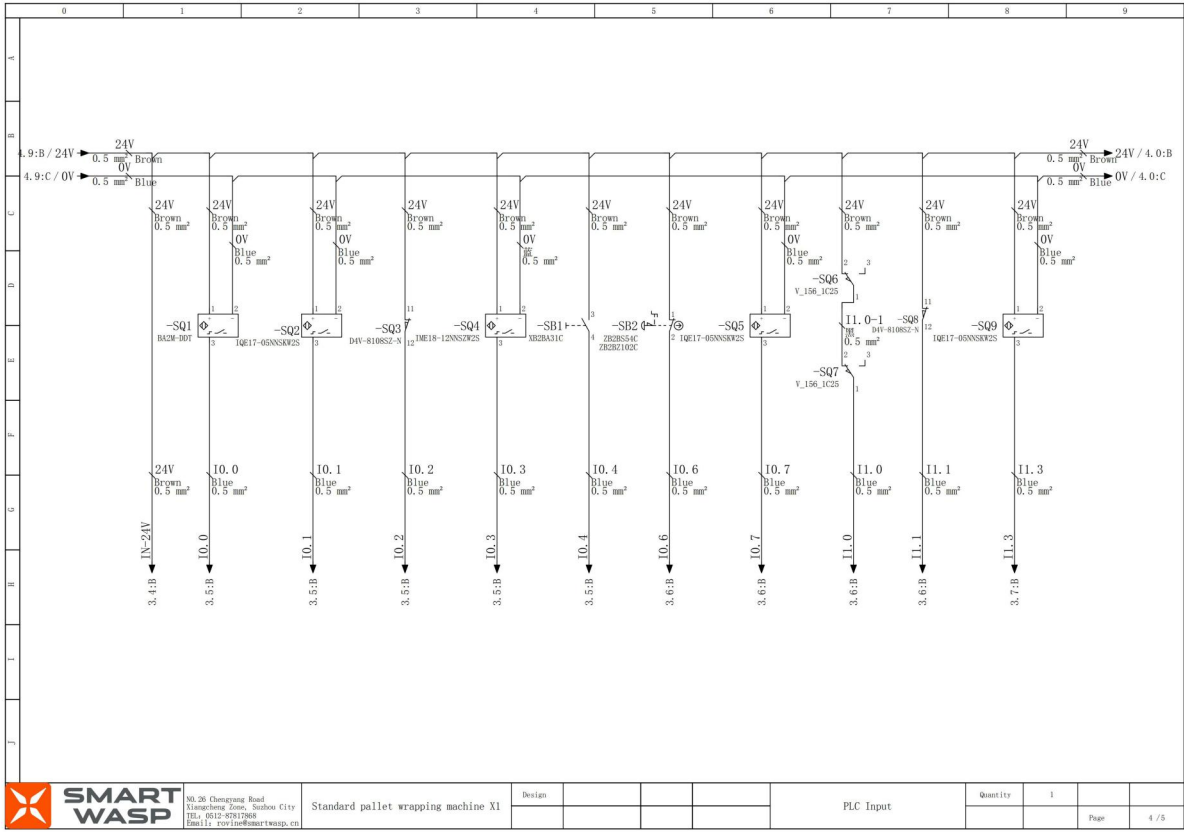
8.1 Electrical principle drawing



	No.28 Chengyang Road Jiangcheng Zone, Suzhou City TEL: 0512-87917868 Email: roryline@smartwasp.cn	Standard pallet wrapping machine X1	Design	Quantity	1	Page	1 / 3
							Main power circuit

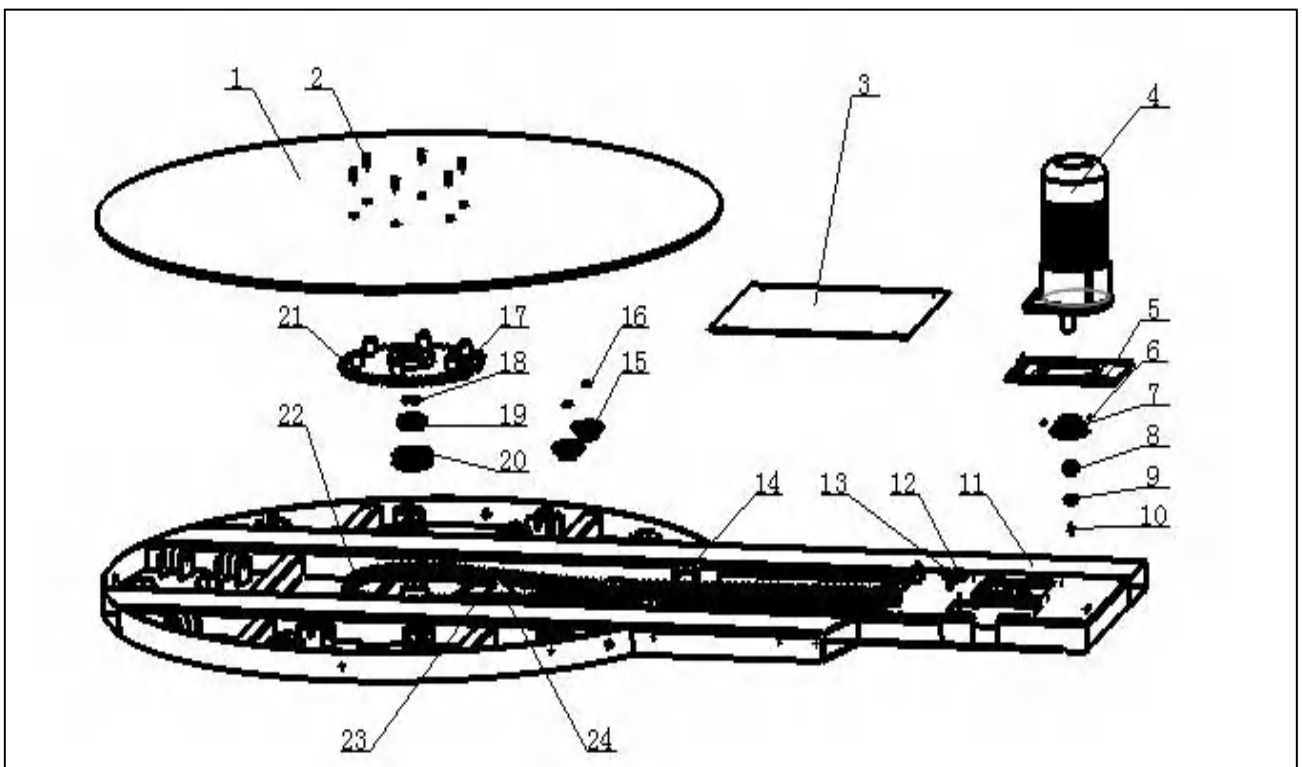
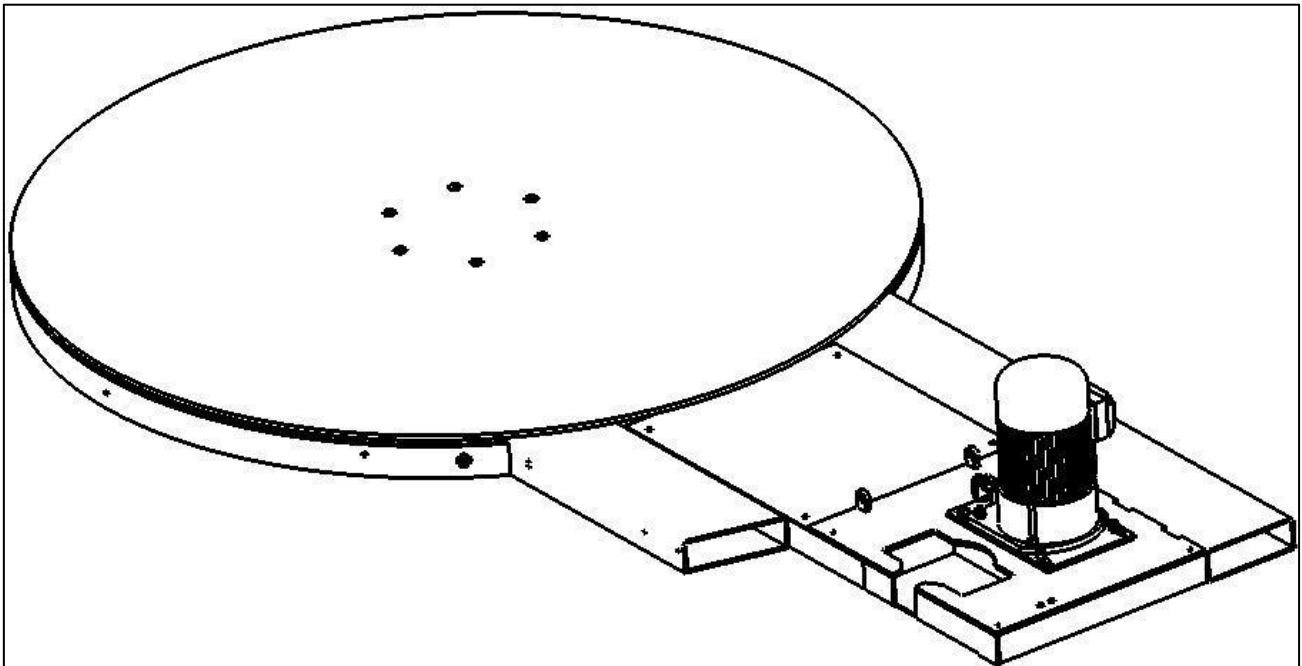


	No.28 Chengyang Road Jiangcheng Zone, Suzhou City TEL: 0512-87917868 Email: roryline@smartwasp.cn	Standard pallet wrapping machine X1	Design	Quantity	1	Page	2 / 5
							Inverter



8.2 Exploded view and the parts list

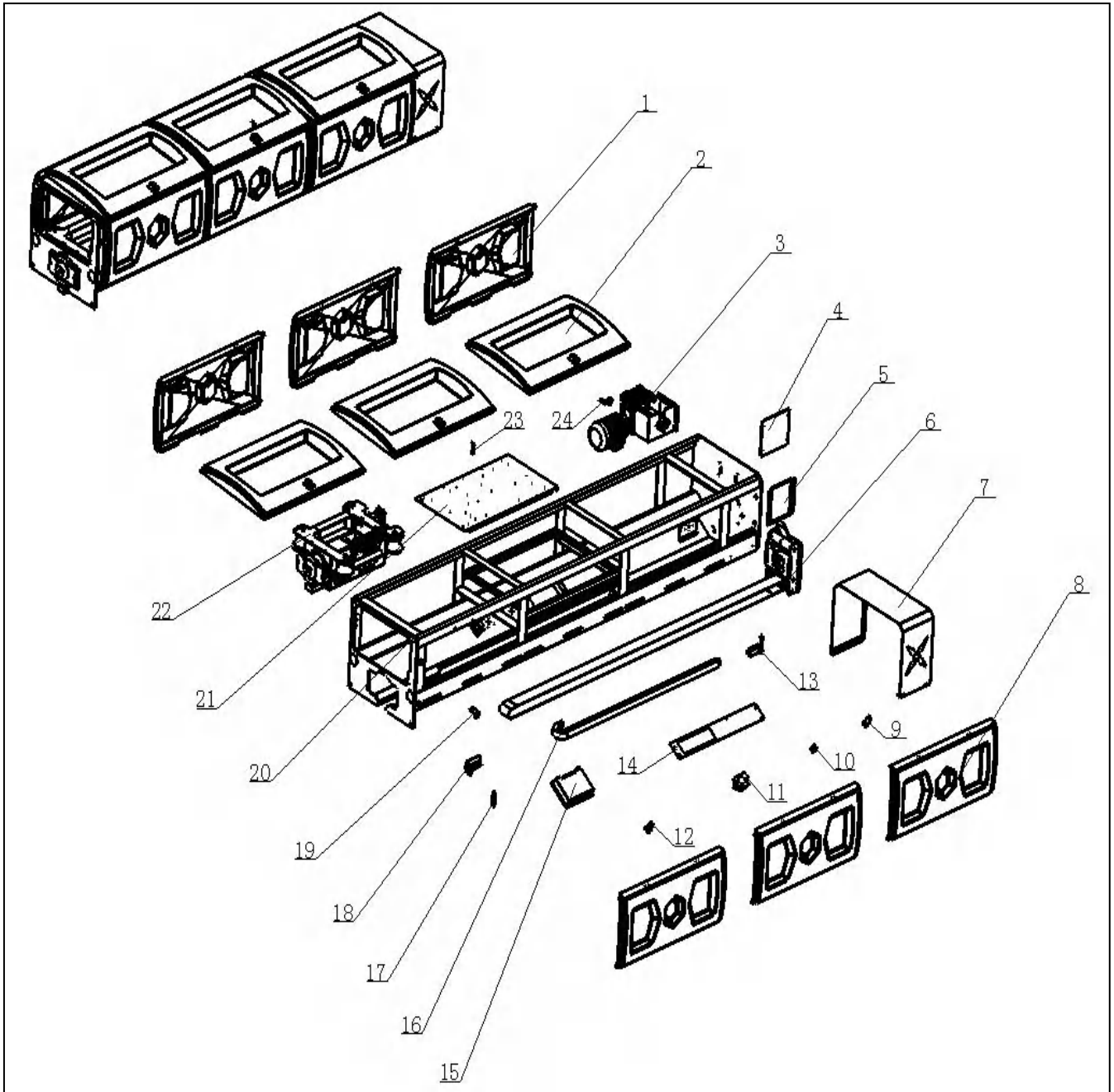
8.2.1 Exploded view and the parts list



NO.	Workpiece number	Workpiece name	Quantity	Specification
1	9XXDA000003	Turntable	1	
2	JJGLD000168	Hexagon socket countersunk head screws M10X25	6	M10X25
3	9XXDA000005	Chain cover	1	
4	JDJL000001	CV vertical aluminum shell geared motor	1	CV-28-750-30S
5	9XXDA000018	Motor mounting plate welding parts	1	
6	JJGLD000233	Hexagon socket plain end set screw M6×12	2	M6X12
7	9XXDA000009	Turntable drive sprocket	1	
8	9XXDA000007	Sleeve	1	
9	9XXDA000008	Gland	1	
10	JJGLD000152	Hexagon socket countersunk flat cap head screw M8X16	1	M8X16
11	9XXDA000021	Turntable base weldment	1	
12	JJGLS000090	Outer hexagon head bolt M12X50	1	M12X50
13	JJGLM000008	Hexagon nut M12	1	
14	9XXDA000073	Chassis roller assembly	19	
15	9XXDA000275	Guide sprocket assembly	2	
16	JDQZY000002	Shaft ringΦ20×1	2	Φ20×1
17	9XXDA000006	Bottom induction block	1	
18	JDQZY000001	Shaft ringΦ45×1.5	1	Φ45×1.5
19	JZCSG000015	Deep groove ball bearing 6009	1	6009
20	JZCTL000001	Thurst ball bearings 51213	1	51213
21	9XXDA000014	Turntable sprocket weldment	1	
22	JCDCL000001	Chassis drive chain	1	12A(208 knots - with full buckle - about 3.9M)
23	DKGJJ000001	Proximity switch (normally on)	1	IQE17-05NNSKW2S
24	9XXDA000051	Proximity switch mounting plate	1	

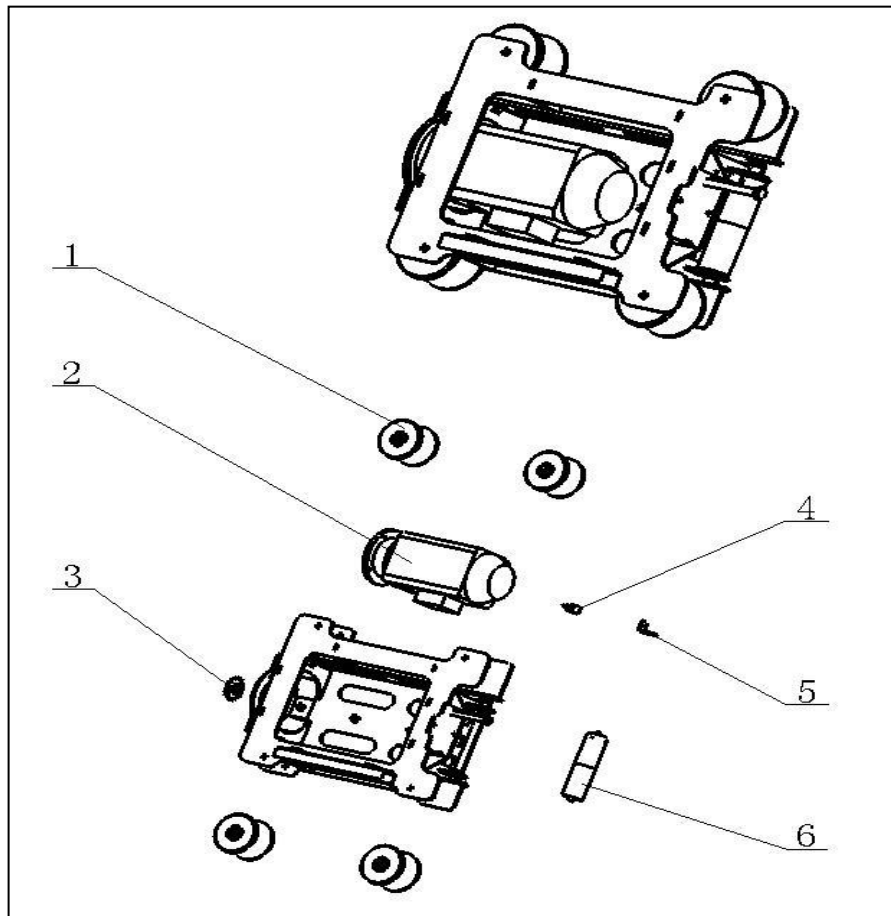
8.2.2 Column exploded view and detail list

1) Column installation exploded view

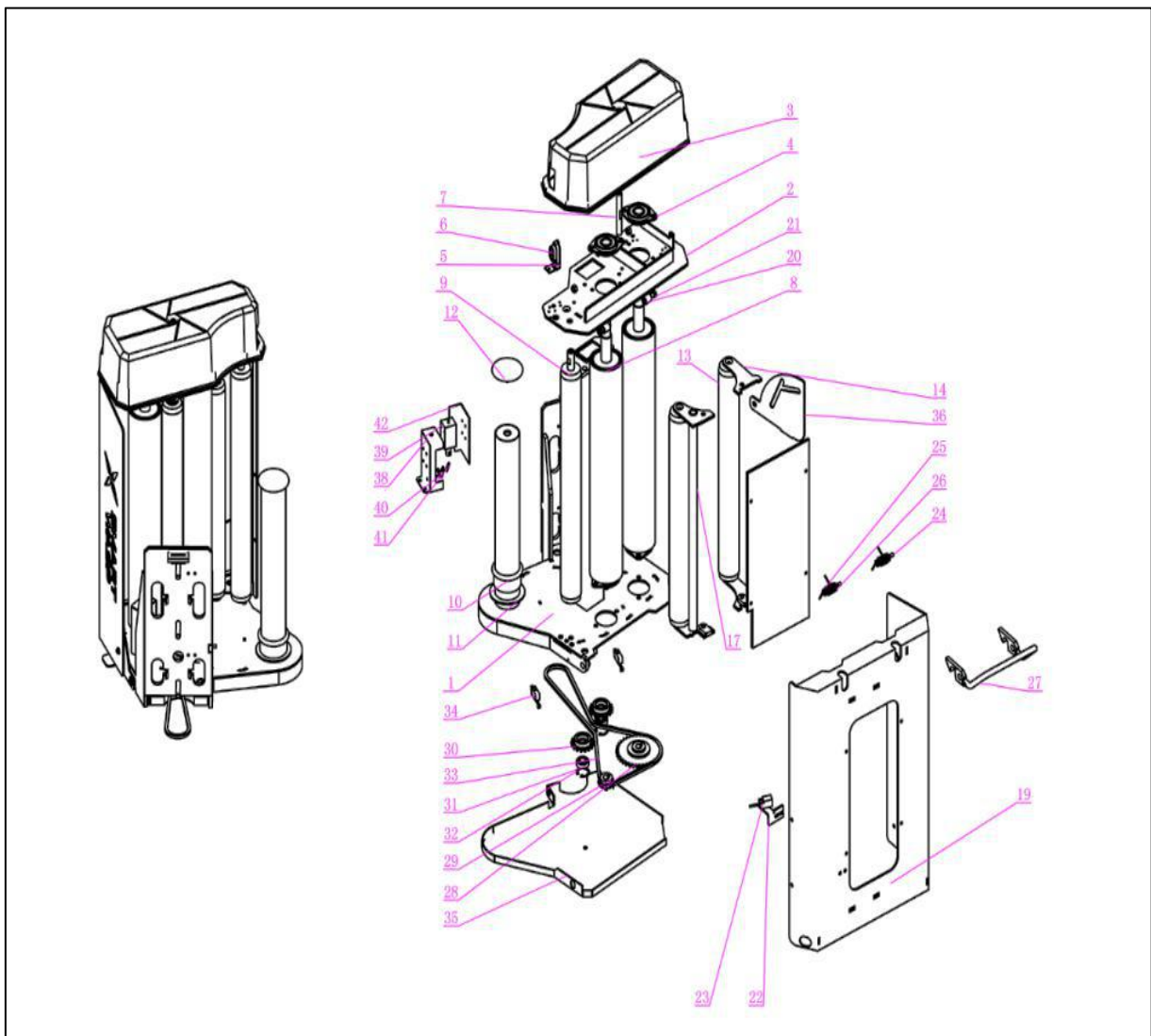


NO.	Workpiece number	Workpiece name	Quantity	Specification
1	9XXLG000273	Side door (new)	3	
2	9XXLG000106	Rear door panel	3	
3	9XXLG000193	Lifting power unit (lifting motor)	1	
4	9XXLG000100	Light guide plate	1	t5 Steel plate
5	9XXLG000101	Light box	1	
6	9XXLG000145	Wheel mechanism	1	
7	9XXLG000168	Top coaming welding piece	1	
8	9XXLG000273	Side door panel (new)	3	
9	9XXD0000042	Power Indicator	1	XB2-BVM1LC
10	9XXD0000041	Start up buttonXB2-BA31C	1	XB2-BA31C
11	9XXD0000043	Load switch LW26GS-25/2	1	LW26GS-25/2
12	9XXD0000044	Emergency stop button	1	XB2-BS42C
13	DKGXZ000001	Travel switch	1	D4V-8108SZ-N
14	9XXLG000095	Electrical cover plate	1	
15	9XXD0000038	Touch screen (SMART 700IE V3)	1	6AV66480CC113A X0
16	JQTQT000002	Tank drag chain	1	18*25-1.5m
17	DKGJJ000008	Cylindrical proximity switch	1	IME18-12NNSZW 2S
18	9XXLG000153	Lower limit switch mounting bracket	1	t3 Steel plate
19	9XXLG000152	Proximity switch frame	1	t4 Steel plate
20	9XXLG000212	2650Siemens column welding parts	1	
21	9XXLG000108	Switchboard	1	t1.5 Steel plate
22	9XXLG000201	Trolley travel mechanism	1	
23	JQTQT000005	Key of door	1	
24	JQTQT000004	Door lock	1	

2) Breakdown diagram of lifting car



NO.	Workpiece number	Workpiece name	Quantity	Specification
1	9XXLG000141	Guide wheel assembly	4	
2	JDJL000004	Lift car motor	1	WB85-AS-LD9-0.37-4P
3	9XXLG000200	Film carriage main power sprocket (18 teeth)	1	45 06B(P9.525)-18z-φ14
4	DKGJJ000001	Proximity switch (normally open)	1	IQE17-05NNSKW2S
5	9XXLG000214	Counting switch mounting bracket	1	Q235B t3Steel plate
6	9XXLG000135	Take-up wheel assembly	1	



8.2.3 Film carriage exploded view and detail list

NO.	Workpiece number	Workpiece name	Quantity	Specification
1	JZCSG000012	Deep groove ball bearing 62002Z	2	6002zz
2	9XXSA000040	Film main frame	1	
3	9XXSA000053	Film carriage top fixing plate	1	
4	9XXSC000009	New style film carriage cover	1	
5	JZCDZ000001	Plummer block SBPFL204	4	SBPFL204
6	9XXSA000134	Photoelectric switch bracket	1	
7	DKGGD000001	Photoelectric switch	1	
8	9XXSC000003	Heightened diaphragm seat guard	1	

		post		
9	9XXSA000005	Film roller	2	
10	9XXSA000138	Film seat guide film roller(L607)	1	
11	9XXSA000056	Film roll bottom sleeve	1	
12	9XXSA000055	Film roll gasket	1	
13	9XXSA000057	Film roll top fixing piece	1	
14	9XXSA000071	Film seat guide film roller(L523)	2	
15	9XXSA000070	Film seat guide film roll upper fixing piece	1	
16	9XXSA000072	Film seat guide film roll lower fixing piece	1	
17	9XXSA000079	Guide roller bracket mounting piece	2	
18	9XXSB000002	Micro-motion roller mounting bracket	1	
19	9XXSA000062	Observation board	1	
20	9XXSA000077	Diaphragm door main plate	1	
21	9XXSA000061	Direct push mechanism roller	2	
22	JJGLD000224	Equal height screwΦ8-L20-M6	2	Φ8-L20-M6
23	9XXSB000006	Proximity switch mount	1	
24	DKGJJ000001	Proximity switch (normally open)	1	IQE17-05NNSKW2S
25	JJGLD000225	Equal height screwΦ8-L35-M6	4	Φ8-L35-M6
26	9XXSA000063	Door handle reset torsion spring	4	丝径φ2
27	9XXSA000014	Brass sleeve for handle shaft	4	
28	9XXSA000068	Film carriage door handle	1	
29	9XXSA000058	Drive from sprocket 1 (35 teeth)	1	06B(P9.525)-35z-φ15
30	9XXSA000127	Drive from sprocket 2(12 teeth)	1	06B(P9.525)-12z-φ15
31	9XXSA000041	tension sprocket	2	06B(P9.525)-12z-φ15
32	JDQKY000001	Hole retaining ringD=30	2	
33	JCDLC000003	Chain 06B	1	
34	DKGWD000001	Micro Switch	2	V_156_1C25
35	9XXSA000009	Security board	1	

36	9XXSA000002	Switch limit plate	1	
37		Membrane seat (with electric cut) X1 final assembly		
38	9XXSD000003	Broken film cover	1	
39	9XXSD000006	Cutting film blade	1	
40	9XXSD000002	Cutting-film connecting rod	1	
41	JQTDC000001	Cutting film electromagnet	1	
42	9XXSD000012	Film carriage cutting bracket welding	1	

8.3 Spare and wearing parts

NO.	Workpiece number	Workpiece name	Specification	Brand	Quantity
1	Cylindrical proximity switch	DKGJJ000008	IME18-12NNSZC OS	SICK	3
2	Proximity switch (normally open)	DKGJJ000001	IQE17-05NNSKW 2S	SICK	2
3	Microswitch	DKGWD000001	V_156_1C25	OMRON	2
4	Bearing package nylon	9XXDI000073	Bearing 6202	SMART WASP	19 sets
5	Film roll gasket	9XXSA000055	Outsourcing according to the picture	SMART WASP	1
6	Film roll sleeve	9XXSA000056	Outsourcing according to the picture	SMART WASP	1