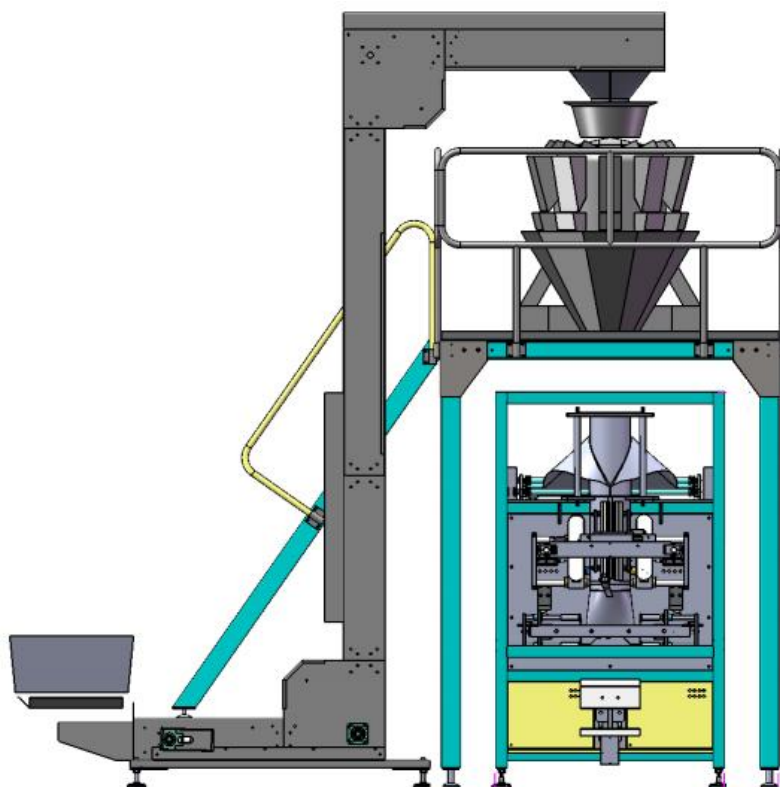


2. 0T-AUTOMATIC WEIGHING

AND PACKING MACHINE

OPERATION MANUAL (SIEMENS)



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1. Preamble

Thank you for choosing SA Packaging Machinery, we dedicate to providing intelligent packaging system to meet the needs of the automatic, To create long-term value and potential growth for customers, Helping global customers and partners succeed.

The manual was created to help users maintain the device.

To ensure the equipment keeps running efficiently 、 stable and creating maximum benefits for users. Here to describe the normal use of the device and the basic maintenance methods

1.1 Safety rules

1. Children do not nearly, All visitors should maintain a safe distance within the operating area.
2. Factories must prevent children from turning on their equipment while playing.
3. Do not overload to operate equipment, let the equipment operate safely at the design speed.
4. Use the correct tool, Do not force modification or additional equipment, This may result in equipment failure.
5. Personnel operating the equipment must wear suitable overalls. Do not wear too loose overalls, ties, accessories, or long hair.
6. Do not allow the device to operate unattended, you should turn off the power.
7. Do not touch the wheel, bearing hair, heat pipe, cutter in the equipment operation, This can lead to injuries and injuries.
8. Never remove or modify warning signs and replace any signs that may cause confusion.
9. Note that the correct access to the power supply voltage, so as to avoid misuse led to electrical burned.

1.2 Application and basic introduction



This equipment to achieve fully automated packaging process:

Manual feeding to storage hopper (Or directly connected to automatic feeding equipment) -vibrating and feeding to →The hoist starts to deliver the material→Combination weigher working →Print the production date→forming bag →filling→exhaust (or Inflation) →sealing→cutting→ finished bag exit conveying ; The full realization of provincial, provincial, efficient automated packaging Process.

Machine application:

Apply to pack of all kinds of food, chemical products, drugs, industrial products, etc

1.3 Precautions

Please read this manual carefully before use:

1. working environment :

temperature: 0 ~ 40°C;

humidity: 35~85%;

voltage: AC 220±5V or 380v±5V 50/60Hz;

Installation Location: horizontal position、 No vibration;

Ground: Safe and reliable、 Independent ground wire;

Sources of interference: Stay away from or shielded

Applications in food packaging must be sterile, dust-free workshop

operation

Attention to rust, corrosion protection when working in Strong acid,

strong

alkaline environment

2. Do not hit or weigh weighing bucket

3. Check and clean up the residual material inside the machine before running

4. Firstly check the access voltage is correct Before the initial operation

5. Must turn off the machine when repairing and cleaning.

6. When the electrical part of the failure, the non-electronic engineers are prohibited from its repair

7. When cleaning, maintenance must pay attention to safety, because the combination of scale, elevator, platform installed above the packaging machine,

there is a distance from the ground

8. Connection with other equipment (such as electronic scales, conveyors, etc.) ,

the DC voltage can not exceed 30V, the load current can not exceed 100mA

9. It is forbidden to touch and open the packing machine safety door when the

machine is running, so as to avoid the injury of fingers and other limbs

10. Do not touch the knife holder, blade or heating part during the operation of the machine to avoid accidents

11. In case of emergency, press the emergency stop button or turn off the main power switch immediately, so that the fault or safety hidden danger is eliminated before restarting

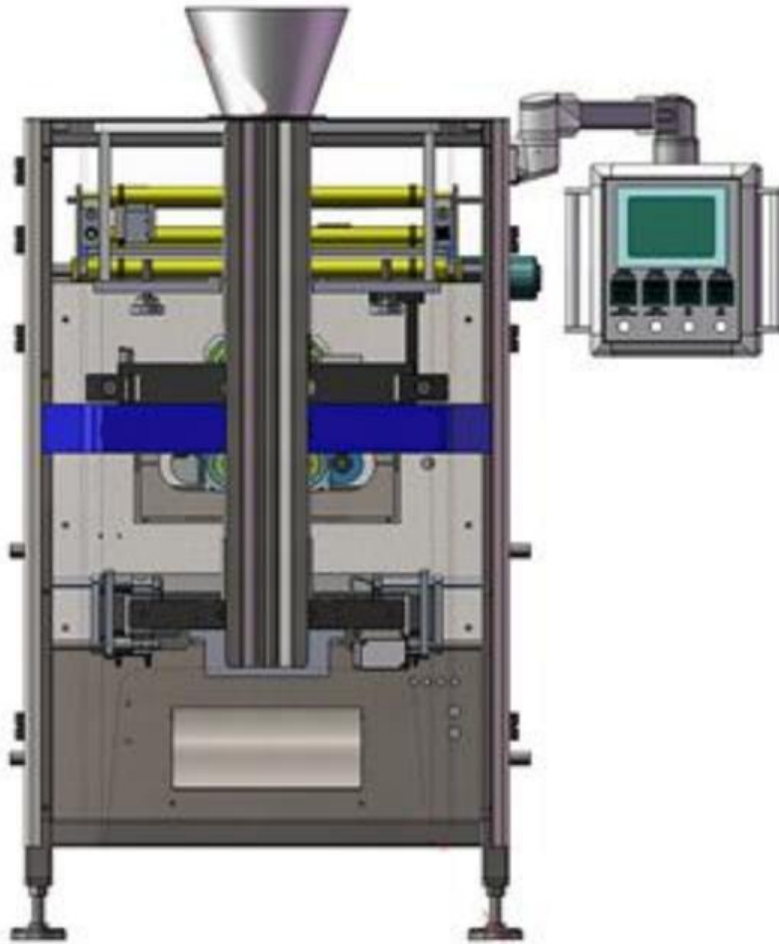
2. Parameters of models

	Model				
	P1-420	P1-520 (2.0T)	P1-720 (3.0T)	P1-850	P1-1050
Voltage	AC220/380 V	AC220/380 V	AC220/380 V	AC220/380 V	AC220/380 V
Power frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Rated current	10 A	12A	15 A	17 A	20A
Power	2.2 kW	2.5 kW	3.0kW	3.5 kW	4.0 kW

Max.film width	420mm	520mm	720mm	850mm	1050mm
Max.bag length	300mm	400mm	480mm	520mm	560mm
Max.volum e	3L	5L	7L	8L	10L
Max.speed	55 bags/min	40 bags/min	28 bags/min	15 bags/min	8 bags/min
Net.weight	500 kg	600 kg	700 kg	800 kg	900 kg
Packaging material	OPP/CPP、 OPP/CE MST/PE、 PET/PE	OPP/CPP、 OPP/CE MST/PE、 PET/PE	OPP/CPP、 OPP/CE MST/PE、 PET/PE	OPP/CPP、 OPP/CE MST/PE、 PET/PE	OPP/CPP、 OPP/CE MST/PE、 PET/PE
Film thickness	0.05-0.12mm	0.05-0.12mm	0.05-0.12mm	0.05-0.12m m	0.05-0.12mm
Hori-seal heating power (4pcs In series)	1200W/220V AC	1200W/220V AC	1200W/220V AC	1200W/220V AC	1200W/220V AC
Verti-seal heating	600W/220VA C	600W/220V AC	600W/220V AC	600W/220V AC	600W/220VA C

power (1 pcs)					
Air pressure	0.65MPa	0.65MPa	0.65MPa	0.65MPa	0.65MPa
Maximu m air consumptio n	0.65m ³ /mi n	0.65m ³ /mi n	0.65m ³ /mi n	0.65m ³ /min	0.65m ³ /min

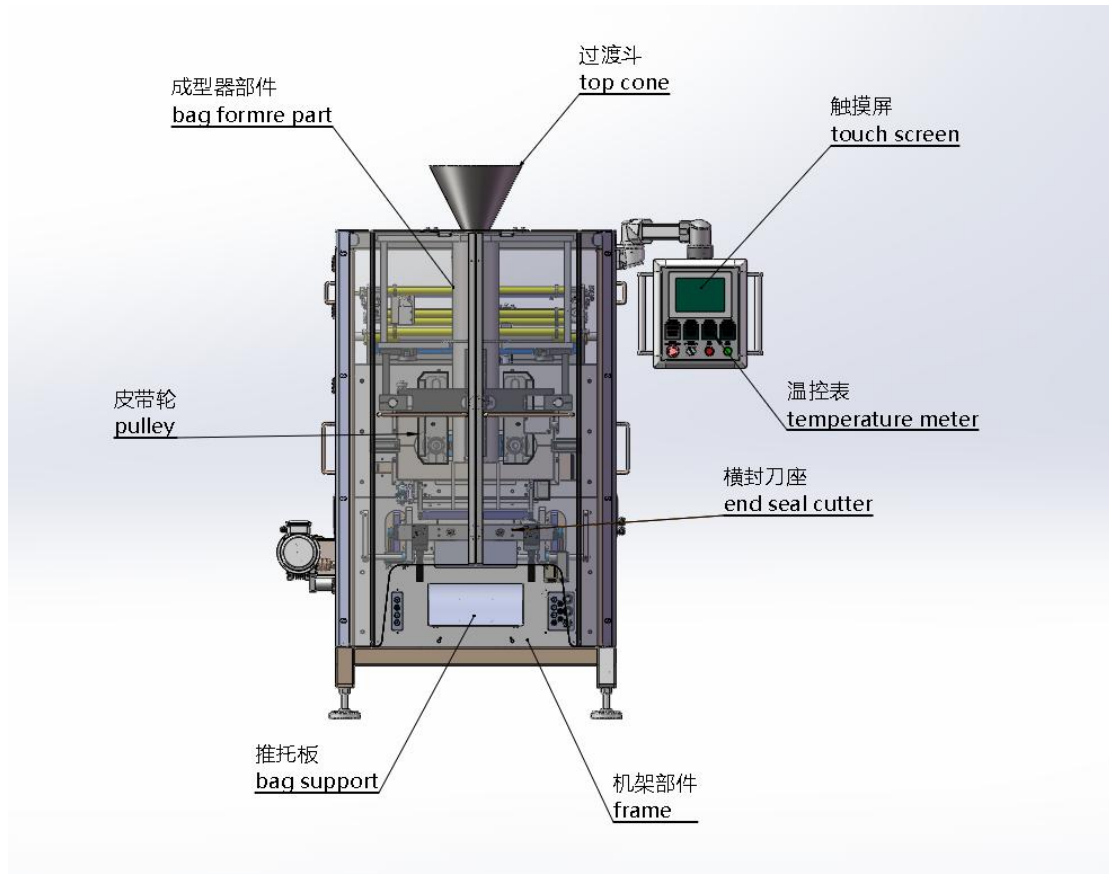
3.Working principle:

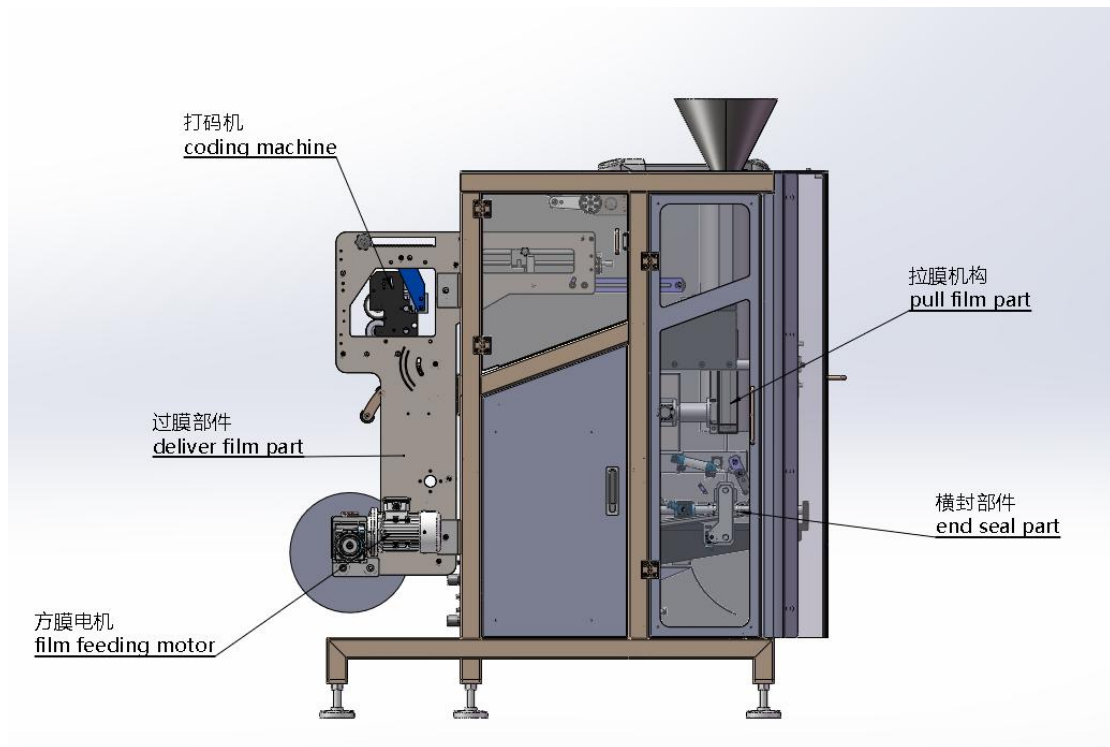


Rolling film → Date print → forming bag → feeding →
exhaust (or inflated) →sealing→cutting off

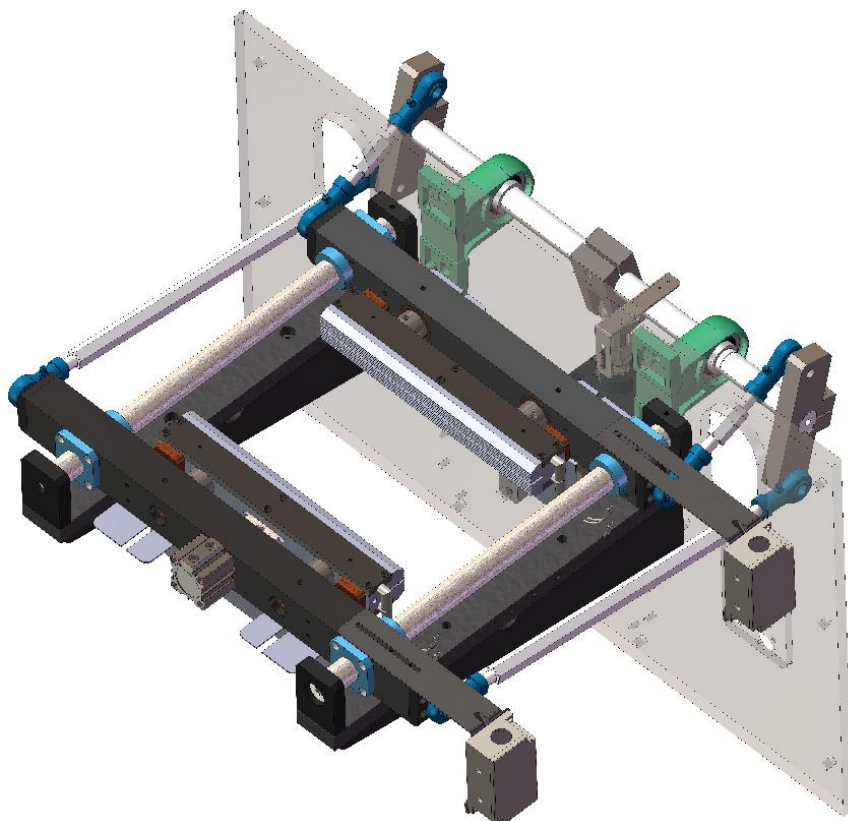
4. Structure dissection

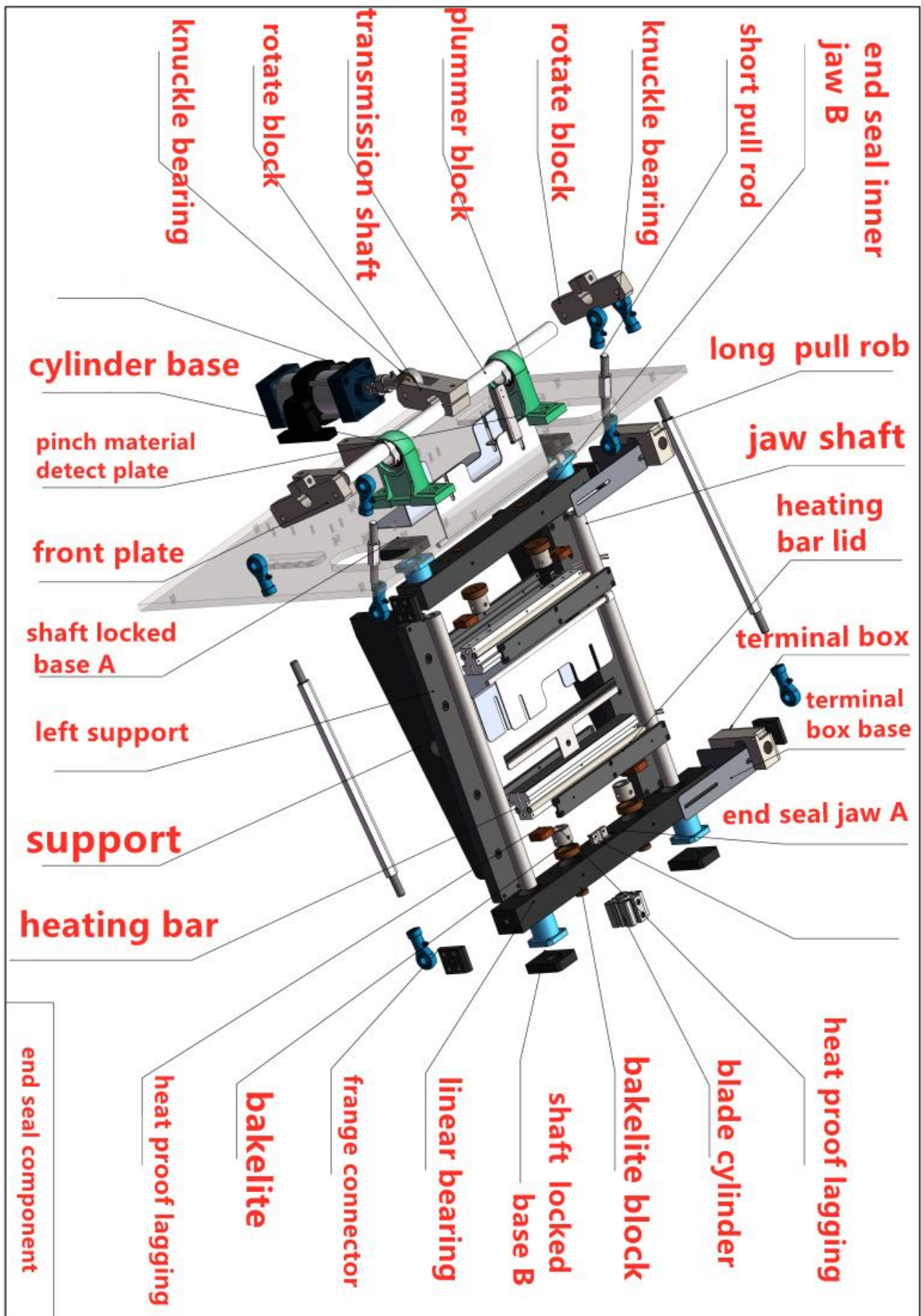
4.1 Parts Instruction



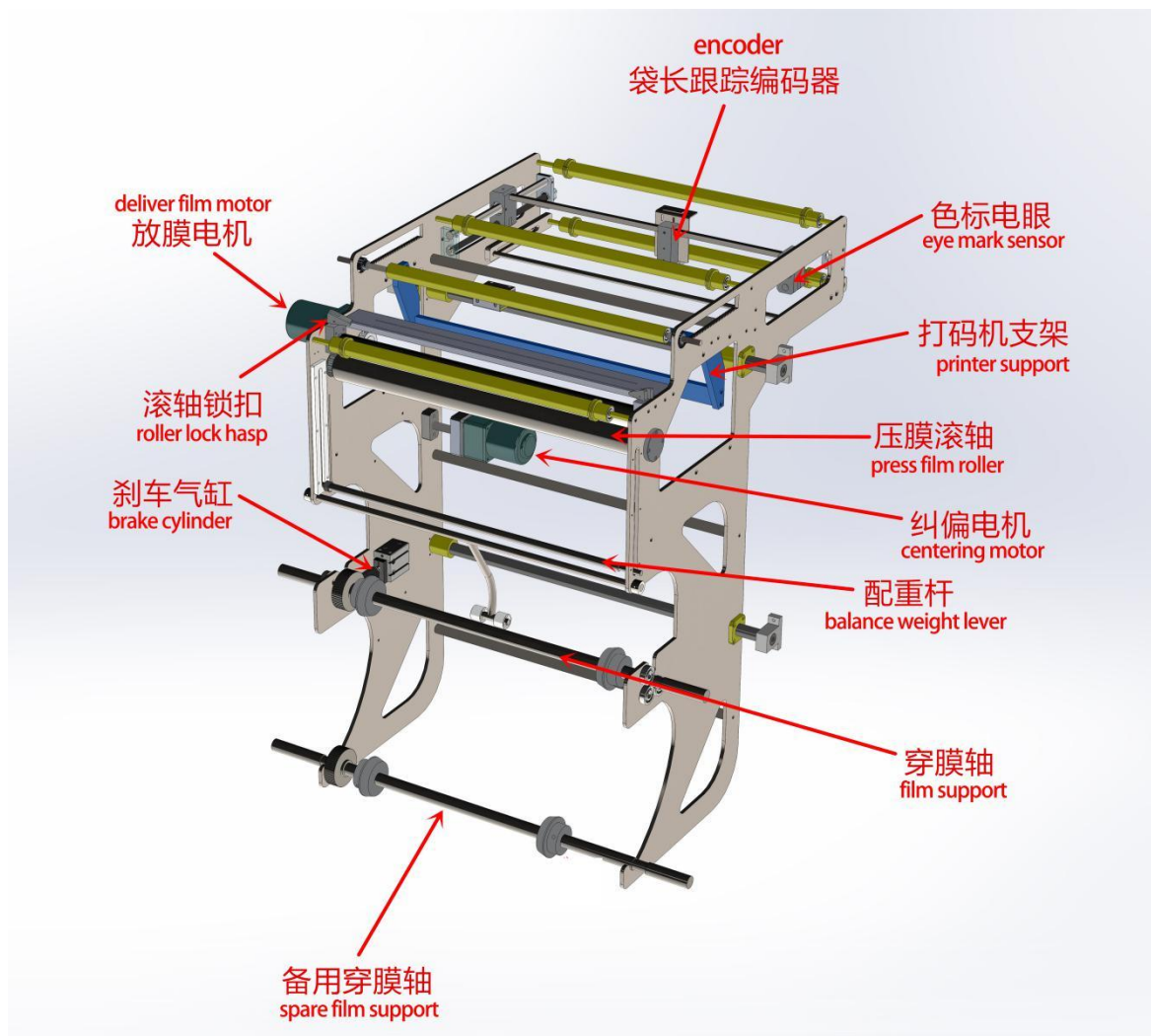


4.2 End seal Parts

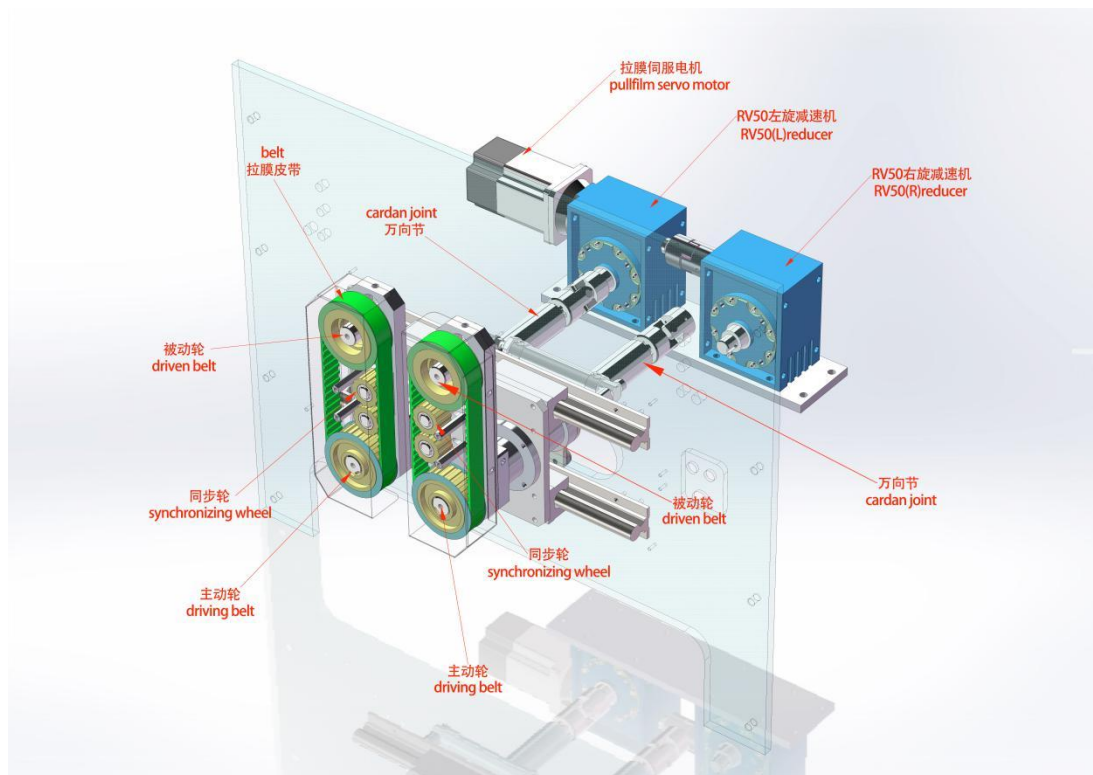




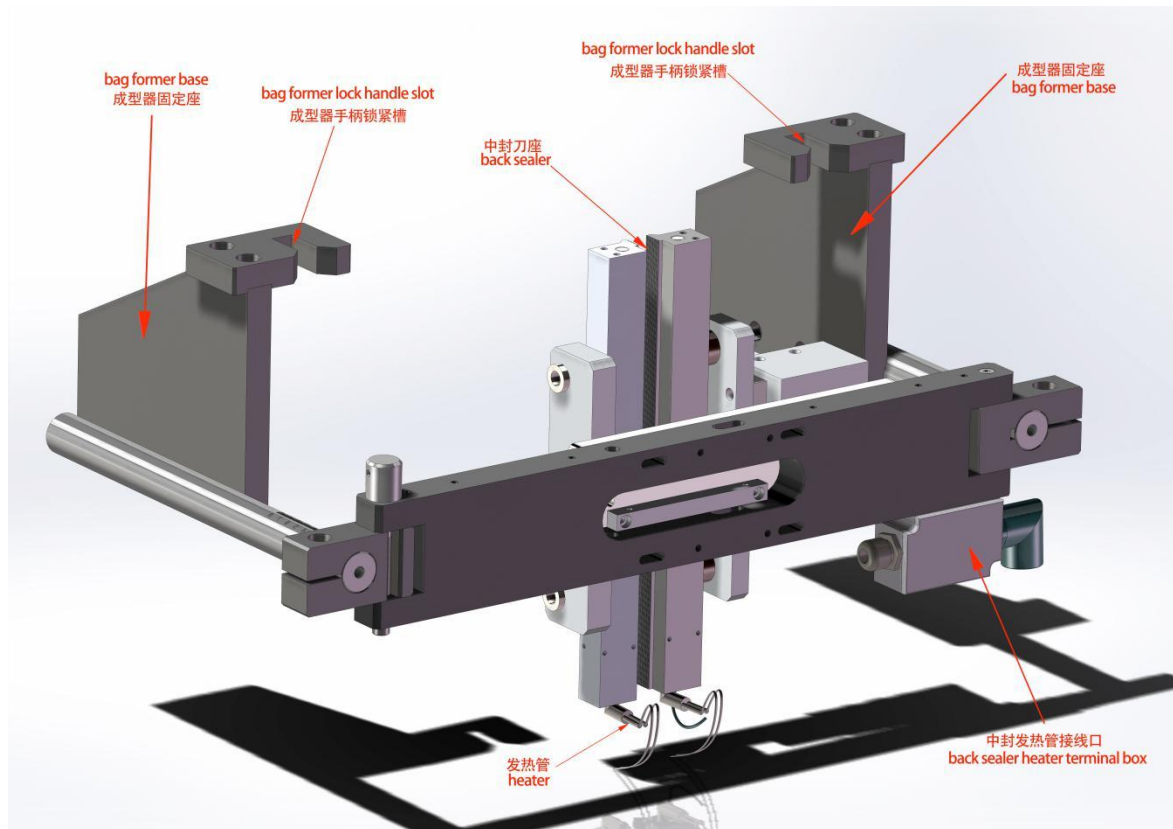
4.3 Deliver Film Parts:



4.4 Pull Film Parts:



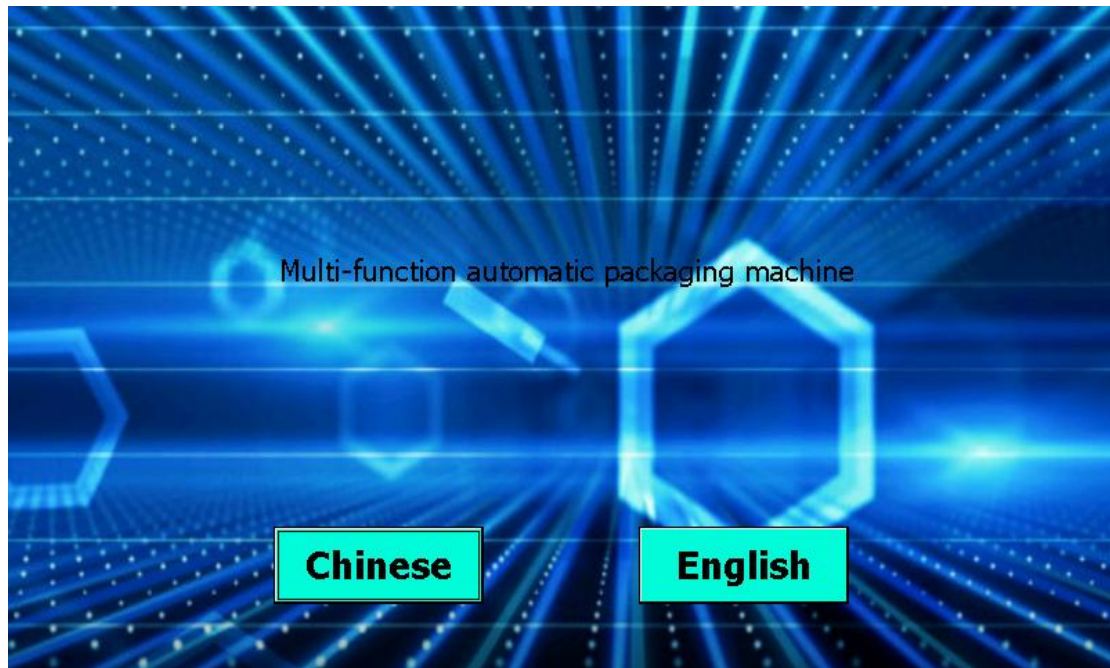
4.5 Center Seal Parts:



5.Touch screen introduction

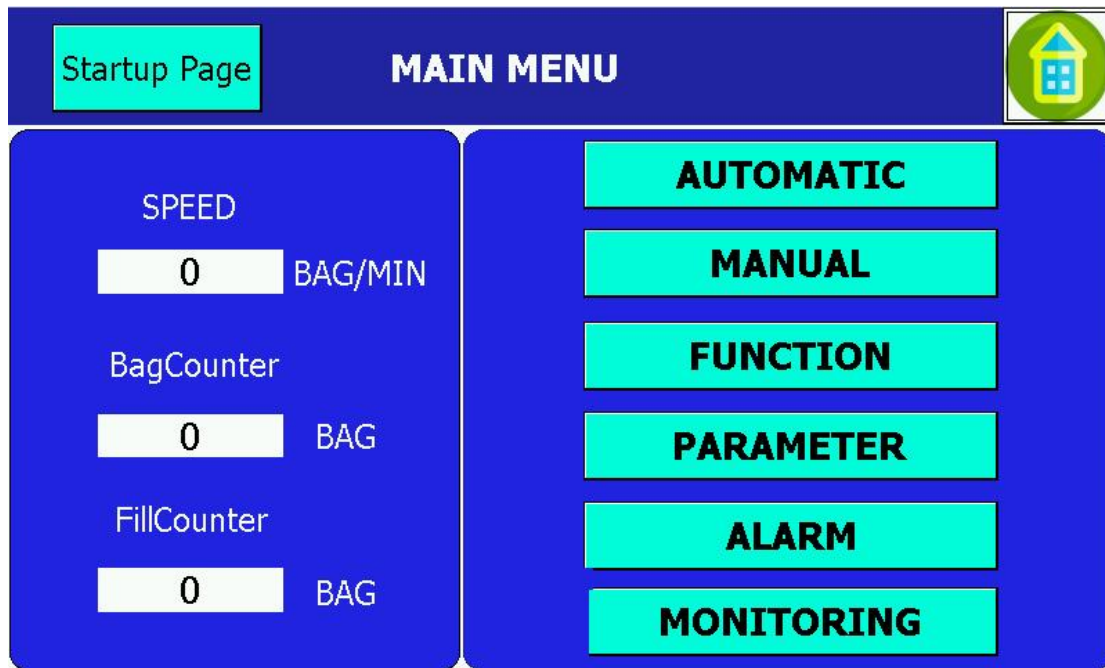
Touch screen is an intelligent operation controller of packaging machine , with LCD display and touch functions 。 Just touch the display screen to control packaging machine, program selection, parameter modification, etc. Do not use nail tip, pencil tip and other hard objects sharp touch screen.This can damage the monitor.。

After power on, As shown below: :



Select language by touch “English” to Main page

5.1 Mainpage



	Click this button, return to language page
AUTOMATIC	click this button, go to automatic operation, all equipment linkage work
MANUAL	click this button to enter manual operation, which can be tested separately for each mechanical action, suitable for debugging or detecting faults
FUNCTION	Click into this page, choose different functions
PARAMETER	click this button to enter the parameter setting interface to set each parameter
ALARM	click this button to enter the alarm settings interface,

	you can monitoring and selecting to turn on and off the alarm function
MONITORING	click this button to enter the PLC input and output monitoring page to monitor the PLC's input and output status
SPEED	Display the current filling speed or empty bag making speed
BagCounter	the packing machine will automatically count the empty bags produced, press and hold to reset, display zero and recount
FillCounter	the packing machine will automatically count the filling bags produced, press and hold to reset, display zero and recount

5.2 AUTOMATIC PAGE:

In the alarm
AUTOMATIC

Reset

Recipe No:

0

Fill Bag

Testing

Press Belt

Make One Bag

←

Centering

→

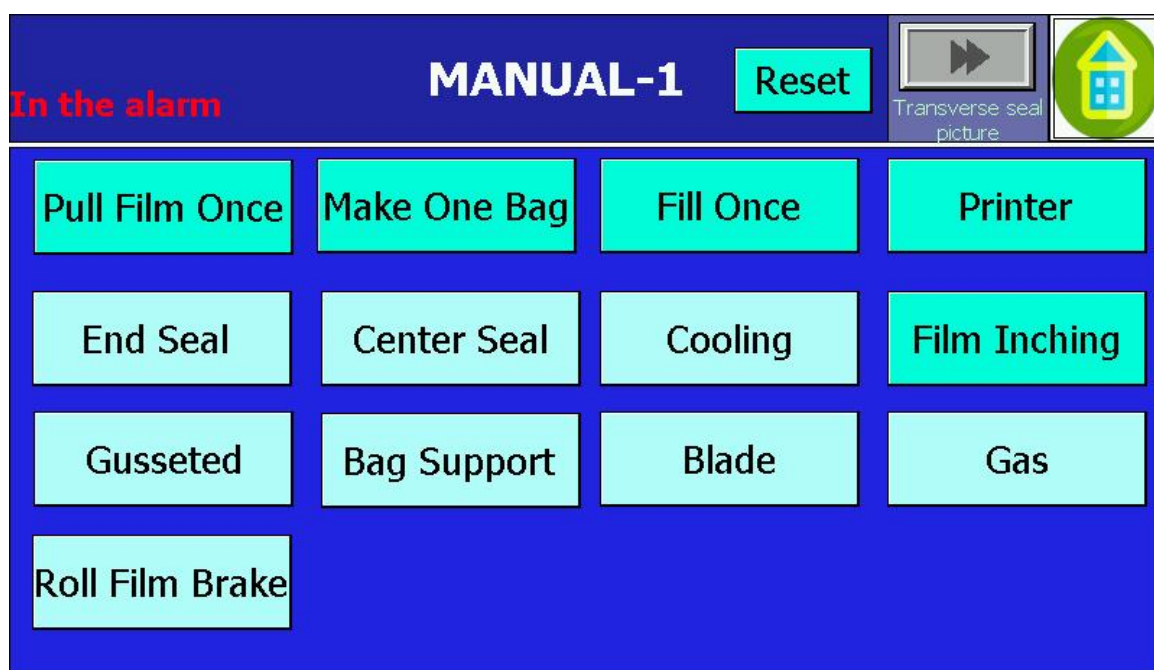
Eye Mark Offset	0	MM
SPEED	0	BAG/MIN
BagCounter	0	RESET
FillCounter	0	RESET

Recipe No:	Display the current recipe, which can not change it
Fill Bag	Press the button, the packaging machine continuous automatic filling and packing in accordance with the set parameters, release the button, the packaging machine stop working. This button is effective after "press belt".
Testing	Press the button, the packaging machine continuous automatic making empty bags in accordance with the set parameters, release the button, the packaging machine stop working. This function is used for general debugging the sealing quality of the packing bag. This button is effective after "press belt".
Press Belt	Press the button, the both belt wheel press the forming tube,

	release the button,he both belt wheel opens, “Test”and “fill bag” working must be in the consider of “press belt” pressed.
Make One Bag	Press the button, the machine make one empty bag in accordance with pre-set parameters , This button is effective when press belt" is pressed
Centering	If the left side and right side of back seam are not balance,you need to adjust it
	If the left side of back seam is more than the right side,click this arrow button,the whole part of film frame will move the left till both sides matched
	If the right side of back seam is more than the left side,click this arrow button,the whole part of film frame will move the right till both sides matched
Eye Mark Offset	If the eye mark sensor is working normal but still fail to cut the color mark.measure the distance from cutting point to color mark.if the distance is 30mm. Input 30mm.the cutting position will be correct automatically
SPEED	Display the actual running speed which can not changed
BagCounter	Display the numbers of bags have been made,click reset to clear it

FillCounter	Display the numbers of filling have been made,click reset to clear it
------------------------	---

5.3 Manual Operation Page:



Pull Film Once	Press the button,the machine will deliver film one time according to the pre-set bag length
Make One Bag	Press the button, the machine make one empty bag in accordance with pre-set parameters , This button is effective after “ press belt" is pressed
Fill Once	Click this button,packing machine will give a fill signal to multi head weigher,the weigher will fill one time

Printer	Click this button,the printer will print one time
End Seal	Click this button,the end seal close,release this button,end seal opens
Center Seal	Click this button,the center seal close,release this button,center opens
Cooling	Click this button,the bar on the end seal cutter will inject air towards sealing area to cool down the temperature
Film Inching	Press the button,the both of belts will deliver the film slowly
Gusseted	Press this button,the cylinder of gusset stretch out,release this button.the cylinder of gusset retract.This is an optional function, which is not available in the normal configuration
Bag Support	Press this button,the cylinder of bag support stretch out,release this button.the cylinder of bag support retract.This is an optional function, which is not available in the normal configuration
Blade	Press this button.the cutting knife stretch out.release this button.the knife retract
Gas	Click this button,inject the nitrogen once,this function only work with machine equiped with nitrogen making

	machine.
Roll Film Brake	Click this button,the brake plate will be locked.release this button.the brake plate opened

5.4 Funtion Select Page:

FUNCTION



Eye Mark ON Encoder OFF One Bag More ON End Seal Mode Pneumatic Anti Pinch Material ON Anti Pinch Material Alarm Remind Only	Weigher Signal Finished Conveyor AUTO Filling Mode Conveyor Auto Mode End Seal Priority
--	---

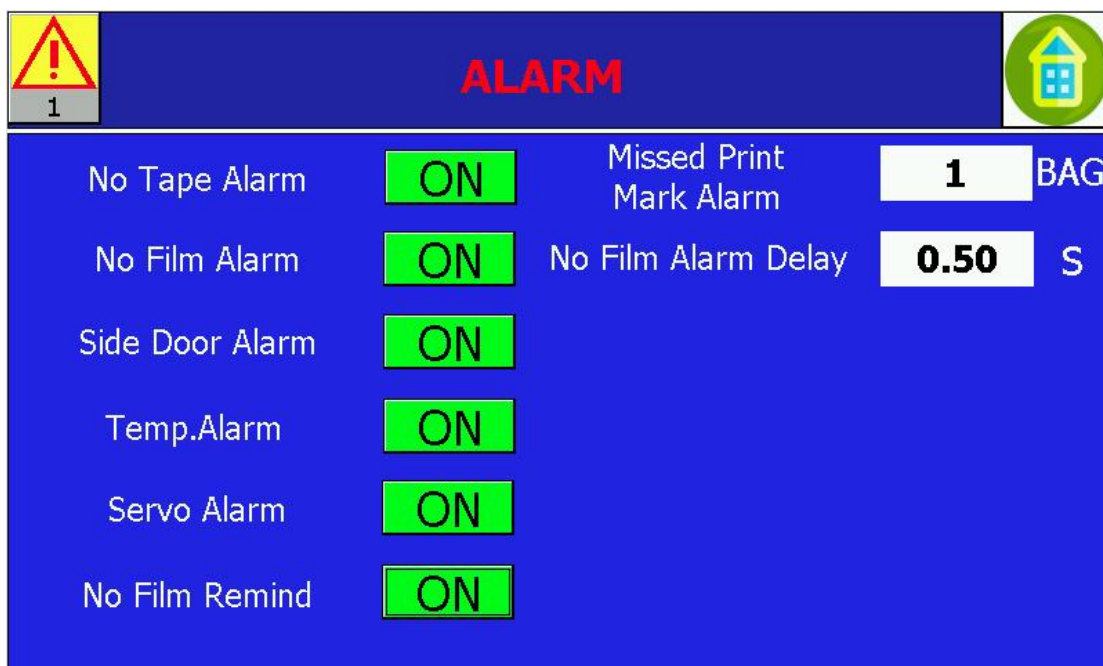
NOTICE:This page is used to select different functions based on your machine system,this is **FACTORY SETTING,DO NOT CHANGE IT WITHOUT GUIDANCE ! WRONG SETTING WILLRESULT IN WRONG MOVEMENT**

Eye Mark	Turn on this button,eye mark sensor is working to track the color mark.
Encoder	If the roll film without printing color mark,you want to

	achieve exact bag length,select encoder mode,encoder mode is against the eye mark mode.either
One Bag More	Open this function,the packing machine will keep making one bag more to finish the dropped product from multi head weigher even though you click stop button
End Seal Mode	End seal mode has 2 mode: by servo motor or cylinder. If your machine is driving the end seal by cylinder. Only choose cylinder.FACTORY SETTING,DO NOT CHANGE IT WITHOUT GUIDANCE
Anti Pinch Material	Turn on this function,if the cutter cut the hard dropping product,metal or hands,end seal cutter will not close within the setting time,the knife will not stretch out to protect the cutter and your hands
Anti Pinch Material Alarm	Turn on this function,if the cutter cut the hard dropping product,metal or hands,end seal cutter will not close within the setting time,the knife will not stretch out to protect the cutter and your hands.at that time,if you select”stop”the machine or “alarm” on touch screen.
Weigher Signal	Default to “ready”mode, means the multi heads weigher has been already finished the weighing,ready to receive a signal from bagging machine.

Filling Mode	If your machine equipped with multi head weigher,must choose “weigher”.
Auto Mode	Auto mode has”end seal priority”and“pull film priority”default to “pull film priority”

5.5 Alarm page

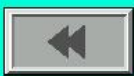


No Tape Alarm	When the ribbon tape finished,alarm accured on touch screen and stop machine.replace a new ribbon tape and clear the alarm,machine will return to be normal. Keep this button”ON”
No Film Alarm	When the roll film finished,alarm occured on touch screen and stop machine.replace a new roll film and clear the alarm,machine will return to be normal. keep this button”ON”

Side Door Alarm	When opening the glass door,alarm occurred on touch screen and stop machine.close the door and clear the alarm,machine will return to be normal.this is not a standard function. turn this button “OFF”
Temp.Alarm	This type of temperature meter without alarm function. turn this button “OFF”
Servo Alarm	This alarm is the pull-film servo motor and screw servo motor alarm. When the pull-film motor and the screw servo motor are abnormal, the machine will give an alarm and stop working. At this moment, please check the cause of the malfunction, such as the servo motor or servo controller if damaged, This alarm can be turned off after power off for about 30s, if repeating power off but still can not clear the alarm, please check the servo motor or servo controller damaged or the circuit is faulty. keep this button”ON”
No Film Remind	The roll film is approaching finished,it will remind on the touch screen. keep this button”ON”
Missed Print Mark Alarm	When the eye mark sensor fails to track the color mark one time,machine alarming and stopped, keep this value“1”
No Film Alarm Delay	When the roll film is approaching finished,in order to

	finish the remain roll film.we can set a delay time before triggering alarm accured on touch screen and stop machine.replace a new roll film and clear the alarm,machine will return to be normal
--	--

5.6 Parameter Setting

 PARAMETER 1  			
Recipe No:	 0 	Display Recipe Save Para. Download	
CURRENT RECIPE:	0		
Bag Length	230 MM	Preset Speed	66 B/MIN
Center Seal length	340 MM	Pull Film Frequency	4500 PULSE
Weigher Filtering Time	0.00 S	Signal Delay	0.00 S
		Pull Film Delay	0.00 S

Bag Length	Distance(mm)between 2 color marks.+10mm.for example. The distance between 2 color marks is 200mm.set bag length 210mm
Center Seal length	Max center seal length of this model is 340mm。 If the bag length is less than 340mm, driving belt only pull once。 If the bag length is more than 340mm.driving belt will pull twice to achieve the target bag length

Weigher Filtering Time	Do not need this function, Keep it"0"
Preset Speed	Preset a target packing speed.but the actual speed affected by different movement time,delay time and mulit heads weigher speed.so the preset speed will be different from actual speed.
Pull Film Frequency	Means the pull film servo motor accelerated speed from 0 to preset value.if the value is big.the pull film speed is fast. Normal value is between 4400-4500
Signal Delay	Period of time:after end-seal solenoid energized---before giving another signal to fill.This delay time is for controlling end-seal not to pinch the dropping material,If end-seal pinching the dropping material, increase the signal delay time to prevent it.
Pull Film Delay	Normal value is 0.1-0.15s

PARAMETER 2

Recipe No: ◀ 0 ▶

Display Recipe
Save Para.
Download

End Seal Delay	0.00	S		End Seal Time	0.45	S
Center Seal Delay	0.00	S		Center Seal Time	0.40	S
Blade Delay	0.30	S		Blade Time	0.10	S
Gusseted Delay	0.00	S		Gusseted Time	0.00	S
Gas Delay	0.00	S		Gas Time	0.00	S

End Seal Time	End sealing solenoid energized time, this parameter value setting subject to the thickness of film and packing speed, in order to keep the seam sealed without leakage. In general, high seal temperature can be used to reduce the end-seal closing time to achieve a faster packing speed, but this will reduce the stability of the package quality. Normal value: 0.1-0.2 seconds
End Seal Delay	Period of time: After delivered the film ---- before starting to seal.

	Normal value: 0.1 seconds
Center Seal Time	Back sealing solenoid energized time, this parameter value setting subject to the thickness of film and packing speed, in order to keep the seam sealed without leakage. In general, high seal temperature can be used to reduce the back-seal closing time to achieve a faster packing speed, but this will reduce the stability of the package quality. Normal value: 0.2-0.3 seconds
Center Seal Delay	Period of time: After delivered the film ---- before starting to seal. Normal value: 0.1s
Blade Time	Cutting knife solenoid energized time. Normal value: 0.15 seconds
Blade Delay	Period of time: after deliver film finished ---- before cutting knife energized time. Normal value: 0.3-0.4 seconds
Gusseted Time	gusset solenoid valve energized time, according to the effect of the

	gusseting. Normal value: 0.5 seconds
Gusseted Delay	Period of time:after delivering film finished---before starting gusseting motion. Normal value: 0 seconds
Gas Time	If your machine equipped with nitrogen making machine,set the gas time control the capacity of nitrogen charging.
Gas Delay	After charging the nitrogen inside the bag.you set a delay time to make the second charge before the end sealing movement finished.

⏪
PARAMETER 3
⏩


Recipe No: ◀ 0 ▶
Display Recipe
Save Para.
Download

CURRENT RECIPE: 0

Bag Support Delay	0.00	S	Bag Support Time	0.00	S
Printer Delay	0.00	S	Printer Time	0.00	S
Hole Delay	0.00	S	Hole Time	0.00	S
Cooling Delay	0.00	S	Cooling Time	0.00	S
Bag Length Coefficient	7.5		Encoder Coefficient	12.97	

Bag Support Time	Bag support device is not a standard device.its settling under the end seal which is for supporting the heavy bag.
------------------	--

	The time setting depending on the conditions
Bag Support Delay	Bag support is not a standard device.its settling under the end seal which is for supporting the heavy bag. The delay time setting depending on the conditions
Printer Time	The normal printer movement time is 0.15s
Printer Delay	Means the period between after the roll film stop and start to print. normal value is 0-0.1s
Hole Time	Means after end seal closing and hole making device starts to stretch out. The time of stretch out movement.
Hole Delay	Depends on the thickness of film and tight of sealing. normal value is 0.2-0.3s
Cooling Time	After the end seal closed,the air bar starts to inject the air towards sealing area which in order to cool down temperature.normal value is as same as the end seal time.when you input 0. the cooling system will stop
Cooling Delay	After the end seal closed,how much longer should start to inject air. Normal value is half of end seal time
Bag Length Coefficient	In the premise of eye mark off and encoder off, tracking bag length by servo motor coefficient, the normal value is 7.5. if the actual bag length is not exact as your preset value. Amend the 7.5 till the actual bag length is as same as the preset value.

Encoder Coefficient	In the premise of encoder on mode, the bag length tracking by encoder.the normal value is 13.if the actual bag length is not exact as your preset value. Amend the 13 till the actual bag length is as same as the preset value.
1.The setting of each parameter is directly related to the maximum packing speed . When the parameters and the actual speed does not match, the greater value of each parameter, the slower of packing speed. On the contrary, vice versa. 2. As the pull film slipping and other reasons, the actual length of the bag may be different from the preset value, you need to increase preset bag length to correct it. 3.optimum parameter:"pull film delay" and "end-seal delay" both parameters are subject to cut off the bag successfully, without affecting the next bag falling.	

PARAMETER 4

Recipe No: ◀
0
▶

Display Recipe
Save Para.
Download

CURRENT RECIPE: ◀
0
▶

Feed Start Delay
0.50
S

Feed Stop Delay
0.20
S

Feed Filter Period
0.50
S

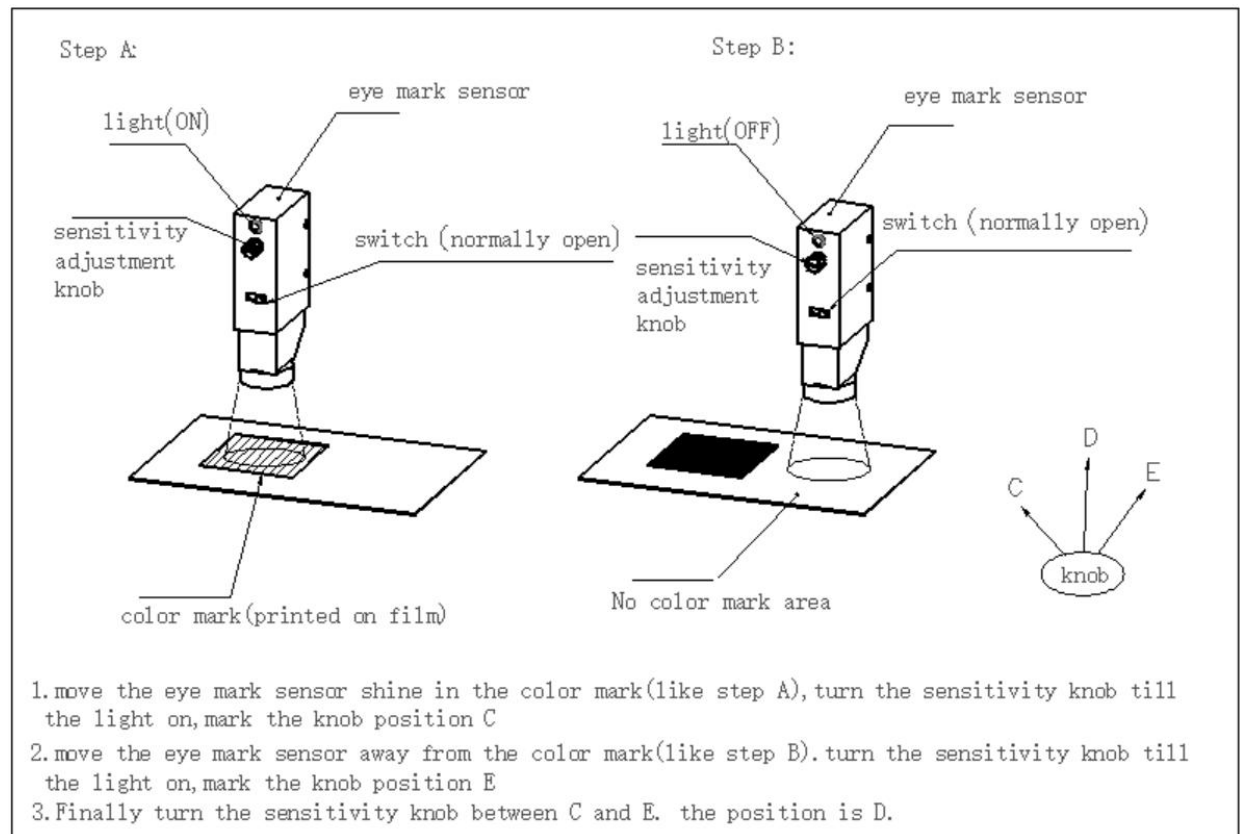
Fill Filter Period
0.50
S

Fill Times
1
BAG

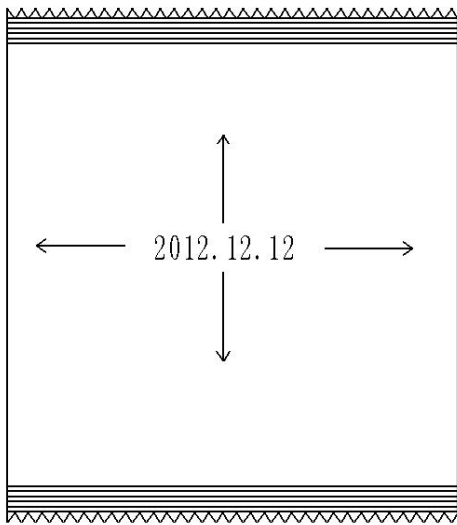
Feed Start Delay	This function only work with manual filling product.
Feed Stop Delay	This function only work with manual filling product.
Feed Filter Period	This function only work with manual filling product.
Fill Filter Period	This function only work with manual filling product.
Fill Times	This function only work with manual filling product.

6. Bagging machine Debugging

6.1 Eye mark tracking instruction:



6.2.Date Printer Position Adjustment:

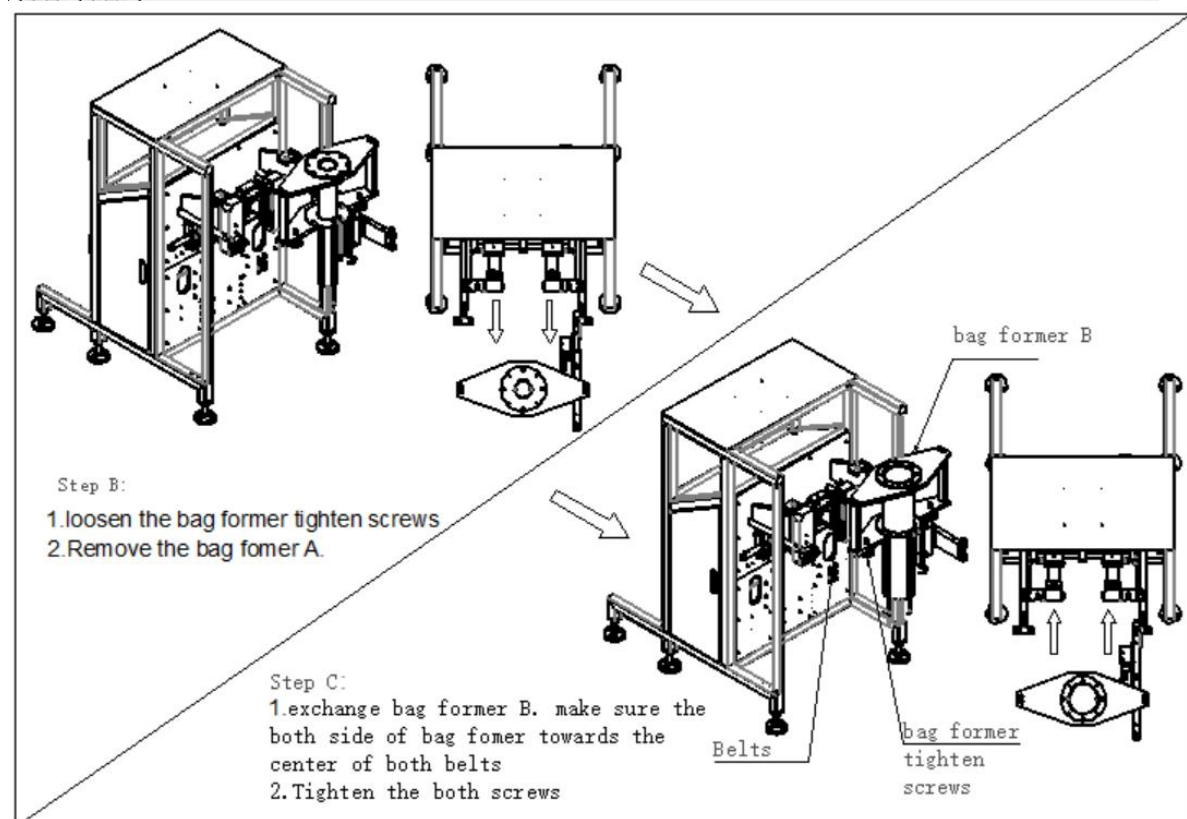
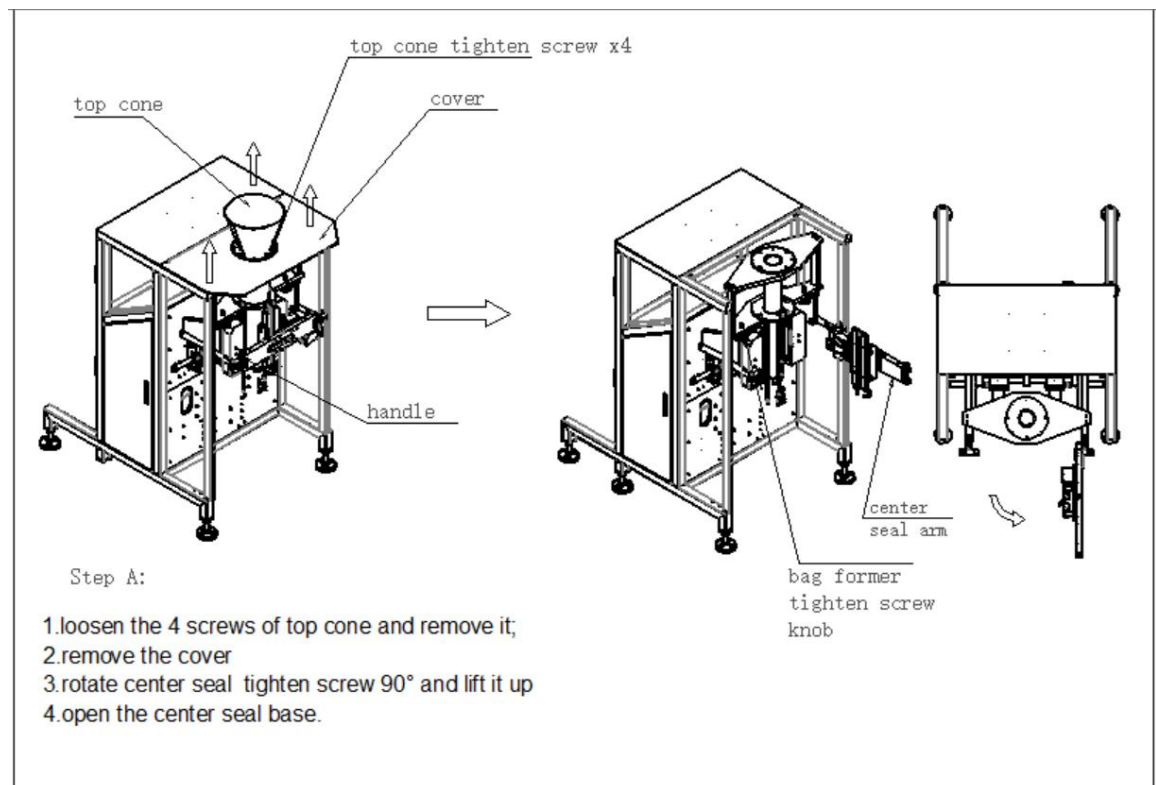


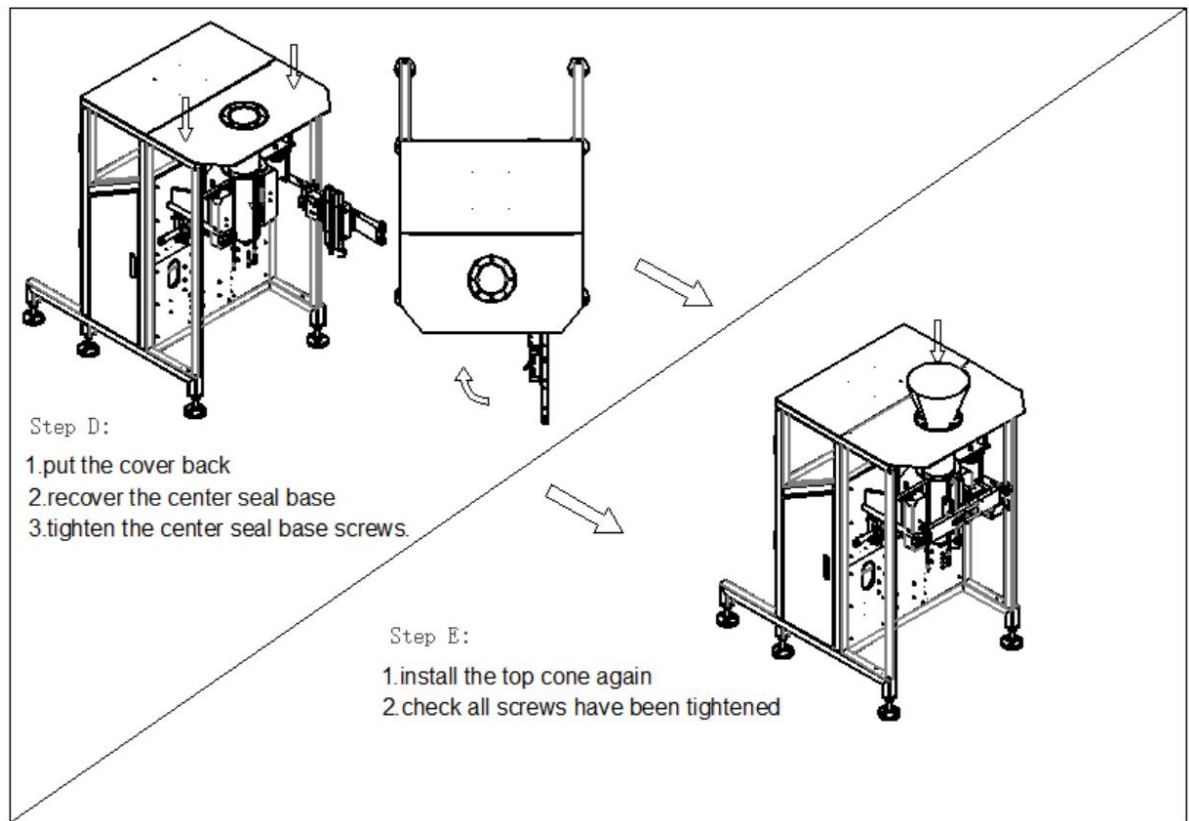
A: Date position left and right position adjustment: move the whole set of print to left or right.

B: Date position forward and backward position adjustment: loosen the shaft B and turn it forward or backward.

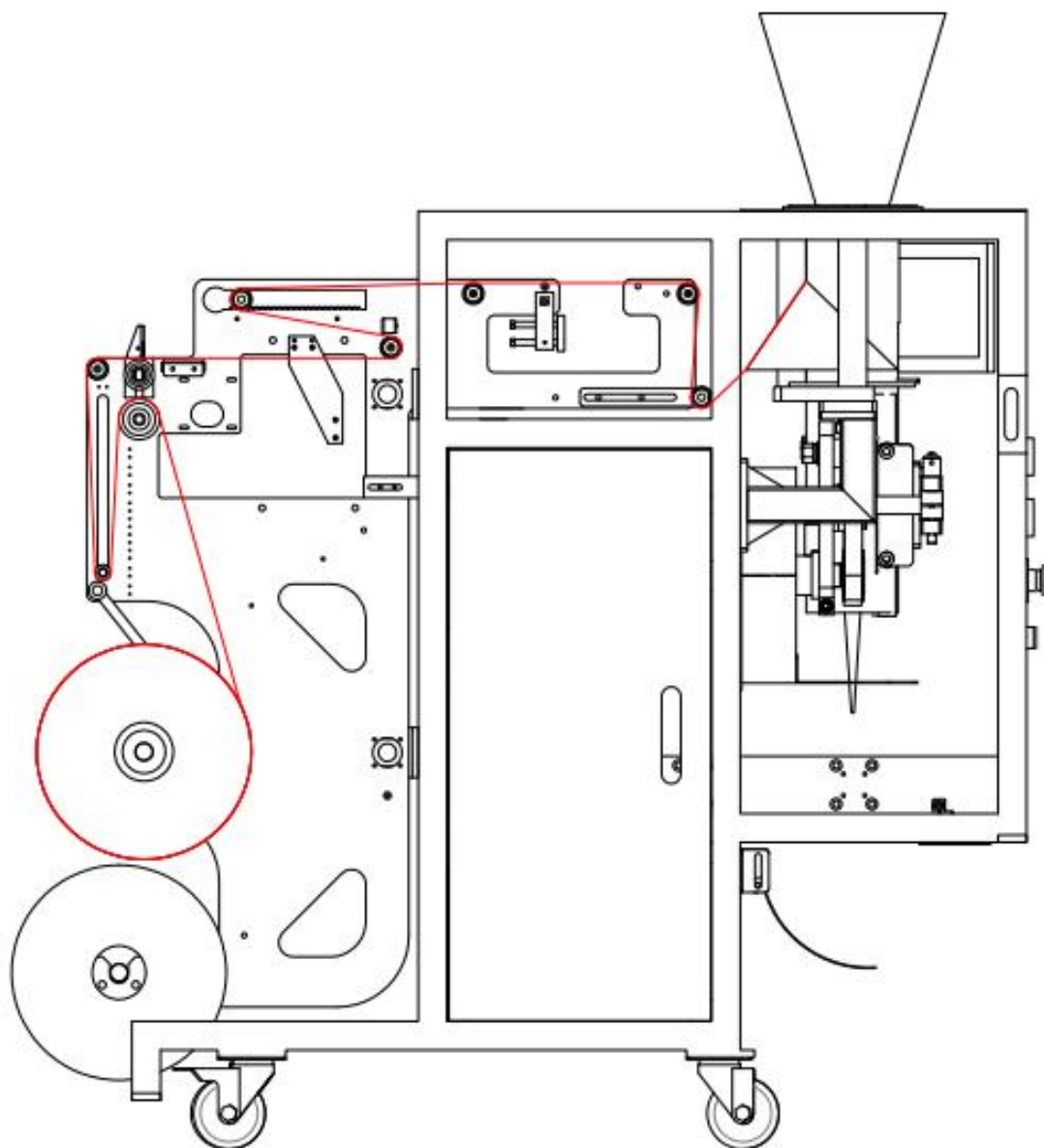
Remarks: Firstly finish the eye mark position adjustment,secondly adjust the printing position.Because the printing position will be changed if the eye mark position changed

6.3. Change bag former



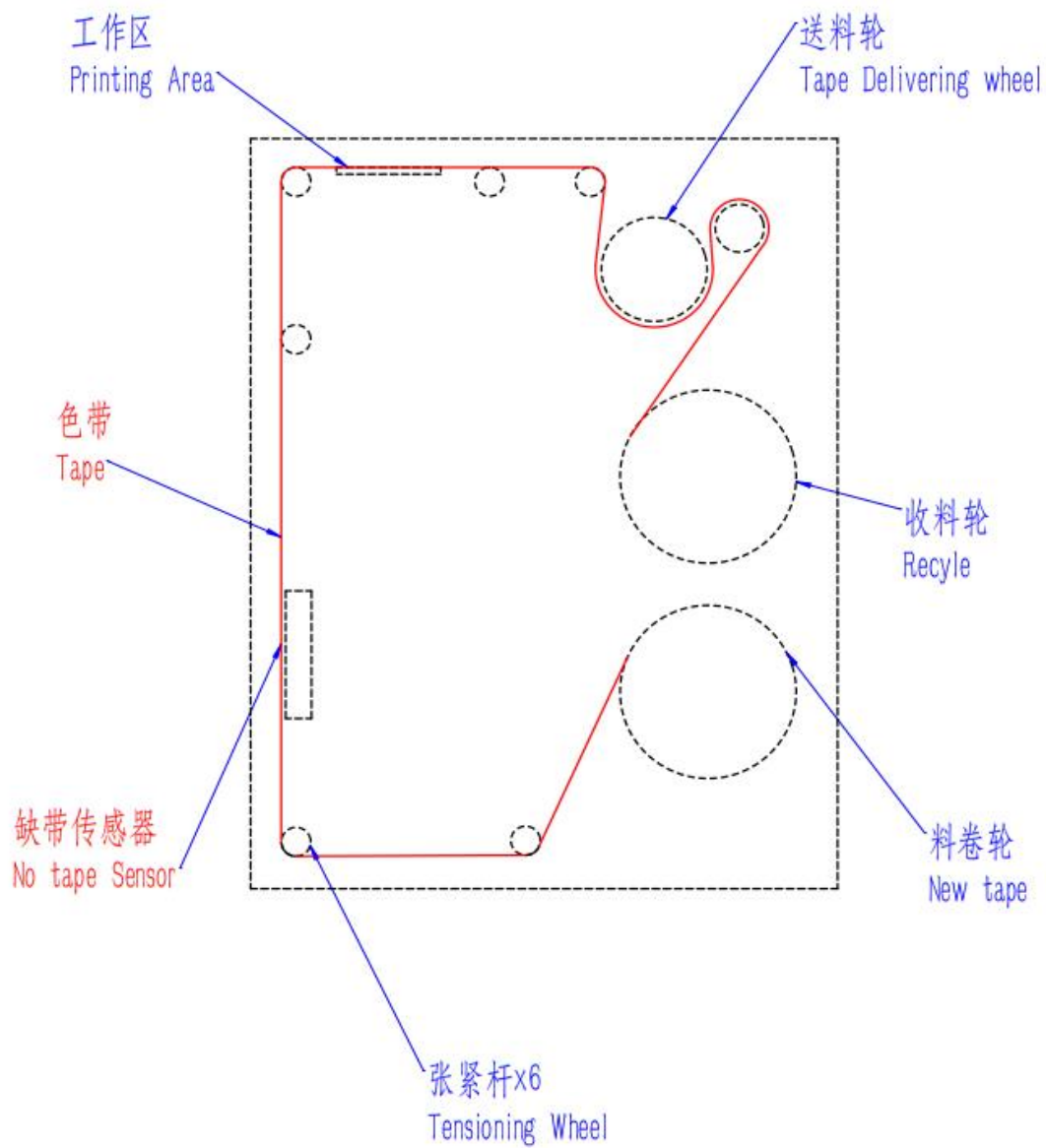


6.4. Roll Film Crossover Layout:



6.5 Date printer Ribbon Layout:

打码机色带绕卷图
Printer Tape Diagram



7.Self-diagnosis and troubleshooting methods

Fault type	Reason	Solution
The machine can not work after turn on the monitor	1、 check the emergency stop switch is reset or not 2、 Inverter, servo controller display RC	1、 Reset the emergency stop switch 2、 Turn off the total power after 20 seconds and then boot
Leakage switch tripping	Heaters and other electrical leakage	Check each appliance one by one
Sealer not heat	1、 circuit breaker trip 2、 heat bar burned out 3、 Temperature controller damaged	1、 check and eliminate short circuit, re-connect 2、 Replace heating bar 3、 Replace temperature controller
Temperature controller monitor number repeatedly beating	Thermocouple loose or damaged	Tighten or replace the thermocouple
Temperature is normal when machine shut down,its decreasing when machine start working.	1、 low voltage, resulting in a low power of heating tube 2、 the power of heater is too small	1、 reduce the speed of packaging or increase the voltage regulator 2、 Replace the high-power heater

Bag sealing leak	1、 Low temperature 2、 Low pressure 3、 Sealing time too short 4、 Front and back sealer not match 5、 Clipping material 6、 Material in the Seal teeth or packaging film accumulation	1、 Raise the temperature 2、 check the total pressure is 6.5 kg 3、 Increase the sealing time 4、 Adjust the Parallelism of sealers 5、 Adjust the filling time or charging time 6、 Clean the teeth of sealer
Can not control the cutting point or cut half a bag	1、 Packing film edge wrinkles or optical quality problems caused by optical malfunction 2、 length of bag setting is not enough which cause different length	1、 Replace film 2、 Adjust the sensitivity of photocell 3、 Increase the bag length setting
Film not delivered	1、 The pressure of transport film cylinder is not strong or too much 2、 The slipping of driving	1、 Check if the pressure of pressing film is 2 kg 2、 Check the film body up and down movement has not been stuck up and down or

	film is serious 3、 The film body is not smooth to release film 4、 Cross-over film is not correct	the movement is not smooth 3、 Check if the proximity switches near film body is normal or not 4、 Check the releasing film motor 5、 Check whether the packaging film is installed according to sketch map
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8. Equipment maintenance

1	must clean inside and outside of the machine before and after turning on the machine, the touching part must be strictly sterilized
2	please check the gas source triplet oil reservoir oil level is maintained at 1/3 or more, if less than 1/3, you should inject 20 # pure oil to the tank about too keep 1/2 inside
3	Before starting the machine, fill 20 # oil in the oil cup on the horizontal sealing bracket every day. If the process of opening machine found vertical seal or horizontal seal folder of material, you must immediately shut down and use copper brush to clean the vertical seal or end seal gear
4	If packing corrosive products, regular use anti-rust oil wipe clean, to avoid prolonged accumulation of products and corrosion of mechanical parts
5	Check the air compressor every 3 days.in order to keep the stable air pressure for packing machine.make sure to exhaust the water from air tank