

bullmer

KWE-A model

Automatic Spreader Operation Manual

Please read this manual carefully before operating the machine

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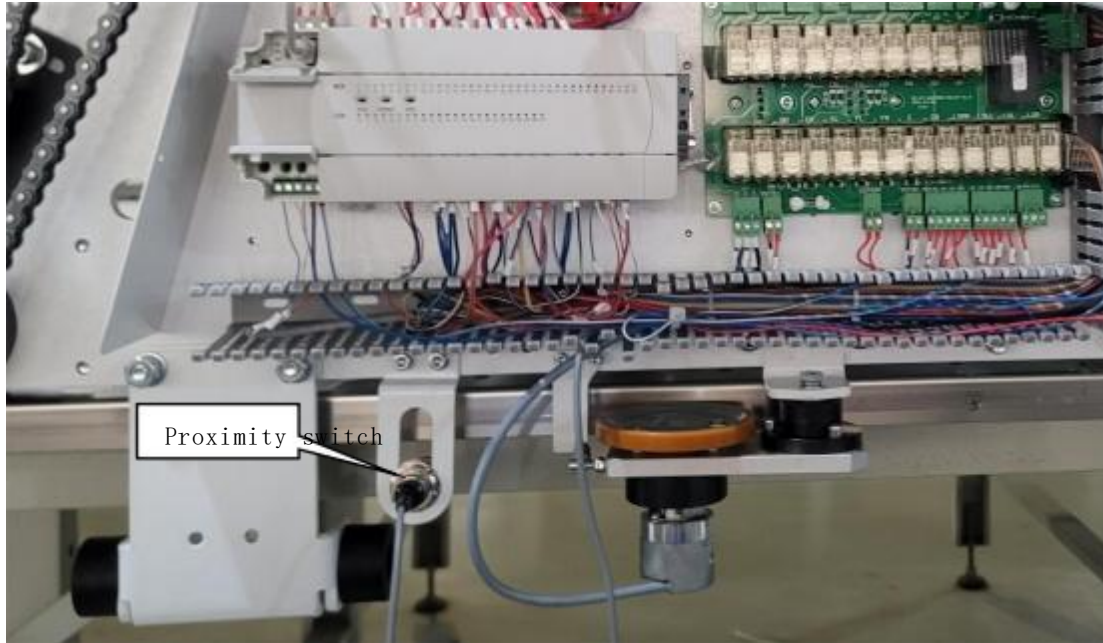
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Catalogue

1. Pay attention before operation	5
2. Normal operation mode	6
3. Introduction to the machine	9
1. Introduction to the operation panel	9
2. Introduction to the homepage	11
3. Introduction to the side page	19
4. Bucket parameter page	24
5. Walking parameter page	26
6. Device parameters page	27
7. Alert page	29
8. Failure	30
9. Maintenance	34

1. Pay attention before operation



When the proximity switch passes the sensing point in the left row, the position now returns to 0. This is the reference point from which the machine calculates the position. Every time the proximity switch passes the sensing point to the left, the present position will be returned to 0.

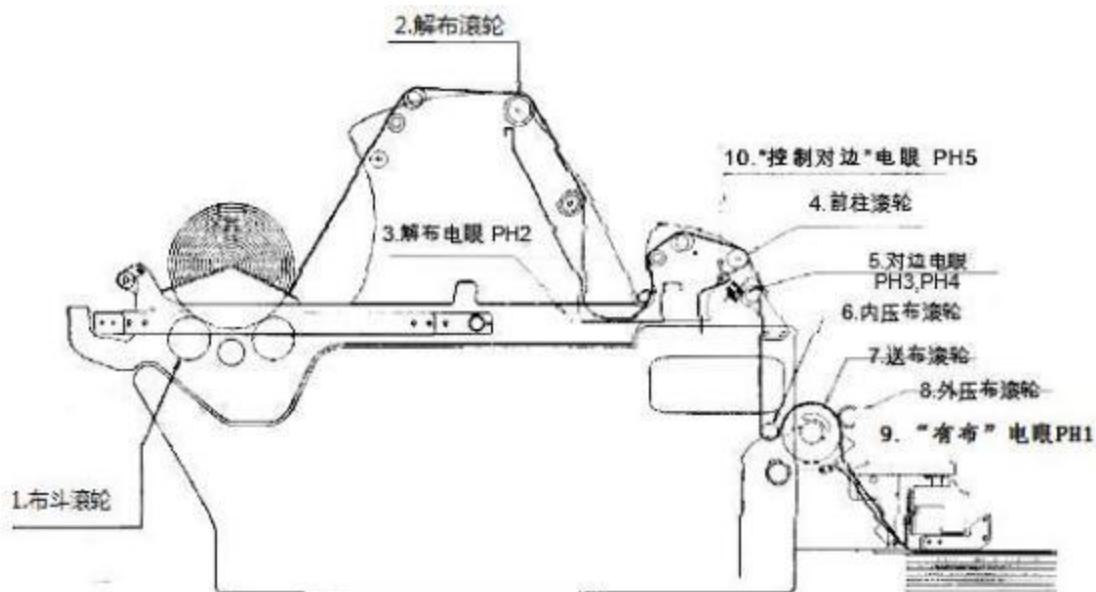
When a machine uses more than two cutting beds, after moving from bed A to bed B, the first necessary action is: connect the power supply-send power, and gently push the machine from right to left (from front to back) to make the proximity switch pass through the induction point. Only then can the machine determine its reference position.

When the machine is suddenly powered off while traveling, the machine will slide and stop in a state of powerlessness. Therefore, the reference position will run away and not be in the original position. In

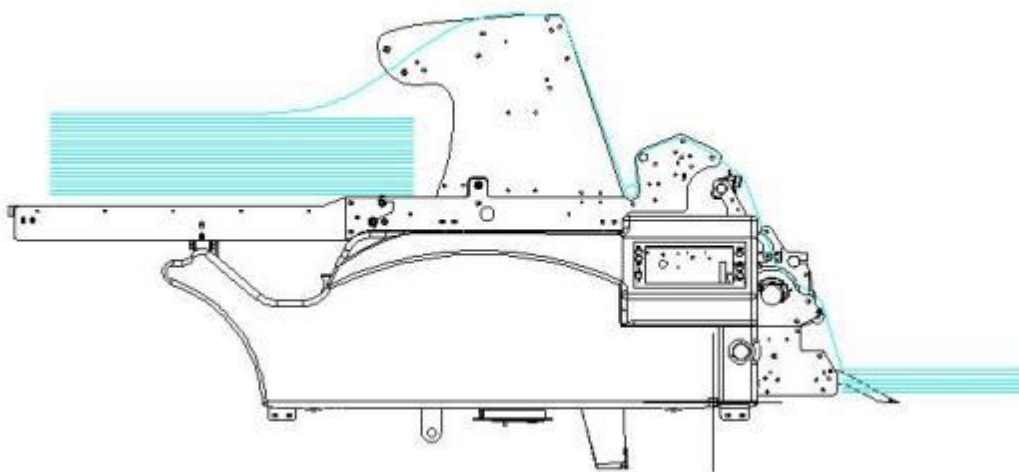
this situation, after power is transmitted again, the machine must be returned to the original position in an inch-move manner, and the proximity switch must be executed again, passing from right to left through the zero point, so that the machine can re-determine its reference position.

Note: If the switch is faulty, the machine will stop and not act.

2. Normal operation mode



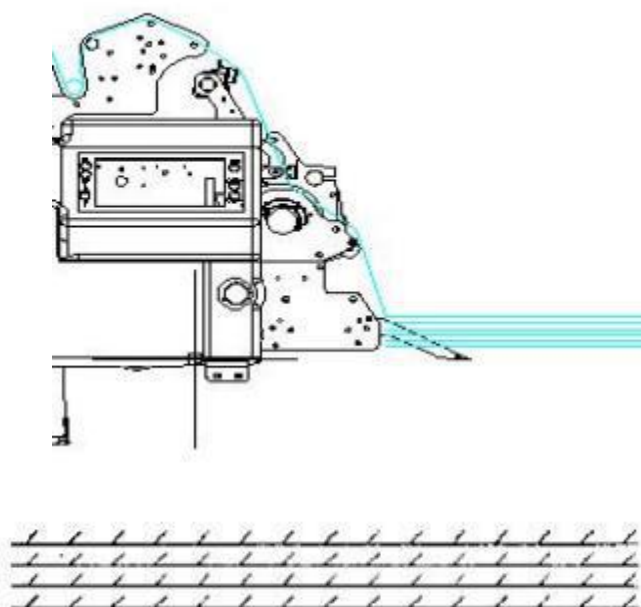
Rolled fabric: Place as shown in the picture above. Requi



Folding fabric: Place as shown in the picture cloth:

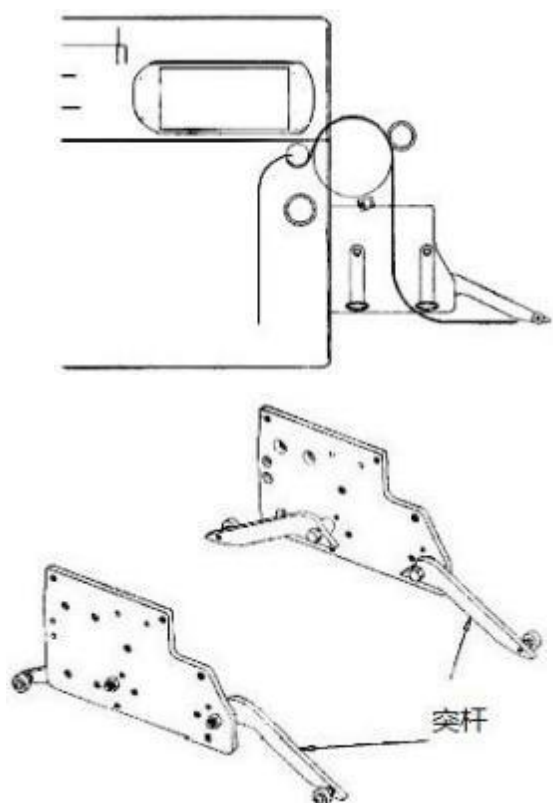


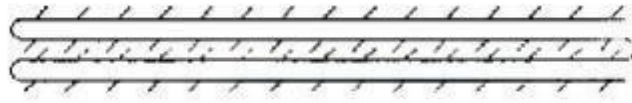
buttons when pulling



Single pull

Hang up the cutting knife set, plug in the connector, and the drawing machine will automatically enter the single pull mode, so there is no need to make other settings.





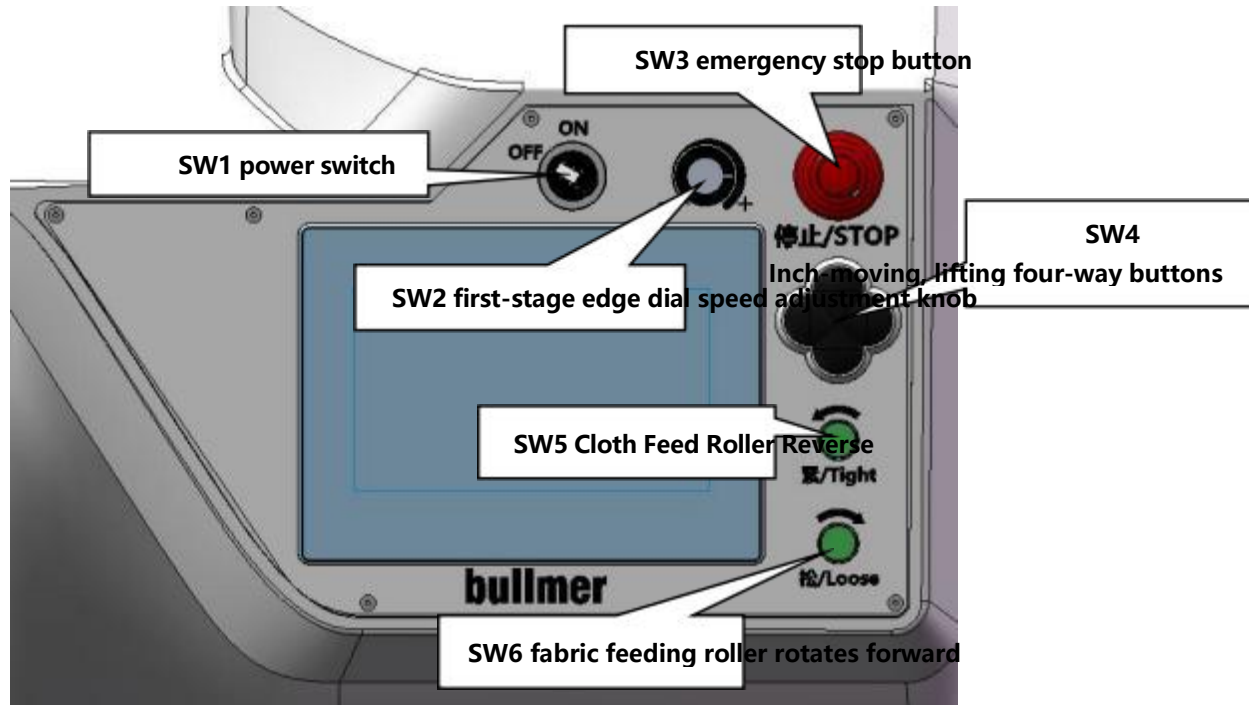
Double pull

Remove the cutting knife set, install the protruding rod, and the drawing machine automatically enters the double drawing mode.

Double pull: You need to use the cloth sweeper at both ends. The cloth sweeper at the tail end should be pushed forward and fixed at the front point with a plug. (It is not used when the tail sweeper is pulled singly. It should be pulled back to the end and fixed at the rear point.)

3. Introduction to the machine

1. Introduction to the operation panel



SW1 power switch : Switching power supply.

SW2 first-stage edge dial speed adjustment knob : Adjust the speed of the first-stage edge dial motor.

SW3 STOP BUTTON: Stop button.

In addition, there are stop steel cables on both sides of the cutting bed, and the function of pulling the steel cable is the same as the stop button. (Stop cable is the most commonly used stop device)

SW4-inch moving and lifting four-way buttons: "Manual" buttons for moving the machine and lifting.

Press the right button to move the machine to the right (forward), press the left button to move the machine to the left (backward), and at a constant speed

Go in the direction of the button.

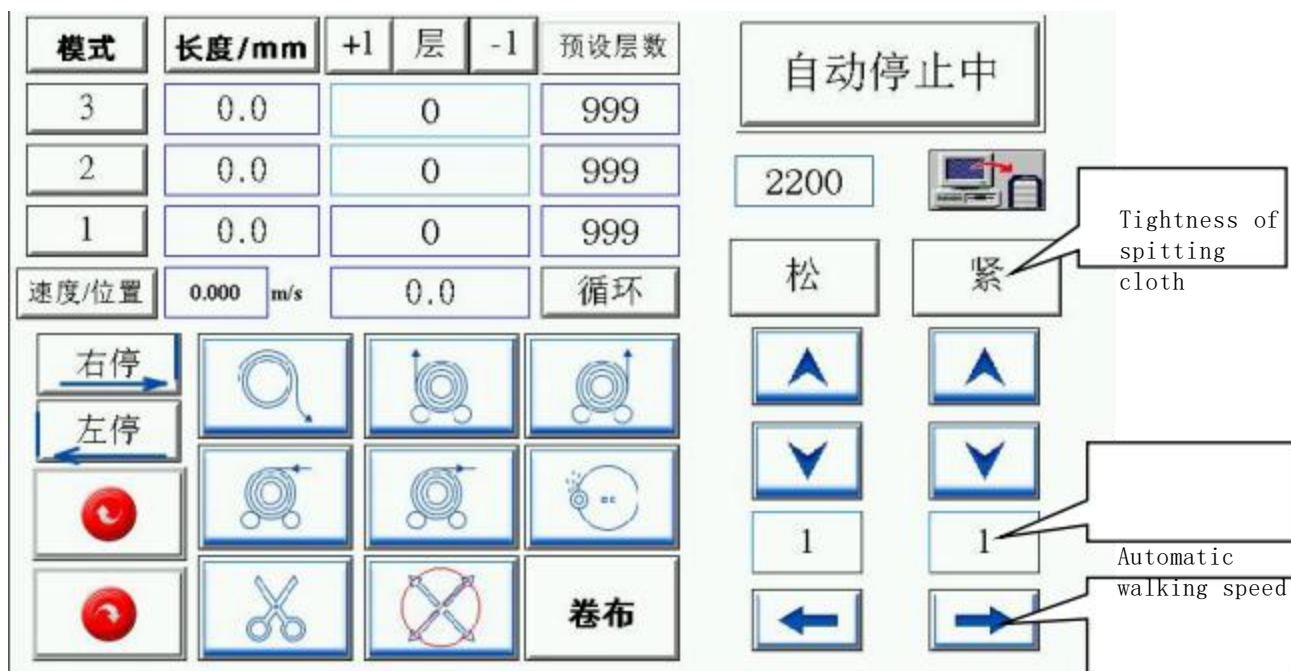
Press the up button-rise; Press the DOWN button-DOWN.

SW5 Cloth Feeding Roller: Manual Reverse Button.

SW6 Cloth Feeding Roller: Manual Forward Push Button.

(The fabric feeding roller rotates as the machine moves during the fabric pulling. When you need to rotate the fabric feeding roller at rest, use these two buttons.)

2. Introduction to the homepage



Click, and the numeric keypad will appear. Type the desired number and press ENTER to determine the "pull length" unit: mm,

$$1 \text{ m} = 100 \text{ cm} = 1000 \text{ mm}$$

$$1 \text{ yd} = 36 \text{ inch} = 91.44 \text{ cm}$$

$$1 \text{ inch} = 2.54 \text{ cm}$$



Teaching mode: Set the drawing length. When the determined drawing length is not known, after moving the machine to the desired position,

As shown in the figure, after pressing mode, the position will now

be set into mode 速度/位置

1 Within the length of the fabric.

2 And the draw length can be set by this method.


3

 : Rab mode button

 → Single-mode pull: shut down when [number of layers] reaches [preset value].

Please use 1 mode for single mode rab.

When the fabric length is long or short, the second length and number of layers can be preset.

 → Coherent mode pull: When all [number of layers] reach [default value] Stop.

The machine stops after going through all the set modes in the sequence of modes 1, 2 and 3.

 : automatic walking

Press this key, and the fabric drawing machine enters the automatic fabric drawing state. When the fabric is ready, confirm that the direction is correct and press this key to enter the fabric drawing operation.

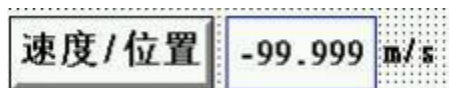


: left endpoint/right endpoint stop key

When you need to stop the operation when the next sheet is finished, click or



The machine will stop at the left end point after pulling the cloth.



: Display current speed/set position

When pressed, the set spread length is set to the current position.

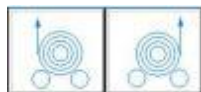


: Fabric selection

Choose according to the fabric and use it with the cloth bucket function.



Pressing this button is a double pulling mode, a two-way pulling mode in which the hanging lead cutting knife group does not automatically cut, and a pulling mode in which the cylindrical cloth uses a double roller device.



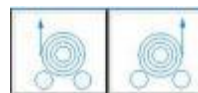
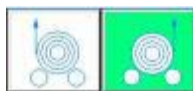
: cloth bucket direction

key

Place the rolled fabric in the cloth bucket, or



Control the direction of cloth discharge. Horse



, make a cloth bucket



The cloth does not use the cloth bucket, and it will not run by pressing the direction key.



: Manual "cloth

bucket" key recovery inch movement

Press and hold



When the fabric is rolled back at low speed, press and hold



When the fabric is rolled out at low speed.



Cloth feeding key



In the fabric feeding state, when the machine moves, the fabric feeding roller follows the rotation to send the fabric downward.



If the cloth is not delivered, although the machine moves, the cloth will not be delivered out.



Click



Click again



。



: crop button

When the machine is stopped, click to perform a trimming action. If the cutting head does not stop due to emergency stop



When positioning, click to bring the cutter head back to positioning.

When you press this crop button for manual cropping, the layer value

remains unchanged.

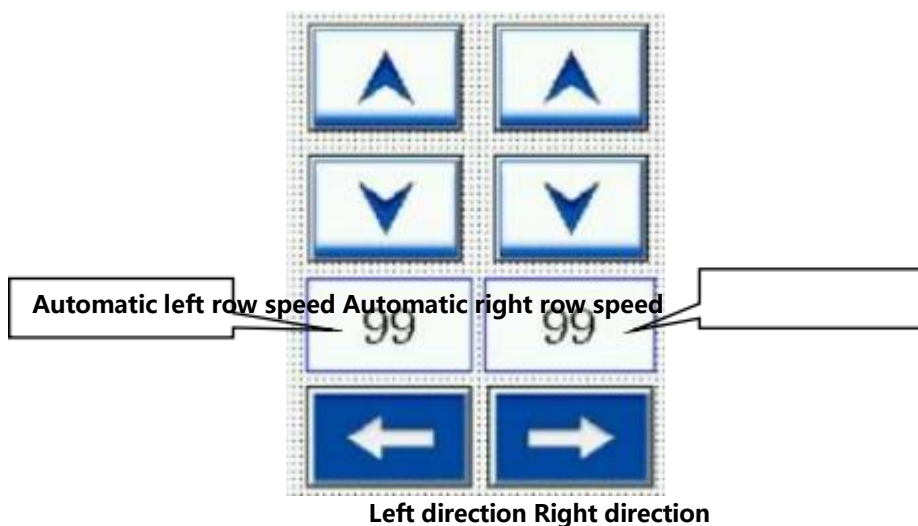


: grinding key

Click



The blade is rotated and the knife is automatically sharpened according to the set sharpening time value.





Cloth spitting tightness adjustment

Two tightening buttons are used to adjust the tightening value of cloth spitting at the current segment speed.

You can also click on the value and use the numeric keypad to set the tightness value.



Press this button to enter the fabric tightness

configuration pre-storage interface, and you can pre-store 10 sets of tightness formulas

布料松紧度参数组										
布料	汉	汉	汉	汉	汉	汉	汉	汉	汉	汉
序号	1	前进	2	前进	3	前进	4	前进	5	前进
松紧值	9999	-9999	9999	-9999	9999	-9999	9999	-9999	9999	-9999
加速	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999
减速	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999
布料	汉	汉	汉	汉	汉	汉	汉	汉	汉	汉
序号	6	前进	7	前进	8	前进	9	前进	10	前进
松紧值	9999	-9999	9999	-9999	9999	-9999	9999	-9999	9999	-9999
加速	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999
减速	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999

布料 汉汉汉汉汉汉

: Type fabric information (you can enter Chinese, English and numbers).

1
9999
-9999
-9999

: Tightness value when the machine moves back (single pull mode)

前进
-9999
-9999
-9999

: Tightness value when the machine moves forward (needs to be set in double pull mode)

松紧值

: Current spitting tightness value (tightness reference value)

加速

: Acceleration section tightness value = tightness reference value + current input value (can be a negative value such as -1) Acceleration (the process of machine stopping-> moving), negative value is tight, positive value is loose.

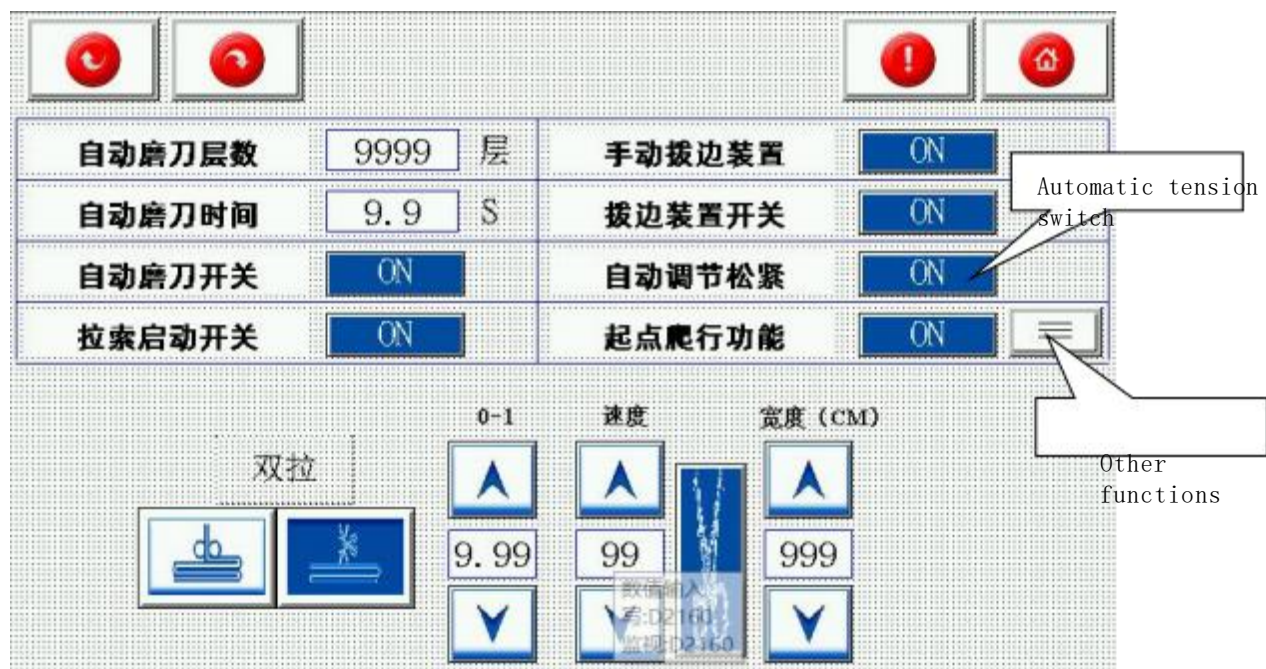
减速

: Deceleration section tightness value = tightness reference value + current input value

Deceleration (the process of machine moving-> stopping), negative values are tight and positive values are loose. Note: The elasticity value should be adjusted according to the actual spread of the fabric

If you put too much fabric, adjust it tighter (that is, reduce the tightness value). If you put it less, the fabric will be tighter and loosened (that is, increase the tightness value).

3. Introduction to the side page



自动磨刀层数	10	层
自动磨刀时间	1.0	S
自动磨刀开关	ON	

When the number of layers reaches the set number of layers, the sharpening action for the set time is carried out. (As shown in the figure, spread 10 layers of cloth and sharpen the knife for 1 second)

The automatic sharpening switch needs to be turned on to be effective.



This switch is a cable function

There are steel cables on both sides of the laying table. Pulling the steel cables can control the start and stop of the machine, and its function is equivalent to the stop button of the operation panel SW3.

拨边装置开关

ON

Edge dial function

After opening, the edging device starts to push the fabric away during the laying process.

手动拨边装置

ON

Manual edge dial

Immediately after opening, activate the edge dial device.

起点爬行功能

ON

Starting point crawl

The speed in the process of starting the machine from the starting point can make the machine walk slowly for a period of time when starting and then accelerate the normal spreading. Prevent the collision between the machine and the person when it starts too quickly.



For other functions, the interface after clicking is as follows

断布检测开关	OFF
压布提前打开	OFF
布有无电眼触发	OFF
张力自动切布	OFF

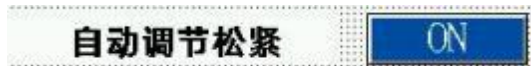
布有无电眼触发	ON
---------	----

This button is used during debugging, no need to pay attention to it

压布提前打开	ON
--------	----

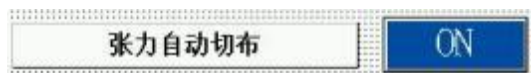
Bead opening ahead of time

When used in conjunction with the folder, this function needs to be turned on to avoid collision between the layering strip and the folder needle plate.



Automatic tension switch

If the fabric is tight or put too much, the fabric will be automatically put or rolled back before cutting, and the fabric will be adjusted to a suitable state before cutting.



Automatic cloth cutting

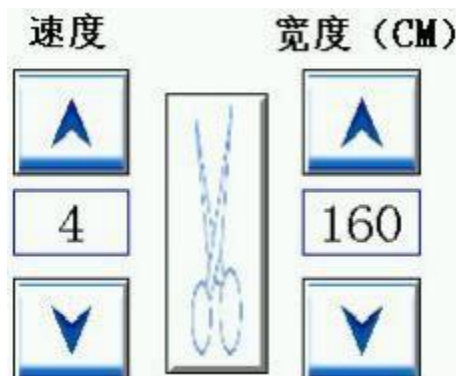
Use with the function of automatic adjustment of tightness. For example, when the fabric slips and the cloth cannot be rewound or released when the tightness is automatically adjusted, the cloth spitting roller keeps rotating, and the surface of the machine will be stopped due to the inadequate tightness adjustment.

Turn on this function to automatically adjust the tightness Automatically cut off after 3S to ensure the normal laying of cloth by the machine.



Automatic rise setting

The automatic rising amount is set according to the thickness of the fabric, so that the rising height is consistent with the height of the fabric stack. Automatic rise After the automatic labra is pulled one level, it automatically rises once.



Crop button 2:

Press this button to perform manual cutting action, increase the number of layers by 1, and the cutting width is slightly larger than the fabric width. Set the cutting speed and cutting length to make them match well.

4. Bucket parameter page

	1	2	3	4	5	6	7	8	9	10
布斗频率	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99
布斗加速值	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99
布斗减速值	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99

双拉左回收距离	999.9	mm	单拉切断前吐布时间	9.99	s
双拉右回收距离	999.9	mm	单拉切断前回收时间	9.99	s
双拉右吐布时间	9.9	s	单拉左吐布时间	9.99	s
双拉左吐布时间	9.9	s			

恢复出厂设置

Cloth bucket frequency: control cloth feeding speed

Adjustment standard: It is enough that the pressing rod fluctuates slightly during the laying process.



1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Represents walking speed (current segment speed)

双拉左回收距离	0.0	mm
双拉右回收距离	0.0	mm
双拉右吐布时间	0.0	s
双拉左吐布时间	0.0	s

Double pull left recovery distance: the machine does not spit cloth for a certain distance when it retreats.

Double pull right recovery distance: the machine does not spit cloth for a certain distance when it moves forward.

Double pull right cloth spitting time: After the machine retreats and stops, it continues to spit cloth for a period of time.

Double pull left cloth spitting time: After the machine moves forward and stops, it continues to spit cloth for a period of time. Use with the

单拉切断前吐布时间	0.00	s
单拉切断前回收时间	0.00	s
单拉右吐布时间	0.00	s

Cloth spitting time before single pull cutting : Continue to spit cloth for a while when the machine retreats.



Recovery time before single pull cut-off : When the machine retreats, the cloth is spitted and reversed, and the


Single pull right spitting time : cloth is closed for a period of time. : Continue to spit cloth for a period of time after the machine stops moving forward.

恢复出厂设置

After replacing the PLC or re-programming the program, it is necessary to restore the factory settings.

5. Walking parameter page



	1	2	3	4	5	6	7	8	9	10
主机速度	9999	9999	9999	9999	9999	9999	9999	9999	9999	9999
主机加速时间	9.99	9.99	9.99	9.99	9.99	9.99	9.99	9.99	9.99	9.99
主机减速距离	9999	9999	9999	9999	9999	9999	9999	9999	9999	9999
急停时间	9.99	9.99	9.99	9.99	9.99	9.99	9.99	9.99	9.99	9.99

Host speed: the actual speed value corresponding to the current segment speed (walking speed).

Host Acceleration Time: The time it takes for the machine to reach the set speed from stopping.

Host deceleration distance: the deceleration distance of the machine from the set speed laying to the stop.

Emergency stop time: The time required for the machine to stop in an emergency.

6. Device parameters page

 		 	
右定位补正	<input type="text" value="0.0"/> mm	加减速无布频率	<input type="text" value="0"/> HZ
左定位补正	<input type="text" value="0.0"/> mm	匀速无布系数	<input type="text" value="0.0"/>
右极限	<input type="text" value="0.0"/> mm	行走手动速度	<input type="text" value="0"/>
左极限	<input type="text" value="0.0"/> mm	布斗手动频率	<input type="text" value="0"/> HZ
		切刀起动速度	<input type="text" value="0"/>
无布停机延时	<input type="text" value="0.0"/> s	切刀起动距离	<input type="text" value="0"/> cm
长度校正	<input type="text" value="0"/>	自动退刀速度	<input type="text" value="0"/>
		手动退刀速度	<input type="text" value="0"/>
			

右定位补正	<input type="text" value="0.0"/> mm
左定位补正	<input type="text" value="0.0"/> mm

When the spreading length is set to 1000 mm, the machine does not reach the set value.

For example, the end point is 999.8 mm, and the right positioning correction is set to 0.2 at this time;

The starting point is 0.2 mm, and at this time, the left positioning correction is set to -0.2.

右极限	<input type="text" value="0.0"/> mm
左极限	<input type="text" value="0.0"/> mm

Right operation machine:

Right limit: soft limit, less than the distance of the anti-collision device of the table and greater than the set laying length

Left limit: set smaller (e.g. -10 mm, -30 mm)

长度校正	0
------	---

Because there may be uneven conditions on the laying table, uneven height between the two tables, etc., it is necessary to correct the length to ensure that the actual walking distance of the machine is consistent with the displayed distance

长度校正	
请依序做长度校正：	
1、以寸动方式依一方向移动机器让“接近开关”通过“归0点”即放手停止；	
2、先于裁板做起点记号，按起点；	起点
3、以寸动方式将机器移到最右端；	
4、丈量机器移动值并输入	0.0 mm
5、请按终点	终点
6、自动计算出长度系数	0
7、完成后按“回主页”键返回主页；	

Just follow the steps.

行走手动速度	0
布斗手动频率	0 HZ

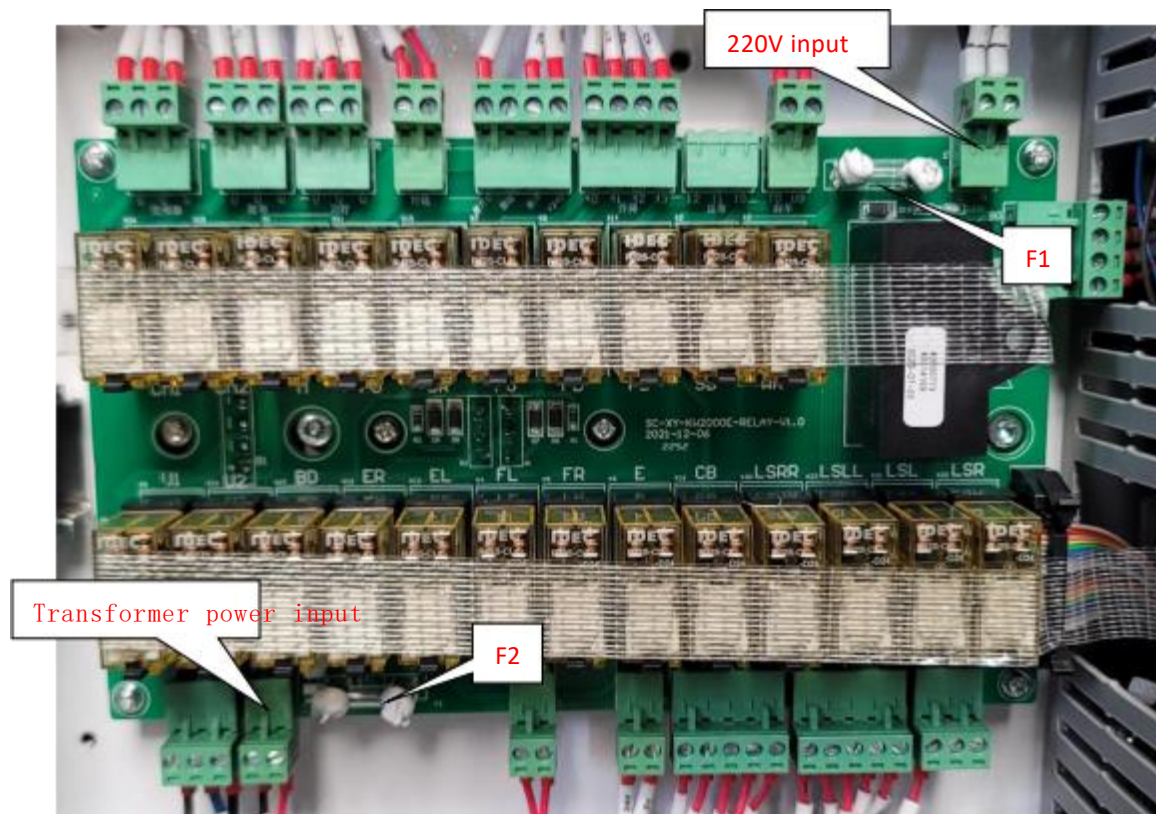
Manual walk and manual cloth bucket values

The factory setting parameters can be slightly modified to meet the usage requirements.

7. Alert page



8. Failure

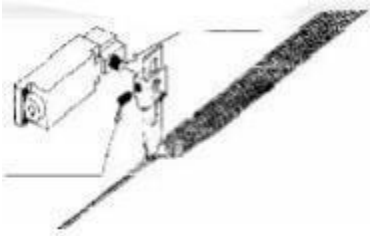


F1: Lift motor fuse.

F2: Opposite side motor fuse.

Condition	Reason	Countermeasure
Cloth cutting blade does not rotate	1. Fuse F2 burns out 2. The circuit board is damaged 3. Motor carbon brush or rotor wear	1. Check the fuse. 2. Turn on the cutter and measure whether the output plug of the cutter has a DC voltage of about 24V. If the circuit board has not been replaced. 3. The motor life is about 1.5-3 years. It is recommended to replace the entire motor. 4. Use a multimeter to measure whether the input power supply of the transformer is AC 20V.

<p>The opposi te edge cloth table does not move</p>	<p>1. Fuse F2 burns out</p> <p>2. The circuit board is damaged</p> <p>3. Opposite motor failure</p>	<p>1. Check the fuse</p> <p>2. Cover the sensor to measure the presence or absence of the opposite output plug</p> <p>The DC voltage is about 24V. If it is not available, replace the circuit board.</p> <p>3. This motor is not easy to fail without being hit.</p> <p>4. Use a multimeter to measure whether the input power supply of the transformer is AC 20V.</p>
---	---	--

<p>Unable to power on</p>	<p>1. Air switch overload trip</p> <p>2. The external power supply of the machine is open</p>	<p>1. Open the housing and turn the air switch back to ON</p> <p>2. Test the electricity meter along the line.</p>
<p>Press Auto</p> <p>Cannot automatically line</p> <p>Go</p>	<p>OP relay abnormal. During power transmission, OP must be in the ON (magnetic attraction) state.</p> <p>Press the steel cable</p> <p>↓</p> <p>Power down the OP</p> <p>↓</p> <p>Machine stops</p> <p>OP continuously powered off = cannot walk automatically</p>	<p>The OP power is supplied via a limit switch at the end of the emergency stop cable.</p> <p>1. Check whether there is any cloth cutting bag or trolley pressed to the steel cable.</p> <p>2. The angle deviation of the limit switch at the end of the steel cable is too large or faulty.</p> <p>3. Refer to P/14 line tracking to check whether there is any disconnection.</p>  <p>1. Axis 2. Screw</p> <p>1. Limit the switch to relax when</p>

		<p>the angle deviation is too large;</p> <p>2. Re-pin the screw to make the shaft spring back to the original point.</p>
--	--	---

<p>Cant sharpen a knife</p>	<p>1. Fuse F2 burns out</p> <p>2. The circuit board is damaged</p> <p>3. Sharpening electromagnet failure</p>	<p>1. Check the fuse</p> <p>2. Measure whether the sharpening output plug has a DC voltage of about 24V after sharpening. If not, replace the circuit board.</p> <p>3. Electromagnets are not easy to fail.</p> <p>4. Use a multimeter to measure whether the input power supply of the transformer is AC 20V.</p>
<p>Edge dial not working</p>	<p>1. Drive overload protection</p> <p>2. Edge dial motor failure</p>	<p>1. Check if the driver light is flashing red, power off and restart the driver, or restart the machine</p> <p>2. Replace the edge dial motor.</p>
<p>Lifting mechanism not working</p>	<p>1. Fuse F1 burns out</p> <p>2. The circuit board is damaged</p> <p>3. Lifting motor failure</p>	<p>1. Check the fuse</p> <p>2. Press and hold up to measure whether there is 220V AC between circuit boards 43 and 40, and press and hold down to measure circuit boards</p> <p>Whether between 43 and 41 is 220V AC, if not replace the circuit board.</p>

<p>The cloth pressing mechanism does not</p> <p>Work/Abnormal Work</p> <p>Work</p>	<p>1. Limit switch failure</p> <p>2. Relay damage</p> <p>3. Cloth pressing motor failure</p>	<p>1. Adjust the position of the limit switch, and make sure that a limit switch is triggered when the bead is opened or pressed down.</p> <p>2. Replace the cloth pressing relay.</p> <p>3. Check whether the circuit and motor are normal.</p> <p>4. Use a multimeter to measure whether the 220V input power supply is AC 220V.</p>
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9. Maintenance

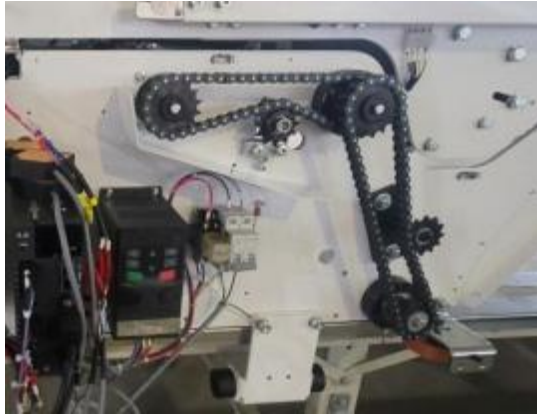


Figure 1 Figure 2



Figure 3

1. Before turning on the equipment, check whether the wires and plugs used are cracked or exposed. If problems are found, stop using them and repair them in time;
2. Before the equipment is turned on, it is necessary to check whether unfixed items are placed on the equipment and whether there are obstacles on the path of the equipment to prevent unnecessary property losses or even safety accidents after the equipment is started;

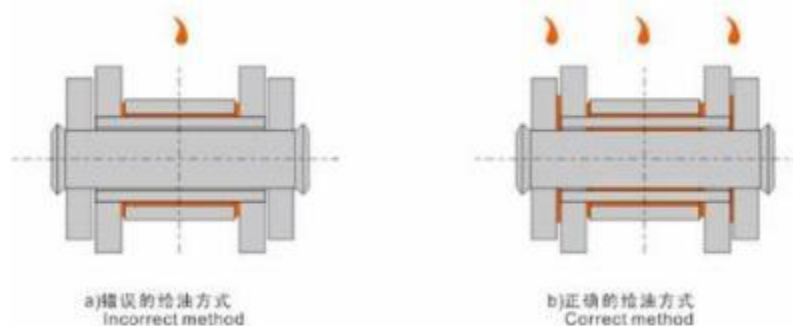
3. It is forbidden to disconnect the power supply when the equipment is running normally to prevent the electromagnetic brake failure from causing the equipment to rush out;

4. After the equipment is stopped, it is necessary to check whether the equipment has returned to zero point, and clean the dust and debris on the running wheels, sponges and running tracks. It must be cleaned every 40 hours of work;

5. The tightness of the chain should be appropriate, not too loose or too tight, and it is advisable to push the loose edge of the chain slightly by human hand;

6. It is recommended to re-lubricate the chain every 40 hours of work.

It is recommended to use lubricant with viscosity N150 (ISO VG150) and brush it in the gap at the hinge of the loose link of the chain (between pin and sleeve, sleeve and roller), re-lubricate the chain at least once a month;



7. Keep the chain clean, avoid sunlight and rain, and prevent contact with acid and alkaline organic solvents and other substances. When there are more chips and oil stains on the surface of the chain, a special chain cleaning agent can be used to clean it to ensure that there is no dirt residue.

