

拉腰机

Waistband setter

(MB2003B)

使用说明书

Instruction Manual

常州智谷机电科技有限公司

CHANGZHOU WISDOM & VALLEY ELECTRICAL TECHNOLOGY CO., LTD

在使用本设备之前请先阅读本使用说明书。

Please read the operation manual of the touch screen interface before using the device

请将本使用说明书放在便于查阅的地方保管

Please keep this operation manual of touch screen interface in convenient place for reference

版本信息/ Version

2022.04.03

感谢购买 IMB 工业用缝纫机。

在使用此机器之前，请仔细阅读以下的说明，这样可以更好地帮到您了解此机器的相关操作。

这些说明是根据现行的条例明确阐述了正确的工作方法。

Thank you for purchasing this industrial sewing machine from IMB

Before using this automatic unit, please read the following instructions, which will help you to

understand how the machine operates.

These instructions illustrate the correct working methods to comply with current regulations.

在没有得到IMB授权许可的前提下，此说明书的任何部分是不可以被复制或者转录的。说明书的内容可能被修改，而不需预先通知。

No part of this manual may be copied or transcribed without requesting prior authorization from IMB

The contents of this manual may be subject to change without advance notification.

我们将欣然接受各位提出的改进此说明书的任何建议和指示

We are happy to receive suggestions and/or indications on ways we could improve this manual.

本机介绍说明分为二部分，具体请参照《MB2003B 拉腰机-使用说明书》、《MB2003B 拉腰机-零件手册》。

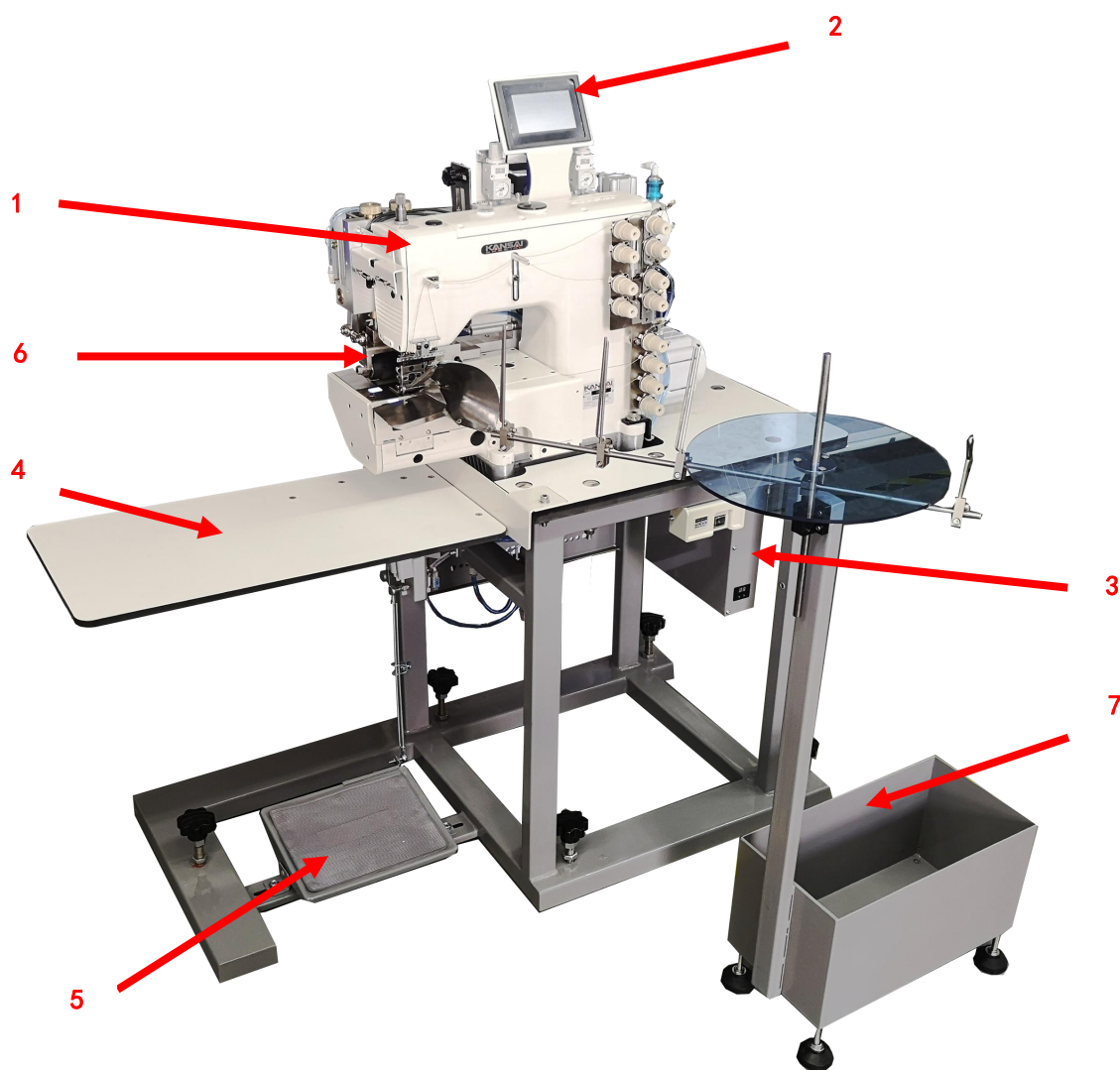
The introduction of this machine is divided into two parts. For details, please refer to 《mb2003b operation manual》 and 《mb2003b Parts Manual》

ENGLISH

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1、 Basic information of equipment



1: Machine head;

4: Table;

7: Loader

2: Screen;

5: Pedal;

3: Control box;



6: Roller

2、Technical parameters of equipment

MB2003B Waisterband setter		
1	Machine head	KS-1104P/IMB-1104P
2	Maximum speed/rpm	3500
3	Voltage/V	220
4	Pressure/Mpa	0.5
5	Stitch length/mm	2—5
6	Waistband width/mm	25.4-47.5
7	Suitable fabric	Denim
8	Suitable for waist	Straight /curved
9	Waistband head	Long type
10	Size/mm	1300L×570W×1300H
11	Weight/kg	110

3、 Safety precautions

Considerations for safe use of automata

 危険	<p>1. In order to prevent accidents caused by electric shock, please do not open the cover of the electrical box of the motor or touch the parts in the electrical box when the power is connected.</p>
 注意	<p>1. In order to prevent personal injury, please do not operate the machine in the state of removing the belt guard, finger protector and other safety devices.</p> <p>2. In order to avoid being involved in the machine's personal accident, please do not let your fingers, hair, clothes near the pulley, v-belt, motor, and do not put items on it during the operation of the sewing machine.</p> <p>3. To prevent personal injury, please do not put your finger near the needle when turning on the power or running the machine.</p> <p>4. In order to prevent personal injury, please do not put your fingers in the wire pole guard during the operation of the sewing machine.</p> <p>5. When the machine is running, it turns at a high speed. To prevent damage to the hand, never let the hand near the cutter during operation. In addition, when changing the cable, please be sure to turn off the power.</p> <p>6. In order to prevent personal injury, please be careful not to pinch your fingers when the machine moves up and down or when you return to the original position.</p> <p>7. Please do not cut off the power or air supply while the machine is running.</p> <p>8. In order to prevent accidents caused by sudden starting, please remove the cloth guide when the preparation work is finished and the sewing state is reached.</p> <p>9. In order to prevent accidents caused by electric shock, please do not operate the sewing machine when the ground wire of the power supply is removed.</p> <p>10. In order to prevent accidents caused by electric shock and damage to electrical parts, be sure to turn off the power switch before inserting or unplugging the power plug.</p> <p>11. In order to prevent accidents caused by damage of electrical parts, please stop the operation for safety when it thunders and pull the power plug.</p> <p>12. In order to prevent accidents caused by damage to electrical parts, condensation will occur when moving from a cold place to a warm place immediately, so please wait until the water drops dry before switching on the power.</p> <p>13. As this product is a precision machine, please pay full attention to it during operation, do not splash water or oil on the machine, and do not let the machine fall and give the machine impact.</p> <p>This machine is A class A industrial machine. The use of this machine in the home environment may cause the phenomenon of radio interference. At this point, please take appropriate measures to solve the problem of radio interference.</p> <p>15. After the power switch is turned off when the accumulator moves, the accumulator lever moves, so please be careful not to clip your finger, etc.</p>

16. When the power switch is turned off during the foot press action, please be careful not to pinch your fingers.

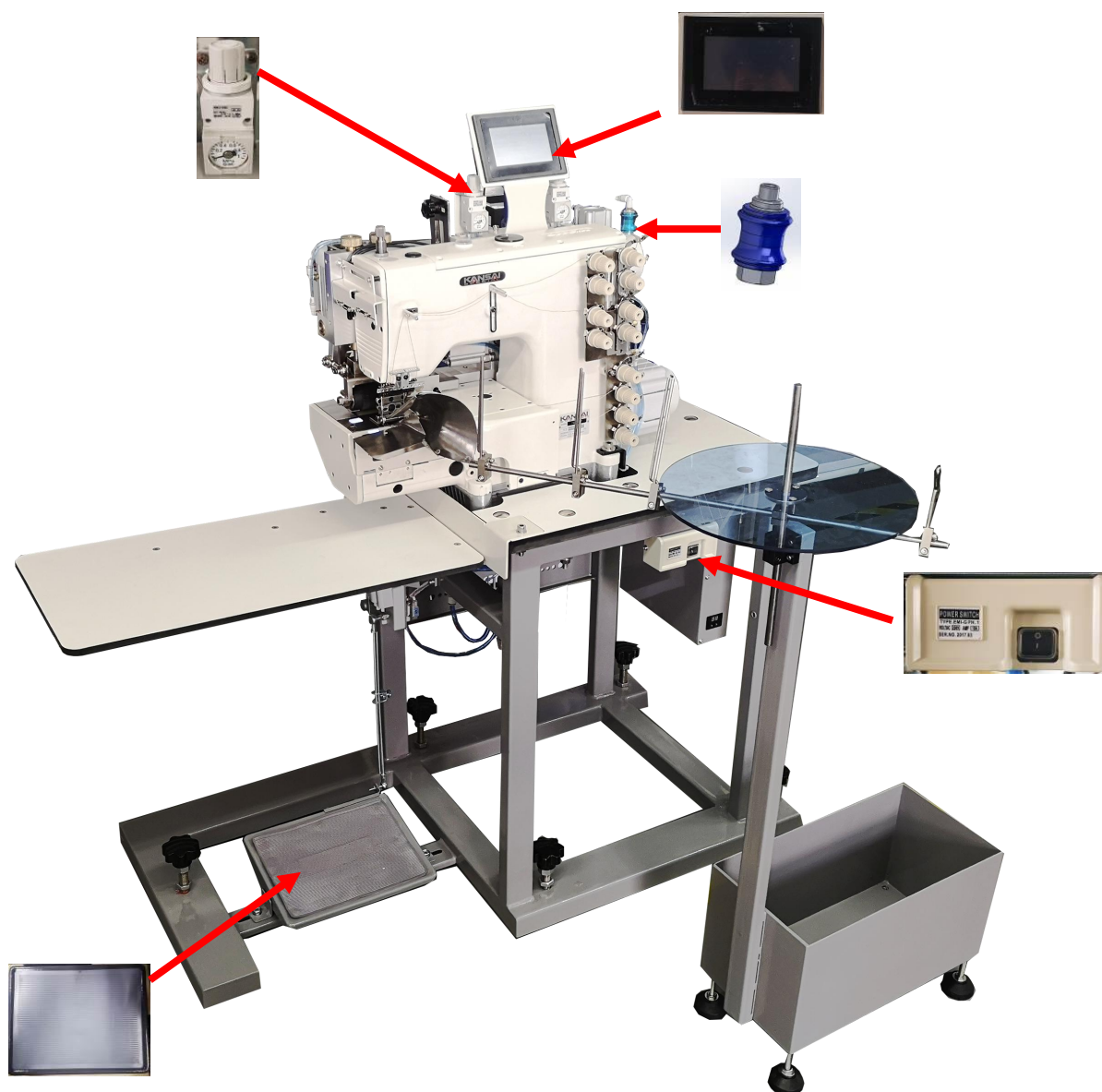
17. During folding operation, please be careful not to clip the cylinder to your finger when putting your finger into the folding machine.

*** important safety information:**

- ✓ improper operation of the machine may cause personal injury. Please read this instruction carefully and operate correctly before operation.
- ✓ Please ventilate the machine before it is officially powered on.
- ✓ do not turn on the internal parts of the electric cabinet or touch screen while the power is on.
- ✓ this machine should be used after receiving training or under special instruction to ensure the safety of the user.

4、Key function

4.1 Key function description



(1): Power switch: press the power switch to position 1, and the equipment is powered on and ventilated.

(2): Foot pedal: front step sewing, back step presser foot lift.

(3): Pressure reducing valve: adjust the cylinder pressure of the front tugboat on the left side, and adjust the cylinder pressure of the rear tugboat on the right side.

(4): Hand slide valve --- when the presser foot is raised, the sliding hand slide valve controls the lifting and landing of the front tug, and the front tug normally falls down

(5): Touch screen

a. Boot interface

IMB 智谷机电

MB2003B

中文

English

creation for tomorrow

a. Main interface

MB2003B 自动拉腰机

5 5 5 HIGH 3000 LOW

前剪 后剪

5 5 5

产量计数: 0 清零

前剪 后剪
左吹线 右吹线
吹气 直腰
手动剪线
菜单 测试

5、Operating instructions

5.1 Preparation before operation

- ✓ When the operator checks, the machine head should be in the stop state
- ✓ Check that the stitches have been correctly fitted
- ✓ Check whether the needle has been installed
- ✓ Clean up the sundries on the machine table to ensure that there are no sundries hindering the operation of the machine
- ✓ Check that the eye guard is properly installed

5.2 Description of operation process

1 Start the device



Press the power switch to position 1, Power on the equipment, Select the language in the 4.1 - (5) - a boot interface and enter the 4.1 - (5) - B monitoring interface.

2 Sewing



- a. Click **直腰**: Left and right rollers fall (as shown in the figure below)



Manually insert the waist into the folder, Step on the pedal to lift the presser foot, Put the waist under the front roller (as shown in the figure on the left below), Put down the presser foot and step forward to finish the sewing



弯腰

b. Click **弯腰**: The left roller falls and the right roller rises



Manually insert the waist into the folder, Step on the pedal to lift the presser foot, Put the waist under the front roller (as shown in the figure on the left below), Put down the presser foot and step forward to finish the sewing.

自动

c. click **自动**: Left roller down, The right roller takes off and lands according to the set initial state. The right roller can be set to lift intermittently. See 6.2 parameter setting for specific setting method.

Manually insert the waist into the folder, Step on the pedal to lift the presser foot, Put the waist under the front roller (as shown in the figure on the left below), Put down the presser foot and step forward to finish the sewing

3 Shut down



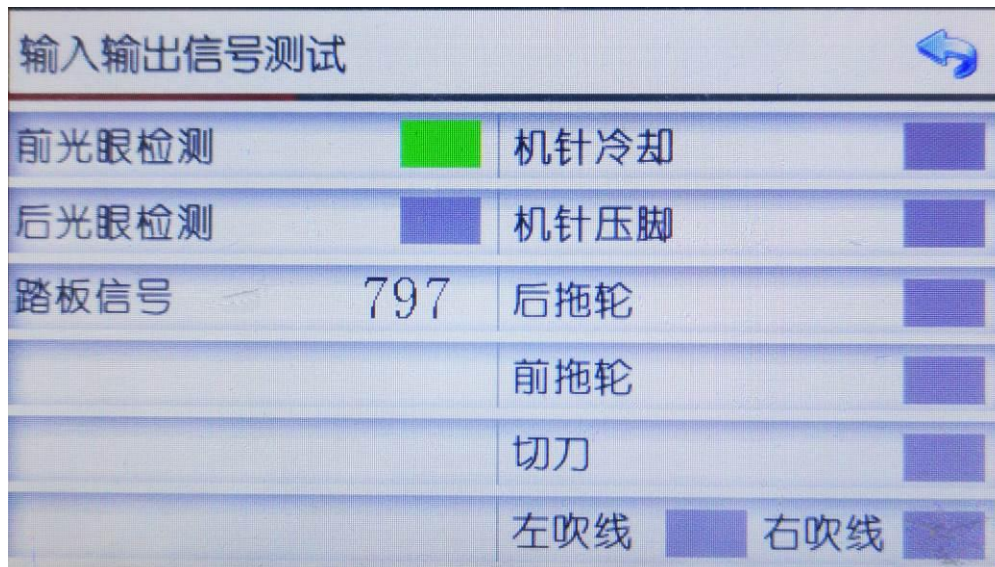
Press the power switch to 0.


6、Debugging method



6.1 signal detection



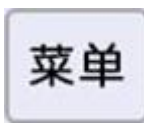
Click the test button in the monitoring interface Enter the following interface



Sensor: Block the reflective paper, and the corresponding button turns green , sensor is normal

Other signals: click , turns , The solenoid valve reacts and the electricity is normal

6.2 Parameter setting



1. Click the menu button in the monitoring interface Enter the following interface and click to change the corresponding parameters.



设置菜单



P-07	右拖轮自动动作初始状态
P-08	右拖轮第一次切换延迟针数
P-09	右拖轮第二次切换延迟针数
P-10	右拖轮第三次切换延迟针数
P-11	右拖轮第四次切换延迟针数
P-12	右拖轮第五次切换延迟针数

P-01 Sewing speed: adjust the maximum speed of the motor;

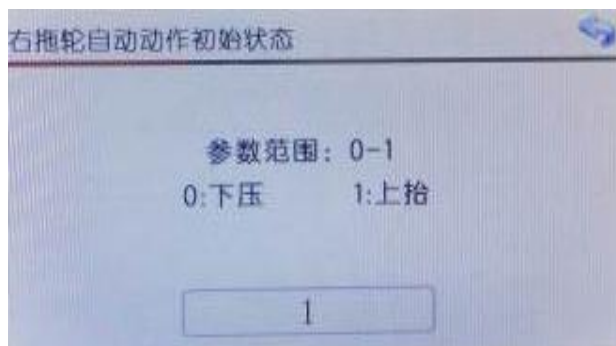
P-02 Cutter working remain time: adjust the completion time of cutter cylinder action;

P-03 Rear roller pressing stitches: Adjust the rear roller pressing time;

P-04 Needle cooler opening stitches: Adjust the up blowing time.

P-05/P-06 Intermittent Blower opening/closing stitches: A loose thread is needed in the middle of the sewing, The number of stitches can be set according to the distance, There is no need to set the parameter to 0.

P-07 Initial state of automatic operation of right roller:



P-07 to P-12 is a cycle:

The first form

P-07: press down P-08: lift up P-09: press down P-10: lift up P-11: press down P-10: lift up

The second form

P-07: lifting up P-08: pressing down P-09: lifting up P-10: pressing down P-11: lifting up P-10: pressing down

The number of delayed stitches can be set for each switch from P-08 to P-12

2. In the monitoring interface



2.1 Select button: as shown in the figure below, the function is on, click any function,



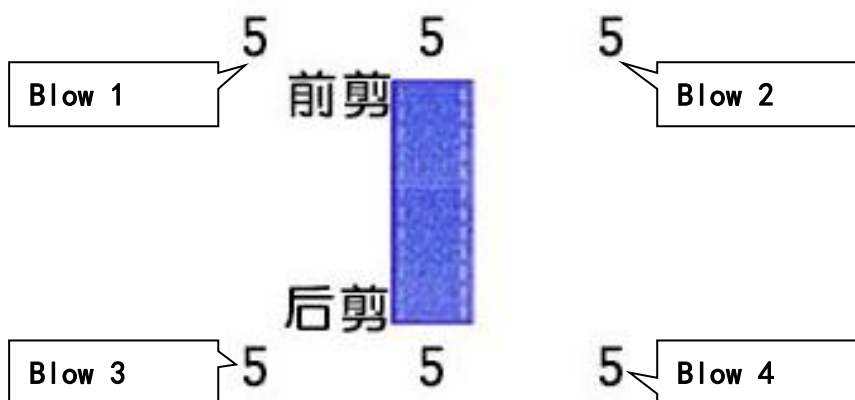
the color becomes lighter, and the function is off。



2.2 Motor speed control button (The same as P-01 in 6.2.1 setting menu)。



2.3 Blowing, cutter delay number of stitches: click the number to change the corresponding parameter value。



Blow 1&2: When the pants cover the first piece of reflective paper, stop blowing according to the number of delayed stitches;

Front cut: The pants cover the second piece of reflective paper and start cutting according to the number of delayed stitches;

Blow 3&4: When the pants leave the first piece of reflective paper, the blowing starts according to the number of delayed stitches;

Rear cut: The pants leave the second piece of reflective paper and start cutting according to the number of delayed stitches.

6.3 Pressure of front and rear roller

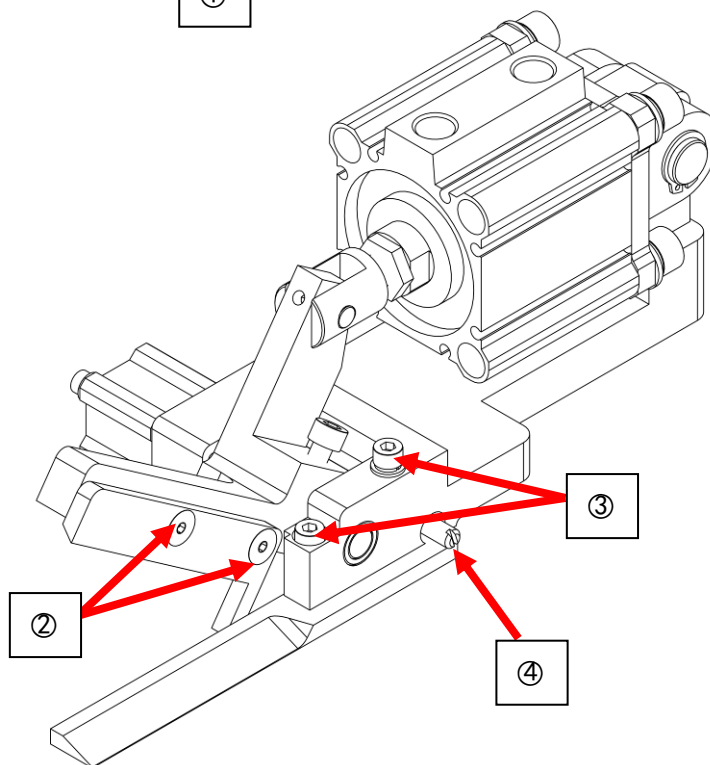
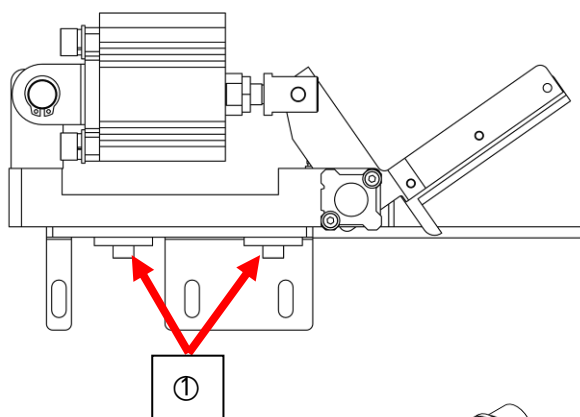
1. Front roller pressure: Manually rotate the pressure regulating knob of the right pressure reducing valve (as shown in the figure below), When the pressure of roller is maintained at 0.2-0.4mpa, the roller will fail if the pressure is too small, which will affect the needle distance.



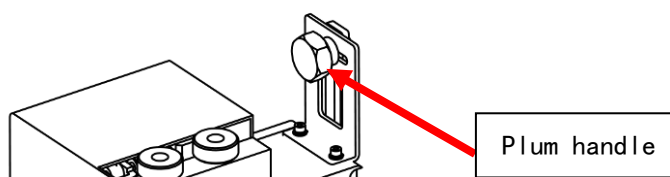
2. Rear roller pressure; Manually rotate the pressure regulating knob of the left pressure reducing valve (same as the figure above), The roller pressure is maintained at 0.2-0.4mpa, too small affects the shear position.

6.4 Knife change

- 1) Remove the two fixing screws (1) in the figure above and take out the cutter device;
- 2) Remove the upper cutter fixing screw (2), remove the upper cutter, replace the new cutter, install the fixing screw (2) and tighten it
- 3) Remove the two retaining screws (3), Remove the lower cutter, replace the new cutter, and install the fixing screw (3) without tightening;
- 4) Adjusting set bolt (4), Make the upper and lower cutters in point contact state, and then tighten the set screw (3)
- 5) Install the cutter device back into the machine head, tighten the fixing screw, and the cutter replacement is completed.



6.5 Needle pitch adjustment



Manually loosen the plum blossom handle at the position shown in the figure above, move it towards the machine head, and the needle pitch decreases, while the reverse needle pitch increases.

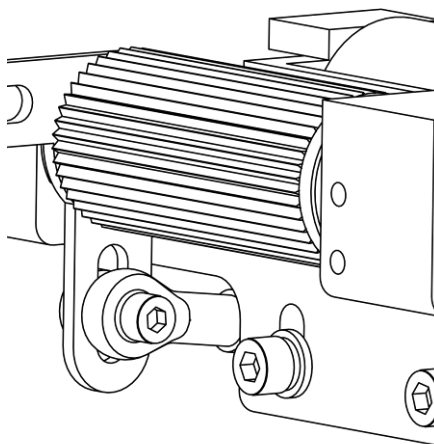
Head needle rod swing adjustment: press the position button in the left figure below, turn the hand wheel, and keep the number between P-4.



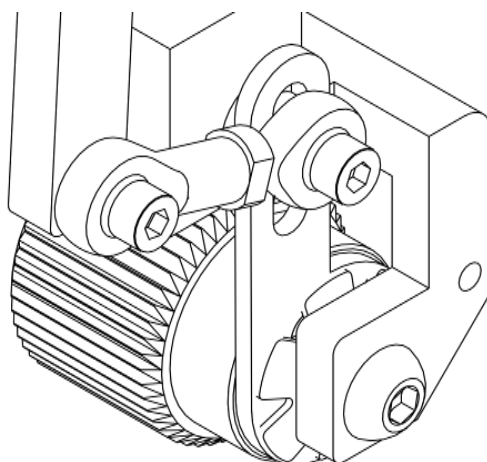
Note: it is not necessary to adjust the swing of the needle bar in normal state. Excessive swing will cause the needle to touch the needle plate.

6.6 Speed ratio adjustment

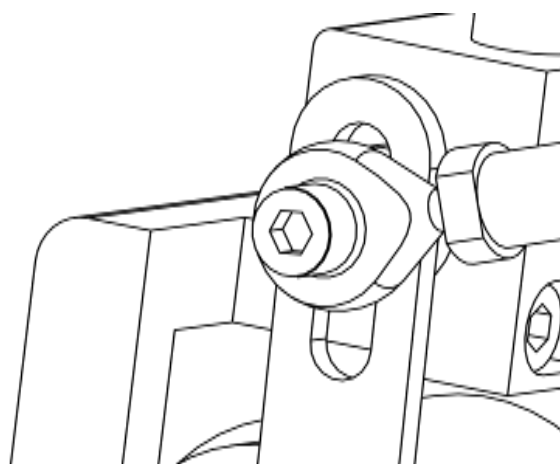
Speed adjustment of lower roller: move the position of spherical plain bearing in waist groove as shown in the figure below



Speed adjustment of left roller: move the position of spherical plain bearing in waist groove as shown in the figure below

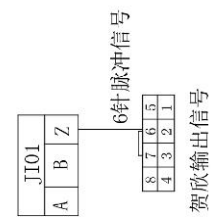
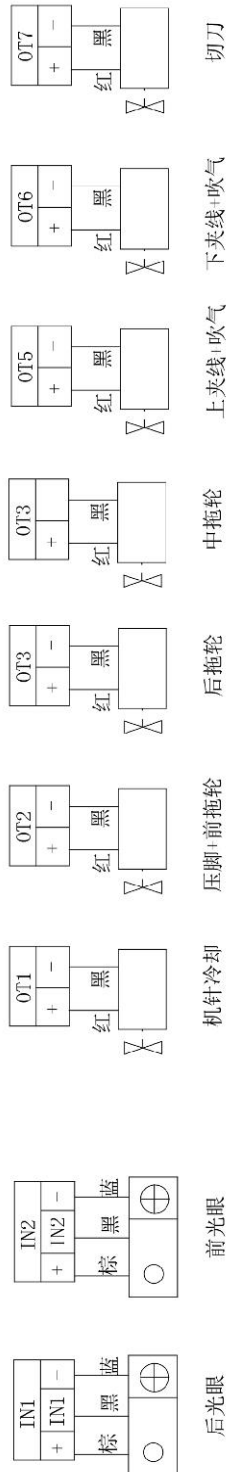
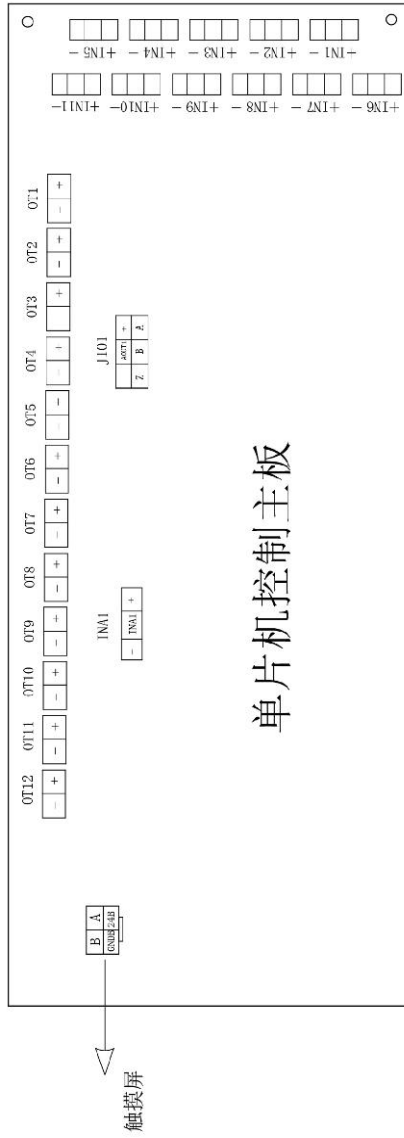


Speed adjustment of right roller: move the position of spherical plain bearing in waist groove as shown in the figure below

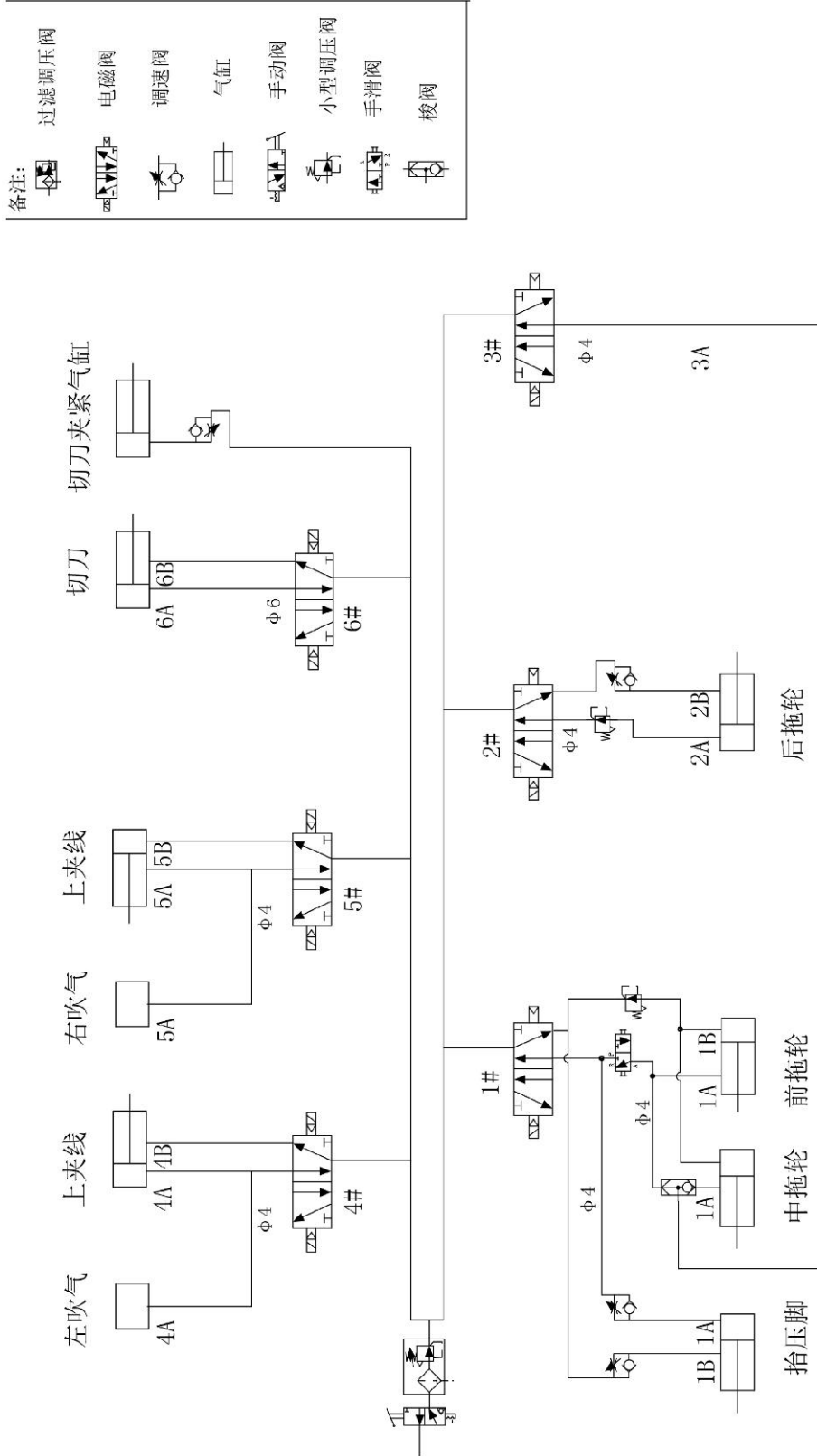


7、Electrical wiring

7.1 Electronic control



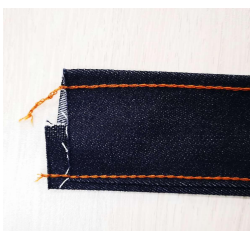



7.2 Pneumatic control



备注：各气路布放时要做好标签，以示区分。

8、Common problems and Solutions

phenomenon	Picture	Cause analysis	Solutions
Waist cut constantly		Cutter wear	<ol style="list-style-type: none"> 1. Adjust the adjusting screw of lower cutter according to steps 6.6-3 and 6.6-4 2. Replace the upper and lower cutters according to 6.6
There is deviation in the shear length of both ends of the waist or the loose line position of the line trace		Wrong number of stitches in front and back blowing or shearing delay	Refer to "mb2003d waist pulling machine – touch screen interface operation instructions" to set the number of delayed blowing or cutting needles
After the waist is sewn, the upper and lower pieces are dislocated		The upper and lower rollers and feed dog are not synchronized	Adjust the speed ratio of the front tug and the lower tug according to the steps in 6.4
Blowing or cutter failure		Position deviation or failure of reflector	<ol style="list-style-type: none"> 1. Check whether the laser is normal 2. Move the reflector position or replace the reflector
Winding of front roller or lower roller		The shield is not against the roller	Adjust the position of the baffle according to 6.5

9、Daily maintenance requirements

11.1. Equipment maintenance list and requirements are shown in the table below

11.2. For other maintenance requirements of the machine head, please refer to the manual of the sewing machine head

NO	Project	Frequency				Requirement
		Daily	Weekly	Monthly	Half year	
1	Clean up the dust	√				Remove dust on equipment surface and parts
2	Clean up the oil		√			Clean the oil stains on the table board, needle plate and shuttle core
3	oil quantity			√		The oil quantity is not lower than the warning line
4	Bobbin			√		Check whether the bobbin is scratched
5	Sensor				√	Check whether the sensitivity is accurate and whether the position changes
6	Sliding parts				√	Check lubrication of sliding parts and add lubricant if necessary
7	Control box				√	The cooling fan runs normally and the dust should be cleaned up in time

10、Knowledge product protection statement

MB2003B waistband setter was designed by Changzhou wisdom & valley Electric Technology Co., Ltd. . The intellectual property rights of this achievement belong to Changzhou wisdom & valley Electric Technology Co., Ltd. and are protected by national intellectual property laws and regulations. Without the written permission of the right holder, the patented technology of the achievement shall not be implemented, and the information related to the achievement shall not be copied, sold or disseminated through the network. For any illegal infringement, Changzhou wisdom & valley Electric Technology Co., Ltd. will pursue its legal responsibility according to law