



拉腰机

Waistband setter

(MB2003D-KS-1509P)

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

2020.07

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.

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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《MB2003D 拉腰机-使用说明书》、《MB2003D 拉腰机-零件手册》。

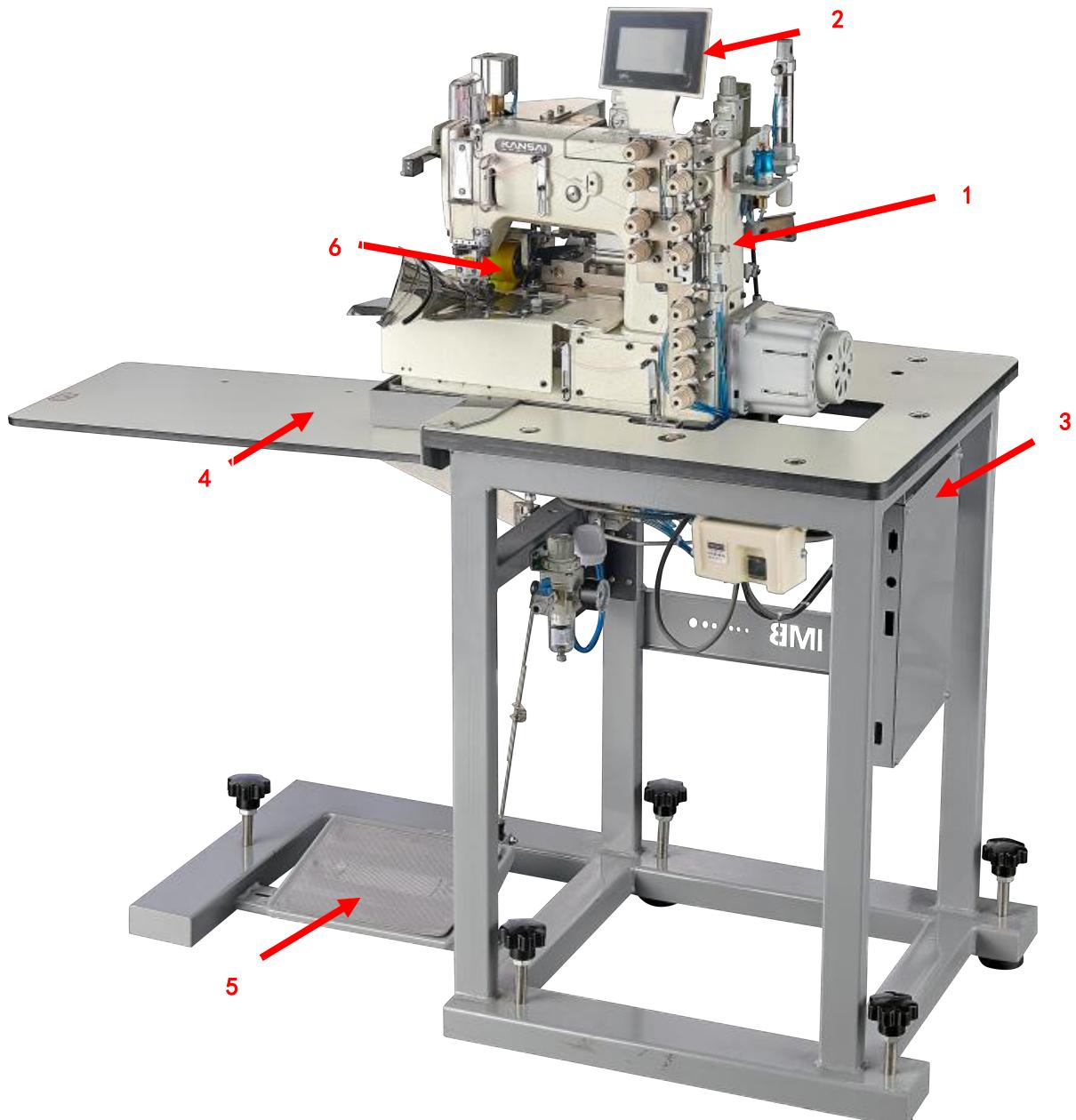
The introduction of this machine is divided into two parts. For details, please refer to 《mb2003d operation manual》 and 《mb2003d Parts Manual》

中文

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一、设备基本信息



1: KS-1509P 缝纫机头；
4: 辅助台板；

2: 触摸屏；
5: 脚踏板；

3: 电控箱；
6: 拖轮装置

二、设备技术参数

MB2003D 拉腰机		
1	机头配置	KS-1509P
2	最快缝纫速度/rpm	4000
3	工作电压/V	220
4	工作气压/Mpa	0.5
5	缝制针距长度/mm	2—5
6	缝制裤腰宽度范围/mm	30—43
7	适用布料	牛仔布料
8	适用腰型	直腰/弯腰
9	设备尺寸/mm	1300L×570W×1300H
10	设备重量/kg	110

三、安全注意事项

为了安全地使用自动机的注意事项

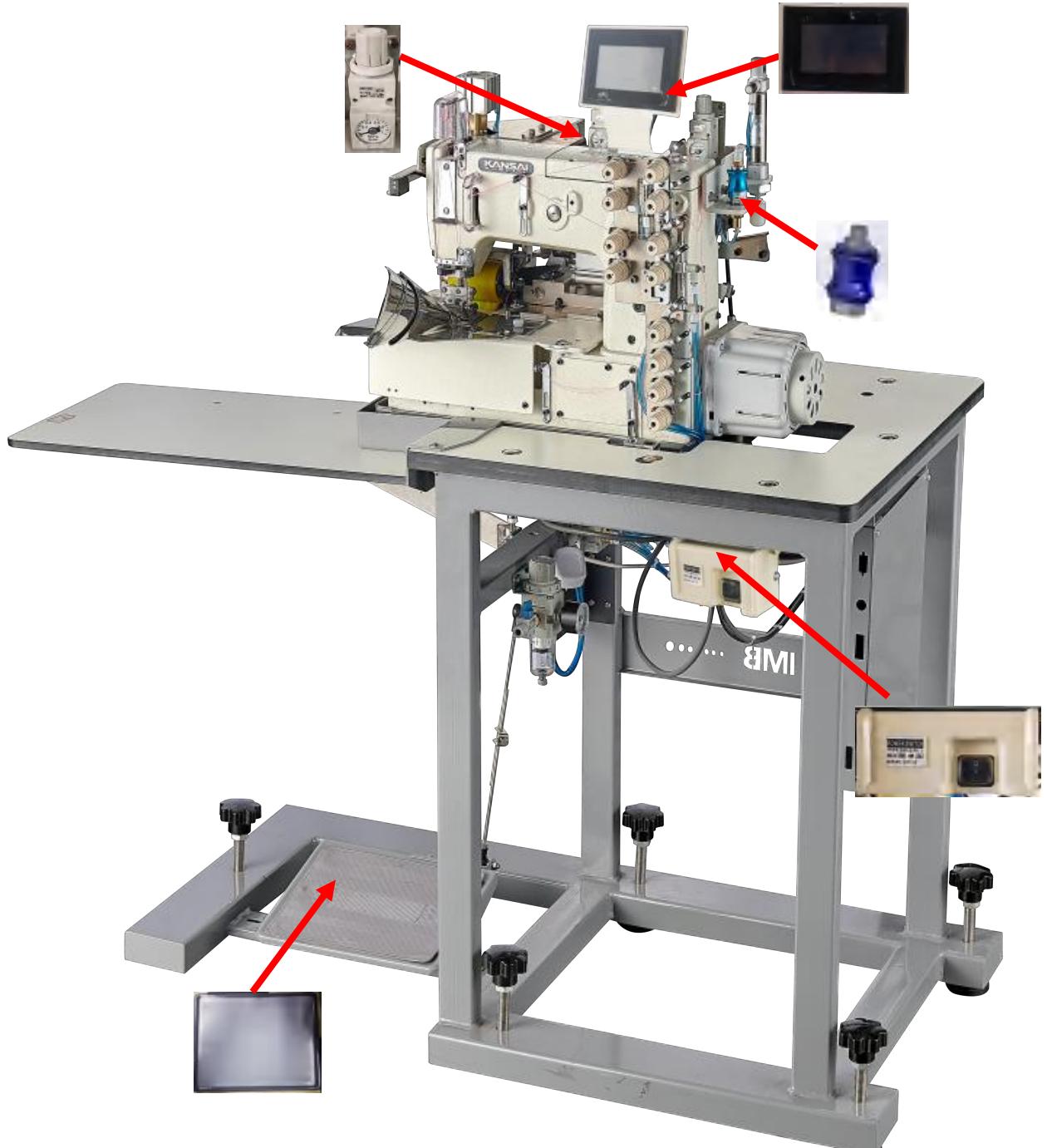
 危险	<p>1. 为了防止因触电造成的事故，在接通了电源的状态下，请不要打开马达电气箱的盖子，也不要触摸电气箱内的零件。</p>
 注意	<p>1. 为了防止对人身的伤害，请不要在卸下了皮带护罩、手指防护器等安全装置的状态下运转机器。</p> <p>2. 为了防止被卷入机器的人身事故，缝纫机运转中，请不要让手指、头发、衣服靠近皮带轮、V型皮带、马达附近，也不要将物品放到上面。</p> <p>3. 为了防止对人身的伤害，打开电源时或缝纫机运转中，请不要将手指放到机针附近。</p> <p>4. 为了防止对人身的伤害，缝纫机运转中，请不要将手指放到挑线杆护罩内。</p> <p>5. 缝纫机运转时，是以高速转动。为了防止伤害到手，运转中请绝对不要让手靠近切布刀。另外，更换机线时，请一定关闭电源。</p> <p>6. 为了防止对人身的伤害，缝纫机上下动作时或返回原来位置时，请一定注意不要夹到手指。</p> <p>7. 缝纫机运转中，请不要切断电源或切断空气供给源。</p> <p>8. 为了防止突然的起动造成事故，当准备工作完了，达到可以进行缝制的状态时，请卸下布料导向器。</p> <p>9. 为了防止因触电造成事故，在卸下电源地线的状态下，请不要运转缝纫机。</p> <p>10. 为了防止因触电和电气零件损坏造成事故，插拔电源插头时，请一定先关掉电源开关。</p> <p>11. 为了防止因电气零件损坏造成事故，打雷时，为了安全请停止作业，并拔掉电源插头。</p> <p>12. 为了防止因电气零件损坏造成事故，从寒冷的地方立即移动到温暖的地方等时会发生结露现象，因此请待水滴完全干燥之后再接通电源。</p> <p>13. 因为本产品属于精密机器，所以操作时请充分注意，不要把水、油溅到机器上面，也不要让机器掉落与机器冲击。</p> <p>14. 本机器是A级工业用机器。在家庭环境下使用此机器的话，有可能发生电波干扰的现象。此时，请使人采取适当的措施解决电波干扰问题。</p> <p>15. 堆积器动作时关闭了电源开关之后，堆积杆动作，因此请注意不要夹到手指等。</p> <p>16. 布压脚动作中关闭了电源开关之后，布压脚动作，因此请注意不要夹到手指等。</p> <p>17. 折边机动作中，将手指放到折边机内时，请注意不要让气缸夹到手指。</p>

*重要安全信息：

- ✓ 对机器操作不当可能会导致人身伤害，请在操作前仔细阅读本说明并正确操作。
- ✓ 机器正式运行通电前，请先通气。
- ✓ 严禁在通电状态下打开电控箱或触摸屏内部零件。
- ✓ 本机器需要在接受培训后或专人指导下使用，以确保使用者的人身安全。

四、按键功能说明

4.1 按钮功能说明



- (1): 电源开关---按动电源开关至 1 位置，设备通电、通气。
- (2): 脚踏板---前踩缝制，后踩压脚抬起。
- (3): 减压阀---左侧调节前拖轮气缸压力大小，右侧调节后拖轮气缸压力大小。
- (4): 手滑阀---压脚抬起状态下，滑动手滑阀控制前拖轮抬起落，前拖轮常态是落下
- (5): 触摸屏

a. 开机界面

IMB 智谷机电

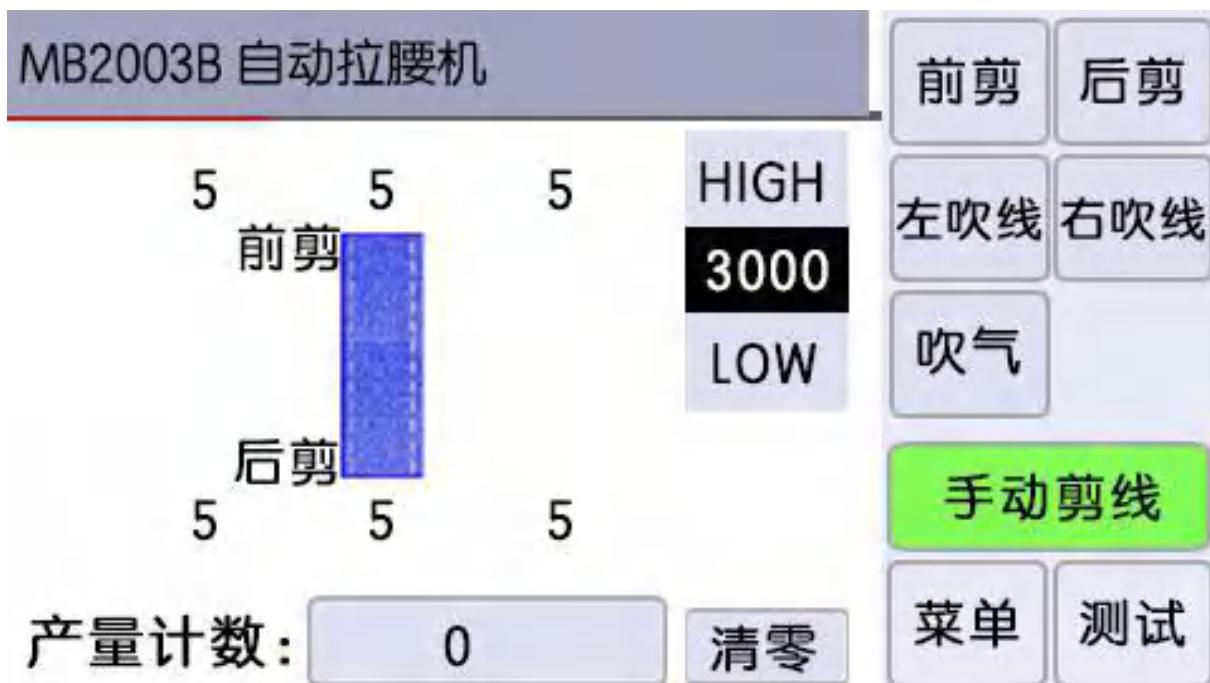
MB2003D

中文

English

creation for tomorrow

b. 监控界面



五、操作说明

5.1 操作前准备工作

- ✓ 操作人员检查时机头需处于停止状态
- ✓ 检查车缝线是否已经正确穿好
- ✓ 检查机针是否已经安装完成
- ✓ 清理机器台面上的杂物，确保机器运行过程中不会有杂物阻碍运行
- ✓ 检查护眼板是否已经正确安装完成

5.2 操作过程说明

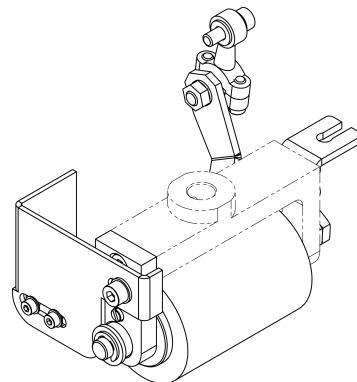
1 启动设备



按动电源开关至 1 位置，设备通电开机，在 4.1- (5) -a 开机界面中选择语言，进入 4.1- (5) -b 监控界面。

2 缝制

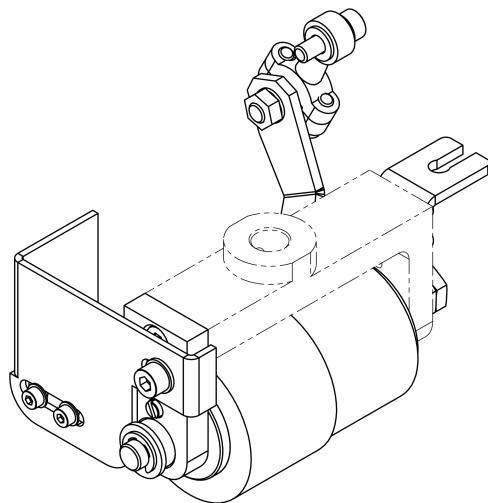
a. 直腰头：



手动将腰头塞进拉筒，后踩 4.1- (2) 脚踏板抬起压脚，将腰头塞到送布牙上方（如下方左图所示），放下压脚，缝制两针再放上裤片（如下方右图所示），前踩脚踏，缝制完成。

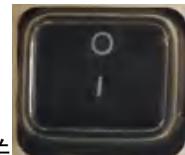


b. 弯腰头:



缝制步骤同直腰头。

3 关机



按动电源开关至 0 位置，设备关机，

六、调试方法

6.1 信号检测

在 4.1- (5) -b 监控界面点击测试按钮 进入如下界面

输入输出信号测试		
前光眼检测		机针冷却
后光眼检测		机针压脚
踏板信号	797	后拖轮
		前拖轮
		切刀
		左吹线 右吹线

光眼：遮挡反光纸，对应按钮 变绿 ，光眼正常

其余信号：点击按钮 ，变绿 ，电磁阀做出反应，电气正常

6.2 参数设置

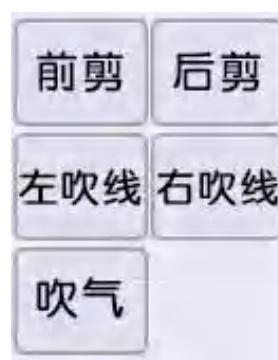
菜单		
1. 在 4.1- (5) -b 监控界面点击菜单按钮	进入如下界面，点击即可更改对应参数。	1/1
设置菜单		
P-01	缝纫工作速度	
P-02	切刀工作保持时间	
P-03	后拖轮下压延迟针数	
P-04	机针冷却延迟开启针数	
P-05	间歇吹线延迟开启针数	
P-06	间歇吹线延迟关闭针数	

- P-01 缝纫工作速度：调节电机最高转速；
 P-02 切刀工作保持时间：调节切刀气缸动作完成时间；
 P-03 后拖轮下压延迟针数：调节后拖轮下压时间；
 P-04 机针冷却延迟开启针数：调节上吹气开启时间。
 P-05/P-06 间歇吹气延迟开启/关闭针数：缝制一段腰头中间需要一段松线，可根据距离设置开启/关闭延迟针数，不需要将参数设置为0。

2. 在 4.1-(5)-b 监控界面中



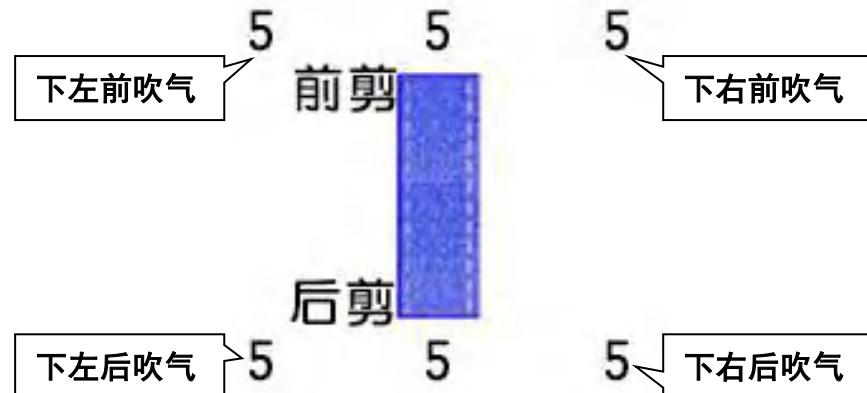
2. 1 选择按钮：如下图所示状态，功能开启，点击任意功能，颜色变浅，功能关闭 .



2. 2 电机调速按钮（同 6.2.1 设置菜单中 P-01）。



2. 3 吹气、切刀延迟针数：点击数字可以更改相应参数值。



下前吹气：吹气运行，底线脱线，当裤片遮住第一片反光纸，根据延迟针数停止吹气；
前剪：裤片遮住第二片反光纸，根据延迟针数开始剪切；
下后吹气：吹气运行，底线脱线，当裤片离开第一片反光纸，吹气根据延迟针数开始吹气；
后剪：裤片离开第二片反光纸，根据延迟针数开始剪切。

6.3 前后拖轮压力

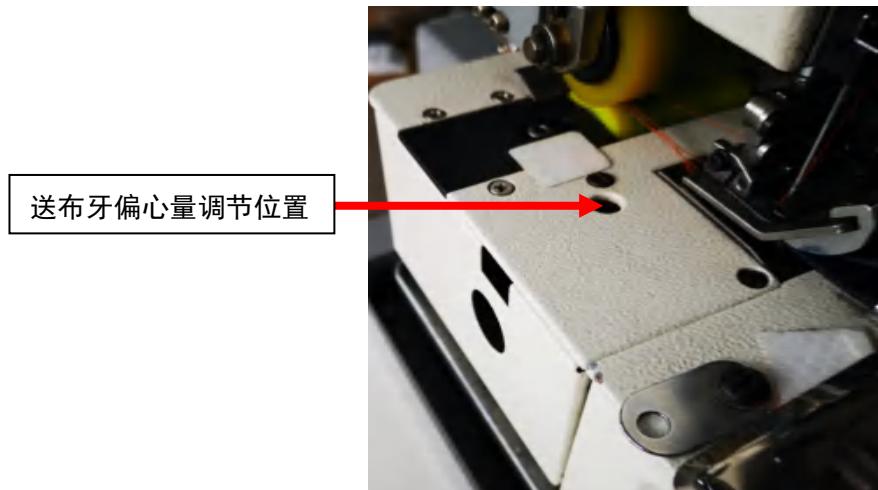
1. 前拖轮压力：手动旋转左边减压阀调压旋钮（如下图所示），拖轮压力维持在 0.3-0.4MPa，压力过小拖轮失效，影响针距。



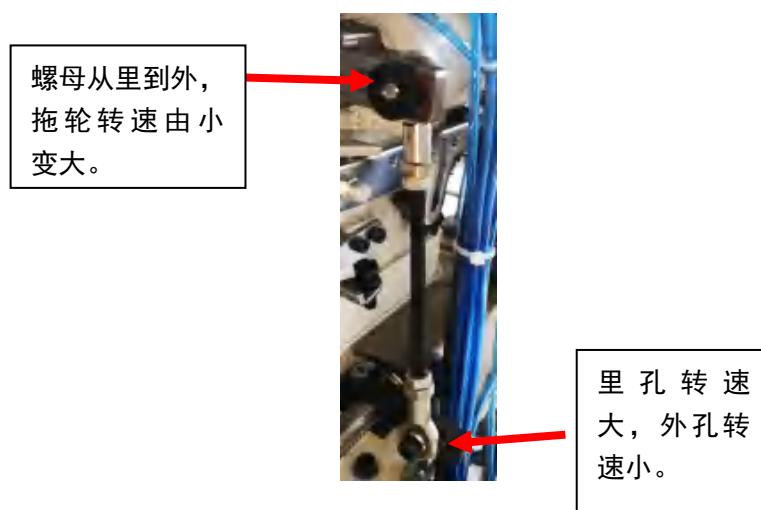
2. 后拖轮压力；手动旋转右边减压阀调压旋钮（同上图），拖轮压力维持在 0.3-0.4MPa，过小影响剪切位置。

6.4 拖轮与送布牙速比

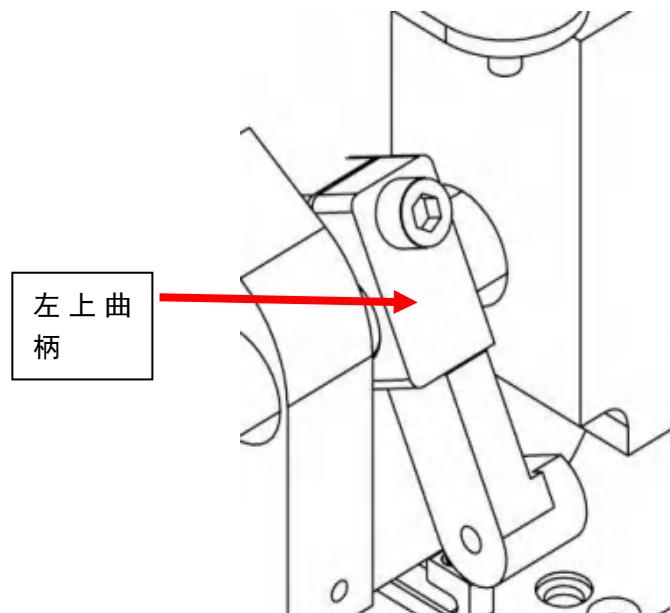
1. 送布牙：参考机头说明书，调节如图所示位置的偏心量，偏心量根据所需针距大小调节。



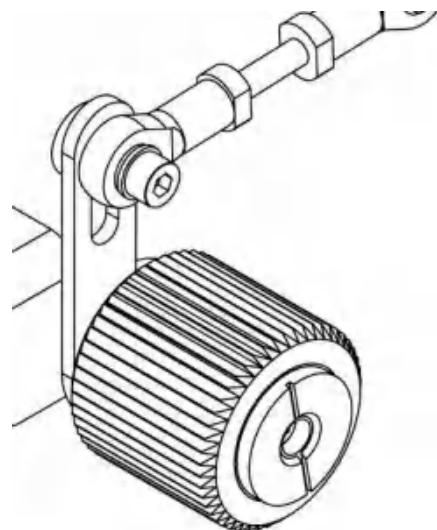
2. 下拖轮：调节下图连杆两端位置即可调节下拖轮转速；



前拖轮：调节左上曲柄与上转动轴的夹角即可调节后拖轮的转速（如下图所示），下拖轮、前拖轮与送布牙的速度要保证相互同步

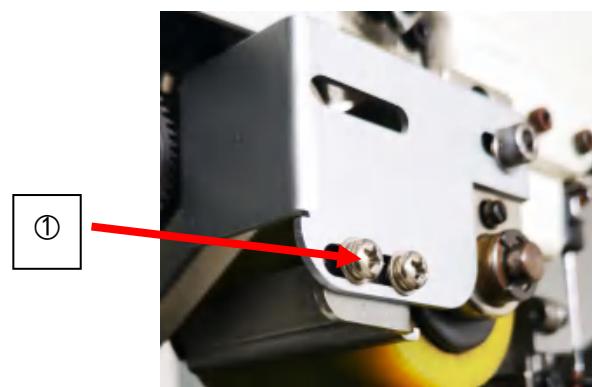


3. 后拖轮：调节螺母与前拖轮右曲柄的相对位置，保证切刀运行时裁片平铺。

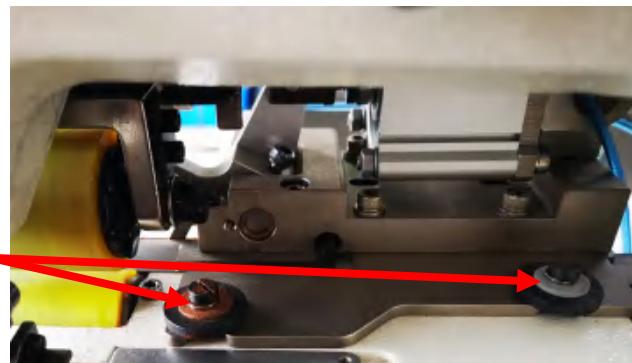


6.5 上下拖轮挡板位置

1. 前拖轮左内挡片：松开固定螺钉①，使挡片底边紧靠前拖轮，防止线头、腰头被拖轮粘带。

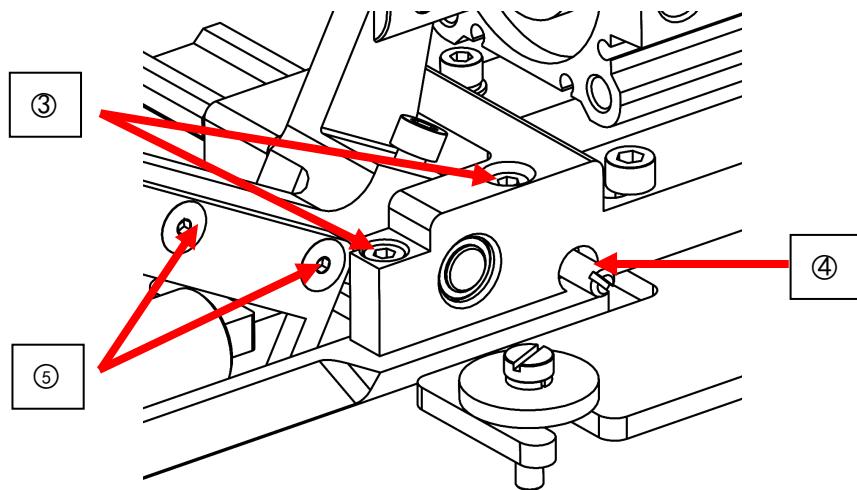


2. 切刀装置位置：松开固定螺钉②，前后移动切刀装置，使下切刀底边紧靠下拖轮，防止线头、腰头被拖轮粘带。



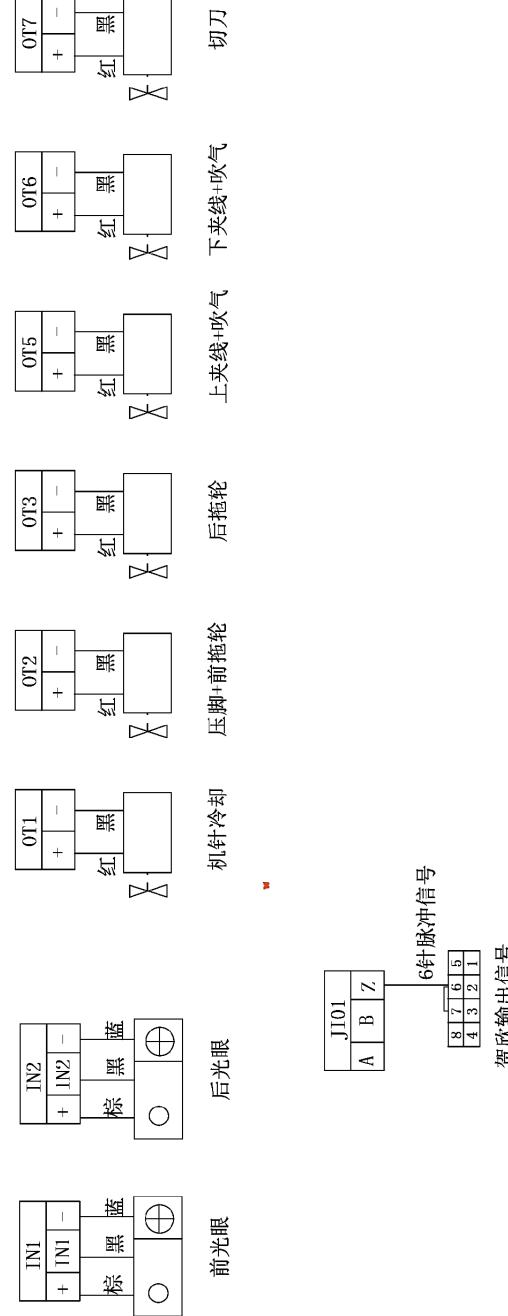
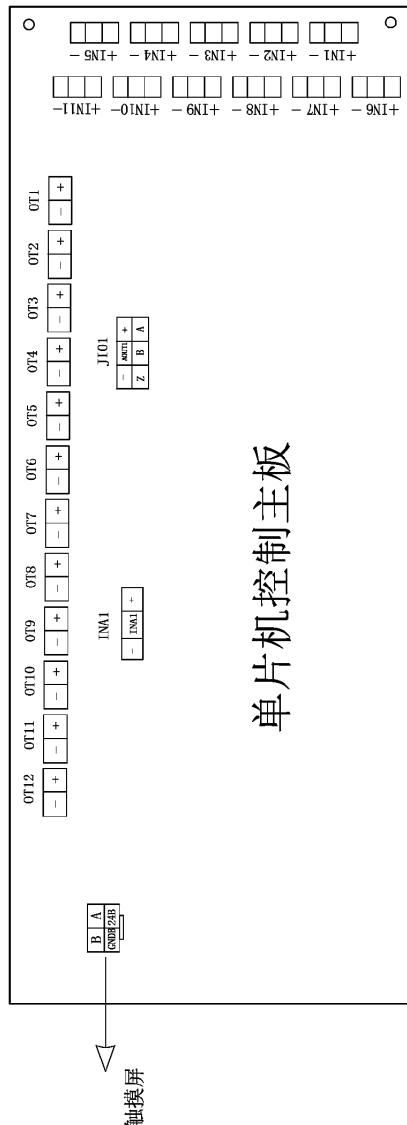
6.6 更换刀具

- 1) 拆卸上图两颗固定螺钉②，取出切刀装置；
- 2) 拆卸上切刀固定螺钉⑤，拆下上切刀，将新切刀换上，装上固定螺钉⑤并拧紧；
- 3) 拆卸两颗固定螺钉③，拆下下切刀，将新切刀换上，装上固定螺钉③不需要拧紧；
- 4) 调节定位螺栓④，使上下切刀处于点接触状态，再将固定螺钉③拧紧。

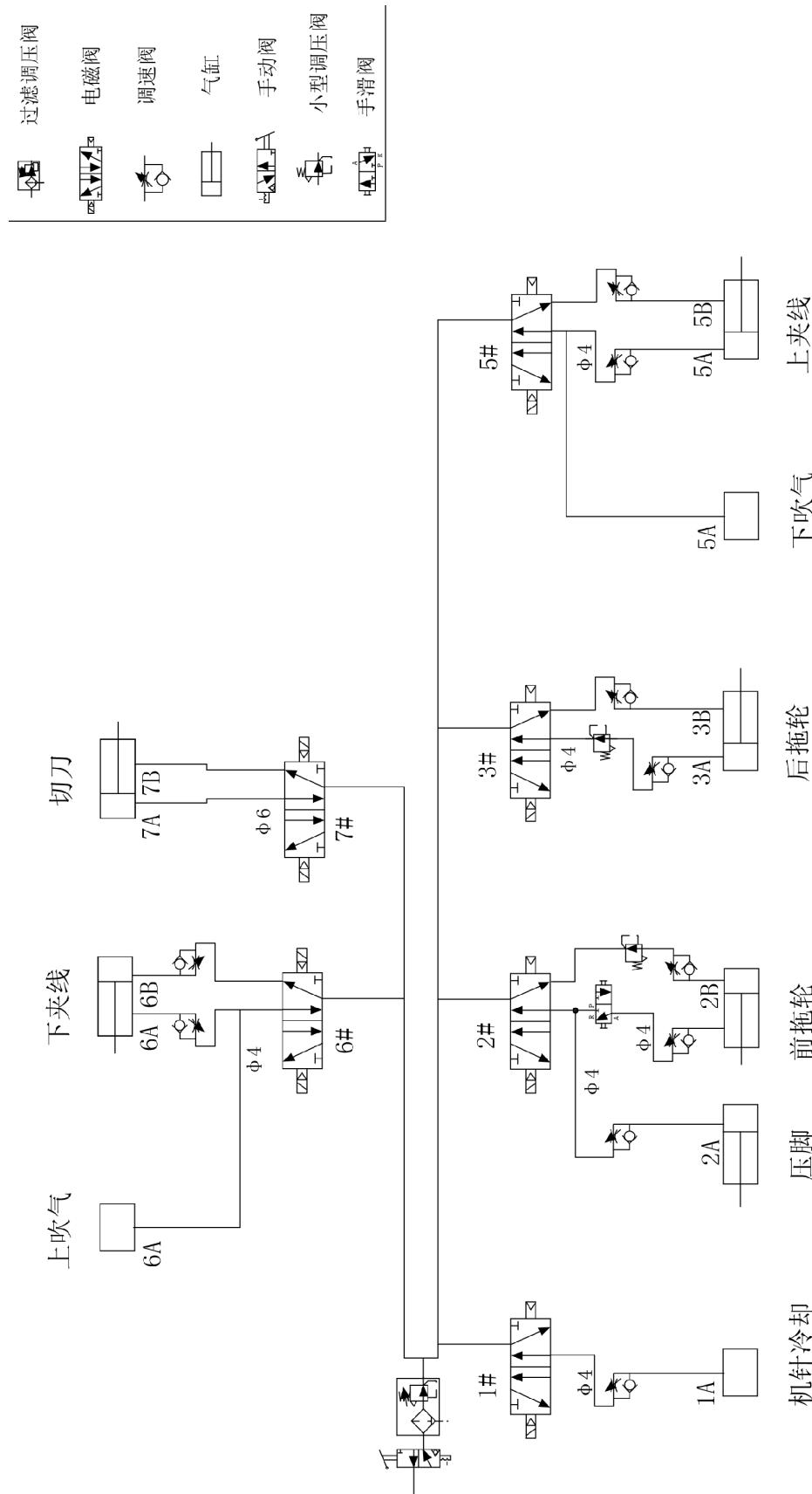


七、电气配线

7.1 电控

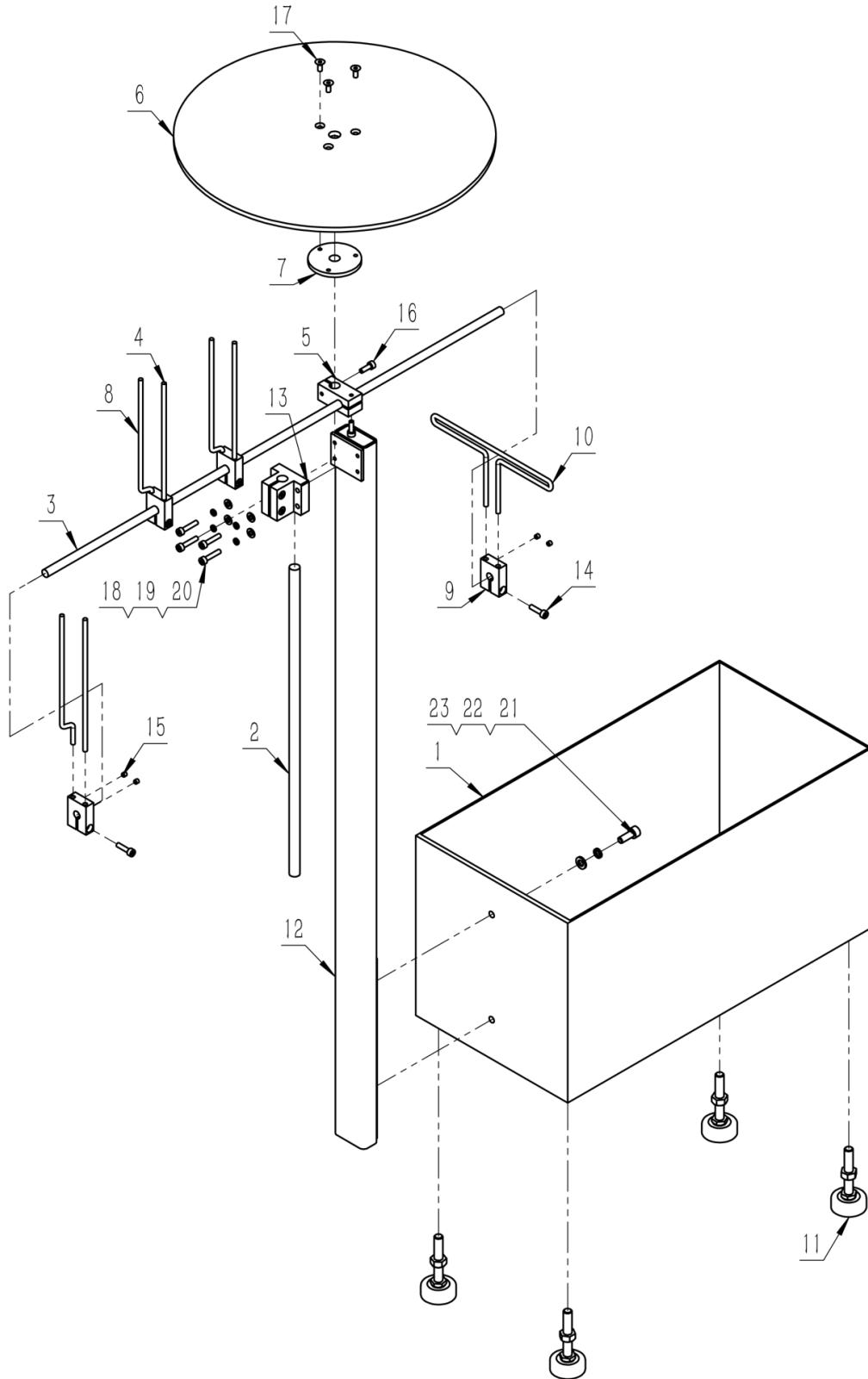


7.2 气控



八、选配装置

8.1 放料架：主要适用于连续腰头裁片。



序号/No.	图号/Parts No.	名称/Description	数量/Qty
1	01200320106000	托盘底座	1
2	02200320105600	杆 1	1
3	02200320105700	杆 2	1
4	02200320105800	杆 3	3
5	02200320105200	连杆抱箍	1
6	02200320105000	腰带托盘	1
7	02200320105100	托盘固定块	1
8	02200320105400	导向杆	3
9	02200320105300	导向杆抱箍	4
10	02200320105500	过布杆	1
11	050200501013	脚轮调整块	4
12	01200320106100	托盘架	1
13	012003230003	底座用支架 CLTB10	1
14	060202000043	内六角圆柱头螺钉 M4×16	4
15	060204000047	内六角平端紧定螺钉 M4×4	8
16	060202000040	内六角圆柱头螺钉 M4×12	2
17	060203000055	内六角沉头螺钉 M4×10	3
18	060401000014	平垫圈 C 级 4×0. 8	4
19	060402000002	标准型弹性垫圈(装配) 4×1. 1	4
20	060202000044	内六角圆柱头螺钉 M4×20	4
21	060202000077	内六角圆柱头螺钉 M6×16	2
22	060401000022	平垫圈 C 级 6×1. 6	2
23	060402000004	标准型弹性垫圈(装配) 6×1. 6	2

九、附件箱明细

序号	附件名称	规格	数量
1	《MB2003D 拉腰机-使用说明书》		1
2	《MB2003D 拉腰机-零件手册》		1
3	机头附件箱		1
4	前拖轮（弯腰头）		1
5	线架衬套		1
6	机头原机盖板		1

十、常见问题及解决方法

现象	图片	原因分析	解决措施
腰头剪切不断		切刀磨损	1. 按照 6. 6-3、6. 6-4 步骤调节下切刀调节螺钉 2. 按照 6. 6 步骤更换上下切刀
腰头两端剪切长度或线迹松 线位置有偏差		前后吹气或剪切延迟针数 有误	参考《MB2003D 拉腰机 -触摸屏界面操作说 明》设置吹气或切刀延 迟针数
腰头缝制完成 后，上下两片 错位		上下拖轮、送布牙不同步	按照 6. 4 步骤调节前 拖轮与下拖轮速比
吹气或切刀失 效		反光纸位置偏差或失效	1. 检查光眼是否正常 2. 移动反光纸位置或 更换反光纸
前拖轮或下拖 轮卷线		挡片没有紧靠拖轮	按照 6. 5 步骤调节挡 片位置

十一、日常保养要求

11.1. 设备保养清单及要求详见下表

11.2. 其他更多关于机头的保养要求请参照缝纫机头说明书

序号	项目	时间				要点描述
		每天	每周	每月	半年	
1	清理灰尘	√				清除设备表面及零部件灰尘
2	清理油污		√			清理台板、针板、梭芯油污
3	机头油量			√		机头油量不低于警戒线
4	梭芯			√		检查机头梭芯是否刮花
5	感应器				√	检查灵敏度是否准确，位置是否变化
6	滑动件				√	检查滑动件润滑，如有需要则添加润滑剂
7	电控箱				√	散热风扇运转正常，及时清理灰尘

十二、知识产品保护声明

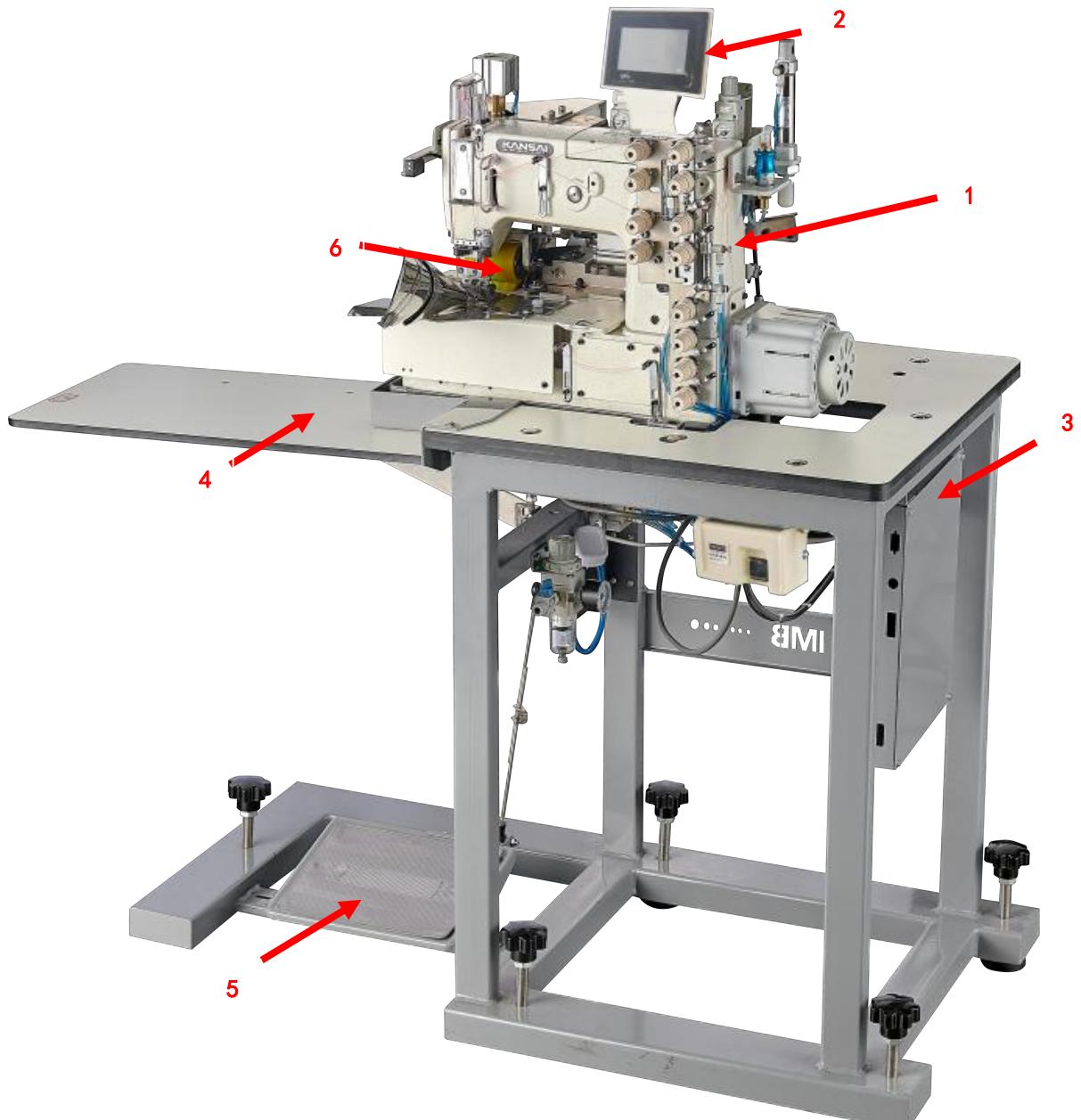
MB2003D 拉腰机是常州智谷机电科技有限公司独立自主完成的设计成果。该成果知识产权属于常州智谷机电科技有限公司，受国家知识产权相关法律法规的保护。未经权利人书面许可，不得实施该成果的专利技术，不得复制、销售或通过信息网络传播和该成果有关的信息。任何违法侵权行为，常州智谷机电科技有限公司将依法追究其法律责任。

ENGLISH

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1、Basic information of equipment



1: KS-1509P machine head;

4: Table;

2: Touch screen;

5: Pedal;

3: Control box;

6: Puller

2、Technical parameters of equipment

MB2003D Waistband setter		
1	Machine head	KS-1509P
2	Maximum sewing speed/rpm	4000
3	Working voltage/V	220
4	Pressure/Mpa	0.5
5	Stitch length /mm	2—5
6	waist width range /mm	30—43
7	Suitable fabric	Denim
8	waist type	Straight/Curve
9	Size/mm	1300L×570W×1300H
10	Weight/kg	110

3、Safety precautions

Considerations for safe use of automata

 危险	<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>

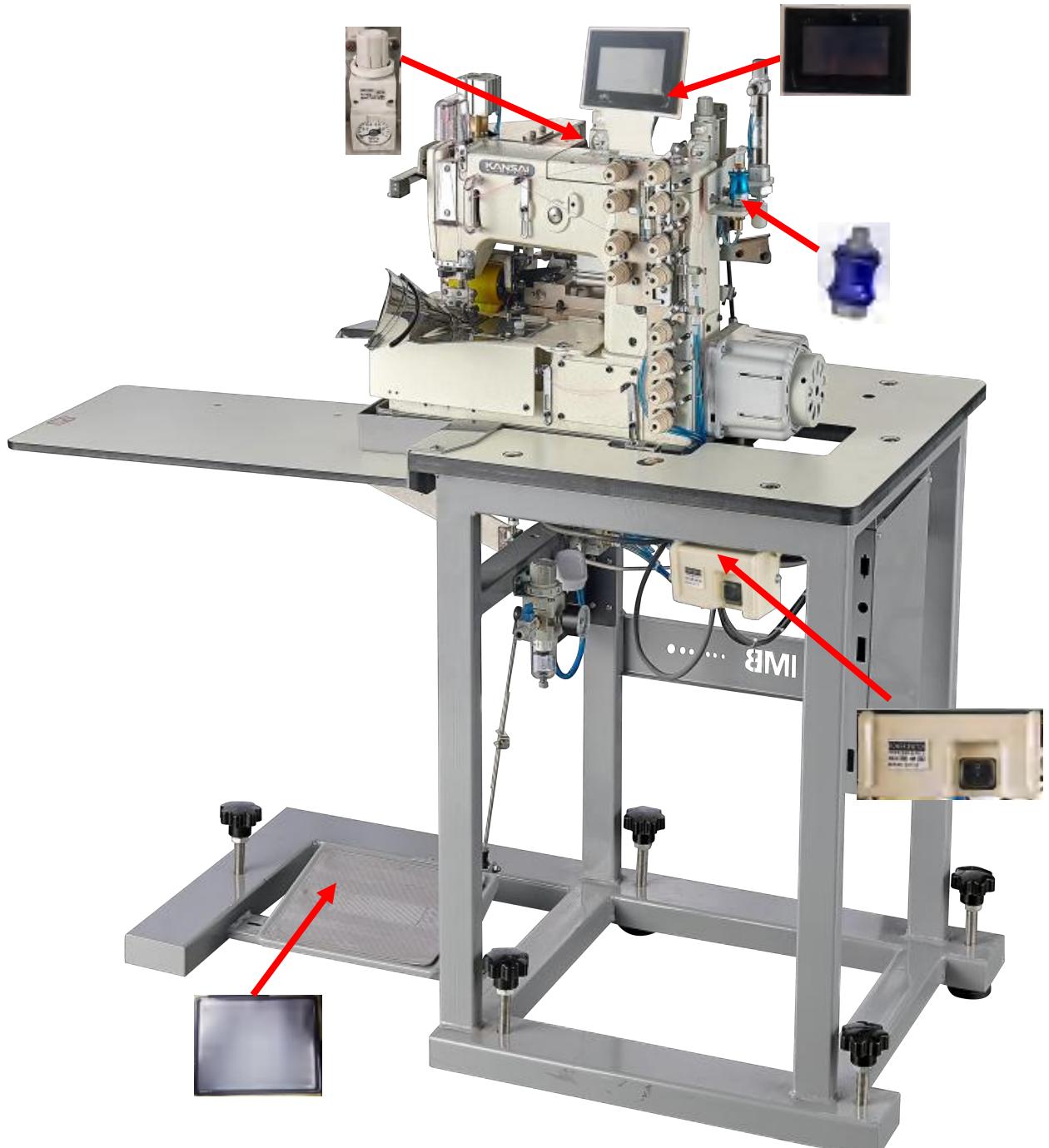
	<p>16. When the power switch is turned off during the foot press action, please be careful not to pinch your fingers.</p> <p>17. During folding operation, please be careful not to clip the cylinder to your finger when putting your finger into the folding machine.</p>
--	---

*** 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

c. Boot interface

IMB 智谷机电

MB2003D

中文

English

creation for tomorrow

d. Main interface



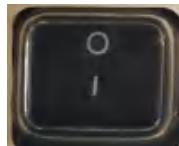
5、Operating instructions

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

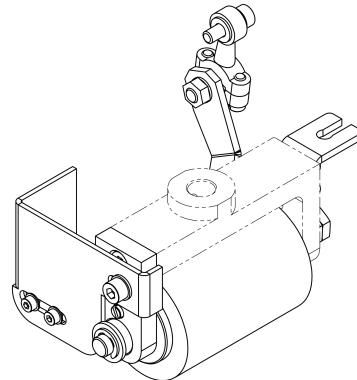
1 Start the device



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

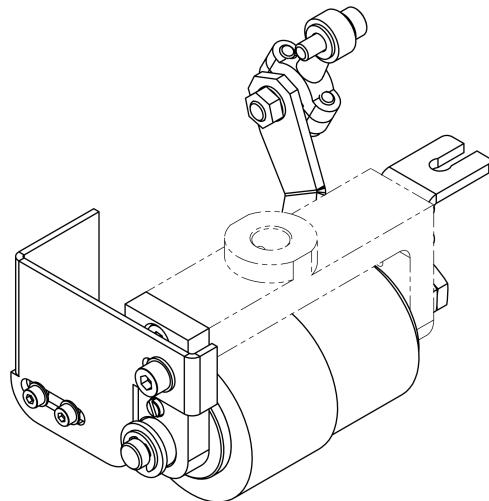
b. Straight:



Insert the waist head into the drawing barrel manually, then step on the 4.1 - (2) pedal to lift the presser foot, insert the waist head above the cloth feeding teeth (as shown in the figure on the left below), put down the presser foot, sew two stitches, and then put on the pants piece (as shown in the figure on the right below), step on the foot pedal to finish sewing.



b. Curved:



The sewing procedure is the same as straight waist .

3 Shut down



Press the power switch To position 0, the device is shut down,

6、Debugging method

6.1 signal detection

Click the test button in 4.1 – (5) – B monitoring interface
Enter the following interface

Input/Output test



Front laser	Needle cooler
Rear laser	Presser foot
Pedal value	Rear roller
	Right roller
	Cutter
	L.blow R.blow

Laser: Cover reflective paper, corresponding button  turn green , laser normal

Other signals: Click , Turn green , The solenoid valve reacts and the electricity is normal

6.2 Parameter setting

Menu

1. Click the menu button in 4.1 – (5) – B monitoring interface

Enter the following interface and click to change the corresponding parameters.

Param Menu

1/1

- P-01 Sewing speed
- P-02 Cutter working remain time
- P-03 Rear roller pressing stitches
- P-04 Needle cooler opening stitches
- P-05 Intermittent blower opening stitches
- P-06 Intermittent blower closing stitches

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

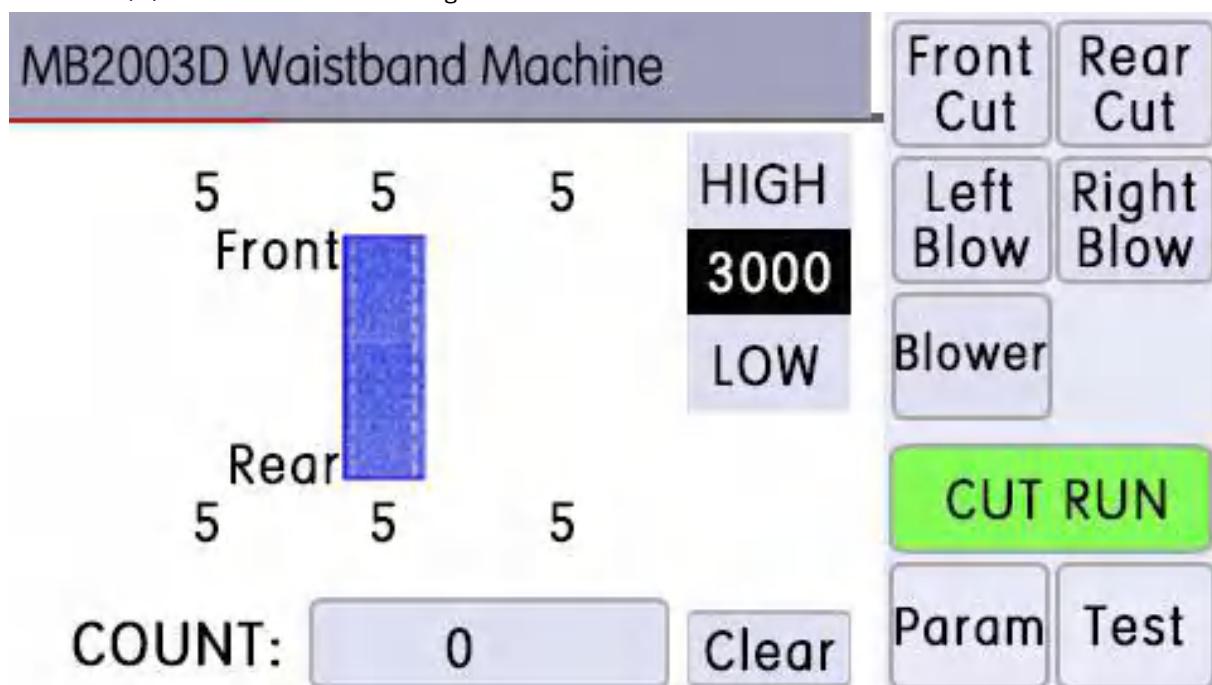
P-02 Cutter working remain time: adjust the completion time of cutter cylinder action;

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

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

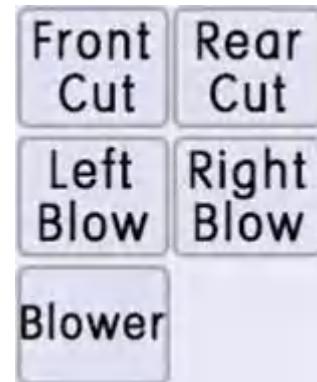
P-05/P-06 Intermittent Blower opening/closing stitches: A loose thread is needed in the middle of the sewing, The number of stitches can be set according to the distance, There is no need to set the parameter to 0.

2. 4.1- (5) -b In the monitoring interface

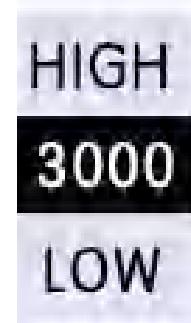


2.1 Select button: As shown in the figure below, the function is on, click any function,

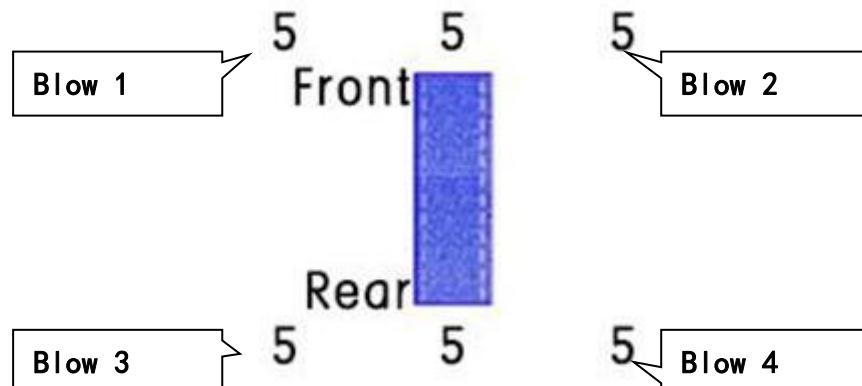
the color will become lighter, and the function will be closed



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



2.3 Blower, cutting stitches: Click the number to change the corresponding parameter value.



Blow 1&2: Blowing operation, bottom line off line, 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: Blowing operation, bottom line off line, When the pants piece leaves the first piece of reflective paper, the blowing starts according to the number of delayed stitches;

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

6.3 Front and rear roller pressure

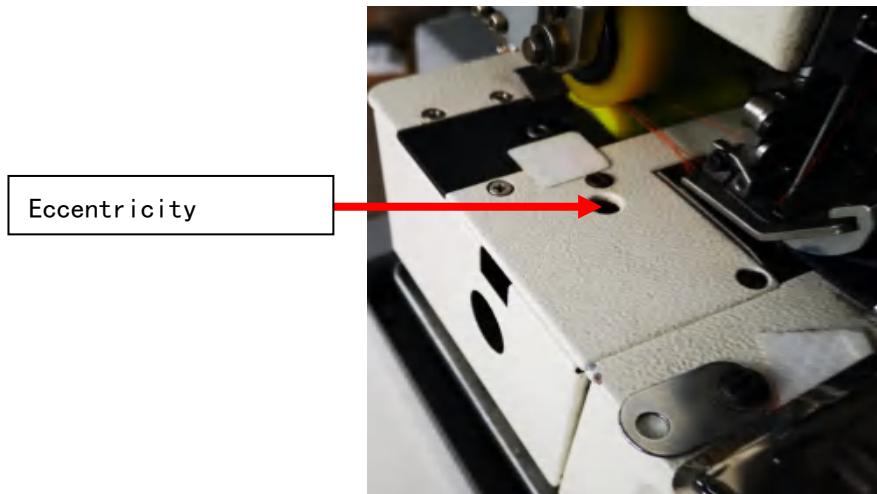
1. **Front roller pressure:** Manually rotate the pressure regulating knob of the left pressure reducing valve (as shown in the figure below), The pressure of the roller is maintained at 0.3-0.4mpa. If the pressure is too small, the roller fails and affects the needle pitch.



2. **Rear roller pressure;** Manually rotate the pressure regulating knob of the right pressure reducing valve (as shown in the figure above), the tugboat pressure is maintained at 0.3-0.4mpa. if too small affects the shear position.

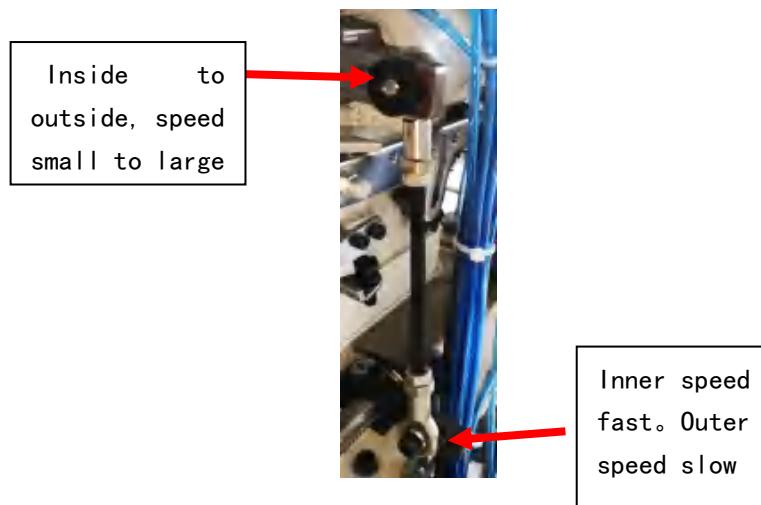
6.4 Speed ratio between roller and feed dog

1. Feed dog: Refer to the manual of machine head, Adjust the eccentricity at the position

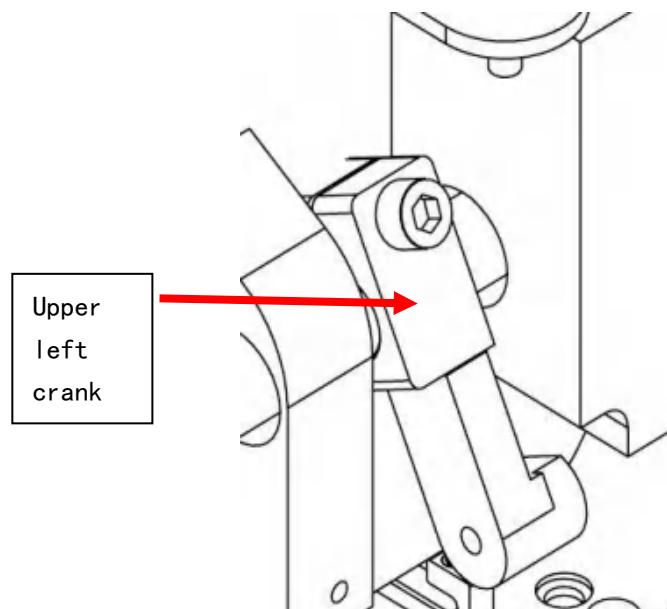


shown in the figure, The eccentricity is adjusted according to the required needle pitch.

2. Lower roller: Adjust the position of both ends of the connecting rod in the figure below to adjust the speed of the lower roller;

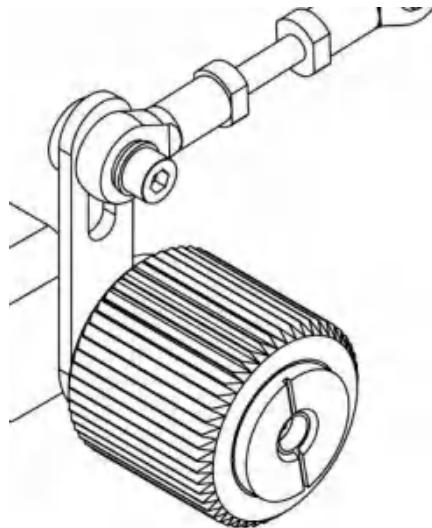


Front roller: The rotation speed of the rear tugboat can be adjusted by adjusting the angle between the left upper crank and the upper rotating shaft (as shown in the figure below),



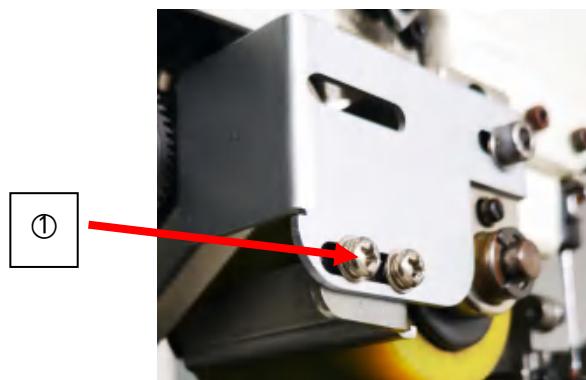
The speed of lower tug, front tug and feed dog should be synchronized

3. Rear roller: Adjust the relative position between the nut and the right crank of the front roller to ensure that the fabric is flat when the cutter is running.

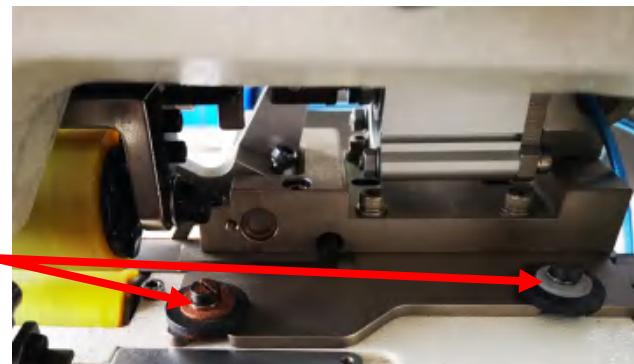


6.5 Position of upper and lower roller baffle

1. Left inner baffle of front roller: Loosen the fixing screw ① so that the bottom edge of the baffle is close to the front roller, Prevent the thread end and waist head from being stuck by the roller

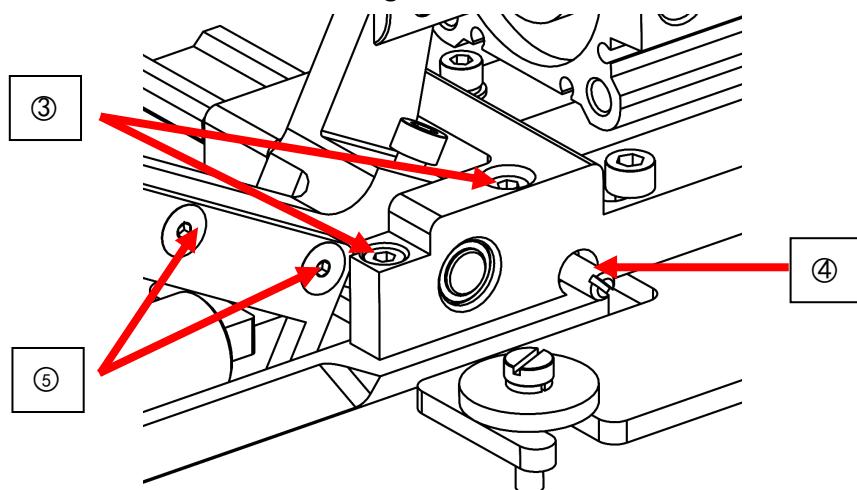


2. Cutter position: Loosen the fixing screw ② and move the cutter device back and forth to make the bottom edge of the lower cutter close to the lower roller, Prevent the thread end and waist head from being stuck by the roller.



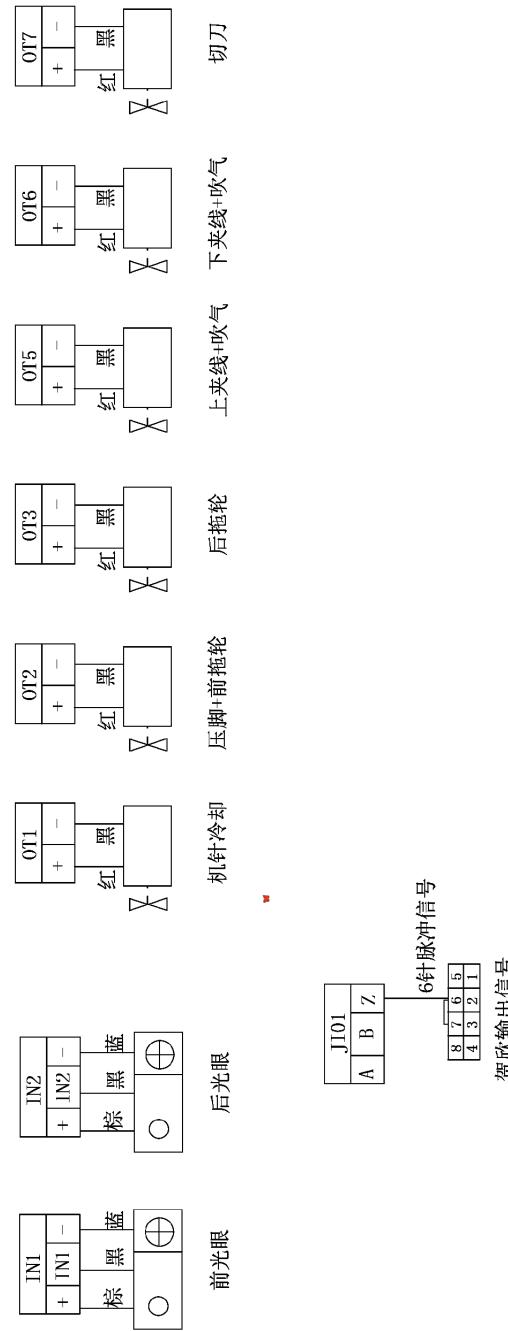
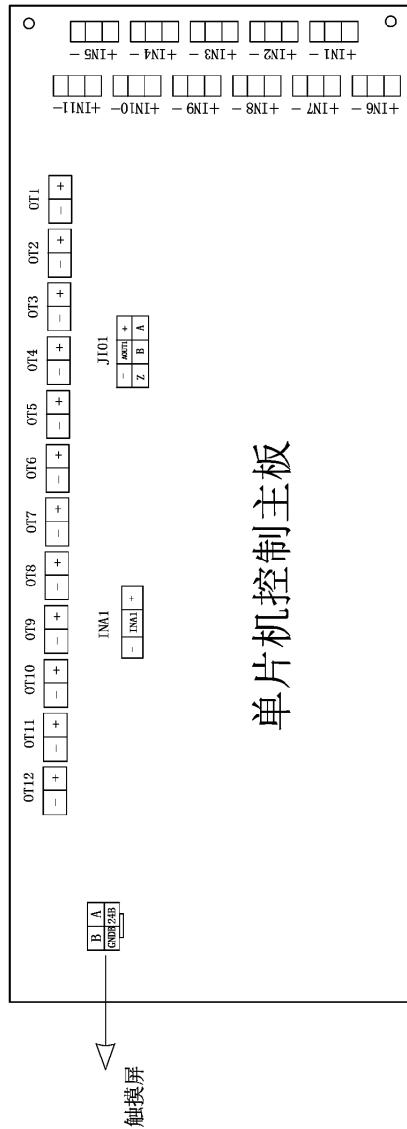
6.6 Cutter change

- 5) Remove the two fixing screws ② in the figure above, and take out the cutter device
- 6) Remove the upper cutter fixing screw ③, Remove the upper cutter, replace the new cutter, and install the fixing screw ⑤ and tighten;
- 7) Remove the two retaining screws ③, Remove the lower cutter, replace the new cutter, and install the fixing screw ③ No tightening is required;
- 8) Adjust the positioning bolt ④, Make the upper and lower cutters in the point contact state, and then set the screw ③ tighten.

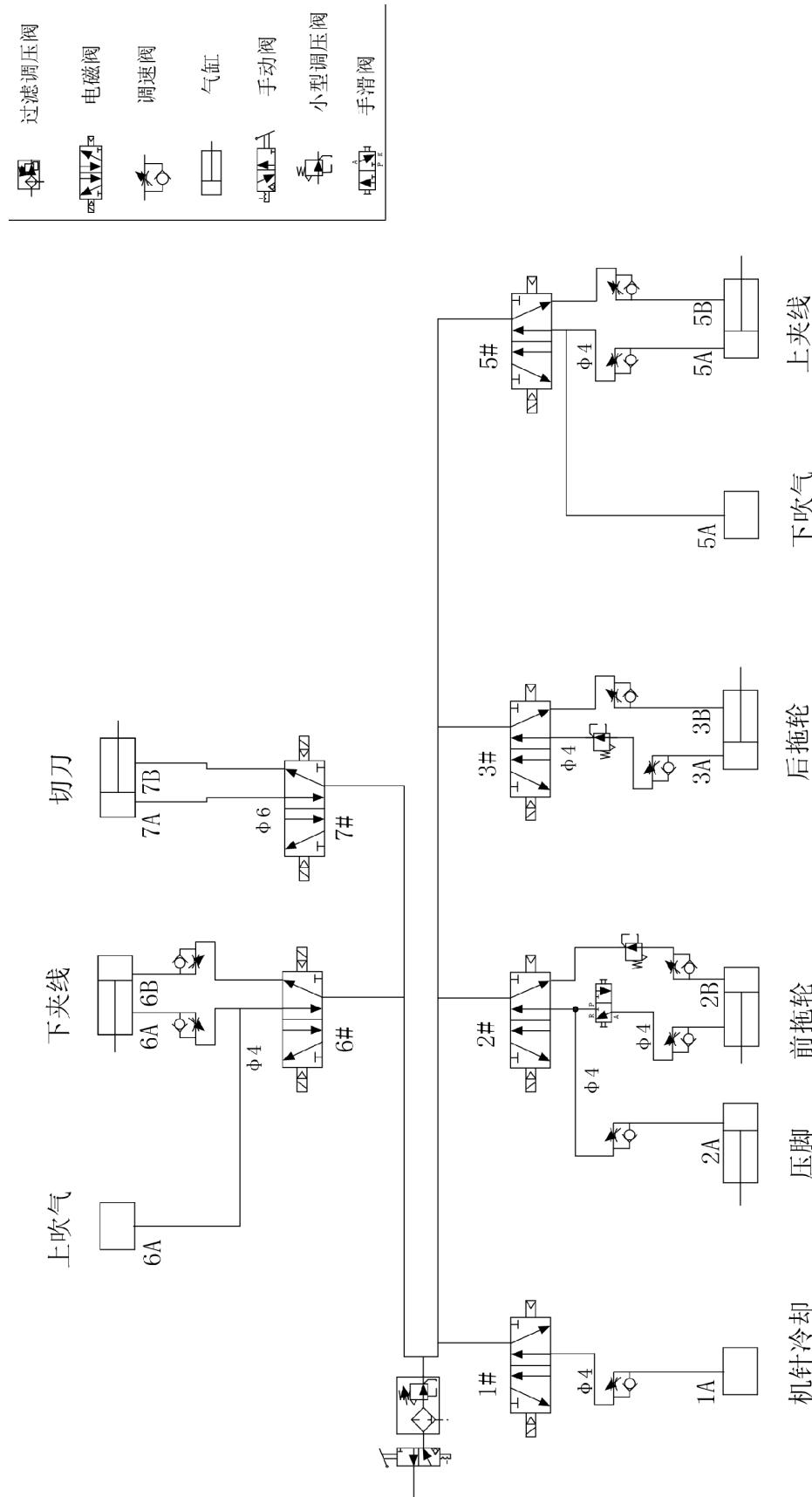


7、Electrical wiring

7.1 Electronic control

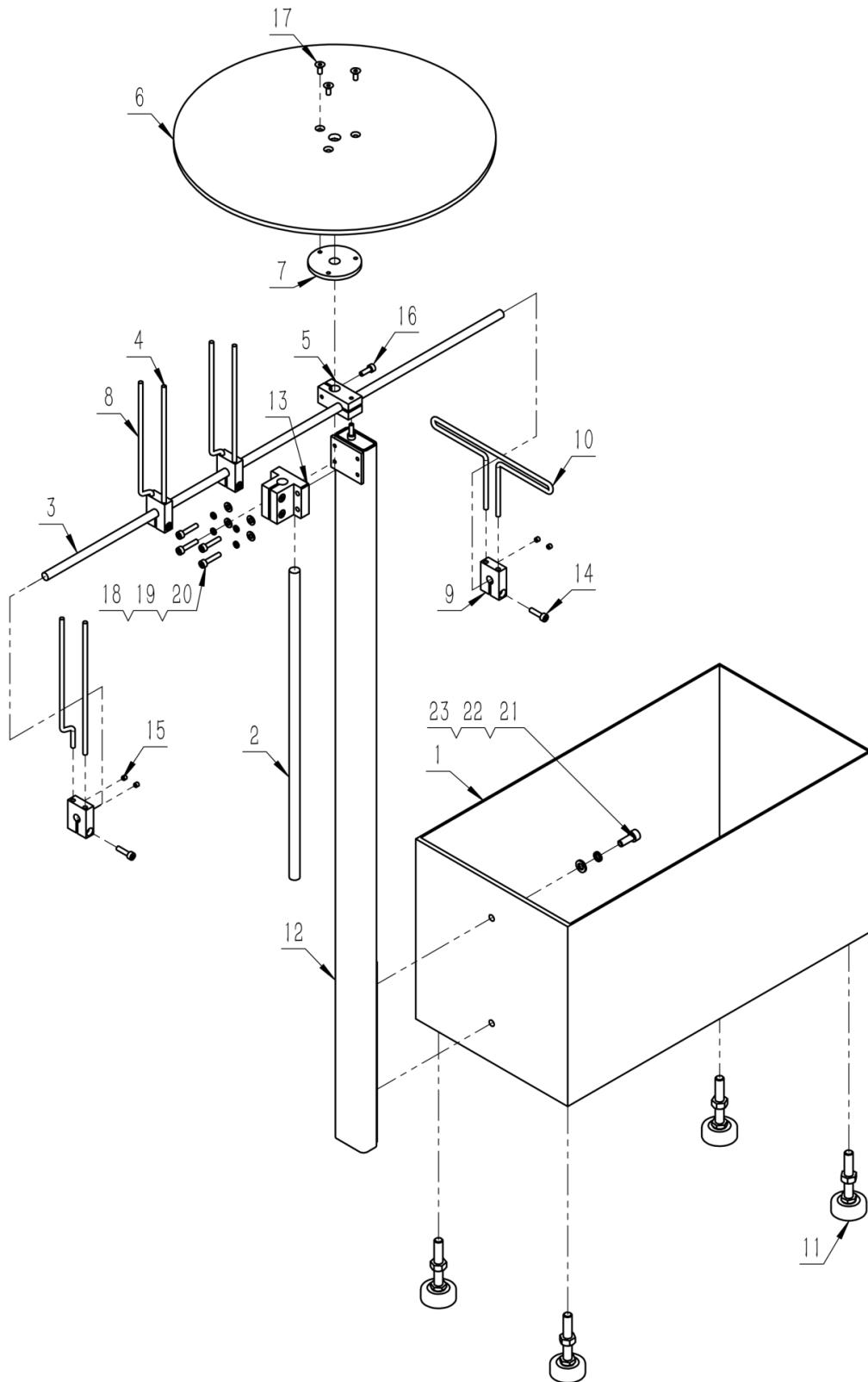


7.2 Pneumatic control



8、Optional devices

8.1 Stacker : It is mainly suitable for continuous waist cutting.



序号/No.	图号/Parts No.	名称/Description	数量/Qty
1	01200320106000	托盘底座	1
2	02200320105600	杆 1	1
3	02200320105700	杆 2	1
4	02200320105800	杆 3	3
5	02200320105200	连杆抱箍	1
6	02200320105000	腰带托盘	1
7	02200320105100	托盘固定块	1
8	02200320105400	导向杆	3
9	02200320105300	导向杆抱箍	4
10	02200320105500	过布杆	1
11	050200501013	脚轮调整块	4
12	01200320106100	托盘架	1
13	012003230003	底座用支架 CLTB10	1
14	060202000043	内六角圆柱头螺钉 M4×16	4
15	060204000047	内六角平端紧定螺钉 M4×4	8
16	060202000040	内六角圆柱头螺钉 M4×12	2
17	060203000055	内六角沉头螺钉 M4×10	3
18	060401000014	平垫圈 C 级 4×0. 8	4
19	060402000002	标准型弹性垫圈(装配) 4×1. 1	4
20	060202000044	内六角圆柱头螺钉 M4×20	4
21	060202000077	内六角圆柱头螺钉 M6×16	2
22	060401000022	平垫圈 C 级 6×1. 6	2
23	060402000004	标准型弹性垫圈(装配) 6×1. 6	2

9、Accessory box details

NO	ITEM		QTY
1	《instruction manual》		1
2	《Parts Manual》		1
3	Machine head accessory box		1
4	Front roller (curved)		1
5	Thread stand cover		1
6	Head cover plate		1

10、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

11、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

12、Knowledge product protection statement

MB2003D 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