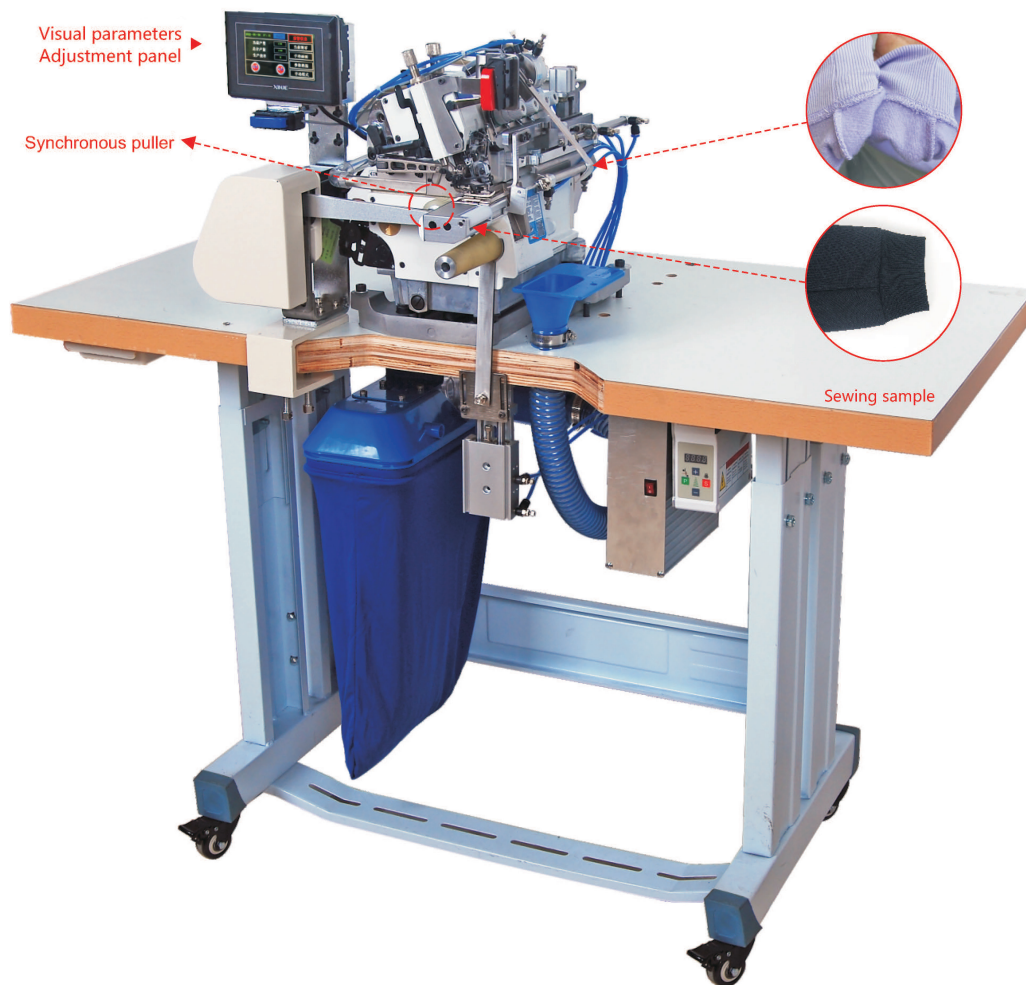


# 产品说明书

product instructions



**EA-5101**

**自动上罗纹袖口机**

**Automatic Rib Cuff Sewing Machine**

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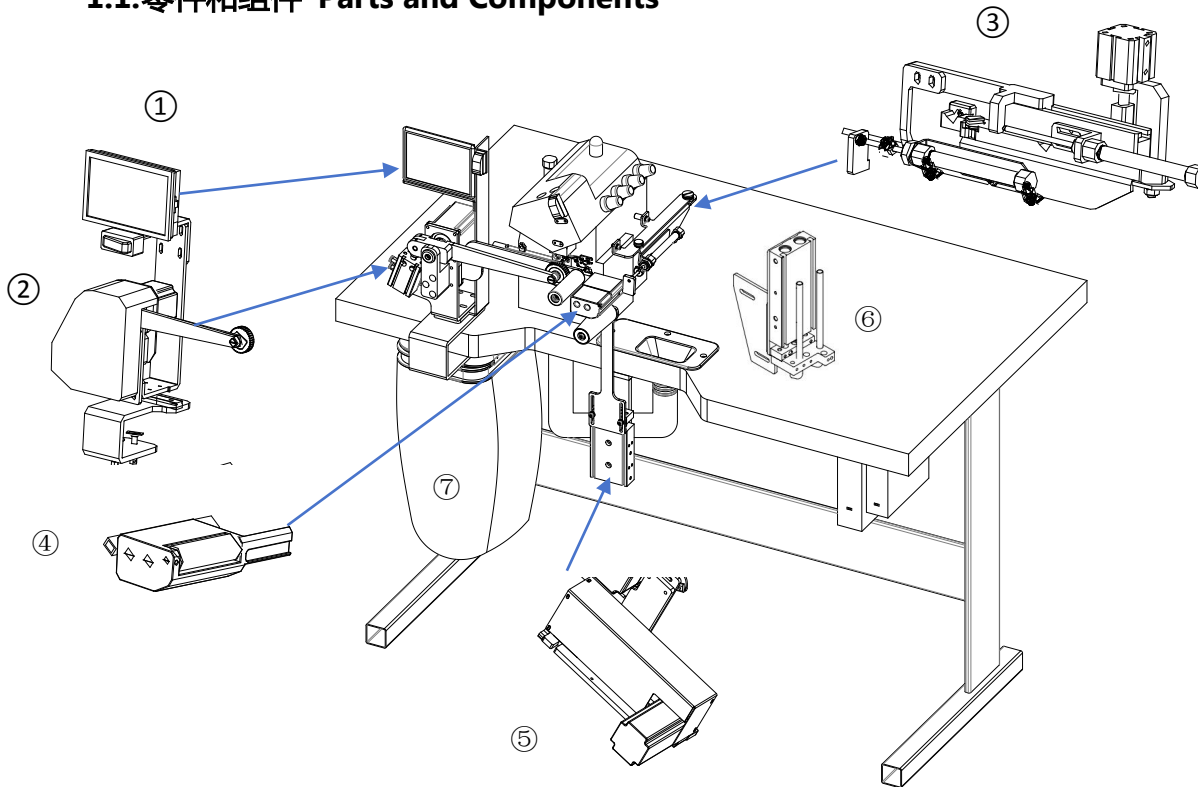
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## 1. 安装 Installation

注意:在安装和操作之前,操作人员请阅读本手册并熟悉设备的所有功能及安全要求。

Note: Before installation and operation, operators should read this manual and familiarize themselves with all functional and safety requirements of the equipment.

### 1.1.零件和组件 Parts and Components



部件序号 Part No.	名称 Name
1	显示屏组件 Display module
2	涨紧组件 Tightening assembly
3	布料张合组件 Fabric tension assembly
4	前嘴组件 Front nozzle assembly
5	电动拉开组件 Electric puller
6	导骨组件 Guide bone assembly
7	吸风装置 Suction device

### 1.2.技术参数 Technical Data

电压voltage	220V 50/60HZ
气压 Air Pressure	6KG
机头转速 Rotation Speed	4000RPM
长*宽*高 (L*W*H)	120*76*159CM
尺寸范围 Size Rang	16-30CM
产能效率 Capacity	600Pcs/H

## 款式适用范围

适用款式 Applicable style	适用品类 Applicable category	尺寸范围	产品示意图
脚口及袖口罗纹 Foot and cuff ribbing	各种针织面料、运动秋冬装 Various knitted fabrics, sports autumn and winter wear	16-30CM	

### 1.3.安全注意事项 Safety and Points for Attention

1) .安全说明 safety instructions

①机器维护保养时，请关断电源和压缩空气

Turn off the power supply and compressed air during machine maintenance

②机器正式运行通电前，请先通气

Please ventilate the machine before it is powered on

③电箱通电时，不应触摸，当心触电

When the electric box is energized, it should not be touched, beware of electric shock

④机器高速旋转，机器运行时禁止触碰

The machine rotates at high speed. Do not touch the machine when it is running

2) .重要安全信息 Important safety information

1) 对机器操作不当可能会引致人身伤害，请在操作机器前仔细阅读本说明并正确操作。Improper operation of the machine may cause personal injury. Please read this instruction carefully and operate correctly before operating the machine.

2) 机器正式运行通电前，请先通气。Please ventilate the machine before it is powered on.

3) 非专业人员禁止打开电控，电控周围不得堆放任何杂物。Non-professionals are forbidden to open the electric control, and no debris can be stacked around the electric control.

4) 严禁在通电状态下打开控制电控或触摸控制电控内的零件。It is strictly forbidden to open the control electric control or touch the parts in the control electric control.

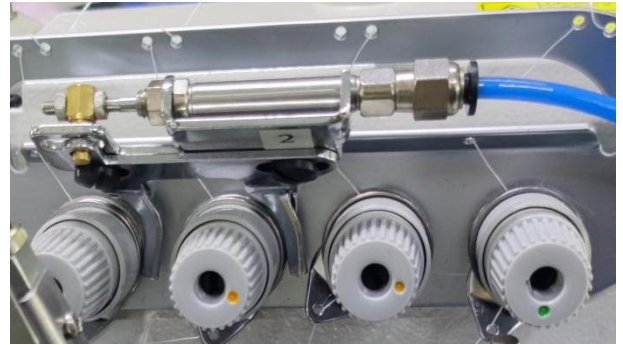
5) 本机器需在接受培训后或专人指导下使用，以确保设备正常使用和使用者的安全。The machine should be used after receiving training or under the guidance of a special person to ensure the normal use of the equipment and the personal safety of the user.

## 1.4. 装配 Assembly

- 1) 检查机器在运输过程中可能发生的任何损坏。如果发现损坏，立即向主管报告。记录损坏情况，提供细节和照片。 Inspect the machine for any damage that may have occurred during shipping. If damage is found, report this immediately to your supervisor. Document the damage and provide details and photographs.
- 2) 用干净的毛巾在所有黑色氧化部件上涂上一层轻油，以避免将来腐蚀。 Apply with a clean towel a light coat of oil to all black oxide parts to avoid future corrosion.
- 3) 松线器 Thread release

按图示安装松线器。

Install the thread release to the picture



### 4) 显示器 Display

按图示安装显示器和停止按键。

Install display and stop button to the picture

停止键 stop key

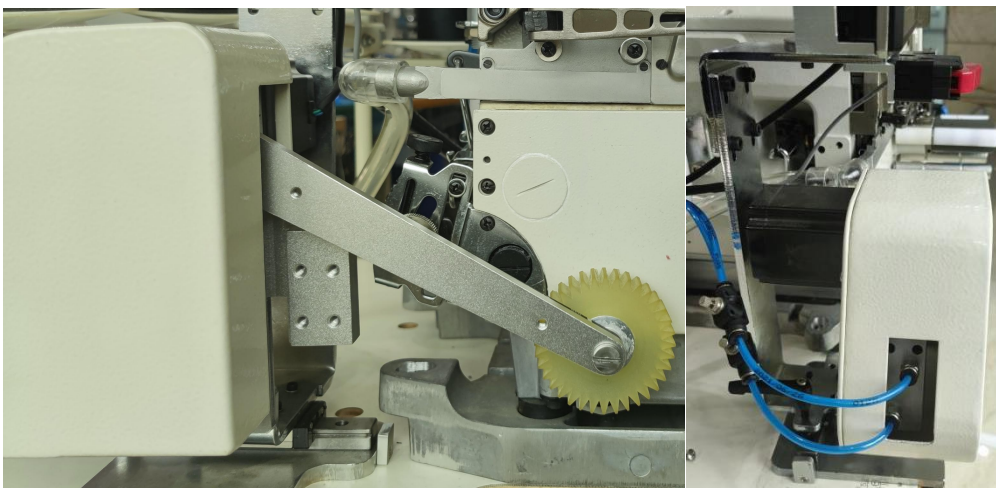


### 5) 涨紧组件

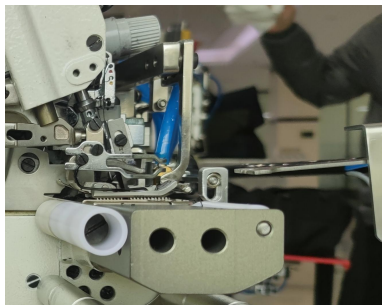
Tightening assembly

按图示安装涨紧组件（涨紧组件和压脚是同步的）。

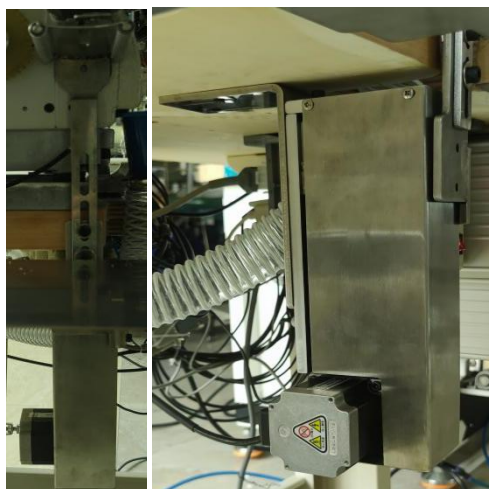
Install tightening assembly to the picture (tightening assembly and presser pin are synchronized)



6) 前嘴组件 Front mouth roller assembly  
 按图示安装前嘴滚轮组件。  
 Install Front nozzle assembly to the picture



7) 电动拉开组件 Electric puller  
 按图示安装电动拉开组件。  
 Install Spread-out assembly to the picture

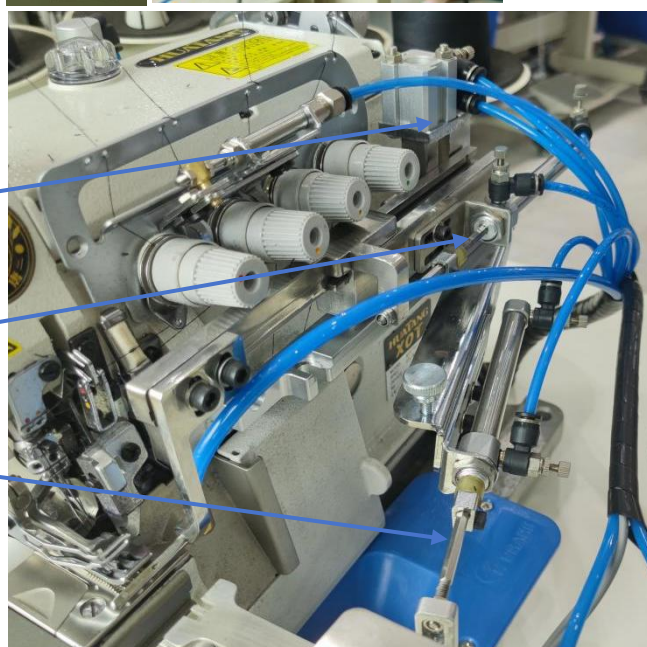


8) 布料张合组件 Fabric tension assembly  
 按图示安装布料张合组件。  
 Install Fabric tension assembly to the picture

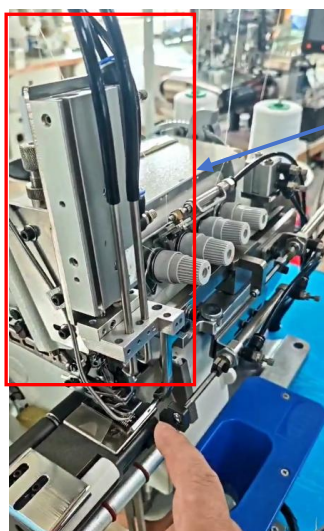
压布 compress

辅助 assist

推出 roll out



9) 导骨组件 Guide bone assembly  
 按图示安装导骨组件、启动和换骨按键。  
 Install Guide bone assembly 、 Start and reborn buttons to the picture



导骨吹布 Bone guide blowing cloth



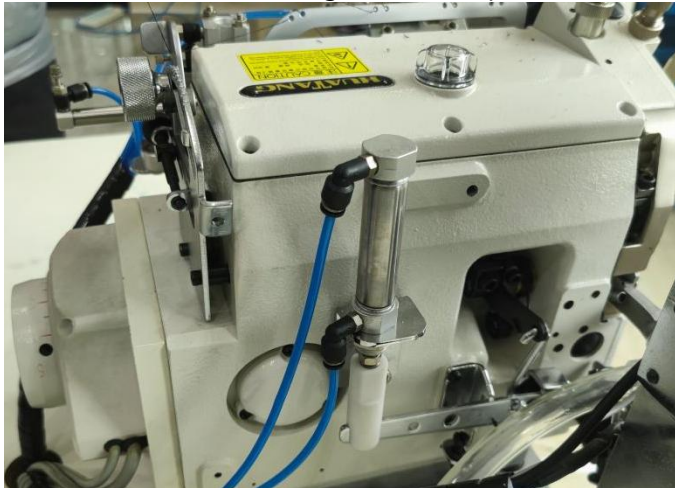
启动键 start key

换股键 Stock swap key

10 ) 起压脚 Pressure starting foot

按图示安装起压脚。

Install the Pressure starting foot to the picture



11 ) 接布装置 Connecting device

按图示安装接布装置。

Install the connecting device to the picture



12 ) 吸风装置 Suction device

按图示安装吸风装置。

Install the suction device to the picture



13 ) 电磁阀组 Solenoid valves

按图示安装电磁阀组。

Install the solenoid valves to the picture



- 1, 2 压脚 presser foot
- 3, 4 压布 compress
- 5, 6 辅助 assist
- 7 骨位 Stock position
- 8, 9 推出 roll out
- 10 松线 thread slack
- 11 吸风 suction
- 12 升降 lift

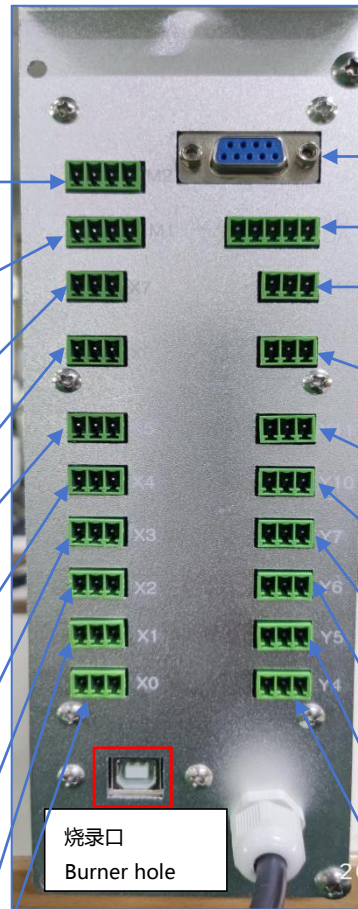
#### 14) 控制盒 Control Boxes

按图示安装控制盒及接线。

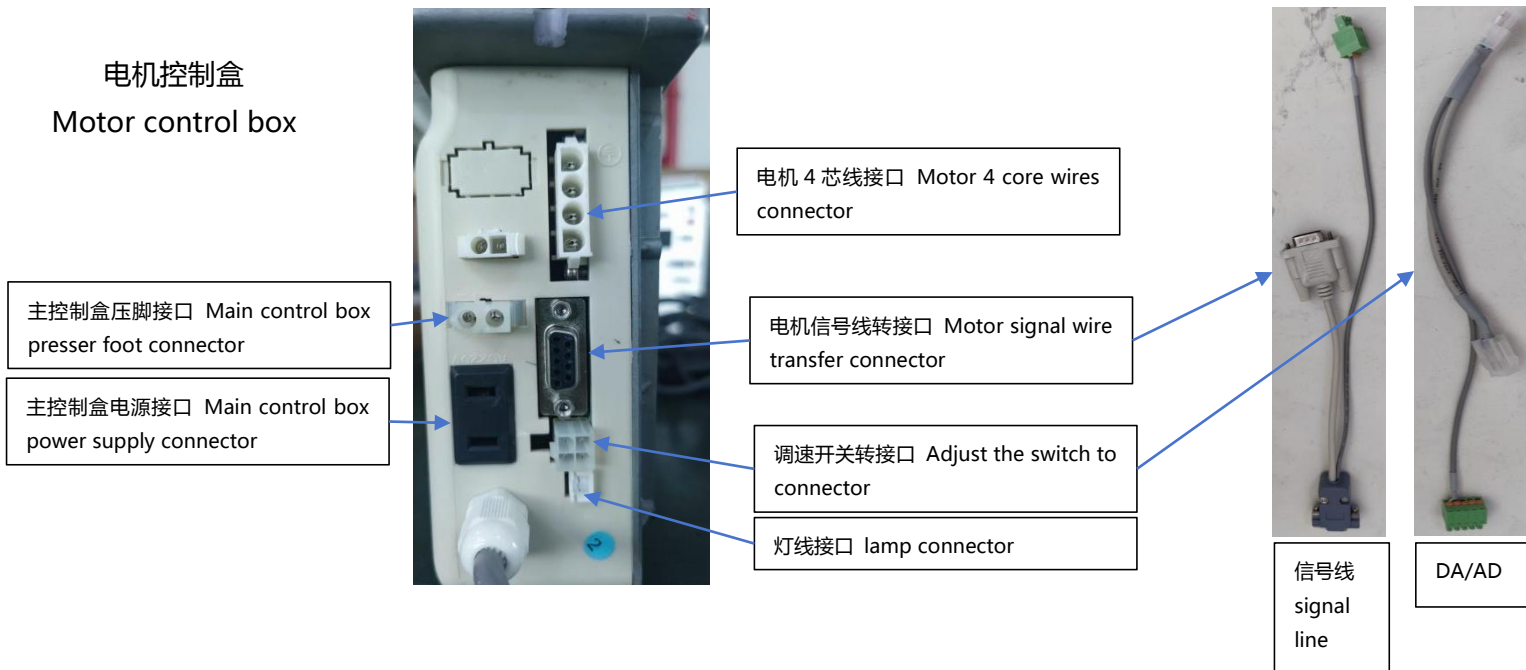
Install the Control Boxes to the picture

主控制盒  
Master control box

- M2 拉开电机接口 M2 Open motor interface
- M1 压布电机接口 M1 Collar motor connector
- X7 电机信号接口 X7 Motor signal interface
- X6 空接口 X6 Null interface
- X5 导股选择开关接口 X5 Strand selection switch connector
- X4 停止开关接口 X4 STOP switch connector
- X3 启动开关接口 X3 start switch connector
- X2 空接口 X2 Null interface
- X1 拉开电机原点接口 X1 Open the motor origin interface
- X0 空接口 X0 Null interface



- 显示屏接口 Display connector
- DA/AD 接口 DA/AD connector
- Y13 电磁阀股位接口 Y13 Solenoid valve stock position interface
- Y12 电磁阀辅助接口 Y12 Solenoid valve auxiliary interface
- Y11 电磁阀压布接口 Y11 Solenoid valve pressure cloth interface
- Y10 电磁阀升降接口 Y10 Lifting interface of solenoid valve
- Y7 电磁阀吸风接口 Y7 solenoid valve suction connector
- Y6 电磁阀推出接口 Y6 solenoid valve roll out connector
- Y5 电磁阀松线接口 Y5 solenoid valve thread slack connector
- Y4 压脚接口 Y4 Press pin connector



### 1.5. 注意事项 Precautions

1) 缝纫电机控制箱的调速器接口的速度控制线以及数针信号线是热地，对应 PLC 控制箱尾部接口的 DA/AD，严禁裸手触摸，严禁误插 PLC 控制箱的其它接口 Speed control line and number pin signal line of the governor interface of the sewing motor control box are hot ground. The DA/AD corresponding to of the PLC control box by mistake.

2) PLC 控制箱的接口因输出电压等级不同、有隔离与非隔离设计，误插接口会烧坏控制器 PLC control box interface because of different output voltage levels, isolation and non-isolation design, misplug interface will burn out the controller.

### 1.6. 故障代码说明 Description of the fault code

1) 产品开机后，如果PLC关联的（如电控、电眼等）出现故障，会弹出橙色的报警显示，在报警列表中会显示故障的原因 After the product is turned on, if the PLC associated (such as electric control, electric eye, etc.) fails, an orange alarm display will pop up, and the cause of the failure will be displayed in the alarm list.

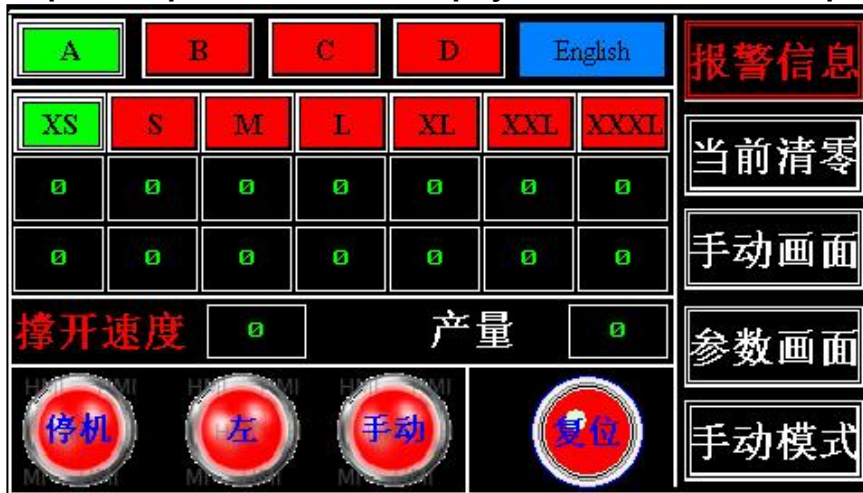
2) 退出报警模式的方式：当故障处理完毕后，点“报警清除”，看报警列表中的显示项有无消除，如果有消除，再点“返回主页”，就可以返回主界面正常使用，如果没有消除，表示故障没有处理好，要继续查找问题。 How to exit the alarm mode:When the fault is handled, click "alarm clear" to see whether the display items in the alarm list are eliminated, if there is elimination, click "return home", you can return to the normal use of the main interface, if not eliminated, it means that the fault has not been handled well, to continue to find the problem.

主要代码说明 Error code display description	处理措施 Treatment measure
数针故障 Needle count failure	缝纫机马达不起动（包括马达电控没开或显示错误代码），只有拖轮转，会显示“数针故障”； sewing machine motor does not start (including the motor electric control is not turned on or the error code is displayed), only the tug wheel is turned, and the "Needle count failure" will be displayed
	X2 信号线损坏或没插，会显示“数针故障”。 the X2 signal cable is damaged or not inserted, the "Needle count failure" will be displayed

## 2.EA-5101显示及操作 Display and operation

### 2.1.操作面板各按键及显示功能详细说明

#### Operation panel buttons and display function detailed description



图标说明 Icon description		功能说明 Description
语言转换Language transformation		语言选择，点击此按钮可进行中/英文界面切换 Select a language. Click this button to switch between English and Chinese
报警信息 alarm information		点击此键，可进入报警提示界面，下长条框可显示当前的报警提示，顶部显示 PLC 和 HMI 软件版本 Click this key, you can enter the alarm prompt interface, the lower bar can display the current alarm prompt, the top display PLC and HMI software version
工程模式 engineering pattern		A/B/C/D4 个工程模式进行储存,模式选中显绿色A/B/C/D4 engineering modes are stored, and the mode is selected to show green
尺码选择 Size selection		XS-XXXL7 个尺码选择 ,尺码选中显绿色并有数据显示 第 1 框数值为第一位置(复位值)，第 2 框数值为第二位置(拉开放第二层时的值) Select XS-XXXL7 sizes, the size is selected in green and the data is displayed, value in the first box represents the first position (reset value), and the value in the second box represents the second position (value when the second layer is pulled open).
撑开速度 strut speed		设定撑开电机运行速度 Set the motor running speed
产量 yield		记录每天生产量 Record daily production
当前清零 current reset		按住不松开 2 秒后将对当前产量的计数值进行清 holding for 2 seconds, the current output count will be cleared
手动画面 Manual screen		点击进入手动画面设定界面 Click to enter the Manual screen interface
参数画面Parameters of the picture		点击进入参数设定界面 Click to enter the parameter setting interface
模式选择mode selection		当机器完成复位动作后，点击此键，机器将进入自动车缝准备状态 When the machine completes the reset action, click this button, the machine will enter the automatic sewing ready state
状态指示灯 Status light		同步手动模式\自动模式\导骨选择显示状态 Synchronous manual mode \ automatic mode \ guide bone selection display status 导骨显示 :导骨(绿灯),不导骨(红灯) Guide bone display: guide bone (green light), non-guide bone (red light)

## 2.2.手动界面各按键及显示功能详细说明

### Detailed description of buttons and display functions in manual interface

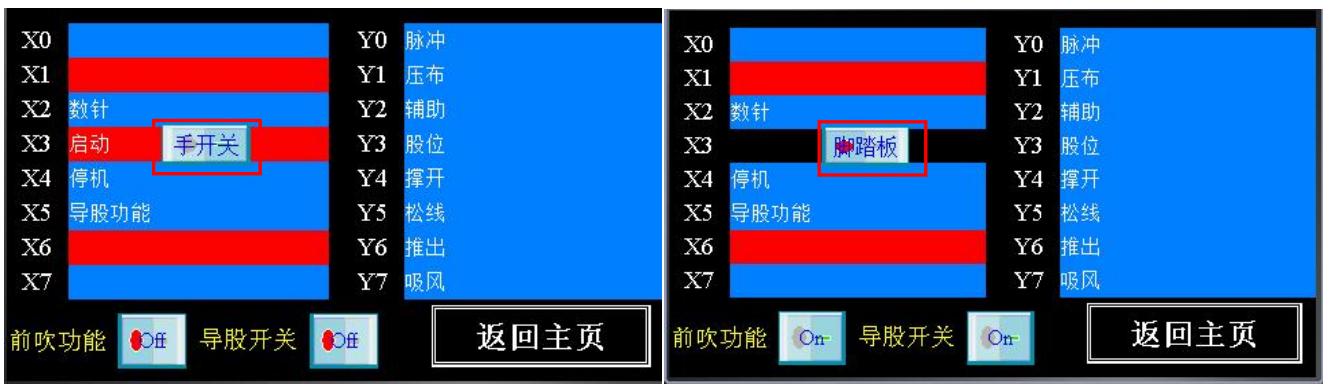


图标说明 Icon description		功能说明 Description
缝纫手动速度 Manual speed of sewing		手动模式时，设置手动启动缝纫机运行的速度，一般略大于踏板启动值(单位：V) Manual mode, set the speed of the manual start of the sewing machine, which is slightly greater than the pedal start value (unit : V)
计针数 Needle number		手动模式时，只有在压脚踏下，对本次启动和停止动作间缝纫机运行针数计数，可用作缝纫针数设定的参考值 Manual mode, only when the pressure foot is dropped, the number of needle Numbers can be used for the operation of the sewing machine, which can be used as the reference value for the number of sewing needles
输送手动速度 Manual speed		手动模式时，设置手动启动输送步进电机运行的速度，范围 500 - 3000( 单位：RMP) Manual mode, set the speed of the manual boot transfer step in the motor operation, and the range of 3, 000 (unit: HZ)
撑开手动位置 Open the manual position		手动模式时，设置手动启动撑开步进电机运行的速度，范围 20 - 1500 ( 单位：RMP) Manual mode, set the speed at which the stepper motor is manually started, ranging from 20 to 1500 (unit: RMP)
启动 Start		手动模式时，点击启动缝纫机运转 Manual mode, click the start of the sewing machine
停止 Stop		手动模式时，点击停止缝纫机运转 Manual mode, click stop the sewing machine
正转 Foreward		手动模式时，点击启动输送步进电机正向运转 Manual mode, click the start of the transport step motor forward operation
往复 reciprocate		手动模式时，点击一下撑开电机拉开，再点一下撑开电机回到原点 Manual mode, click to open the motor, and then click to open the motor to return to the origin
松线 thread slack		手动模式时，点击控制松线气缸动作 Manual mode, click control of thread slack action
导股 Guide stock		手动模式时，点击控制导股气缸动作 Manual mode, click to control the cylinder action
推出 roll out		手动模式时，点击控制推出气缸动作 Manual mode, click control to launch cylinder action
吸风 Suction		点击控制吸风动作（吸风启动改到缝 10 针后） Click to control suction action (suction start changed to after 10 stitches)

压布 Compresses		点击控制压布动作 Click to control cloth pressing action
辅助 assist		点击控制辅助动作 Click to control cloth assist action
升降 Lift		点击控制升降动作 Click to control the lifting action
总计清零 Total of zero		点击产量总计的计数清零 Click on the total output count to clear
工作画面 Work picture		点击返回主界面 Click to return to the main screen
IO监控 IO monitor		点击进入IO监控界面 Tap to go to the I/O monitoring page

### 2.3.IO 界面各按键及显示功能详细说明

#### IO interface each key and display function detailed description



图标说明 Icon description	功能说明 Description	
导股功能 Stock guide function		ON 开/OFF 关闭导股功能 ON /OFF Disables the strand guide function
前吹功能 Front blow function		ON 开/OFF 关闭前吹风功能 ON /OFF Blowing function before turning on
手开关 Hand switch		触控此按钮为手开关,表示自动启动由手动开关控制,此时压脚抬起Touch this button is a manual switch, indicating that the automatic start is controlled by the manual switch, and the press foot is raised
脚踏板 pedal plate		触控此按钮为脚踏板,表示自动启动由脚踏开关控制,此时压脚压下,反踩抬压脚,框内数值为压脚电压实际值Touch this button for the foot pedal, indicating that the automatic start is controlled by the foot switch, then press the foot to press down, reverse step to lift the press foot, the value in the box indicates the actual voltage of the pin

### 2.4.参数设定界面各按键及显示功能详细说明

#### Detailed description of buttons and display functions on the parameter setting interface

拖轮直径	60	松线针数	15	款式	A	B	C	D	上一页		
针距	2.5	落压脚延时	1.000	尺码	XS	S	M	L	XL	XXL	XXXL
踏板启动值	2.000	抬压脚延时	1.000	辅助退回针数	0	0	0	0	0	0	0
踏板最大值	5.000	吸风延时	1.000	推出针数	0	0	0	0	0	0	0
运行速度	3000	导股延时	0.500	传送停针数	0	0	0	0	0	0	0
		导股时间	1.000	缝纫针数	0	0	0	0	0	0	0
下一页		出厂设置		工作画面							

显示/按键 Display/Button	功能说明 Description	参数范围 Parameter scale	默认值 Default
拖轮直径 wheel diameter	步进电机同步输送轮的直径 Step motor synchronous conveying wheel diameter	10-99	60
针距 Stitch length	缝纫机针每走 1 针走过的距离 Distance of each stitch of the sewing machine is set according	2.0-6.0	2.5
踏板启动值 Pedal starting value	脚踏板前踩过程中, 设定缝纫电机启动运转的最低踏板值, 保证步进电机与其同步启动运转 During pedal forward stepping, set the minimum pedal value for starting and running the sewing motor to ensure that the stepping motor starts and runs synchronously with it	1.2-2.5	2.0
踏板最大值 Pedal maximum	设定脚踏板前踩到底后的最大踏板值, 保证步进电机与缝纫电机同步比例运转 Set the maximum pedal value after stepping on the foot pedal to ensure the synchronous proportional operation of stepping motor and sewing motor	3.0-5.0	5.0
运行速度 Running speed	需设置与缝纫电机控制箱内运行速度相应的值 Value corresponding to the running speed in the sewing motor control box should be set	400-7000	3000
松线针数 Number of loose stitches	自动模式下, 推出后缝纫机共运行此针数后开始松线, 缝缝纫机停止随后停止松线 Automatic mode, the sewing machine starts to loosen the thread after running this number of stitches, and the sewing machine stops and then stops loosening the thread	0-99	15
落压脚延时 Drop foot delay	自动模式下, 启动后落压脚动作, 延时等待落到位后才启动缝纫机运转 (单位: s) Automatic mode, after starting, the press foot will move, and the sewing machine will start running after the delay waiting for falling in place (unit: s)	0.01-3.0	1
抬压脚延时 Lift foot delay	自动模式下, 启动后停止缝纫机, 延时等待完全停止并停在上针位后才执行抬压脚动作 (单位: s) Automatic mode, stop the sewing machine after starting and wait for a delay until it stops completely and stops at the upper needle position before lifting and pressing foot (unit: s)	0.01-3.0	1
吸风延时 Suction time delay	自动模式下, 启动后停止缝纫机后, 吸风延时停止 (单位: ms) Automatic mode, after starting and stopping the sewing machine, the suction delay stops (unit: s)	0.01-3.0	1
导股延时 Stock guide delay	自动模式下, 启用导骨功能, 导骨机构下降的延时, 确保导骨效果 (单位: s) In automatic mode, enable the guiding bone function. After the guiding bone mechanism is in place, delay the retraction to ensure the guiding bone effect. (unit: s)	0.01-2.0	0.5
导股时间	导股开始, 吹气延时时间 (单位: s) Start guiding the shares, blowing air delay time (unit: s)	0.01-32	1
辅助退回针数 Number of assist return stitches	辅助退回针数可设 Number of assist return pins can be set	0-2000	90
推出针数 Launch pin number	自动模式下, 启动后缝纫机共运行此针数后, 推出气缸动作, 推出布料利于缝纫的吸风剪线收尾 (单位: PCS) Automatic mode, after starting up, the sewing	50-2000	105

	machine will run this number of stitches, then push out the cylinder action and push out the suction and cutting end (unit: Pcs) for cloth to facilitate sewing		
传送停针数 Number of transmission stops	步进停针数可设 number of step stops can be set	50-2000	145
缝纫针数 Sewing needle number	自动模式下, 启动后缝纫机共运行此针数后, 随后停止 Automatic mode, the sewing machine will run this number of stitches after starting and then stop	50-2000	155
工作画面 Work picture	点击返回主界面 Click to return to the main screen		
出厂设置 Factory settings	点击按键 2 秒以上恢复出厂设置 Click the button for more than 2 seconds to restore factory Settings		

### 3.操作说明 operating instructions

#### 3.1.操作前准备工作 Make preparations before the operation

- 1) 确保通电前先通气 Make sure to ventilate before electricity ;
- 2) 检查是否已装衣车针 Check that the needle has been loaded ;
- 3) 检查是否已穿底面线 Check that the bottom line has been pierced ;
- 4) 清理机器台面上的杂物, 保证在机器运作过程中, 机器台面上不会有杂物阻碍 Clean the debris on the machine table to ensure that there will be no debris on the machine table during the operation of the machine

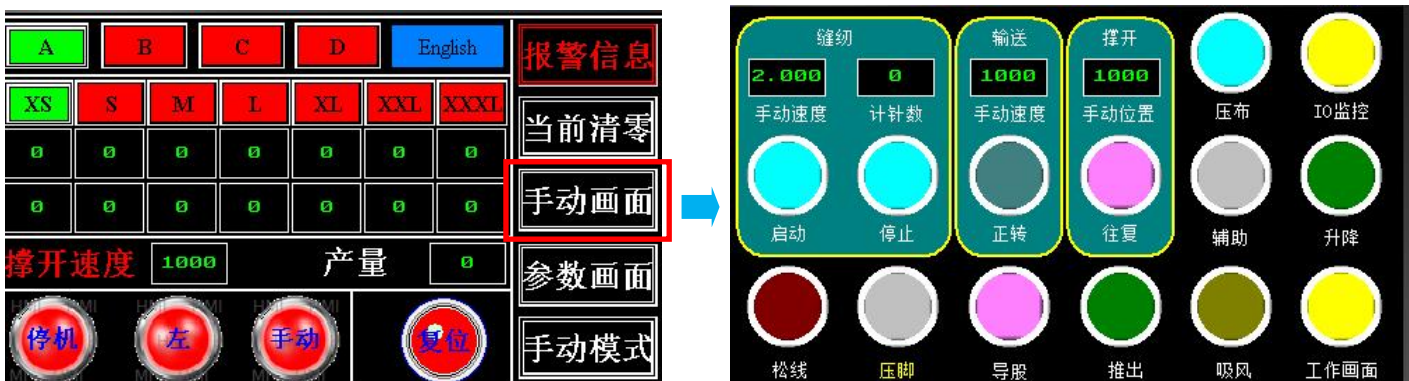
#### 3.2.操作过程说明 Operation procedure description

##### 3.2.1.启动机器电源 Power up the machine

按下直驱电源开关, 开启机器, 随后打开 EA-5101 电控开关, 显示屏开启 Press the direct drive power switch, turn on the machine, then turn on the EA-5101 electronic control switch, and the display screen is turned on.

##### 3.2.2. 手动检查 manual examination

进入手动画面, 按动各个按键对电磁阀、电机和信号线进行动作检查, 确认机器正常 Enter the manual screen, press each key to check the operation of the solenoid valve, motor and signal line, and confirm that the machine is normal.



压轮设定 1000 转速, 要求正转; 手动速度设到 2.1, 启动后缝纫机开始运行, 计针数开始计数 Pressure wheel set 1000 speed, requiring positive rotation; The manual speed is set to 2.1. After starting the sewing machine, the needle count starts to count.

##### 3.2.3. 按款式选择参数 Select parameters by style

- 1) 点击主界面的参数画面, 弹出参数界面, 按款式在参数选择相应参数 (参数界面有两页), Click on the

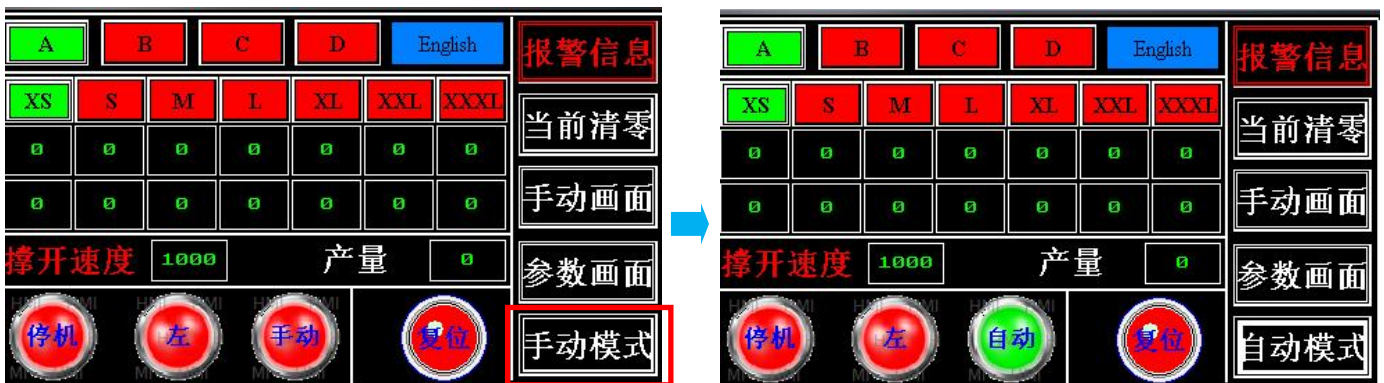
parameter screen on the main interface, and a parameter interface will pop up. Select the corresponding parameters according to the style (the parameter interface has two pages).



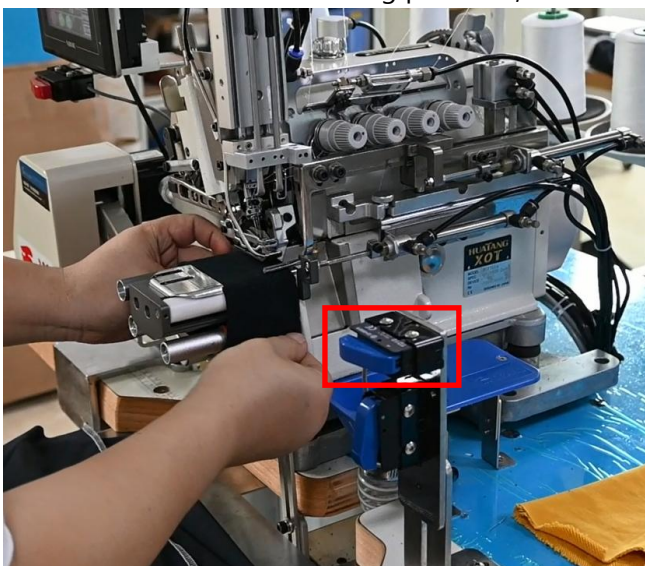
2) 可根据实际尺寸点击“缝纫针数”/“推出针数”/“传送停针数”/“辅助退回针数”进行参数修改, 修改后的参数自动保存在“参数选择” You can click "Number of sewing needles"/" Number of push-out needles "/" Number of transfer stops "/" Number of auxiliary returned needles "to modify the parameters according to the actual size, and the modified parameters are automatically saved in" Parameter Selection ".

### 3.2.4. 车缝 sewing

1) 点击手动模式, 进入自动车缝状态 Click the manual mode to enter the automatic sewing state

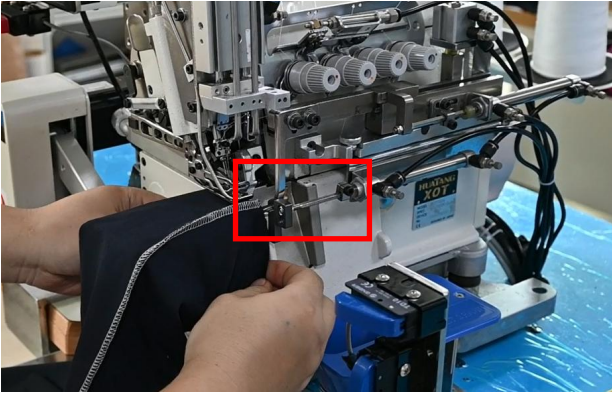


2) 将罗纹袖口套放到前嘴装置, 此时压脚和辅助抬起, 撑开装置在起始位, 点击起动开关, 撑开装置下拉, 辅助压下 Place the ribbed cuff on the front mouth device, press foot and auxiliary lift at this time, and stretch the device in the starting position, Click the start switch, pull the device down, auxiliary pressure.



3) 放入裁片, 缝位对齐辅助的三角位

Put in the cut piece and align the seam with the auxiliary triangle



4) 再按一次起动开关, 导骨起动, 手轻扶衫身其余部分裁片, 无需手势控制容布, 开始自动车缝 Press the starting switch again, guide the bone to start, gently hold the rest of the garment body cut pieces, no need to gesture control the cloth, start automatic sewing



5) 车缝完成后, 剪线, 手动取下载片  
After sewing, cut the thread and remove the cut piece manually



6) 继续车缝或结束车缝 Continue sewing or end sewing

(1) 如需继续车缝, 请重复 3.2.4 中的 (2) (3) (4) (5) 步骤 To continue sewing, repeat steps (2) (3) (4) (5) in 3.2.4.

(2) 如不需使用机器, 请关闭电控电源 If you do not need to use the machine, please turn off the electric control power.

(3) 紧急情况下，操作员可以按“急停”按钮，停止机器运行。如需继续车缝，需重新按启动键 In case of emergency, the operator can press the "emergency stop" button to stop the machine. To continue sewing, press the start button again.



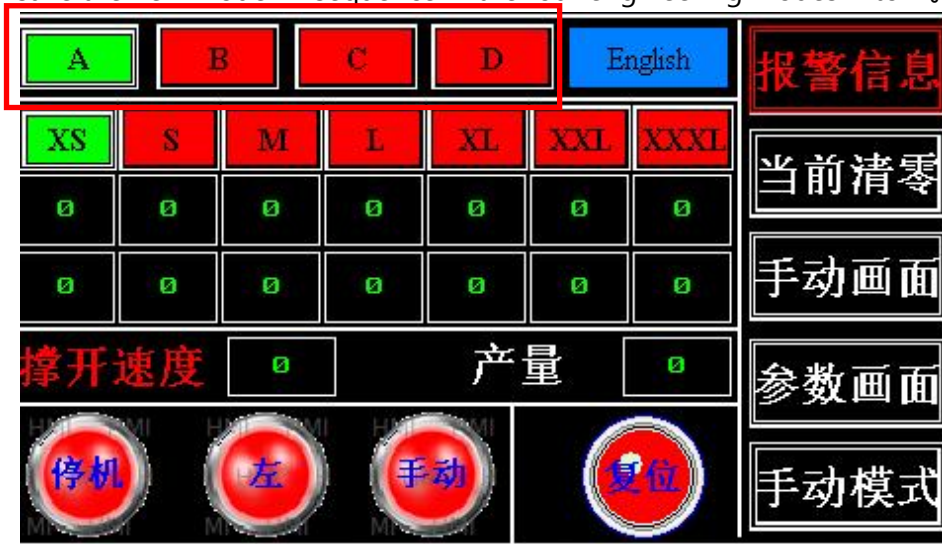
## 4.调机方法 Modulation method

### 4.1 转款调机 Transfer funds and transfer machines

转款调机的步骤依次是：参数选择—参数设置-针数设置，具体如下： The steps of transferring machine are as follows: parameter selection - Parameter setting - needle number setting, as follows

#### 4.1.1.新建款式

(1) 在参数界面按款式在“参数选择”选择接近的参数型号，再点击“缝纫针数”/“推出针数”/“传送停针数”/“辅助退回针数”进行微调，进入主界面进行试车，最后根据车后产品修订参数，最后新款按序号保存在 A-D 四个工程模式中 In the parameter interface, select the nearest parameter model by style in "Parameter Selection", then click on "Sewing Needle Count"/" Push-out Needle Count "/" Transfer Stop Needle Count "/" Auxiliary Return Needle Count "for fine-tuning. Enter the main interface for A test run, and finally revise the parameters according to the product after the run. Finally, save the new model in sequence in the four engineering modes A to D.



#### 4.1.2.微调

根据以上试车操作步骤，试车一件，根据试车情况，进行针数以及容布比例的微调，至此完成一次转款 According to the above test operation steps, test a piece, according to the test situation, the number of needles and the fine adjustment of the ratio of cloth, so as to complete once transfer.

## 5.日常保养要求 Daily maintenance requirements

保养项目 Maintenance item	机构部位 /零件 Mechanism position/ part	保养要求 Maintenance requirement	建议 suggest	
			保养/更换频率 Maintenance/replac	操作者 operator

			ement frequency	
清尘/清理 Dust removal/cleaning	机器表面 machine surface	清理垃圾袋 Trash bag	每天 everyday	操作员 operator
		用风枪清理设备表面积尘及阻挡物,用碎布抹拭机头,以防有油 Clean the dust and barrier on the surface of the equipment with an air gun. Wipe the head with a rag to prevent oil		
	电控 electronic control	定期对电箱清尘 Clean the electrical box regularly	每季度 every quarter	机修 mechanic
各接触端点固定良好 All contact ends are well fixed				
线路表面是否有损伤、老化 Whether the circuit surface is damaged or aged				
维护/检查	气缸 air cylinder	气缸螺丝是否紧固 Whether the cylinder screws are tight	每月 monthly	机修 mechanic
		在安静环境下,检查是否有漏气 In a quiet environment, check for air leaks		
		通气状态下,手动按相应电磁阀开关检查气缸活动是否顺畅 In the state of ventilation, manually press the corresponding solenoid valve switch to check whether the cylinder movement is smooth		
	电机 Motor	检查电机是否移动顺畅 Check whether the motor moves smoothly	每月 monthly	机修 mechanic
	导轨/轴承 Guide rail/bearing	保持器导轨表面清洁,轴承活动正常,定期加润滑油 The surface of the retainer guide rail is clean, the bearing activity is normal, and the lubricating oil is added regularly	每月 monthly	机修 mechanic
	电磁阀 solenoid valve	动作是否正常 Whether the action is normal	每周 weekly	机修 mechanic
	气管 air tube	检查气管是否磨损或漏气,如有磨损或漏气请更换 Check whether the air pipe is worn or leaky. If so, replace it	每周 weekly	机修 mechanic
	接线 connection	检查各接线是否有松动,连接器连接是否接松动 Check whether cables are loose and connectors are loose	每周 weekly	机修 mechanic
	调压阀 pressure regulating valve	检查气压是否处于正常值( 0.5MPa )Check whether the air pressure is normal (0.5MPa)	每月 monthly	机修 mechanic
整机螺丝 Machine screw	紧固整机螺丝,磨损更换 Tighten the screws of the whole machine and replace them with worn ones	半年 half a year	机修 mechanic	
缝纫机 sewing machine	维护保养请参考缝纫机自带保养说明 Maintenance Please refer to the maintenance instructions that come with the sewing machine	每月 monthly	机修 mechanic	