全自动电子圆头锁眼机

AUTOMATIC EYELET BUTTONHOLE SEWING MACHINE

使用说明书

OPERATION MANUAL (电控分册)

(ELECTRONIC CONTROL FASCICULE)

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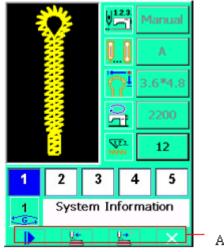
1 按键功能

Key Functions









运行界面(run panel)

F1 F2 F3 F4 : 在不同的界面这四个按键的功能也不同。对话框底部的图标A指示这四个按键的功能,如运行界面上这四个按键的功能分别为: 暂停并解锁后继续缝制,暂停并解锁后向后移动一针,暂停并解锁后向前移动一针,取消操作。





. 暂停并锁定按键,锁眼过程中按此按键将暂停操作并锁定。

///: 暂停并解锁按键,暂停并锁定状态下按此按键将解锁

: 准备按键,按此按键使操作界面和运行界面进行切换

: 操作按键,按此按键将从系统界面或者参数界面切换到操作界面

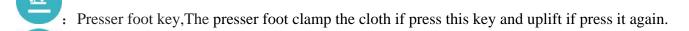
: 参数按键,按此按键将进入参数设置界面

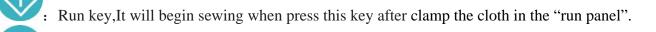
: 系统按键,按此按键将进入系统界面

按键功能

Key Functions

: The four keys' functions are different in different panels. The four Icons A at the botton of the dialog indirect their functions. For example, In the "run panel", the four keys' functions are as follows: Continue sewing after pause and unlocking. Move a stitch backwards after pause and unlocking. Move a stitch ahead after pause and unlocking. Cancel the operation.

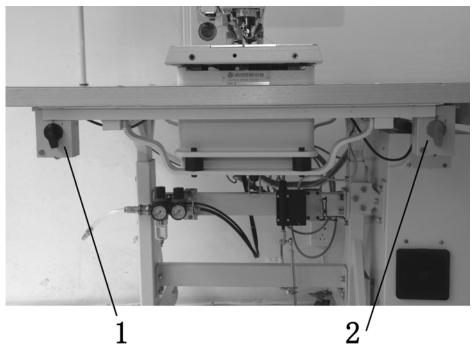




- Pause and lock key, The machine will pause and lock when press this key in the sewing process.
- Pause and unlock key, The machine will unlock when press this key in the pause and lock station.
- : Ready key,It will switch from operate panel to run panel when press this key.
- Operate key, It will switch from system panel or param panel to operate panel when press this key.
- Param key, It will enter param panel when press this key.
 - : System key, It will enter system panel when press this key.

Switching on or off-Firm hold-Emergency stop

2 开、关机-安全停机-紧急停机 Switching on/off、Firm hold、Emergency stop



2.1 开机 Switching on

- 接通电源,将安全开关1拨在开关盒上的记号"1"位置。
- 将电源开关2拨到"1"位置,等待几秒后,完成开机并进入操作界面。
- 当安全开关1位于"0"位置时,机器处于"紧急停车"状态。
- Connect the power supply; turn the firm hold switch 1 to mark "1".
- Turn the power switch 2 to mark "1", it takes about one minute to enter the operation software windows.
- Turn the firm hold switch 1 to mark "0", the machine is stopped safely.

开、关机-安全停机-紧急停机

Switching on or off-Firm hold-Emergency stop

2.2 关机

Switching off

- 关闭电源开关 2。
- Turn off the power switch 2.

2.3 安全停机

Firm hold

- 1) 在机器上进行维修、维护及穿线等操作,机器必须关闭或处于"安全停机"状态。
- 2) 在缝纫过程需要立即停车时,可将开关1打开。但这样会放弃正在进行的立即锁眼过

程。如果仅仅需要暂停,请后踏脚踏板或按按键区域的"暂停并锁定"按键



- 1) Before repairing, maintenance and threading needle etc, must turn off the machine or firm hold it.
- 2) It will abandon the sewing process during the sewing "firm hold" for emergency stop, if only pause desired, step on the pedal backward or press the key "pause and lock".

2.4 紧急停机

Emergency stop

- 在操作不当、断针、断线或其它意外情况时,按下机头上的急停开关3,即可紧急停车。
- 紧急停车后,可通过按键区域的"回退"或"前进"按键 进行穿线后的补针操作, 详见3.3节。

Switching on or off-Firm hold-Emergency stop

注:

如果断线检测功能设置为开,则缝纫机在断线后, 无需按紧急停车开关就会自动停车。

- Press the emergency stop button 3 on the machine head to stop the machine in the case of incorrect operation, needle breakage, thread breakage etc.
- Then, press the button "Backward" or "forward" to darn sewing process after threading, see details in next section.

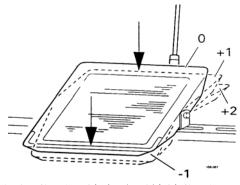


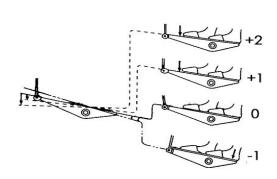
Notes:

If the thread breakage sensor is on, the machine will be stopping automatically without pressing the emergency stop button when thread is broken.

2.5 锁眼基本操作-使用脚踏板

Using the pedal



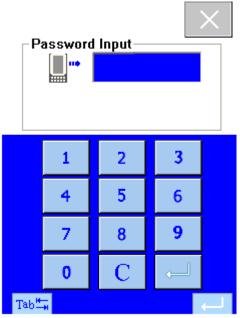


- 后踩至-1位置,缝台移至始缝位置
- 前踩至位置+1并保持住,压脚压布,若不保持则压脚会随着抬起
- 继续前踩到位置+2,缝纫开始。
- 缝纫过程中后踩一次至-1,缝纫暂停。后踩两次至-1,缝纫取消。
- Step on the pedal to position -1, the fabric support plate move to the starting position.
- Step on the pedal to position+1 and hold, presser foot clamp the cloth and would uplift without holding.
- Go on to position +2, sewing begins.
- Step on the pedal to position-1 during sewing, the machine pause, step to position -1 again , sewing work will be abandoned.

3 控制系统基本操作

Control system operating instructions





3.1 操作操作面板

Operate the operation panel

进入程序

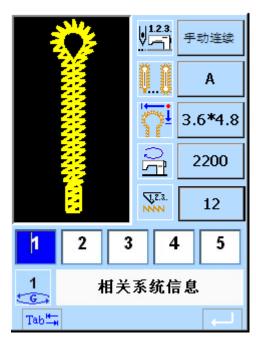
Enter the program

- 打开电源开关,见"2.1"节,进入操作界面。
- 全自动电子圆头锁眼机的输入采用触 摸屏和键盘控制。
- 更改各种参数,也通过触摸屏和键盘来 输入。
- Switch on the main switch, see section"2.1", enter the operating panel.
- The automatic eyelet button-holing machine adopt touchable screen and the keyboard.,
- Adjusting or inputting parameters by touching the screen. and pressing the keyboard.

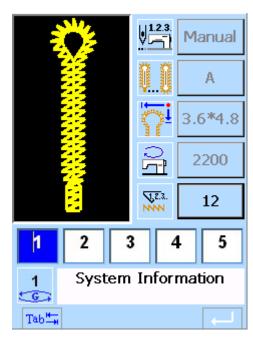
输入密码

Input password

- 进入操作界面时,如果用户设置有操作密码,则需要输入操作密码。
- 一 如果密码输入错误,在弹出的提示对 话框中按 按钮后重新输入。
- Enter "Operation" panel, input the password if need.
- If input error, press button in the popup dialog and input again.



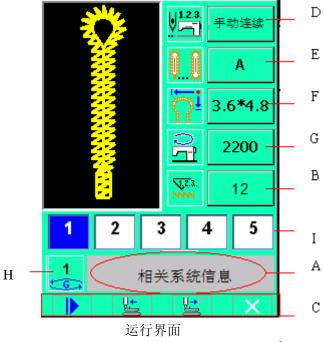
操作界面



Operate panel

3.2 锁眼过程 Sewing process 锁眼基本操作 General operation

- 进入操作界面,按按键区域的"准备"键 进入运行界面(见下页绿色界面),工作台移至 工作位置。
- 缝料放好后,按按键区域的"压布"键 或者向前踩踏板至+1位置并保持(见2.5节),压脚压住缝料。
- 此时,如果气压不够(低于0.55Mpa),则机器蜂鸣报警,直到气压达到要求为止。
- 按下按键区域的"运行"键 ,机器开始进 行扣眼的缝制。
- 按"取消"键 , 返回至上一动作。如"压 布"后再按"取消",则取消压布。
- 扣眼锁完后,计数按钮 12 上的数值会增加一个。
- In the Operation panel, it will enter the Run panel when you press prepare, cloth support plate move to the sewing position.
- Feed the cloth, press key "clamp". The presser foot clamp the cloth.
- If air pressure is inadequate (less than 0.55Mpa), it will alert, "clamp" key turn to gray until the air pressure reaches the request.
- Press key "run" , it begins to sewing button-holing.
- Press key "cancel" , return to previous operation.
 E.g. press key "Clamp" then "cancel", "clamp" will be canceled.
- The number of counter button added when finished sewing holing.



Run panel

其他图标信息说明 Other icons' info

D : 缝制类型 (Sewing type)

E : 扣眼类型 (Buttonhole type)

F : 圆头尺寸 (Eye shape)

G : 速度 (Speed)

Η

H : 组号 (Group number)
I : 扣眼号 (Buttonhole number)

A. 信息栏

Message

信息栏显示当前的工作状态。

在程序出错时,信息栏会显示提示信息,以便迅速 找出错误所在。

The current working status message appears in the margin. When program error, the info below is indicated, so that can find out the possible cause.

B. 计数器

Use the counter

计数按钮 能够记录当天该班次缝制的扣眼个数,点击该按钮可清零重新计数。

The counter button can record the number of buttonholes sewn each time, click this button to reset and counter over again.

C.功能按钮指示图标

Indirect the function buttons

四个图标分别对应键盘区域第一排的四个按键,如:

The four icons indirect the functions of four keys in the first row of the key zone.

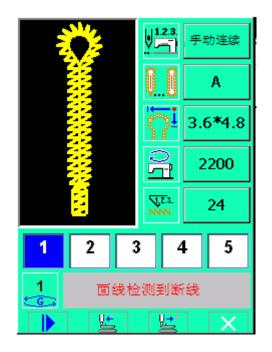
- ① : 暂停并解锁后继续缝制 Continue sewing after pause and unlocking.
- ② : 暂停并解锁后向后移动一针 Move a stitch backwards after pause and unlocking.
- ③ : 暂停并解锁后向前移动一针 Move a stitch ahead after pause and unlocking.
 - : 取消操作
 Cancel the operation

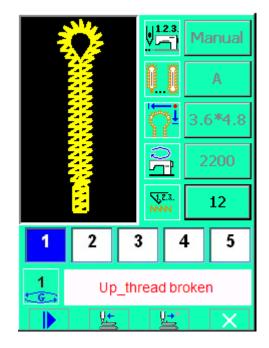
 F1 F2 F3 F4
 按按键
 现①②③④的功能。

Press key achieve the 1234 functions differently.

3.3 断线补缝

Go on after needle thread broken





当系统界面的面线断线检测设为"开"时,如果在缝纫过程中出现断线,机器会自动停车。 按以下操作进行补缝:

- 重新穿好机针线;



- 按下操作按键区域的"暂停并解锁"按键
- 再按"回退"按键 , 直至缝台移到断线的位置;
- 按"继续"按键 ,则缝纫机继续完成缝纫。

When the needle thread sensor in "System panel" is set "on", the machine will stop automatically when needle thread is broken.

Darning according the following operation:

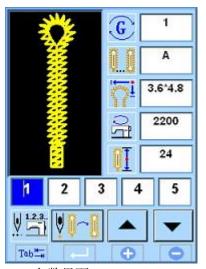
- Re-thread the needle thread.
- Press the key "Pause and unlock" in the key zone;
- Press key "back" till the cloth support plate move to the breakage position.
- Press key "Go on", go on sewing.

3.4 扣眼参数

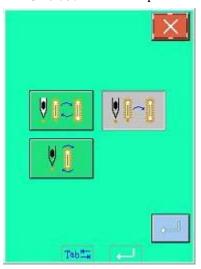
Buttonhole parameter

当系统处于"运行"窗口(绿色界面)时,按按键区域的"准备"按键 进入操作界面,然 后按"参数"按键 进入参数界面。在其他界面时直接按"参数"按键 。

When the system is in the "Run" panel, please press the "Ready" Key in the key zone to enter the "Operation" panel, then press the "Param" key , enter the parameter panel. When in other panels, press the "Param" key directly.



参数界面Parameter panel



缝制模式选择

首先按 按钮指定缝制方式,共有三种方式可供选择:

- **自动连续** : 每缝好一种扣眼,机器会自动转向下一种扣眼的缝制。例如: 1号扣眼缝制好后,会自动转向2号扣眼, 然后依次下去直至5号扣眼, 然后再返回到1号扣眼, 如此循环。

手动连续:每缝好一种扣眼,机器需要手动来完成 转向下一种扣眼的缝制,即将焦点放在其他扣眼号编辑框处

(按按键 进行焦点的切换,左边的"参数界面"图中扣眼号的焦点在1处,因为1号扣眼编辑框底色为蓝色),如果不手动切换扣眼号,它将继续缝制同种扣眼。

- **单一缝制**: 是指始终只缝制一种样式和大小的扣眼,与手动连续不同之处在于它没有多种样式供手工切换。

Sewing mode select

Click key "parameter", enter into the parameter interface.

First you can press the button to select the sewing mode. There are three sewing modes for choosing.

- **Auto sequence**: The machine will sew the next kind of buttonhole automatically after current sewing finished. E.g.:No.2 buttonhole will be sewn after No.1 finished, and up to No.5 in turn, then return to No.1, thus circle sewing.
- **Manual sequence**: The machine turns to sewing the next buttonhole by manual after current work finished, that is set the focus on other buttonhole number edit box, if not manual operate, the machine will keep sewing the same type of buttonhole.
- Single mode: Sewing the buttonholes with same type and size all along, the difference with Manual sequence mode is not have multi-types to manual change.

锁眼参数调整

Adjusting buttonhole parameter

用户可以根据需要,对与扣眼相关的参数通过操作面板和键盘进行调整。

注:在"参数"界面,改变扣眼参数时,左侧的扣眼形状会跟着实时变化。用户可以通过该变化来理解该参数所代表的意义。

Adjust the buttonhole parameters by control panel and the keyboard if desired. Notes:

When adjusting the buttonhole parameters, the left hole shape will be changed along with...

扣眼参数更改

- 点选需要更改参数的扣眼号(蓝底白字显示状态即为选中),参数栏即显示该扣眼号的各项 参数设定。
- 将光标放至需要更改的参数编辑框上,按按键区域的"增加"或"减少"键(可以更改该值。

具体参数如下表:

文件多效如下衣:		
符号	代表参数	具体意义
G	扣眼组号	要缝制的扣眼的组号
Actually Seatter	扣眼种类	扣眼样式的种类共 A、B、C、D、E
基本参数:		
12 14 14 14 14 14 14 14 14 14 14 14 14 14	圆头尺寸	圆头的外形尺寸大小 尺寸为 0.0x0.0 时,代表无圆头的扣眼
01	缝纫速度	扣眼的两平行部分的缝纫速度,最高 2200 针/分。
Actual Control of the	扣眼长度	从圆头内部的上端到套结的起点的扣眼长度

符号	代表参数	具体意义	
grana France	开孔方式	- 先切后缝- 不切- 先缝后切	
₹ ⁷ .3.3	圆头部位针数	缝制时在圆头部位的针数,控制圆头的疏密。	
**************************************	直列针距	扣眼左右直列的线迹间距,大小必须在 0.5 和 2 mm 之间	
A Marie Control	直列切刀间隙	本参数改变扣眼两平行边之间的切刀间隙大小	
↑ +	圆头切刀间隙	设定圆头部分切刀切下的间隙	
⊕*)+(切刀位置修正	调整切刀开孔的前后位置 大小在-0.3到+0.3之间可调节	
₩ 2	起针速度	设置起针1-3针软启动的速度,防止起针跳针。	
P3	圆头速度	缝制圆头部分时的速度。 当缝圆头由于缝料厚薄不均等原因导致跳针时,适当降低该速 度能防止或减少跳针。	
PRESENT	摆针宽度补偿	对扣眼摆针的宽度进行电控补偿。	
	旋转修正	进行圆眼部分和平行部分的旋转角度的调整	
	眼部偏斜修正	当扣眼头部歪时,用该参数进行调整	
1	平行部位纵坐 标修正	调整左侧平行部分的针迹纵向坐标,可使左、右平行部分针迹对齐。	
₩ÅM	缝制结束加固 针数	设定缝制结束时加固针数的参数,范围0-3针	
⊕•) ! (缝台后移	缝制完毕后底线夹线器动作前缝台后移的距离范围0-10mm	
直尾套结参	直尾套结参数:		
₩ ±	锥形套结长度	带锥形套结的扣眼,从套结的尖端到末端的长度。当扣眼长度改变,请确认没有超过最大的锁眼长度。这种情况会发生在带锥形套结的扣眼上,因为锥形套结的长度是锁眼长度的一部分。当扣眼长度增加,锥形套结的长度相应地自动调节。	

符号	代表参数	具体意义
•	锥形套结交叠	锥形套结的直线部分两侧线迹之间的间距。当间距为0.0 mm,则一侧线迹直接在另一侧上。

圆尾套结参数:		
THE STATE OF THE S	圆尾交叠量	可调节圆尾部分起针和结束的角度重合量
₩ <u>r</u> 5°3	圆尾针数	圆尾套结的线迹数可能为: 4, 6, 8 或 10 针
横尾套结参	数:	
#####################################	横尾摆针宽度	本参数改变横尾套结的纵向宽窄
 	横尾长度	横尾套结的扣眼的横尾的长度
######################################	横尾针距	横尾套结的扣眼的横尾的针距
######################################	横尾横向调整	调整横尾套结相对于扣眼中心的位置
######################################	横尾纵向调整	调整扣眼两平行边与横尾之间的间距
±±±	横尾水平修正	调整横尾套结的水平角度,使横尾套结与扣眼两平行部分垂直
# <u>2</u> 2	横尾速度	用来降低横尾缝制的速度,当横尾跳针时,可适当降低该速度

Buttonhole parameter change

- Select the buttonhole number, (white word with blue grounding when selected) the relevant option appears in "parameters"
- Set the cursor on the parameter edit box which you want to change, Press "Add" or "Reduce" key



in the key zone to adjust the value.

Press button "Page up" or "Page down" to view more parameters.

Symbol	Parameter	Meaning
G	Buttonhole group	The group number of the buttonhole to be processed
Tames A	Buttonhole type	Buttonhole types A to E are available
Base param	eters:	
	Eye shape	The external dimensions (x, y) of the eye. Buttonholes without eyes have dimensions 0.0x0.0. Which buttonhole shapes are possible?
	Speed	The speed of the machine, max.2200rpm.
**************************************	Length	The buttonhole length from the upper end of the eye up to the beginning of the tack
States States	Cutting	-Cut before sewing -No cutting -Cut after sewing
₩ .5.3	Stitch count in the eye	The number of stitches sewn by the machine in the eye.
**************************************	Stitch distance	The distance between stitches within the side of the buttonhole.
Access 1	Throw width in the side	This parameter changes the throw width in the side of the buttonhole.
***	Setting the eyelet space	Set the clearance where the knife drops in the eyelet section.

Symbol	Parameter	Meaning
⊕) (Cut-position correction	The distance by which the cut of the blade is moved lengthwise.
112	Speed in stitch 1 to 3	The speed of the machine in the stitch 1 to 3
<u> </u>	Speed in eye	The speed of the machine in the eye
PERFECT	Stitch width compensation	The stitch width compensation t in the buttonhole side and the eye.
	Parallel section turning compensation	Turning angle of parallel section can be adjusted
**	Eyelet section turning compensation	Turning angle of the eyelet section can be adjusted.
1	Left parallel section fore-and-aft compensation	Adjusting the left parallel section in fore-and-aft direction.
₩ÅΜ	Stitch count to reinforce when sewing end	Seting the stitch count to reinforce when sewing end.range:0-3 stitches
⊕•)•(Board move behind	Seting the distance of the board moving behind after sewing before the action of the bobbin thread catcher.Range:0-10mm
Taper tack	parameters:	
₹	Intermediate fabric Taper tack length	This parameter changes the intermediate-fabric type. In buttonholes with taper tacks, the length from the tip of the taper. To the end of the taper. The minimum taper tack length is 2 mm. When changing the buttonhole length please ensure that the maximum sewing length is not exceeded. This can occur with taper-tack buttonholes as the length of the taper tack forms part of the sewing length. When the buttonhole length is increased the taper tack length is thus automatically adjusted accordingly.
HARA	Taper tack overlap	The distance between the two sides in the straight section of the taper tack. When it is 0.0 mm. one side is directly above the other.

Symbol	Parameter	Meaning
Round tack	parameters:	
#	Overlap	In round tacks and eyelets the overlap can be adjusted.
₹ <u>₹</u> .8.3	Number If stitches in the cross tack	In round tack buttonholes, the number of stitches in the round tack. 4,6,8 or 10 stitches are possible.
Cross tack p	parameters:	
**************************************	Throw width in the cross tack	This parameter changes the throw width in the cross tack.
↑	Cross tack length	In buttonholes with cross tacks, the overall length of the cross tack
**************************************	Stitch distance within the cross tack.	The distance between stitches within the cross tack.
**************************************	Stitch distance in the cross tack	In buttonholes with cross tacks, the position of the cross tack with respect to the center.
	Seam extension	In buttonholes with cross tacks the distance between the buttonhole side and the cross tack can be set.
™	Cross tack angle of parallel section compensation	Adjust the cross tack angle of parallel section; let the tack plumb with the parallel section of buttonhole.
الله الم	Speed of the cross tack	Adjust the speed of the cross tack to avoid skip stitch.

4 579系列 "系统"界面 579 series system menu

当系统处于"运行"窗口(绿色)时,按按键区域的"准备"按键 进入操作界面(蓝色窗

口),然后按"系统"按键 进入系统界面。其他情况下直接按"系统"按键 进入系统界面。

在该界面的各对话框中,可进行维修测试、程序参数设定等工作。 只有受过专业培训的人员才可以进入并更改参数。

When the system is in the "Run" panel(green), please press the "Ready" Key

in the key zone

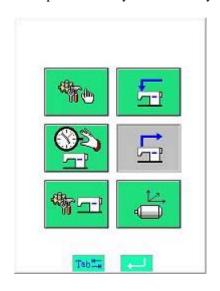
to enter the "Operation" panel(blue), then press the "System" key

, enter into the system

interface. While in other interfaces, you can press the "System" key directly to enter into the system panel.

We can do some testing and program changing and etc.

The operation in "system" can only be done by the professional trained operators.



系统界面(system panel)

各按钮功能:

the function of the buttons:



: 设置基本参数 Setting the basic parameters



: 设置各项动作时间 Setting the times



: 系统管理 System management



: 输入测试 Input test



: 输出测试 Output test



: 电机测试 Motor test

4.1 设定基本参数

Setting the basic parameters

按钮,进入"基本参数"界面,进行相关设置。 点击

通常,"基本参数"里的设置在出厂时已设定至最优值,所以,请不要随意更改。

Clike

button, enter "basic" interface, do some set.

Usaually, the parameters in "basic" are optional, don't need to change.

各参数功能如下表: The functions of parameters are included in the following table			
参 数	项目及具体意义		
监控参数	■ 1		
扣眼数量	: 当日数量 指用户当天缝制的扣眼数量,按此按钮,在弹出的对话框中按确定按钮,该值会被清零。 ()) () () () () () () () ()		

参 数	项目及具体意义
零位补偿	Y
切料位置	□ BD9 : 横向位置 该参数可使切刀刀缝的位置向左或向右移动,以保证切刀缝落在扣眼的中间。
	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
语言	简体中文 ENGLISH B11 : 中文 B11 : 英语 「簡体中文」 ENGLISH 该参数可以设定语言,按下按钮后在 两个按钮中 选择一个并按 确定。
机头型号	************************************

参数	项目及具体意义
应用分类	B13 : 标准 B13 : 西裤 B13 : 女外套
	按下按钮后在三十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二
	个并按通确定。
	注意: 该机出厂时,是按照"标准"进行零件配置的。当更换成"西裤"后,需要 更换对应的上、下压脚、切刀、切刀砧板、护指架,这些零件在随机出 厂的附件盒中有提供。
送料位置	按下按钮后在三个按钮中选择一个并按 确定。 : 切料位置 : 始缝位置
	: 最前位置
最大速度	£_3
复位	RESET
	 将基本参数设置为出厂参数

Parameters	Item and the meaning		
Sensor Parameters	: bobbin thread : looper thread Set the parameters to detect the breakage of bobbin thread and looper thread. When set the value "0", the detect function off, the machine will not auto-stopped when thread break. When set the value "2", the machine auto stopped and show error after sewing 2 stitches when thread broken. When set the value "n", the machine auto stopped and show error after sewing n stitches when thread broken.		
	: day number Means the quantity of hole sewn in the day Click this button, press button in the pop_up dialog box,it will be cleared to zero.		
Hole number	: month number Means the quantity of hole sewn in the month Click this button, press button in the pop_up dialog box,it will be cleared to zero.		
	: machine number Means the quantity of hole sewn from the machine was produced.		

Parameters	Item and the meaning
Home compensate	: X axis compensate BOT : Y axis BOB : C axis When the axis compensate is not zero(suppose it as n), the buttonhole will move parallel n .
Cut Position	: Horizontal position Set the parameters to move left or right the cutting knife, to make sure the blade in the middle of the sewing hole : Portrait position Set the parameters to move fornt or behind the cutting knife, to make the blade carve the sewing hole but not break the hole and tail.
Language	简体中文 ENGLISH : simplified Chinese
Machine head model	W5790 W5791 W5792 W5793 B12 B12 B12 Choose the control_programme model on the different accessory configure, unsuitable choice will make the crush or destroy on the machine accessory.

Parameters	Item and the meaning
Application	choose a button in to make sure. Attention: The machine equipped the spare part according the "Standard" before leave the factory. It must change the upper/lower presser foot, cutting knife, cutting block, finger guard in the accessories box when instead to "Trousers"
Feed position	press the button and then choose one ,press : cut position : at the seam start : forefront
Fastest speed	Set the fastest speed. Range: 1800~2200rpm
Reset	RESET Set the initialize parameter as the basic parameter

4.2 设定各项动作时间

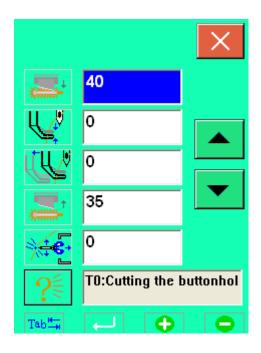
Setting the time

点击 按钮,进入"时间"界面,用来设定缝纫循环中的各动作之间的时间间隔。选中某一时间,界面底部的提示栏 会出现对该时间进行解释的提示信息。当提示栏无法显示所有字符时点击 按钮可以弹出对话框显示提示的所有内容。

Press the button, enter the "time" interface, we can set the interval between the actions in cycle sewing.

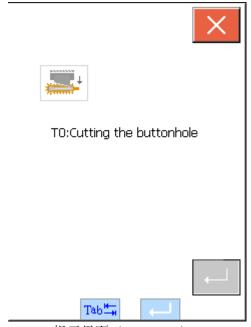
The bottom of interface will appears the relevant info while select one of the options.

Press the to popup a dialog which show all the contents of info When the hint box can't show all the characters.



各时间参数所代表的意义如下:

The time and the relevant meaning:



提示界面(hint panel)

图标 Icon	时 间 Time	意 义 Meaning
A CONTRACT OF THE PARTY OF THE	T0 (0~2000)	 开孔 上面的刀砧和下面的切刀接触后 经过间隔 T0 刀砧向上移动 必须保证钮孔有充足时间被完整切开 Sewing hole The upper cutting block meet the cutting knife Pass time T0 Cutting block move upward Make sure have enough time to cut the button hole fully.
	T1 (0~2000)	 面线抓线器的线夹开始合上 经过间隔 T1 面线抓线器从机针处开始往后移动 必须注意面线需在面线抓线器后移前被夹住 Clamp of the Thread catcher begin to close Pass time T1 The thread catcher move backward from the needle The thread should be clamped before the thread catcher moving backward
	T2 (0~2000)	 面线抓线器开始从机针处往后移动 经过间隔 T2 面线抓线器开始向上移动 必须注意在面线抓线器向上移动时,线夹不再位于机针的下方 The thread catcher move backward from the needle Pass time T2 The thread catcher move upward. The clamp not longer under the needle when the thread catcher move upward
†	T3 (0~2000)	开刀后切刀上升延时 delay of knife move upward

图标 Icon	时 间 Time	意 义 Meaning
₩€ -	T4 (0~2000)	 面线抓线器开始向上移动 经过间隔 T4 剪断弯针线 必须注意面线不能被弯针线剪线器剪断
		 The thread catcher move upward. Pass time T4 Cut the needle thread
	T5 (0~2000)	 吸料停止 经过间隔 T5 面线过线器开始打开 必须保证只有当面线拉线器向后退时,面线过线器才打开 Stop vacuuming the cloth
		 Pass time T4 Needle thread guide open Make sure thread guide only open while the thread puller move backward.
	T6 (0~2000)	 面线抓线器开始落向缝料 经过间隔 T6 开始缝纫 必须小心只有面线抓线器落下后才能开始缝纫,以保证面线不从抓线器线夹中脱出 The thread catcher move to cloth Pass time T6 Start sewing Make sure start sewing after the thread catcher down so that the thread will not
		away from the clamp.

图标 Icon	时 间 Time	意 义 Meaning
	Т7	面线抓线器开始摆向机针经过间隔 T7面线抓线器的线夹开始合上必须注意在线夹合上时应已经夹住面线
	(20~2000)	 The thread catcher move to needle Pass time T7 The clamp close Make sure the thread was clamped when the clamp close.
***	T8 (0~2000)	 维纫结束 经过间隔 T8 弯针线夹线器开始打开、弯针拉线器开始拉线 必须注意在拉弯针线前,机器已完成缝纫 Sewing end Pass time T8 The looper thread catcher open、looper thread puller begin to pulling. Make sure finish sewing before pulling the looper thread
₩ <mark>€</mark>	T9 (10~2000)	 —剪线面线 —经过间隔 T9 —面线过线器合上 必须注意只有剪线面线后夹线板才可以合上 Trimmer needle thread Pass time T9 Needle thread guide close The clamp plate should be open after trimmer needle thread

图标 Icon	时 间 Time	意 义 Meaning
	T11 (0~2000)	面线抓线器上升延时 The thread catcher move upward delay
**************************************	T12 (0~2000)	 剪断弯针线 经过间隔 T12 缝纫旋转机构开始回转,同时缝台开始移动 必须注意在缝纫旋转机构回转前,弯针线已被剪断 Trimmer looper thread Pass time T12 The fabric support plate start moving. The looper thread should be trimmed before the sewing rotation work start running
	T13 (0~2000)	打开底线夹线器,向前拉底线延时 Open the bobbin thread catcher, pull the bobbin thread forward delay
	T14 (0~2000)	 开始向前拉面线、吸掉切料的废屑 经过间隔 T14 吸料停止,面线拉线器收回 Pull the needle thread、vacuum the cloth waste Pass time T14 Stop vacuuming,,needle thread puller back.

图标 Icon	时 间 Time	意 义 Meaning
777	T17 (0~2000)	- 绷料延时 - Spread delay
# *	T18 (0~2000)	 底线拉线延时 The bobbin thread pull delay
↓	T20 (0~2000)	 - 压缩空气压力低 - 经过时间 T20 - 报警 - Low of air pressure - Pass time T20 - Alert
	$T22$ $(0\sim2000)$	 面线抓线器打开延时 The thread catcher open delay
	$(0\sim2000)$	剪线完毕,缝台回移延时The delay of back move after cutting.
*	T25 (0~2000)	- 剪线动作持续延时 - The delay of keeping cut motion.
† ************************************	T26 (200~2000)	 开孔 上面的刀砧和下面的切刀未发生接触 (当没有刀砧、切刀、刀砧安装座其中之一,就不会发生接触) 经过间隔 T26 切刀气缸向后退回 Sewing hole the upper cutting block miss the cutting knife(No touch happened without one of the cutting block、cutting knife、cutting block pedestal) Pass time T26 The cutting pneumatic cylinder move backward

图标 Icon	时间Time	意 义 Meaning
	T27 (0~2000)	- 压脚压布延时 - The presser clamp cloth delay
	T0+T3	 开始向前拉面线、吸掉切料的废屑 经过间隔 T0+T3 停止拉面线、停止吸掉废屑 必须注意有足够的时间完成拉面线动作并将废屑吸掉 Pull the thread forward、vacuum the waste Pass time T0+T3 Stop pulling、stop vacuum Make sure have enough time to finish the pulling and vacuum the waste.
	T0+T3+T5	 切孔 刀砧和切刀接触后 经过间隔 T0+T3+T5 缝台移动 必须注意在缝台向前移动之前,刀砧已抬起 Cutting hole cutting block meet the cutting knife Pass time Sewing T0+T3+T5 The cut block must be raised before fabric support plate moving

图标 Icon	时 间 Time	意 义 Meaning
	T9+T1+T2	 打开面线剪线电磁阀(此时剪线气缸推动阀有动作) 经过 T9+T1+T2 关闭面线剪线电磁阀 必须注意剪线气缸应有足够的时间将剪线刀推到底,从而保证剪线面线 Open the electromagnetic valve of the needle thread trimmer(The trimmer pneumatic cylinder driver vlave acting) Pass time Sewing T9+T1+T2 Close the electromagnetic valve The cylinder need enough time to push the trimmer knife to the end so that can make sure trimmer the needle thread.
	T1+T2+T7+T9	 弯针线夹线器开始打开、弯针拉线器开始拉线 经过间隔 T1+T2+T7+T9 弯针线夹线器关闭、停止拉弯针线 Looper thread tension open、looper thread puller begin to pulling. Pass time T1+T2+T7+T9 Looper thread tension close、stop pulling.

4.3 系统测试

System test

4.3.1 输入、输出信号测试

Input test, Output test

测试各项输入、输出信号是否正常。

Do the input and output test.

注意!

本测试只能由受过本公司专业培训的人员来完成。

小心受伤!



- 接通输出组件会导致和机器的其它组件碰撞,从而损坏机器。同时部分测试存在伤人的危险,请小心操作。
- 在接通任何输出组件前,必须确认不会和其它部件相撞。利用本菜单可接通一个或几个输出组件。

Attention:

The test must only be carried out by the person with appropriate training.



Danger of injury!

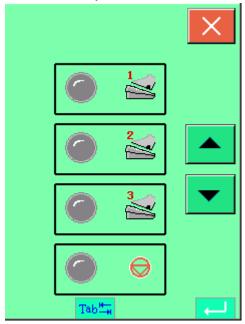
- The switching of output elements can lead to collisions with other machine elements as well as to damages to the automatic buttonholer. Exercise utmost caution when making the output test with the machine running.
- Before switching on an output element make sure that this cannot collide with other components . In this menu, one or several output elements can be connected.

输入测试

点击系统界面的按钮,进入输入测试。

Click the button

in the system interface, enter the input test.



手工转动或移动机器的某部分,使该部分的感应片与接近式感应开关的感应头重叠,对话框上对应的指示灯应由棕黄色变为绿色。



若没有变化,则表示该处感应开关没有信号变化。

用一字螺丝刀刀头或其它金属片靠近接近开关的感应头,如果仍没有变化,则说明该接近开关已坏,需要更换。

Turn or move one of the components manually, overlap its proximity plate to the proximity switch, the relevant indicator lamp in the dialog box should turns yellow to green.

Click button to change the page.

If not, it means no signal change of this proximity switch.

Close the screwdriver or other metal to the proximity switch, if there's still no change, it means the proximity switch breakage, need to replace.

各图标对应的测试项如下:

The meanings of the test items are as follows:



🕯 : 踏1 (pedal 1)



: 踏3 (pedal 3)(备用功能standby function)



: 机针(needle)



: 底线(bobbin thread)(5791特有 the peculiar function of 5791)



:切料(cut_hole)



: 开关1(switch 1)(备用功能standby function)

面线(needle_thread)



开关2(switch 2备用功能standby function)



: 锁定(lock)

: 踏2(pedal 2)

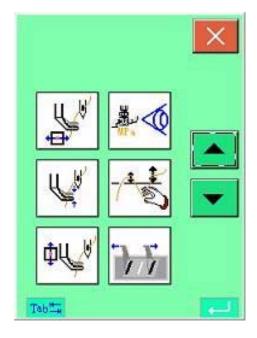
: 停止(stop)

输出测试

点击系统界面的按钮,进入输出测试。



in the system interface, enter the output test.



- 该测试主要用来确认缝纫机的气动动作是否正常。
- 接通压缩空气后,按对话框中的各测试按钮,对应的机器部位应有动作输出。
- 如果没有动作输出,请依次确认机械有无卡死、气缸有无损坏、电磁阀有无损坏。
- 如果输出动作不灵活,请依次检查机械部位有无卡阻、气源压力是否足够、气管是否破损或 折弯、气缸是否不灵活。
- This test mainly use to check the pneumatic action whether is in gear.
- After connecting the gas, click the buttons in the dialog box by order, the relevant part of the machine will act.
- If not any action is output, confirm again by order that the mechanism was not blocked, the
 pneumatic cylinder and the electromagnetic valve are in good condition.
- If output not well worked, check by order whether the components were not blocked, the voltage is strong enough, the pipe is broken or fold and the cylinder is well working or not.

各按钮对应功能如下:

The fuctions of the buttons are as follows:



: 抓线前后(catch front and back)



: 压脚压布(clamp cloth)



: 抓线夹子 (catch up_thread)



: 拨线动作 (spreader action)



: 抓线上下(catch thread up and down)



: 绷紧布料(spread cloth)



: 面线剪线 (cut needle_thread)



: 切料动作(cut hole)



: 面线过线(needle_thread guide)



面线夹线(needle_thread clamp)



底线夹线(bobbin thread clamp)



: 底线剪线(cut bobbin thread)

注: 底线剪线测试为5791特有功能

Notice: The function of cut bobbin thread is the peculiar function of 5791.

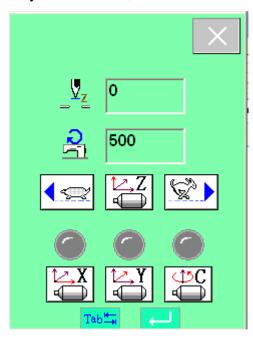
4.3.2 电机测试

Motor test

点击系统界面的按钮,进入电机测试。

Click the button

in the system interface, enter the motor test.



步进测试

步进测试包括旋转电机 、摆动电机 、前后电机 的测试。

点击按钮,看对应的步进电机及其机构有无输出动作,若没有动作,则说明步进电机出现故障。

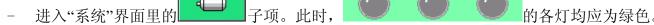
Step test

Step test includes the test of rotary_motor、swing_motor and front_back_motor.

Click the button, check the relevant step motor and mechanism whether have any action or not. If not, it means the step motor trouble.

零位状态





- 当缝纫机出现故障,无法使各机构自动复位时,请打开锁定开关,再关闭锁定开关,然后即 可进入"系统"界面。
- 手工移动或转动与电机对应的机构,带动电机摆动。
- 当电机的零位感应片处于零位的位置时,对应的零位指示灯应显示绿色。若仍为棕黄色不变, 则表示该项无输入。

Home position

- in "Operate" interface, Then press it again, Make all mechanism at Press the Kev"Prepare Home position.
- submenu item of "System" interface. All the lamp should be green. Enter into
- When met trouble and can not reset all the mechanism, activating the lock switch, then deactivate it, so that enable to enter into "System" menu.
- Remove or turn the relevant mechanism of the motor manually, drive the motor running.
- When the proximity plate at the Home position, the relevant indicator lamp turn green.
- If still keep yellow, it means no input.

主轴测试

principal axis

按钮开始主轴测试,再按一次则停止主轴测试。

button to start the principal axis, click again to stop it.



按钮加速,

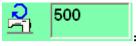


When start the principal axis, you can press the

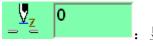


button to speed up, and you can press

button to slow down too.



显示当前主轴速度 Show the current speed of the principal axis.



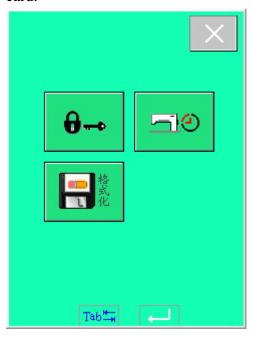
显示当前主轴缝制针数 Show the needles sewed in the test

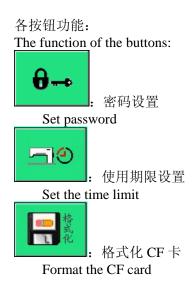
4.4 系统管理

System management

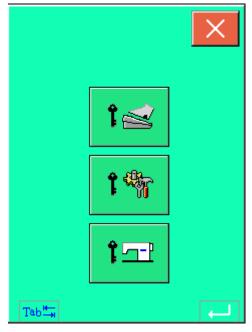
利用"系统界面"的项______,进入系统管理界面。可以设置密码,设定用户使用期限及格式化 CF 卡。

On the subclass in the "System" menu, We can set password, set time limit and format CF card.





4.4.1 密码设置 Password setting



在"系统管理界面"按**上**,我们可以设置各个界面的密码以及对密码进行更改或取消等操作。

Press in the "System management" menu, we can set the password for each option, also can re-set or cancel it.

各按钮功能:

The function of the buttons:



: 操作界面密码设置

Password setting in operation interface



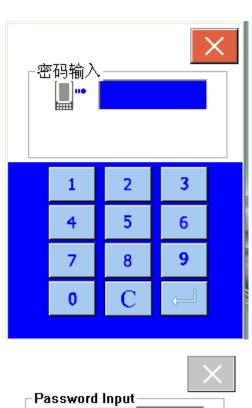
:参数界面密码设置

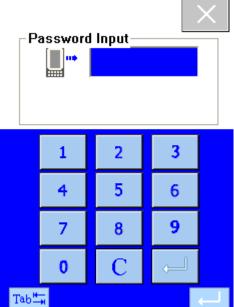
Password setting in parameter interface



: 系统界面密码设置

Password setting in system interface



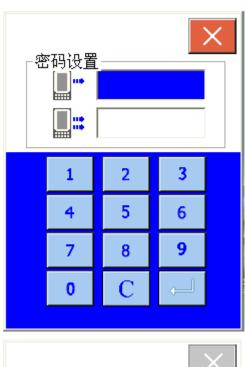


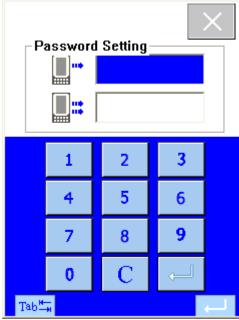
点击想变更的密码项目按钮, 若以前设有 密码则需输入密码。

Click the button you want to change the password. You have to input password if you have set .

密码正确后进入密码设置界面

If the password is correct, you will enter the password_setting interface.





在第一个编辑框中输入你想设定的新密码, 在第二个编辑框中确认输入的新密码。

按钮,新密码确认。

Input the new password in the first edit box, input it again in the second edit box to affirm.

Then press the button, new password is set.

如果想不设定密码,则让两个编辑框为空并

按钮即可.

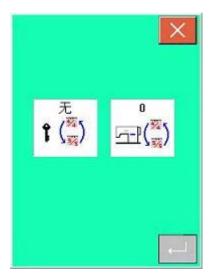
If you don't want to set any password, you only need make two edit boxes vacancy.

4.4.2使用期限设置Time limit setting

进入使用期限设置画面。

Press

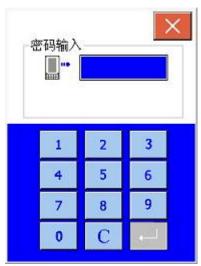
in the "System management" menu, enter the time limit setting interface.



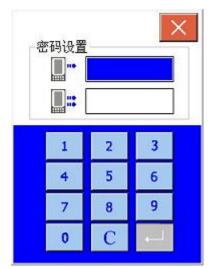
(1) 设置使用期限功能密码 Set the time limit function password

00000000)。输入正确的密码后进入密码设置画面。

to enter the time limit function password inputing Press interface(initialize password is 00000000).It will enter the password setting interface after you input the correct password.



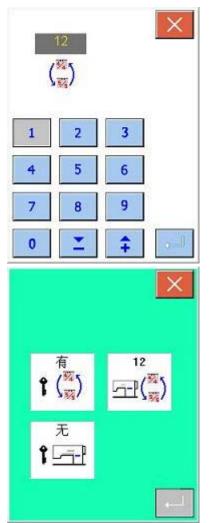
<密码输入画面>



在第一个编辑框中输入想设置的密码,在第二个编辑框中再次输入想设置的密码,按 按钮确定。

Input the password what you want to set in the first edit box, and input it again in the second edit box, then press to ensure it.

<密码设置画面>



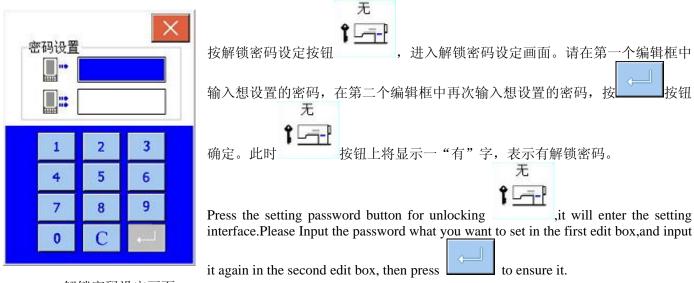
<使用期限功能设置画面>

(2) 进入使用期限设置画面enter the time limit setting interface 按钮,当(1)设置了密码时,请输入正确的密码,然后进入使用期限设置画面,请输入限制使用的天数(如12天)。按确定按钮保存设置。此时使用期限设置画面将显示解锁密码设定按钮,,you need input the correct password if you set in step(1), then it will enter the time limit setting interface, please

input the number or days to limit using(e.g 12days). press save the setting. Then it shows the setting password button for unlocking 无

on the time limit setting interface 解锁按钮上显示"无"表示按此按钮进入的画面无密码。

It means it needn't passwords entering the interface when it shows "without" on the setting password button for unlocking



<解锁密码设定画面>

当设置了使用天数时。如果使用期限超过了使用天数,此时在开机时会弹出密码输入框,此时需要输入 正确的解锁密码才能进入系统继续操作。(解锁码即为这里所设置的密码)

在没有超过使用天数时,如果需要取消使用期限限制,则只需按 (2)的操作,进入使用期限设置画面将使用期限设置为零。

It will pop up the password input box after starting the machine if you have set the limited using days and the machine have been used more than limited using days. You have to input the correct password to enter the system to continue operation.

You can operate as (2) showing to enter the time limit setting interface and set the time limit as zero if you want to cancel the limit when it does't exceed the limit.

5 故障排除

Trouble shooting

5.1 缝纫故障

Sewing trouble

故障	可能原因	排 除 方 法
	机针不在上死点	按转动方向转动手轮,使机针在上死点
		信息频繁重复,必须重调感应开关,
	机针在错误的刺入点机器在锁眼循环中停止	按转动方向转动手轮,使机针在正确的刺入点前
机器不启动		信息频繁重复,必须重调在锁眼前校正位置感应开关
		利用电源开关机,略等片刻后再开机
	气动部件的空气压力太低 检查压力计的空气压力	空气压力管是否连接好- 检查空气压力波动- 检查所有空气压力管和连接-
	急停开关打开	关闭"安全停机"的急停开关
	机针磨秃,弯曲或没有正确 安装在针杆中	装新机针 正确安装机针
跳针	机针和弯针线穿线不正确	检查机针和弯针线的穿线
	线架安装不当	检查线架
	面线张力调得太高	检查面线张力
	缝料没有被夹住	检查压脚压力

故障	可能原因	排 除 方 法
	根据缝料种类,厚薄和所用缝线,必须选择相应粗细的机针	更换机针 更换机针后,必须检查机针到弯针的间 隙
	针板、弯针或拨线叉可能被机针损坏	让维修人员修整
	可能使用了与缝纫装置不匹配的零件,例如针板、弯针、拨线叉、压脚、上/下压脚板	对照配置表检查缝纫配件
跳针	改变了线缝宽度,勾线行程未作调节	调节勾线行程
	弯针或拨线叉调节有错如果没调错, 上述调整没有带来改善,再检查邻近 点	检查维修说明的下列章节 介绍的调整: - "调节定位点" - "调节勾线行程" - "针杆高度" - "等针与机针的间隙" - "护针板" - "拨线叉" - "发线板" - "针板"
	面线和弯针线穿线不当	检查面线和弯针线的穿线
断线	机针弯曲,有锐边或安装不正确	装上新机针,正确安装机针
	缝线有结,太硬,或太粗,因此不合 适	使用推荐缝线

故 障	可能原因	排除方法
	所用的缝线线张力调得太大	检查线张力
断线	过线零件,例如导线器、过线杆 或挑线盘有锐边	检查线道,是否过线件有锐边
	检查针板、弯针或拨线叉是否被 机针损坏	让维修人员修整
(15.)	缝线张力不适合缝料,厚度或缝线	检查缝线张力
线迹稀疏	机针和弯针线穿线不正确	检查机针和弯针线的穿线(参见操作说明 "穿面线"和"穿弯针线")
	压力调节的太低	增加开孔压力
	刀刃钝了或损伤	装上新的底刀
扣眼切得 不完美	砧板不匹配	修整砧板或换新的砧板。
	如果钮孔为先开后锁或先锁后 开,或有圆头或没有圆头,需要 用相应的砧板	砧板上有二道刀痕会导致开孔不完美。
	机针粗细和缝料或缝线不匹配	更换机针
Nr. <i>t</i> -1.	缝台或锁眼机构送料故障	见下面"缝台的错误送料"或"缝纫机构的错误转动"。
断针	线缝宽度作了改变,压脚板未调 节或调节得太近	根据要求调节压脚板,尽可能分开。
	机针撞到压脚	检查操作板选项
始缝线迹不牢 固或不松线	面线张力余力调节的太紧,因而 下一钮孔锁眼开始缝线太短	调节剩余张力

故 障	可能原因	排除方法
始缝线迹不牢 固或不松线	锁眼开始时线夹未打开.	检查打开线夹的气缸。
	同步带没有绷紧	重新绷紧同步带,如有必要更换
	同步带和同步带轮脏了	清洁同步带和同步带轮,如有必要,更换同步带。
	缝台和其它部件碰撞	以低速检查缝台的运动,观察可能的碰撞。
	只有机器关闭时才可费 力的移动缝台	检查缝台驱动的所有部件。
缝台送料故障	个别部件可能的呆滞	如果没有发现故障零件或不灵活,有些情况下,改变下列参数可排除故障 - 减速 - 增加圆头部位的线迹数 - 减小针距 - 减少交迭 - 增加圆形套结的线迹数 - 减少十字套结的针距 - 减小十字套结的复盖线迹宽度 如有必要,告知维修人员。
	同步带没有绷紧	重新绷紧同步带,如有必要更换
锁眼机构的转 动故障	同步带和同步带轮脏了	清洁同步带和同步带轮,如有必要,更换同步带
	锁眼机构和其它部件碰 撞	以低速检查锁眼机构运动,观察可能发生的碰撞。

故障	可 能 原 因	排 除 方 法
	只有在机器关闭时才可费 力的转动锁眼机构	弯针座或针杆驱动机构上的紧定环调节得太靠近驱动杆或十字头 检查弯针座或针杆驱动上的紧定环,如有必要,调节到到有一点间隙。
锁眼机构的转动故障	个别部件可能的呆滞	检查与锁眼机构转动有关的所有部件。如果没有发现故障零件或不灵活,有些情况下,改变下列参数可排除故障: - 减速 - 增加圆头部位的线迹数 - 减小针距 - 增加圆形套结的线迹数 - 减少十字套结的针距 - 减小十字套结的复盖线迹宽度 - 减少交迭 如有必要,告知维修人员。

Description of fault	Possible cause	Error elimination
	The needle is not at the upper dead center	Turn the handwheel in the direction of rotation so that the needle is i at the upper dead center
		Info overlap, it must reset the induction-switch,
	The needle is not at the correct entry point	Turn the handwheel in the direction of rotation so that the needle is at the correct entry point.
The automate does not start up		Info overlap, reset the position induction-switch before sewing
	The machine stopped during cycle sewing.	Turn off the machine and turn on later
	Too low air pressure for the pneumatic components. Check the air pressure at the manometer	Has the compressed air hose been connected Check compressed air fluctuations Check all compressed air hoses and connections
	Emergency stop is active.	Deactivate the emergency stop of the "Safe stop"
	The needle is blunt, bent or incorrectly inserted in the needle bar.	Insert a new needle Insert the needle in the needle bar correctly.
Skipped stitches	Needle and bobbin thread are threaded incorrectly.	Check threading of needle and bobbin thread
	The yarn stand is mounted wrongly.	Check the thread reel holder
	Too tight thread tension.	Check the thread tension
	The fabric is incorrectly held.	Check the fabric clamping pressure

Description of fault	Possible cause	Error elimination
	The matching needle size has to be chosen according to the material, the material thickness and the thread used.	Change the needle size.(See Operating Instructions" Needles, yarns and gimps") After changing the needle size the distance needle-hook has to be checked.
	Needle plate, looper or spreaders have possibly been damaged by the needle.	Have the parts reworked by the service personnel.
Skinnad	Possibly parts have been inserted which do not match the sewing equipment, as e.g. needle plate, looperk, spreader, clamping plates, upper/lower presser foot.	Check the sewing equipment parts according to the equipment sheet.
Skipped stitches	When converting the seam width the looping stroke has not been readjusted.	Adjust the looping stroke
	Hook or spreader are adjusted wrongly. Even if no wrong adjustment is to be seen and the above-mentioned measures did not lead to an improvement, check the opposite points once again.	Check the adjustments described in the following chapters of the Service Instructions: - "Adjusting the locking positions" - "Adjusting the looping stroke" - Needle bar height" - "Distance between hook and needle" - "Needle protection" - "Spreader" - "Spreader plate" - "Needle plate" - "Rotary thread take-up disc"
Thread breakage	Needle and bobbin thread are threaded incorrectly.	Check threading of needle and bobbin thread
2	The needle is bent, sharp-edged or incorrectly inserted in the needle bar.	Insert a new needle. Insert the needle in the needle bar correctly.

Description of fault	Possible cause	Error elimination
	The thread used is knotty, hard or too thick and thus unsuitable.	Use recommended threads only
	The thread tensions are too tight for the thread used.	Check the thread tensions
Thread breakage	Thread-guiding parts as e.g. thread pipes, thread guides or the rotary thread take-up disc have sharp edges.	Check whether thread-guiding parts are sharp-edged.
	Check whether the throat plate, the looper or the spreaders have been damaged by the needle.	Have the parts reworked by the service personnel.
	The thread tensions are not adapted to the material, the material thickness or the threads used.	Check the thread tensions
Loose stitches	Needle and looper thread are threaded incorrectly.	Check the threading of needle and bobbin thread
	The set cutting pressure is too low.	Increase the cutting pressure
	The knife edge is blunt or chipped.	IInsert a new knife
The buttonhole is cut open inaccurately	The knife works on a non-matching cutting block.	Rework the cutting block or insert a new one.
	No matter whether buttonholes are cut open before or after sewing or buttonholes with or without eyelet are sewn, always insert the matching cutting block.	Cutting blocks with two knife marks lead to an inaccurate cut.
Needle breakage	The needle size is unsuitable for the material or the thread.	Change the needle size.

Description of fault	Possible cause	Error elimination
	The fabric support plate or the sewing works fault	See following"Faulty feed of the fabric support plate" or "Faulty rotation of the Sewing works"
Needle breakage	When changing the seam width the upper fabric clamps have not been set apart or not wide enough.	Set the upper fabric clamps apart as far as required.
	The needle hits the fabric clamps	Check the subclass on the control panel.
No reliable seam beginning Or unthreading respectively	The remaining tension is too tight for the needle thread so that the thread at the seam beginning is too short for the next sewing start.	Readjust the remaining tension
	The thread clamp not open at the seaming beginning.	Check the pneumatic cylinder which open the thread clamp.
	The toothed belts are insufficiently tightened.	Retighten toothed belts or replace them, if necessary
Faulty feed of the fabric support plate	Toothed belts and toothed lock washers are soiled.	Clean the toothed belts and toothed lock washers. Replace the toothed belts, if necessary.
	The fabric support plates Collides with other components.	Check the motion of the fabric support plate at low speed to find possible collisions.
	The fabric support plate is only heavily movable when the machine is switched off.	Check all components belonging to the drive of the fabric support plate.

Description of fault	Possible cause	Error elimination
	Possible rough running of individual components	If neither faulty components nor rough running are found, the problem can in some cases be solved by altering the following parameters: - Speed reduction - Increase of the stitches in the eyelet - Reduction of the stitch distance - Reduction of overlapping - Increase of the stitches in the round tack - Reduction of the stitch distance - in the straight bartack - Reduction of the throw width in the straight bartack Inform the service personnel, if required.
	The toothed belts are insufficiently tightened.	Retighten toothed belts or replace them, if necessary.
Faulty rotation of the sewing works	Toothed belts and toothed lock washers are soiled.	Clean the toothed belts and toothed lock washers. Replace the toothed belts, if necessary.
	The sewing works collides with other components.	Check the motion of the sewing works rotation at low speed to find possible collisions.
Faulty rotation of the sewing works	The sewing works is only heavily rotatable when the machine is switched off.	The adjustable rings at the hook support drive or at the needle bar drive are pressed too tight against the driving levers or the yoke. Check the adjusting rings at the hook support drive and at the needle bar drive and set a slight clearance, if required

Description of fault	Possible cause	Error elimination
	Possible rough running of individual components	Check all components belonging to the sewing works rotation. If neither faulty components nor rough running are found, the problem can in some cases be solved by altering the following parameters: Speed reduction Increase of the stitches in the eyelet Reduction of the stitch distance Increase of the stitches in the round tack Reduction of the stitch distance in the straight bartack Reduction of the throw width in the straight bartack Reduction of overlapping Inform the service personnel, if required.

5.2 控制系统软、硬件故障 Software and Hardware trouble of control system

故障	可能原因	排除方法
开机后,电源开 关指示灯亮,显 示屏无显示,电 控箱内无声响	电压过高,导致电源保险 丝被烧断	 切断机器电源并等待2分钟后,打开电控箱。 取出电源板上FUSE 8A的保险丝,检查是否烧断。 若烧断,请换上附件盒中对应的保险丝。 请确保提供的电压小于250V。
	主电源接插件松动	 切断机器电源并等待2分钟。 检查电控箱侧面的主电源(220V)接插件的线端(3芯金属头)的两个固定螺丝是否松动或者脱出。 若有,将插头插紧并拧紧两端的固定螺丝。
	5V/24V的开关电源不能 正常工作	切断机器电源并等待2分钟后,打开电控箱。检查电控箱内电源板上的J53到5V/24V开关电源之间电缆的线端是否松动或者有芯针脱落。若有,将芯针重新插好,将线端插入板端并卡紧,确保插牢并无芯针脱出。
开机后,显示屏 无显示,电控箱 内有声响	DC5V电源接插件松动	 切断机器电源并等待2分钟后,打开电控箱。 检查电控箱内I/O板上DC5V电源接插件(I/O板下方JP_PWR)到5V/24V开关电源之间的电缆线端是否松动或者有芯针脱出。 若有,将芯针重新插好,将线端插入板端并卡紧,确保插牢并无芯针脱出。
内有声响	通讯电缆没插好	 切断机器电源并等待2分钟。 检查电控箱背面四个并排的接插件中位于最下方与手控盒相连的通讯电缆线端(DB9芯)是否松动。 若有,将插头插紧并拧紧两端的固定螺丝。

故 障	可能原因	排除方法
开机后,显示屏显示解显示"通讯检查"。请关机检查手控盘时,请关机检查手经。"	AC220V电源波动较大,造成5V电源短暂性供电不稳定	- 切断机器电源并等待5秒钟以上,打开电源, 重新启动即可。
	通讯电缆没插好	切断机器电源并等待2分钟。检查电控箱背面四个并排的接插件中位于最下方与手控盒相连的通讯电缆线端(DB9芯)是否松动。若有,将插头插紧并拧紧两端的固定螺丝。
	主控板与I/O板未插好	 切断机器电源并等待2分钟,打开电控箱。 检查I/O板上的主控板是否有松动。 若有,用手轻压主控板上无元器件处,使主控板与I/O板连接良好。
显示屏信息栏显示"气压太低"	供应的气压过低	将总气压调到0.6±0.05MPa
显示屏信息栏显示"面线检测到断线"	面线断线	重新穿好缝线
	参数设置不正确: "系统参数设置"界面中的 "面线监控"数值过低	提高转速。如确实需要低速运转,请关闭面线 监控功能,并在断线后立即停止缝纫以免损坏 机器。将"面线监控"的数值适当调大

故障	可能原因	排 除 方 法
显示屏信息栏显示"X和Y和C轴出错,请关机检查"	110V/24V的开关电源不能 正常工作	 切断机器电源并等待2分钟后,打开电控箱。 检查电控箱内电源板上的J54到110V/24V 开关电源之间电缆的线端是否松动或者有芯针脱落。 若有,将芯针重新插好,将线端插入板端并卡紧,确保插牢并无芯针脱出。
	110V/24V开关电源上(到步 进驱动)的接插件松动	 切断机器电源并等待2分钟后,打开电控箱。 检查电控箱内110V/24V开关电源线端(4芯)是否松动或者有芯针脱落。 若有,将芯针重新插好,将线端插入板端并卡紧,确保插牢并无芯针脱出。
显示屏信息栏显示"××出错,请关机检查" ××为X轴、Y轴或C 轴。	××步进驱动损坏	切断机器电源并等待2分钟后,打开电控箱。更换相应的步进驱动。
	××步进驱动信号线未接好	切断机器电源并等待2分钟后,打开电控箱。将相应的信号线重新拔插。
	××步进驱动的电源未接通	 切断机器电源并等待2分钟后,打开电控箱。 检查电控箱内××步进驱动电源线各接插件(例如X轴电机出错,检查X轴步进驱动上的绿色接插件)线端是否有芯针或芯线脱出。 若有,将芯针或芯线重新插好。将线端插入板端,确保插牢且无芯针脱出。

故障	可能原因	排除方法
转动手轮,"机针" 指示灯无报警	主轴上的接近开关损坏或未接牢	 用金属靠近该传感器,看传感器上的指示灯是否有亮暗变化 若有变化,则将该传感器的三根线(机头I/O转接板上对应位置为19,20,21)重新拔插,注意顺序不可弄错 若无变化,则将传感器的三根线重新拔插,注意顺序不可弄错,再重复1步骤;若还是无变化,请更换传感器
按"准备",信息栏显 示"准备中	一个或多个步进电机 上的接近开关损坏或 未接牢	- 关闭安全开关。- 按29.3节介绍的方法,对电机零位进行测试, 找出有问题的接近开关- 更换已损坏的开关。
缝纫结束后,切刀汽 缸有声音,但切不开 布料	时间参数T26值设置得 太小	- 将T26值设置为300~500,且大于T0
显示屏信息栏显示 "电源出错,请关机 检查"	DC24V电源接插件松 动	 切断机器电源并等待2分钟后,打开电控箱。 检查电控箱内I/O板上DC24V电源接插件(I/O板下方JP_PWR)到5V/24V开关电源之间的电缆线端是否松动或者有芯针脱出。 若有,将芯针重新插好,将线端插入板端并卡紧,确保插牢并无芯针脱出。
显示屏信息栏显示 "伺服出错,请关机 检查"	伺服驱动信号线松动	切断机器电源并等待2分钟后,打开电控箱。检查I/O板上J1(或J1_1)到驱动器上的伺服驱动信号线端是否有松动。若有,将插头插紧并拧紧两端的固定螺丝。
	伺服驱动电源线松动	 切断机器电源并等待2分钟后,打开电控箱。 检查电源板上Servo(3芯绿色接插件)到伺服驱动上电源(220V)输入端之间的电缆线端是否有松动或者有芯针脱出。 若有,将芯针重新插好,将线端插入板端并卡紧,确保插牢并无芯针脱出。

Description of fault	Possible cause	Error elimination
The main switch indicator lamp light after the machine starts, no signal in display and no voice in control box,	Voltage too high so that the fuse burnt	 Switch off the machine and wait for 2 minute, then open the control box. Take out the Fuse 8A on the power board and Check whether it burnt or not. If burnt, please replace it. Make sure the voltage less than 250V.
	Main power plug loose	 Switch off the machine and wait for 2 minute, then open the control box. Check if the two screws of the thread end(3 cores metal head) of main power(220v) plug (at the side of the control box) is loose or has pin out. If so, reconnect it. And tighten the two screws.
No signal in display with noise in control box after the machine starts	5V/24V switch power can't work normally	 Switch off the machine and wait for 2 minute, then open the control box. Check if the cable end from J53 on the power board to the 5V/24V switch power is loose or has pin out. If so,reconnect the pin and insert the cable end into the board.Be sure to insert fastness and have no pins out.
	DC5V power plug loose	 Switch off the machine and wait for 2 minute, then open the control box. Check if the cable end from the DC5V power plug(at the bottom of the I/O board JP_PWR) to 5V/24V switch power is loose or has pin out. If so,reconnect the pin and insert the cable end into the board.Be sure to insert fastness and have no pins out.
	The cable for communication is disconnectable	 Switch off the machine and wait for 2 minute, then open the control box. Check the cable end for communication(DB9 cores) connected the plug at the downmost of the four side by side plugs at the back of the control box with the hand control box. If so, reconnect it. And tighten the two screws.

Description of fault	Possible cause	Error elimination
Shows "Communication Exceptional, Power Off and check the linker!" or "Communication timeout, Power off and check the linker!" on display after the machine starts	The AC220V power fluctuated too much to make the momently 5V power supply stably.	 Switch off the machine and wait for 5 seconds, then turn on the power to reboot.
	The cable for communication is disconnectable	 Switch off the machine and wait for 2 minute, then open the control box. Check the cable end for communication(DB9 cores) connected the plug at the downmost of the four side by side plugs at the back of the control box with the hand control box. If so, reconnect it. And tighten the two screws.
	The main board is not connected with the I/O board well	 Switch off the machine and wait for 2 minutes, then open the control box. Check the main board on the I/O board loose or not. If so,press the mainboard gently where has no chips to make the main board and the I/O board connect well.
The message area shows "Air pressure is too low"	Air pressure is too low	Adjust the pressure to 0.6±0.05MPa
The message area shows "Up_thread broken"	Needle thread broken	Re-thread
	Incorrect parameters setting - Too low the value of the needlethread sensor in "System"—"Basic" menu	 Increase the speed. If low speed desired, close the thread sensor, and stop sewing once thread broken to avoid damage for the machine. Increase the value of the needle thread sensor.

Description of fault	Possible cause	Error elimination
The message area shows "X and Y and C motor error,power off and check"	The 110V/24V power can't work well	 Switch off the machine and wait for 2 minutes, then open the control box. Check if the cable end from J54 on the power board to the 110V/24V switch power is loose or has pin out. If so,reconnect the pin and insert the cable end into the board.Be sure to insert fastness and have no pins out.
	The plug on the 110V/24V switch power is loose	 Switch off the machine and wait for 2 minutes, then open the control box. Check if the cable end(4 cores) of the 110V/24V switch power is loose or has pin out. If so,reconnect the pin and insert the cable end into the board.Be sure to insert fastness and have no pins out.
The message area shows "XX error,power off and check" XX is X \ Y or C motor	XX Step driver is damaged	 Switch off the machine and wait for 2 minutes, then open the control box. Replace the relevant step driver.
	Step motor driver Cable is not connected	 Switch off the machine and wait for 2 minutes, then open the control box. Re-connect the relevant cable.
	XX step driver power is not connected	 Switch off the machine and wait for 2 minutes, then open the control box. Check if the cable end of the plugs on the XX step driver cable has pins or thread out. If so, re-connect the pin or thread. And insert the cable end into the board, Be sure to insert fastness and have no pins out.

Description of fault	Possible cause	Error elimination
Turn the wheel, "Needle" indicator lamp has no alert	The proximity switch of the mainshaft is broken or disconnecting	 Close the metal to transducer, check the indicator lamp whether have any change with the brightness If changed, re-connect the three cable of the t transducer (relevant position on the I/O commutator of the machine head is 19,20,21), The sequence should not be mistaken Otherwise, re-connect the three cables by order, and repeat operation 1; change the transducer if still has no change.
Press "Prepare" key, show info "In preparing"	One or Multi-step motor Proximity switches is broken or disconnecting	 Turn off the safe switch Test the Home position of the motor; find out the faulty proximity switch. Replace the broken proximity switch.
When sewing end, cutting pneumatic cylinder noise but can't split the cloth.	The "Time" T26 value is too small	- Set the T26 value 300~500, and larger than T0
The message area shows "Power error, power off and check!"	The plug of the DC24V power is loose	 Switch off the machine and wait for 2 minutes, then open the control box. Check if the cable end from the DC5V power plug(at the bottom of the I/O board JP_PWR) to 5V/24V switch power is loose or has pin out. If so,reconnect the pin and insert the cable end into the board.Be sure to insert fastness and have no pins out.
The	The signal cable of the servo driver is loose	 Switch off the machine and wait for 2 minutes, then open the control box. Check if the signal cable end from J1(or J1_1) on the I/O board to the driver is loose. If so, reconnect it. And tighten the two screws. Switch off the machine and wait for 2 minutes,
The message area shows "Servo error, power off and check!"	The power cable of the servo driver is loose	 then open the control box. Check if the cable end from servo(3 cores green plugs) on the power board to the input end of the power(220V) on the servo driver is loose or has pin out. If so,reconnect the pin and insert the cable end into the board.Be sure to insert fastness and have no pins out.