

一、安全上的注意事项

使用前请详细阅读本技术资料与所搭配的缝制机械说明书，配合正确使用。

- 1.1 (1) 电源电压与工作频率：请遵照马达与控制箱铭牌所标之规格。
(2) 电磁波干扰：请远离高频磁波机器或电波发射器等，以免所产生的电磁波干扰本驱动装置因而发生错误动作。
(3) 接地：为防止杂讯干扰或漏电事故，请做好接地工程（包括缝纫机、马达、控制箱）。
- 1.2 拆卸马达或控制箱时，勿带电拔插；控制箱里面有危险高压电，所以关闭电源后要等1 分钟以上方可打开控制箱盖。
- 1.3 为保证人身安全，请在维修机械或进行穿针作业时关闭电源。
- 1.4  这个标示符号表示机器安装时，如有错误恐会伤害到人体或机器会受到损坏。所以机器方面有危险性的地方会有此标志。
 这个标志符号表示有高压电等，电气方面有危险性的地方会有此标志。
- 1.5 本装置保证在正常工作情况且无人为失误的操作下，保修期为一年。

二、安装要求

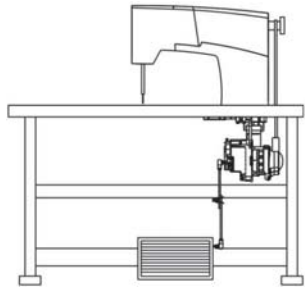
安装时注意（如右图）

2.1、皮带安装要求：

需保证缝纫机的手轮与电机的皮带轮在同一平面；
同时控制好皮带的松紧度；
（两指稍用力捏住皮带，两皮带不能接触、也不能过紧）

2.2、连杆安装要求：

需保证球接连杆的垂直度，
否则对踏板使用寿命以及性能有影响。



三、按键说明

功能参数编辑键		进入或退出功能参数的编辑。
参数查看保存键		对所选参数号内容进行查看和保存：选择好参数号后按此键可以进行查看和修改操作，修改参数值后按此键则退出并保存参数
上选择键		1、参数选择区内参数项递增键 2、参数内容区内设定数值递增键
下选择键		1、参数选择区内参数项递减键 2、参数内容区内设定数值递减键
慢速起缝键		1、设定开启或取消慢速起缝功能 2、若此键和‘下选择键’为组合键，则长按 1 秒开启或取消慢速起缝功能
停针位选择键		1、切换缝制后机针的停止位置（上停针位/下停针位）。 2、若此键和‘上选择键’为组合键，则长按 1 秒切换停针位置

四、操作说明

4.1 监控模式

长按 S 键 2 秒，进入到监控状态，按   键进行变更监控序号，监控值不能修改。具体监控界面见下表。

显示序号	项目名称	单位
SPd	速度	RPM
CUr	电流	0. 1A
UdC	电压	V
PdL	踏板	/

显示序号	项目名称	单位
HAL	霍尔	/
id	机型	/
vEr	版本	/

4.2 快捷操作模式

- 1、正常开机状态按住 P+慢速起缝键，切换有无停针位；
- 2、正常开机状态按住 P+停针位选择键，切换正反转；

五、故障说明

错误码	故障内容	故障原因	检查项目、处理
E01	硬件过流	硬件过流	系统电流检测回路是否工作正常 驱动器件是否损坏
E02	软件过流	软件过流	系统电流检测回路是否工作正常 驱动器件是否损坏
E03	系统电压过高	实际电压偏高 制动回路故障 电压检测有误	系统进线电压是否过高 制动电阻是否工作正常 系统电压检测回路是否工作正常
E04	系统电压过低	实际电压偏低 电压检测有误	系统进线电压是否过低 系统电压检测回路是否工作正常
E05	编码器信号异常	电机传感器信号故障 电机电源线损坏	电机编码器接口是否接触良好 电机接口是否接触良好
E06	电机信号故障	电机定位信号故障	停针器接口是否接触良好；停针器是否安装到位
E07	操作盒通讯不良	机头操作盒通讯数据丢失	操作盒插头是否接触良好 操作盒器件是否损坏
E08	踏板 ID 故障	踏板辨识故障	踏板接头松动
E09 E19	电机堵转 电机超负荷	电机堵转 电机超负荷	电机插头是否接触良好 机头是否卡死 是否缝制规格厚度以上布料 电流检测信号是否正常
E21	电流检测回路故障	电流检测非正常	系统电流检测回路是否工作正常
E22	OZ 回路故障	OZ 回路非正常	系统 OZ 回路是否正常
OFF	掉电提示	电源关闭	等待电源重新开通

注：如根据检查项目无法排除上述故障，可申请技术支持。

六、参数列表

参数项	中文说明	范围	初始值	内容值名称说明与备注
P01	最高转速	200-6500	5000	车缝时的最高转速设定
			3000	
P02	停针功能选择	0-1	1	0:有停针位；1:无停针位
P03	停针位选择	0-1	0	0：上停针；1：下停针
P04	马达运转方向	0-1	0	0:平缝机；1：包缝机
P06	慢速起缝开关	0-1	0	0：关；1：开
P07	慢速起缝速度	200-1500	400	慢速起缝速度
P08	慢速起缝针数	1~15	1	慢速起缝针数
P09	最低缝纫速度	200-500	800	车缝时的最低转速设定
			500	
P10	上定位调节	0-100	0	上定位调节
P11	下定位调节	0-100	10	下定位调节
P12	加速曲线调整	0-4	1	控速器的加速爬升斜率设定
P13	恢复出厂设置	0-2	0	0：不恢复；1：恢复普通参数； 2：恢复所有参数(Ⅱ级界面)
P14	剪线功能选择	0-2	2	0:关闭；1:开启;2:后踩输出信号
P15	剪线动作时间	0-100	2	单位:0. 1s
P16	剪线延时时间	0-100	0	单位:0. 1s
P18	吸风功能选择	0-2	2	0:关闭;1：后踩开；2:常开；
P19	吸风动作时间	0-100	2	单位:0. 1s
P20	吸风延时时间	0-100	0	单位:0. 1s

1. Safety precautions

Before use, please read this manual and lockstitch machine's manual at the same time, thanks for your cooperation.

1.1 (1) The voltage and working frequency: please according the name plate of motor and controlling box.

(2) Electromagnetic interference: Please stay away from high-frequency magnetic wave machines or Radio wave transmitter etc. In order to prevent the generated electromagnetic waves from interfering with the drive device and causing wrong action

(3) Grounded: To prevent noise interference or leakage accidents, Please do grounding works including sewing machine, motor and control box.

1.2 If Disassemble motor and controlling box, please Turn off the power in advance. Dangerous high voltage electricity in the electric control box, so please waiting more than 1 mins after Turn off the power, then to disassemble the control box

1.3 To ensure the safety of life, Please turn off the power when repair the machine or threading needles.

1.4  This symbol indicates when the machine is installed, if made a mistake, the human body or the machine may be damaged. Therefore, there will be this mark in the dangerous place of the machine.

 This symbol indicates that there is high voltage, etc. Electrically dangerous places have this mark.

1.5 This products guarantees a one-year warranty under normal working conditions and no-one error operation

2. Install Requirement

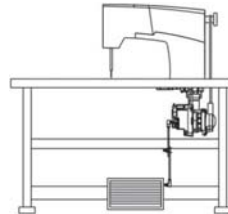
Install Instruction (Photo in the right side)

2.1、Belt Install Instruction:

Make sure the sewing machine hand wheel and motor pulley in the same level; and control the tightness of belt (use two fingers hold belt tight, two belts cannot be touched and not too tight);

2.2、Connecting Rod install instruction:

Make sure the perpendicularity of the rod, or it will affect the life and performance of the pedal.



3、Key Description

Function parameter edit key		Enter or exit the editing of function parameters
Parameter view save key		View and save the content of the selected parameter number: After selecting the parameter number, press this key to view and modify the operation, after modifying the parameter value, press this key to exit and save the parameter
Up selection key		1. Increment key for parameter item in parameter selection area 2. Set the value increment key in the parameter content area
Down Select key		1. Decrease key of parameter item in parameter selection area 2. Set the value decreasing key in the parameter content area
soft start key		1. To setting open or cancel the slow start sewing function 2. If this key and the 'down selection key' are combination to one key, press and hold for 1 second to turn on or cancel the slow start sewing function
Stop needle position selection key		1. Switch the stop position of the needle after sewing (upper position/down position) 2. If this key and the 'up selection key' are combination to one key, press it for 1 second to switch the needle position

4. Instructions

4.1 Monitoring mode

Press the S key for 2 seconds to enter the monitoring state, press   to change the monitoring serial number, the monitoring value cannot be modified. The specific monitoring interface is shown in the table below.

Display No:	Item number	unit	Display No:	Item number	unit
SPd	Speed	RPM	HALL	HALL	/
CUR	Current	0.1A	id	model	/
UdC	Voltage	V	vEr	version	/
PdL	Pedal	/			

4.2 Quick operation mode

1. In normal power-on state, press P+ soft start key to switch with or without needle stop position

2. In normal power-on state, press P+ Stop needle position selection key to switch between forward and reverse.

5、Failure description

Error code	Fault content	Reason	Inspection items and how to fix
E01	Hardware overcurrent	Current detection is abnormal The motor is running abnormally	Whether the system current detection circuit is working normally Whether the hardware drive device is working normally
E02	Software overcurrent	The motor continues to run with high current	Current detection loop system is working properly
E03	Voltage too high	AC input voltage too high Brake circuit fault Voltage detection error	AC input voltage is too high; Braking resistance is working properly; System voltage detection circuit are working properly
E04	Voltage too low	AC input voltage too low Voltage detection error	AC input voltage too low Whether the system voltage detection circuit the normal work.
E05	Encoder signal is abnormal	Motor sensor signal failure Motor power cable is damaged	Whether the motor encoder interface is in good contact Whether the motor interface is in good contact
E06	Motor signal error	Motor needle positioning signal failure	Whether the motor encoder interface is in good contact Whether the motor disk is installed in place
E07	Communication error	Sci circuit error	If operation box plug is well contacted; If operation box components are damaged.
E08	Pedal ID fault	Pedal verification fault	Pedal connection is loosen.
E09 E19	motor stall motor overload	motor stall motor overload	If motor plug is well contacted; If materials are too thick; Electrical signal detection signal whether the normal.
E21	Current circuit fault	Current detection abnormal	Current detection loop system is working properly.
E22	OZ circuit fault	OZ circuit fault	OZ circuit system is working properly.
OFF	Power off Display	Power off	Wait for power supply to resume.

Note: If the above faults cannot be eliminated according to the inspection items, please apply technical support.

6、Parameter list

Parameter	Description	Range	Initial value	Content value name description and remarks
P01	Maximum speed	200-6500	5000 3000	Maximum speed setting during sewing
P02	Needle position function selection	0-1	1	"0" with needle position, "1" without
P03	Needle position selection	0-1	0	"0" mean Needle up, "1" mean Needle down
P04	Motor running direction	0-1	0	"0": for lockstitch, "1" : for overlock
P06	Soft start switch	0-1	0	"0": off, "1": on
P07	Soft start Speed	200-1500	400	Soft start speed function setting
P08	Number of soft start stitches	1~15	1	Number of soft start stitches
P09	Minimum speed	200-500	800 500	Minimum speed setting during sewing
P10	Up needle position adjustment	0-100	0	Up needle position adjustment
P11	Down needle position adjustment	0-100	10	down needle position adjustment
P12	Acceleration curve adjustment	0-4	1	Speed controller acceleration and climb slope setting
P13	Factory settings	0-2	0	0: not rest; 1: Rest common parameter; 2: all parameter reset
P14	Trimming function selection	0-2	2	"0": off, "1" : on, "2" : Step back output signal
P15	Trimming action time	0-100	2	Unit: 0.1s
P16	Trimming delay time	0-100	0	Unit: 0.1s
P18	Suction function selection	0-2	2	"0": off, "1" : step back and turn on, "2" : Normally open
P19	Suction action time	0-100	2	Unit: 0.1s
P20	Suction delay time	0-100	0	Unit: 0.1s