

## F4 节能平缝机 产品使用说明书

## F4 Power saving lockstitch sewing machine

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## 杰克缝纫机

JACK SEWING MACHINE  
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- If your machine is provided with a belt cover, finger guard or any other protectors, do not operate your machine with any of them removed.
- Don't clean the face of machine head with thinner.

### 1. 机器的安装 (图1、图2、图3、图4)

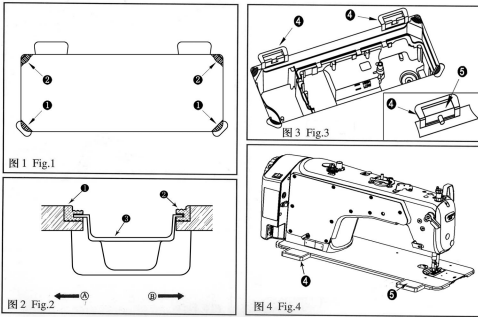
#### 1. INSTALLATION (Fig.1, Fig.2, Fig.3, Fig.4)

##### \* 油盘安装:

- 先将油盘支架①和油盘座垫②分别套在油盘③的四角上, 再将油盘③安装在台板上。
- 如图所示, 安装时要确保两个油盘支架①朝向操作者一边, 两个油盘座垫②是在有机头连接钩④的那一侧。
- 先将机头连接钩座⑤安装在台板上, 再将机头连接钩⑥放入底板孔内, 最后将机头放置于台板上, 且机头连接钩⑥要与台板上的机头连接钩座⑤相嵌合。

##### \* Installing the oil pan

- Firstly, oil pan holder① and Oil pan cushion② should be set in the four corners of the oil pan③, and then install the oil pan③ on the stand & table.
- As is shown in the chart, making sure that the two oil holders① are pointing to the operator during the installation and the two oil pan cushions② are on the side which is with machine head connecting hook④.
- Install the machine head connecting hook base⑤ on the stand & table, and then put the machine head connecting hook⑥ in the baseplate hole, at last, put the head on the stand & table, making sure machine head connecting hook⑥ is nested in the machine head connecting hook base⑤ which is on the stand & table.



### 2. 机器的润滑 (图5、图6)

#### 2. LUBRICATION (Fig.5, Fig.6)

##### 1. 润滑须知: (图5)

##### \* 开车前:

- 向油盘①内加缝油机油(10号白油)至 HIGH 记号部位 A。(图5)
- 当油面低于 LOW 记号 B, 应再加油。
- 加油后, 开动机器, 应看到油液飞溅到油窗②上, 说明润滑正常。
- 至于飞溅的油量多少与总润滑油量多少无关。

##### \* 注意:

使用新机器或者长期未使用过的机器时, 应在每分钟 1800-2200 转的状态下使机器进行十分钟左右适应性运转。

##### 1. Information on lubrication (Fig.5)

##### \* Before starting the machine

- Fill oil pan ① with sewing machine oil (10 white oil) up to HIGH mark A.
- When the oil level lowers below LOW mark B, refill the oil pan with the specified oil.
- When you operate the machine after lubrication, you will see splashing oil through oil sight window ② if the lubrication is adequate.
- Note that the amount of the splashing oil is unrelated to the amount of the lubricating oil.

##### \* Precaution

When you first operate your machine after set up or after an extended period of disuse, run your machine at 1,800 s.p.m. to 2,200 s.p.m. for about 10 minutes for the purpose of break-in.

##### 2. 面部油量采用油线渗油的方法: (图6)

2. The amount of oil supplied to the face plate parts apply the plug of main shaft to control (Fig.6)

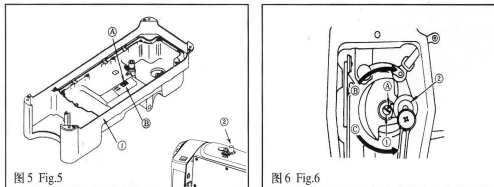


图5 Fig.5

图6 Fig.6

### 3. 面线的穿法 (图7)

#### 3. THREADING THE MACHINE HEAD (Fig.7)

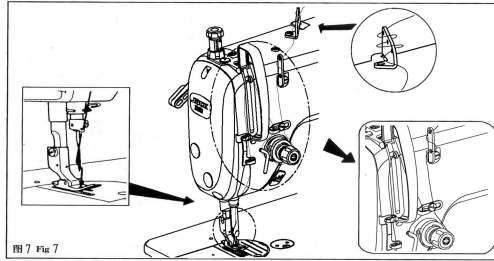


图7 Fig.7

### 4. 缝线张力 (图8)

#### 4. THREAD TENSION (Fig.8)

##### 1. 面线张力的调节:

- 根据不同的缝制条件, 用夹线螺母来调整面线张力。
- 若把螺母①按顺时针方向 (即 A 方向) 转动时, 面线张力将增大。
- 若把螺母①按逆时针方向 (即 B 方向) 转动时, 面线张力将减小。

##### 2. 底线张力的调节:

- 将夹线螺钉②朝顺时针方向 (即 C 方向) 转动时, 底线张力将增大。
- 将夹线螺钉②朝逆时针方向 (即 D 方向) 转动时, 底线张力将减小。

##### 1. Adjusting the needle thread tension

- Adjust the needle thread tension using tension adjust nut ① according to the sewing specifications.
- As you turn nut ① clockwise (in direction A), the needle thread tension will increase.
- As you turn nut ① counterclockwise (in direction B), the tension will decrease.

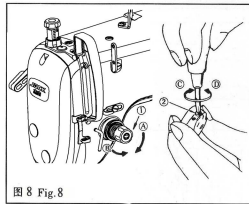


图8 Fig.8

### 2. Adjusting the bobbin thread tension

- As you turn tension adjust screw ① clockwise (in direction C), the bobbin thread tension will increase.
- As you turn screw ② counterclockwise (in direction D), the bobbin thread tension will decrease.

### 5. 挑线簧 (图9)

#### 5. THREAD TAKE UP SPRING (Fig.9)

##### 1. 改变挑线簧①的摆动量:

- 旋松定位螺钉②。
- 把夹线螺钉③朝顺时针方向 (即 A 方向) 转动时, 挑线簧的摆动量将增大。
- 把夹线螺钉③朝逆时针方向 (即 B 方向) 转动时, 挑线簧的摆动量将减小。

##### 2. 改变挑线簧①的张力:

- 旋松定位螺钉②, 取出夹线器 (组件)③。
- 旋送定位螺钉④, 并转动夹线螺钉③。
- 把夹线螺钉③朝顺时针方向 (即 A 方向) 转动时, 挑线簧的张力将增大。
- 把夹线螺钉③朝逆时针方向 (即 B 方向) 转动时, 挑线簧的张力将减小。

##### 1. Changing the stroke of thread take-up spring ①

- Loosen setscrew ②.
- As you turn tension post ③ clockwise (in direction A), the stroke of the thread take-up spring will be increased.
- As you turn the knob counterclockwise (in direction B), the stroke will be decreased.

##### 2. Changing the pressure of thread take-up spring ①

- Loosen setscrew ②, and take out tension asm ③.
- Loosen setscrew ④, and remove tension post ⑤.
- As you turn tension post ③ clockwise (in direction A), the pressure will be increased.
- As you turn the post counterclockwise (in direction B), the pressure will be decreased.

### 6. 针与旋梭的关系 (图10)

#### 6. THE RELATION BETWEEN THE NEEDLE AND THE HOOK (Fig.10)

##### 针与旋梭的关系应配合如下:

- 转动上轮, 使针杆位于最低点, 再旋松针杆连接柱定位螺钉①。
- 针杆高度的确定: 拉动针杆, 水平透过内板内边缘可看到针孔有 1/3-1/2 漏出 (机针必须安装到位)。机针理线槽朝左, 然后旋紧针杆连接柱螺钉②。
- 旋梭位置的确定: 旋梭旋梭固螺钉, 让旋梭钩线尖③对准机针④的中心线, 此时转动上轮, 使旋梭钩线尖位于针孔上缘上方 1-1.5mm 处。
- 在上述状态下, 左右转动旋梭, 使机针与旋梭的横向间隙为 0-0.05mm, 然后拧紧旋梭紧固螺钉⑤。

\* 注意: 间隙太小, 会磨换梭尖, 若间隙太大, 则会引起跳针。

\* 旋梭原来用什么型号, 调换后, 也请使用原来的型号。

The relation between the needle and the hook should be as follows;

- Turn the pulley, make the needle stay the lowest point, then loosen the screw (1).
- The height of the needle bar
- Pull the needle bar, you can see the pinhole basset 1/3-1/2 level through edge of inside hook (needle must be position). Turn needle cover wire slot left, then tighten setscrew.
- The hook position
- Loosen the hook and tighten the screw, make the top of the thread eyelet aim at the middle hole of the needle(2). Then turn the pulley, make the thread eyellet top locate above the needle hole about 1mm-1.5mm.
- In the above situation, remove the hook left and right, make the horizontal gauge between the needle and hook about 0-0.05mm then.

##### \* Preaution

If the clearance is too small, the tip of the hook will be abraded. If it is too big, it will lead to skip over. \* Note that the type of hook to be substituted for, when replacing the hook, shall be in conformity with the very type of the hook installed in the sewing machine of original assemblage.

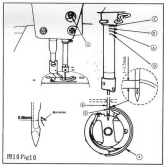
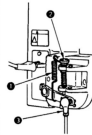


图10 Fig.10

### 7. 踏板压力和行程 (图11)

#### 7. PEDAL PRESSURE AND PEDAL STROKE (fig.11)



- 踏板踩踏压力的调整: 1) 更换踩踏弹簧①的位置, 可调整踩踏压力。2) 把弹簧挂到左侧之后, 压力变轻。3) 挂到右侧之后变重。
- 踏板回踩力的调整: 1) 用踏板回踩压力调节弹簧②可以调整。2) 拧进调节螺丝时压力变大。3) 拧松调节螺丝时压力变小。
- 踏板踩踏行程的调整: 1) 把连接杆③插到右侧的孔里之后行程变大。

- Adjusting the pressure required to depress the front part of the pedal  
1) This pressure can be changed by changing the mounting position of pedaling pressure adjust spring ①.  
2) The pressure decreases when you hook the spring on the left side.  
3) The pressure increases when you hook the spring on the right side.
- Adjusting the pressure required to depress the back part of the pedal  
1) This pressure can be adjusted using regulator screw ②.  
2) The pressure increases as you turn the regulator screw in.  
3) The pressure decreases as you turn the screw out.
- Adjusting the pedal stroke  
1) The pedal stroke increases when you insert connecting rod ③ into the right hole

### 8. 膝提高度的调节 (图14、15)

#### 8. ADJUSTING THE HEIGHT OF THE KNEE LIFTER (Fig.26, Fig.27)

- 用膝提升时的标准压脚高度是 10 毫米。
- 当压脚提升量超过 10 毫米时, 不能使处于最低位置的压杆的针杆①的底端与压脚②相碰。
- 当压脚提升量超过 10 毫米时, 不能使处于最低位置的压杆的针杆①的底端与压脚②相碰。
- You can adjust the presser foot lift up to 13 mm using knee lifter adjust screw ①.
- When you have adjusted the presser foot lift to over 10 mm, be sure that bottom end of needle bar ② in its lowest position does not hit presser foot ③.

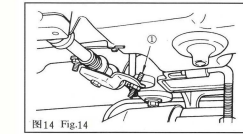


图14 Fig.14

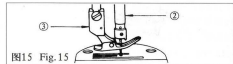


图15 Fig.15

### 9. 规格

#### 9. SPECIFICATIONS

用途	一般布料、薄料、中厚料	中厚料、厚料
缝纫速度	最高4,000rpm	最高3,500rpm
最大针脚长度	5mm	
机针	DBx1 #11-#18(#14)	DPx5 #16-#24(#21)
压脚高度(膝动提升)	10mm(标准)13mm(最大)	10mm(标准)13mm(最大)
使用机油	New Defrix Oil No.10 机油	
噪音	根据噪声测量标准: DIN 45635-48-A-1 在转速4000 r/min时, 工作场所噪音L <sub>A</sub> ≤ 83 dB(A)	
Application	General fabrica, light-weight and medium-weight materials	Medium-weight materials, Heavy-weight materials
Sewing speed	Max. 4,000 rpm	Max. 3,500 rpm
Max. Stitch length	5mm	
Needle	DBx1 #11-#18(#14)	DPx5 #16-#24(#21)
Presser foot lift	10 mm (standard) 13mm (Max.)	10 mm (standard) 13mm (Max.)
Lubricating oil	New Defrix Oil No.10	
Noise	Workplace-related noise at sewing speed N=4,000 min <sup>-1</sup> : L <sub>A</sub> < 83 dB(A) Noise measurement according to DIN 45635-48-A-1	

## 使用说明 Operation Manual

### 开车前的注意事项: BEFORE OPERATION

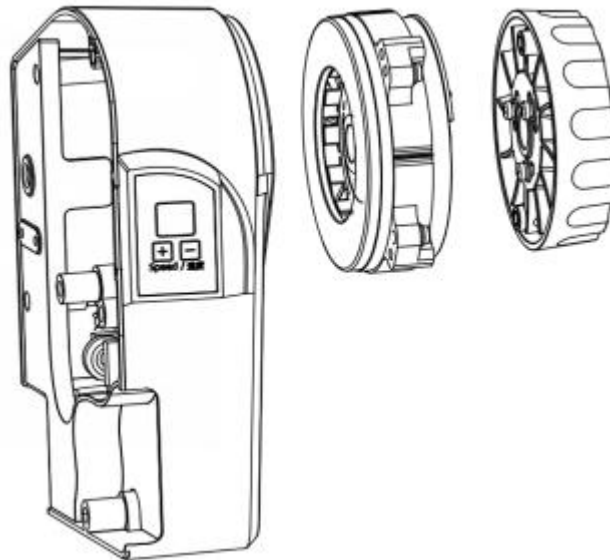
- 油盘内未加油绝不能开车。
- 机器运转时, 从上面外侧看转向应为逆时针方向。注意, 不能倒转。
- 确认标准上标的电压是否正确。

- Never operate the machine unless its oil pan has been filled with oil.
- After setting up the machine, check the direction of motor rotation. To check it, turn the handwheel by hand to bring the needle down, and turn the power switch ON while observing the handwheel. (The handwheel should turn counterclockwise as observed from the handwheel side.)
- Confirm that the voltage and phase (single or 3-phase) are correct by checking them against the ratings shown on the motor nameplate.

### 使用注意事项: OPERATION PRECAUTIONS

- 接通电源开关或机器运转时, 请勿将手放到针的下方。
- 机器运转时, 请勿将手指伸入挑线杆护罩内。
- 机头翻动时, 一定要切断电机开关。
- 操作者离开机器时, 必须切断电源。
- 机器运转期间, 注意不允许任何人的头或者手以及任何东西靠近绕线轮和手轮。
- 装拆防护罩或者其他保护装置时, 请勿开动机器。
- 不要用香蕉水等油漆稀释剂擦洗机头表面。
- Keep your hands away from the needle when you turn the power switch ON or while the machine is operating.
- Do not put your fingers into the thread take-up cover while the machine is operating.
- Be sure to turn the power switch OFF before tilting the machine head or removing the V belt.
- When an operator leaves from the machine, make sure to turn off the power.
- During operation, be careful not to allow your or any other person's head or hands to come close to the bobbin winder or handwheel. Also do not place anything close to them. Doing so may be dangerous.

# Energy-saving Servo Motor



User Guide

## Perface

GAUTION: PLEASE READ INSTEUCION MANUAL CAREFULLY BEFORE OPERATEING. THE INSTALLATION AND OPERATION MUST BE OPERATE UNDER PROFESSIONAL TRAINED STAFF. This product only applies to the specified rang of sewing equipment, please do not to put other uses.

## SAFETY INSTRUCTION

1. Please read this manual carefully before installation and adjuston.
2. Installation and operation must be operated under professional trained staff.
3. It is not allowed change the structure and any motor parts, otherwise the customer should take full responsibility.
4. Confirm the power connected to the ground safety and keep in accordance with the voltage range and technical requirements in the nameplate.
5. Please leave your feet away from the speed governor when power is turned on or off.
6. You must cut the power off under below mentioned operation:
  - 1) install the machine;
  - 2) Insert or pull out any plug in the control box;
  - 3) Threading, changing needle and rotate the machine head;
  - 4) Machine maintenance and machine is in idle state;
- 7.The setting of control system and maintenance should be operated by trained staff.
- 8.There should be 20seconds separate during changes power.
- 9.The system must be connected to the ground safety.

## I. Installation of speed governor

Install governor rod should guarantee the rod position is perpendicular to the pedal.  
Adjustment rod former high and behind low angle to make the pedal angle relative to the ground plane 15 degrees is advisable. (Picture 1 and picture 2 )



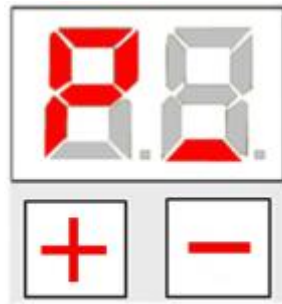
Picture 1



Picture 2

## II. OPERATION INSTRUCTION OF OPERATION PANEL

In P interface, the first tube display "P", the second tube display "-" (means bottom position).

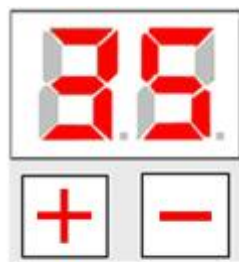


Picture 3

### 1. Parameter Adjustment

#### 1.1 Speed Adjust

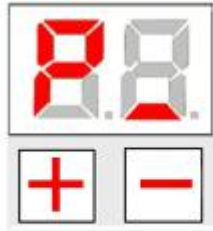
The panel shows "P", then press "+" or "-" to adjust speed up and down. After 3 seconds, the parameter saved the panel back to the "p". For example, 35 means 3500rpm/min.



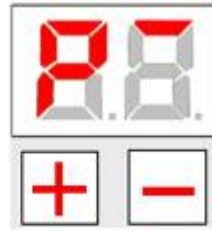
Picture 4: speed interface

#### 1.2 Needle Position Adjust

The panel shows "P", press "+" for 3 seconds, then set the position up or down.



Picture5:bottom position

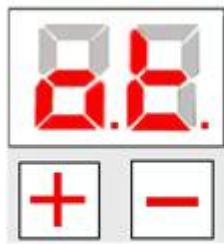


Picture6:up position

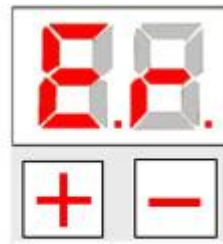
### 1.3 Reset to Factory Defaults Parameter

When the control box cannot work or parameter set abnormal, and panel shows E5/E7 error code, user can reset factory defaults to set.

The panel shows "P", press "-" for 3 seconds, and the panel shows "OK", then stop. This means set successfully. Panel shows "Er" means failure. Check other reasons.



Picture 7 "oK"



Picture 8 "Er"

### 1.4 Error Solve with one Button

When the panel shows Er code, machine cannot work, press ▲ and adjust which error code. If the Er code still exist, the panel still show the error code. If the problem solved, it will back to P.

## III. OPERATION REPEIREMENTS

1. Please check the control-box far away magnetic or high radiation environment in order to avoid obstructions.
2. The operational temperature must be in the range of -5°C--40°C.
3. Please don't use this product near to any kind of heater(heat, radiator).
4. Please don't use this product in over-wet circumstances.
5. Please don't use this product under the corrosive and explosion situation.
6. Keep ventilation where the control-box and motor stored.
7. Keep the power supply voltage steady.
8. There must be qualified connector to the ground in order to make sure safety.

## IV. MANTAINANCE AND GENERAL RECOVERY PROCESSING

If the machine went wrong, maintenance and operation should be operated under professional trained person.

1. No reaction when turn on the power control box.

Please check if the power plug connected to the socket tightly, or the fuse is burnt, if yes, change the fuse. Open the cover of the control box first, then find the position of fuse, take the burnt fuse out and change a new one which as the same type as before.

2. Control box is connected, but the motor doesn't work when pressing the pedal.

Please check if the plug of the speed controller is connected to the socket in control box correctly. Check the speed controller is broken or not.

3. The motor cannot stop without operate.

Check if the position of magnetic steel coil changed. The method as follow:

Open the speed governor, adjust the position of plastic rocker arm, make sure the magnetic steel coil in rocker arm is just on the hall. Usually, the machine cannot stop running. If the motor still running, user can adjust the rocker arm with clockwise.



**Picture 9 the position when motor stop running**

4. If turn on the machine the fuse immediately burnt, after change the same specification fuse the problem still can't solve, please contact with the local agent to repair.

5. Other problems not list above, please contact with the local agent.

### Error Code List

Error Code	Reasons	Solution
OF	The machine has been in standby mode for about 30 minutes, it goes to sleep mode; the voltage is too low.	Press “+” or “—” to wake up the machine; if still shows “OF”, check the voltage.
E1	Motor stuck The plug of motor loose or drop	Motor used too much. Restart machine after several minutes; Check if the fabric much too heavy; Machine lack of oil; Check if the plug loose or drop.
E2	Motor controller abnormal	1. Usually this problem because the machine too much used or problem of IGBT. If restart without result, contact the agents change. 2. Check the plug loose or drop.
E4	Needle position abnormal	Check if the plug connected well, or the coder wire broken or not, or if the plug loose or shape changed.
E5	Needle governor abnormal	Check the plug connected well; Check if the hall problem. If because hall

		problem, and shows E5, press “—” for 3 seconds to turn off this function.
E6	Speed governor abnormal	Plug do not connect; Check if the plug connected well, or the coder wire broken or not
E7	Machine head protection of the safety switch	Check the machine head steady or not; Before changing from the agent, user can turn off this function by pressing “—” for 3 seconds.
Eb	System over-voltage	Immediately cut off the power, and check whether the supply voltage has exceeded 264V, if yes, please adjust the voltage to the rated voltage, then start to work(rated voltage: 220V) or change parameter“Y” to 0.
Ec	System under-voltage	Immediate cut off the power, and check whether the supply voltage under 154V, if yes, please adjust the voltage to the rated voltage, then start to work(rated voltage: 220V) or change parameter“Y” to 0.

Note: After the system appearing the error, the machine cannot work. The panel continues to display any error code. And the error still can't be eliminated, please contact with the manufacturer in time.