Process moulding machine

Operation instructions

Directory

2.15. The manufacture
2.16 IC card.
2.17 Other

2.18 sewing

3、maintenance

3.1 Cleaning of rotating shuttle and surrounding area

3.2 The needle bar is oiled up and down

3.3 Oil feed box for rotating shuttle

3.4 Installation instructions for the second part of gear case filling .

1 The machine installation

2 Put through power supply

3 Connect air supply

Part 1 operation instructions

1 The product description

1.1 Product introduction

NT8100is a special sewing machine of general type

- This machine is suitable for thin and thick material single needle lock pattern template machine.

- The machine head adopts nonoil lubrication technology to prevent the contamination of fabric by liquid lubrication .

- The machine has a maximum sewing speed of 3000 rpm .

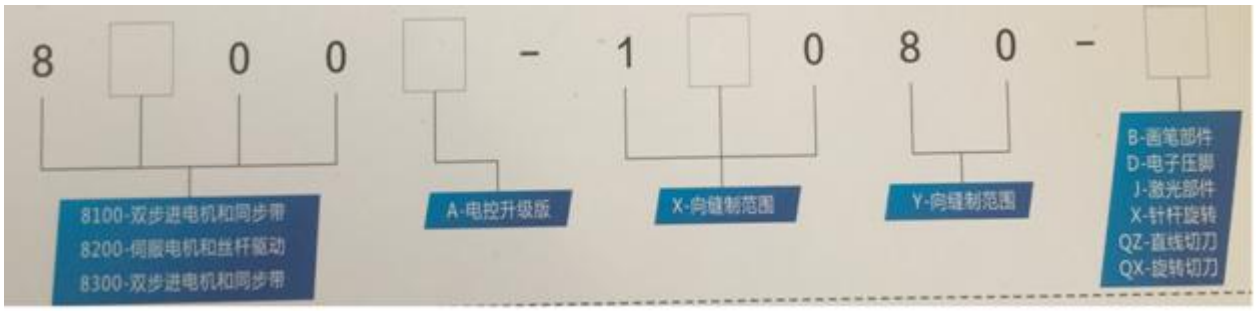
- Adjust the range of needle distance from 0.5to 12.7mm.
- Automatic identification template automatic shearing automatic stop needle position automatic foot lifting function.
- Surface line detection function and bottom line inspection function.

1.2 Product use

The 8100 sewing machine is suitable for thin and thick sewing is widely used in the industries of clothing (including down jacket、 cotton dress、 shirt、 jacket、 suit、 etc)automobile interior、sofa、airbag、outdoor products、luggage 、home visiting、 etc.

Generally speaking this sewing machine can only sew dry fabrics must not contain hard materials.

1.3 The machine number



1.4 Technical parameters

Sewing range (X.Y)(mm)	800X450
X to Y drive	Double step motor and synchronous belt
Stitch	301 Stitch
The highest sewing speed	3000 rpm (needle spacing 3mm, common thread)
Stitch length	0.5~12.7mm
Needle	DBX1 10#(7#~14#).DPX5 10#(7#~14#).select according to the specific type
rotary hook	Double hook
Medium pressure leg working stroke	Standard 4mm
Middle pressure foot	0~8mm

distance adjustment range	
Lift height of middle pressure foot	20mm
Lift height of external pressure foot	15mm
Maximum stitch count per pattern	8000 needle
Number of stored patterns	999 species of
Number of recognition template	999 species of
Program input mode	U disk
The file format	DXF.AI.PLT.DST rank
Spindle servo motor power	550W
The total power	2100W
The input voltage	220V±20%
The net weight (Kg)	400
Gross weight (Kg)	450
Overall dimensions	1325x1200x1250

1.5 The choose and buy a

1.B brush components

2.D Electronic presser foot

3.J Laser components

4.X Needle bar rotating

5.QX Rotary cutter

2 Operation

2.1 Wear a needle and thread

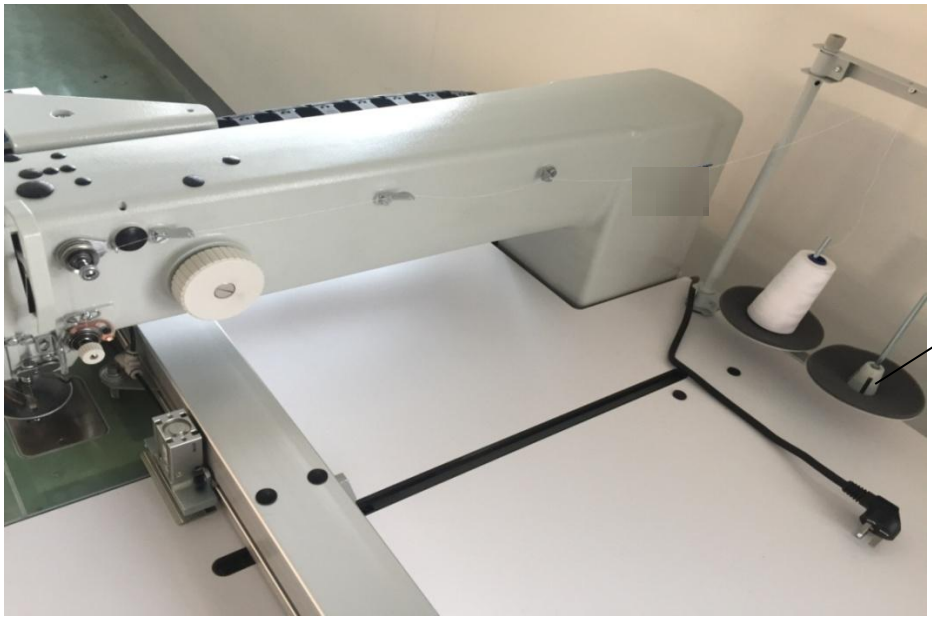


Fig 3

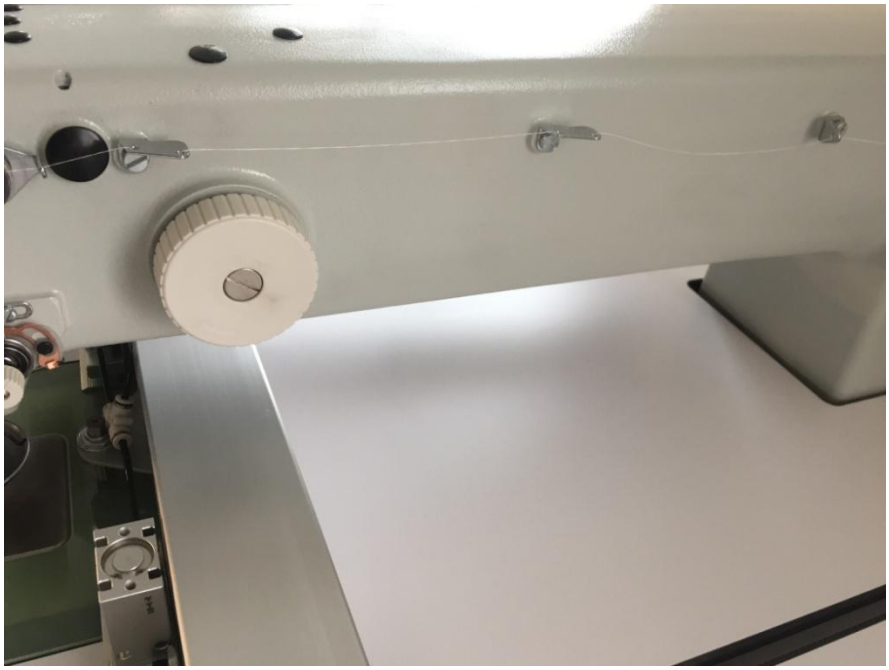


Fig 4

Fig 5

See figure 3 first, insert the wire ball 1 into the wire rack 2. put the wire through according to figure 3 figure 4 and figure 5 and pull the wire head out of the pinhole 50-60mm.

2.2 Adjust beedle tension (see figure 6)

Preload clamping device 1

When the clamping plate of the main clamping device 3 is released trace residual tension must be retained to control the shearing line residual tension is generated by the preclamping device 1 .adjusting the preload clamp knob 2 can also determine the length of the sewing thread after automatic cutting .

When the knob 2 is rotated clockwise(+)the thread ends become shorter

When the knob 2 turns counterclockwise (-)the thread ends become longer

Main clamp 3

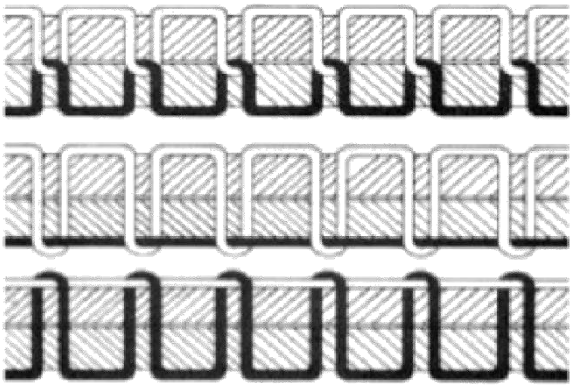
Main clamper 3 tension (needle thread tension)should be set as low as possible and the knot should be located in the middle of the seam material(figure a)excessive thread tension during thin seam can cause seam wrinkling and breakage .

When the knob 2 is rotated clockwise(+)the tension of the needle thread increases.

When the knob 4 turns counterclockwise (-)the tension of the needle thread decresses

Figure a： The correct knot is in the middle of the material

Figure b: Too low needle tension or too high thread tension



- Plug the winder into the power socket at the right corner in front of the board and press the button on the socket to energize
- Insert the bobbin 3 onto the bobbin 4.
- Wire ball 8 is placed on the wire axis as shown in figure 7.
- Thread as shown
- Make several turns of thread on the bobbin 3 by hand clockwise.
- Press button 5 to start winding
- When the set bobbin winding amount is reached (80%) the winder will stop automatically or press button 6 to stop winding.

- Cut the thread with scissors and remove the core 3.

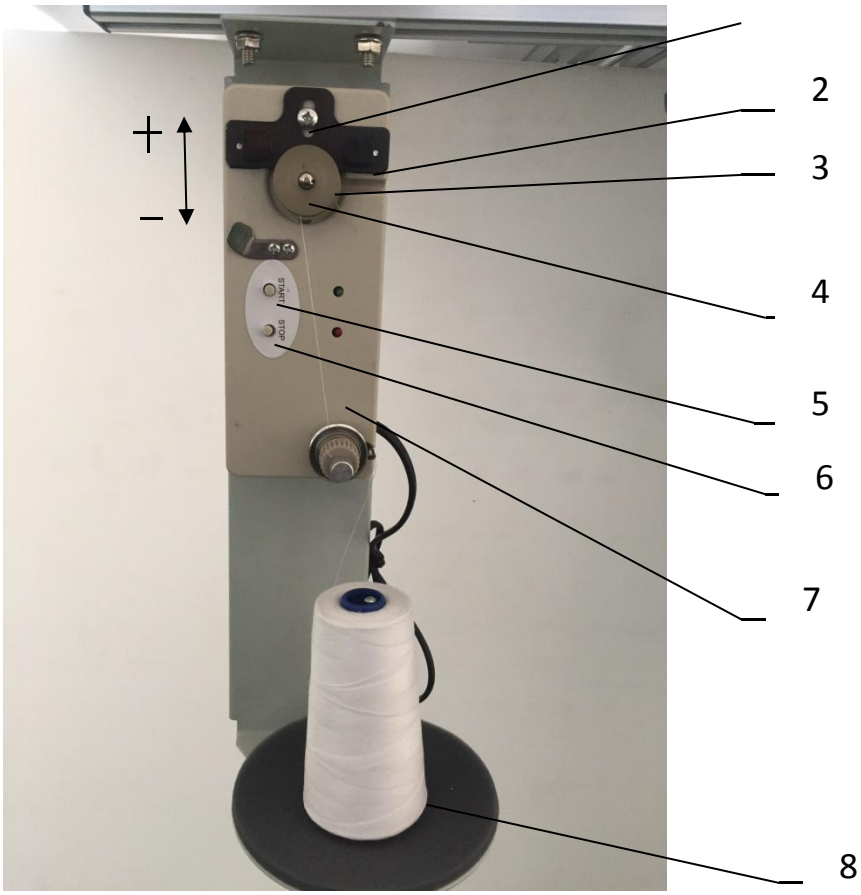


Fig 7

2.3 Adjustment of bobbin winding volume (figure 7)

The amount of winding of regulating piece 2 in the ‘+’ direction and the amount of winding of regulating piece 2 in the “-” direction are increased. Adjustment of bobbin winding volume to the bobbin capacitance volume(80%)。

2.4.2 adjustment of winding position

When the wire is wound or shaped as shown in fig.8.1 loosen the screw 7 in fig.7 and move the part 4 up and down in fig.7 to make the wound core wire as shown in fig.8.1.

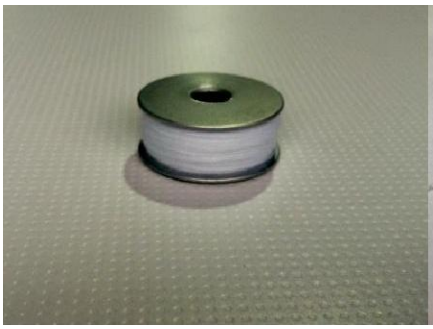


Fig 8.1

fig 8.2

fig 8.3

2.5 Put the bobbin

2.5.1 Press button 1 (fig 9) to jack up 2(fig 10) to lift off roof 2

Fig 9

fig 10

2.5.2 Remove the bobbin

— lifting cover 1 (fig.11)

— remove the bobbin case 2 containing the bobbin core 3 (fig.12);

— Remove the empty bobbin from the bobbin case 2 .

2.5.3 Load the full bobbin (fig. 12)

put the full bobbin 3 in the bobbin case 2 and pull the bobbin through The groove 4 to press down on the bobbin 6 and enter the hole 5.

— The length of the shuttle wire is about wire is about 5mm from the boonim case 2.

— The bobbin should rotate in the direction indicated by the black arrow during drawing.

— Place the bobbin case 2 in the bobbin and close the door cover.

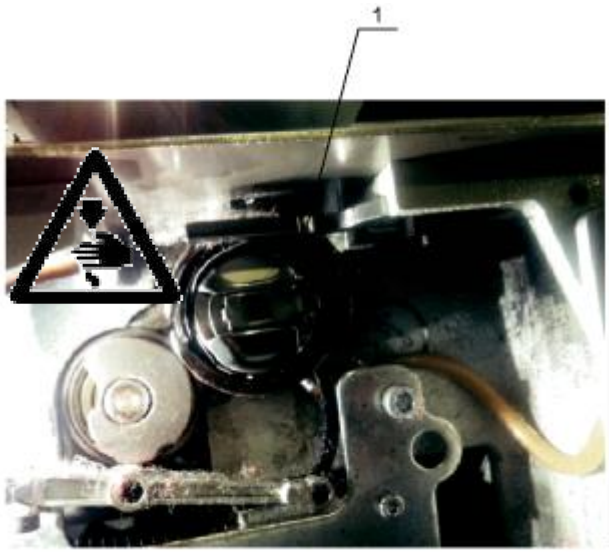


Fig 11

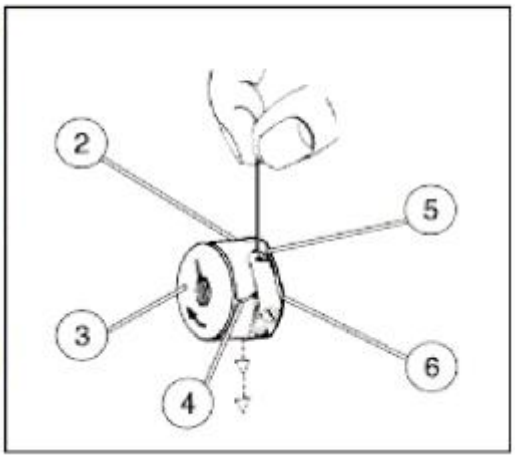


fig 12

Remove the bobbin and pick up the cover 1 ;

Remove the bobbin case 2 containing the bobbin core 3 ;

Remove the empty bobbin from the bobbin case 2 ;

2.6 Adjust the tension of the bobbin

Fig 13

fig 14

Turn off main switch

The bobbin can only be installed when the machine is off

Adjust the thread tension

In order to meet the line trake requirements as shown in figure 14.1 below the bobbin tension is set as fpllpws.

T has full bobbin to measure bobbin tension and the recommended value is 25g. 12.5g is generated by brake spring 1 and 12.5g is produced by bobbin 3.

— The basic rules for setting up bobbin 3 are as follows.

The bobbin case with full bobbin core is slowly lowered by is dead weight (see figure 12) the role of brake spring 1 is to prevent the bobbin from continuing to rotate after automatic shearing,

The procedure for adjusting these two tension values is as follows:

— Backward rotation fig.14 screw 2 allows complete release of the tension setting of the bobbin 3.

— Bend brake spring 1 to produce half of the recommended lint tension.

— put the box containing the bobbin into the hook.

— hold the thread with one hand.

— turn the hand wheel until the sewing machine is in a stitch .

— use the needle thread to extract the shuttle wire from the pinhole .

—pull the

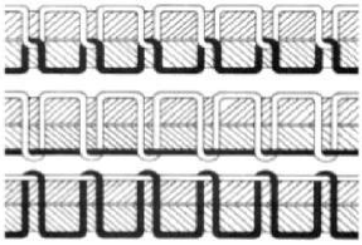
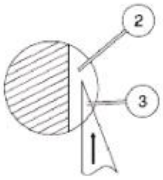


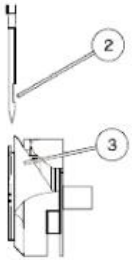
Figure a： The correct knot is in the middle of the material

Figure b: Too low needle tension or too high thread tension

Figure c: Too high needle tension or too low thread tension

2.7 Replace the needle





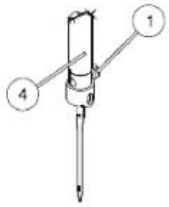


Fig 15 fig 16 fig 17

warning:to prevent personal injury turn off the main and change the pin only when the switch is off.

Loosen screw 1 remove the needle and insert the new needle into the pin hole cover of pin 4 .

Note:the needle slot 2 must be pointed to the tip of the rotating shuttle 3(fig 16)

Screw 1

Note: the distance between the hook and needle must be readjusted when replacing the needle of another specification(see maintenance manual)

The above adjustments can lead to the following problems: 1. jumper wire 2.damage wire 3.damage hook tip 4.damage machine needle .

2.8 Adjustment of needle and thread volume regulator

Needle thread volume regulator 1 adjust the amount of thread required to make the stitch.

Only when the needle and thread volume regulqtor is set correctly can the best sewing performance be guaranteed.

The setting of the needle line regulator depedas on the following f actors.

--stitch

--sewing the material thickness.

--under the correct setting loop 3 should side out of the empty line and the tension of the line around the bobbin.

warning： textile personal injury
turn off main switch
adjust the needle count tensioning device only when sewing the machine.
Regulating valve adjusting decice.
Tighten the screws

2.9 adjusting the pladgr called prexxure(fig 22)

Release the pressure regulating balve.

Rotate the screw 1 clockwise to inceasdde the pressure and counterclockwise to decrease.

Fig 20

2.10Total air source switch and pressure adjustment

2.10.1 Total air source switch (air slide valve)1 moves to the left to close the air source and to the right to open the air source.

2.10.2 Pull knob 2 upward clockwise to increase pressure counterclockwise to decrease pressure . pressure standard is 0.6MPA.

Fig 21

2.11 Adjust the pressure of the auxiliary pressure foot (fig 22)

2.11.1 See figure 21: adjust the pressure adjustment valve of the auxiliary pressure foot 3 knob 3pull upward clockwise rotation pressure increases counterclockwise rotation pressure decreases the air pressure is set as 0.15mpa actual of sewing

2.11.2 As shown in figure 22 adjust the upper and lower throttle valve of the auxiliary pressure foot cylinder 3 4 adjust the moving speed and pressure of the auxiliary pressure foot up and down.

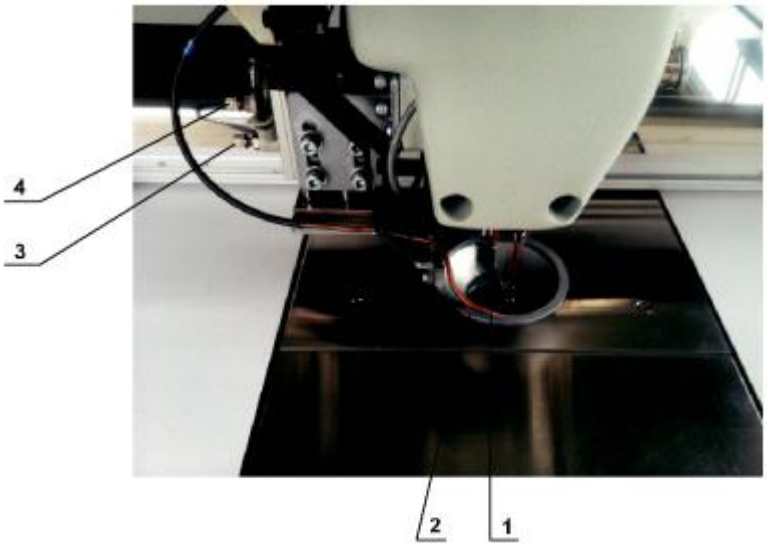


Fig 22

2.12 Replace the auxiliary pressure foot

It is different to replace or disassemble the auxiliary pressure foot according to the actual situation of sewing fig.22 is the auxiliary big pressure foot (installed in factory).

Fig 23

2.13 Adjustment of stroke of middle presser foot according to the thickness of stitching material and shown in fig.24 fig .25 the stroke
Of middle presser foot 4 reaches the range through adjusting part 6 with screws at different positions screws at diff 5 slot 2.

A: 0mm
B: 0.9-1.3mm
C: 2-4.5mm
D: 4.5-6mm

The factory for 2.5mm.

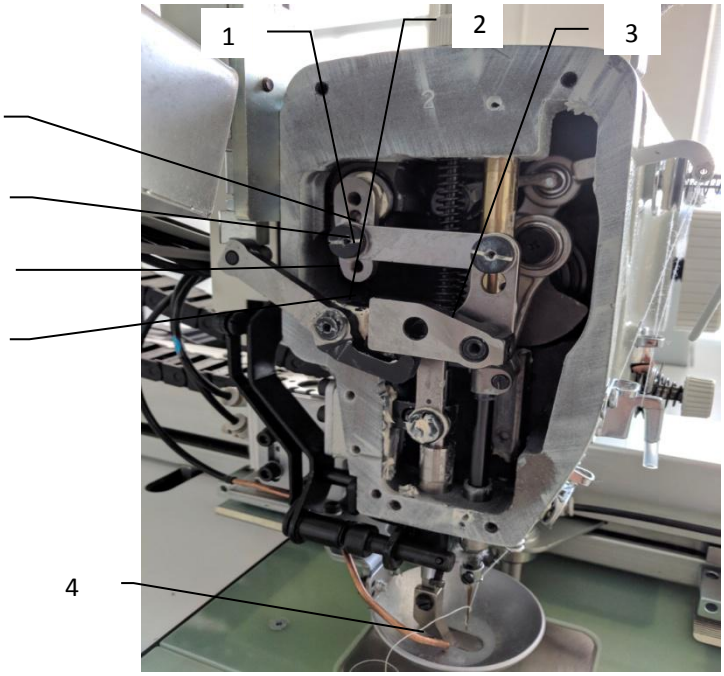


Fig 24

fig 25

2.14 Adjustment of the position of the thread head when starting sewing.

According to the requirements of the sewing process some processes need to be above the sewing material 1 some processes need to be below the sewing material 2 as shown in fig 26.

— Turn on the dial electromagnet to turn off the upper air pressure line .

— the surface wire head opens the pull wire electromagnet pull wire to open the upper air pressure line function.

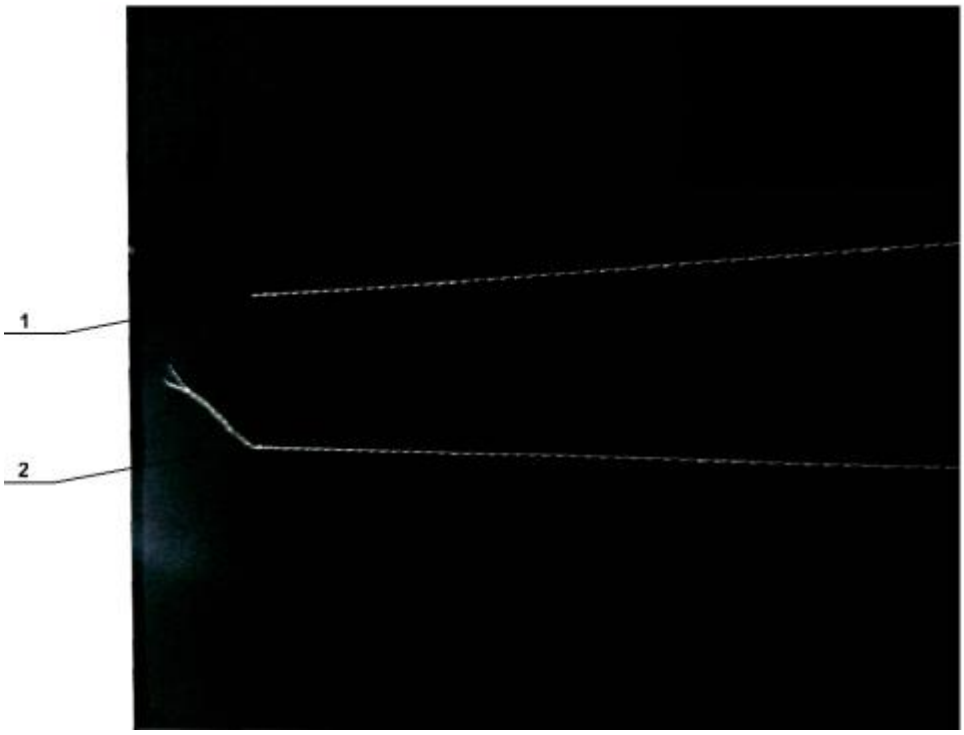


Fig 26

2.14. Adjustment of the pulling function of electromagnet.（fig 27）

— electormagnet button 1 turned on for eard by the dial function

— Electromagnet button 1 press back to turn off the function

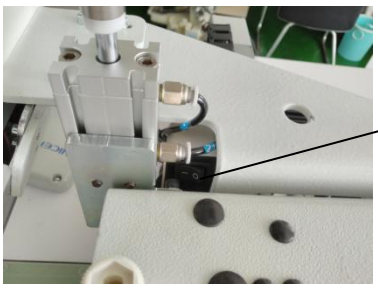


Fig 27

2.14.2 Adjust the function of upper air pressure line

Through the electronic control system of the control of the electromagnet when the seam from compressed air blow out the trachea（fig28）1， blow to the secondary machine needle head presser foot 2 below, the seam when pressed thread between auxiliary presser foot and template because of the position and facing anqle of template slot relation can't pin thread who need to adjust blowing direction to pressure.

Open the sewing nc software and operate the sewing patterns, click figure 29.1 to operate the processing as shown in figure 29.2 click 4 (enter to)in figure 29.2 "to slogan" to 5 and "level" to high (low means close). Click 5 (delay)in figure 29.3 to change "delay(milliseconds)" to 225.

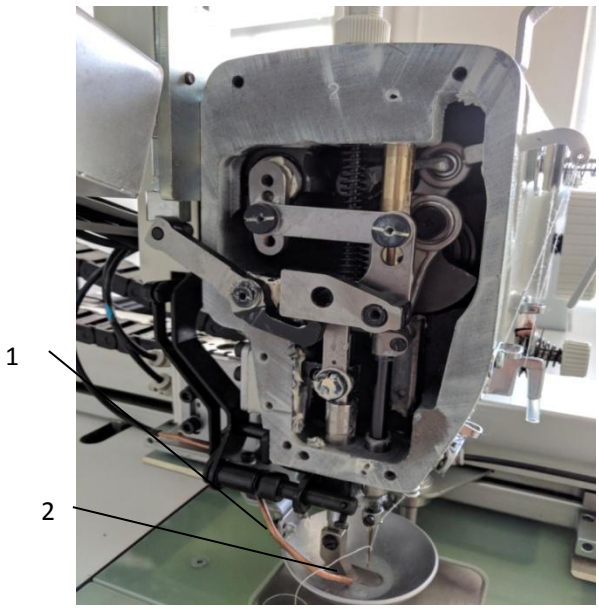


Fig 28

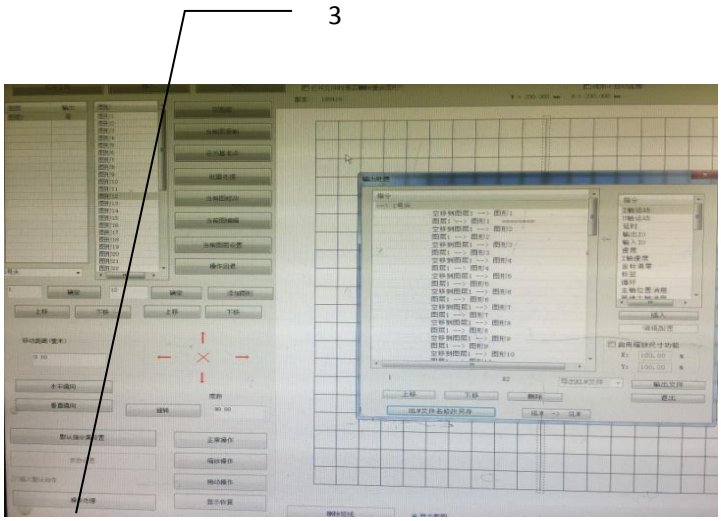


fig 29.5

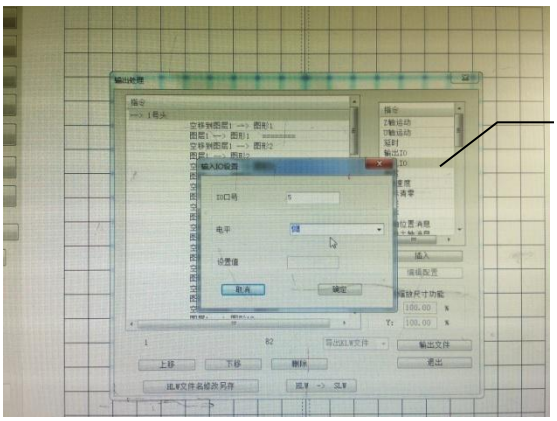


Fig 29.2

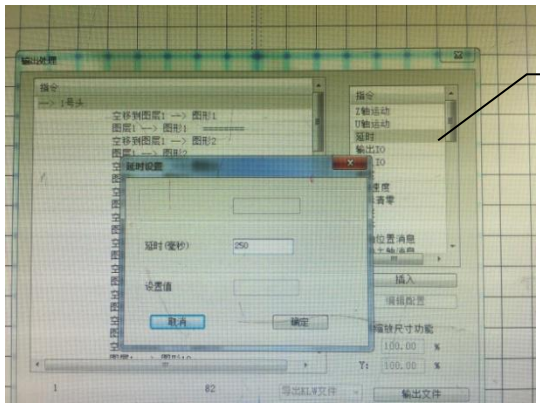


fig 29.3

2.15 the manufacture

The template provided below is only one of them.

2.15.1 Template carving

Figure 29.3 is the template of the maximum sewing range size of 8045.

— Form material PVC board.

— PVC sheet with a thickness of 1.5mm.

— The size of the template can be adjusted according to the sewing pieces and patterns.

— According to the complicated pattern choose 6-8mm sewing groove.

— The sewing groove track in the template is designed according to sewing pattern and process.

— Select appropriate template engraving machine after training qualified technicians to carve.

— After carving the upper and lower formwork and mounting plate clear the formwork and flying edge on the mounting plate.

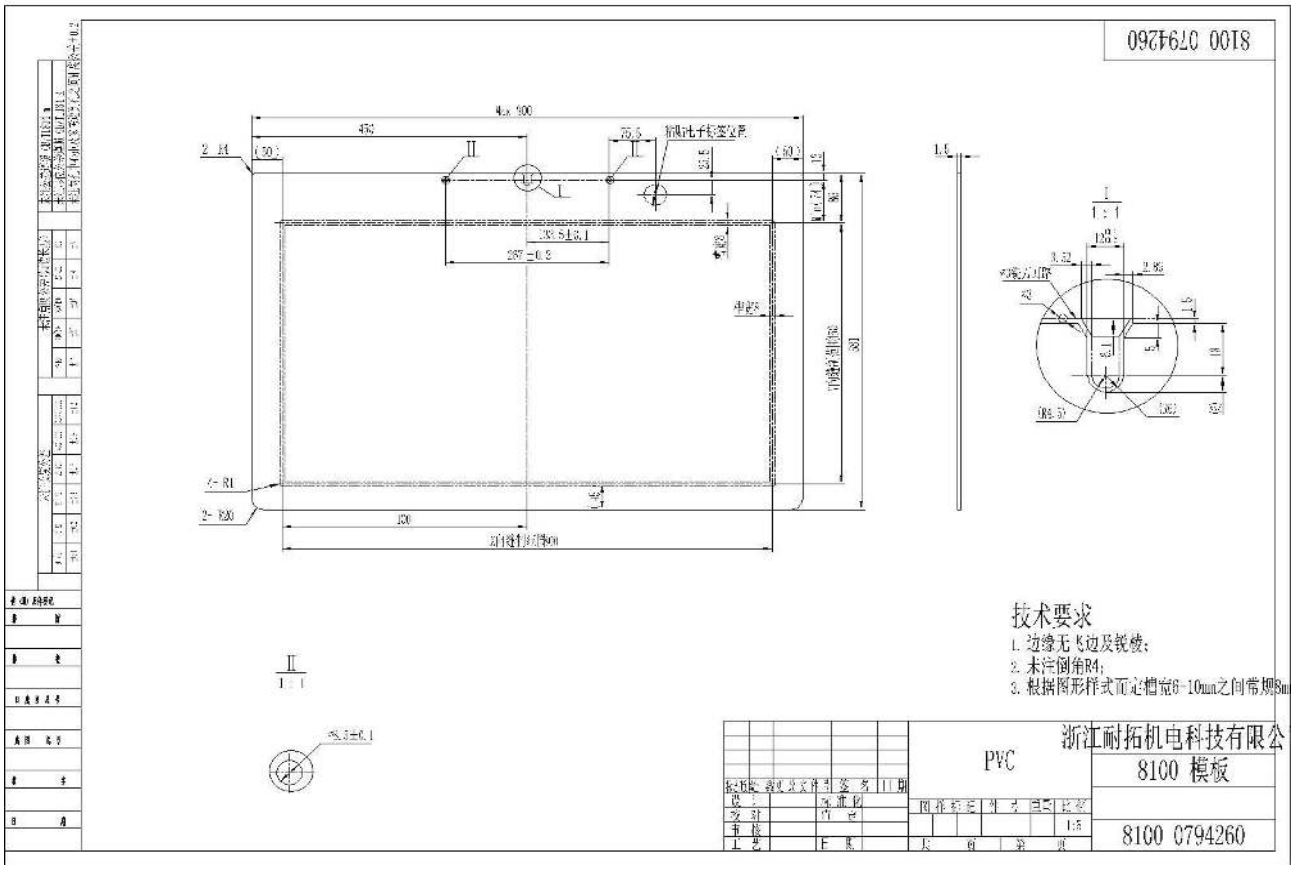

8100 0794260
技术要求
1. 边缘无飞边及锐棱；
浙江耐拓机电科技有限公
PVC
8100 模板
8100 0794260

Fig 29.4

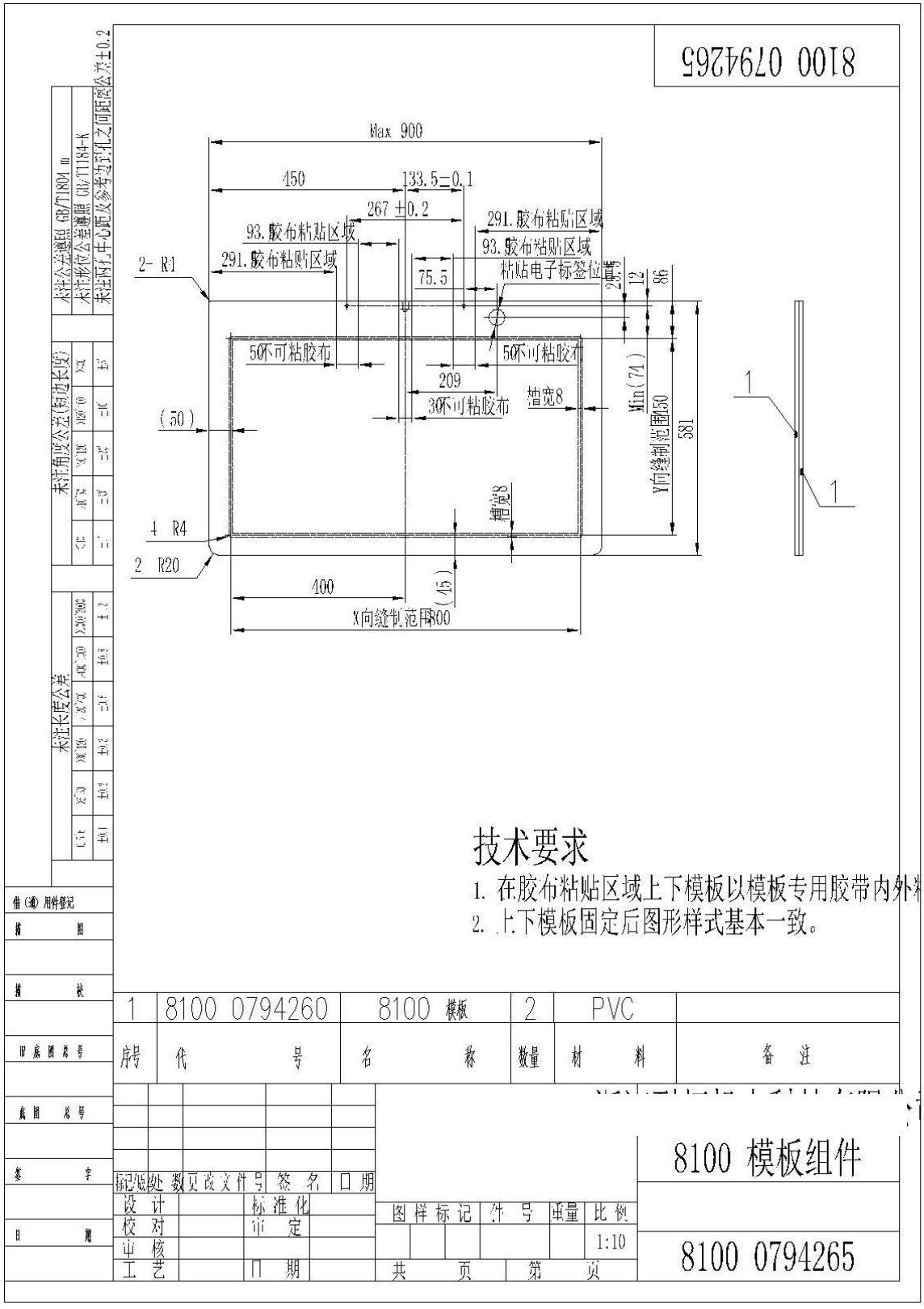

8100 0794265
Max 900
450
133.5±0.1
267 ±0.2
291.胶布粘贴区域
93.胶布粘贴区域
93.胶布粘贴区域
291.胶布粘贴区域
2- R1
75.5
粘贴电子标签位置
23.5
12
86
50不可粘胶布
50不可粘胶布
209
30不可粘胶布
槽宽8
(50)
Min(74)
Y向缝制范围650
581
槽宽8
4 R4
2 R20
400
(45)
X向缝制范围800
1
1
未注公差遵照 GB/T1804-m
未注形位公差遵照 GB/T1184-K
未注两孔中心距应参考边到孔之间距离公差±0.2
未注角度公差(短边长度)
未注长度公差
技术要求
1. 在胶布粘贴区域上下模板以模板专用胶带内外
2. 上下模板固定后图形样式基本一致。
借(通)用件登记
描图
描校
旧底图总号
底图总号
签字
日期
1 8100 0794260 8100 模板 2 PVC
序号 代号 名称 数量 材料 备注
标记 处数 更改文件号 签名 日期
设计 标准化
校对 审定
审核
工艺 日期
图样标记 件号 重量 比例
1:10
共 页 第 页
8100 模板组件
8100 0794265

Fig 29.5

2.15.2 Template assembly

— Engrave the top and bottom templates according to the design requirements.

— As shown in fig.30 out the upper template on the lower template the sewing slots A of upper and lower templates should be aligned and overlapped and the special adhesive tape 4(wide 36mm) of the upper template should be glued at 1.2.3.4 on fig.30.31 as shown In fig.30.31

— The upper and lower formwork groove is glued with non-slip material such as sand belt double-sided adhesive tape or the positioning nail in the appropriate position to make the sewing thread more beautiful

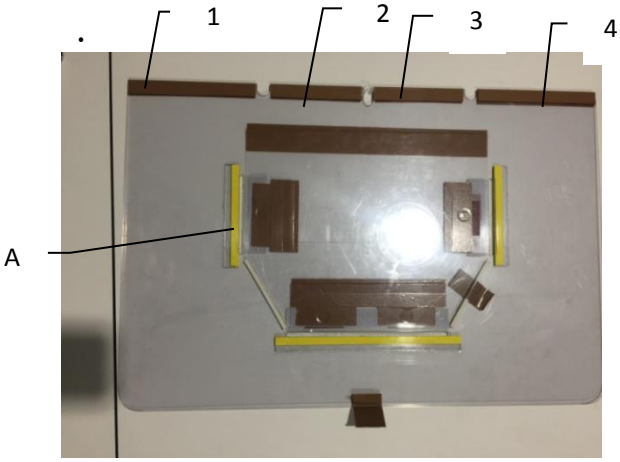


Fig 30

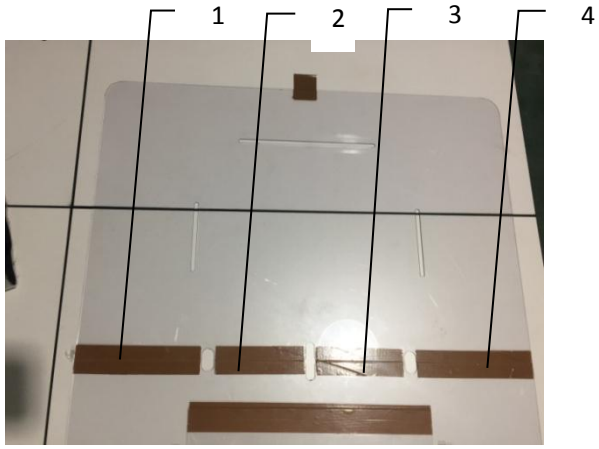


fig 31

2.16 IC card

2.16.1 For the installation of the electronic scanner first install the electronic scanner next to the rotating shuttle as shown in figure 32.

2.16.1 Sticker of IC card

The IC card is glued in the template with double-sided adhesive as shown in figure 33.

Fig 32

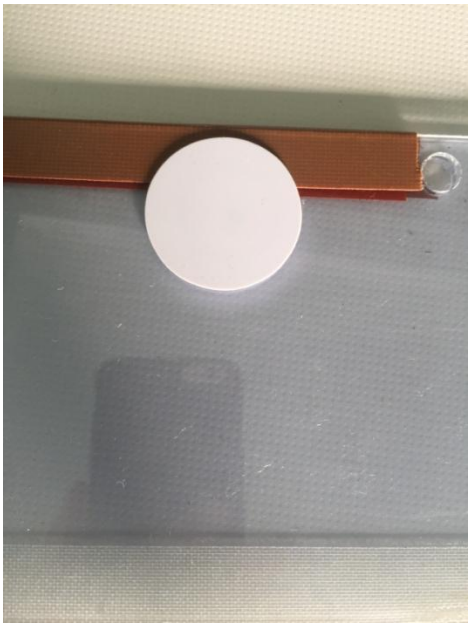


fig 33

2.16.3 Pattern to read

The IC card at the top of the electronic scanners, into the electric control main interface (figure 34)  file line, choose pattern file (figure 36 diamond starfire ii)after some  to  returned to the main interface (figure 34)click on the figure 34 after  key lock file 1 again to aim at electronic IC card scanner will display the required pattern .

1

Fig 34

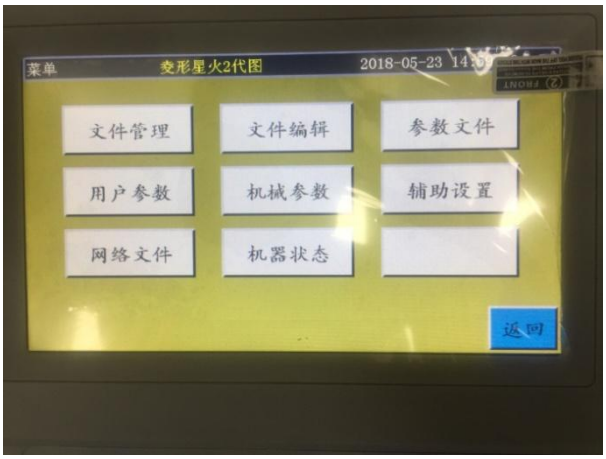


fig 35

Fig 36

fig 37

2.17 Application and closing of other barcode needle spacing adjustment speed adjustment sewing track(pattern)editing setting and import operation panel introduction thread breakage detection baseline detection template reference setting up and down needle stop automatic thread cutting setting etc. please read the operation manual of the electronic control system.

2.18 Sewing

2.18.1 Turn on the main power switch .

As shown in figure 37 press button 1 to connect the total power.

2.18.2. Turn on the total air source switch

As shown in figure 37 slide the total sir valve 2 to the right to open the total air source.

2.18.3 The machine is reset

As shown in fig. 34 press the reset button of 

and the machine reset pin reaches the upper stop pin position to assist the pressure foot to lift up.

2.18.4 Read the pattern program to sew or make the pattern program directly on the operation display panel see the operation manual of the electronic control system for derails.

2.18.5 With the template

2.18.5.1 As shown in fig.38,push the empty template(without stitching material)so that one orifice A on the positioning plate 1 of the template is opened on the positioning pin and the other two auxiliary orifices B are stuck on positioning sleeve and pushed to the bottom.

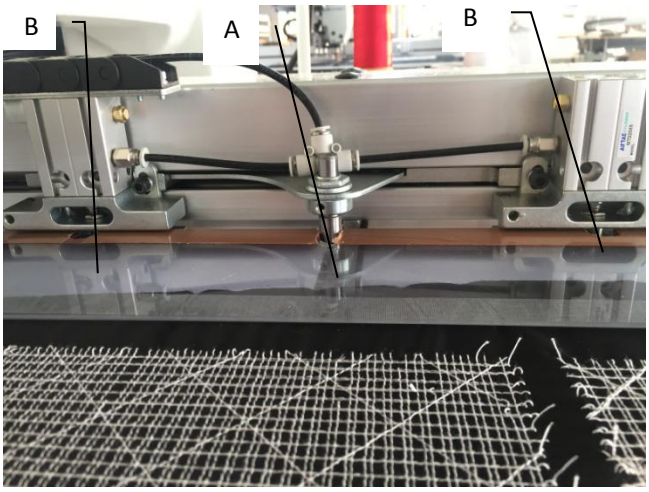


Fig 38

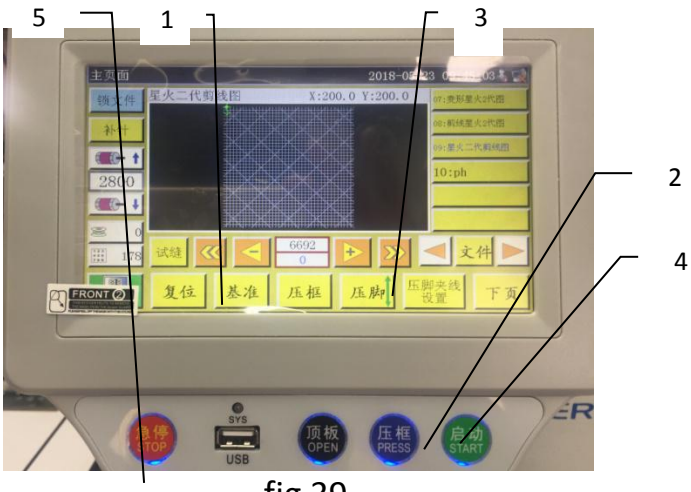


fig 39

2.18.5.2 As shown in figure 39 press the press box button 2 on the operation button panel and press the pressure plate.

2.18.6 Read sewing pattern program

2.18.6.1 If the template is affixed with IC card open operation display panel electronic scanner (see the electric control instruction)automatic identification of IC card matching sewing pattern procedures.

2.18.6.2 If there is no IC card attached to the template manual selection of sewing patterns matching the template is used in the operation display panel.

2.18.7 Selection of benchmarks

In order to make the sewing pattern track coincide with the template groove a reference should set to make them match .

After setting the benchmark enter the operation display panel interface as shown in figure 39 press the button all the time 3 will enter the simulated sewing pattern track the button 5 (figure 39) is required to stop the operation during the simulation operation.

2.18.8 Sewing material

2.18.8.1 Remove the template

As shown in figure 39 put the template in the reset position press the box button 2 in the operation button to loosen the template to the two cylinders on the linear module.

2.18.8.2 with the fabric

After the needle sewing are laid on the template the seam material should be smooth at the same time the seam material should be pressed according to different pressing modes of the template so that the seam material cannot be moved if the fabric is filled or filled with cotton as far as possible to exhaust the air inside.

2.18.9 Reset the reference 1 reset in the mounting template is operated by

2.18.3

2.18.10

Press 2.18.5 for the template with seam material and 2.18.7 for the

standard.

2.18.11 Start the

As shown in figure 39 press the start button 4 on the operation panel to start sewing and enter the automatic sewing state.

2.18.11 Scram

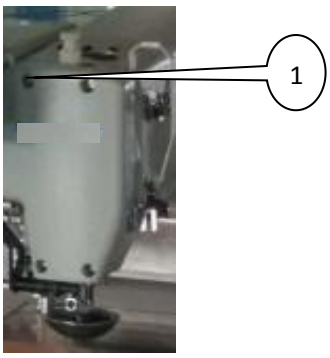
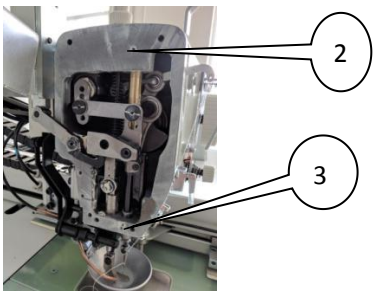
As shown in figure 39 press the red emergency stop button on the operation panel to stop the machine immediately.

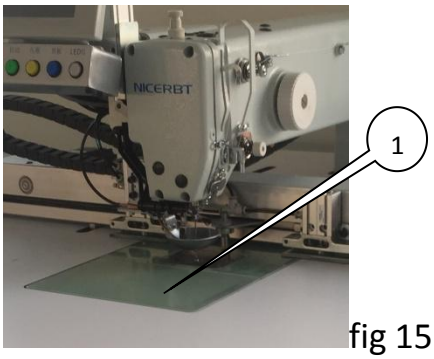
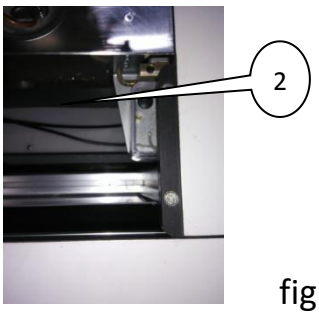
2.18.12 Restart the

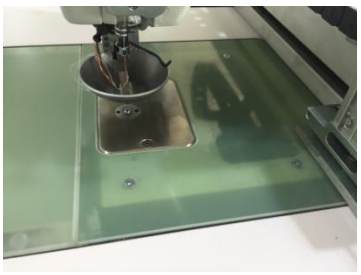
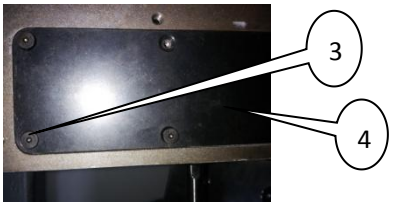
After the above unexpected situation as shown in figure 39 rotate the red emergency stop button 5 to make it pop up and remove the emergency stop state and then press the start button 4 to resume automatic sewing.

3、Maintenance

The serial number	Parts of the	Instructions	The elapsed time
1	The area under the needle plate the surrounding area of the rotating shuttle the bobbin shell and the interior the part of shearing line the area of the needle bar the area of internal and external pressure pin the air intake and exhaust port of the electric cabinet and other easily accumulated fiber bits the line head and other residues are shown in figure 1  Fig 1	Use tools such as air guns to clean the surface of the machine especially the above easy to collect fiber bies thread ends and other residues.	Eight hours

2	The needle bar is oiled up and down see figure.  Fig 11  Fig 12  Fig 13  Fig 14	1.Loosen panel screw 1 and remove panel 2. Loosen and remove the upper set screw 2 of the needle bar the lower set screw 3 of the needle bar as shown in the figure. 3、Align the oil injection nozzle of the oil injection gun with the screw hole of the upper and lower sleeve of the needle bar and add oil as shown in figure 13 .14 4、Pump no less than 0.5cm. 5、After refueling tighten the screws of the upper and lower sleeve of the needle bar respectively to the panel and tighten the panel screw. 5 、 No.2 lithium grease is used to lubricate grease and cannot be mixed with other grease.	Run 720 hours

3、	Oil filling of oil supply box of rotating shuttle is shown in figure.  fig 15  fig 16	1、Remove cover plate 1 fig.15. 2、Remove rubber plug 2 from oil supply box fig 16 3.Add no.10 white oil to the rubber jack. 4、Stop filling up the line on the oil supply box. 5、Install rubber plug and cover plate.	The oil of the oil supply box is lower than that of the undercutting line.

4	Lubricate the gear box  Fig 17  Fig 18  Fig 19	1、 Unscrew the screw and remove the pin plate 2、 See figure 17 remove the gear box cover plate and pad after unscrewing the screw4 3、 when the oil is half full stop refueling and put back the gear box cover cap and pin plate fastening screw.	

Part ii installation instructions

1、The machine is mounted by adjusting the roller suspended at four corners under the frame so that all four supporting feet are on the ground and the plane of the platform is horizontal.

2、switch on the power supper supply the power supply is 220V±20%,50Hz.

3、turn on the gas source and the air pressure is at 0.4~0.6bar.