

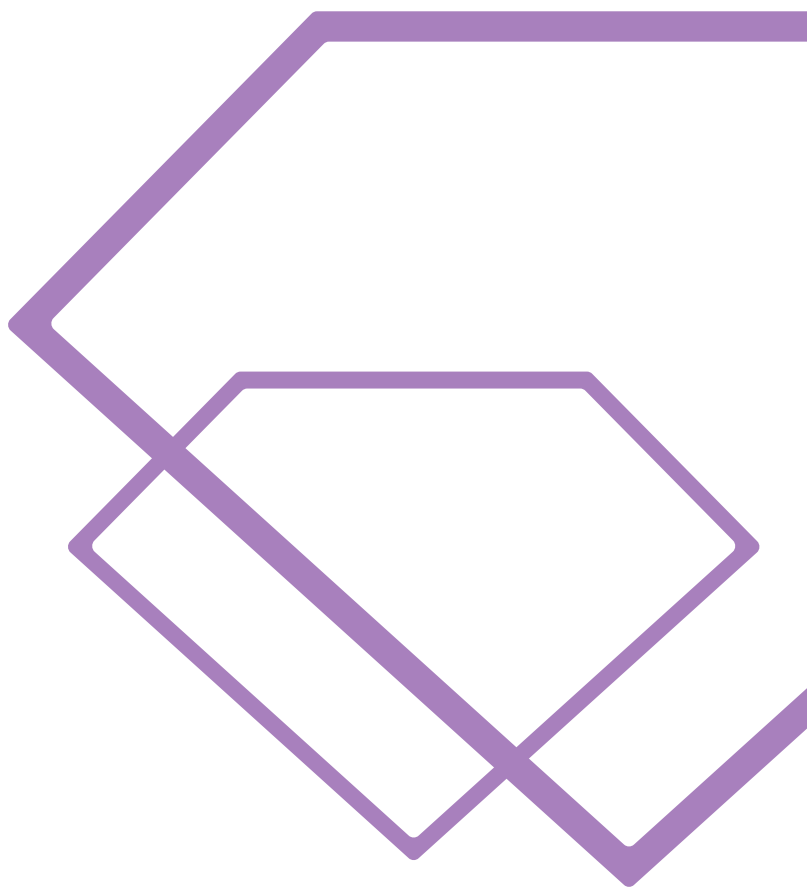
新一代智能缝纫机

NEW GENERATION OF INTELLIGENT SEWING MACHINE

HIKARI® 富山

电控操作说明书

ELECTRICAL CONTROL BOX
INSTRUCTION MANUAL



H9V-II 系列
Series

新一代智能平缝机

NEW GENERATION OF INTELLIGENT
OVERLOCK SEWING MACHINE

前 言

感谢您选用本公司的产品，该手册提供了此系统所需的操作指导说明。

为了您更好地使用该产品，在使用之前请仔细阅读本手册。

- 一、 由于产品的改进，本手册内容可能随时变更，恕不另行通知。
- 二、 您在使用中若有任何疑问或对我们的产品和服务有任何意见，请随时与我们联系。

PREFACE

Thank you for selecting our product. The introduction provides necessary knowledge and notes for using.

Please read safety introduction carefully and understand them before using.

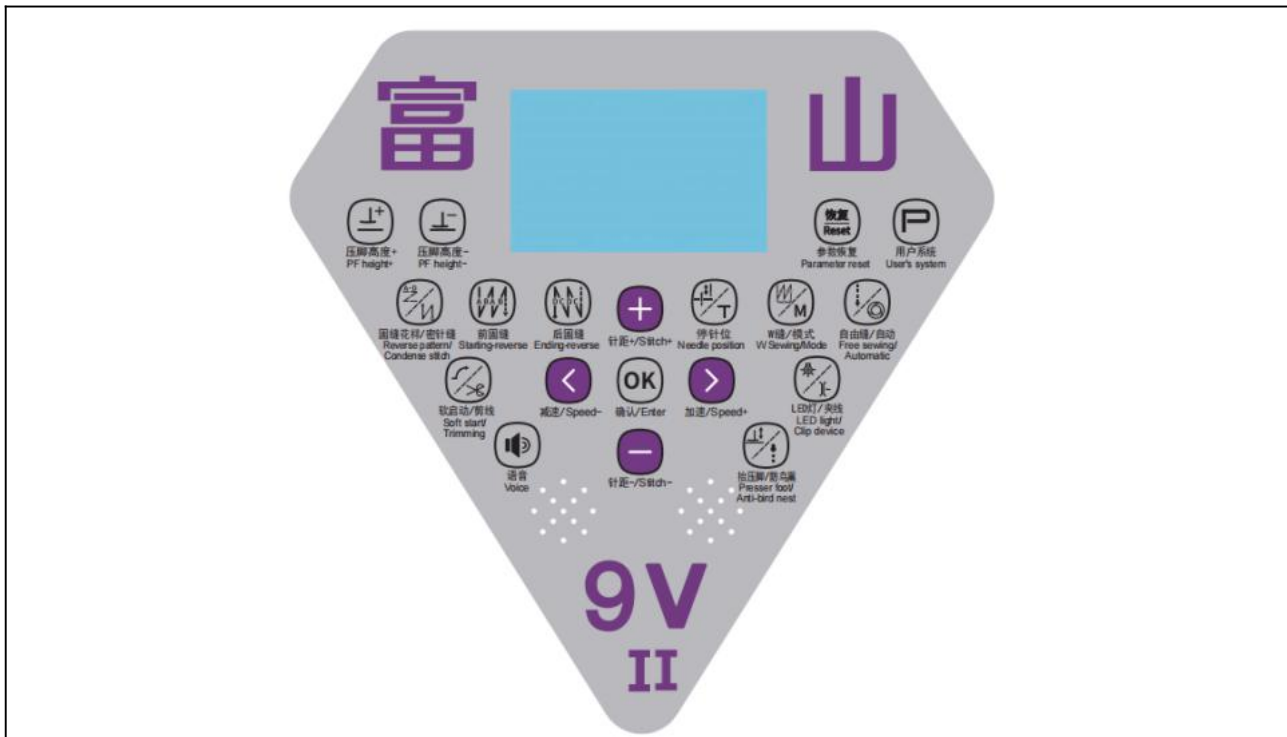
The content of the introduction will be amended with the improvement of our product, the notice is not announced.

If you have any doubts or comments about our product and service, please contact after-sale service.













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I.Operation panel



| Function | Button | Description |
|------------------------------------|--------|---|
| Parameters setting key | | 1. Enter the level of different parameters (parameters are divided into 3) sewing set interface under short press P into the parameter interface, the level for the I parameter display parameter list. Long press the "P" button in the sewing setting interface to enter the "password input interface". After entering the correct maintenance password, press the "P" button to enter the "parameters interface". At this time, the parameters of level I and II in the parameter list are displayed. |
| Identify key | | 1.identify key 2.for the belt clip line function model, the strength of long press this button to display the thread clamp, LCD display "[L7]"), press the key again to exit. 3.Lock screen unlock key,press this key to unlock screen |
| Left or right key/Adjust speed key | | 1.At the free sewing interface, can adjust the speed by the left and right keys, the left button to reduce speed, the right button to increase speed. 2.At the free sewing interface,press S to enter 3333,setting the number of fixed stitches as the left and right keys. 3.When setting fixed long stitch, multi-skilling are showed to switch left and right. 4.When setting beauty stitch, multi-segments are showed to switch left and right. |
| add-subtract key | | Under normal sewing interface 1. Adjust the stitch size 2. According to several numerical and subtract (S key seam free mode into the display number segment) 3. The parameter value plus or minus 4. Pattern edit value add and subtract |
| Starting | | circulation: front Reinforcing-sewing / front double Reinforcing-sewing /front Four solid Reinforcing-sewing /turn off |

| | | |
|---|--|--|
| Ending-reverse |  <p>后固缝 Ending-reverse</p> | <p>circulation: Back Reinforcing-sewing / back double Reinforcing-sewing /back Four solid Reinforcing-sewing /turn off</p> |
| Stop needle selection key/Trial teaching function |  <p>停针位 Needle position</p> | <p>1.Short press:Up and down needle selection key(Default value:Down needle position) 2.P+T button:In fixed-length seam mode, try teaching mode 3.P+T button: in free seam mode, debug mode shortcut key (long press for more than 3 seconds)</p> |
| Voice |  <p>语音 Voice</p> | <p>Short press: Adjust the voice (P130) Long press: Voice function on and off (P90)</p> |
| Free sewing/Automatic |  <p>自由缝/自动 Free sewing/ Automatic</p> | <p>Short press: free sewing Long press: Effective (on/off) in fixed-length seam mode (one-section seam, multi-section seam, multi-section seam self-knitting pattern) W seam mode Open automatically Presser foot function hot key:P+back Reinforcing-sewing</p> |
| Reverse pattern/condense stitch |  <p>反转花样/密针缝 Reverse pattern/ Condense stitch</p> | <p>Short press: After this function is enabled, the front and rear fixed seams can be sewn according to the self-editing pattern Long press: Close stitch function on and off.</p> |
| W Sewing mode |  <p>W缝/模式 W Sewing/Mode</p> | <p>Short press:Circulation:w sewing Free seam circulation:w sewing Free seam Long press to switch one-stitch sewing/multi-stitch sewing/Circulation 1. Able to set several sections of several stitches, each section can set a range of 0 ~ 99 stitches. 2. Able to set several sections of several stitches, each section can set a range of 0 ~ 99 stitches. 3. Able to set several sections of number sewing, each section can set the range of 0 ~ 99 stitches, each section of stitch length pattern can be knitting</p> |
| Press foot mode/Anti-bird nest |  <p>抬压脚/防鸟巢 Presser foot/ Anti-bird nest</p> | <p>Short press: .Foot presser function cycle: middle stop lifting foot/cutting line after lifting foot/middle stop cutting line after lifting foot/closing Long press: Anti-nest function on and off.</p> |
| Soft start/Scissors function key |  <p>软启动/剪线 Soft start/ Trimming</p> | <p>Short press: Press short: soft start on and off Long press:Scissors function on and off</p> |
| LED brightness adjustment/ |  <p>LED灯/夹线 LED light/ Clip device</p> | <p>Short press:LED brightness adjustment, divided into 5 grades, 0-5 cycles Long press:Thread clamp function on and off. Electronic tension is enabled after open it</p> |
| Reset setting |  <p>恢复 Reset 参数恢复 Parameter reset</p> | <p>Under standby interface, long press the Reset button for 1.5 seconds</p> |
| Press foot height+ |  <p>压脚高度+ PF height+</p> | <p>Short press: Increase in presser foot height (P13)</p> |
| Press foot height- |  <p>压脚高度- PF height-</p> | <p>Short press: Decrease in presser foot height (P13)</p> |

II. System Function Setting Description

1. System Info:

Operation panel default mode, press the button  +  key, enter the system monitoring state. through the





key choose parameter at the project.



| Code No. | Description | Unit |
|----------|------------------------------|-------|
| U1 | speed of motor control | rpm |
| U2 | Motor Current | 0.01A |
| U3 | Motor Voltage | V |
| U4 | Pedal voltage | 0.01V |
| U5 | Mechanical Angle with | limit |
| U6 | Motor initial Angle | limit |
| U7 | Head type | JIA |
| U8 | DSP version no. | V100 |
| U9 | DSP type | F73 |
| U10 | Step version no. | V1xx |
| U11 | Step foot lift current | 0.01A |
| VER | HMI Master chip version | v1xx |
| TYPE | HMI type | C104 |
| AD1 | Knee control sensor voltage | 1mV |
| AD2 | Foot lifting sensor voltage | 1mV |
| H1 | HMI Chip (STM32) version no. | V1xx |
| H2 | Model type | 1969 |
| JJ | Plan number(plus) | Piece |
| Jp | Plan number(minus) | Piece |
| DX | Lower thread test | cm |






Press the button “”key back to sewing mode.

2.Planning state: Plus/Minus

Press the button  +  setting key enter JJ plan number state under sewing mode, and then press

the button   key could exchange “JJ & DX”and“JP” key, parameter on the screen is showed









current plan number, press  key exchange the display bow, press   key could adjust the


current data, press  key back to sewing mode.

Remark: (1) The quantity back to zero, long press  key 3 second under the system monitoring state.






- (2) Setting parameter no. P35 used for valid plan number:
- (3) Setting decreasing function should change the parameter no. P38
- (4) Setting decreasing function, “JP” key appear on the screen
- (5) Plan number error: PBOB

3. Lower thread detect mode:

Under the normal sewing mode, press “ + ” setting key, enter “DX” accounting state。 Press   key shows “JJ&DX” and “JP” interface, parameter on the screen shows current data, press  key exchange interface, press   key could change the current quantity, press “” key enter sewing mode。

- Remark: 1、The quantity lower thread back to zero, long press  key 3 second under the system monitoring state。
 2、Lower thread function is available should setting the parameter no. P30
 3、Lower thread error: LBOB

4. Aging mode:

Under the normal sewing mode, press “ + ” assemble key, enter aging mode, press “ + ” key for operating, press again for stopping。 Long press  key over 1 second could return back to normal mode from current state。




P94 parameter manual:

- 0: Time mode: Operate time P98, stop time P97。
- 1: Stitching mode: Stitching operate P98, stop time P97。
- 2: Easy mode: No need stop sewing, the other settle is same as 0。
- 3: Aging mode: Running 1S, stop 0.1S, speed 5000rpm。 The other is same as easy mode。 Total running time 15 minutes。

Remark: The parameter data is setting 3 for aging mode of control box, damage head under this mode, no use this mode, our suggestion is change to mode 0.






| | | | | |
|----|--------------------------|--|---------------|------|
| 94 | Auto test mode | 0: Time mode (unit: S) 1: Stitching mode 2: Easy mode 3: Setting mode | 0~10 | 3 |
| 96 | Auto test max speed | Setting auto test max speed | 200~5000(rpm) | 3500 |
| 97 | Auto test stop time | Setting auto test stop time | 1~250(ms) | 20 |
| 98 | Auto test stitch setting | Auto test stitch setting | 1~250(ms) | 30 |

5. Setting mode:

Under the normal sewing mode, press “ + ” setting key, enter setting mode, press  key could return back to normal mode from current mode。













| | |
|----------|---|
| 1-DJ | Motor angle test |
| 2-bJ | Step zero setting |
| 3-PD | Pedal zero test |
| 4-JD | Trimming operate test |
| 5-CP-1/2 | Main shaft encode signal test, solenoid signal test |

5.1 Motor sensor angle setting test mode:







Under the normal sewing mode, press  +  setting key, screen appear “1-dJ”, press  key enter motor angle test interface, appear “dj”, toward forward pedal one time (or press ), motor will run several times, and then angle data will appear on the screen, it means motor sensor angle data. Press  key could return back to normal mode from current mode.

Remark: The function used for needle stop UN-usual or check whether the parameter data of sensor angle is correct or not when high speed stitching.

Step zero setting:









Under the normal sewing mode, press  +  setting key, screen appear “1-dJ”, press  +  key exchange to “2-bJ”, press  key enter machine zero position interface, appear “P-75—00”, press  +  key exchange P-75/P6/P7/P8 circle, press  key enter current parameter, press  +  key adjust data, press  key for confirm and exit current interface. Press  key could return back to normal mode from current mode.

5.2 Pedal zero position setting mode:

Under the normal sewing mode, press  +  setting key, screen appear “1-dJ”, press  +  key exchange to “3-Pd”, press  key enter pedal zero position interface, the screen appear “pdL”, now the system will checking by it self, waiting 3 seconds, the screen appear “PASS”, if self-checking is fault, the screen will appear error code no. Press  key could return back to normal mode from current mode.







Remark: The function is used for pedal running error, adjust the parameter data through software program.





5.3 Thread trimming action test

After entering sewing mode normally, press  +  setting key, screen appear “1-dJ”, press  +  key exchange to “4-Jd”, press  key Taction test interface, screen appear “JD”, Step the pedal forward (Or press  key), The scissors will move once according to the desired angle (loop), Press the key  again to enter the shortcut parameter debugging P122/P124. If you want to return from this mode to normal mode, press the key  to exit and enter normal mode.





Note: When debugging this function upon start up, manually rotate the hand wheel once or run the motor once to check the zero position of the wire cutting, otherwise the scissors will not move








6. Resetting mode:

Under normal sewing mode, long press  key enter parameter interface, appear "0" when enter parameter no. "P79", press   key and adjust to "8", appear "yes" after press "S" key   key could adjust to "no"  key for confirm.





Hot-key for resetting : Under normal sewing mode , long press  key over 1.5 seconds , appear "yes"   key will adjust to "no"  key to confirm the data resetting.




7. Copy original parameter and resetting original parameter.

Under normal sewing mode , long press  key enter parameter interface , whole machine parameter finish setting, enter parameter no. P131, appear "0", press   key exchange to "1", and press  key for confirm, that's all for save original parameter.

Long press  key enter parameter interface, enter parameter no. "P79", appear "0", press   key exchange to "3", press  key will appear "yes"   key will adjust to "no"  key for resetting original parameter.

8. Pattern design setting mode:

Under the normal sewing mode, press  +  setting key, the screen appear "d1", press   key exchange to d1-d9 pattern, choose your pattern no. and press S for setting, the screen appear "1 3.0 01", now setting the stitching and gauge data for first stage, press left/right key to select setting data; after setting one stage, press left/right key move to left data, press +/- key move to other data setting, if current stitch is zero, can not go on next stage setting;

After finish all the data of stitching and gauge, press  key for saving and return back to "d1" interface, press  key for exit and no save. Press  key return back to normal mode.

Remark:

(1) The function is used for setting pattern design, could setting 9 kind of patterns, 16 teams each patterns; Under sewing mode, the pattern is as gauge.

(2) Pattern sewing mode, if stopping during sewing, after press reverse button, the pattern sewing will be begin from zero. (fit for corner bend)

III. System parameter table

| NO | Project | Content | Setting range | The default value | level |
|------|--|--|-------------------|-------------------|-------|
| P-01 | Sewing speed | Set sewing speed | 200~5000(rp m) | 4100 | 1 |
| P-02 | Soft start function | Sewing few stitches at sewing start function 0: Invalid 1~9: Soft start stitches | 0~9 | 2 | 1 |
| P-04 | Fixed-length seam sewing speed | Set fixed-length seam sewing speed | 200~4000(rp m) | 3000 | 1 |
| P-06 | Zero pitch correction value | When the needle pitch is set to 0mm, fine the value so that the actual sewing needle pitch is zero | 50~150 | 100 | 2 |
| P-07 | Positive needle distance correction value | Magnification positive sewing distance (Sewing needle fixed distance) | 50~150(%) | 100 | 2 |
| P-08 | Anti-needle distance correction value | Enlarge reverse stitches Distance Scale (Sewing needle fixed distance) | 50~150(%) | 100 | 2 |
| P-09 | Back stitch speed limitation | can keep needle from breaking while back stitching | 500~1500 | 800 | 1 |
| P-10 | Set the length of the stitch from the set number | 0:Set the number of stitches to set the value 1:When the length is set to self-made, the number is the number of the pattern, that is, the total number of stitches is the number of stitches × set the value | 0/1 | 1 | 1 |
| P-12 | Middle presser foot lifting height | Setting the height of the presser foot when sewing stops in the middle | 0~70 | 1 | 55 |
| P-13 | Maximum lifting height of the presser foot | Setting the maximum height of the presser foot after thread trimming. | 0~70 | 1 | 60 |
| P-14 | Pressure foot lifting speed | Step speed for presser foot lifting | 20~300(rpm) | 10 | 300 |
| P-15 | Pressure foot release speed | Step speed for presser foot release | 20~300(rpm) | 10 | 300 |
| P-16 | Output duty cycle of soft down | output duty cycle of soft down | 0~100 | 8 | 2 |
| P-17 | Output duty cycle of trimmer and thread tension | Output duty cycle of trimmer and thread tension (too small will affect trimmer and tension solenoid suction power) | 0~100 | 50 | 2 |
| P-18 | The stitch pattern began after the termination of the stitch, mode selection | The stitch without pattern began after the termination of the stitch mode selection 0: unavailable 1: available | 0/1 | 0 | 1 |
| P-19 | Solid after before | 0: unavailable 1: available | 0/1 | 0 | 1 |

| | | | | | |
|------|---|--|----------------|------|---|
| | sewing stop | | | | |
| P-20 | Attachment button select function mode | 0: unavailable 1: Manual thread trimming in standby 2: Manual adjust presser foot after thread trimming | 0/1/2 | 0 | 1 |
| P-21 | soft start speed 1 | speed of the 1st needle of soft start | 100~3000(rp m) | 400 | 1 |
| P-22 | soft start speed 2 | speed of the 2nd needle of soft start | 100~3000(rp m) | 1000 | 1 |
| P-23 | soft start speed 3 | speed of the 3 rd~9th needle of soft start | 100~3000(rp m) | 1500 | 1 |
| P-24 | Presser foot soft lowering function | Setting to protect damaged the fabric to slow down the presser foot lowering speed | 0/1 | 1 | 1 |
| P-25 | Presser foot lift function | Presser foot lift function set 0: unavailable 1: available 2:available after trimming | 0/1/2 | 1 | 1 |
| P-26 | Function of over thickness | Setting the function of over thickness 0: unavailable 1: available | 0/1 | 0 | 1 |
| P-27 | Power on and positioning | The function setting of automatically finding the needle position when the power is on 0: unavailable 1: available | 0/1 | 0 | 1 |
| P-28 | Signal mode for turn/lift switch | Setting of signal mode of turn/lift switch of machine head 0: always open 1: always close 2:forbid a protection | 0/1/2 | 0 | 1 |
| P-29 | Presser foot soft lowering time | To set presser foot soft lowering time The longer time the lower speed of the presser foot | 10~500(ms) | 150 | 2 |
| P-30 | Baseline count enable | 0: unavailable 1: Auto count when cycle to the set value 2: Auto stop when count to set value | 0/1/2 | 0 | 1 |
| P-31 | Baseline initial value setting | Baseline initial value setting | 200~4000(0.1m) | 1600 | 1 |
| P-32 | Selection of special mode for back tacking | 0: invalid 1: CDC | 0~1 | 1 | 0 |
| P-33 | Special mode selection for front back stitching | 0: invalid 1: ABA 2: BAB | 0~2 | 1 | 1 |
| P-34 | Standard joint speed mode selection | Select 0 automatic for standard joint speed mode; 1 pedal control | 0/1 | 0 | 2 |
| P-35 | Multiple ratio of counting by piece | Setting of multiple ratio of counting by piece | 0~50 | 0 | 1 |
| P-36 | Setting initial value of counting by piece | Setting initial value of counting by piece | 0~1000 | 100 | 1 |
| P-37 | Time of thread wiper | Time of thread wiper | 0~800(ms) | 40 | 2 |
| P-38 | Setting function of choosing counting by | 0: unavailable 1: Auto count when cycle increased to the set | 0/1/2/3/4 | 0 | 1 |

| | | | | | |
|------|---|--|----------------|------|-----|
| | piece | value 2: Auto count when cycle decreased to the set value 3: Auto stop when count increased to set value 4: Auto stop when count decreased to set value | | | |
| P-40 | Pressure foot loosening function | 0: When lifting the presser foot, the loose thread does not move 1~5: The time for loosening the thread when lifting the presser foot, in seconds | 0~5 | 1 | 0 |
| P-41 | Low speed | The lowest speed of pedal | 100~500(rp m) | 200 | 1 |
| P-42 | Pedal curve selection | Pedal speed adjustment 0: normal 1: Slow acceleration 2: Quick acceleration | 0/1/2 | 2 | 1 |
| P-44 | Thread-cutting speed | thread-cutting speed | 100~500(rp m) | 250 | 1 |
| P-45 | Back-tracking speed limit function | Back-tracking speed processing can prevent reverse sewing needle breakage 0:no speed limit 1: infinite speed limit 2: the speed limit | 0/1/2 | 0 | 1 |
| P-46 | Presser foot lifting delays sewing | delay with presser foot lowered | 0~800(ms) | 100 | 2 |
| P-47 | Knee support and foot pressure during operation to determine speed | | 200~1000(rp m) | 50 | 500 |
| P-48 | Knee support pressure foot lifting height during operation | | 0~100 | 1 | 0 |
| P-49 | Press foot holding time | Lift the pressure foot after holding time to force off | 1~60(s) | 25 | 2 |
| P-50 | Output time of total pressure of presser foot lifting | output time of total pressure of presser foot lifting | 0~800(ms) | 150 | 2 |
| P-51 | Output duty cycle of presser foot lifting hold time of presser foot lifting | output duty cycle of presser foot lifting hold time of presser foot lifting | 0~100 | 40 | 2 |
| P-53 | starting reinforcing-sewing speed | starting reinforcing-sewing speed | 100~3000(rp m) | 2200 | 1 |
| P-56 | ending reinforcing-sewing speed | ending reinforcing-sewing speed | 100~3000(rp m) | 2200 | 1 |
| P-59 | Continuous reinforcing-sewing | Continuous reinforcing-sewing speed | 100~3000(rp m) | 2200 | 1 |

| | | | | | |
|------|--|--|----------------|-----|---|
| | speed | | | | |
| P-60 | Bar-tack stitch cancel speed limit | 0: The software has speed limited 1: No speed limited (The stitch length may be unstable when stitch length is large and the speed is high) | 0/1 | 0 | 2 |
| P-61 | A switch to cancel the angle limit when change stitch length | 0: Change the stitch length within the limiting angle 1: change stitch length at any angle (The stitch length may not coincide, or the needle may break) | 0/1 | 0 | 2 |
| P-62 | Pedal travel upon start | Pedal position upon start Travel relative to medium pedal | 10~50(0.1°) | 25 | 2 |
| P-63 | Pedal travel upon acceleration | Pedal position upon start acceleration Travel relative to medium pedal | 10~100(0.1°) | 50 | 2 |
| P-64 | Pedal travel at highest rotation speed | Pedal position at highest rotating speed Travel relative to medium pedal | 10~150(0.1°) | 110 | 2 |
| P-65 | Pedal travel upon presser foot lift | Pedal position upon pedal lift Travel relative to medium pedal | -100~-10(0.1°) | -25 | 2 |
| P-67 | Pedal travel 1 upon thread trimming | Pedal position upon start trimming without presser foot function Travel relative to medium pedal | -100~-10(0.1°) | -30 | 2 |
| P-68 | Pedal travel 2 upon thread trimming | Pedal position upon start thread trimming with presser foot function Travel relative to medium pedal | -100~-10(0.1°) | -50 | 2 |
| P-69 | Down needle positioning position | To adjust down needle position | 0~240 | 160 | 1 |
| P-70 | Reverse needle lift function | Reversal of needle lift function after thread trimming 0: unavailable 1: available | 0/1 | 0 | 1 |
| P-71 | Reversal of needle lift angle | Reversal of needle lift angle | 0~45(°) | 20 | 1 |
| P-72 | Thread clamp strength adjustment | Adjust the thread clamp strength size 0: Clip line function is invalid 1~9: Three Intensity Adjustment | 0~9 | 6 | 1 |
| P-73 | Thread pressing actuation angle | Thread pressing actuation angle | 10~150(°) | 100 | 1 |
| P-74 | Thread pressing release angle | Thread pressing release angle | 160~300(°) | 270 | 1 |
| P-75 | Needle position adjustment | Needle position adjustment | 0~240 | 33 | 1 |
| P-77 | Setting of beauty sewing | 0: unavailable 1: available | 0/1 | 0 | 1 |
| P-78 | Beauty sewing (close sewing) mode setting | 1: Close stitch on start sewing 2: Close stitch on end-sewing 3: Close stitch on both start and end sewing | 1/2/3 | 2 | 2 |

| | | | | | |
|-------|---|--|---------------------|------|---|
| P-79 | return to factory-set parameter | Special functional parameters 3:Return set parameters 5/8: Restore factory parameter | 0~15 | 0 | 1 |
| P-80 | highest speed of sewing | highest speed of sewing | 300~5000(rp m) | 4100 | 2 |
| P-81 | Pedal speed percentage | Pedal speed percentage | 50~100 | 100 | 2 |
| P-82 | Trial use function | Trial use function 0: Trial use function 10~1000: Trial use time | 0~1000(h) | 0 | 3 |
| P-83 | Strength function | Try if the needle can't penetrate the cloth. 0: invalid; 1~15: intensity adjustment | 0~15 | 0 | 2 |
| P-84 | Function of cutting line and adding force | Effective when the cutting wire is an electromagnet; 0: invalid; 1~15: intensity adjustment | 0~15 | 0 | 2 |
| P-85 | Cutting line suction Angle | Cutting line suction Angle set | 150~200 | 174 | 3 |
| P-86 | Cutting line adding force Angle | Cutting line adding force Angle set | 200~300 | 260 | 3 |
| P-87 | Cutting line release Angle | Cutting line release Angle set | 300~360 | 340 | 3 |
| P-88 | Loose line suction Angle | Loose line suction Angle | 0~360 | 180 | 2 |
| P-89 | Loose line release Angle | Loose line release Angle | 0~360 | 350 | 2 |
| P-90 | Language selection setting | Setting of language: 0: turn off 1: Chinese 2: English | 0~2 | 1 | 2 |
| P-91 | Change pitch selection | Change pitch selection 0:Changes Allowed 1:Not allowed to change | 0~1 | 0 | 2 |
| P-92 | Pedal presser foot lift confirm time | Pedal presser foot lift confirm time | 10~300(ms) | 80 | 2 |
| P-93 | Pedal presser foot lift confirm time | Trimming the neutral position of the pedal | -15~15(0.1°) | 0 | 2 |
| P-94 | Auto test mode set | Auto test mode set 0: standard time mode 1: stitch mode (Use P98 set stitch) 2: simple time mode 3: Factory aging mode (Do not use this mode in machine) | 0~3 | 3 | 3 |
| P-95 | Anti-nest function selection | Anti-nest function selection: 0: thread clamp type 1: Anti-nest type 2: thread wiper type | 0/1/2 | 0 | 2 |
| P-96 | Auto test maximum speed | Auto test maximum speed set | 200~5000(rp m) | 3500 | 3 |
| P-97 | Auto test stop time | Auto test stop time set | 1~250 (0.1s) | 20 | 3 |
| P-98 | Auto test running time/stitches | Auto test running time/stitches set | 1~250(0.1s/s titch) | 30 | 3 |
| P-100 | Knee support | 0: invalid 1: valid | 0/1 | 1 | 0 |

| | | | | | |
|-------|--|--|-------------------|------|----------|
| | function settings | | | | |
| P-101 | Knee support sensor zero position electrical | unit: 0.01v | 0~500 | 5 | 110 |
| P-102 | Maximum stroke voltage of knee support sensor | unit: 0.01v | 0~500 | 5 | 180 0 |
| P-103 | Switching between wire tension/loosening function | 0 :Line tension control 1 :Control of ordinary loose wire electromagnet | 0/1 | 1 | 1 |
| P-104 | Pattern stop function enable | 0: unavailable 1: Stop the needle need to go through the current number of pattern stitches | 0/1 | 0 | 2 |
| P-109 | Force adjustment of electromagnet for presser foot lifting | Force adjustment of electromagnet for presser foot lifting (Cushion when press foot is absorbed) | 50~100 | 80 | 2 |
| P-110 | Material thickness and tension control | Increase tension when sewing thick material | 0~10 | 0 | 2 |
| P-111 | Over thickness sewing speed | Limit speed of over thickness | 500~3000(rp m) | 1500 | 2 |
| P-112 | Over thickness stitch offset coefficient | Over thickness stitch offset deals | 50~150(%) | 120 | 2 |
| P-113 | Needle compensate stitch length mode | Needle compensate stitch length mode 0: normal stitch length 1: Needle compensate stitch length (press 114 to set) 2: reverse sewing by normal stitch length 3: reverse sewing by needle compensate stitch length | 0~3 | 0 | 1 |
| P-114 | Needle compensate stitch length setting | Needle compensate stitch length setting | 10~50 (70) mm | 35 | 1 |
| P-115 | Back latch sewing button function setting | 0: back latch sewing 1: tightly sewing 2: fill needle 3:back latch sewing+ fill needle 4: tightly sewing+ fill needle 5: Manual sewing (heavy duty) 6: Switch | 0~7 | 0 | 2 |
| P-116 | fill needle button function setting | 0: back latch sewing 1: tightly sewing 2: fill needle 3: back latch sewing+ fill needle 4: tightly sewing+ fill needle 5: Manual sewing (heavy duty) | 0~5 | 2 | 2 |
| P-117 | Dense needle pitch setting | Head button stitch stitch set | 50~150 | 110 | 2 |
| P-118 | tightly sewing No function | tightly sewing setting | 1~10 | 2 | 2 |

| | | | | | |
|-------|---|--|---------|-----|-----|
| P-119 | tightly sewing needle gauge setting | needle gauge setting | 50~150 | 105 | 2 |
| P-121 | Starting angle of the first segment of thread trimming | Starting angle of the first segment of thread trimming adjust. | 200~300 | 2 | 240 |
| P-122 | Trimming the first segment of the stroke | Trimming the first segment of the stroke adjust. | 0~150 | 1 | 75 |
| P-123 | Starting angle of the second segment of thread trimming | Starting angle of the first segment of thread trimming adjust. | 250~360 | 2 | 300 |
| P-124 | Trimming the second segment of the stroke | Trimming the second segment of the stroke adjust. | 0~150 | 1 | 125 |
| P-125 | Stop and trimming during fixed-length sewing | 0: invalid 1: valid | 0/1 | 0 | 2 |
| P-126 | loose thread enable when start sewing | 0: invalid 1: valid | 0/1 | 1 | 2 |
| P-127 | Delay before start-sewing loose thread | Delay before start-sewing loose thread | 0~1000 | 100 | 2 |
| P-128 | Action time of loose thread when start-sewing | Action time of loose thread when start-sewing | 0~1000 | 660 | 2 |
| P-129 | Display backlight brightness Setting | Display backlight brightness Setting | 0~10 | 5 | 1 |
| P-130 | Voice choice | 0: invalid 1: valid | 0~1 | 1 | 1 |
| P-131 | Factory parameter save selection | 0. Invalid 1. Save the current values of all parameters | 0~1 | 0 | 3 |
| P-133 | Fill needle mode option | 0: Intermediate stop and thread trimming stop 1: Only intermediate stop | 0~1 | 1 | 1 |
| P-135 | Midway back latch function selection | 0: invalid 1: valid | 0~1 | 0 | 1 |
| P-136 | The number of midway stitch set | 1~50 needle | 1~50 | 4 | 1 |
| P-137 | Setting the number of Mid-back latch stitching | 1~10 times | 1~10 | 1 | 1 |
| P-138 | Lock screen function setting | 0: invalid 1: valid | 0~1 | 1 | 1 |
| P-139 | Lock screen time setting | 30~240 (s) | 0~1 | 30 | 1 |
| P-140 | Anti-bird's nest delay before hooking | The delay time between the end of trimming and the hook | 0~500ms | 30 | 2 |
| P-141 | Anti-bird's nest Hook time | Wire hooking solenoid time | 0~500ms | 80 | 2 |

| | | | | | |
|-------|--|--|---------------|-----|------|
| P-142 | Anti-bird's nest delay after hooking | The delay time of hooking solenoid off | 0~500ms | 50 | 2 |
| P-143 | Anti-bird's nest Hook line duty cycle | Adjust the strength of the hooking solenoid | 0~100 | 100 | 2 |
| P-144 | Anti-bird's nest Suction action time | Working time of suction valve | 0~2000ms | 350 | 2 |
| P-145 | Thread-straight work time of Anti-nest | The work time of a thread-straight solenoid | 0~500ms | 50 | 2 |
| P-146 | Anti-bird's nest Suction start angle | start angle during thread trimming | 150~360 | 154 | 2 |
| P-150 | Maximum needle gauge setting | needle gauge of 5mm stitch length (1.0mm~5.0mm) needle gauge of 7mm stitch length model (1.0mm~7.0mm) | 10~50 (70) mm | 50 | 2 |
| P-151 | First off-line prevented stitch length | 0: invalid 1: valid | 0~1 | 0 | 2 |
| P-152 | First off-line prevented stitch length setting | Stitch length setting Parameter range (1.0mm~5.0mm) | 10~50 | 40 | 2 |
| P-153 | Head button inching mode setting | 0: Invalid 1: valid (Press once valid ,press again cancel, such as close sewing, over thickness, presser foot) | 0~1 | 0 | 2 |
| P-154 | Back stitch button type | 0: Ordinary switch 1: Travel switch | 0~1 | 0 | 3 |
| P-155 | LED light setting | 0: LED light light off 1~5: Adjust the brightness (HMI control 0/1/2/3/4/5/0switch) | 0~5 | 5 | 2 |
| P-156 | Refueling reminder time setting | 0: invalid 15~3000: Power-on trial time | 0~3000 | 0 | 3 |
| P-160 | Fill needle button setting | Fill needle button setting | 0~50mm | 1 | 10 |
| P-161 | 1/2 Fill needle button setting | 0: Back latch sewing 1: tight sewing 2: 1/2 fill needle | 0~2 | 2 | 2 |
| P-163 | Height of starting seam presser foot | | 0~100 | 1 | 30 |
| P-164 | Starting angle of seam presser foot | | 0~300 | 5 | 0 |
| P-165 | Starting and pressing foot end angle | | 0~500 | 5 | 300 |
| P-168 | First stitch start speed setting | First stitch start speed setting | 200~5000rpm | 100 | 3500 |
| P-170 | Speed adjust coefficient | =0, P171~P176 are invalid =1, P171~P176 are valid | 0~1 | 1 | 2 |

| | | | | | |
|-------|--|---|--------|-----|---|
| P-171 | Speed forward sewing adjust | Speed forward sewing adjust | 50~150 | 100 | 2 |
| P-172 | Speed backstitch adjust | Speed backstitch adjust | 50~150 | 100 | 2 |
| P-173 | Front fixed sewing speed, forward sewing adjust | Front fixed sewing speed, forward sewing adjust | 50~150 | 100 | 2 |
| P-174 | Front fixed sewing speed, back latch sewing adjust | Front fixed sewing speed, back latch sewing adjust | 50~150 | 100 | 2 |
| P-175 | Rear fixed sewing speed, forward sewing adjust | Rear fixed sewing speed, forward sewing adjust | 50~150 | 100 | 2 |
| P-176 | Rear fixed sewing speed, back latch sewing adjust | Rear fixed sewing speed, back latch sewing adjust | 50~150 | 100 | 2 |
| P-177 | Switching between the needle pitch pulse output function of the wire pulling electromagnet and the mop wheel | Switching between the needle pitch pulse output function of the wire pulling electromagnet and the mop wheel 0 Output of wire pulling electromagnet 1 Needle distance pulse signal output (mop wheel) | 0~2 | 1 | 0 |
| P-178 | Switching between 1/2 needle filling and surface line detection functions | Switching between 1/2 needle filling and surface line detection functions 0 1/2 needle compensation signal input 1 Surface line detection sensor input | 0~1 | 1 | 0 |
| P-179 | Sensitivity setting for surface line detection | Sensitivity setting for surface line detection 0 invalid 1~10 No valid surface line detection signal within the number of stitches, error reported | 0~20 | 1 | 2 |
| P-180 | Needle gauge adjust coefficient | =0, P181~P200 valid =1, P181~P200 invalid | 0~1 | 1 | 2 |
| P-181 | 1mm regular sewing adjustment | 1mm regular sewing adjustment | 50~150 | 100 | 2 |
| P-182 | 1mm Back latch sewing adjustment | 1mm Back latch sewing adjustment | 50~150 | 100 | 2 |
| P-183 | 2mm regular sewing adjustment | 2mm regular sewing adjustment | 50~150 | 100 | 2 |
| P-184 | 2mm Back latch sewing adjustment | 2mm Back latch sewing adjustment | 50~150 | 100 | 2 |
| P-185 | 3mm regular sewing adjustment | 3mm regular sewing adjustment | 50~150 | 100 | 2 |
| P-186 | 3mm Back latch sewing adjustment | 3mm Back latch sewing adjustment | 50~150 | 100 | 2 |
| P-187 | 4mm regular sewing | 4mm regular sewing adjustment | 50~150 | 100 | 2 |

| | | | | | |
|-------|----------------------------------|---|--------|-----|---|
| | adjustment | | | | |
| P-188 | 4mm Back latch sewing adjustment | 4mm Back latch sewing adjustment | 50~150 | 100 | 2 |
| P-189 | 5mm regular sewing adjustment | 5mm regular sewing adjustment | 50~150 | 100 | 2 |
| P-190 | 5mm Back latch sewing adjustment | 5mm Back latch sewing adjustment | 50~150 | 100 | 2 |
| P-191 | 6mm regular sewing adjustment | 6mm regular sewing adjustment | 50~150 | 100 | 2 |
| P-192 | 6mm Back latch sewing adjustment | 6mm Back latch sewing adjustment | 50~150 | 100 | 2 |
| P-193 | 7mm regular sewing adjustment | 7mm regular sewing adjustment | 50~150 | 100 | 2 |
| P-194 | 7mm Back latch sewing adjustment | 7mm Back latch sewing adjustment | 50~150 | 100 | 2 |
| P-201 | Pedal mode | 1: Comfort mode 2: Standard mode 3: Sports mode | 1/2/3 | 1 | 2 |

IV. Error code

| Error Code | Contents | Possible reasons | Checking and treatment |
|--------------|--|--|---|
| E011 E012 | Motor signal error | Motor position sensor signal failure | If electric engine plug is well contacted; if electric engine signal detecting device has been broken; if sewing machine hand wheel correctly installed. |
| E021 E023 | Motor overload | motor stall motor overload | If electric engine plug is well contacted; if machine head or thread-cutting mechanism has been blocked completely; f materials are too thick; Electrical signal detection signal whether the normal. |
| E101 | Hardware drivers fault | Current detection abnormal Driving hardware error | Current detection loop system is working properly; Weather the damage to the device driver. |
| E111 E112 | Voltage too high | High input voltage Brake circuit fault Voltage detection error | System into line voltage is too high; Braking resistance are working properly; System voltage detection circuit are working properly. |
| E121 E122 | Voltage too low | Actual low voltage Voltage detection is wrong | If the voltage on the inlet wire is too low Whether the system voltage detection circuit the normal work. |
| E133 | Oz circuit fault | Oz circuit fault | Oz circuit system is working properly. |
| E134 | DBFLT malfunction | Automatic resistance circuit failure | Brake resistor plug is in good contact Brake resistance is damaged |
| E201 | over current | Current detection error | Current detection loop system is working properly Electrical signal is normal. |
| E211 E212 | Abnormal motor operation | Current or voltage detection error | If electric engine plug is well contacted If electric engine signal |
| E301 | Communication error | Sci circuit error | if operation box plug is well contacted; if operation box components are damaged. |
| E302 | Operation inner failure | Sci circuit error | check whether the operating box is damaged. |
| E303 | SPI Communication breakdown | Sci circuit error | check whether the main control board is damaged. |
| E304 | HMI From the main chip communication failure | Sci circuit error | check whether the operating box is damaged. |
| E402 | Pedal ID fault | Pedal verification fault | Pedal connection is loosen. |
| E403 | Pedal zero position fault | The pedal zero position over range | The pedal is damaged or it is not under stop state when correction |
| E501 | Safety switch fault | Safety switch effective | Put down the head or check turned up switch. |
| E502 | Fuel fault alarm | Fuel fault alarm | Add oil Tips |
| E601 | Hardware drivers fault | Feed motor STEP2 hardware over current | Current detection loop system is working properly;Whether the damage to the device driver. |
| E602 | Hardware drivers fault | Feed motor STEP2 software | Current detection loop system is working |

| | | | |
|-------|-----------------------------|---|---|
| | | over current | properly;Whether the damage to the device driver |
| E603 | Hardware drivers fault | Feed motor STEP2 Current detection circuit | Current detection loop system is working properly;Whether the damage to the device driver. |
| E604 | Motor signal error | Feed motor STEP2 The initial mechanical angle | Feed motor connector is a good contact |
| E605 | Motor signal error | Feed motor STEP2 at the start, Encoder or rotor stuck | Feed motor connector is a good contact Machinery is stuck |
| E606 | Hardware drivers fault | Feed motor STEP2 Motor winding circuit | Current detection loop system is working properly; Weather the damage to the device driver. |
| P.oFF | Power off Display | Power off | Wait for power supply to resume. |
| EvAL | Trial expired | Trial expired | Contact the dealer processing |
| L.bob | The bottom line tips | The bottom line count value is negative | After replacing the bottom line, press P to cancel the Alert Status |
| P.bob | Remind of counting by piece | The number of counting is 0 | Press S key to enter the interface, and long press "front seam" button for more than 2 seconds to cancel the prompt state |



富山IoT



微信公众号



抖音官方号

上海富山精密机械科技有限公司

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