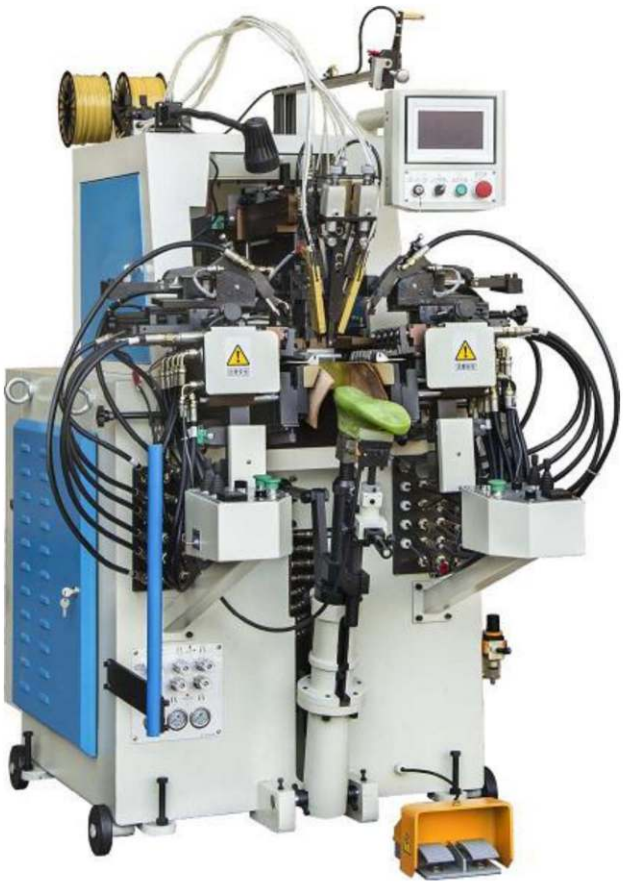
# MC-526MAS

## HEEL AND SIDE LASTING MACHINE WITH GLUE

## INSTRUCTION



# Catalog

~ ~ Please read the technical manual before operating machinery ~ ~

## ● Foreword

1. Purchase the machine, if found damaged after unpacking, please notify LANBOWANG or a related subordinate companies within seven days and send the picture, We will arrange staff as soon as possible.

2. When using this machine, you must comply with the procedures, not to abuse or overload within the warranty period, if the issued damage cause of human factors and improper operation, and after we sent staff and identification is true, then the maintenance costs should be beared by user (fee calculated by hour).

3. Please specify maintenance technician who could conveniently contact us for services.

4. Mechanical specifications listed in the catalog, we have the right at any time to change the design without notice.

5. The machine was sold to user, If user provide such as providing counterfeit or modify others to bear the legal liability and pay compensation for the loss for us.

6. If the following situations occured in user's company, that has nothing to do with our company:

   (1). Loss of material When test machine.

   (2). Loss in production management and marketing.

   (3). Resulting in personal injury cause failure to perform described in this manual.

   (4). Using the machine to manufacture products involving abuses of patents, trademarks and industrial applications.

7. Any model of machine which are requested to refund or replacement of a new machine, the costs consumed by the buyer.

- Quality assurance

1. This manual describes the parts (excluding consumable parts) has one-year warranty period (counting from the date buyer get the machine), if there are fault or damaged (not including vandalism) we will give free period for repair .

2. In order to ensure the interests of the buyer for this model, the Buyer shall hold a purchase contracts before ask us questions about this machine, and enjoy after-sales maintenance services.

This guarantee is only valid to the purchaser, and not to other companies or others.

- Machine's inspection

1. Damage inspection and report:

   Before unpacking, should check whether the destruction of the wooden box , if there is mechanical damage or packing damage , notify the insurance agent immediately and fill out an application , and notify our company as soon as possible.

2. Unpacking and Handling:

   When carrying wooden boxes, lift as per the position which marked in this manual, better that the packing machinery is usually transported to the installation site before unpacking , it can also reduced failure rate when transport. After all the wooden boxes are positioned , only the upper and side board could be removed, and then keep pallet for transport, at this time the machine is not covered, you can more clearly to check.

3. Retreat damaged or wrong equipment steps :

   Before retreat , renewal, should prepare a summary report should include the item like damaged or faulty , including how damaged , damaged condition, part number and machinery categories , date of manufacture and serial number that should be sent to us for authority in order to solve quickly.

- Machine installation considerations

(ONE). Safety precautions:

1. When working, should be very careful, operator should really follow the method described in this manual in order to avoid any damage to machinery and personnel.
2. If overhead crane has available to make the job more convenient, but still must pay attention for safety.
3. Before operate should read this instruction manual, in full knowledge of the mechanical function, and then try to operate, that is in order to avoid machinery or personnel injuries because incorrect operation.

( TWO) Pre-installation Preparation:

1. User should handling or lift this machine very carefully.
2. As for transportation , please use the crane lifting or forklift for handling .
3. Before installation, user should has a arrangement plan of factory, according to each machine's position. The arrangement plan should considerate machine's carry, safety, and the convenience of installation.
4. User should prepare power for save time before machine installation. And check factory's power whether meet with machine's require.

5. During the installation ,except LANBOWANG technician, customers should assign personnel for help installation, to understand the machine's structure to improve self-repair capabilities.
6. When installing in oversea countries , due to wooden case, first unpack the machine, should be careful avoid mechanical damage.

- Maintenance points

1. tubing, fittings must lock can not have oil leakage, to check pressure gauge whether is zero when change tubing, Pressure must be zero before replace tubing.
2. have to replace oil after machine was used for 2400 hours, especially the new machine for the first time it is best to replace oil after used 2000 hours and have to clean oil filter in 500 hours after a new machine installation or after oil replacement, and clean when the pump noise increase. Whenever replacing oil, the oil tank must be thoroughly cleaned, the oil level should be higher oil filter at least 30mm, but can not fill full the tank, oil level should be about 30mm lower than the top of oil tank.
3. electrical parts should be kept clean always.
4. Machine should be cleaned every day before off duty, it is more difficult to clean up if don't clean the machine after it have been long time used, and check the drainage function of the F.R.L if is normal, and check the screw if is loosen, if loosen please tight it up.
5. When don't use the machinery, should stop the motor as possible (except warm-up in the morning).
6. Each sliding position should be lubricated for every week, as kept lubrication.
7. Should check the nitrogen pressure of the accumulator every week, such as below 10kg/cm $^2$ should be supplemented with nitrogen (must use nitrogen when necessary supplement, do not use other gases).

* To enhance the mechanical life and achieve the best use of performance, please use the highest quality for hydraulic oil, due to the different countries, different brands of the hydraulic oil, We recommend the following brands for customer choice *

| Brand | Model |
|---|---|
| C.P.C | AW-46 |
| ISO DIS | VG46 |
| CALTEX | RANDC OIL 46 |
| ESSO | TERESSO 46 |
| MOBIL | LIGHT OLL 25 |
| SHELL | TELLUS C46 |

- Machine specifications and features

1. Machine specifications：

| | |
|---|---|
| Model | LB-780EM |
| Power | 3HP |
| Elec. heating | 1.6KW |
| Use pressure | 50kg/cm ² |
| Air pressure | 6kg/cm ² |
| Output | 1500~1800pairs/8hr |
| N.W. | 1300kgs |
| G.W. | 1350 |
| Machine（L x W x H） | 1600×1100×1950mm |
| Packing size | 1650×1150×2000mm |
| Hydraulic oil | 86Liters |

2. Machine feature:

(1). The machine is use for heel and side lasting once completed, the soles and uppers without manually gluing in advance, so save labor, and that never unglued after forming, it is most suitable for the quality shoes and the production of special shoes.

(2). Easy operation, easy adjustment, personnel need only short training then could operate.

(3). Uses a chain wrapped for heel band, tighten with best results, we have wide range of heel band for a variety of shoes for choose, to ensure perfect lasting result.

(4). These fader of side presser with automatic self-balancing devices. They could automatically attached according the curvature of the shoe side, the pressure in the process of lasting has two section adjustment to accommodate a variety of materials of uppers lasting, to achieve the most perfect effect.

(5). There are left and right floating injector in the heel and side lasting structure, by the heel central as a starting point forward gluing, injector open adopts spring and speed control, automatically attaching on the insole according different size shoes, and gluing stroke is using electronic ruler control, operator can adjust the length from the PLC. And lasting complete in one time. change old sub-gluing which with gap disadvantage.

(6). The machine selects alone heel lasting, side lasting, heel and side lasting and without or with gluing operation.

(7). Electric control system adopts PLC programmable control, with a touch screen and user interface, greatly enhance machine stability and convenience.

(8). Side lasting and heel lasting pressing overlap, so that heel and side lasting without any pressing gap.

(9). Side lasting combination with four groups of independently mechanism controlled, to choose a suitable group action from the screen depend on shoe size.

(10). Injector gluing stroke open by two-stage programmable when heel and side lasting.

(11). Glue volume control, the operator can adjust the feeding glue speed by left top panel, to adjusted the gluing speed.

(12). With side last pincer which is left and right independent controlled, it could be adjustable for front and rear and height position, and in addition, the pincers could automatically pull up, settings should depend on the height both of inside and outside shoe waist.

(13). Automatically or manually change the left and right shoes select from the screen.

(14). The machine use for shoe lasting quickly and dramatically improve productivity and efficiency.

- Operation Precautions

1. Machine's safety:

   Safety of machinery have been considered when design, it is justified. Mainly in order to protect the operator, according to the final analysis, the safety of the operator is important, so that each operator is required to advance the full knowledge and understanding of these matters, then to operate this machine. This manual from start to finish to emphasize these considerations; like other machinery as there are many special places may not care, did not consider lost or forgotten protection, which are alleged out; all the guidance and safety precautions must be observed, and in any case can not be omitted or overload.

   Under rules and morality, every operator should be responsible for this machine. confirm the individual parts have been completed involving safety precautions noted, especially for the security-conscious place.

2. Environmental safety:

   Machine installation location must be noted that the following matters:

(1). Placed machinery and working environment must maintain adequate air circulation.

(2). Select appropriate test probe to regularly test the work environment.

(3). Ensure installation and operation in accordance with the provisions of healthy environment.

(4). The machine must use within the range of ambient temperature 0 ~ 50 ℃ and 20 ~ 85 % RH.

3. Operation safety:

(1). Operation should be under the correct way, especially when the shoe last which locating the last supporter is fixed, hands should leave lasts.

(2). In the lasting process, you can not touch any parts.

(3). Do not overload operation, to avoid danger.

(4). When servicing, either the operator or other personnel can neither makes mechanical acts.

(5). When the operator must temporarily leave machine, turn off the power switch to prevent others from improper operation.

(6). The operator is required to ascertain the location of the emergency stop switch, and quickly press the switch to stop the machinery, to avoid machinery and personnel injury.

(7). Non-touch gluing rods and injector during operation to avoid burns.

(8). Forbid to touch pincer in the operation, to avoid clamping injury.

4. Precaution before operation:

(1). Confirm whether the heel band specifications meets with the shoe last, replace it if necessary.

(2). Check the wiper width, shape whether match heel shape, replace wiper if necessary.

(3). Distance of supporter height and wiper should be thickness of the upper plus lining.

(4). Side presser should be slightly below insole which on shoe last.

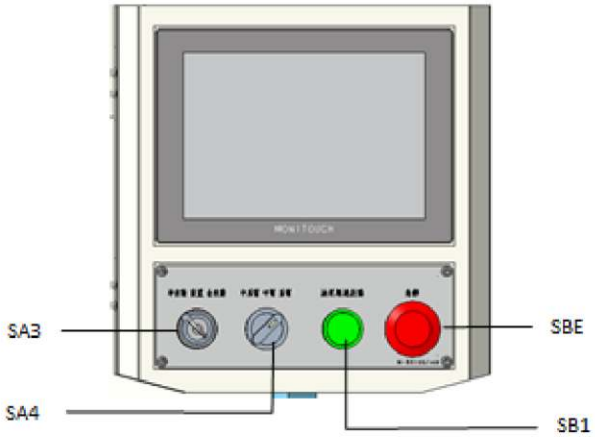
(5). Side gluing position is required convergence of toe and heel lasting.

(6). The machine is suitable for hole-type plastic lasts and aluminum last, it is not suitable for two section type last curved towards the bottom.

(7). Please notes the matching effect of the upper and last when using this machine, and if the gap is too wide between the upper and last, even machine can be overcome after adjusted, but after pulling the shoes last for a period of time, there may happen distortion.

- Mechanical function introduction

- Function description of upper right control box panel:



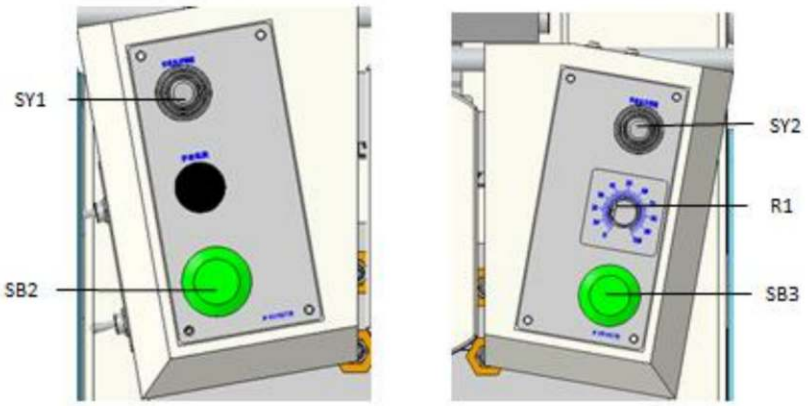

SA3: key selection switch, used to switch the working mode of the machine, select the left machine to work in semi-automatic mode, select the right machine to work in full automatic mode, and select the middle machine to work in semi-automatic mode, but the machine stops working when it is finished. This function is mainly used for debugging the machine.

SA4: three section selection switch, used to select the action of the machine. the machine works for heel and side lasting at the same time when turn the key to left, machine works for side lasting when turn the key in center position, and the machine works for heel lasting when turn the key to right.

SB1: button switch, press the switch to start the oil pump motor, and the indicator lighting.

SBE: emergency stop switch, press the switch to stop the oil pump motor, and the machine stops all actions.

**Function description of left and right operation box panel:**




SY1: cross switch, used to adjust the up and down position of left pincer, the pincer will descends and release the upper when toggle the switch to the left, the pincer raise and tighten the upper when toggle the switch to the right.

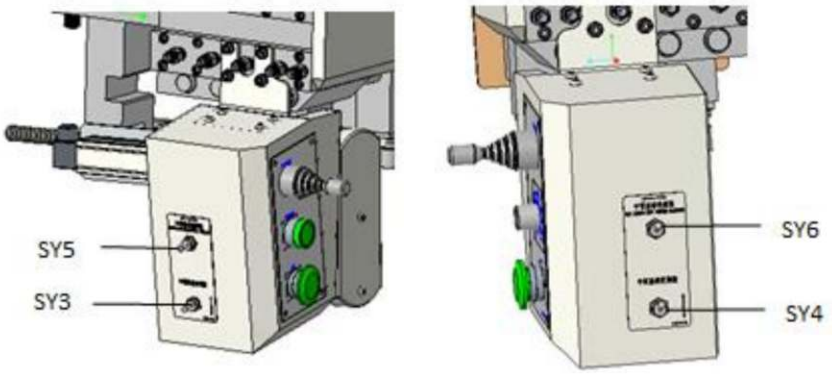
Sy2: cross switch, used to adjust the up and down position of the right pincer, the pincer descends and release the upper when toggle the switch to the right, the pincer raise and tighten the upper when toggle the switch to the left.

R1: potentiometer, used to adjust the heating temperature of the wiper, clockwise adjust the heating temperature of the wiper to be high, otherwise, the heating temperature of the wiper is low.

SB2: button switch, used in the semi-automatic mode. When the foot start switch is pressed and released in the semi-automatic mode, it is simultaneously pressed with the start switch on the right side. The machine continues the rest of the action, and the foot start switch is invalid at this time.

Sb3: button switch, used in the semi-automatic mode. When the foot start switch is pressed and released in the semi-automatic mode, it is pressed at the same time as the left start switch. The machine continues the rest of the action. At this time, the foot start switch is invalid.

Function description of left and right operation box panel:



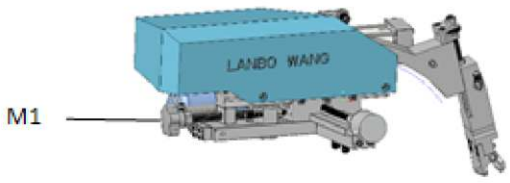

Sy3: button switch, used to adjust the angle of base of the left side lasting, the angle rises when toggle frontwards, the angle descends when toggle backward.

Sy5: button switch is used to adjust the front and rear positions of left base of the side lasting, the base of side lasting forward when toggle the switch forwards, the base of side lasting backward when toggle the switch backwards for adjust the distance between the wiper and the first finger. It can only be adjusted when the key switch is switched to the setting gear.

Sy4: button switch, used to adjust the angle of the base of the side lasting, the base of side lasting forward when toggle the switch forwards, the base of side lasting backward when toggle the switch backwards (this function is only available for electric adjustment models).

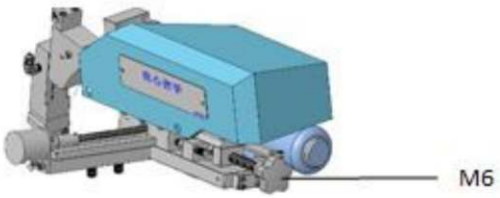
Sy6: button switch is used to adjust the front and rear positions of right base of the side lasting, the base of side lasting forward when toggle the switch forwards, the base of side lasting backward when toggle the switch backwards for adjust the distance between the wiper and the first finger.

**Description of other adjustment functions:**

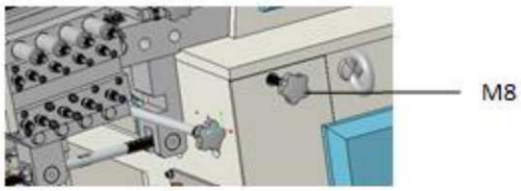



M1: hand wheel adjustor, the left pincer move outwards when clockwise adjusting, otherwise move inwards.


M3: hand wheel adjustor to adjust the width of the heel band. Turn it clockwise to decrease the width, otherwise it will increase the width.

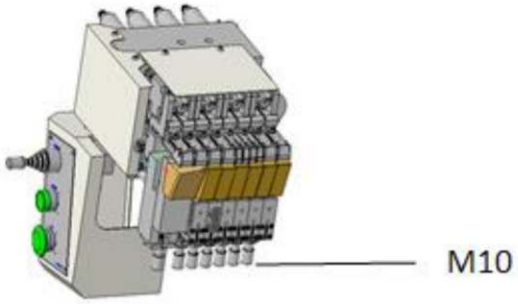



M6: hand wheel adjustor, the right pincer move outwards when clockwise adjusting, otherwise move inwards.

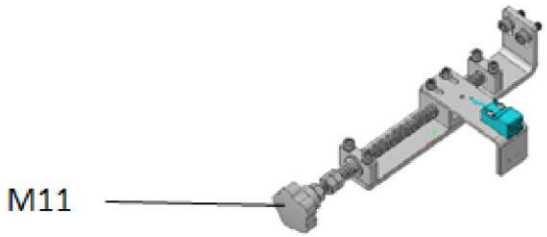



M8: hand wheel adjustor, to adjust the front and gear position of the heel band, rotate clockwise, keep the heel band close to the operator, otherwise, keep away from the operator.

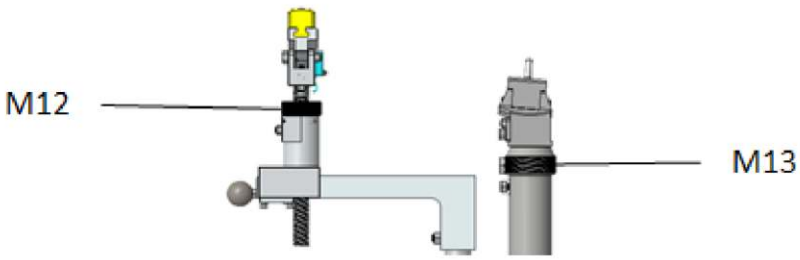

M9: hand wheel adjustor, to adjust the lowering position of the positioning rod, rotate clockwise, the position is lower, and vice versa.




M10: adjusting screw, rotate clockwise, the position of the rubber finger block will rise, otherwise it will descends.



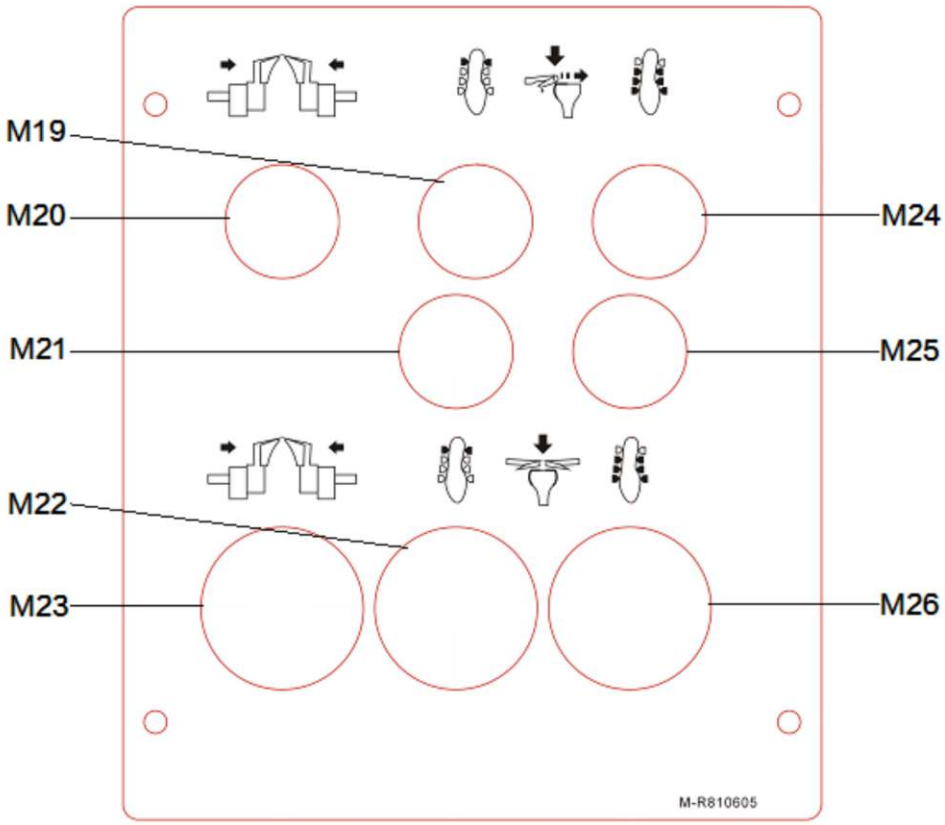

M11: hand wheel adjustor to adjust the the stop point of the internal pull of the last supporter, rotate clockwise, the internal pull distance is longer, otherwise it is shorter.




M12:adjusting screw nut, rotate clockwise, and the position of the auxiliary supporter will be raised, otherwise it will be lowered.

M13: adjusting screw nut, rotate clockwise, and the height of the last supporter will rise, otherwise it will descends.

**Left lower adjustment panel function description**




M19: Pressure regulating valve, used to adjust the lower pressure of first finger press, clockwise adjust, the pressure increases, whereas the pressure decreases (general pressure 3-8 Kg).

M20: Pressure regulating valve, use for low pressure of side press, clockwise adjust, the pressure increases, whereas, pressure decreases (general pressure 5-15Kg).

M21: Pressure regulating valve, use for adjust the high pressure of first finger press, clockwise adjust, the pressure increases, whereas the pressure decreases (general pressure 25-40Kg).

M22: Pressure gauge, used to show the first finger pressure.

M23: Pressure gauge, used to display pressure of side press.

M24: Pressure regulating valve, used to adjust the low pressure of second. third. fourth fingers press. down pressure low pressure pressure, clockwise adjustment pressure increases, and vice versa, pressure decreases (general pressure 3 - 8 Kg).

M25: Pressure regulating valve, used to adjust the second. third. four finger down pressure pressure pressure, clockwise adjustment pressure increases, and vice versa, pressure decreases (general pressure 25 - 40Kg).

M26: Pressure gauge, used to display the pressure of the second, third and fourth fingers.

- **Introduction of Man-Machine Interface**

After turn on the machine, the company's trademark will appear on the man-machine screen first.

**Home page, Language page**


**Press this key enter the function page**

**Function page**


①Commonly used adjustments: Press this key to enter the commonly used adjustment page.

②Switch selection: Press this key to enter the switch selection page.

③Pincer settings: Press this key to enter the pincer Settings page.

④Time settings: Press this key to enter the time settings first page.

⑤Shoe type call: Press this key to enter the shoe type call page.

⑥Machine detection: Press this key to enter the output detection first page.

Glue arm return: Press this key to switch the glue arm out for the operator to glue when used, and then press this key then the glue arm back.


Language: Press this key to return to the home page.

**Common adjustments**


1: Used to show production output.

2: Press this button for 3 seconds to clear the current output.

3: Pressing this key will pop up the keyboard for adjusting the time when the machine pressed the shoes. The longer the numerical value is, the general time for gluing is 30 (that is, 3 seconds).

4: Press this key: Open or close the cycle action, yellow is closed.

5: Press this key to pop up the keyboard for adjusting the opening position of the rubber nozzle when gluing. The value large, the side lasting start late, adjusted according to the size of shoes.

6: icon of side lasting Rubber Nozzle Open.

7: icon of side lasting finger pressure.

8: Pressing this key will pop up the keyboard for adjusting the time of side pressing shoes , pressing longer the numerical value is large, gluing is generally 30 (that is, 3 seconds).

9: icon of start point of heel lasting.

10: Pressing this key will pop up the keyboard for adjusting the heel lasting start position. It is far between wiper and this position when the number setting large, and vice versa. It is usually set to 10-15mm.

11: the icon of gluing nozzle when nozzle stop work.

12: Pressing this key will pop up the keyboard for adjusting the stop position of the gluing nozzle after completion of work. The value larger is close to the operator, otherwise is far, generally set to 80-100mm.

Function sheet: Press this key to jump to the Function sheet page.

**The choose page of switch**


Pull low pressure: press this button to switch to pull high pressure, press this button to switch twice pull high pressure or low pressure.


Tightening Low pressure Press this key to switch to Tightening High pressure. Press this key to switch the Tightener to clamp the upper by High pressure or Low pressure.


Secondary pressing tightening: press this key to switch to the second pressing tightener to loosen, press this key to switch the tightener to loosen or clamp during the second pressing.

Normal tightening: Press this key to switch to delayed tightening. Press this key to switch the tightener to tighten after the second drawing or after the pincer pulling.


Positioning once: Press this key to switch locating 1st time action or 2nd time actions.


pincer positioning: Press this key to switch to pincer positioning, press this key to switch pincer positioning at the highest or lowest point in standby condition.


Pincer off: Press this key to switch the pincer start action or the pincer off action.


Press this button to switch the high-pressure or low-pressure action.


Wiper wiping once: Press this key to switch the Wiper wiping once or twice.


One finger group back closure: Press this key to switch the first group of fingers back to open or close (when the first group of fingers is launched, the first finger back to delay time, then the wiper work, when switch off, the wiper and the first group of fingers simultaneously launched).


Function sheet: Press this key to jump to the Function sheet page.


Next page: Press this button to jump to the switch selection page 2.

## Switch selection page 2


First finger low pressure: Press this key to switch the first group of finger pressing by high pressure action or low pressure action.


Second finger low pressure: press this key to switch the second, third and fourth groups of finger pressing by high pressure action or low pressure action.


Second finger closure: Press this key to switch two groups of fingers to open or close, while opening or closing the corresponding edge-holding block (three or four groups of fingers can be opened only when the third ,fourth or fourth group of fingers are started).


3rd group finger closure: Press this key to switch three groups of fingers to open or close, while opening or closing the corresponding edge-holding block (when two groups of fingers open this key is useful, when the fourth group of fingers open it).


4th group Fingers Close: Press this key to switch the fourth group of fingers to open or close, while opening or closing the corresponding edge-holding block (it is useful to open this key when two and three groups of fingers open).


Finger Vibration Switch: Press this button to switch the finger down pressure vibration pressure or continuous pressure.


Heating closure of glue feeding: Press this button to switch the heating opening or closing of the spray nozzle.


Glue feeding closure: Press this key to switch the glue feeding action to open or close.


Bottom positioning closure: Press this key to switch the bottom positioning mechanism to open or close.


Semi-automatic two-stage: according to this key to switch semi-automatic work machine is

divided into two-stage work or three-stage work.


Previous page: Press this button to jump to the selection switch first page.


Function sheet: Press this key to return to the Function sheet page.

## PINCER SETTING PAGE


自动内外腰 切换开关关闭 Automatic inside and outside waist switching switch off: press this key to switch inside and outside waist switching function on or off.

外腰爪子夹紧 使用 External waist pincer clamping use: Press this key to switch the external waist claw action to use or close action.

Pincer inner waist pull-up timer: Press this key to display the digital part of the pop-up keyboard for input parameters, the larger the number, the longer the pull-up distance on the claw, otherwise reduce the pull-up distance, generally set to 10-20 (10 equals 0.1 seconds).

pincer outer waist pull-up timer: Press this key to display the digital part of the pop-up keyboard for input parameters. The larger the number, the longer the pull-up distance on the claw. Conversely, it reduces the pull-up distance, which is generally set to 10-20 (10 equals 0.1 seconds).

pincer pull-in timer: Press this key to display the digital part of the pop-up keyboard for input parameters, the larger the number, the longer the claw pull-in distance, otherwise reduce the pull-in distance, generally set to 20-30 (20 equals 0.2 seconds).

功能表 Function sheet: Press this key to return to the Function sheet page.

**Time setting 1st page**



束紧计时

Tightening Timing: Press this button to display the keyboard at the digital position for input parameters. The larger number, the last supporter is more closer, the tighter delay. On the contrary, the shorter the secondary tightening distance and the tightening is earlier, generally set to 2-4 (2 is equal to 0.2 seconds).


一指回延时

1st group finger back delay: Press this key to display the digital part of the pop-up keyboard for input parameters. In the switch selection 1st group finger back switch opens, the larger number , upper press timing longer, and vice versa. It is generally set to 10-20 (10 is equal to 1 second. Wiper does not work until turn on this function).


擦胶延时

Glue delay: Press this key to display the digital part of the pop-up keyboard for input parameters. The larger the number, the longer the nozzle stays at the nozzle start position. Conversely, reduce the nozzle stays time, generally set to 2-5 (2 is equal to 0.2 seconds).


压边计时

edge pressing timing: Press this key to display the digital part pop-up keyboard for input parameters. The larger the number, the later the push-out time is delayed after the edge press is pulled on the claw. On the contrary, the blank holder advance is generally set to 0-3 (2 equals 0.2 seconds).


送胶计时

Timing of rubber feeding: Press this button to display the keyboard at the digital part for input parameters. The bigger the number, the longer the rubber feeding, and vice versa, reduce the length of rubber feeding, generally set to 30-40 (30 is equal to 3 seconds).


扫刀计时

Sweeper timing: Press this button to display the keyboard at the digital part for input parameters. The larger the number, the later the sweeper is launched. On the contrary, the sweeper is launched ahead of time, generally set to 1-5 (1 equals 0.1 seconds).


鞋号储存

Shoe size storage: Press this button to jump to the shoe type storage page.


功能表

Function sheet: Press this key to jump to the Function sheet page.


下一页

Next page: Press this button to jump to Time Settings page 2.



爪子延时放

Pincer Delay Opening: Press this button to display the digital part of the keyboard for input parameters. The larger the number, pincer delayed opening and rising. On the contrary, the pincer opened and rose earlier, generally setting 2-5 (2 equals 0.2 seconds).


胶嘴张开延时

Late opening of gluing nozzle: Press this key to display the digital part of the pop-up keyboard for input parameters. Gluing nozzle open delay when the number set large. and vice versa, the opening time of the rubber nozzle will be reduced.


撑台后退计时

Last supporter Timing: Press this button to display the digital part of the pop-up keyboard for input parameters. The distance increase of last supporter back when the number set large, and vice versa, reduce the backing distance, generally set 3-8 (3 is equal to 0.3 seconds).


压边回延时

Edge return delay: Press this key to display the digital part pop-up keyboard for input parameters. The bigger the number, the edge holding time is longer after the finger is pushed out. Conversely, it reduces the holding time, which is generally set to 5-15 (5 is equal to 0.5 seconds).


手指加压延时

Finger Pressure increase Delay: Press this key to display the digital part pop-up keyboard for input parameters. The finger press for down press second time delay after once press, On the contrary, the finger downward earlier second time. usually set to 2-5 (2 equals 0.2 seconds).


撑台下沉计时

Timing of last supporter descends: Press this key to display the keyboard popping up at the digital part for input parameters. number is large, the descending distance of the last supporter increases when recover. Conversely, it reduces the distance, generally set to 3-8 (3 is equal to 0.3 seconds).


内腰擦胶位置

Inner waist gluing position: Press this key to display the digital part pop-up keyboard for input parameters. The number large, the switching action of inner waist of gluing nozzle delay. On the contrary, the switching action in advance, usually set to 30-50 (30 is equal to 30 mm), depending on the shoe type.

鞋号储存 Shoe size storage: Press this button to jump to the shoe type storage page.

功能表 Function sheet: Press this key to return to the Function sheet page.

上一页 Previous page: Press this button to jump to the time setting page.

## Shoe Storage


A-J: Used for switching the storage shoe type group, each group can store 20 different types (the location shows blue).Please enter the last model: press the blue box on the right to pop up the keyboard for the last model.

1-20: Press the blue box on the right to select the location where you want to store shoes.

鞋型存储 Shoe Storage: Pressing this key will jump to the confirmation page of shoe storage.

功能表 Function sheet: Press this key to return to the Function sheet page.

## Shoe type invocation


A-J: Used for switching the storage shoe type group, each group can store 20 different types (the location shows blue).

Shoe Shape: The blue frame of the edge compress is used to show the current shoe shape.

1-20: Press the blue frame on the right to select the shoe type location to call (invocation only when stored well).

调用确认 invocation confirmation: Press this key to execute the call (after choosing the body code, press this key to execute the call).

功能表 Function sheet: Press this key to return to the Function sheet page.

## MACHINE TESTING


This page is for maintenance personnel to test. Press the switch and display OFF to indicate that the switch has no signal input. Display ON to indicate that the switch has signal input.


Function sheet: Press this key to return to the Function sheet page.


Next page: Press this key to jump to the first page of output detection.


This page is force output list. It could force each part acting. So should be careful.

: press this for last supporter pull close with low pressure.

: press this for last supporter pull close with high pressure.

: press this for location rod descend and outward.

: press this for location rod ascend and retreat.

 : press this for last supporter ascends.

 : press this for last supporter descends.

 : press this for last supporter retreat.

 : press this for heel bend tightens with low pressure.

 : press this for heel bend tightens with high pressure.

 : press this for left pincer descends.

 : press this for right pincer descends.

 : press this for pincer close.

 : press this for left pincer ascends.

 : press this for right pincer ascends.

 : press this for left pincer inner pulling.

 : press this for right pincer inner pulling.

 : press this for left pincer inner pull back.

 : press this for right pincer inner pull back.

 : press this for edge compress with high pressure.


：press this for 1st group edge compress.



：press this for cement feeding arm push outward.


：press this for 4th group machine’s finger push outward.


：press this for 2nd,3rd,4th group machine’s finger push with low pressure.


：press this for cement feeding arm descends.


：press this for 2nd edge compress.


：press this for 3rd group machine’s finger push outward.


：press this for cement feeding arm retreat.


：press this for all machine’s finger retreat.


：press this for wiper wiping outward.

 ：press this key, the cement arm ascends.

 ：press this for 3rd edge compress.

 ：press this for 1st group machine's finger push with low pressure.

 ：press this for 1st group machine's finger push outward.

 ：press this for 1st group machine's finger push with high pressure.

 ：press this for wiper retreat.

 ：press this key, the cement arm ascends。

 ：press this for 4th edge compress.

 ：press this key, the last supporter ascends。

 ：press this for 2nd group machine's finger push outward.

 ：press this for 2nd,3rd,4th group machine's finger push with high pressure.

 ：press this key, the last supporter descends。

 ：press this for cement feeding, and the injector open.

 ：press this for injector open.

- Mechanism adjustment instruction

(1). The positioning rod adjustment description:

Positioning rod is used to control the height of last supporter, due to the size of shoe last, and height are different, so shall adjust the hand wheel to adjust the positioning height of the positioning rod. When the last supporter is positioning should be noted that the heel height should be lower than wiper's edge, about the distance of upper + lining + material.

(2). Last supporter adjustment description:

As the last and heel height is inconsistent, so last supporter height adjusting by adjusting nut, that will be adjusted a proper height of positioning rod.

(3). the auxiliary supporter adjustment description:

Auxiliary supporter height shall be adjusted by the adjusting nut, aimed at making the last parallel with the wiper, so that wiper wiping easily. front and rear position of auxiliary supporter, subject to adjustment by the positioning seat to support different lengths of shoe lasts.

(4). Pincer mechanism adjustment description:

Front and rear, height position of pincer, controlled by a hand wheel.

(5). Heel band description:

Heel band width adjustment shall be adjusted by the left and right sides of the hand-wheel. Front and rear position to be adjusted by the hand wheel, it is better about 3mm from wiper's edge.

(6). Side lasting mechanism description:

Side lasting "finger" bottom height must be slightly lower than shoe last, its height is controlled by the adjustment screw. Side lasting "finger" press can tighten upper without relaxation, its pressure is adjusted by the pressure regulating valve (A24, A25). When producing a smaller shoe, the rubber "finger "apparently too long, this time to turn off the switch which control the hydraulic cylinder through the switch selection page on the man-machine interface.

(7). Gluing mechanism adjustment description:

Hot melt adhesive melting temperature is about 225 ℃, if you need more dilute melt may through appropriate to enhance the temperature, but also note that the temperature can not too high, appropriate temperature is about 230 °C ~ 240 °C. gluing length shall be depend on the shoe last and adjust through the 3rd timer page of human-machine interface. Injector open speed can not too fast, glue will be fixed the adjustment by the throttle valve. Use automatic gluing should first heat injector until the thermostat reaches 230D °C ~ 240 °C

and then send hot melt with small amount by the manually switch (A15) for several times, if no glue out, to check hot melt whether is deformation or stuck, automatic cementing until hot melt could be output.

- Operation introduction

(1). Semi-automatic operation mode, heel and side lasting, choose automatic cementing mode.

1 · step left foot pedal then leave.
↓
2 · last supporter pull in.
↓
3 · positioning rod descends.
↓
4 · last supporter ascends and reach the positioning rod then stop ascends.
↓
5 · positioning rod ascends.
↓
6 · last supporter low pressure press 2nd time or with high pressure pull in.
↓
7 · heel band tighten with low pressure or with high pressure.
↓
8 · pincer clamps.
↓
9 · pincer pull upward.
↓
10 ·step left foot pedal then leave.
↓
11· the side lasting “finger” push out.
↓
12 ·pincer open.
↓
13 ·pincer ascends.
↓
14 ·injector pull inward.
↓
15 ·injector descends.
↓
16 injector open.
↓
17 ·injector gluing forward.
↓
18 ·gluing stroke end point.
↓
19· side lasting “finger” push out.
↓

20 ·injector close, ascends.

↓

21 ·injector retreat.

↓

22 ·side lasting 1st group “finger” retreat.

↓

23 ·wiper push out.

↓

24 ·compress piece retreat.

↓

25 ·side lasting 2nd ,3rd, 4th group” finger press with high pressure or low pressure.

↓

26 ·last supporter ascends with high pressure

↓

27 ·pressing timer timing out, all mechanism retreat.

(2). Automatic sequence, heel and side lasting, choose automatic cementing mode:

1 ·step foot pedal then leave.

↓

2 ·last supporter pull inward.

↓

3 ·positioning rod descends.

↓

4 ·last supporter ascends reach positioning rod then stop ascending.

↓

5 ·positioning rod ascends.

↓

6 ·last supporter pull inward with low pressure or high pressure.

↓

7 ·heel band tighten with low pressure or high pressure.

↓

8 ·pincer clamps.

↓

9 ·pincer pull upward.

↓

10· side lasting “finger” push out.

↓

11 ·pincer open.

↓

12 ·pincer ascends.

↓

13 ·injector pull inward.

↓

14 ·injector descends.

↓

15 ·injector open.

↓

16 ·injector forward to gluing.

↓

17 ·gluing to end point.

↓

18· side lasting “finger” push out.

↓

19 ·injector close, ascends.

↓

20 ·injector retreat.

↓

21 ·side lasting 1st group “finger” retreat.

↓

22 ·wiper push out.

↓

23 ·compress edge retreat.

↓

24 ·side lasting the 2nd, 3rd, 4th group “finger” press with high pressure or low pressure.

↓

25 ·last supporter 2nd time ascends with high pressure.

↓

26 ·pressing timer timing out, all mechanism retreat.

## ● MACHINE MAINTENANCE

The operator's responsibility is to carefully operating this machine, and perform general cleanup and maintenance, maintenance scope and time in accordance with the following status, please do maintenance in accordance with this standard, there are many advantages, keep the machine and the environment clean and more stable for mechanical function, most cleaning work should be done by for each shift staff, if the adverse matter occurs in the operation during the production process of a shift , should be shut down to wait for a full-time maintenance staff to deal with.

Usual maintenance：

| step | Maintenance matter | Mechanism position | Mechanism method |
|---|---|---|---|
| 1 | Lubrication of wiper sliding seat | Grease fitting of sliding seat | Fill grease |
| 2 | Clean of sliding wiper seat | wiper sliding seat | Clean out the clutter |
| 3 | Clean of last supporter | Last supporter | by compressed air nozzle to clean clutter |
| 4 | Clean of machine bottom | Machine’s bottom | by compressed air nozzle to clean clutter |
| 5 | Machine’s surroundings | Machine’s surroundings | To clean the floor |
| 6 | If enough oil in the tank | Oil tank Inner | Oil level should be 70%~90% of the oil tank. |
| 7 | Oil leakage | Hydraulic parts | Check if oil leak, and nock the oil nozzle. |
| 8 | Noise inspection | Whole Machine | To check when quiet surrounding |
| 9 | F.R.L | Right side of machine | Drain water, and fill oil for oil cup. |

Maintenance every month：

| step | Maintenance matter | Mechanism position | Mechanism method |
|---|---|---|---|
| 1 | Rotary axis of last supporter | The bottom of last supporter | Fill grease |
| 2 | Bottom board of wiper | Rear of heel band | Apply butter for Friction surface |
| 3 | Side lasting seat | Sliding surface of side lasting seat | Apply butter for sliding surface |
| 4 | Hydraulic oil | Inner of oil tank | Check lubrication of the oil by hand, if has sediment in bottom, so have to replace hydraulic oil. |

Maintenance every season

| step | Maintenance matter | Mechanism position | Mechanism method |
|---|---|---|---|
| 1 | Clean the oil filter | Inner of the tank | Clean by diesel, and use compressed air blow dry |
| 2 | Hydraulic oil | Inner of the oil tank | Same above |
| 3 | Parts adjustment | Machine’s parts | Inspect for each action |

Maintenance every year：

| step | Maintenance matter | Mechanism position | Mechanism method |
|---|---|---|---|
| 1 | Replace hydraulic oil | Oil tank | After 6months for new machine, one time one year for used machine. |

| | | | |
|---|---|---|---|
| 2 | Oil, electricity, air inspection | All in machine | Contacts status, each part insulation, clean the whole system surface. |
| 3 | Parts adjustment | Machine's parts | Inspect for each action |

- Troubleshooting

| |
|---|
| When a fault occurs in the use of mechanical, solution is to check circuit, oil way, air and parts of machine, listed below are prone to failure and simple troubleshooting, such can not be dealt with, shall immediately contact our company or technical staff. |

| SEQ | trouble | Probable cause | Solution |
|---|---|---|---|
| 1 | Motor not running | 1 • Power disconnection or lack phase.<br>2 • Power switch is damaged.<br>3 • motor coil burnt.<br>4 • fuse or no fuse switch burned trips.<br>5 • electromagnetic switch of motor overload trips. | 1 • use a three-phase meter to check power wire.<br>2 • replace it.<br>3 • replace it.<br>4 • First test with the meter if not short circuit, then replace it or reset.<br>5 • Reset after investigation no short circuit. |
| 2 | Motor still running but machine not work | 1 • Motor reversed.<br>2 • key for connect the motor and pump are damaged, loss, damage or square keyway are damaged.<br>3 • foot switch is broken or contacts damaged. | 1 • Replace the motor turning (interchange any two of the power cord).<br>2 • Replace or check the square key, if keyway damaged, shall replace the motor and pump.<br>3 • repair foot switch and contacts. |
| 3 | Last supporter not pull inward | 1 • foot switch failure.<br>2 • Solenoid valve failure.<br>3 • improper pressure adjustment. | 1 ·check circuit or replace<br>2 ·repair or replace<br>3 ·re-adjust pressure |
| 4 | Injector can not open | 1 Solenoid valve failure.<br>2 ·valves improper adjustment | 1 ·repair or replace<br>2 ·re-adjust flow |
| 5 | Positioning rod not work | 1 ·proximity switch failure<br>2 Solenoid valve failure. | 1 repair or replace<br>2 repair or replace |
| 6 | Last supporter can not rise in one time completely | 1 Solenoid valve failure.<br>2 flow improper adjustment<br>3 ·improper pressure adjustment | 1 repair or replace<br>2 readjust flow<br>3 readjust pressure |
| 7 | Last supporter can not rise in 2nd time | 1 ·proximity switch failure<br>2 Solenoid valve failure.<br>3 improper pressure adjustment | 1 repair or replace<br>2 repair or replace<br>3 readjust pressure |

| | | | |
|---|---|---|---|
| 8 | Heel band not work | 1 Solenoid valve failure.<br>2 improper pressure adjustment | 1 repair or replace<br>2 readjust pressure |
| 9 | Pincer not clamp | 1 pincer switch off<br>2 Solenoid valve failure. | 1 re-set the switch<br>2 repair or replace |
| 10 | Pincer not descend | 1 pincer switch was off<br>2 Solenoid valve failure. | 1 re-set the switch<br>2 repair or replace |
| 11 | Injector not descend | 1 gluing switch was off<br>2 Solenoid valve failure. | 1 re-set the switch<br>2 repair or replace |
| 12 | Injector not forward gluing | 1 Solenoid valve failure.<br>2 throttle valve failure | 1 repair or replace<br>2 check or replace |

| SEQ | trouble | Probable cause | Solution |
|---|---|---|---|
| 13 | No glue out when gluing | 1 gluing switch was off<br>2 temperature controller was not turn on or temperature setted wrongly<br>3 ·gluing tube was blocked | 1 re-set the switch<br>2 turn on temperature controller or re-set temperature at （230 ℃~240 ℃）<br>3 check the gluing tube broken or cement block inside |
| 14 | Side lasting ”finger” not work | 1 gluing position wrongly<br>2 Solenoid valve failure. | 1 reset the gluing stroke<br>2 repair or replace |
| 15 | Wiper not work | Solenoid valve failure. | repair or replace |
| 16 | Side lasting “finger” not work with high pressure | 1 Solenoid valve failure.<br>2 improper pressure adjustment | 1 repair or replace<br>2 readjust pressure |
| 17 | Last supporter 2nd pressing not work | 1 Solenoid valve failure.<br>2 ·not contact the micro switch when wiper cylinder forward | 1 repair or replace<br>2 readjust position or repair or replace the micro switch |
| 18 | Side lasting “finger” not retreat | Solenoid valve failure. | repair or replace |
| 19 | Side lasting rubber piece not retreat | Solenoid valve failure. | repair or replace |
| 20 | Heel band not retreat | 1 spring broken<br>2 Solenoid valve failure. | 1 replace<br>2 repair or replace |
| 21 | Can not automatically work | 1 foot pedal failure<br>2 PLC failure<br>3 select operation mode wrongly | 1 repair or replace<br>2 repair or replace<br>3 re-set up |