

(MB1102J)

Instruction Manual

CHANGZHOU WISDOM & VALLEY ELECTRICAL TECHNOLOGY CO., LTD

Please read the operation manual of the touch screen interface before using the device

Please keep this operation manual of touch screen interface in convenient place for reference

Version
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Thank you for purchasing this industrial sewing machine from IMB
Before using this automatic unit, please read the following instructions, which will help you to understand how the machine operates.
These instructions illustrate the correct working methods to comply with current regulations.

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The contents of this manual may be subject to change without advance notification.

We are happy to receive suggestions and/or indications on ways we could improve this manual.

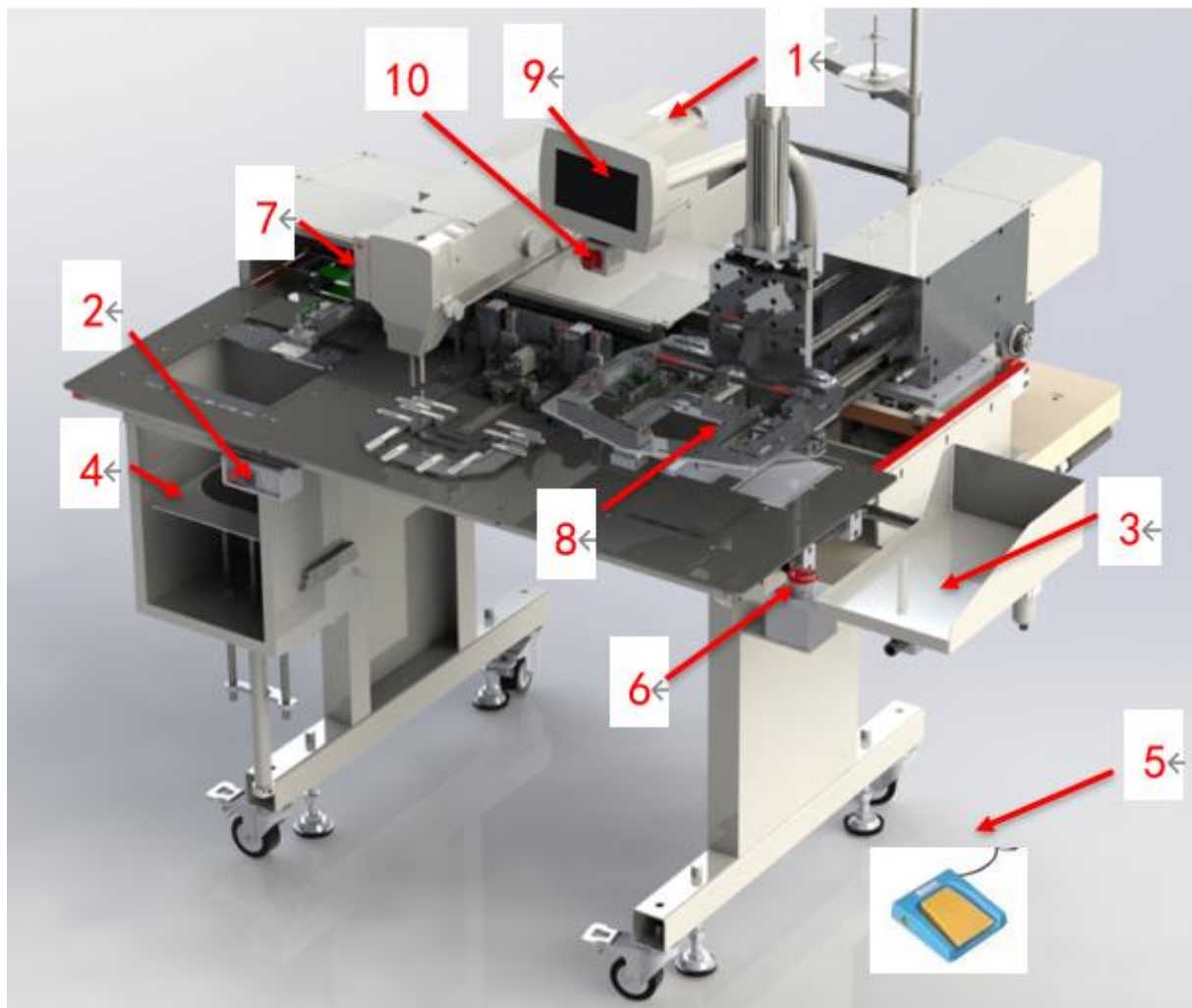
The introduction of this machine is divided into three parts. For details, please refer to 《MB1102J Operation manual》 and 《MB1102J Parts Manual》 《MB1102J Electric control system manual》

Table of contents

I. Basic Equipment Information
II. Technical Specifications
III. Safety Precautions
IV. Button Function Descriptions
4.1 Button Functions
4.2 Reset Procedures
4.2.1 Power-on Reset
4.2.2 Emergency Stop Reset
5. Operating Instructions
5.1. Pre-operation Preparations
5.2. Operating Procedure
5.2.1 Starting the Equipment
5.2.2 Reset Operation
5.2.3 Positioning the Trouser Panel
5.2.4 Pocket placement
5.2.5 Automatic material folding and sewing start
5.2.6 Power off
VI. Adjustment and Setup
6.1. Mold fine-tuning and replacement
6.1.1 Mold positioning
6.1.2 Material pickup test

VII. Electrical wiring
VIII. Optional devices
IX. Common issues and solutions
X. Daily maintenance requirements
XI. Intellectual property protection statement

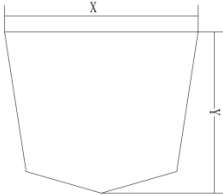
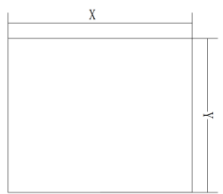
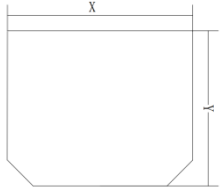
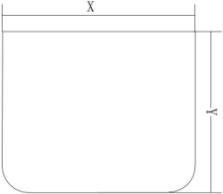
I. Basic Equipment Information



A

- 1: Sewing machine head;
- 2: Power switch;
- 3: Material feeding bin;
- 4: Material collection unit;
- 5: Foot pedal;
- 6: Start button;
- 7: Emergency stop button (on machine head);
- 8: Hemming device;
- 9: Touch screen;
- 10: Emergency stop button (hemming unit);

II. Technical Parameters of the Equipment

MB1102J Watch Strap Machine (Pattern Sewing Model)				
1	Nose configuration		IMB	
2	Maximum sewing speed /rpm		2600	
3	Operating voltage /V		220	
4	Operating air pressure /Mpa		0.5	
5	Spindle and X/Y control		Head-mounted servo motor, closed-loop stepper motor	
6	Stitch length /mm		0.05--12.7	
7	Work efficiency		6s/ piece	
8	Mold changing method		No quick mold change	
9	Equipment dimensions /mm		1500L×1165W×1400H	
10	Equipment weight /kg		150	
11	Sewing area for watch straps (length × width)		60×60mm~130×130mm;	
12	Bag-like shape	   	size	60×60mm~130×130mm;

III. Safety Precautions

Precautions for the safe use of the automated machine

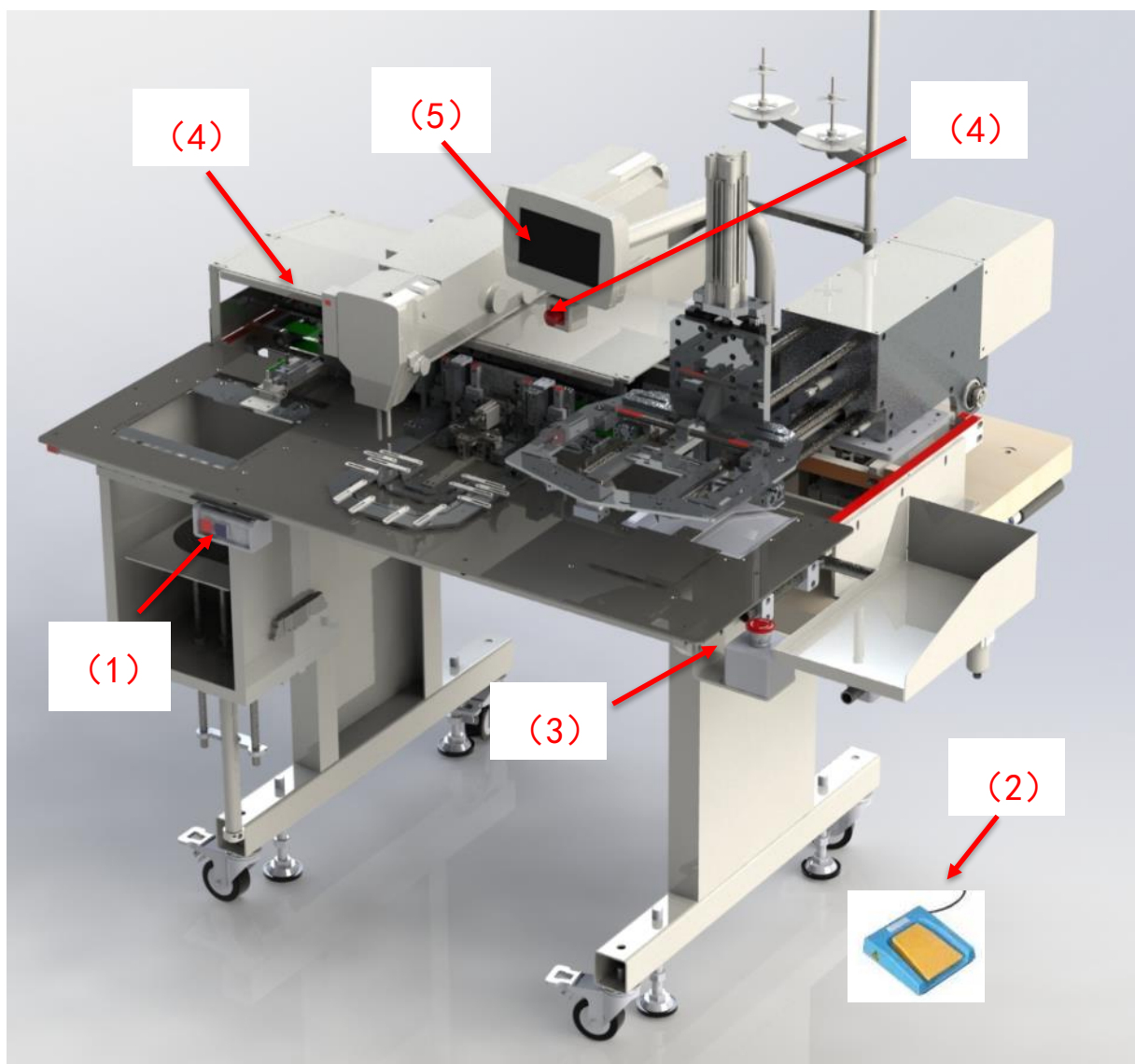
 Danger	1. To prevent accidents caused by electric shock, do not open the cover of the motor's electrical box or touch the components inside while the power is connected.
 Note	1. To prevent personal injury, do not operate the machine without safety devices such as the belt cover or finger guard in place. 2. To prevent accidents involving entanglement, keep fingers, hair, and clothing away from the pulley, V-belt, and motor while the sewing machine is running; do not place objects on or near these parts. 3. To prevent personal injury, do not place fingers near the needle when turning on the power or while the sewing machine is running. 4. To prevent personal injury, do not place fingers inside the take-up lever cover while the sewing machine is running. 5. The sewing machine operates at high speeds. To prevent hand injury, never bring your hands near the fabric cutter while the machine is running. Additionally, always turn off the power when changing threads. 6. To prevent personal injury, be careful not to get your fingers caught when the sewing machine moves up and down or returns to its home position. 7. Do not cut off the power supply or air supply while the sewing machine is running. 8. To prevent accidents caused by sudden startup, remove the fabric guide once preparations are complete and the machine is ready for sewing. 9. To prevent electric shock, do not operate the sewing machine if the power ground wire has been disconnected. 10. To prevent electric shock or damage to electrical components, always turn off the power switch before inserting or removing the power plug. 11. To prevent damage to electrical components, stop work and unplug the power cord during thunderstorms for safety. 12. To prevent damage to electrical components caused by condensation (which can occur when moving the machine from a cold to a warm environment), wait until all moisture has completely dried before connecting the power. 13. As this product is a precision machine, handle it with care; do not splash water or oil on it, and avoid dropping or subjecting it to impact. 14. This machine is a Class A industrial machine. Using it in a domestic environment may cause radio frequency interference. In such cases, the user should take appropriate measures to resolve the radio wave interference. 15. If the power switch is turned off while the stacker is operating, the stacking arm will still move; therefore, take care to avoid getting fingers or other body parts caught. 16. If the power switch is turned off while the fabric presser foot is operating, the presser foot will still move; therefore, take care to avoid getting fingers or other body parts caught. 17. When placing fingers inside the hemmer while it is operating, take care to avoid getting them caught by the air cylinder.

*Important Safety Information:

- ✓ Improper operation of the machine may result in personal injury. Please read this instruction carefully before operation and operate it correctly.
- ✓ Please ventilate the machine before putting it into official operation.
- ✓ It is strictly prohibited to open the electric control box or the internal parts of the touch screen while the power is on.
- ✓ This machine needs to be used after receiving training or under the guidance of a dedicated person to ensure the personal safety of the user.

IV. Button Function Description

4.1. Button Function Description

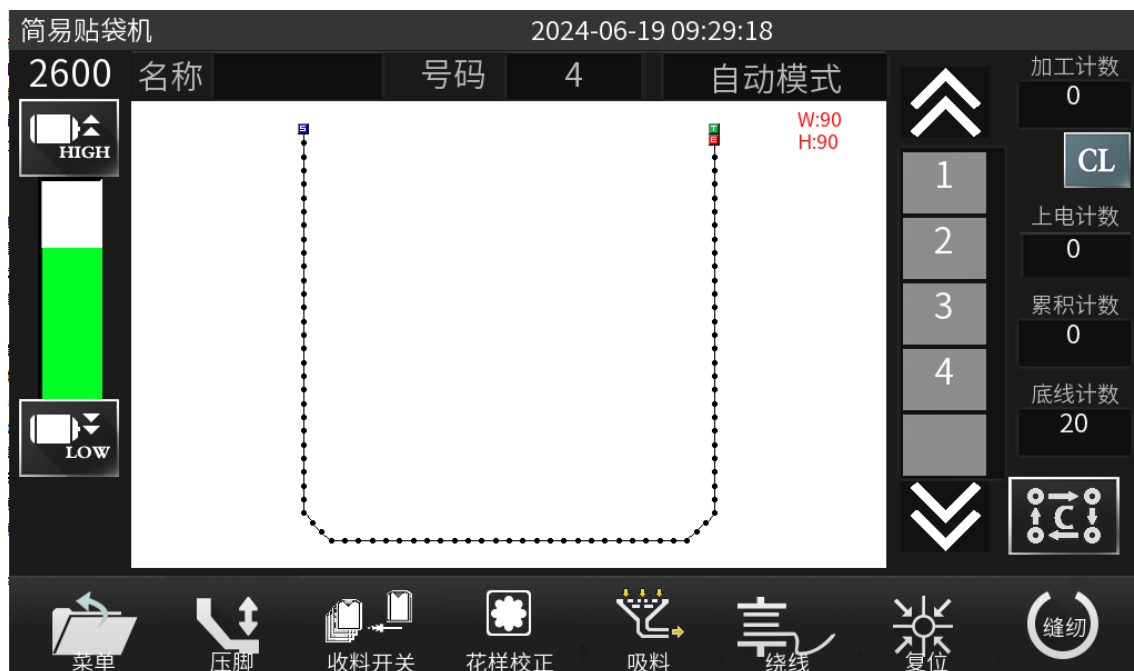


B

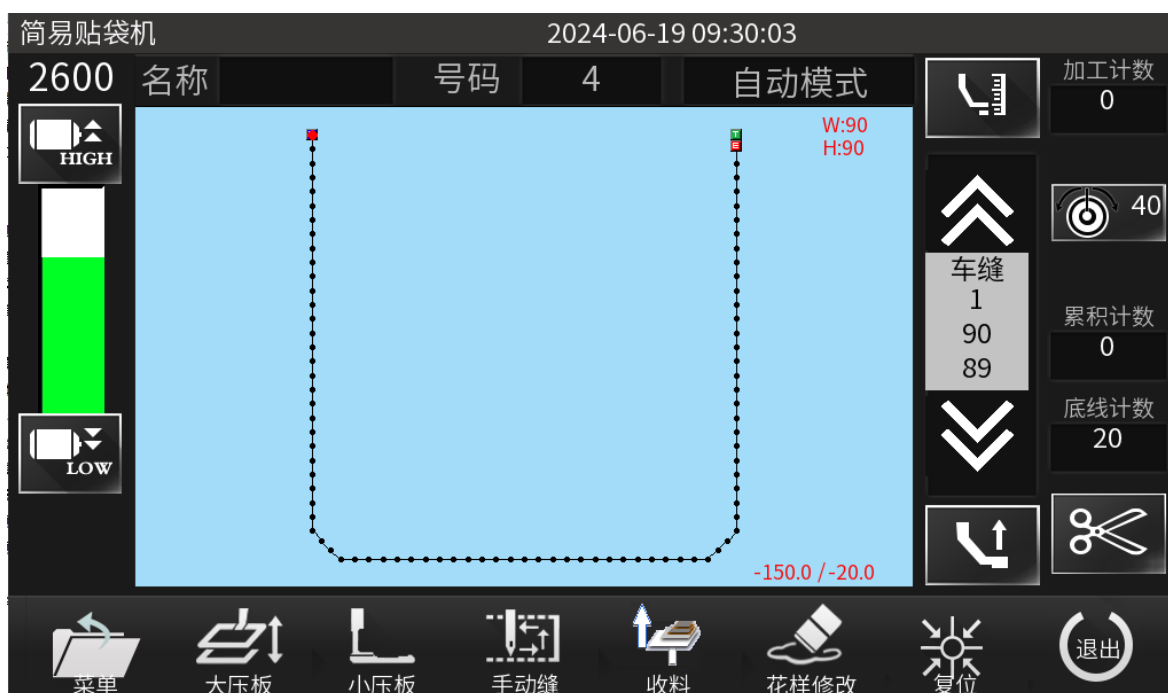
- (1): Power Switch — Press "ON" to supply power and air to the machine.
- (2): Foot Pedal — Controls the extension and retraction of the bag-shaping plate in pedal mode.

- (3): Start Switch — Press to initiate automatic sewing.
- (4): Emergency Stop Button (Right) — Emergency stop for the folding mechanism.
Emergency Stop Button (Left) — Emergency stop for sewing (integrated into the sewing head).
- (5): Touch Screen — Refer to the "MB1102J Bag-Making Machine (Pattern Sewing Model) - Interface Instructions" for details.

a: Main Interface



b: Stitching interface



4.2. Reset Instructions

4.2.1 Power-on reset operation

Step	Illustrate	Button controls
1	Power on	button 4.1- (1)
2	Reset	button 4.1-a 
3	Switch sewing mode	button 4.1-a 

4.2.2 Emergency stop reset operation

Scenario 1: Hemmer emergency stop. Reset procedure: Rotate the emergency stop switch clockwise to reset it, reposition the fabric, and then press the start switch (3).

Scenario 2: Emergency stop during sewing, reset procedure: Rotate the emergency stop switch clockwise to reset.

(1) Continue sewing: Button 4.1-b  Back up to the sewing point. —  Continue sewing;

(2) Resewing: Buttons 4.1-b  Reset.

V. Operating Instructions

5.1. Preparations before operation

- ✓ Ensure the machine head is stopped before the operator begins inspections.
- ✓ Check that the pressure plate foam is intact and undamaged.
- ✓ Verify that the sewing thread is correctly threaded.
- ✓ Confirm that the needle is properly installed.
- ✓ Clear any debris from the machine table to ensure nothing obstructs operation.
- ✓ Check the air pressure gauge to ensure it meets the machine's operating requirements.
- ✓ Verify that the eye guard is correctly installed.

5.2. Description of the operating procedure

5.2.1 Start the device

Press the "ON" button to power on the device. If the prompt "E068: Presser plate not at home position" appears, you must power off the machine and reposition the presser plate. Specifically, after powering off, shift the presser frame to the right so that the distance from the edge of the frame to the needle exceeds 40 cm, then power the machine on again.



C



D

5.2.2 Reset operation

Perform the machine power-on reset operation. Please refer to: 4.2.1-2 Power-on Reset Operation. The figure below shows the device status after the reset is complete.



Pocket-shaped plate

E

***Mode Selection:** In pedal mode, the bagging plate is retracted; pressing the pedal extends the plate and activates the suction. In automatic mode, the bagging plate is extended and the suction is active.

5.2.3 Trouser panel layout

Place the main trouser panel in the vacuum suction area, aligning it with the preset reference.

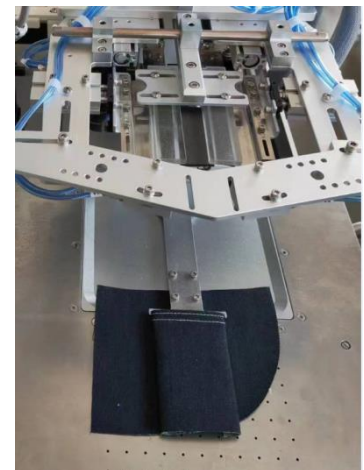
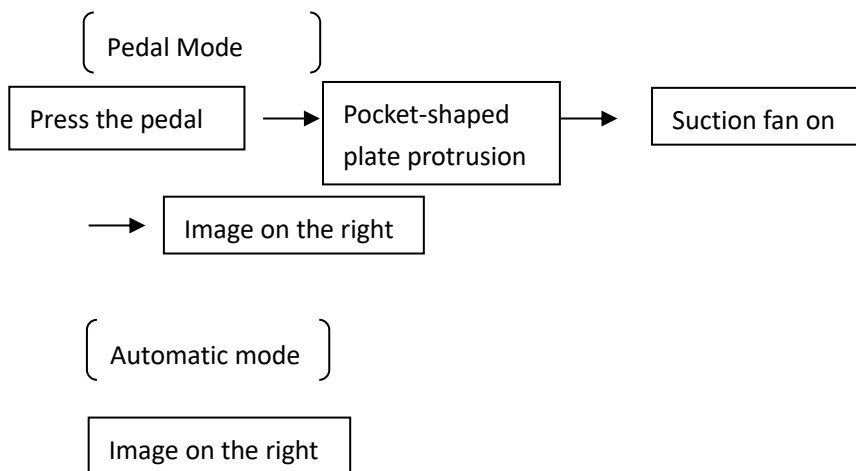


F – Pedal Mode



G – Automatic mode

5.2.4 Pocket placement



5.2.5 Automatic material folding and seam starting

H

Press the start switch on the right,  See 4.1- (3) , at this time: Flanger extends, descends; automatic folding; folding complete; telescopic pressure plate shifts right to receive the material; bag-shaping plate retracts; telescopic pressure plate shifts left for automatic sewing; sewing complete; automatic material collection.

Shift the retractable pressure plate to the left into the sewing area to position the cut pieces, then repeat the operation in sequence.

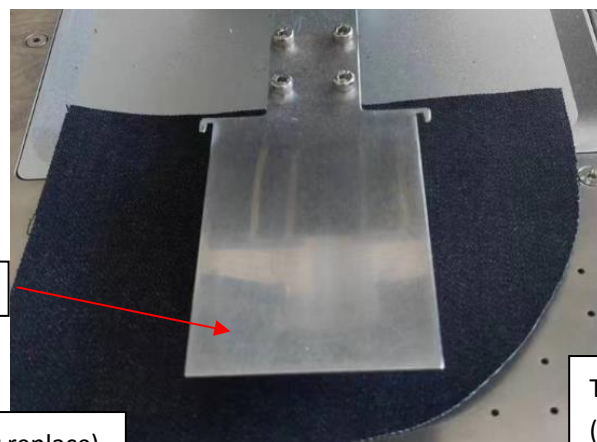
5.2.6 Shut down

Once the operation is complete, press the OFF button to turn off the device.

VI. Commissioning Methods

6.1. Mold fine-tuning and replacement

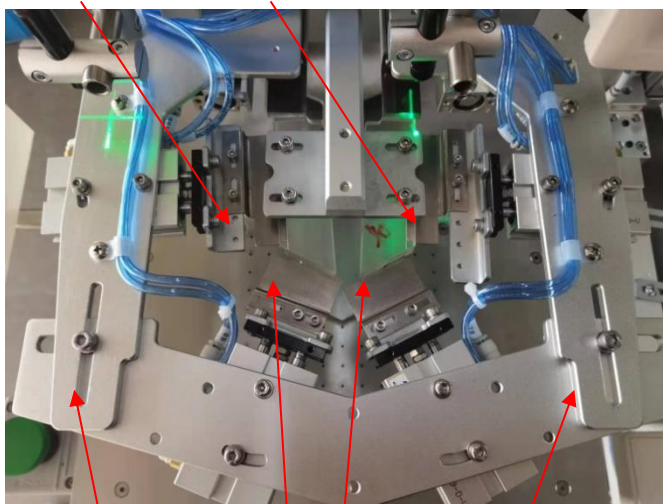
6.1.1 Mold position



Pocket-shaped plate (replacement)

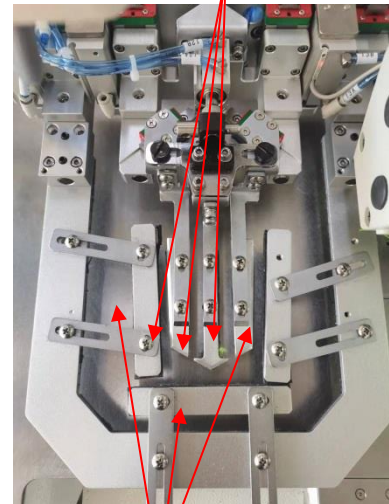
Telescopic Formwork (Replacement)

Left and right folding knives (adjust or replace)



Front folding knife (Adjust or replace)

Left/Right Folding Knife Base (Adjustable)



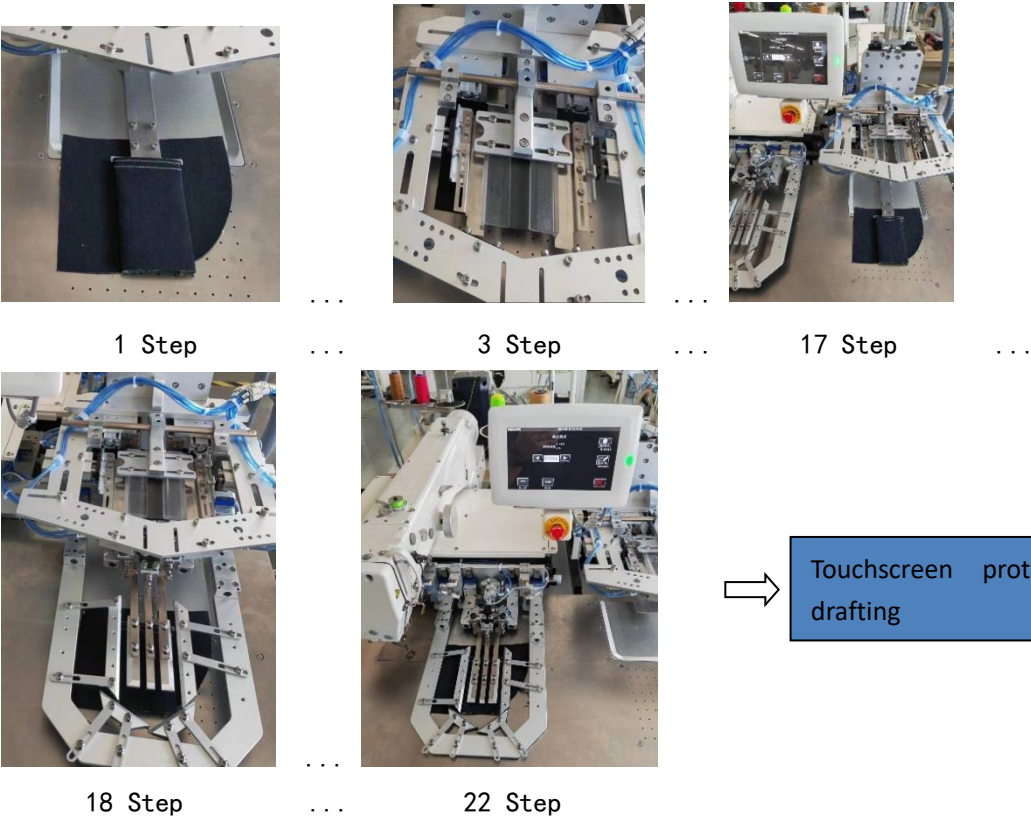
Outer Pressure Frame Adjustment Plate (Adjustment)

6.1.2 Material Sampling Test

Tap 4. 1-A Touchscreen – Main Interface A You will then arrive at the following interface:



Press "Forward" and "Backward" to check the template position and the folding effect.



***Step 18:** Press "Pick-up Calibration" on the right side to adjust the vertical and horizontal position of the pick-up pressure plate so that it aligns with the pocket.



*Step 22: Create patterns and draw designs on the touchscreen; for details, refer to the "MB1102J Watch Case Machine (Pattern Sewing Model) - Touchscreen Interface Operation Manual."



L



M

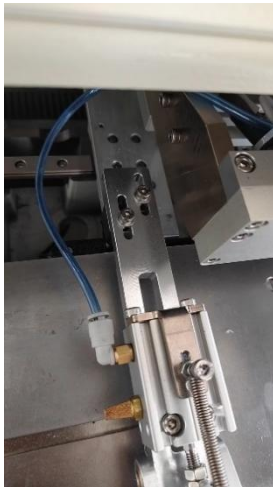
VII. Electrical Wiring.

MB1102J Watch Bag Machine (Fancy Machine) 10-Partition Table						
	Output			Enter		
N°	Name	Port number	Remark	Name	Port number	Remark
1	On pallet	J1	2-core DC24V	X origin	IN1	3-core DC24V
2		J2	2-core DC24V	Y1	IN2	3-core DC24V
3	Bag board	J3	2-core DC24V	Z origin	IN3	3-core DC24V
4	Folding material 1	J4	2-core DC24V	bag shaped board	IN4	3-core DC24V
5	Folding material 2	J5	2-core DC24V	Under the hemming machine	IN5	3-core DC24V
6	Folding material 3	J6	2-core DC24V	On pallet	IN6	3-core DC24V
7		J7	2-core DC24V	Y2	IN7	3-core DC24V
8	Small board pick and place	J8	2-core DC24V	Pedal	IN8	2 core switch
9	Small board telescopic	J9	2-core DC24V	Under the tray	IN9	3-core DC24V
10	Folding material 4	J10	2-core DC24V	On the hemming machine	IN10	3-core DC24V
11	Needle cooling	J11	2-core DC24V	Outside the folding device	IN11	3-core DC24V
12	Lift as a whole	J12	2-core DC24V	In the hemming machine	IN12	3-core DC24V
13	Receipt 3	J13	2-core DC24V	bag shaped board outside	IN13	3-core DC24V
14	After suction	J14	2-core DC24V	Jade foot in place detection	IN14	3-core DC24V
15	Auxiliary pressure plate	J15	2-core DC24V	origin	IN15	3-core DC24V
16	Fold in and out	J16	2-core DC24V	Air pressure detection	IN16	2 core
17	small platform	J17	2-core DC24V	Folding start	IN17	2 core switch
18	Fold and pick	J18	2-core DC24V	Large pressure plate	IN18	3-core DC24V
19	Suction motor	J19	2-core DC24V	Small pressure plate	IN19	3-core DC24V

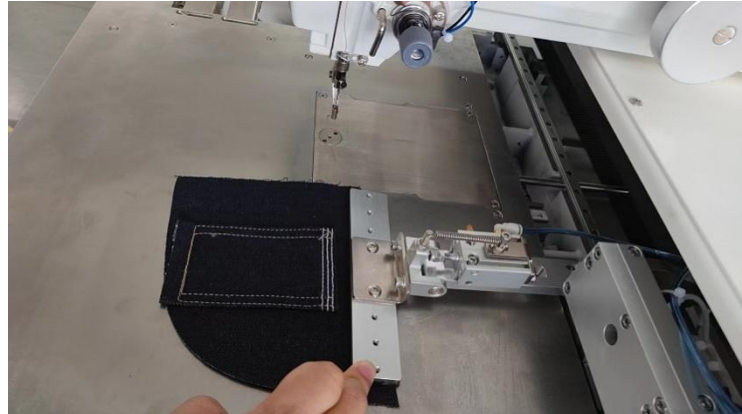
20	Raise the nose	J20	2-core DC24V	Shrink the board in place	IN20	3-core DC24V
21	Under the tray	J21	2-core DC24V	Sewing emergency stop	IN21	2 core switch
22	Rewind rotation	J22	2-core DC24V	Emergency stop for folding material	IN22	2 core switch
23	Receiving platen	J23	2-core DC24V		IN23	
24	Receiving cover	J24	2-core DC24V		IN24	
25	Suction air	J25	2-core DC24V		IN25	
26		J26	2-core DC24V		IN26	
27	Large pressure plate	M1	2-core DC24V	The whole thing is in place	IN27	3-core DC24V
28	Pull down	M2	2-core DC24V	The nose is in place	IN28	3-core DC24V
29	Thread cutting	M3	2-core DC24V	X axis alarm	Motherboard	
30	Loose line	M4	2-core DC24V	Y axis alarm	Motherboard	
31	Clamp button	M5	2-core DC24V	Disconnection detection 1	Motherboard	
32		M6				
33		J33				

VIII. Material Receipt Adjustments

- 8.1. Adjust the front-to-back position of the pressure plate so that it overlaps the pocket edge by at least 10 mm, and ensure that shifting it to the left does not cause a collision with the needle or presser foot.

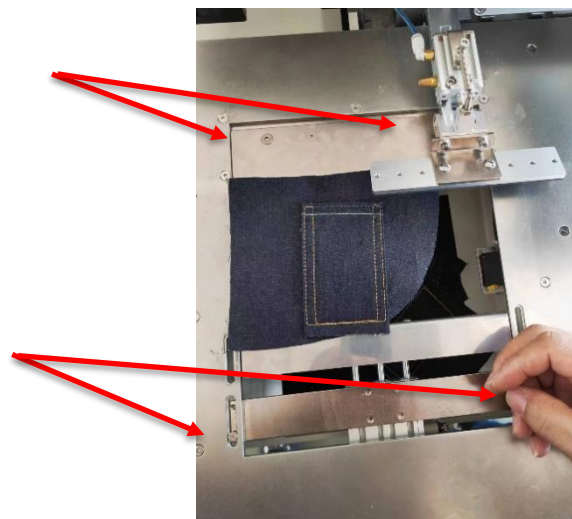


N



O

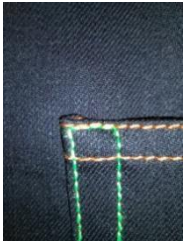
- 8.2 Shift the pressure plate to the left. Using the pocket fabric as a reference, adjust the positions of the upper and lower support plates by loosening or tightening the screws at the locations indicated by the arrows, ensuring each plate provides 10 mm to 30 mm of support.



IX. Frequently Asked Questions and Solutions

9.1. Refer to the table below for common issues and solutions.

9.2. For other issues, please refer to the *MB1102J Electronic Control System Manual*.

Issue	picture	Analysis of Causes	Corrective measures
Broken wire / Jumper wire	/	1. The height of the small presser foot is excessive; 2. The small presser foot is striking the presser frame;	1. Adjust the height of the small presser foot; 2. a. Modify the pattern; b. Adjust the clamping frame.
Incorrect rabbet/step size		Pattern Issues	1. Modify the pattern
Corner fold exposure		Left/right folding blade passes over the top	Adjust the left and right folding blades downward as appropriate
Unfolded corner		Misalignment of the corner-folding blade	Adjust the position of the folding corner blade (vertically and horizontally)

X. Routine Maintenance Requirements

10.1. Refer to the table below for the equipment maintenance checklist and requirements.

No.	Project	Time				Key Points Description
		Daily	Weekly	Monthly	Half-yearly	
1	Clean off the dust	✓				Remove dust from the equipment surface and components
2	Clean up oil stains		✓			Clean oil and grime from the tabletop, needle plate, and bobbin case
3	Fan filter element		✓			Clean dust from the fan filter element
4	Pressure plate sponge		✓			Inspect the sponge for wear or deformation; replace if damaged
5	Hemmer			✓		Ensure the unit is level and check that screws are securely tightened
6	Pocket template			✓		Ensure the unit is level and check that screws are securely tightened
7	Clamping frame mechanism			✓		Ensure the unit is level and check that screws are securely tightened
8	Air hose connection			✓		Ensure air hose connections are tight and free of leaks
9	Machine head oil level			✓		Ensure the oil level in the machine head is above the minimum mark
10	Bobbin			✓		Check the machine head bobbin case for scratches
11	Sensor				✓	Verify sensitivity accuracy and check for any positional shifts
12	Sliding component				✓	Check the lubrication of sliding parts; apply lubricant if necessary
13	Electronic control box				✓	Ensure the cooling fan operates correctly and clean off dust promptly

VI. Statement on Intellectual Property Protection

The MB1102J Watch Pouch Machine (pattern sewing model) is a proprietary design developed independently by Changzhou Zhigu Electromechanical Technology Co., Ltd. The intellectual property rights for this product belong to Changzhou Zhigu Electromechanical Technology Co., Ltd. and are protected by relevant national laws and regulations. Without the written permission of the rights holder, it is prohibited to implement the patented technology associated with this product, or to copy, sell, or disseminate information regarding this product via information networks. Changzhou Zhigu Electromechanical Technology Co., Ltd. will pursue legal action against any acts of infringement in accordance with the law.