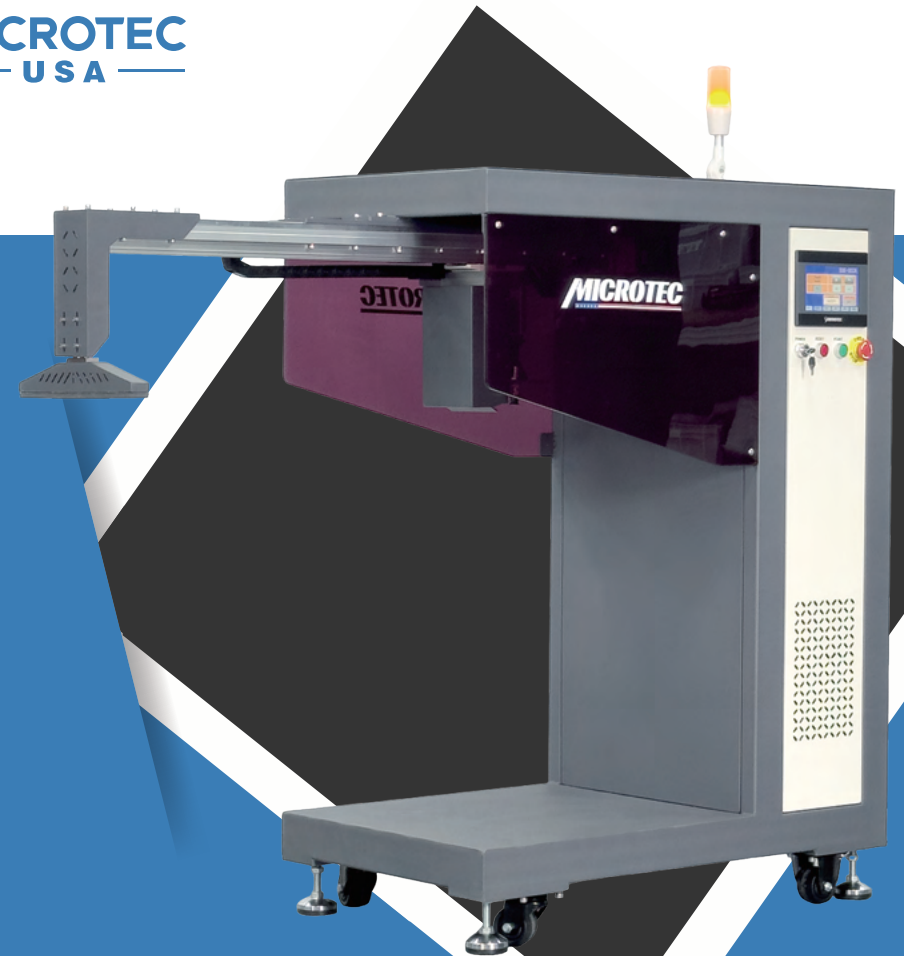


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Model: X-Peel

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X-Peel User Manual

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Overview

1.1 Equipment Overview

Thank you very much for choosing our company's X-Peel film peeling machine!

Please read this user manual carefully before use to ensure proper operation. Please keep this manual in a safe place for quick reference at any time.

Due to variations in configuration, some machines may not include all the features listed in this manual. Please refer to your specific model's operational features for definitive details.

1.2 Safety Precautions

NOTICE



The manufacturer is not responsible for damage, injury, production loss, or other losses caused by improper operation, unauthorized modification, incorrect installation, incompatible parts, or service by unqualified personnel.

1.3 Operating Environment

- Indoor, dry, clean, and well-ventilated location
- Storage Ambient Temperature: 32–122°F;
- Storage Ambient Relative Humidity: Below 80% (non-condensing).
- Operating Ambient Temperature: 32–104°F;
- Operating Ambient Relative Humidity: Below 80% (non-condensing)
- Stable, level, heat-resistant work surface
- Keep away from water, excessive dust, corrosive gases, flammable materials, and explosive vapors

1.4 Grounding & Technical Parameters

1.4-1 Grounding Requirements:

To prevent electric shock or fire accidents caused by electrical leakage, overvoltage, or insulation breakdown, please ensure the power control system is reliably and securely grounded. The grounding resistance must be less than 10 Ohms, the wire length must be within 20 meters, and the wire cross-sectional area must be greater than 4 mm². Machines in motion present inherent dangers! It is the user's responsibility to design effective error-handling and safety protection mechanisms during production. This equipment carries no obligation or liability for any incidental or consequential damages resulting from operation.

1.4-2 Technical Parameters:

Parameter	Specification
Model No.	X-Peel
Controller	PLC(MX310-32 + TK8072IP)
Amp \ Voltage \ Power \ Phase	9A\220V\2KW, 60HZ

Appearance and Functions

2.1 Exterior View

(Please refer to the images in your original document for labels 1 through11.)



2.2 Component Names and Functions

1. Garment Fixing Plate: Secures garments firmly in place to facilitate smooth film peeling.

2. Machine Status Indicator Light:

○ **Green:** The machine is running in Automatic Mode.

○ **Yellow:** The machine is in Teaching Mode.

○ **Red:** The Emergency Peeling (E-stop) is engaged or an abnormal status has occurred. Check the touchscreen controller for alarm messages.

3. PLC Touchscreen Controller: Controls machine movements and configures program settings.

4. Power Switch: Turns the main machine power ON and OFF.

5. Reset Button: Press and hold for 2 seconds to reset the suction nozzle axis.

6. Start Button: Press once to enter Automatic Mode; the status indicator light will turn green.

7. Emergency Peeling Button (E-Stop): Press in the event of an emergency or abnormality. The machine will immediately cease operation, and the status light will turn red.

8. Peeling Gripper/Axis: Adjusts the peeling position and clamps down on the DTF film to execute the peeling motion.

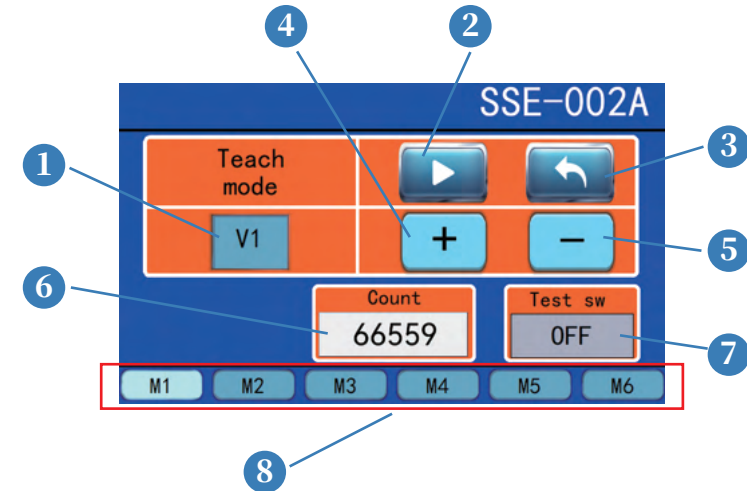
9. Air Supply Inlet Fitting: Provides the pneumatic air source required for all machine operations.

10. Power Cord: Delivers the primary electrical power required for the machine.

11. Ethernet Port: Communication interface for connecting to multi-station X4/6/8 machinery.

2.3 PLC Touchscreen Controller Interface and Functions:

2.3.1 Main Interface and Functions



1.V1 Indicator: Flashes while in Teaching Mode. Use the "+" and "-" buttons to adjust the film-pickup position of the suction nozzle.

2.Confirm Button (Play icon): Press once during Teaching Mode to confirm that the current motion step is completed.

3.Return Button (Back arrow icon): Press during Teaching Mode to exit without saving.

4.& 5. "+" / "-" Buttons: Used to adjust the film-pickup position for the V1 suction nozzle while in Teaching Mode.

6.Counter Display: Increments by 1 each time a peeling cycle is completed. Press and hold this area for 2 seconds to reset the counter to 0.

7.Test Switch (Test sw): Turn this switch ON while in Teaching Mode, then press the Start button to preview the currently programmed sequence.

8.M1-M6 Preset Keys: Press and hold any preset key for 2 seconds to independently program and store up to 6 distinct sets of film peeling coordinates.

2.4 Startup Preparation

1. Confirm that the equipment is plugged into a power source that meets all electrical requirements.
2. Confirm that a clean, dry air supply is securely connected.



3. Turn on the main circuit breaker, then switch the power key switch **"POWER"** on the operating panel to the ON position. Once energized, the equipment will boot up and display the primary user interface.

2.5 Automatic Operation



1. Press and hold to select your desired operational preset profile (e.g., select **"M1"** as shown in the figure).



2. Press the **"START"** button. The machine will enter automatic mode and the status indicator light will change to green. As shown in the figure.

3. The machine will now stand by and await the peeling trigger signal from the multi-station X4/6/8 equipment.

2.6 Teaching Method



NOTE: Teaching Mode can only be accessed when the machine is not running automatically (the status indicator light must be yellow). If the machine is in automatic mode (indicator light is green), press the "EMERGENCY STOP" button, twist it to reset it, and then press and hold the "RESET" button to return the peeling gripper/axis to its home origin. Once homed, you may proceed to Teaching Mode.

Teaching Steps:



1. Press and hold for 2 seconds to select the profile slot you wish to save to (e.g., select "M1").



2. Press and hold the Touchscreen "▶" Button, the "V1" indicator will begin to flash. Use the "+" and "-" touch keys to move "V1" into the desired film peeling position, as shown below:



3. Long press and hold the "▶" Button. The "V1" indicator will stop flashing, indicating that the current peeling coordinate has been successfully set.



4. Long press and hold the "►" Button once more until "V1" flashes again. Use the "+" and "-" keys to maneuver "V1" to the designated film disposal/drop position.



5. Long press and hold the "►" Button one last time, and a "Finish teach!" confirmation window will pop up.



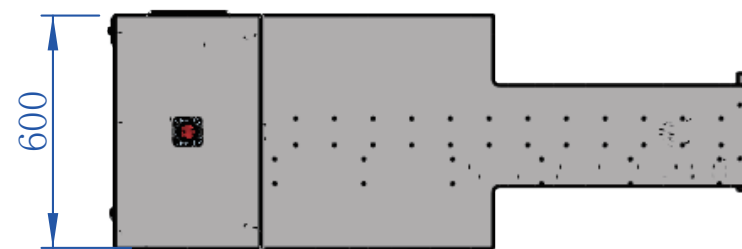
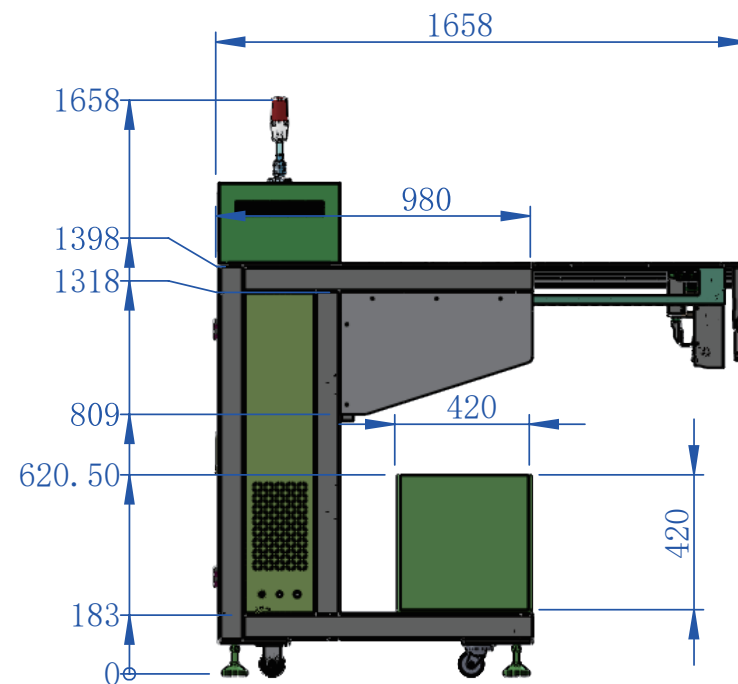
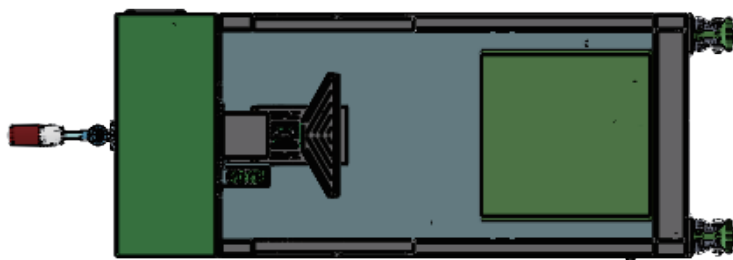
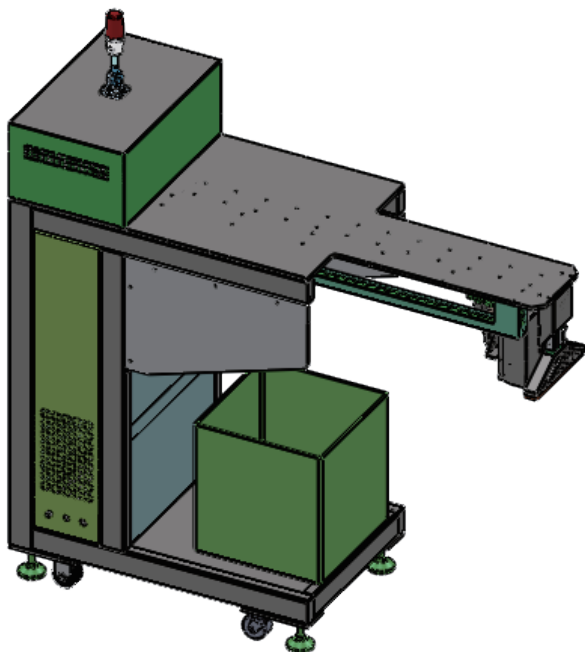
6. Tap the "Save" button to store the configuration and exit. This completes data programming for the M1 preset. If you select the "X" button instead, the system will discard the current session data and exit.



7. Tap the "Test sw" field on the screen to enable the test feature, then press the physical green "START" button to verify if the programmed teaching positions are correct. If further adjustments are required, repeat the teaching steps from the beginning.

2.7 Equipment Dimension

(Refer to the technical drawings in your original document for specific measurements.)

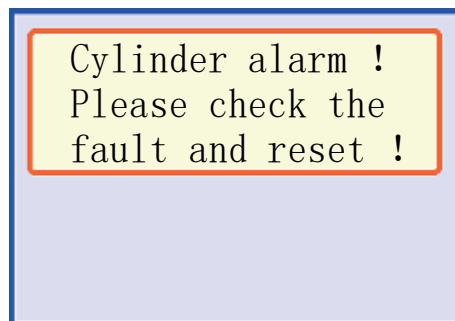


Troubleshooting

1. Servo Alarm Interlock: If the "Servo alarm!" fault window appears on the screen, shut off the main power supply. Check whether the axis home origin switch is disconnected/broken or if there is a mechanical jam or physical blockage. Once the mechanism is verified to be clear and normal, restart the power supply.

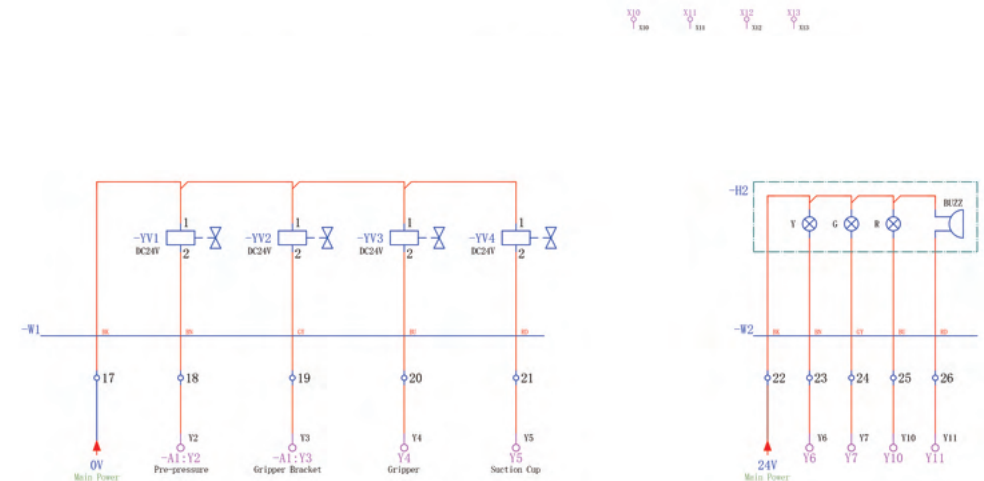
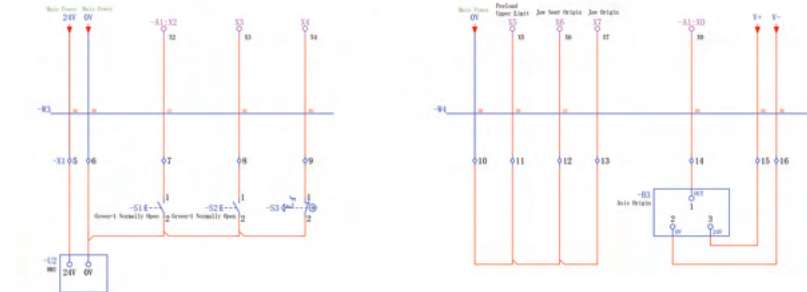


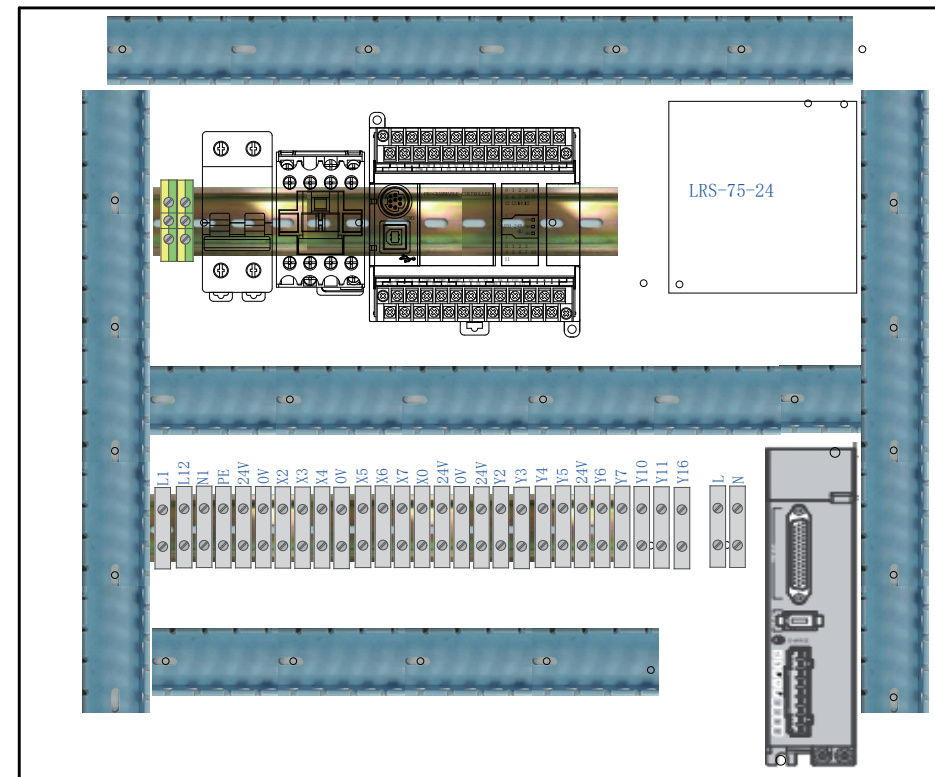
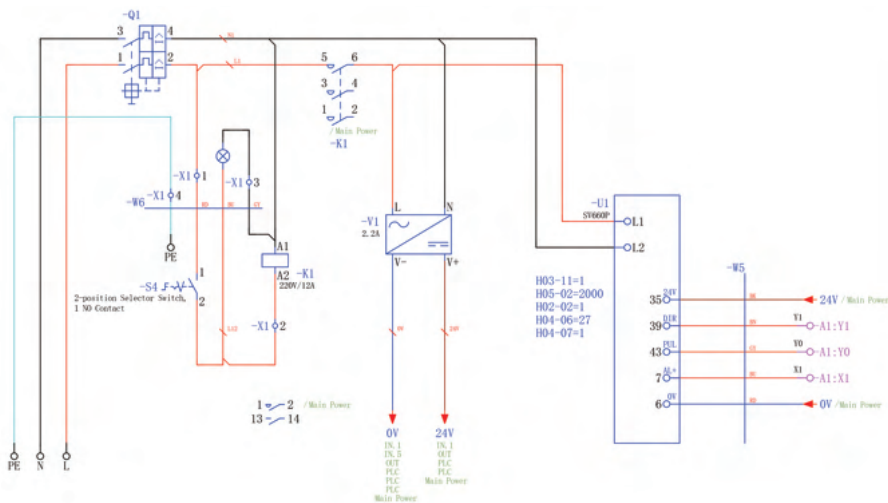
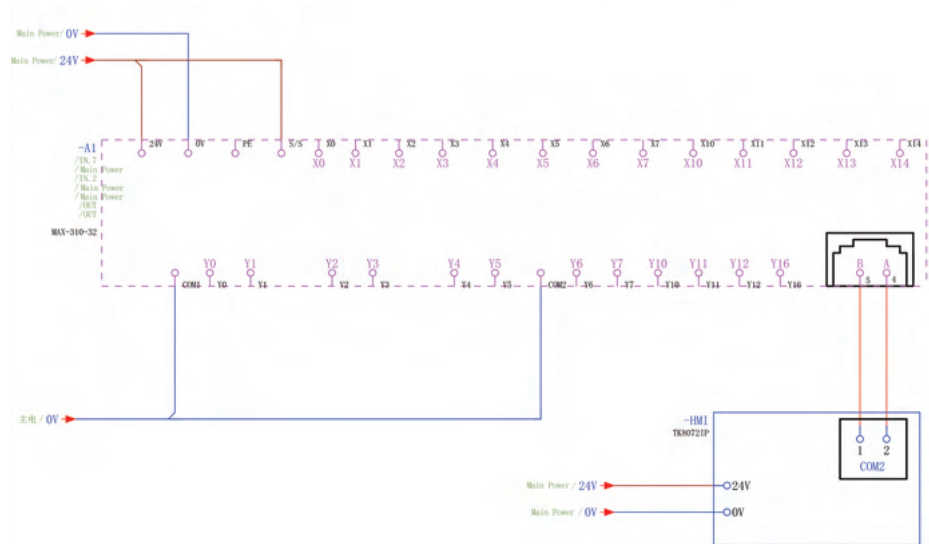
2. Cylinder Alarm Interlock: If the "Cylinder alarm!" fault window displays on the screen, check the incoming air supply pressure. Verify whether the cylinder upper limit travel switch has shifted out of position or suffered a broken/disconnected wire.



Circuit Diagram

(Refer to your original document for the diagram layout.)





Pneumatic Diagram

(Refer to your original document for the diagram layout.)

