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Model: AT48-APS

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AT48-APS Series User Manual

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Overview

1.1 Equipment Overview

Thank you very much for choosing our AT48-APS series pneumatic shuttle dual-station auxiliary equipment!

Please read this user manual carefully before operating the machine to ensure proper and safe usage.

Keep this manual in a safe, convenient place for future reference.

Depending on the specific configuration of your model, some features listed in this manual may not be available on your machine. Please refer to the actual operating functions of your specific unit.

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
- Operating / Storage Temperature: 41°F-104°F
- Relative Humidity: 30%-90%, 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 caused by leakage, overvoltage, or insulation failure, please ensure the equipment is reliably grounded.

1.4-2 Technical Parameters:

Technical Specifications	Details
MODEL NO.	AT48-APS
Controller	PLC(XD3-16T-E + SK-102QT)
Amp\Voltage\Power\phase	30A\220V(3)\9.0KW, 60HZ
Time Range(S)	0~999
Temperature Range(°F)	50~437
Heating plate size (Inch)	39.4*47.2

Appearance and Functions

2.1 Exterior View

(Please refer to the images in your original document for labels 1 through 9.)



2.2 Component Names and Functions

1. Pressure Gauge Assembly: Used to adjust the operating air pressure and display the current system pressure value.

2. Power Cord: Supplies the main electrical power required for the machine.

3. Power Switch: Turns the machine's power ON and OFF.

4. PLC Touch Control Panel: Controls machine operations, heating, and the heat transfer/sublimation process.

5. Emergency Stop Switch: Pressing the E-stop button during a transfer cycle or while the heating plate is pressing down will cause the lower plate to sink, immediately stopping the transfer process and automatically switching the system to manual mode. Pressing the E-stop button while the lower plate is moving will cause the motor to stop immediately and automatically switch the system to manual mode.

6. Dual Start Buttons: In "Semi Auto" mode, pressing both start buttons simultaneously will send the exterior lower plate into the machine to complete one transfer cycle.

7. Motor Speed Controller: Adjusts the travel speed of the lower plate.

8. Exhaust Port: Connects to an external exhaust or ventilation system.

9. Electrical Cabinet: Houses the electrical components that control the machine's opera-

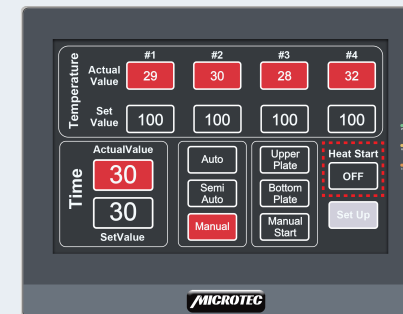
2.3 Operation

Operation Steps

1. Connect to a 3-phase AC 220V power supply according to the machine's voltage requirements [2]. Connect to an appropriate air source [1]. Turn ON the power switch [3]. Pull up the black adjustment valve on the pressure gauge assembly [1] and adjust the system pressure to **4–6 kg/cm² (0.4–0.6 Mpa)** according to the markings.

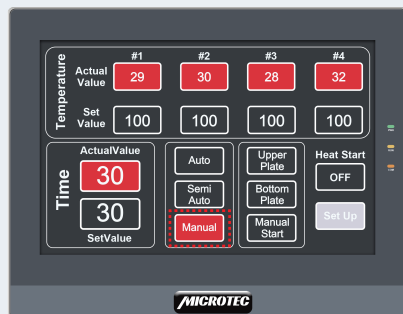
2. Press the heating switch "Heat Start" on the screen (set to ON) to allow the machine to start warming up.

3. Place your transfer materials onto the exterior lower plate.



2.3.1 Manual Mode

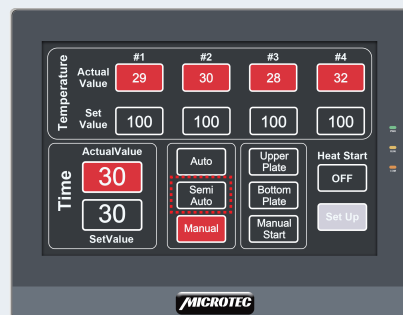
When **"Manual"** mode is selected on the screen and the system reaches the preset transfer temperature:



1. Long-press **"Upper Plate"** or **"Bottom Plate"** on the screen to feed the upper or lower plate completely inside the machine until it stops moving.
 2. Tap **"Manual Start"** to initiate the transfer cycle.
 3. While the machine is operating, prepare and place your transfer materials on the exterior lower plate.
- Repeat steps 1 through 3 sequentially to continue processing transfers.

2.3.2 Semi-Auto Mode

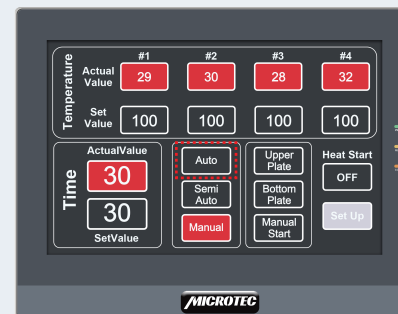
When **"Semi Auto"** mode is selected on the screen and the system reaches the preset transfer temperature:



1. Press the two green **Dual Start Buttons [6]** simultaneously with both hands. The lower plate loaded with materials will automatically feed into the machine and complete the transfer cycle.
 2. While the machine is operating, prepare and place your transfer materials on the exterior lower plate.
- Repeat steps 1 through 2 sequentially to continue processing transfers.

2.3.3 Auto Mode

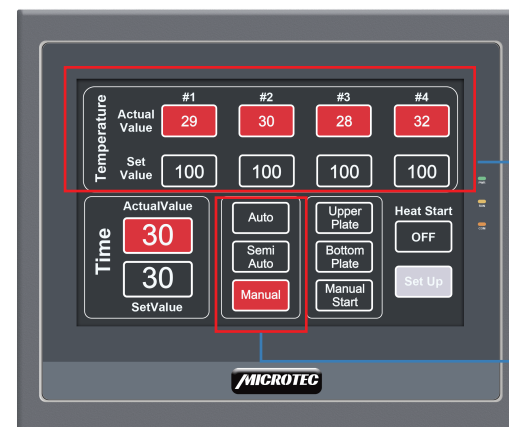
When the system has reached the preset transfer temperature and the transfer materials are placed on the exterior lower plate:



1. Select **"Auto"** mode on the screen.
2. The lower plate will automatically feed in to complete the transfer cycle, running in a continuous automated loop.

Note: When using **"Semi Auto"** and **"Auto"** modes, the activation switches will only function if the upper or lower plate has fully reached its limit switch. If it has not reached the limit switch, use **"Manual"** mode and press **"Upper Plate"** or **"Bottom Plate"** to move the respective plate inside the machine until it stops, indicating it is properly in place.

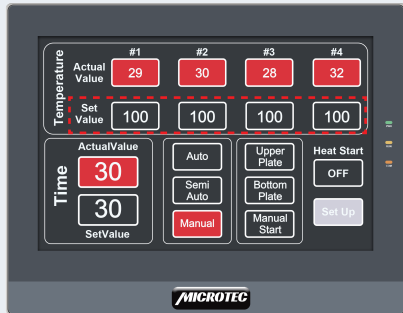
2.4 PLC Touchscreen Controller



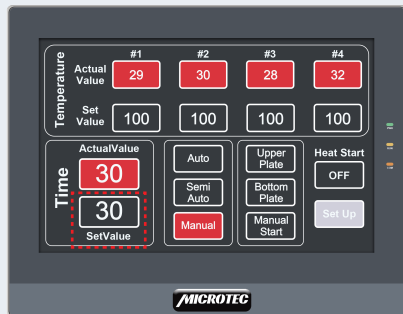
4-Zone
Temperature Control

Manual /Semi-Auto /
Auto Mode Switching

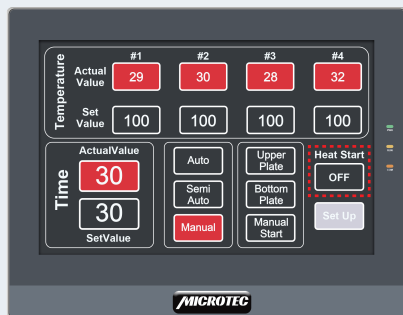
2.5 PLC Temperature Controller Instructions



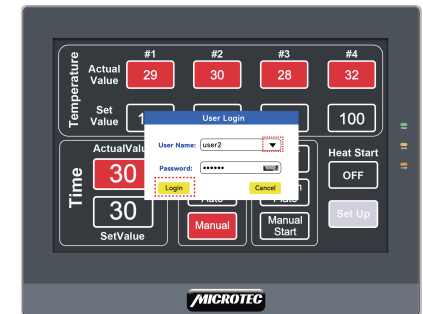
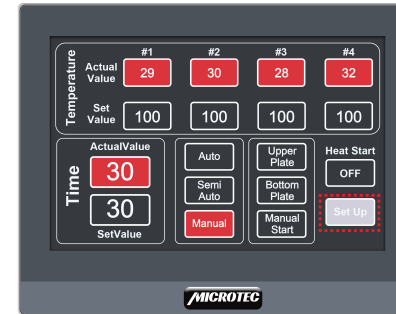
1. On the main touch screen interface, tap the **"Set Value"** field within the Temperature area to set target values for zones "1#" through "4#" respectively. Press confirm to save.



2. Tap the **"Set Value"** field within the Time area on the main interface to set the transfer duration. Press confirm to save.



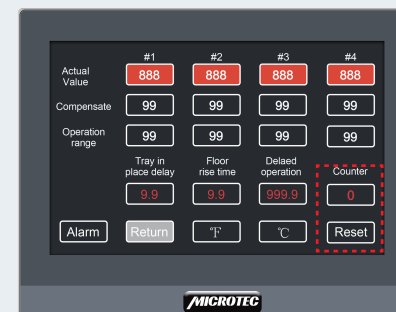
3. Once the temperature and time are configured, tap **"Heat Start"** on the main interface to turn ON the heating switch and initiate the warm-up cycle.



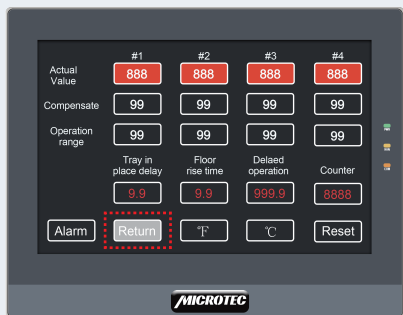
4. Tap **"Set Up"** on the main interface, select **"User 2"**, and enter the password **"334468"** to access the Engineering/Factory Settings mode:



4.1 Tap **"°C"** or **"°F"** to select your preferred temperature unit.



4.2 Tap **"Reset"** to clear the value under "Counter" back to 0.

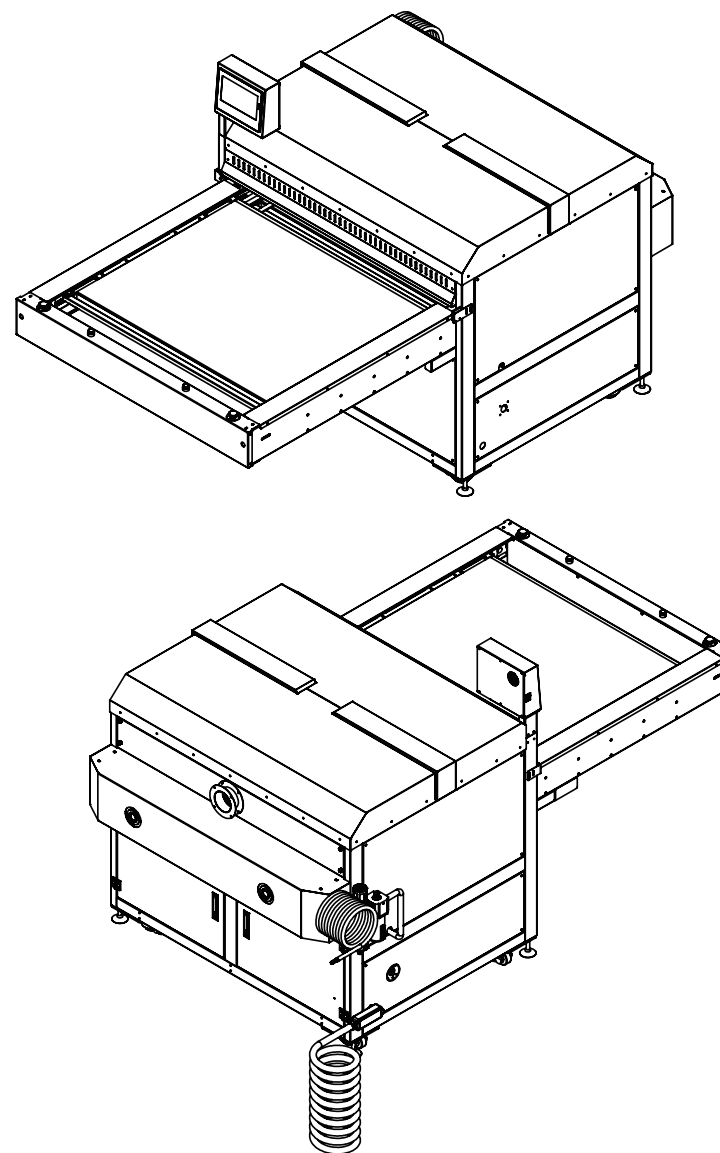


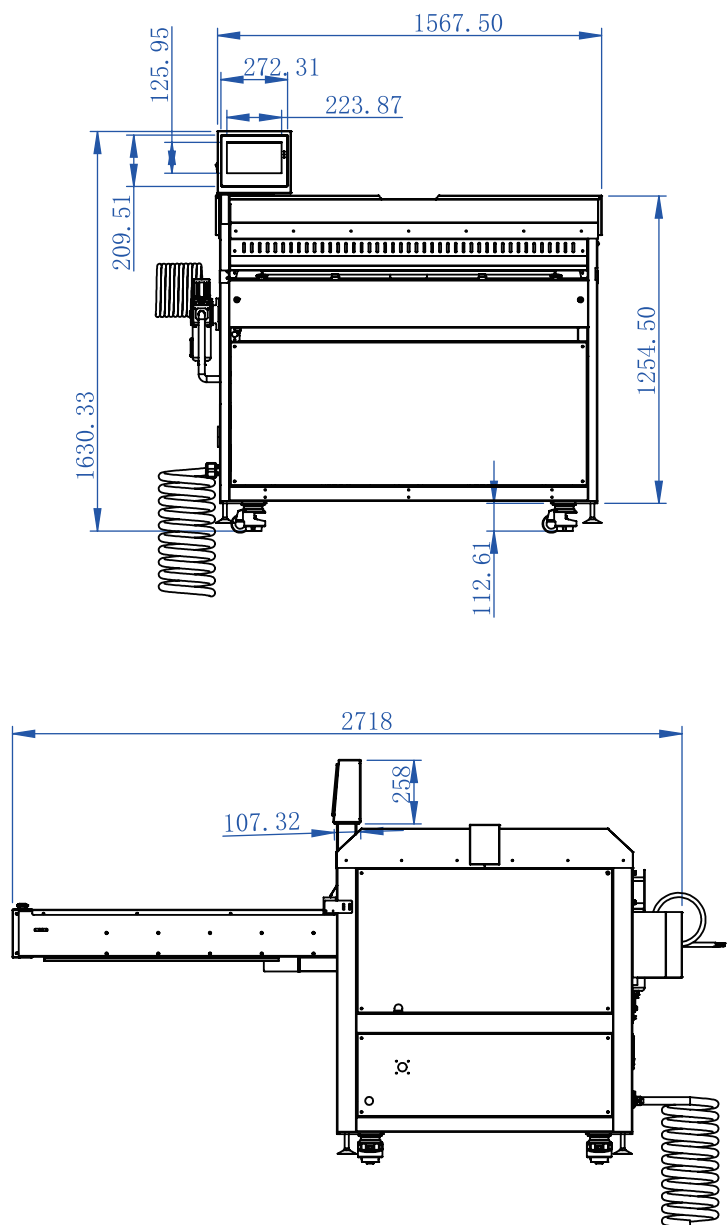
4.3 Tap "Return" to go back to the main user interface.

Note: Do not modify any parameters or data within the Engineering mode that are not explicitly mentioned above. Doing so may cause the machine to malfunction or run abnormally. For advanced PLC technical instructions, please contact your equipment supplier. Thank you!

2.6 PLC Temperature Controller Instructions

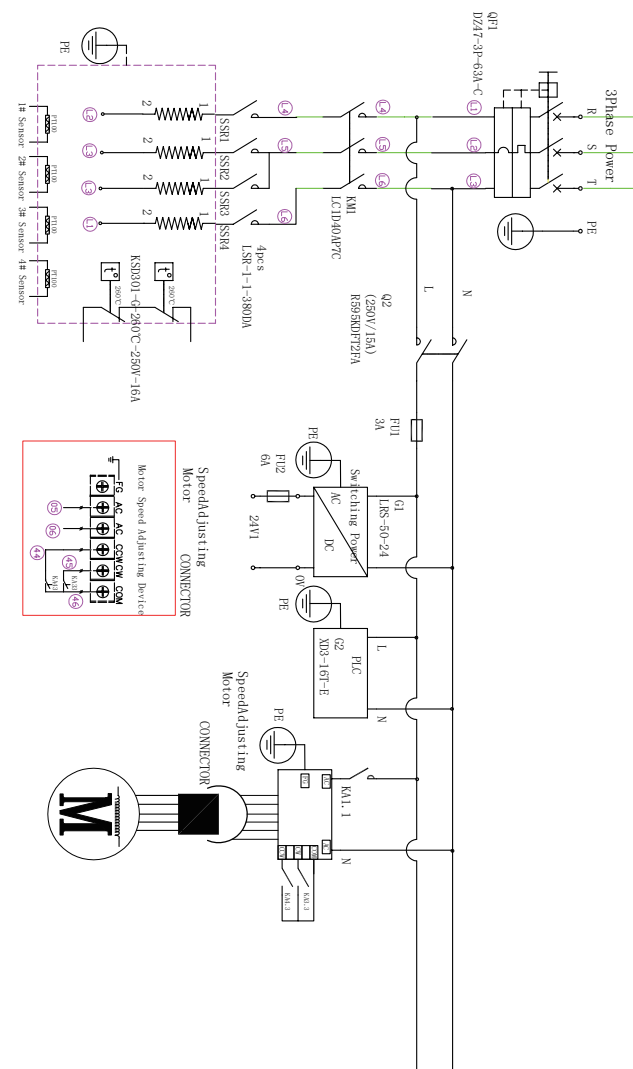
Refer to the technical drawings in your original document for specific measurements.)





Circuit Diagram

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



Pneumatic Diagram

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

