

Automatic labeling machine

Product Type: FUTUREATT-LAF510

Device Principle

The equipment operates with two operators who handle the loading and unloading of products. The equipment automatically applies labels to the trays and verifies if they are correctly labeled. Any non-conforming products are automatically rejected, while the qualified ones are placed in predefined workstations by a sorting mechanism. Finally, manual operators handle the packaging process.



Functional Features

- Suitable for 7-inch trays.
- Compatible with various WMS, ERP, MES systems for integration.
- High labeling efficiency and stable performance.
- Fully automated scanning, labeling, verification, unloading and processes.
- Equipped with 2 industrial cameras with 1000W pixels for code reading and verification, including an NG channel to meet accuracy requirements.

Application

Used in electronic components, SMT factories, and line-side warehouses.

Workflow

The entire labeling process is carried out sequentially at each workstation by a fork conveyor mechanism.

- The operator places SMD trays onto the loading turntable assembly, with a maximum capacity of 40 trays per group and a total capacity of up to 240 trays for the entire assembly.
- The trays are individually transported to the fork conveyor line by a gripper mechanism.
- The loading lift assembly lifts the SMD trays, and one tray is taken away while the lift assembly elevates the height for the next SMD tray.



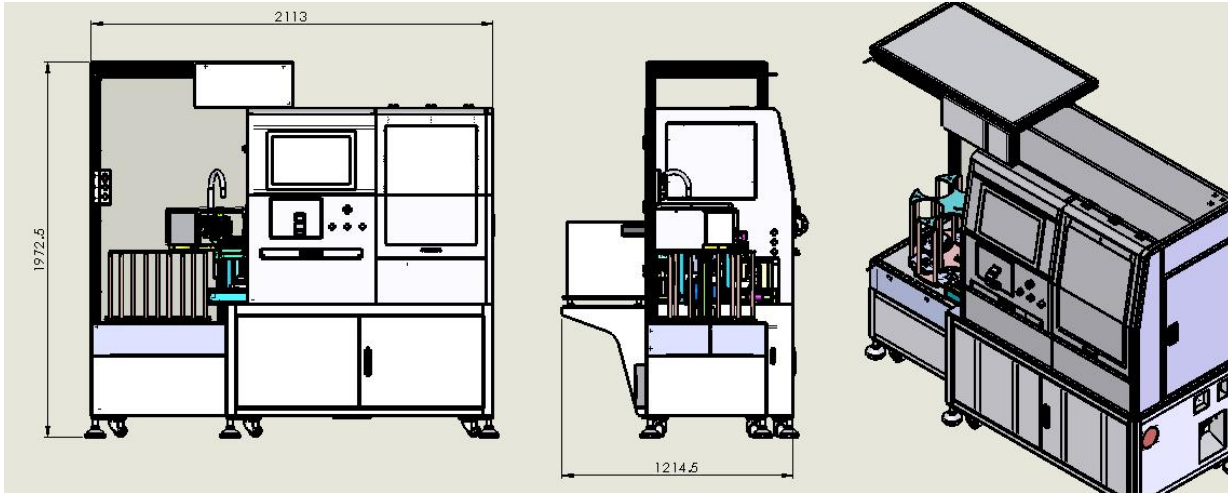
- The fork conveyor mechanism transports the trays to CCD1 workstation, where CCD1 performs tray positioning, barcode reading, and automatic rotation to the correct angle. The system sends the barcode information to the WMS system, which controls the label printer for printing.
- The fork conveyor mechanism moves the trays to the labeling workstation, where the trays are labeled.
- The fork conveyor mechanism transports the trays to the verification workstation, where CCD2 identifies the labels on the trays and sends the information to the WMS system for verification. The verification results (OK or NG) are sent to the labeling sorting workstation system.
- The fork conveyor mechanism transports the trays to the unloading workstation. If the verification result is NG, the reject mechanism removes the tray to the NG tray storage. If the verification result is OK, the unloading mechanism unloads the tray to the sorting mechanism and places it in the corresponding cache workstation based on system requirements.
- When any cache workstation is full (10 trays), the trays from that workstation are moved to the corresponding discharge workstation (each cache workstation corresponds to one discharge workstation).
- The cylinder at the discharge workstation extends, and the operator manually takes away 10 trays, performs manual box packaging and label application. The process continues in a loop.

Technical Specifications

	Equipment Model	Parameters
Basic Parameters	Power Supply Voltage	Single-phase, 220V (Customizable for overseas users according to local power supply voltage)
	Frequency	50HZ
	Compressed Air	Air pressure of 0.5-0.7Mpa, flow rate of 45L/min
	Dimensions (Length x Width x Height)	2350mm x 1693mm x 1900mm
	Efficiency	1.8 seconds per piece
	Applicable Tray	7-inch tray
	Interface System	The system can be integrated with any WMS, EMP, MES, etc.
Safety Measures		All doors of the equipment are equipped with door sensors. If the doors are opened while the program is running, the machine will stop operating.
		The operating side is equipped with safety light curtains. If the light curtains are triggered, the rotating

		tray and the discharge mechanism will not operate.
		Hazardous areas are marked with warning signs.
		Equipped with a three-color sound and light indicator, capable of displaying various operating statuses.
Requirements for Power Distribution Cabinet	Electrical Requirements	The power supply enters the equipment from above and is protected by fuses. There is a power switch button to control the power supply of the equipment.
		The power distribution cabinet has independent circuit breakers for easy maintenance.
		Plastic cable trunking is used for wiring.
Other	Pneumatic System	The primary air source requires the installation of a two-joint component. It is equipped with a pressure detection switch that will provide an alarm if the pressure falls below 0.5MPa, ensuring the smooth and stable operation of pneumatic components.
		Wiring should be neat and orderly
	Environmental Requirements	Maintain a distance of 500mm from the operating position or the equipment's outer wall for measurement.
	Safety Requirements	The equipment complies with relevant national safety standards for electromechanical equipment and meets CCC standards.
	Equipment Appearance	The upper and lower frames are in light gray color (RAL7035).

*Dimensions



*Equipment Safety Requirements

- 1、 Compliance with the current FUTUREATT standards or stricter local regulations. Specific requirements will be clarified during equipment design review.
- 2、 The appearance and structural methods of equipment protective devices need to be checked one by one during design review. Subsequent processing and installation should not cause mechanical interference, hinder maintenance, or pose safety concerns.

*Randomly Equipped Items

Item	Quantity	Remarks
Tool Bag	1 set	
Electric Screwdriver	1 piece	
Small Adjustable Wrench	1 piece	
Hex Key Set	1 set	
Micro Screwdriver Set	1 piece	

***Other Optional Models**

Labeling Machine	Model	Labeling Type	Efficiency	Dimensions
Fully Automatic Labeling Machine	FUTUREATT-LAM520	7-inch, dual label	1.8S/Pcs (single label); 4S/Pcs (dual label)	2250 × 1400 × 1880
	FUTUREATT-LAM710	7-13-inch, general-purpose single label		
	FUTUREATT-LAM720	7-13-inch, general-purpose dual label		

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