未来亚特
WEI LAI YA TE

SMD packing machine

Product Type：FUTUREATT-LIC220

Device Principle

This equipment requires one operator for product loading. The operator places 7-inch trays into the device, and the device automatically reads the codes, saves images, uploads them to the WMS system, tears off labels, prints new labels based on system feedback, applies labels, seals the trays, performs code verification, removes defective products, automatically places moisture-sensitive cards and desiccants, and supplies them automatically. The equipment also features automatic bag packaging, vacuum sealing, label application, verification, alarm for defective products, and unloading of qualified products.

Functional Features

- Compatible with 7-inch trays
- Can be integrated with any WMS, ERP, MES systems
- Configured with desiccants, moisture-sensitive cards, vacuum packaging for high efficiency and good airtightness
- Supports dual labeling (tray labeling and bag labeling)
- Fully automated process including scanning, labeling, verification, desiccant and moisture-sensitive card placement, bag packaging, vacuum sealing, verification, and batch stacking for output
- Equipped with four 2000W pixel industrial cameras for code reading, verification, and positioning. Includes an NG channel to ensure accuracy
- Requires only one operator

Application

Suitable for electronic components, SMT factories, and line-side warehouses.

Workflow

● The operator places a box of SMD trays (60PCS) into the loading turntable component. The turntable has 6 stations, and each station can accommodate 30 trays with a width of 7 inches and 8mm.

● The trays are transported one by one to the fork conveyor line using grippers. After removing a tray, the loading lifting component lifts the remaining trays by the height of one tray.

● The fork conveyor mechanism transports the trays to the CCD1 station. CCD1 locates and reads the barcodes on the trays, saves images, transmits tray position information to the robotic arm, and sends barcode information to the WMS system. The WMS system controls the printer to print labels.

● The fork conveyor mechanism transports the trays to the labeling station, where a labeling robotic arm applies labels to the trays (able to apply two types of labels).

● The fork conveyor mechanism transports the labeled trays to the verification station. CCD2 recognizes the labels on the trays and sends the information to the WMS system for verification. The verification result (OK or NG) is sent to the device system.

● The fork conveyor mechanism transports the trays to the unloading station. If the verification result is NG, the rejection mechanism removes the trays to the NG product storage bin. If the verification result is OK, the unloading mechanism places the trays at the desiccant and moisture-sensitive card placement station.

● The retrieval robotic arm retrieves moisture-sensitive cards and desiccants from the respective supply boxes and places them on the trays. The moisture-sensitive cards and desiccants can be placed at any designated position on the tray (moisture-sensitive cards on the back of the tray, desiccants at the corners of the packaging, not on the tray).

● Simultaneously, the foil bag loading module lifts and suctions a foil bag (250x250mm) to the bagging station. The bag-opening mechanism opens the foil bag.

● The bagging mechanism pushes the tray containing moisture-sensitive cards and desiccants into the opened foil bag.

● The fork conveyor mechanism transports the bagged products to the vacuum sealing station for vacuum sealing.

● The fork conveyor mechanism transports the bagged products to the labeling station, where a bag labeling robotic arm applies labels to the vacuum-sealed bags (able to apply two types of labels).

● The fork conveyor mechanism transports the products to the bag label verification station. CCD3 captures and reads the labels on the bags, and sends the information to the WMS system for verification. The verification result (OK or NG) is sent to the device system.

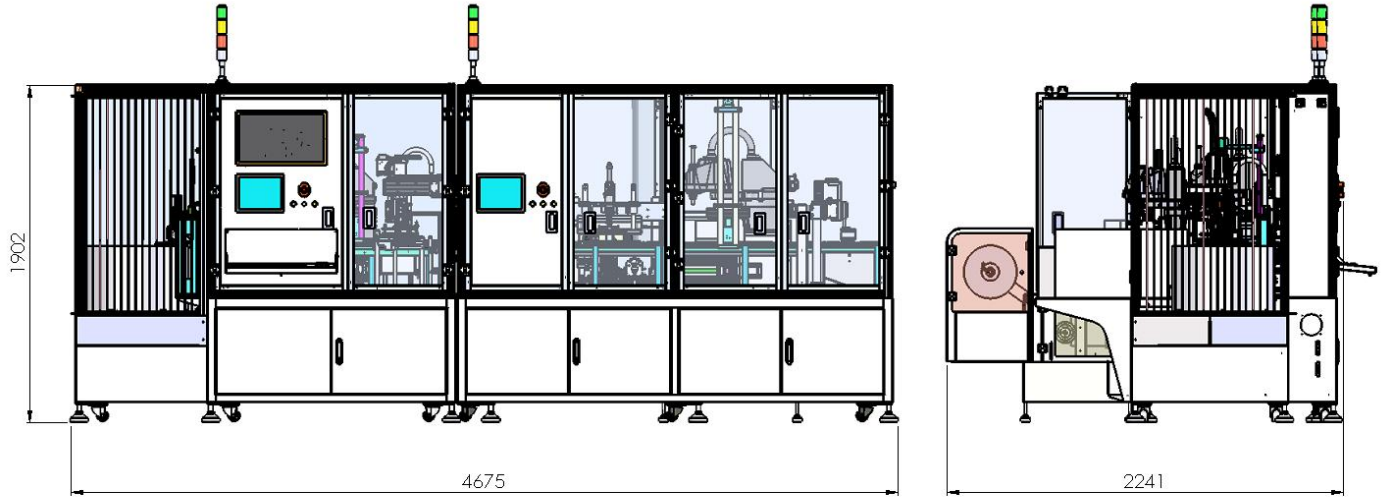
● The fork conveyor mechanism transports the trays to the unloading station. If the verification result is NG, the arm mechanism removes the finished products to the NG product storage bin. If the verification result is OK, the products are transported to the finished product buffer area, and the process repeats.

Technical Specifications

	Equipment Model	Parameters
Basic Parameters	Power Supply Voltage	Single-phase, 220V (16A) (For overseas users, customization is available based on local power supply voltage)
	Frequency	50HZ
	Compressed Air	Air pressure: 0.5-0.7Mpa; Flow rate: 120L/min
	Dimensions (Length x Width x Height)	4675mm x 2241mm x 1902mm
	Efficiency	8-12s/tray
	Code Reading Efficiency	⩽250ms
	Vacuum Air Source Flow rate	150 L/min
	Compatible Materials	Diameter: 7-13 inches
	System Integration	Compatible with any WMS/EMP/MES system
	Code Reading Camera Field of View	180mm*240mm
	Configuration	4 industrial cameras with 1000w pixels (code reading, positioning, and verification)
	Equipment Weight	2061Kg
	Note	The code reading camera has a lifting range of 5-350mm (suitable for handling items of the same height)
		Suitable for verification and validation of materials
	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.

Others		Plastic cable trunking is used for wiring.
	Equipment Control Components	Include electrical control system, human-machine interface, visual software system, etc.
	Electrical Control System	Implements control functions for various equipment mechanisms
	Human-Machine Interface	Provides human-machine interaction functionality
	Visual Software System	Records tray information, detects labels, traces various statuses of products produced on the machine, and interacts with WMS data.
	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.
		The equipment mechanism's corners are rounded to prevent employees from the risk of cutting or injuring themselves during operation.
	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 a 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	

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