FUTURE ATT

X-ray SMT component counter(fully-automatic)

Product Type： FUTUREATT-XAT500

Device Principle

The device requires an operator to handle the loading and unloading of products. The equipment is designed to improve work efficiency by automatically loading, counting, labeling, and unloading materials. The operator simply needs to place the tray into the buffer storage, and the device will handle the rest of the process.

Functional Features

- Supports 7-15 inch materials with a height range of 8mm-70mm.
- Compatible with various WMS (Warehouse Management System), ERP (Enterprise Resource Planning), MES (Manufacturing Execution System) software for seamless integration.
- Supports mixed loading mode, accommodating 2 trays for 7-inch materials and 1 tray for 13-inch materials.
- Fully compatible with online counting function, capable of connecting to a printer for offline printing.
- High counting accuracy of up to 99.99%, ensuring precise material inventory control.
- Simple operation, requiring only one operator.

Application Range

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

Workflow

The equipment is capable of accommodating 7-15 inch trays, with 4 trays for 7-inch materials and 1 tray for 7-inch and above.

- The operator places the trays into the buffer storage.
- The equipment automatically retrieves the materials and places them in the main tray storage area, with 4 trays for 7-inch materials and 1 tray for 13-inch materials.
- The equipment sends the tray to the X-ray counting area.

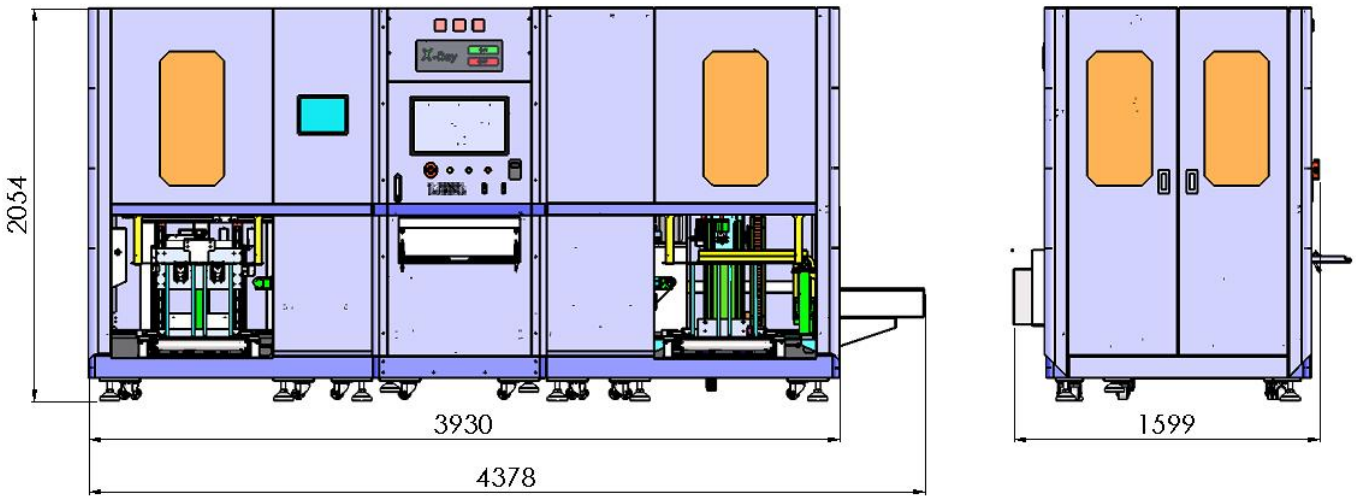
- Simultaneously, the previous tray with completed counting is sent out, and upon successful counting, the printer will generate customer labels. The receiving mechanism will automatically collect the counted tray from the buffer storage, label it, and perform a verification check.
- The process continues in a loop.
- The operator retrieves the trays from the buffer storage.

Technical Specifications

	Equipment Model	Parameters
Basic Parameters	Power Supply Voltage	Single-phase, 220V (Can be customized based on local power supply voltage for overseas users)
	Frequency	50HZ
	Compressed Air	Air pressure of 0.5-0.7Mpa, flow rate of 45L/min
	Dimensions (Length x Width x Height)	4378mm × 1599mm × 2054mm
	Counting Efficiency	780 trays/hour (for 7-inch materials),
	Applicable Tray Sizes	7-15 inches
	Interface	Compatible with various WMS, ERP, MES systems
	Weight	2576kg
	Total Power	3000w
	X-ray Source	Tube Voltage of 30-100KV, maximum power of 150W
	Detector	Effective size: 427mm × 427mm, Resolution: 3072 × 3072; Accuracy: 140 μm
	Compatible Materials	Diameter: 7-15 inches or equivalent flat materials, Height: 5mm-70mm
	Safety	Radiation leakage < 1 μSv/Hour, equipped with safety doors
	Strong Electrical Components	Independent circuit breakers in the distribution cabinet for easy maintenance.
		The distribution cabinet is equipped with exhaust fans.

Other		Neat wiring using plastic cable ducts.
	Equipment Control Components	Includes electronic control system, human-machine interface, and visual software system.
	Electronic control system	Implements control functions for various functional mechanisms of the equipment.
	Human-machine interface	Enables interaction between humans and the machine.
	Visual software system	Records tray information, detects labels, and traces various statuses of products produced by the machine. Interacts with WMS data.
	Environmental Requirements	Measurement should be 500mm away from the operating position or the equipment's outer wall.
	Safety Requirements	The equipment complies with relevant national safety standards for electromechanical equipment and CCC standards.
	Equipment Appearance	Upper and lower frames are in a light gray color, RAL7035.

*External Dimensions



*Placement Accuracy

Component	Dimensions	Accuracy	Component	Dimensions	Accuracy	Component	Dimensions	Accuracy
Resistor	01005	99.9%	Tantalum Capacitor	4525	99.9%	MOS	2N7000	99.9%
	0201	99.9%		6640	99.9%		2N7002	99.9%
	0402	100%		7343	99.9%	IC	BGA	100%
	0603	100%	SMD Inductor	CD32	99.9%		QFN	100%
	0805	100%		CD43	99.9%		QFP	100%
	1206	100%		CD52	99.9%	Crystal Oscillator	4025B	99.9%
	1210	99.9%		CD54	99.9%		2016B	99.9%
	1812	99.9%		CD73	99.9%		1612B	99.9%
	2010	99.9%		CD75	99.9%		HC-49	99.9%
	2512	99.9%		CD104	99.9%			
	Jumper	99.9%		CD105	99.9%			
Capacitor	0201	99.9%	Diode	M1	99.9%			
	0402	100%		M2	99.9%			
	0603	100%		M4	99.9%			
	0805	100%		M5	99.9%			
	1206	100%		4148	99.9%			
	1210	100%	Transistor	SOT-23	99.9%			
	1608	99.9%		SOT-89	99.9%			
	3612	99.9%		SOT-323	99.9%			

*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

Component Placement Machine	Model	Dimensions (L*W*Hmm)	Efficiency	Type
X-ray Intelligent Component Placement Machine	FUTUREATT-XMT450	1424×1194×2050	480 trays/hour (7” SMD)	Single workstation
	FUTUREATT-XMT960	910×1586×1991	1200 trays/hour (7” SMD)	Double workstation

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