LY.GROUP.CHINA X-RAY Intelligent Component Counting Machine Specifications

一、 Equipment Overview

Device Name:	X-RAY Intelligent Counting Machine	Equipment Model:	DS-3000
Manufacturer:	LY.GROUP.CHINA	Equipment Specifications:	80KV
Place of Origin:	CHINA	Equipment Status:	all-new

The system of this series of equipment is primarily composed of seven main components: X-ray source, image imaging unit, computer image processing system, mechanical system, electrical control system, safety protection system, and warning system. It integrates modern non-destructive testing, computer software technology, image acquisition and processing technology, mechanical transmission technology, and AI algorithms. It covers the four major technical fields of optics, mechanics, electronics, and algorithms. By exploiting the differences in X-ray absorption caused by different materials or thicknesses, the internal components of electronic device trays are imaged and counted for detection.

The X-RAY intelligent component counting machine is designed to work in conjunction with SMT production lines for automatic counting of residual materials. This machine can simultaneously count four material reels, automatically scan codes, and achieve the goal of reducing labor and increasing efficiency. The X-RAY intelligent component counting machine can be integrated with MES systems as needed, making residual material counting and material warehousing more efficient, secure, and data-oriented.

Equipment Parameters

General Specification	
Working mode	Off-line
Dimensions(mm)	800(W)X1380(D)X1950(H)
Weight	Approx. 800 KG
Power supply	110~220VAC 50/60Hz, 1.5KW
System Computer	
Industrial PC	Industrial PC with Intel i7 processor (64bit)
Operating System	Window 10 OS
Display	27″ FHD LCD Display
Storage System	
RAM:16GB, HDD:1TB + SSD:256G	
Accessories Included	
Handheld Barcode scanner	/
Label printer	/

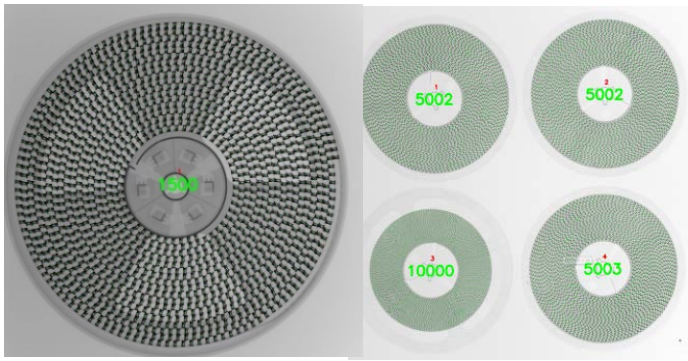
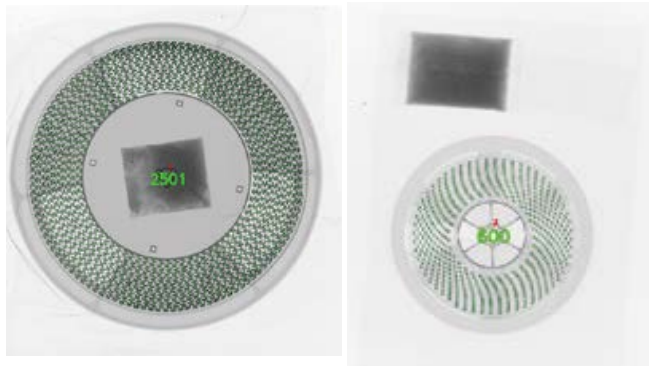
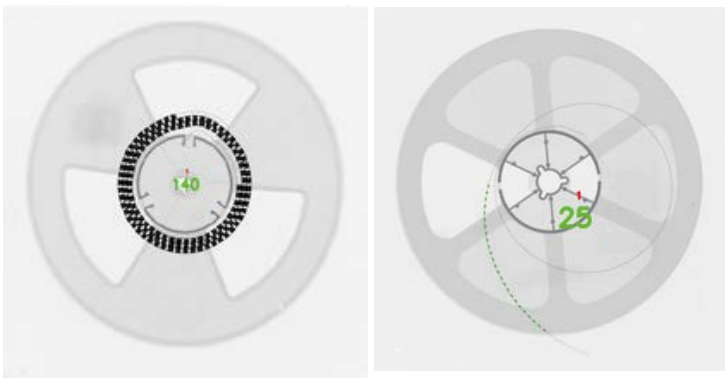
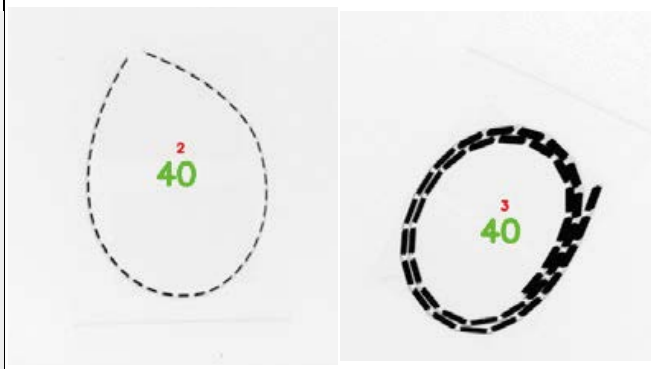
Inspection Capabilities	
Tape & reel size	7″ ~ 17″
Scan height	≤80mm
Max inspection speed	7”~17”
Tape & Reel	<10s/Reel or 4*7” reel<10s.
Min component size	01005
Inspection accuracy	≥99.99%
X-Ray Tube	
Type	Closed tube
Max Voltage	50KV
Max. Current	1000 μA
Focus spot size	0.03mm
Imaging System	
Type	Flat Panel Detector (FPD)
Effective detection range:	430mmx430mm
Pixel matrix	3072*3072 pixel
Pixel size	139μm
Frame Rate	6fpsv
AD Conversion	16 bits
Detectable Package	
Chip, Bulks, ESD packages, JEDEC Tray, Tube, Transistor.	
Detectable Components	
Capacitors, resistors, inductors, beads, crystals, transistors, diodes, FETs, various types of resistors, bile capacitors, detectable connectors, integrated circuit chips, etc	
Database	
Support connection with MES, ERP, and WMS Intelligent	
Safety System	
Standard	Conformed to FDA-CDRH regulation CFR 21 1020.40 subchapter for cabinet x-ray systems.

X-ray emission	< 1μSv/h (FDA-CDRH regulation CFR 21 1020.40 subchapter standard required < 5μSv/h)
Authority management	Fingerprint and password assessing system.
Shielded cabinet protection against radiation leakage	
Real time radiation leakage monitoring meter	

Configuration list

NO.	Name	Quantity	Unit	Configuration Specifications
1	X-ray Source	1	SET	Closed Microfocus X-ray Source 80KV
2	Imaging Unit	1	PCS	Amorphous Silicon Flat Panel Detector 17 inches
3	Computer Host	1	PCS	Advantech Industrial Computer
4	Monitor	1	PCS	24-inch HD Monitor
5	Shell Sheet Metal	1	SET	Independently Manufactured by LY
6	Software	1	SET	Independently Developed by LY
7	AI Algorithm Model	1	SET	Independently Developed by LY

Sample Counting Image

SMD Surface Mount Components Automatic Pick and Place System for Capacitors, Resistors, Inductors, Diodes, Transistors, etc.	Automatic Pick and Place of Full Reel Components (with Moisture Barrier Bag and Desiccant)
	
Automatic Pick and Place of Small Quantity Components in the Tail Reel.	**Automatic Pick and Place of Loose Components**
	
Automatic Pick and Place of JEDEC Tray Components.	**Due to the X-ray (2D imaging) detection principle, stacked or non-flat materials cannot be accurately counted. Currently, for the entire industry, materials like pellets cannot be accurately counted using X-ray counting machines.**