GALAXY FULL-AUTOMATIC VISUAL PRINTER

Galaxy is Completely Automatic Screen Printer with vision.

This is an accurate printer with vision, independent camera that provide geometric matching location, with upwards and downwards imagen. The printer comes with automatic solder paste application function that Automatically add solder paste in set up points on set up time, also calculate the quantity of solder paste to apply over the stencil screen. This printer provides high precision and repeatability, increasing productivity.

Solder paste application is a important process in the surface mount technology, (SMT) if it is no done well, it cause the majority of the failure in an SMT line.

Features

- PCB Thickness adjusting System.
- Vacuum Suction function.
- Intelligent squeegee system.
- Automatic Cleaning System.
- Temperature and humidity Control Function.

Standard Configuration

Accurate optical positioning system

Four way light source is adjustable, light intensity is adjustable, light is uniform, and image acquisition is more perfect; Good identification (including uneven mark points), suitable for tinning, copper plating,Gold plating, tin spraying, FPC and other types of PCB with different colors.
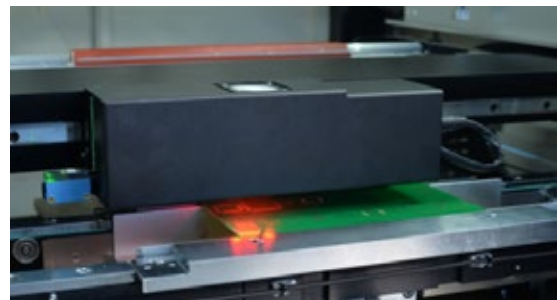
Intelligent squeegee system

Intelligent programmable setting, two independent direct motors driven squeegee, built-in precise pressure control system.
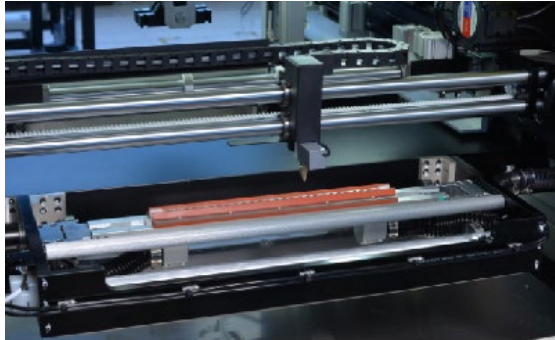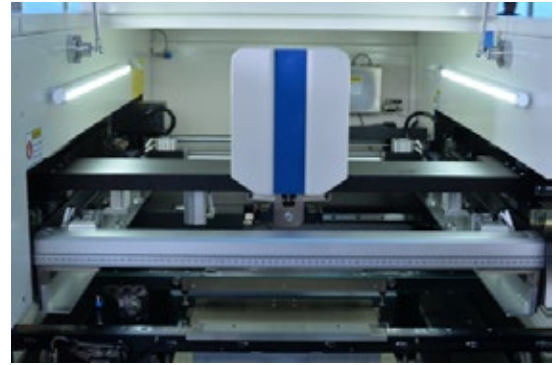
High efficiency and high adaptability stencil cleaning system

The new wiping system ensures full contact with the stencil; three cleaning methods of dry, wet and vacuum, and free combination can be selected; soft wear-resistant rubber wiping plate, thorough cleaning, convenient disassembly, and universal length of wiping paper.

HTGD Special PCB thickness adaptive system

The platform height is automatically calibrated according to PCB thickness setting, which is intelligent, fast, simple and reliable in structure.
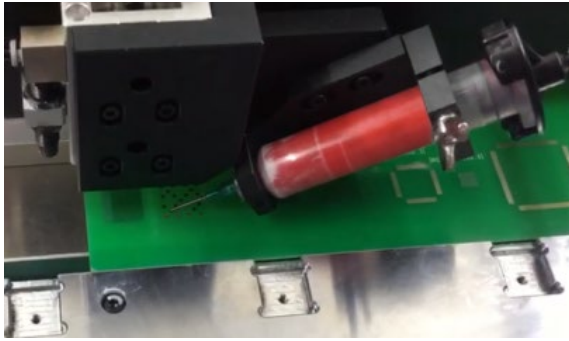

Options Configuration

Automatic Solder Paste filling function

Automatically add solder paste at fixed time and fixed point to ensure the quality of solder paste and the amount of solder paste in the steel mesh. In order to ensure that customers can carry out quality stability and long-term continuous printing, improve productivity.

Automatic dispensing function

According to different printing process requirements, after printing, the PCB can be carry out accurate dispensing, tin dispensing,ine drawing, filling and other functional operations.

Squeegee pressure close-loop feedback control

Built in precise digital pressure sensor control system,through the squeegee pressure feedback system,It can accurately display the original pressure value of squeegee,intelligently adjust the depth of the blade pressing down ensure the pressure value is constant during the printing process and obtain the highest process control,achieve perfect printing of high density and fine spacing devices.
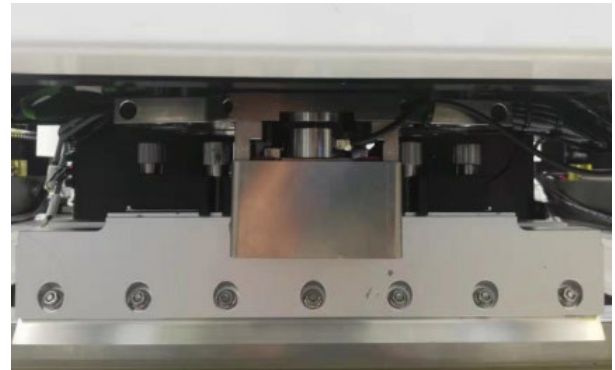
Stencil's Solder Paste Remaining Inspecting Function

Real time detection of solder paste margin (thickness) on stencil,intelligent prompt tin adding.

Detection function on Stencil

By compensating the light source above the steel stencil, CCD is used to check the mesh in real time, so as to quickly detect and judge whether the mesh is blocked after cleaning, and carry out automatic cleaning, which is a supplement to the 2D detection of PCB.
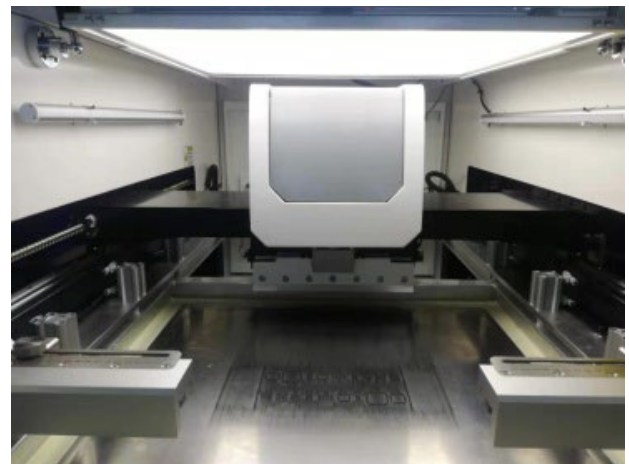
Temperature and humidity control function

Automatic adjustment and supervision of temperature and humidity within the printing press, to ensure the stable physical characteristics of printing materials.

Vacuum suction plate function

It can automatically clamp PCB of various sizes and thicknesses to effectively overcome the deformation of the board,Make sure that the tin is evenly printed.
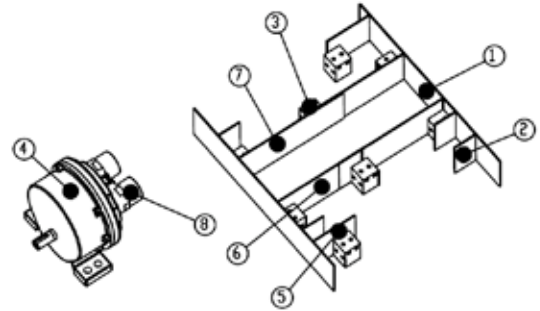
SPI close loop

It is connected with SPI to form a closed-loop system. When the feedback information of SPI printing is received, the machine will automatically adjust according to the SPI feedback offset. The XY direction offset can be automatically adjusted in 3pcs, and the steel mesh can be cleaned to improve the printing quality and production efficiency, forming a complete printing feedback system.

Support MES system seamless docking

It can scan the one-dimensional code or two-dimensional code on the customer PCB and record the relevant information, which can be shared with the customer MES system. MES system uses two-dimensional code, one-dimensional code, mobile IOT and other technologies to conduct scientific management on the warehouse material preparation and prevention, incoming material picking management, material loading and error prevention, production scheduling, quality traceability, Kanban control, etc. in the SMT production process. By optimizing the process, we can improve the production efficiency, product quality, shorten the production cycle, reduce the manufacturing cost, prevent mistakes and stupefaction in an all-round way, realize comprehensive and scientific traceability management, help enterprises respond to market changes quickly, andimprove their core competitiveness.

Product size
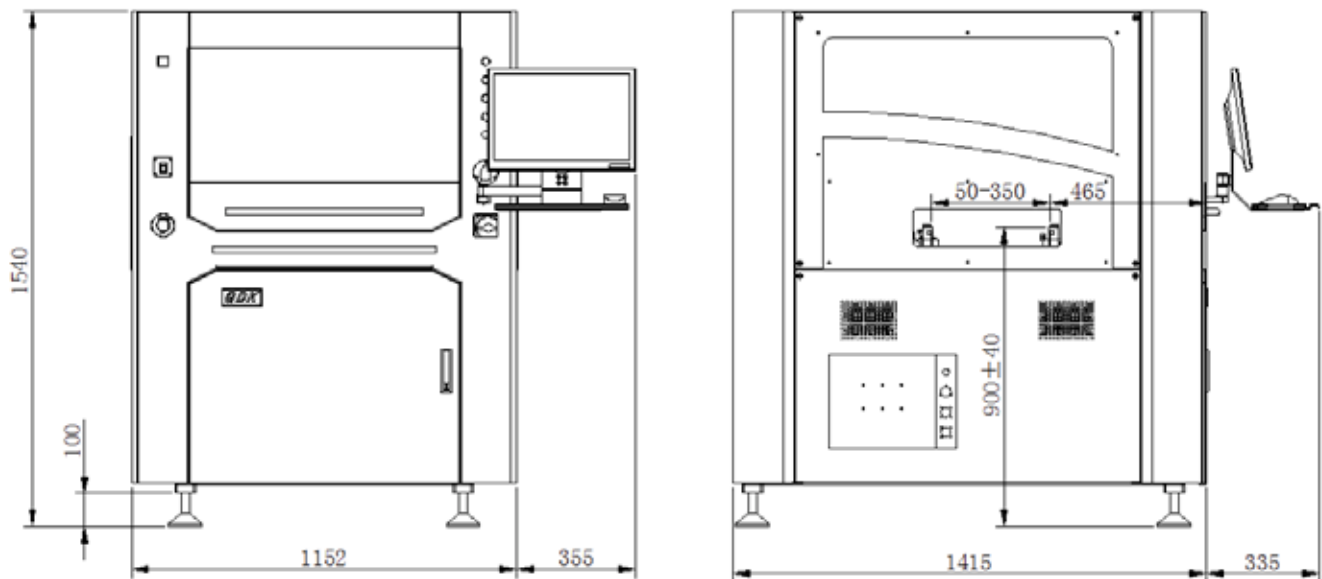
In this manual, the explanatory text, drawings and technical parameters change with the development of technology without notice. *

Technical parameters

PCB PARAMETER	
Maximum board size（X x Y）	450mm x 350mm
Minimum board size（X x Y）	50mm x 50mm
PCB thickness	0.4mm~6mm
Warpage	1% ≤1%Diagonal
Maximum board weight	3Kg
Board margin gap	3 mm Configuration to 3mm
Maximum bottom gap	20mm
Transfer speed	1500mm/s(Max)
Transfer height from the ground	900±40mm
Transfer orbit direction	L-R,R-L,L-L,R-R
Transfer mode	One stage orbit
PCB clamping method	Programmable elastic side clamp + Automatic adjustment plate thickness + Mdge locking of base plate pressing (Option: 1. Bottom integral cavity type vacuum;2.Bottom multi-point local vacuum)
Support method	Magnetic thimble + Equal high block.(Optional:1.vacuum suction cavity; 2.special workpiece fixture)

PRINTING PARAMETERS

Printing head	Floating intelligent printing head (two independent direct connected motors)
Template frame size	470mm x 370mm~737 mm x 737 mm
Maximum printing area（X x Y）	450mm x 350mm
Squeegee type	Steel/Glue Squeegee（Angel 45°/50°/60° matching the printing process）
Squeegee length	300mm（200mm~500mm）(optional with length of 200mm-500mm)
Squeegee height	65±1mm
Squeegee thickness	0.25mm Diamond-like carbon 0.25mm Diamond-like carbon coating
Printing mode	Single or double Squeegee printing
Demoulding length	0.02 mm - 12 mm
Printing speed	0 ~ 200 mm/s
Printing pressure	0.5kg - 10Kg
Printing stroke	±200 mm (From the center)

CLEANING PARAMETERS

Cleaning mode	1. Drip cleaning system; 2. Dry, wet and vacuum modes
Length of cleaning & wiping plate	380mm（300mm, 450mm, 500mm）(optional with 300mm, 450mm, 500mm)

IMAGE PARAMETERS

Field of view	8mm x 6mm
Platform adjustment range	X:±5.0mm,Y:±7.0mm,θ:±2.0°
Benchmark point type	Standard shape benchmark point（SMEMA standard）, solder pad/openings
Camera system	Independent camera, upwards/downwards imaging vision system, geometric matching location

PERFORMANCE PARAMETERS

Repeat position accuracy	±10.0μm @6 σ, Cpk ≥ 2.0
Repetition accuracy	±20.0μm @6 σ, Cpk ≥ 2.0
Cycle time	＜7s (Exclude printing and cleaning)
Product changeover	＜5min

EQUIPMENT

Power requirements	±10.0μm @6 σ, Cpk ≥ 2.0
Compressed air requirements	±20.0μm @6 σ, Cpk ≥ 2.0
Operating system	＜7s (Exclude printing and cleaning)
External dimension	＜5min
Machine weight	