

G-SERIES

GKG



G-STAR

**FULLY AUTOMATIC
SMT PRINTER**

www.gkgasia.com



DIGITAL CCD CAMERA

An upgraded CCD positioning camera with a 10x8mm field-of-view, effectively capturing different types of fiducial mark. It is upgradable with a barcode scanner to provide seamless connectivity with users' MES systems, enhancing product traceability and maintenance needs.

STD STANDARD FEATURES



PCB CLAMPER

The combination of retractable top clamp and motor controlled side clamp, uniquely designed by GKG (patented), securely clamps warped substrates to ensure highest quality of printing.



STENCIL Y-AXIS MEMORY

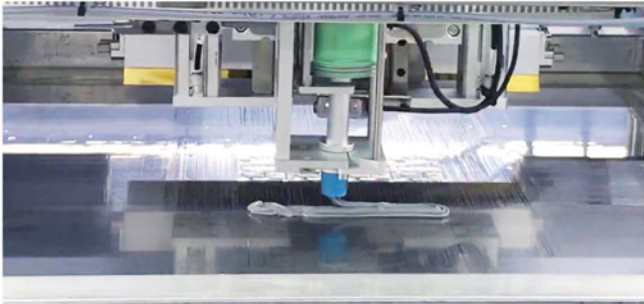
The stencil Y position is adjustable via user interface, and the settings can be saved and reapplied when replacing the stencil. This function significantly reduces human errors and saves time in readjusting stencil position.



PRINTING TABLE

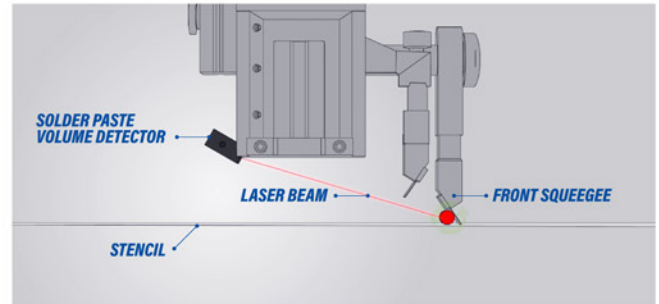
A stable and reliable printing table combined with a vacuum suction function, optional with different types of support block to eliminate substrate warping issue and enhance printing quality.

OPT OPTIONAL FEATURES



AUTO PASTE REPLENISHMENT

Closed-loop with paste rolling diameter monitoring system to automatically replenish solder paste when insufficient paste is detected. The paste is automatically dispensed across the entire squeegee length, maintaining at 15mm rolling diameter, adopting the common 500 grams' solder paste jar.



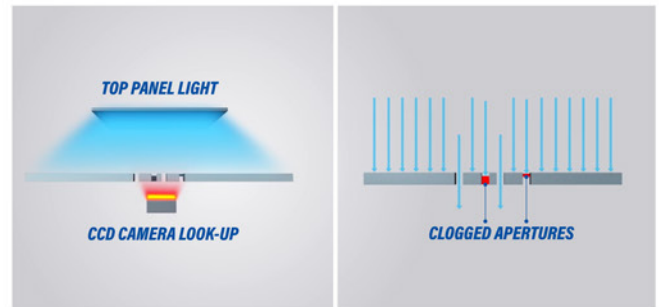
PASTE ROLLING DIAMETER MONITORING SYSTEM

Tracing solder paste rolling diameter in real time and trigger the auto dispensing if the paste diameter falls below 10mm. Completely eliminate insufficient solder paste on stencil and keep the paste rolling speed within optimum range to achieve best printing result.



MES SYSTEM

Customization for Industry 4.0. MES keeps track of all manufacturing information in real time, receiving up-to-the-minute data from robots, machines and employees.



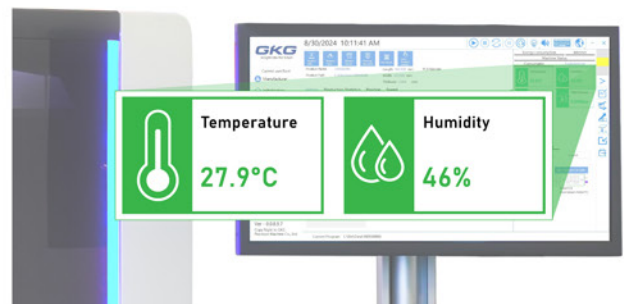
STENCIL APERTURES INSPECTION SYSTEM

A panel light is installed at the top, with a CCD camera positioned below to inspect stencil apertures. It automatically detects any clogging of stencil apertures, eliminating the use of poor-quality stencils and ensuring quality printing right from the start.



SPI CLOSE-LOOP CONNECTION

With SPI close-loop system, machine will automatically adjust and correct the print deposits based on the feedback given with regards to poor printing quality. This will facilitate improved print quality and production efficiency, by forming a complete printing feedback system.



TEMPERATURE & HUMIDITY DISPLAY SYSTEM

The temperature and humidity display system provides real-time monitoring of the internal temperature and humidity status of the equipment. This system is beneficial for monitoring and extending the lifespan of solder paste to ensure printing quality.

PERFORMANCE

Machine Alignment Capability	2 Cmk @ #12.5 µm @ 6 sigma
Process Alignment Capability	2 Cpk @ #25 µm @ 6 sigma
Core Cycle Time (excluding printing & cleaning time)	< 8 secs
Product Changeover Time	< 3 mins
New Product Set-up Time	< 5 mins

BOARD HANDLING

Max. Size (L x W)	400mm x 340mm
Min. Size (L x W)	50mm x 50mm
Thickness	0.4 ~ 6mm
PCB Thickness Adjustment	Manual (Optional for automatic. PCB max width reduce to 310mm)
PCB Max Weight	3kg
PCB Edge Clearance	3mm
PCB Bottom Clearance	15mm (7mm with optional auto PCB thickness adjustment)
PCB Warp	Max. 1% diagonally
Clamping Method	Top clamp (Manual), motor controlled side clamp
Support Method	Magnetic support pins, bars, blocks, vacuum suction
Conveyor Direction	L to R, R to L, R to R, L to L (software control)
Conveyor Height	900 ± 40mm
Conveyor Speed (max.)	1,500 mm/s
Conveyor Width Adjustment	Automatic

PRINTING PARAMETERS

Stencil Frame Size (L x W)	Adjustable, 370mm x 370mm to 737mm x 737mm
Print Gap (snap-off)	0 ~ 20mm
Printing Table Adjustment Range	X: ±3mm, Y: ±7mm θ±2°
Print Speed	10 ~ 200mm/s
Squeegee Pressure	0.5 ~ 10kg (program control)
Squeegee Type	Std: Metal Squeegee 280mm, 350mm Opt: OPC Squeegee, Rubber
Squeegee Angle	Std: 60°, Option: 45°, 50°, 55°
Cleaning System	Auto wet, dry, vacuum (software select)

OPTICAL SYSTEM

Field-of-View (FOV)	10mm x 8mm
Fiducial Types	Circle, Triangle, Square, Diamond, Cross
Fiducial Size	0.5 ~ 4mm
Vision Methodology	Digital CCD camera look up & down
2D Inspection	Max. 500 windows to inspect missing & insufficient (std.)

FACILITIES REQUIREMENT

Power Supply	AC220V ± 10%, 50 / 60Hz
Power Consumption	2.5kW
Air Supply	4 ~ 6Kg / cm ²
Air Consumption	5L / min
Dimension (excluding signal tower)	1,150mm (L) x 1,362mm (W) x 1,463mm (H)
Machine Weight	1,000kg

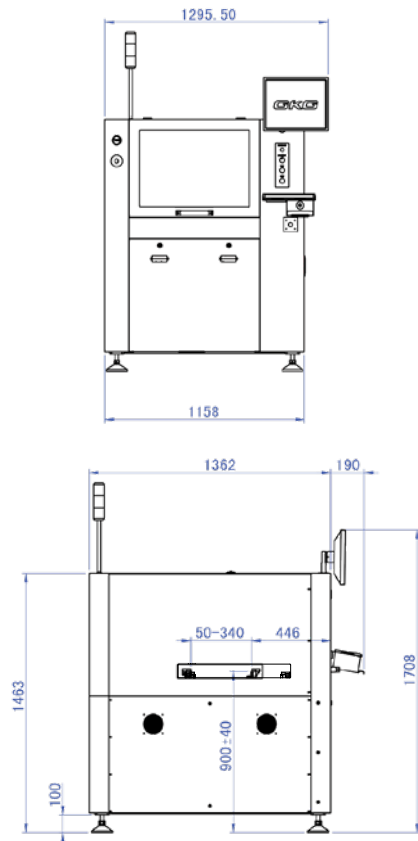
OPERATOR INTERFACE

Hardware	LCD Monitor, Mouse & Keyboard
Operating System (OS)	Windows 10
Control Method	Industrial PC controlled
I/O Interface	SMEMA Standard

OPTIONS

Auto Glue Dispensing
Auto Paste Replenishment
Auto Table Adjustment for PCB thickness
Handheld barcode scanner for stencil, solder paste, squeegee traceability
Internal / External barcode scanner for PCB traceability
MES System Integration (for Ind. 4.0)
Paste Rolling Diameter Monitoring System
SPI closed-loop
Stencil Aperture Inspection System
Temperature, Humidity Monitoring & Display
Uninterrupted Power Supply (UPS)
2 machines in series for higher output

EXTERNAL DIMENSION(mm)



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WEBSITE



LINKTREE



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*GKG reserves the right to make any changes concerning design or specification of the machine without any prior notice for continuous improvement. (G-Star Version 1.1 2025.03)