



GKG®

G9 FULLY AUTOMATIC VISION SCREEN PRINTER

G9系列全自动视觉印刷机

未来，源自今天的选择



G9全自动视觉印刷机是一款针对于SMT高端应用领域的新产品，能完美满足03015，0.25pitch等细间距、高精度、高速度的工艺要求。

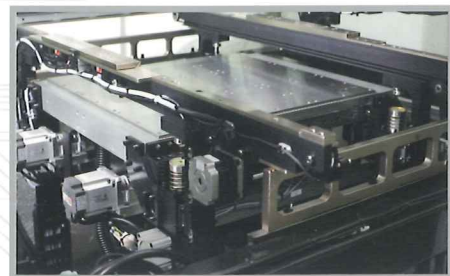
功能介绍 Performance



CCD数字相机系统 CCD digital camera system

全新的光路系统——均匀的环形光和高亮度的同轴光，配以均可无极调节的亮度功能，使得各类型的Mark点均可很好的识别（包括凹凸不平的Mark点），适应镀锡、镀铜、镀金、喷锡、FPC等各类不同颜色的PCB。

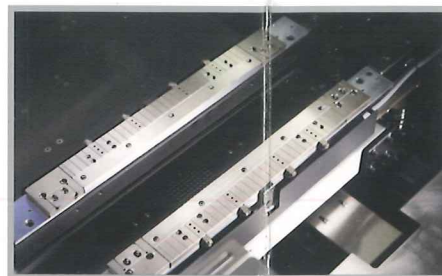
Total new optical path system, uniform circular light and high brightness of coaxial light source. With both light source system, brightness can adjust to an infinite loop, allowing different mark point can be easily recognize (including uneven mark point) such as tin plating, copper plating, silver plating, hot air soldering, FPC and various types of different PCB color.



高精度PCB厚度的调节顶升平台 High precision adjustable PCB thickness lift up platform

结构紧凑可靠，升降平稳，PIN针高度软件自动调节，可以精确的实现不同厚度的PCB板位置高度的调节。

Advance design, compact structure, high reliability, Smooth and stable lift up/down platform, pin height automatically adjust by software control. Precisely realize different types of PCB thickness position height adjust.



导轨定位系统 Guide Rail positioning System

国家实用新型发明专利。可拆卸，可编程的柔性侧夹装置，针对软板，翘曲形变之PCB，进行独特的顶部压平，通过软件编程，可自动伸缩，不影响锡厚。

New pattern patented guide rail can detachable, programmable flexible side clamp, specific to FPC, PCB warpage, perform a unique clamping plate device. Through software programming can automatically stretch out and draw back unaffected PCB thickness.



全新的刮刀结构设计 Total new squeegee blade structure design

通过滑轨与气缸新型刮刀结构，提高运行稳定性及延长使用寿命。

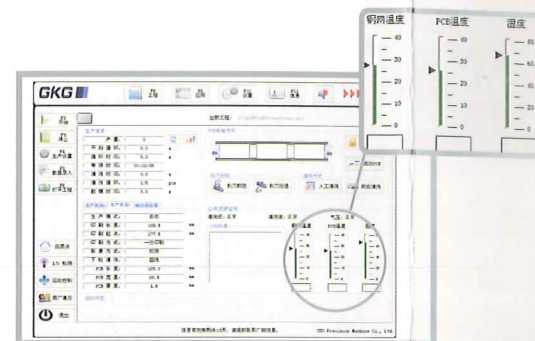
Through sliding rail and air cylinder new pattern squeegee blade structure, increase movement stability and prolonging the service life.



高速网板清洗 High speed cleaning system

浸润式清洗结构，有效预防溶剂管堵塞造成的局部无溶剂而引起擦拭不干净。

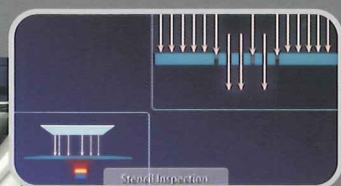
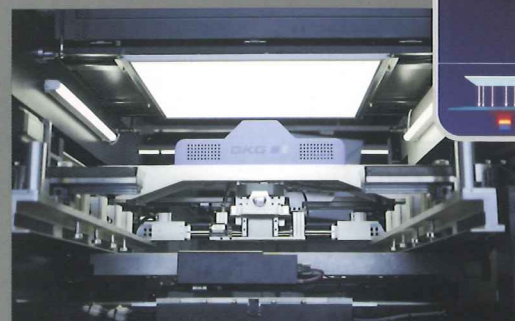
Infiltration type cleaning structure, effectively prevent the solvent tube blockage cause no solvent while cleaning and poor cleaning effect.



全新多功能界面 New multi-function interface

简洁，明了，便于操作。
Simplicity, Clearly understand, friendly user.

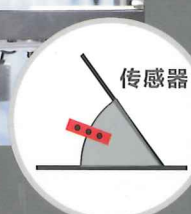
实时温湿度监控功能。
Actual temperature and humidity monitor function.



钢网检测系统 Stencil check System

通过在钢网上方进行光源补偿，使用CCD对钢网的网孔进行实时检查，从而能快速检测并判断出钢网清洗后是否堵孔，并进行自动清洗，是对PCB板的2D检测的一种补充。

Through light source compensation at stencil and CCD real time inspection check on stencil holes which can rapidly detect, judge stencil after cleaning whether stencil holes is been block and auto clean. Is complement for PCB 2D Inspection.



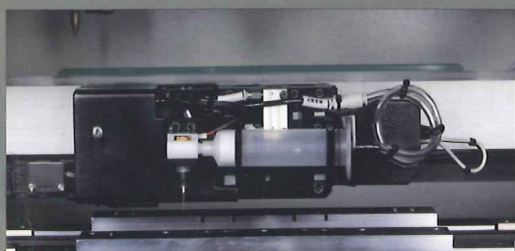
瓶式自动加锡及自动锡膏检测功能 Cylindrical type automatic add solder and solder paste inspection function

定时定点自动加锡膏，保证锡膏品质及钢网中锡膏量。从而保证客户的印刷品质及提高生产率。

Automatic add solder at periodic time and position to ensure quality of solder paste volume at stencil thus guarantee printing quality and efficiency at customer

通过传感器，管理钢网上锡膏量，能够进行质量稳定且长时间连续印刷。提高生产率

precision sensor to manage amount of solder paste at stencil, be able to extend and continuous printing thus increase productivity



自动点胶系统 Automatic Dispensing System

针对不同的印刷工艺要求，可在印刷完后，对PCB板进行准确的点胶、点锡、画线、填充等功能操作；同时点胶头上还配备有加热功能，可在环境温度较低时，对胶水进行加热，提高胶水的流动性。

In view of the different printing requirement, dispensing through glue, solderpaste, dispense line, padding etc can be performed after the printing process. Dispensing head is equip with heating function to maintain glue viscosity with better flowability.



SPI联机 SPI On line

与SPI联机形成闭环系统，当收到SPI印刷不良的反馈信息后，机器会自动根据SPI反馈的偏移量自动进行调整，XY方向偏移可在3PCS内自动调整完成，并清洗钢网，提高印刷品质与生产效率，构成完整的印刷反馈系统。

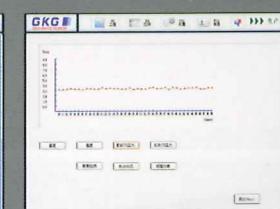
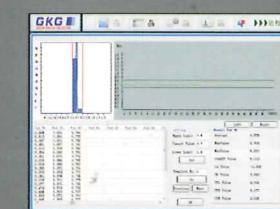
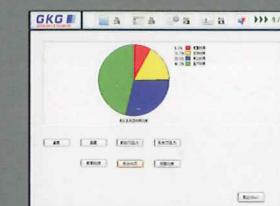
With SPI close loop connection, when received SPI feedback on poor printing information, machine will automatic adjust per SPI data and correct. XY shifted auto adjust complete by within 3 pieces and clean stencil. This will improve printing quality and production efficiency. It form a complete printing feedback system.



引领工业4.0的兼容性 4.0 the compatibility of leading industry

通过对机器状态、参数的自动上传或输出，为客户工业4.0智能生产提供强有力的保障。可实现与客户MES系统的无缝对接，实现产品的高度可追溯性；智能管控设备保养。根据现场管理实现自行分配各层级工程人员使用权限。

Through to the machine status, parameters can be automatically upload or output support customer Industrial 4.0 Intelligence production much more guarantee. With industrial 4.0 it can seamless connection and realized with customer MES system, product traceability, Intelligence control machine maintenance. Distribution according to the on-site management implementation engineers at the level of access.



Specifications/ 技术参数与规格

基板处理 Substrate processing

最大基板尺寸 (XxY) Maximum board size	460*340mm
最小基板尺寸 (XxY) Minimum board size	50*50mm
基板厚度尺寸 Board thickness	0.4~6mm
最大基板重量 Maximum board weight	3Kg
基板边缘间隙 Board edge clearance	2.5mm
过板高度 Board height	17mm
传输高度 Transport height	900 ± 40mm
传输速度 Transport speed	分段控制, 1500mm/s(Max) Program Control
传输方式 Transport direction	一段式运输导轨 One stage
基板夹持 Board clamp	自动伸缩式上压片 Patented over the top clamping
	柔性边夹 Side clamping
	吸附功能 Adsorption function
基板支撑方法 Support System	磁性顶针 Magnetic Pin
	等高块 Support Block
	手动调节顶升平台 Manual up-down table

印刷参数 Printing Parameters

最大印刷区域 (XxY) Maximum Print Size	530*340mm
印刷脱模 Snap-off	0~20mm
印刷模式 Print Mode	单或双刮刀印刷 One/ Twice
刮刀类型 queegee Type	胶刮刀/钢刮刀(角度45/55/60) Rubber/Steel Squeegee Blade(angle 45/55/60)
印刷速度 Print Speed	6~200mm/sec
印刷压力 Print Pressure	0.5~10Kg
模板框架尺寸 The template frame size	370*370mm~737*737mm
清洗方式 Cleaning System	加强型真空吸附 Reinforced Vacuum absorption
	干、湿、真空三种模式 Dry, Wet Vacuum three modes
	来回清洗 Back and forth cleaning

影像 Vision

影像视域 CCD FOV	10*8mm
基准点类型 Fiducial mark types	标准形状基准点 (见SMEMA标准) Standard Fiducial mark shape
	焊盘 Pad
	开孔 Hole
摄像机系统 Camera System	上/下成像的视觉系统 Look up/down optics structure
	数码相机 CCD digital camera
	几何匹配 Geometry pattern match

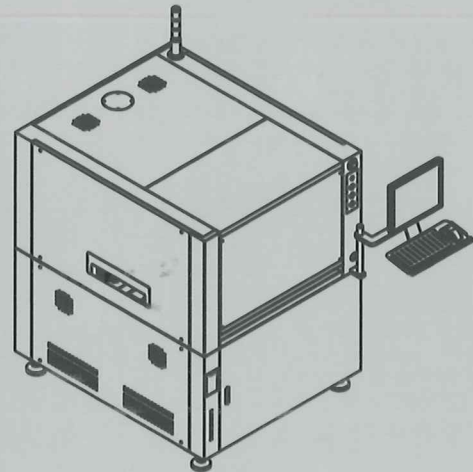
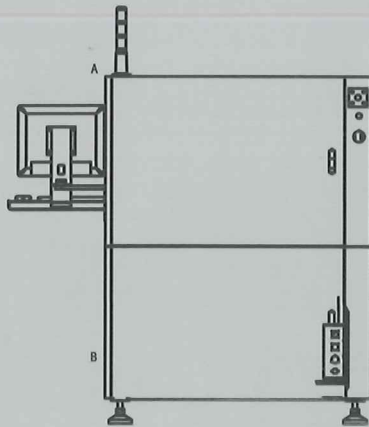
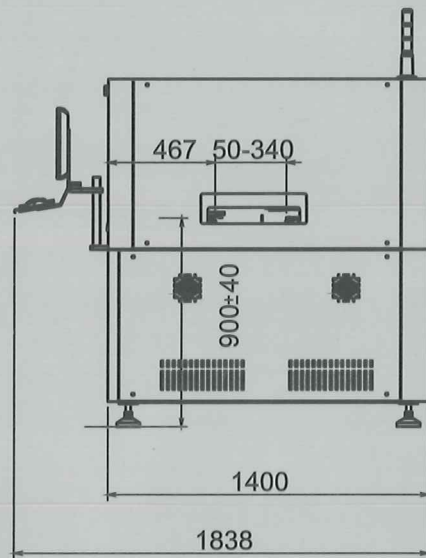
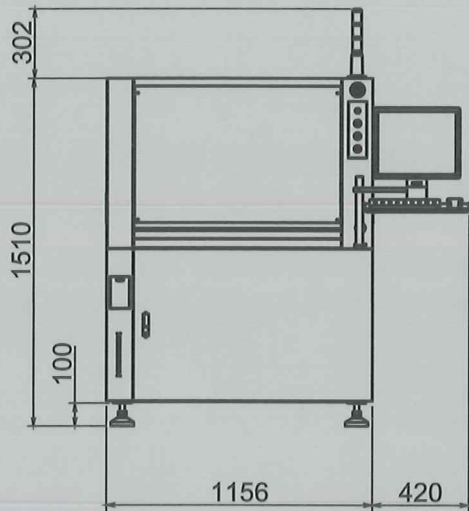
性能 Machine Performance

系统对准精度和重复精度 Repeat Position Accuracy	± 12.5微米@6σ, Cpk≥2.0 (± 12.5micro@6σ, Cpk≥2.0)
实际焊膏印置重复精度 Print Accuracy	± 15微米@6σ, Cpk≥2.0 (± 15micro@6σ, Cpk≥2.0)
基于第三方测试系统(德国CTQ)验证的实际焊膏印刷位置重复精度 Based on the third party test system(CTQ)Verify the actual solder paste printing position repeat precision	
印刷周期 Cycle time	<7sec(不包括印刷及清洗时间)

设备 Machine paramter

功率要求 Power Source	AC:220±10%,50/60HZ, 2.5KW
压缩空气要求 Air Pressure	4~6 Kg/cm ²
耗气量 Air Consumption	约5L/min
工作环境温度 Operating Temperature	-20°C~+45°C
工作环境湿度 Operating Humidity	30%~60%
机器高度(去除三色灯) Machine dimension(without Tower light)	1510(H)mm
机器长度 Machine Length	1156(L)mm
机器宽度 Machine Width	1400(W)mm
机器重量 Machine Weight Approx:	Approx: 约1000Kg

G9尺寸外观图



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