

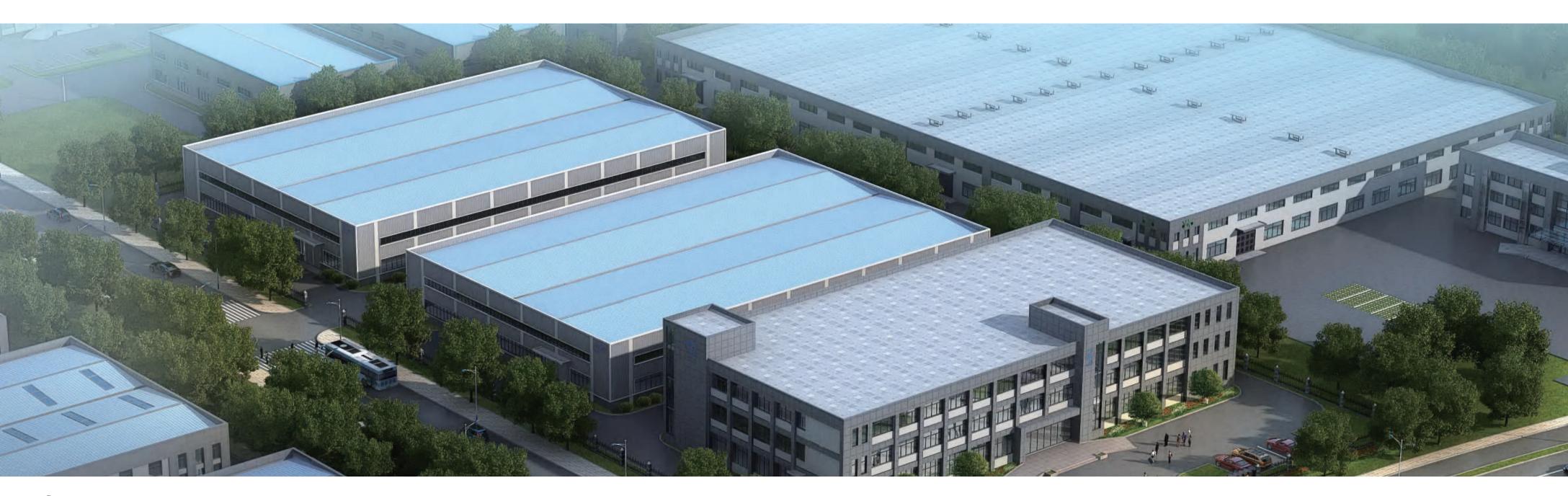


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GRANDSEED, LEADER FOR THE INTEGRATED PRODUCTION LINE OF CHINA'S ELECTRONIC INDUSTRY

Shenzhen Grandseed Technology Development Co., Ltd,founded in 2011,which main business are R&D and production of electronic and integration equipment of complete manufacturing line, semiconductor packaging intelligent integration equipment of complete manufacturing line and surface mount intelligent equipment of flexible industrial robot production line; It owns Anhui Grandseed Automation Equipment, Shenzhen Songle Intelligent Equipment.

At present, it has more than one hundred national patents, software copyrights and integrated circuits, which have been included in the national intellectual property protection database, and have become a highquality manufacturer in Guangdong Province, a contract-abiding and trustworthy enterprise in Guangdong Province, a "double soft" enterprise in Shenzhen, and "The most potential" of Shenzhen brand enterprise, many other honorary titles as well.Our company has unique advantages in energy saving, environmental protection, information system integration and other design concepts. In 2019, it was approved as a postdoctoral innovation practice base in Guangdong Province successfully, which provided a strong guarantee for Grandseed to be "a global high-end equipment and intelligent application system service provider"!







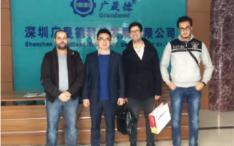






















Brand vision

Provide Chinese automation equipment and solutions for global customers.

Brand positioning

Leader for integrated production line of China's electronic industry

Brand core value

Reliable



What GrandSeed brings to the society is not only the products, but also the positive energy of public good. Every year, it receives batches of visiting delegations from Alibaba, Made in China and other companies and shares with them the growth and development of manufacturing enterprises as well as the problems and experience during the operation, contributing to the development and progress of Chinese industrial technology.



Provide Chinese smart equipment and solution to customers all over the world



Independent operation, steady development, sustainable innovation, and win-win cooperation

Development goals

Develop the brand and achieve great undertaking, make "Grandseed" blossom and yield

Enterprise Vision

Let the human easy work, happy life

Operating principle

Quality first, reputation primary, technology based, service oriented

Core Values

Create value for customers, offer opportunities for employees, donate benefits for society and realize dreams for shareholders













QUALIFICATIONS & HONORS

















第六届LED首创奖

授予:深圳市广晟德科技发展有限公司

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SMT ONE-STOP SOLUTION



PCB PRINTER SERIES

GSD-PM400A

GSD-PM400A full automatic vision printer



GSD-PM1200

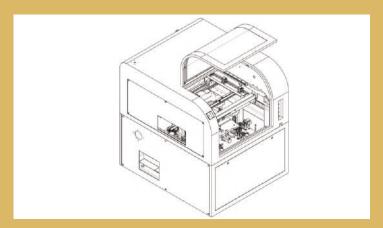
GSD-Pm1200 full automatic vision printer



Item \ model		GSD-PM400A	GSD-PM1200
	Min Size	420X500mm	1100 X300mm 730 X300mm
Screen Frame Dimension	Max Size	737X737mm	1500 X 750mm
	Thickness	$25\sim40\text{mm}$	20~40mm
PCB PCB Min Size		50X50mm	80X50mm
PCB PCB Max Size		400X300mm	1200 X 340mm
PCB PCB Thickness		0. 2– 6mm	0.8~6mm
PCB PCB Warpage		1% Diagonal 1%	<1% Based on diagonal length)
Transport Height		900 ± 40mm	900 ± 40mm
Transport Directtion		Left- Right; Right- Left; Left- Left; Right-Right	Left-Right; Right-Left; Left-Left; Right-Right
Transport Speed		Max 1500mm/S adjustable	Max 50~1200mm/S Programmable
DOD	Supporting style	Magbetedic Pin/Up-down table adjusted by hands	Magnetic thimble / Edge support block / Flexible automatic thimble (optional)
PCB PCB positioning	Clamping style	Particular top pressing, side clamping, vacuum adsorbing	Bouncy side clip / Bouncy movable Z direction pressing plate / vacuum suction
Print Head		Two independent motorized print heads	Programmable electronic control printing head (optional: air control)
Squeegee Speed		6~300mm/s	10~200mm/s
Squeegee Pressure		0~10Kg/cm²	0~15Kg/cm² Program Control
Squeegee Angle		55° (Standard)	60° (Standard)/55° /45°
Squeegee Type		Stainless steel (Standard), plastic	Stainless steel(Standard), plastic
Stencil Separation Speed		0.1 ~ 20mm/sec Programmable	0.1~20mm/sec Programmable
Cleaning System		Dry、Wet、Vacuum(Programmable)	Dry、Wet、Vacuum (Programmable)
Table Adjustment ranges		X: ±5mm: Y: ±8mm: θ:±2°	X:8mm;Y: ± 10mm; θ: ± 2°
Repeat Position Accuracy		±0.009mm	± 0.015mm
Printing Accuracy		±0.023mm	± 0.03mm
Cycle Time		<10s (Exclude Printing & Cleaning)	<11s (Exclude Printing & Cleaning)
Product Changeover		<5Min	<5Min
Air pressure requirement		4.5~6Kg/cm²	4~6Kg/cm²
Power Input		AC: 220 ± 10%,50/60HZ,1~3KW	AC:220 ± 10%,50/60HZ ,1~3KW
Control Method		PC Control	PC Control
Machine Dimensions		1146 (L) X1364 (W) X1440 (H) mm	2220(W) x 1220(D) X1500(H)mm
Machine weight		Approx : 1000kg	Approx:1500Kg

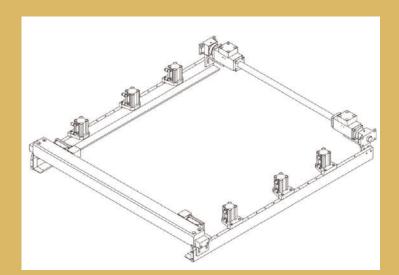






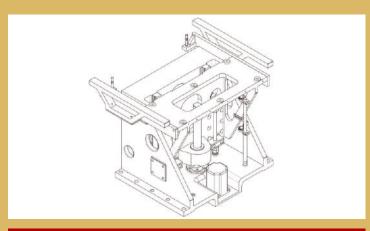
Patent Right Code: 201410387489.2

Appearance patent for full automatic solder paste printing machine



Patent Right Code: 201420227188.9

Stencil clamping system for full automatic solder paste printing machine



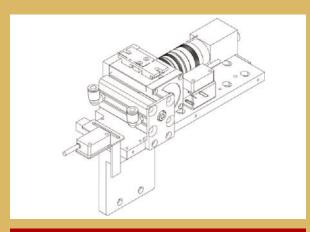
Patent Right Code: 201420145549.5

Jacking system for full automatic solder paste printing machine



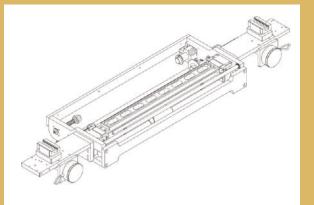
Patent Right Code: 201420227460.3

Guide rail transport system for automatic solder paste printing machine



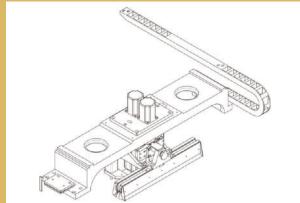
Patent Right Code: 201410121005.X

Mark image recognition system for full automatic solder paste printing machine



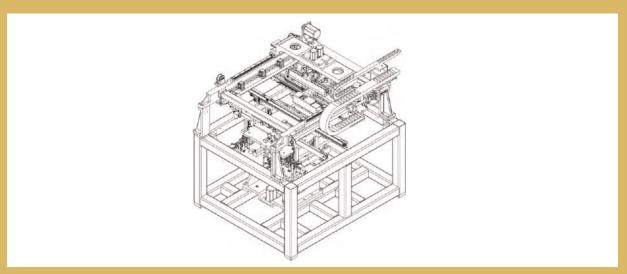
Patent Right Code: 201420444485.9

Automatic cleaning system for full automatic solder paste printing machine



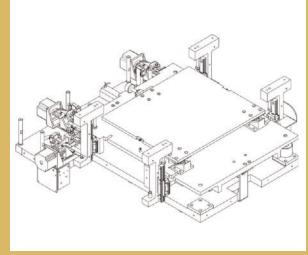
Patent Right Code: 201420229924.4

Suspension-type scraper system for full automatic solder paste printing machine



Patent Right Code: 201430289406.7

The overall invention of fully-auto solder paste printer



Patent Right Code: 201420229970.4

Platform correction system for full automatic solder paste printing machine



GSD-G880 AOI

GSD-G880 Off-Line AOI



GSD-G800 AOI



		SMT 锡膏印刷后,SMT 回流焊前/后,波峰焊前/后,软板			
_	编程模式 ————————————————————————————————————	手动编写、自动编写、CAD 数据导入自动对应元件库			
检		剪刀断脚·铝板卡钩断变形,漏装剪刀,剪刀错料,剪刀组装不良,剪刀装反 倒装。			
测	检测类型	R/D 脱落或严重损坏, 剪刀弯脚, 卡勾上扬, 剪刀断中轴等 ————————————————————————————————————			
		焊点缺陷:锡多、锡少、虚焊、连锡、锡球、溢胶、引脚未出、铜箔污染等。 ————————————————————————————————————			
	零件角度	支持 0~359° 旋转,最小 1° 角距			
	最小检测范围	01005chip、0.3 pitch IC			
光	相机	500万/2000万定制全彩色高速工业数字相机			
学 配	镜头分辨率	10um/15um/18um/20um/25um,特殊应用时可订制			
置	光源	可自主配置环形立体多通道彩色光源,视应用选配同轴光源			
PC	CPU&RAM	Intel i7 3.40GHz 16GB			
	运送和检测方式	人工/自动进出板,步进电机调节PCB轨道宽度,X、Y伺服电机调节或驱动取图			
	检测尺寸	20*20mm~450*350mm(Max)(离线)/50*50mm~400*360mm(Max)(在线),特殊应用时可订制			
	检测厚度	0.3~5.0mm			
机	产品重量	Max: 3KG			
械	产品零件高度	Top: 35mm, Bottom: 35mm。可调节,特殊应用时可订制			
	XY 驱动系统	AC 伺服电机,精密研磨滚珠丝杆			
	XY 移动速度	Max: 830mm/s			
	XY 定位精度	≦Q8um			
	设备外形尺寸	L1200 * W900 * H1500 mm(离线)/L900 * W980 * H1620 mm(在线)			
	 电源	AC220V, 50/60Hz, 1.2KW			
整	PCB 离地高度	820±20mm(离线)/900±20mm(在线)			
机	设备重量	420KG (离线) /600KG(在线)			
数数	前后设备通讯	/SMEMA(在线)			
	气压要求	/0.4-0.8MPa,可选配电控免气压(在线)			
	环境温湿度	10~35℃,35~80% RH(无结露)			
	选配	维修站系统,离线编程系统,SPC 服务器系统,条码识别系统,MES接口			

M606

M606 multifunction mounter



SPECIFICATIONS

机器型号	M606
定位方式	固定拍照+飞行拍照
轴杆数量	1头*6嘴
贴装速度	理论21000CPH (IPC985 CPH15000CPH)
PCB顶板方式	单顶料结构
对应元器件	0402~□28mm SOP.QFP等 (H15mm)
	Min.50(W)*50(L)mm
对应PCB	可选: 300 (W)*600 (L) mm
XIME CD	300 (W) *1200 (L) mm
	Thickness0.38-4.2mm
喂料器	48支 8mm
贴装精度	±50μm+3σ/chip,±30μm@μ+3σ/QFP(以标准元件为基准)
电源/气压	AC 220V 0.5-0.7Mpa
额定功率	1.5KW
机器重量	1500Kg
机器尺寸	1272 (L) *1260 (W) *1450 (H) mm

M612-4.0

M612-4.0 multifunction mounter



机器型号	M612
定位方式	固定拍照+飞行拍照
轴杆数量	2头*6嘴(12吸头)
贴装速度	理论3500000CPH (IPC985 CPH28000CPH
PCB顶板方式	
对应元器件	0402~□32mm BGAQFP(H15mm)
	Min.50(W)*50(L)mm
对应PCB	Max320 (W) *1200 (L) mm
	选配: 320*1500 (2次进板)
喂料器	64支8mm
贴装精度	±50 μ m+3 σ /chip, ±30 μ m@ μ +3 σ /QFP(以标准元件为基准)
电源/气压	AC 220V 0.5-0.7Mpa
额定功率	3.5KW
机器重量	1600Kg
机器尺寸	1750 (L) *1300 (W) *1460 (H) mm



M606T

M606T Lens mounter



SPECIFICATIONS

机器型号	M606
定位方式	视野相机30万像素+飞行拍照130万像素
轴杆数量	1头*6嘴
贴装速度	理论15000CPH (IPC985 CPH10000CPH)
和农还及	开蓝光6500~7500CPH
PCB顶板方式	单顶料机构,可调夹板方式
对应元器件	各种规格的透镜
_	Min.50(W)*50(L)mm
对应PCB	可选: 300 (W)*600 (L) mm
XJMPCB	300 (W) *1200 (L) mm
	Thickness0.38-4.2mm
喂料器	震动盘(1组6通道)
贴装精度	$\pm 50 \mu m + 3 \sigma/chip$, $\pm 30 \mu m@\mu + 3 \sigma/QFP$
电源/气压	AC 220V 0.5-0.7Mpa
额定功率	1.5KW
机器重量	1500Kg
机器尺寸	1272 (L) *1260 (W) *1450 (H) mm

M612T

M612T Lens mounter



机器型号	M612T
定位方式	飞行拍照120万像素
轴杆数量	2头*6嘴
贴装速度	理论2500000CPH (IPC985 CPH18000CPH
如衣坯皮	蓝光9000~12000CPH
PCB顶板方式	单顶料机构,可调夹板方式
对应元器件	各种规格的透镜
_	Min:50(W)*50(L)mm
对应PCB	Max:360 (W)*1200 (L) mm
	Thickness0.38-4.2mm
喂料器	震动盘(2组6通道)
贴装精度	±50 μ m+3 σ /chip, ±30 μ m@ μ +3 σ /QFP
电源/气压	AC 220V 0.5-0.7Mpa
额定功率	2.5KW
机器重量	1600Kg
机器尺寸	1750 (L) *1300 (W) *1460 (H) mm





GSD-L12



GSD-L10



GSD-L8



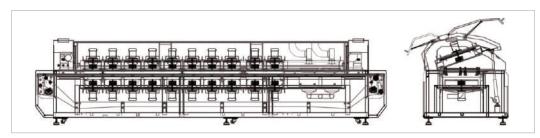
Features

- Windows user interface, two kinds of control methods are designed: computer control and emergency manual control, with security function;
- ◆ The leading heating method solved dead angle problem in the reflow soldering. It is suitable for the welding of electrical components of CSP, BGA, 020ICHIP etc;
- ◆ The professional wind wheel design brings the stable wind speed, thus effectively guaranty the hot wind uniformity when PCB is heating, so as to achieve the maximum repeated heating:
- ◆ The forced independent circulation is used in each temperature zone. The independent PID control and the upper and lower independent heating method enable the accurate and uniform temperature of the furnace chamber with the large heat capacity;
- ◆ The high quality aluminum silicate insulation materials are used in the insulation layer, thus brings the sound insulation effect and fast heating; the time it takes from room temperature to operating temperature ≤20min;
- ◆ Furnace lead-free design; all made of high quality imported stainless steel plate;
 High quality, high temperature and high-speed motor bring the steady wind transmission,
 with minor vibration and low noise;
- ◆ The furnace uses cylinder lifting and safety rod support, which is safe and convenient;
- ◆ The transmission mode of PCB board is stepless variable-frequency variable-speed (VSVF) with the synchronized mesh chain and excellent stability;
- ◆ The special quality aluminum guide rails and automatic refueling system ensure the accuracy of rail width adjustment and long service life;
- ◆ Equipped with power protection UPS, so that the PCB board can be ensured with the normal output after a power failure without damage;
- Powerful software functions can conduct the analysis, storage and printing of the data curve any time for PCB board on-line temperature measurement;
- ◆ PC and PLC communications use PC/PP protocol, which ensures the stable operation and avoids crashes;
- Automatic monitoring displays the working status of equipment;
- ◆ Forced air cooling; temperature of PCB board after going out from the machine ≤50°;
- ◆ Soldering flux automatic recovery system long keeps the furnace clean;
- Special furnace design ensures the good insulation, with the lowest power consumption of the same kind.



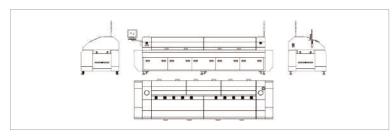
Product Structure

ZL 20102065146.8



structure based on the principle of mechanical design, not easy to deform, front and rear doors with cylinder style structure, top cover with humanized design, can be easily opened with only 3kg of strength. The entire equipment with scientific, safe and labor-saving design, and also according to the principles of physics and chemicals, to achieve high efficiency, energy saving and environment protection.

ZL 201130009454.2

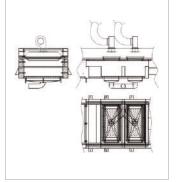


The machine according to the aesthetic design, with nice shape and fluency lines. electrostatic sprayed surface makes firm coating, bright color and excellent



Windows operating system offers the English and Chinese interface, which is easy to learn; two kinds of control methods are designed: computer control and emergency manual control, with security function; PC and PLC (singlechip) communications use PC/PP protocol, which ensures the stable operation and avoids crashes; Powerful software functions can conduct the analysis, storage and printing of the data curve any time for PCB board on-line temperature measurement; automatic monitoring displays the working status of equipment, which will help monitoring equipment at any time;

ZL 201020674965.6



The independently controlled cooling system is made of stainless steel. The upper and lower cooling convection, curve after cooling down forms the mirror image of welding temperature curve, which is in full compliance with SMT international certification standards.

ITEMS	GSD-L8	GSD-L10	GSD-L12
Control system	PC+PLC	PC+PLC	PC+PLC
Heating/cooling	16heating zones +2cooling zones	20heating zones +2cooling zones	24heating zones +2cooling zones
Heating zone length	2950mm	3650mm	4350mm
Temperature range	room temperature-350°C	room temperature−350°C	room temperature−350°C
Temperature accuracy	±1~2°C	±1~2°C	±1~2℃
Temperature variation	±2℃	±2℃	±2℃
Cooling	forced cooling	forced cooling (nitrogen gas input style is water cooling)	forced cooling (nitrogen gas input style is water cooling)
PCB尺寸 PCB size	50-400mm (W)	50-400mm (W)	50-400mm (W)
PCB A high degree of PCB transfer	900 ± 20mm	900 ± 20mm	900 ± 20mm
Transmission	chain rails + mesh belt	chain rails + mesh belt	chain rails + mesh belt
Transmission direction	L→R(R→L可选) (R→L optional)	L→R (R→L optional)	L→R (R→L optional)
Transmission speed	0~2000mm/min	0~2000mm/min	0~2000mm/min
Wide range of track notes	50-420mm	50-420mm	50-420mm
Net width	500mm	500mm	500mm
Power failure protection	UPS	UPS	UPS
Power supply	A3Ø380V 50HZ/60HZ	A3Ø380V 50HZ/60HZ	A3Ø380V 50HZ/60HZ
Normal working power/ total power consumption	11/73KW	14/88KW	17/93KW
(L*W*H) Dimensions (I*w*h)	5580mm (L)*1500mm (W)*1550mm (H)	6350mm (L) *1500mm (W)*1550mm (H)	6890mm (L) *1500mm (W)*1550mm (H)
Weight	1870kg	2350kg	2800kg





GSD-M8C



GSD-M8N



GSD-M6C

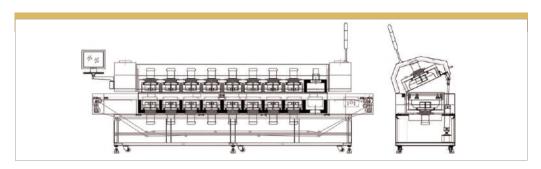


GSD-M6N



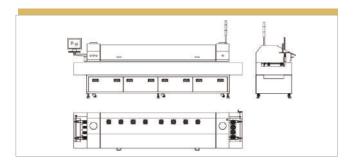
Product Structure

20102065146.8



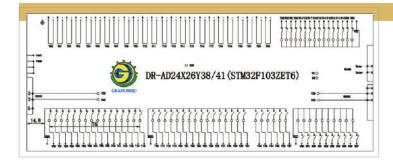
structure based on the principle of mechanical design, not easy to deform, front and rear doors with cylinder style structure, top cover with humanized design, can be easily opened with only 3kg of strength. The entire equipment with scientific, safe and labor-saving design, and also according to the principles of physics and chemicals, to achieve high efficiency, energy saving and environment protection.

ZL 201130009454.2



The machine according to the aesthetic design, with nice shape and fluency lines. electrostatic sprayed surface makes firm coating, bright color and excellent appearance.

PCBASE V1.0



Windows operating system offers the English and Chinese interface, which is easy to learn; two kinds of control methods are designed: computer control and emergency manual control, with security function; PC and PLC (single-chip) communications use PC/PP protocol, which ensures the stable operation and avoids crashes; Powerful software functions can conduct the analysis, storage and printing of the data curve any time for PCB board on-line temperature measurement; automatic monitoring displays the working status of equipment, which will help monitoring equipment at any time;



Features

- Windows user interface, two kinds of control methods are designed: computer control and emergency manual control, with security function;
- ◆ The leading heating method solved dead angle problem in the reflow soldering. It is suitable for the welding of electrical components of CSP, BGA, 020ICHIP etc;
- The professional wind wheel design brings the stable wind speed, thus effectively prevented the wind uniformity of PCB when it is heated, so as to achieve the maximum repeated heating;
- The forced independent circulation is used in each temperature zone. The independent PID control and the upper and lower independent heating method enable the accurate and uniform temperature of the furnace chamber with the large heat capacity;
- ◆ The high quality aluminum silicate insulation materials are used in the insulation layer, thus brings the sound insulation effect and fast heating; the time it takes from room temperature to operating temperature ≤20min;
- ◆ Furnace lead-free design; all made of high quality stainless steel plate;
- High quality, high temperature and high-speed motor bring the steady wind transmission, with minor vibration and low noise;
- ◆ The furnace uses cylinder lifting and safety rod support, which is safe and convenient;
- ◆ The transmission mode of PCB board is stepless variable-frequency variable-speed (VSVF) with the synchronized mesh chain and excellent stability;
- The special quality aluminum guide rails and automatic refueling system ensure the accuracy of rail width adjustment and long service life;
- Equipped with power protection UPS, so that the PCB board can be ensured with the normal output after a power failure without damage;
- Powerful software functions can conduct the analysis, storage and printing of the data curve any time for PCB board on-line temperature measurement;
- PC and PLC communications use PC/PP protocol, which ensures the stable operation and avoids crashes;
- ◆ Automatic monitoring displays the working status of equipment;
- ◆ Forced air cooling; temperature of PCB board after going out from the machine ≤60°C;
- ◆ Soldering flux automatic recovery system long keeps the furnace clean;
- ◆ Special furnace design ensures the good insulation, with the lowest power consumption of the same kind.

ITEMS	GSD-M8N	GSD-M8C	GSD-M6N	GSD-M6C
Control system	PC+PLC	PC+PLC	PC+PLC	PC+PLC
Heating/cooling	16heating zones +2cooling zones (top & bottom hot wind)	16heating zones +2cooling zones (top hot wind ⊥ infrared)	12heating zones +2cooling zones (top & bottom hot wind)	12heating zones +2cooling zones (top hot wind ⊥ infrared)
Heating zone length	2750mm	2750mm	2100mm	2100mm
Temperature range	room temperature-350°C	room temperature-350℃	room temperature−350°C	room temperature−350°C
Temperature accuracy	±1~2℃	±1~2℃	±1~2℃	±1~2°C
Temperature variation	±2℃	±2℃	±2℃	±2°C
Cooling	forced cooling	forced cooling	forced cooling	forced cooling
PCB size	30-320mm (W)	30-320mm (W)	30-320mm (W)	30-320mm (W)
A high degree of PCB transfe	r 900 ± 20mm	900 ± 20mm	900 ± 20mm	900 ± 20mm
Transmission	chain rails + mesh belt	chain rails + mesh belt	chain rails + mesh belt	chain rails + mesh belt
Transmission direction	$\begin{array}{c} L \rightarrow R \\ (R \rightarrow L \text{ optional}) \end{array}$	L→R (R→L optional)	$L \rightarrow R$ ($R \rightarrow L$ optional)	L→R (R→L optional)
Transmission speed	0-2000mm/min	0-2000mm/min	0-2000mm/min	0–2000mm/min
Wide range of track notes	30-320mm	30-320mm	30-320mm	30-320mm
Net width	400mm	400mm	400mm	400mm
Power supply	A3Ø380V 50HZ/60HZ	A3Ø380V 50HZ/60HZ	A3Ø380V 50HZ/60HZ	A3Ø380V 50HZ/60HZ
Normal working power/ total p	ower consumption 10.8/50KW	8.4/40KW	9.5/38.5KW	7/32KW
Dimensions (I*w*h)	4600mm(L)*1130mm(W)*1400mm(H)	4600mm(L)*1130mm(W)*1400mm(H)	3900mm(L)*1130mm(W)*1400mm(H)	3900mm(L)*1130mm(W)*1400mm(H)
Weight	1100kg	910kg	920kg	790kg





GSD-S8A

GSD-S6A





GSD-S5A



GSD-S8C

GSD-S6C





GSD-S5C



REFLOW SOLDERING SERIES 回流焊系列

Features

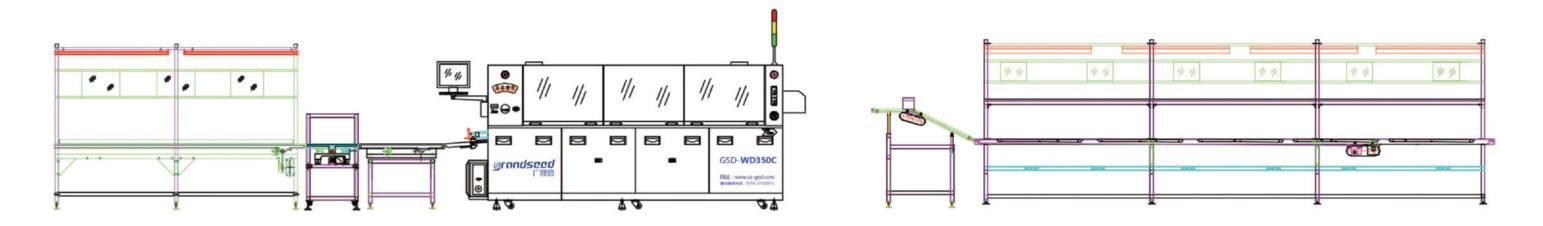
- ◆ Windows user interface, two kinds of control methods are designed: computer control and emergency manual control, with security function; (The item is product characteristice of series of C)
- ◆ The heating system uses the energy-efficient Swedish nickel heating tube, coupled with curved reflex housing, it achieved high thermal efficiency and faster temperature rise;
- ◆ The special forced hot air circulation structure system allows the even heating of PCS and components, "shadow effect"
- Use of high-current solid-state breaker for non-contact output, which is safe and reliable;
- ◆ Powerful software functions can conduct the analysis, storage and printing of the data curve any time for PCB board on-line temperature measurement; (The item is product characteristice of series of C)
- ◆ PC and PLC communications use PC/PP protocol, which ensures the stable operation and avoids crashes; (The item is product characteristice of series of C)
- ◆ Automatic monitoring displays the working status of equipment, which will keep monitoring equipment at any time; (The item is product characteristice of series of C)
- ◆ Fastest response to changes in the external heat and ensure the more balanced temperature through internal controls;
- ◆ Heat pipe module design, which ensures the easy maintenance disassembly;
- Use of high-temperature high-speed motor, which offers stable wind transmission, minor vibration and low noise;
- Drive system adopts stepless governor motor, ESC line speed stepless speed adjusting gear ensures the smooth operation;
- ◆ Stable and reliable electrical control systems.
- The shit-out function (patent agency) professionally designed according to the characteristics of transmission dynamics enabled the product can be shifted from the furnace within a few seconds after a power failure, which is safe, convenient, time-saving and effort-saving.
- ◆ Delay switch protection function offers the even cooling after the machine is shut down.

ITEMS	GSD-S8A / GSD-S8C	GSD-S6A / GSD-S6C	GSD-S5A / GSD-S5C
Temperature control	PID closed loop control SSR driving/PC+PLC	PID closed loop control, SSR driving/PC+PLC	PID closed loop control SSR driving/PC+PLC
Heating zone length	8+8(top & bottom)temperature zones	6+6(top & bottom)temperature zones	5+5(top & bottom)temperature zones
Heating zone length	2760mm	2100mm	1740mm
Heating system	hot wind +infrared	hot wind +infrared	hot wind +infrared
Cooling type	air cooling	air cooling	air cooling
PCB maximum width	350mm	350mm	350mm
Transport direction	L→R	L→R	L→R
Transport height	880±20mm	880 ± 20mm	880 ± 20mm
Transmission	mesh belt transmission	mesh belt transmission	mesh belt transmission
Transmission speed	0–1200mm/min	0–1200mm/min	0–1200mm/min
Power supply	3P 380V50Hz/60HZ	3P 380V50Hz/60HZ	3P 380V50Hz/60HZ
Normal working power	5.9KW/25KW / 7KW/25KW	4.5KW/20KW / 4.6KW/20KW	4KW/17.3KW / 4.5KW/17.5KW
Heating time	15	15	15
Temperature control	room temperature−300°C	room temperature~300℃	room temperature−300°C
Temperature control accu	aracy ±1℃	±1°C	±1°C
PCB temperature distribu	tion deviation $\pm 2^{\circ}\!$	±2°C	±2℃
Abnormal alarm	abnormal temperature (exceed the high or low temperature after constant temperature)	abnormal temperature (exceed the high or low temperature after constant temperature)	abnormal temperature (exceed the high or low temperature after constant temperature)
(L*W*H) Dimensions(L*W*H)	L4030*W700*1400mm	L3350*W700*1400mm	L3000*W700*1400mm
Weight	450kg	350kg	320kg



SMT ONE-STOP SOLUTION

PCB Components Insertion Solution



Туре	Automatic Components Insertion Line	Parallel Transfer Machine	PCB Loading Conveyor	Lead-free Dual Wave Soldering Machine	PCB Downloading Conveyor	Long Workbench With Belt Conveyor
Length	3000mm	600mm	1000mm	4300mm	1200mm	6000mm

WAVE SOLDERING SERIES

GSD-WD350CE

GSD-WD350CE(Computer controlled)



GSD-WD350C

GSD-WD350C(Computer controlled)



WAVE SOLDERING SERIES 波峰焊系列

GSD-WD350R(按键式)

GSD-WD350R(Button Controlled)



ITEMS	GSD-WD350CE	GSD-WD350C	GSD-WD350R
Control style	PC + PLC	PC+PLC	Button + PLC
Conveying motor	1P AC220V,60W	1P AC220V,60W	1P AC220V,60W
Conveying speed	0-2000mm/min	0–2000mm/min	0-2000mm/min
PCB size	30-350mm(w)	30-350mm(w)	30-350mm(w)
Flux capacity	6L	6L	6L
Pre-heating zone	1300mm, 3sectinos, PID controlled individual hot air, zone temperature 250°C	1300mm, 3sectinos, PID controlled individual hot air, zone temperature 250 ℃	1800mm, three sections control, PID IR heating, zone temperature 250℃
Solder pot temperature	1KW * 9PCS Zone temperature 300℃	1KW * 9PCS Zone temperature 300°C	1KW*9PCS Zone temperature 300°C
Solder pot capacity	500KG	350KG	350KG
Solder wave motor	3P AC220V,0.18KW*2PCS	3P AC220V,0.18KW*2PCS	3P AC220V,0.18KW*2PCS
Finger cleaning pump	1P AC220V 6W	1P AC220V 6W	1P AC220V 6W
Conveying direction	L-R (R-L Optional)	L-R (R-L Optional)	L-R(R-L Optional)
Soldering angle	3-6°	3-6°	3-6°
Flux pressure	3-5BAR	3–5BAR	3–5BAR
Power supply	AC380V 50HZ /60HZ	AC380V 50HZ/60HZ	AC380V 50HZ /60HZ
Normal working power/ Total power	8KW/28KW	8KW/25KW	6KW/21KW
Outside dimension	4260(L)*1400(W)*1700(H)MM	4260(L)*1400(W)*1700(H)MM	4260(L)*1400(W)*1700(H)MM
Machine dimension	3400(L)*1400(W)*1700(H)	3400(L)*1400(W)*1700(H)	3400(L)*1400(W)*1700(H)
Net weight	1180KG/1200KG	1180KG/1200KG	1150KG



WAVE SOLDERING SERIES

GSD-WD300C

GSD-WD300C(Computer Controlled)



GSD-WD300R

GSD-WD300R(Button Controlled)

GSD-WD300S

GSD—WD300S(Button controlled)





SPECIFICATIONS

ITEMS	GSD-WD300C	GSD-WD300R	GSD-WD300S
Control style	PC+PLC	Button + PLC	Botton+PLC
Conveying motor	1P AC220V,60W	1P AC220V,60W	1P AC220V,60W
Conveying speed	0–2000mm/min	0–2000mm/min	0-1800mm/min
PCB size	30-300mm(w)	30-300mm(w)	30-300mm
Flux capacity	6L	6L	6L
Pre-heating zone	15、1300mm,3sections,PID controlled individual hot air, zone temperature 250°C	1300mm, three sections control, PID IR heating, zone temperature ~250℃	600mm ~250℃
Solder pot temperature	1KW * 9PCS Zone temperature 300℃	1KW * 9PCS Zone temperature 300℃	1KG 9PCS zone temperature 250℃
Solder pot capacity	195KG	195KG	165kg
Solder wave motor	3P AC220V,0.18KW*2PCS	3P AC220V,0.18KW*2PCS	3PAC220,0.18KW
Finger cleaning pump	1P AC220V 6W	1P AC220V 6W	1P AC220,6KW
Conveying direction	L-R (R-L Optional)	L-R (R-L Optional)	L-R/R-L
Soldering angle	3-6°	3–6°	3-6°
Flux pressure	3–5BAR	3–5BAR	3-5BAR
Power supply	AC380V 50HZ/60HZ	AC380V 50HZ/60HZ	AC380V 50HZ/60HZ
Normal working power/ Total power	5. 5KW/21KW	5KW/18KW	3.5KW/15KW
Outside dimension	3560(L)*1200(W)*1650(H)MM	3560(L)*1200(W)*1650(H)MM	L2260*1200*1450(mm)
Machine dimension	2700(L)*1200(W)*1650(H)	2700(L)*1200(W)*1650(H)	L1880*1200*1450(mm)
Net weight	900KG	890KG	655KG



GSD-WD300A浸焊式焊锡机

GSD-WD300A DIP Style soldering machine



Adjustable width of PCB	Max.50~300mm
Transport height of PCB	750 ± 50mm
Conveying speed of PCB	0~2.0M/Min
Transport Angle of PCB Soldering Angle	Horizontally soldering
Conveying direction of PCB	Left – Right
Component height restriction of PCB	Max.100mm
Preheating zone length	1300mm
Preheating zone quantity	3
Preheating zone power	7.2kw
Preheating zone temperature	Zone temperature 250℃ adjustable
Heating Style	Infrared heating
Wave soldering style	Automatic DIP soldering
Power of soldering pot	9kw
Solder capacity	150KG
Temperature for solder	± 1°C Zone temperature 350°C,control accuracy±1°C
Temperature Control methods	P.I.D+SSR
Machine Control methods	Touch panel + PLC
Flux capacity	6L
Spraying mode	Cylinder + Spraying nozzle
Power supply	3P 380V 50Hz / 60Hz
Initial power	16kw
Power for operation	4.5kw
Air source	4~7KG/CM²
Frame dimension	L3000*W1200*H1650MM
Boundary dimension	L3800*W1200*H1650MM
Weight	920kg





WAVE SOLDERING SERIES

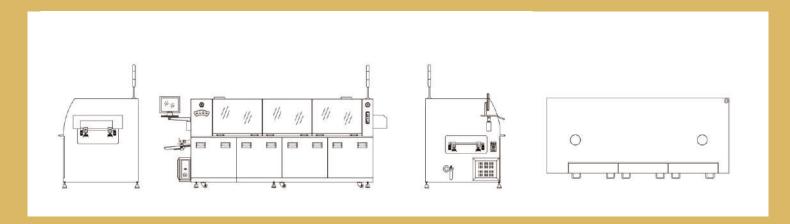
FEATURES OF 350 SERIES OF PRODUCTS

- ◆ Efficient, energy saving, environmentally friendly, safe, new design, smooth lines, simple operation and convenient maintenance.
- ◆ Full-automatic computer-controlled, Windows Xp interface operation and dynamic monitoring, which significantly increases the work efficiency and reduce the production cost; (this is the feature of 350C product)
- ◆ Full-automatic transportation power system, stepless frequency speed adjustment and self-synchronous board entry;
- ◆ Flux spray system adopts the scanning spraying mode, spray and rodless cylinder made in Japan with PLC controlled, which is accurate and reliable;
- ◆ Preheating system adopts three-phase strong hot air control system, which is of good heat preservation effect, quick in warming with even temperature, ≤ ±2°C;
- ◆ Tailor-made titanium alloy transport chain, which is reinforced and non-tin-bonding, therefore guaranteeing the welding quality of PCB plate;
- ◆ The solder machine adopts imported high-temperature motor with stepless frequency conversion control and independent control, stable peak performance;
- ◆ The solder machine adopts lead—free environmentally friendly independent design, which is convenient and safe in going up and down as well as going in and out and easily to clean;
- ◆ The heating of the solder machine adopts hi-speed PID external heated two-phase independent control, which is quick in heating, therefore solving the shortage of solder machine:
- ◆ The function of time controller is designed so that the user can preset the on-off time, the heating up time of solder machine is 70 minutes;
- ◆ This machine adopts the memory function of black box, which can call out the generated management record at any time, therefore to increase the working efficiency; (this is the feature of 350C product)
- ◆ Reasonable environmentally friendly design, automatic chain washing function is adopted to guarantee the cleanliness of the chain;
- ♦ The whole machine design is safe and reasonable, sensitive fault alarm system ensures the stability of the equipment performance as well as the safety of the operators.

FEATURES OF 300 SERIES OF PRODUCTS

- ◆ Efficient, energy saving, environmentally friendly, safe, new design, smooth lines, simple operation and convenient maintenance.
- ◆ Full-automatic computer-controlled, Windows Xp interface operation and dynamic monitoring, which significantly increases the work efficiency and reduce the production cost; (this is the feature of 300C product)
- ◆ Full-automatic transportation power system, stepless frequency speed adjustment and self-synchronous board entry;
- ◆ Flux spray system adopts the scanning spraying mode, spray and rodless cylinder made in Japan with PLC controlled, which is accurate and reliable;
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- ◆ The whole machine design is safe and reasonable, sensitive fault alarm system ensures the stability of the equipment performance as well as the safety of the operators.





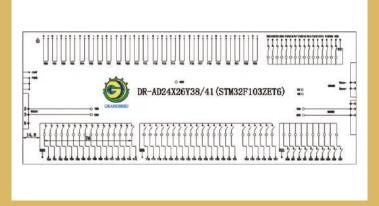
Patent Right Code: 201130002801.9

Appearance of wave soldering machine



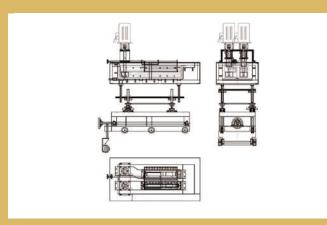
Patent Right Code: 201420444469.X

Input & output system for PCB, conveying rails width adjustment device



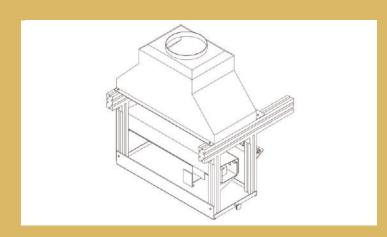
PCBASE V1.0

GrandSeed Software



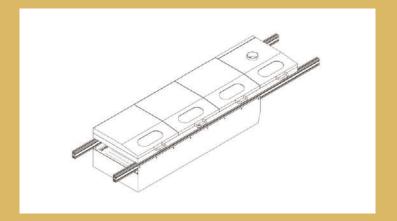
Patent Right Code: 201020056206.3

Full-Automatic wave soldering machine



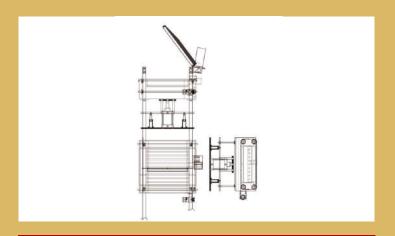
Patent Right Code: 201120461844.8

Spraying system of wave soldering machine



Patent Right Code: 201420444459.6

Preheating system of wave soldering machine



Patent Right Code: 201220013239.9

Automatic solder adding device of wave soldering machine



GSD-SF300

4

Automatic conformal coating spraying machine



SPECIFICATIONS

Adjustable width of PCB	Max.50~300mm	
Transport height of PCB	750 ± 50mm	
Conveying speed of PCB	0~2.0M/Min	
Conveying direction of PCB	左→右 Left-Right	
Component height restriction of PCB	Max.35mm	
Drying zone length	900mm	
Drying zone quantity	1	
Drying zone power	3kw	
Drying zone temperature	Zone temperature 110°C Adjustable	
Heating method	Infrared heating	
Temperature Control methods	P.I.D+SSR	
Machine Control methods	Touch panel + PLC	
Conformal coating capacity	6L	
Spraying mode	Cylinder + Spraying nozzle	
Power supply	3P 380V 50Hz/ 60Hz	
Total power	6kw	
Power for operation	2.5kw	
Air source	4~7KG/CM ²	
Frame dimension	L2500*W1200*H1650MM	
Boundary dimension	L3000*W1200*H1650MM	
Weight	650kg	

Features

- ◆ Full-automatic transportation power system, stepless frequency speed adjustment and self-synchronous board entry;
- Flux spray system adopts the scanning spraying mode, imorted spray and rodless cylinder with PLC controlled, which is accurate and reliable;
- Latest streamline appearance design, which is easy in operation and convenient in maintenance;
- ◆ The drying system adopts far IR ceramic heating tube for heating, which is quick in warming with even temperature, ±2°C;
- ◆ The system in drying zone adopts tunnel modular design, which is easily maintained and kept;
- Under the spray, stainless steel is selected to be bent and molded as tray for holding waste water and conformal coating, which can be drawn out to clean;
- ◆ Steerable vapor-pressure type air knife is set to blow the redundant flux when spraying back to the recycling bins, thus preventing the conformal coating from entering the dry zone and guarantee the production safety;
- ◆ All stainless steel + aluminum alloy post, which is convenient to clean and maintain. With high anti corrosion level, thus durable;
- ◆ PID temperature control is accurate and reliable, imported thermocouple detection system has the function of thermocouple abnormality warning;
- ◆ Three-point synchronous slide way width adjustment equipment, the width can be adjusted with worm gear, worm and high-precision screw rod, the accuracy of width adjustment is less than 0.2mm. Three-point support enables the slide way to stay parallel, the whole slide way is installed without reducers, which has no need to be cut off;
- ◆ GrandSeed exclusive conveyor chain (no deformation), the thickness of the metal board ≤ 2.5mm(PCB loading is synchronized chain style connection);
- ◆ The whole machine design is safe and reasonable, sensitive fault alarm system ensures the stability of the equipment performance as well as the safety of the operators.





GSD-SL400

GSD-SL400 Automatic PCB loading machine



Patent Right Code: 201420133205.2

GSD-XL400

GSD-XL400 Automatic PCB downloading machine



Patent Right Code: 201420133051.7

Features

- ◆ The operation panel words are simple and clear, alarm is exact, PCB conveying buffer distance is adjustable.
- PLC control system ensures the stable operation without interference, and the software can offer the sound safety protection measures for machine with the reasonable arrangement.
- Taiwan TBI ball screw.
- ◆ Power: AC220V / 50Hz single phase, power consumption 150W, supply air pressure 5Kg / m2.
- ◆ PCB transmit height: 900 ± 20mm. Step pitch error shall be less than 0.2mm.
- ◆ Four standard racks can be stored (2 for upper line, 2 for lower line, it can also be customized).
- ◆ PCB automatic loading machine with Taiwan made AirTac brand cylinder for pushing the PCB,the pushing bar can stay and then push to anywhere.
- ◆ Transmission direction: from left to right or from right to left (optional).
- PCB automatic downloading machine with stepped motor for pushing PCB, speed can be adjusted by the operation panel.

Items	
Loading machine size	L1350*W700*H1250n
Downloading machine size	L1980*W700*H1250n



GSD-YS350

4

GSD-YS350 Semi-automatic solder paste printer



Features

- ◆ Microcomputer control, touch screen display, menu user interface;
- ◆ Scraper floating. (Similar to the full automatic printing machine, the scraper can freely move up and down and automatically adjust the level with stencil);
- ◆ The pressure of scraper is adjustable (the pressure of scraper on the stencil can be adjusted according to the length of scraper of the different models);
- ◆ The stencil moves away from PCB(demould), which has segmented movements, and it is adjustable from 0-5 seconds. (i.e., similar to the full automatic printing machine, the stencil will rise slowly within 2 seconds to demould, then quickly rise to leave the PCB, which avoids the wire drawing occurring in the demould, and saves time and improves production efficiency as well);
- ♦ Key and switch operation using both hands in the operation, which is safe and reliable;
- In the menu of touch screen, the stopping time of scraper at the positions of upper left and lower left, upper right and lower right can be set independently;
- ◆ The positioning and fixing methods of PCB include a variety of different forms of precise positioning of reference holes positioning, reference edge positioning and the both positioning of the reference hold and edge as well as template positioning;
- ◆ The touch screen features with the time display function, automatic counting function of printing times and screen saver function;
- ◆ The machine with the left and right scraper speed adjustment functions and emergency stop safety function.

SPECIFICATIONS

Items	GSD-YS350	GSD-YS600	GSD-YS1200
PCB size	Max:300*300mm	Max:600*300mm	Max:1200*300mm
Printing area	500*320mm	700*320mm	1300*320mm
PCB fixing system	Reference positioning pins	Reference positioning pins	Reference positioning pins
Frame size	L*W (370X550)mm/(470X650)mm	L*W (370X750)mm/(470X850)mm	L*W (370X1500)mm/(470X1650)mm
Adjusting for table	10mm, ±10mm Front / Behind,Left / Right	10mm, ±10mm Front/Behind, Left/Right	10mm, ±10mm Front/Behind, Left/Right
Printing Accuracy	± 0.2mm	±0.2mm	± 0.2mm
Repeating Accuracy	± 0.2mm	±0.2mm	± 0.2mm
PCB thickness	0.2-2.0mm	0.2-2.0mm	0.2-2.0mm
Air Pressure	4-6kg/cm ²	4-6kg/cm²	4-6kg/cm ²
Power supply	AC220V 50HZ/60HZ	AC220V 50HZ/60HZ	AC220V 50HZ/60HZ
Dimension	800*700*1700mm(L*W*H)	900*700*1700mm(L*W*H)	1600*700*1700mm(L*W*H)
Net weight	225kg	310kg	320kg

ZL201220517725.4



GSD-DB350

GSD-DB350 Laser Machine



GSD-DJ350

GSD-DJ350 Gluing Machine



GSD-JB350

GSD-JB350 Full-automatic Solder Paste Mixer



Features

- ◆ The solder paste mixing equipment with automatic and stable for performance, simple and safe for operation, easy and quick for maintenance;
- ◆ The unique appearance design, which makes it beautiful, generous and practical to use; it is processed with the advanced paint technology;
- Mixing principle: it is based on the mixing method of motor revolution and self-rotation, which does not require to take out the solder paste from the refrigerator and wait for deicing;
- ◆ The solder paste can be warmed in a short time, while evenly stirred for use;
- ♦ It is applicable to the solder paste 500g for a variety of brands, two cans can be stirred once at the same time to save mixing time and improve production efficiency;
- In the mixing process, the paste box is not required to open so that the paste will not be oxidized or absorb moisture;
- ◆ The shield mixing can fix the running time, thus ensures the stability degree of the softness (Q characteristic) of the solder paste and the new and old solder pastes can be mixed together.





GSD-JB350 SMT

GSD-JB350 SMT Buffer Conveyor





SPECIFICATIONS

Items	
Control system	Micro controller
Guide Rails Distance	50-350mm
Conveyor direction	$L \rightarrow R (R \rightarrow L)$
Height of conveyor	910 ± 30mm
Conveyor speed	0-2M/Min
Power consumption	15W
Power	AC220V 50HZ/60HZ
Weight	Approx.50kg
Dimension	L1000*W630*H910mm

Features

- ♦ Automatic and manual work mode, and anti-static platform surface is equipped as the standard;
- Wear-resistant anti-static belts and aluminum guide rails ensure the smooth connection and stable transport;
- ♦ The width adjustment mechanism ensures that transport rails are parallel to each other;
- ◆ It is equipped with signal communication interface, which can be on-line connected with other equipment:
- Standard lights supporter and work flow chart card holder;
- ◆ Electronic speed regulator for speed control,and 0-2meters/min is available for the conveying speed;



GSD-SXW300



GSD-SXW300 Manual Dip Soldering Machine



Features

- ◆ The furnace of solder machine is made with high-quality stainless steel plate, which is
- ♦ The appearance of solder machine adopts iron plate of 1.5MM, with blue stoving varnish spraying in the surface, thus sturdy and durable;
- ◆ The temperature controller adopts PID natural technology, output by solid-state relay, with small temperature error, it has the function of temperature compensation
- ◆ Ceramic heater and thermocouple adopted are made of imported components, which are of high heat generation efficiency, thus the life is improved and electric energy is saved
- ♦ Large welding area is suitable for manual work of electronics factories and LED industry.

SPECIFICATIONS

ms	Technical Details
ater	600W*6PCS
ne control	7days timer
wer	AC220V 50HZ/60HZ
lder pot capacity	50kg
achine weight	40KG
lder pot size	360*250*75 (L*W*H)
mensions	500*340*670 (L*W*H)

GSD-MD330

GSD-MD330 Knife Sharpener

Features

- ♦ You can control the panel by pressing thebuttons on it , very easy and convenient
- ♦ The angle of the grinding blade can be adjusted manually to ensure safety and
- It is especially applibable to small scaled manual work in electrical factories.

Technical Details
L480mm*W480mm*H830mm
220V 50HZ/60ZH
Ma*250mm
3000r/min







GSD-PY300

GSD-PY300 Horizontal Transfer Machine

Features

- ◆ PLC control, touch screen, fault audible and visual alarm and menu display;
- ◆ Continuous left and right sway, automatically dock with insert line and crest welder;
- ♦ The stepper motor receives and delivers boards reciprocatingly , which can set the left or right offset of PCB board at will;
- ◆ Dedicated imported linear slide way, which is accurate without deviation.

SPECIFICATIONS

Items	Technical Details
PCB Width available for PCB	50-300mm 50-300mmadjustable
Input Power	AC220V 50 / 60HZIndividual electronic cabinet control
Transport height	750+/-20mm
Transport motor	6W 1:15
Parallel moving motor	Stepped motor





GSD-CJ350



Features

- ◆ The holder adopts 40mm*40mm iron material, the platen is made with 2mm iron plate and the height of working surface: 750±20mm
- ♦ 28W energy saving lamps used for lighting, lamp pipe material adopts 25*50 flat pipe and lamp holder is
- ◆ Automatic insert line special aluminum material and automatic insert line special chain are adopted
- ♦ Width of slide way: 30-300mm adjustable
- ♦ 6 keels are installed between holders

ns	Technical Details
eed regulation motor	220V,40W
eed	0-1.8meters/min,stepless speed adjustment
nual adjustment for guide rails width,Ma	x width 300MM







GSD-RB350

GSD-RB350 PCB Loading Conveyor

Features

- ◆ Connection equipment of wave solder is an input equipment especially used before PCB board enters the dual wave soldering
- The angel of inclination at front end and rear end can be adjusted by screw rod respectively
- Nylon roller chain provides smooth delivery, whose speed can be adjusted.

SPECIFICATIONS

Itenms	Technical Details	
Transmission Motor	220v 40w	
Adjustable width of guide rails	50-300mm	
Transport speed	0-1800mm/min	
Power supply	AC220V 50HZ/60HZ	



GSD-CB350

GSD-CB350 PCB Downloading Conveyor

Features

- ♦ Wave solder board exit machine is a downloading device especially used after PCB board enters the dual wave soldering
- The angel of inclination at front end and rear end can be adjusted by screw rod respectively
- Skid-resistant belt provides smooth delivery, whose speed can be adjusted.
- Belt shall be punch L belt, with fan above to help the PCB board cool.

Technical Details
220v 40w
400mm
0-1800mm/min
AC220V 50HZ/60HZ







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Manufacturer of energy-saving lamps



Hardware manufacturer





Component manufacturers

PARTS OF THE CUSTOMERS OF GRANDSEED

































Strategic Partner





























