



SFG ELECTROMECHANICAL EQUIPMENT CO.,LIMITED

Add:Building 43,Hong' xiang industrial zone, xinqiao street ,Shajing Town, Bao'an District, Shenzhen, China

## SFG Lead Free Wave Soldering Machine SH-350



### *Parameter*

Model	SFG-350	Solder pot type	The 4th generation energy-saving tin furnace
PCB size	Max.50~350	Heating process	Matrix type direct sticking 3-sided heating process, thermal efficiency can reach 95%
PCB Height	750±50mm	Solder pot tem.	Room tem.~350°C、Control precision±1-2°C
Conveyor speed	0-2000mm / Min	Control precision	±2°C
Welding angle	3~7°	Claw type	FJ claw/L claw/ customed
Components height	Max.120mm	Flux	Manual
Wave height	0—18mm	Tem control method	P.I.D+SSR
Number of wave	2	Width adjustment	Manual ( standard ) /Electric ( Option )
Length of heating	1800MM	Flux adding	Automatic
Number of heating	4 stage preheating	Flux flow	10~100ml/min
Direction	L→R or R→L	Spay nozzle	Step motor +A-100
Power of preheating	20KW	FLUX recycling	Pallet recycling
Preheating Tem.	Room Tem.~250°C	Power	3Phase 5line 380V/3Phase 220V ( Option )

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Heating method	Hot air	Start power	Max.14kw
Solde type	LEAD Free	Normal working power	Approx.3-8kw
Power of solder pot	14kw	Air source	0.4MPa~0.7MPa
Max solder weight	Approx.450kg	Dimension size	4500*1600*1730 ( L*W*H )
Solder pot material	Cast iron enamel	Weight	Approx.1500kg

**Machine' s Shell**

Body structure	Streamlined shell design, using a thick square pass frame, 2mm thick steel plate bending to make the shell, the bottom of the body has 6 direction wheels, and 6 foot cups for positioning and placement (adjustable body level and height); the front door is an extension Curved tempered glass, maximum viewing angle design
Front door structure	Fully enclosed transparent toughened glass door structure, the glass door is equipped with dual hydraulic gas springs to stretch the cover to ensure the largest operation and maintenance space
Backdoor structure	Magnet with hand buckle detachable structure, maximum maintenance space
Top of the body	Set of explosion-proof lighting
Surface treatment	The whole machine is sprayed with computer white (the glass door frame is sky blue)

**Spay Parts**

Nozzle	The spray range is adjustable from 20 to 65mm, the nozzle height is adjustable from 50 to 80mm, and the maximum flow rate is 100ml/min.
Air system	Adopt imported filter, control valve and pipe joint, digital display air pressure. The spray air pipe adopts acid and alkali resistant, anti-corrosion SMC air pipe
Spray nozzle moving system	Stepping motor drive, PLC intelligent control, combined control with limit proximity switch and plate entrance light eye, automatic detection of induction spray according to the speed and width of the PCB.
Flux recovery system	The bottom of the nozzle is made of stainless steel bent and formed as a tray to contain waste water and flux, which can be taken out and cleaned at will
Flux exhaust filter system	Ventilation system: stainless steel screen frame and double-layer filter screen, using the characteristics of the fluid to filter and recover excess flux
Isolated wind curtain	Pneumatic air knife blows the excess flux during spraying into the recovery box to prevent the flux from entering the preheating zone. Ensure production safety.
Spray box structure	All stainless steel structure, easy to clean and maintain. High level of anti-corrosion and durable.

**Preheating parts**

Four-stage preheating zone	1800mm/4 sections of independent temperature control preheating zone can provide adequate preheating adjustment space, can preheat some relatively large PCBs, more complex products, adaptable low solid residue no-clean rosin flux; reduce PCB Board
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	thermal shock, PCB board is heated evenly, which can improve production efficiency.
Temperature control method	Mitsubishi temperature acquisition module, PID temperature control is accurate and reliable, imported thermocouple detection system, with thermocouple abnormal alarm function.
Heating parts	Adopting Taiwan Taiwan Exhibition heating element, fast heating, long life, low thermal inertia; uniform heat in the temperature zone.
Preheating power	Total 22kw
Installation mode	The preheating system adopts a direct pull-out drawer type modular design, which is convenient for maintenance and cleaning.
Preheat box cover	It adopts arc streamline appearance design, and is filled with imported Cissr high-density rock wool to enhance heat preservation effect.
<b>Conveyor parts</b>	
High-strength wear-resistant guide rail	SFG special aluminum guide rail uses high temperature and wear resistance, and the special thermal compensation anti-deformation telescopic structure ensures that the guide rail is not deformed and does not fall off the board
Rail parallelism	Two-point synchronous guide rail width adjustment device, high-precision screw rod width adjustment, the width adjustment accuracy is less than 0.2mm, 6-point support, so that the guide rails are parallel and consistent, there is no big or small head, the guide rail installation, do not need to cut off,
Adjustment method	Manual
Double hook	SFG special 1.5MM double hook claw (no deformation, non-sticky tin), thickness of splint $\leq$ 2.5mm (incoming plate is connected by synchronous chain)
C/V speed setting minimum unit	1mm / min 0-1800mm / min
C/V speed deviation range	Electronic closed-loop control within 0-10mm/min
Chain tensioner	Sprocket adjustment tension
Conveyor motor	Taiwan TCG frequency conversion 90W motor, with overload limiter protection device
<b>Solder pot</b>	
Tin furnace characteristics	Specially structured wettability nozzle (50-400mm), flat wave design, the way of feeding the tin is the way of lowering the tin, which can reduce the oxidation of the solder joints, the oxide slag automatically accumulates, it is easy to maintain, and does not produce bleachable tin slag black powder
Ultra-low oxidation design	High-quality tin furnace, good thermal stability, adopts liquid tin flow design principle, reduces the impact oxidation of tin, and greatly reduces the oxidation of tin when welding small PCB boards
Economical operation	Controlled by PLC and photoelectric switch to spray wave function, reduce unnecessary waste



In and out of solder pot	Electric
Wave height	0-18mm
Wave motor	Taiwan TCG high temperature motor, frequency conversion to accurately adjust the peak height, digital adjustment
Heating parts	Adopting Taiwan imported dry-burning resistant stainless steel heating tube, long service life; external matrix heating system, the upper and lower heating of the tin furnace is more accurate, no tin explosion, and multiple reinforcing ribs to resist deformation. Save 40% of electricity, about 30 kilowatts of electricity per day
Cooling system	
Cooling method	The use of high-power centrifugal fan to blow upwards for cooling can significantly improve the cavitation and pad peeling problems caused by the formation of lead-free solder eutectic
<b><u>Automatic claw washing device</u></b>	
Imported high-quality micro anti-corrosion chemical pump, double-sided washing claw, propanol as cleaning agent, automatic cycle cleaning chain claw	
<b><u>Control software system</u></b>	
★ Automatic fault alarm function: there is a thermocouple abnormal alarm function, ultra-high and low temperature alarm; when preheating or tin furnace failure, heating will be stopped	
★ The temperature of the preheating zone, the temperature of the tin furnace, the transportation speed, the spraying action, and the forced cooling can be separately controlled	
★ One week time setting (You can set the automatic power on and off time three times a day, seven days a week)	
★ There are two emergency systems in the nose and tail of the machine, please press in special and emergency situations	
<b>Warranty:</b>	
Machine:2 year Heating parts:5 year	