

High spray external conjunctions super energy saving wave soldering scheme



Product brief introduction:

<i>Machine Specification</i>			
Model	SWS350M	Solder pot type	4 th adjustable
PCB width	Max.50~350mm	Heating technology	Matrix straight heating, heating efficiency up to 95%
PCB convey height	750±50mm	Solder pot temp.	Room temp.~300°C、accuracy±1-2°C
Conveyor speed	1500-1800mm / Min	Solder pot temp. accuracy	± 10
Angle	3~7 degree	Finger types	Strong dicolpate finger/customized
Component height limit	Max.100mm	Solder bar adding way	Manually
Wave height range	0~18mm keep steady	Temp. control	P.I.D+SSR
Wave quantity	2	Machine control	PLC+PC
Preheating length	1800MM	Width adjust	Manually/motorized
Preheating zone	4 zones	Flux adding way	Automatically
Conveyor direction	Left to right	Flux flow rate	10~100ml/min
Preheat power	8KW	Spray method	Step motor+A-100 nozzle
Preheat temp.	Room temp.~250°C (adjustable)	Flux recycle	Tray to hold
Heating model	Hot air	Electricity	3P 5 wires 380V/3P 220V
Solder bar type	Lead-free	Total power	Max.22kw
Solder pot power	14kw	Normal running power	Approx.3-5kw
Solder pot capacity	Approx.480kg	Air supply	4~7KG/CM2
Solder pot material	Cast iron	Dimension	3900*1600*1730(Relocation spray Dimension 1500*1350*1550mm)
Weight	Approx.1500kg		

<i><u>Machine cover</u></i>	
Structure	Streamline cover design, the frame is made of thick square tube, the cover is made of 2mm steel plate. There are totally 6 wheels to move the machine easily.
Front door structure	Fully enclosed glass door, transparent, pneumatic holder to support, ensure the operating and repairing space.
Machine top	Anti-explosion lamp
Surface treatment	Painted with white color
<i><u>Flux spraying</u></i>	
Spray nozzle	Spray range:20~65mm,adjustable, nozzle height: 50~80mm adjustable, max. flow rate:100ml / min
Air circuit	Acid and alkali resistant air pipe, the brand is SMC from Japan.
Nozzle moving system	Step motor to drive, Mitsubishi PLC, with proximity switch and entrance sensor to control, according to the coming PCB's speed and width, the spraying system can detect and starts to work.
Flux recycle system	Tray to hold the waste water and flux, can be draw out easily, make maintenance very convenient.
Flux exhaust system	Exhaust system: stainless steel mesh frame+ double layers filter, recycle the flux to maximum.
Isolated air curtain	Air pressure type knife, blow the redundant flux into the recycling box, to avoid the flux to enter into the preheating zones, ensures the safety.
Spraying box structure	Made of full stainless steel, easy to clean and repair. Anti-corrosion, very durable.
<i><u>Preheating</u></i>	
Preheating zone quan.	Preheating length is 1800mm, divided into 4 sections, supply abundant adjusting space, very good for big PCB and complicated PCB. Reduce the heat impact on PCB, improve the production efficiency.
Temp. control method	Mitsubishi temp. collecting module, PID is very precise and stable.
Heating parts	The heaters are imported from Taiwan, heat up very fast, with long life, small thermo lag; The heat is even in the zones.
Preheating power	22kw
Install mode	The heating module adopts drawer design, easy to replace and repair, make the maintenance very convenient.

<u>Transmission</u>	
Rail	Made of aluminum, wear resistant and without distortion.
Rail parallelism	Width adjusting accuracy less than 0.2mm
Width adjust	Manually/motorized
C/V speed setting unit	Min.1mm / min 0-1800mm / min
C/V speed variation range	Electric closed-loop control, within 0-10mm / min
Conveying motor	Panasonic motor from Japan
<u>Solder pot</u>	
Low oxidization design	High quality solder pot, the heat is very steady. Adopts liquid solder flow design, reduce the impact oxidization, especially for small PCB.
Economical running	Reduce the power consumption
Moving method	Motorized
Wave adjustable height	0-18mm
Wave motor	TCG motor from Taiwan, adjust the wave height with frequency conversion.
Preheating parts	Adopts the stainless steel heaters from Taiwan, with long life and power saving up to 40% daily.
<u>Cooling</u>	
Cooling method	Adopts high power centrifugal fan, reduce the air bubble and solder pad stripping
<u>Automatic finger cleaning</u>	
Imported premium pump, can wash the fingers from both side. Propyl alcohol to clean and can be recycled.	
<u>Control software</u>	
★Automatic alarm function for failure: thermocouple abnormal, temp. too high or too low; if preheating system or solder pot is abnormal, the heating stops.	
★Preheating temp., solder pot temp., conveyor speed, spraying and cooling can be controlled separately.	
★One week automatic power on/off setting (three times one day)	
★The emergency stop are in front, rear of the machine, press them in case of any emergency.	

Benefits of spray external concatenation wave soldering

The external spray machine is easier to maintain than the internal spray machine, which can eliminate the possibility of welding flux fire. The combination of spray machine and wave soldering can save the site, reduce the connection point and reduce the possibility of a stuck plate.

Transportation guide rail adopts aluminum profile the first quality shenzhen huajari 7 series profile, guide rail inside inlaid steel bar, the traditional structure is carbon steel chain slide on the guide rail, easy to wear, and kaitai structure is carbon steel chain slide on the steel bar, not easy to wear, increase the service life and stability of the machine.



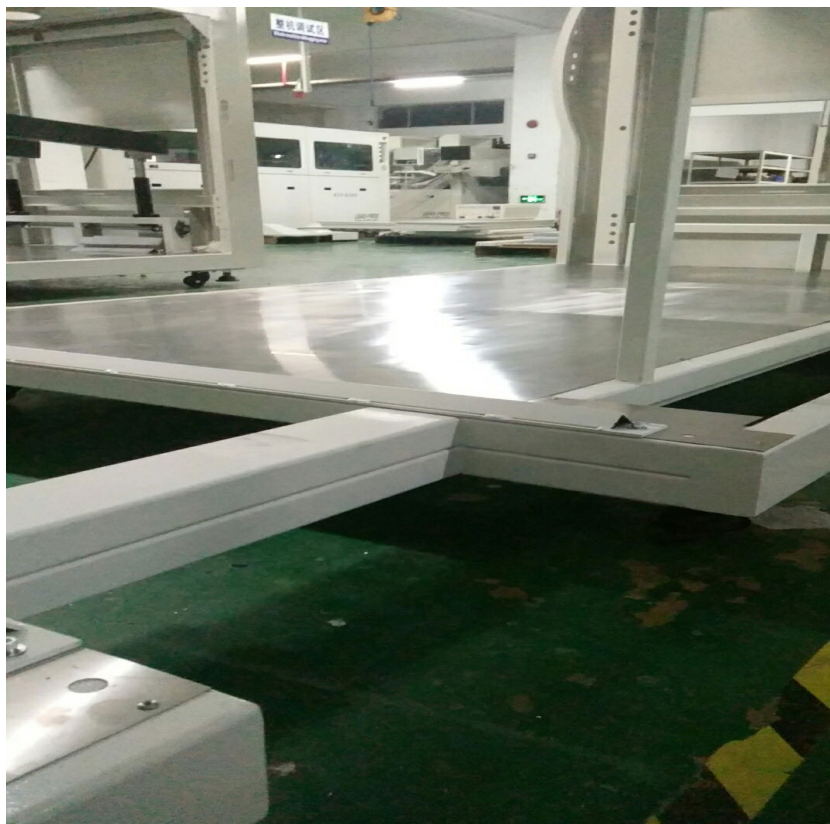
Widely used in high precision products like 01005-QFP, BGA, CSP, Flip, and POP , automotive electronics, mobile devices, home appliances, communications, LED, semiconductor and other industries.



Spoiling wave 6 mm cylindrical etching nozzle greatly enhanced the impact of tin, to solve the customer because of the SMT element density caused by the element pin welding problem.



The chassis adopts 120x60X5 square two-layer overlapping welding, to avoid all kinds of machine failures caused by the deformation of the chassis in the long-term use of the machine. At present, some so-called first-tier brands are listed on the market, but after becoming famous, they are changed to 80X40 single-layer chassis



Preheating area of the main rail also choose 120x60x5 precision cast steel, the main rail once the deformation, transport lead to how can not deformation, not shaking, must produce size head, fish belly, how can not fall off the plate. But what most company USES at present is 80X40X4 fine cast steel only, cost will save how many, but performance difference has a bit big.





Preheating zone structure of 4 period of full hot air, infrared other company usually with 1, 2 hot air, a total of three segments, like reflow soldering flux activity is the need to preheat the curve, three can also play curve, but it is very difficult to hit, preheating, flux activity is not enough, seriously reduce the rty, increase the repair welding, increased labor costs, and affect the quality. And stainless steel parts than cold plate dusting process, to be durable for many years, no rust off paint hidden trouble.

The preheating cover is also made of stainless steel structure, with three layers of heat-insulating cotton, the middle of which is hot and cold.



Titanium claw transport using ball structure, no friction resistance, no jitter.



The spray is made of external stainless steel structure, isolated from the preheat, safe and without fire hazard. The entrance is completely sealed except for the basic size of the plate, so as to avoid the strong smell of flux from spilling over the body, harming the health of employees and improving the environmental protection level of the workshop.



Taiwan songyi structure into the plate, into the plate is very smooth, easy to adjust, tin furnace using nodular alloy, nozzle using titanium alloy.



Part of the processing equipment



Part of the processing equipment



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