

On-line Selective Wave Soldering Machine ETA-SS350

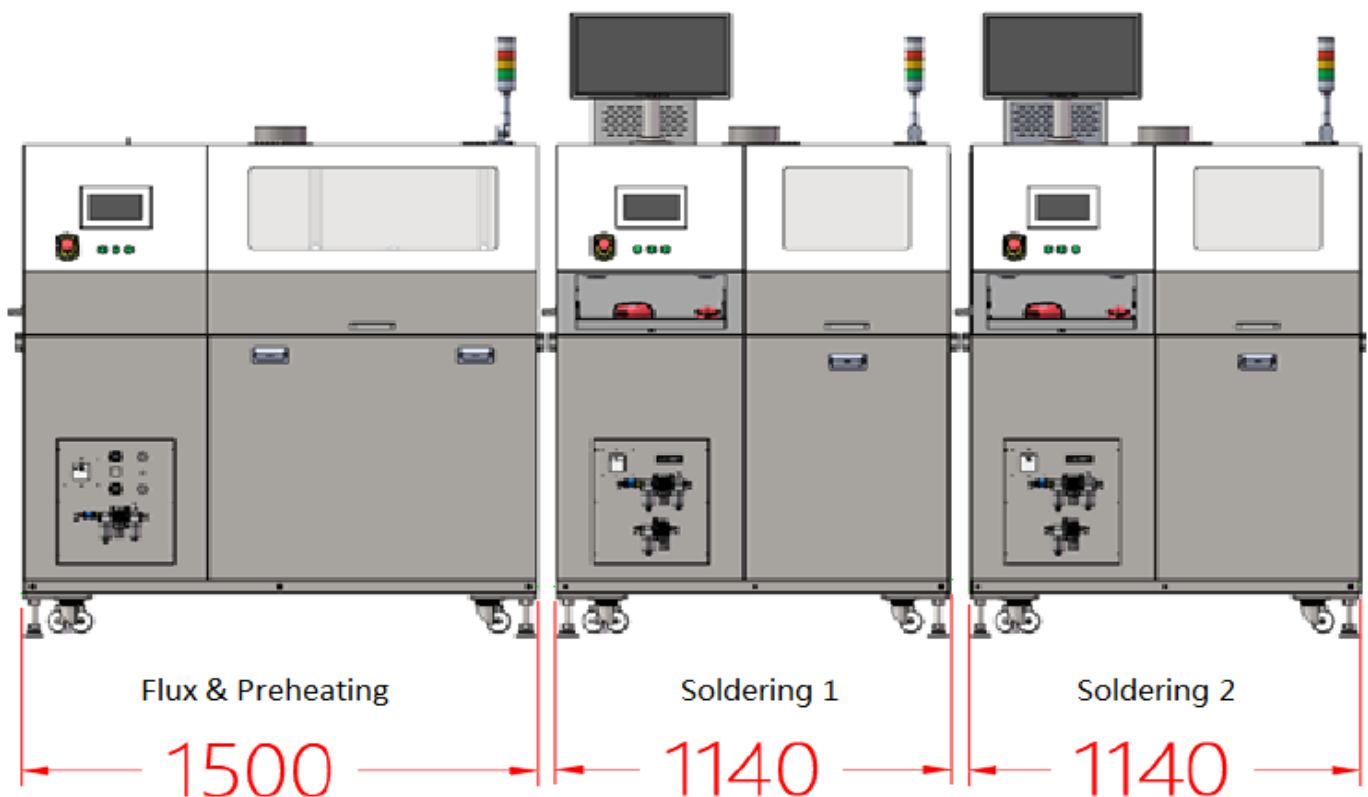


Introduce:

Selective wave soldering is a special form of wave soldering invented to meet the development requirements of through-hole components welding. Selective welding generally consists of three modules: flux spraying, preheating and soldering. Through the equipment programming device, flux spraying module can finish flux selective spraying for each soldering in turn. After preheating by preheating module, each soldering spot can be soldered point by point by soldering module.

It is mainly suitable for the soldering of through-hole components in high-end electronic products. For example: military electronic products, automotive electronics, switching power supply products and other industries which require higher soldering reliability.

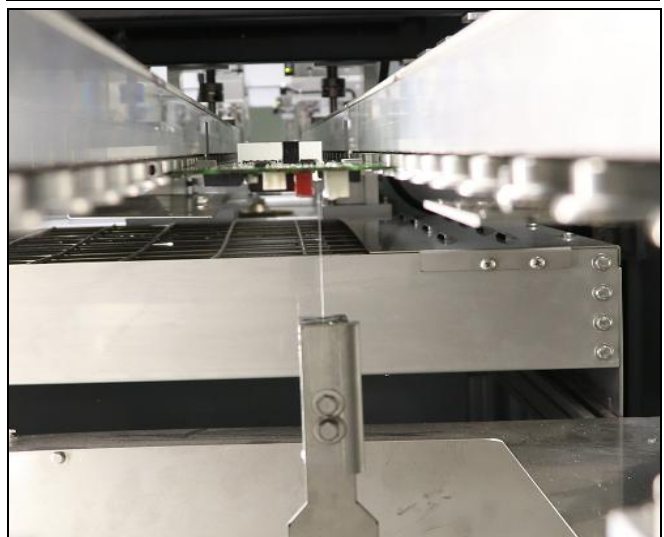
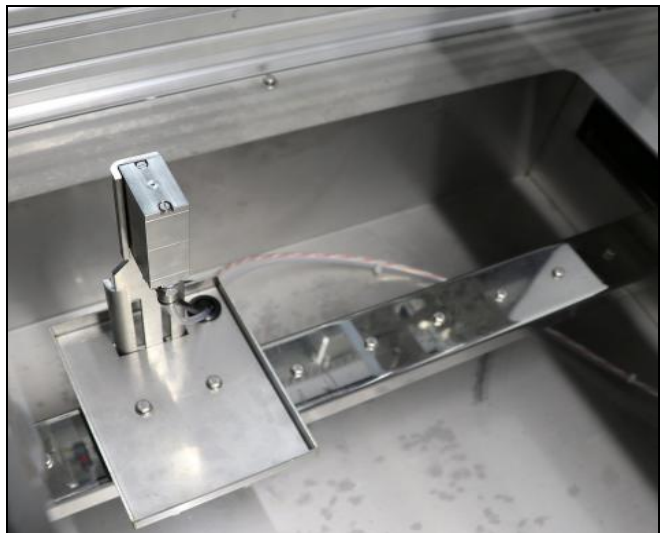
Features:



- 1.Spray control: touch screen control, precise control the spray time, spray speed, economy and environmental protection, digital flux flow, spray flow, angle, density, width and other parameters can be recorded.
- 2.Temperature Protection: third-party over-temperature protection, multiple protection layers to ensure safe operation.
- 3.Products comply with CE, CCC, UL and other standards and specifications.
- 4.User-friendly design: fault detection (such as heaters abnormal alarm, etc.), regular maintenance reminders,economy functions, emergency manual transmission function and tool-free maintenance, reduce equipment failure rates.
- 5.Heating module: ir design make preheating zones not influenced by adjacent zones to ensure accurate temperature curve, while ensuring high production capacity and heat exchange capacity, and achieve high adaptive capacity
- 6.Core components: using imported components to ensure long-term stability of equipment operation.
- 7.Customers can choose different configurations of flux processing system according to their own production characteristics, to ensure the furnace hall clean.

Flux system

The XY spray platform is composed of high-precision ball screw and linear slide rail. It is driven by a high-speed servo motor. The nozzle is mounted on the XY platform to ensure the accuracy of the spray orientation, and to achieve rapid and accurate positioning. The accuracy of repetition and positioning can reach 0.05mm.



Preheat system

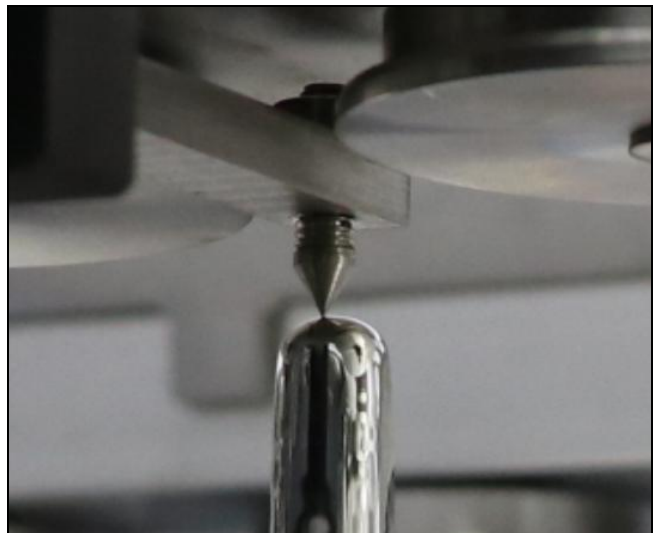
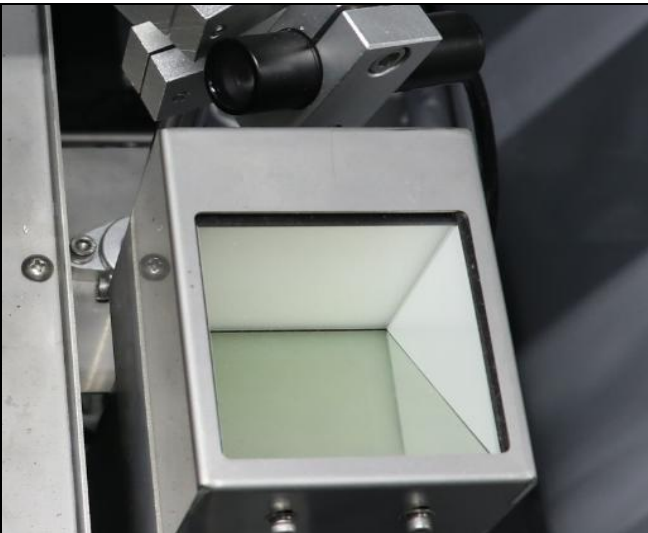
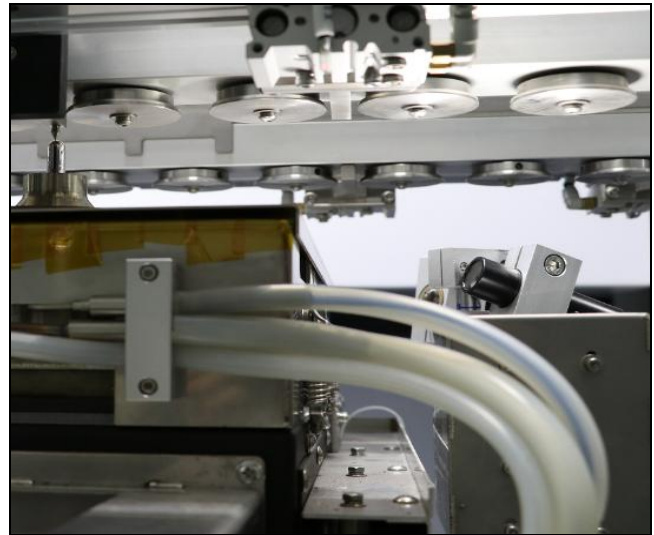
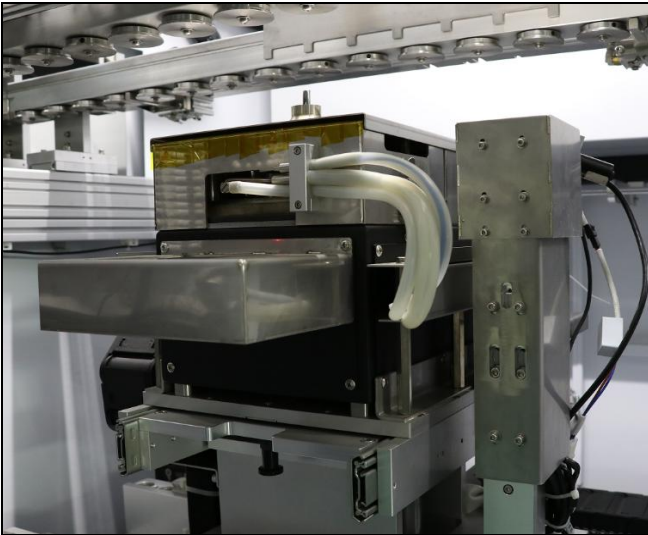
Efficient and stable IR heat conduction. Design structure for maximizing preheating area. All round high temperature cotton design to ensure temperature stability. Heat-generating and heat-conducting parts and motors adopt top brands. Maintenance plug-in design. tool-free maintenance mode.



Soldering system

The soldering module consists of XY soldering platform, Z-direction tin furnace lifting platform, tin furnace, nitrogen protection, image monitoring system, control system, etc.

XY platform is composed of high precision ball screw and linear slideway. It is driven by High-speed Servo motor. It can achieve fast and accurate positioning, repetition and positioning accuracy can reach 0.05 mm. The Y axis moves forward and backward, and the X axis moves left and right. Z-direction tin furnace lifting platform is driven by servo motor ball screw, which drives Z-direction platform to move up and down vertically. The repetition accuracy is 0.05 mm.

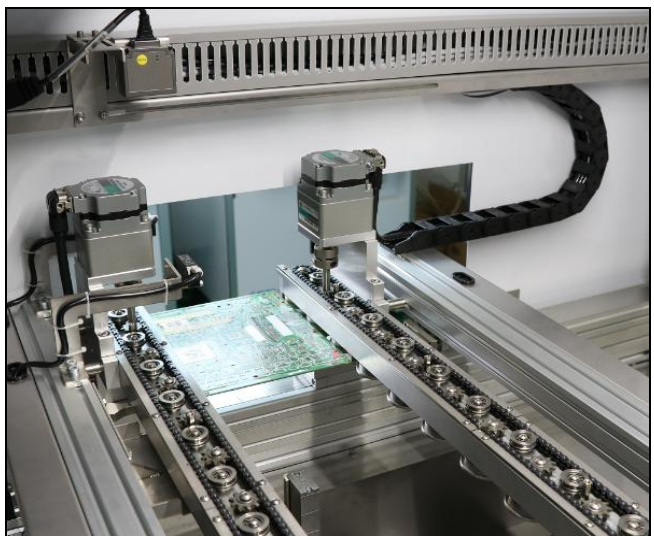
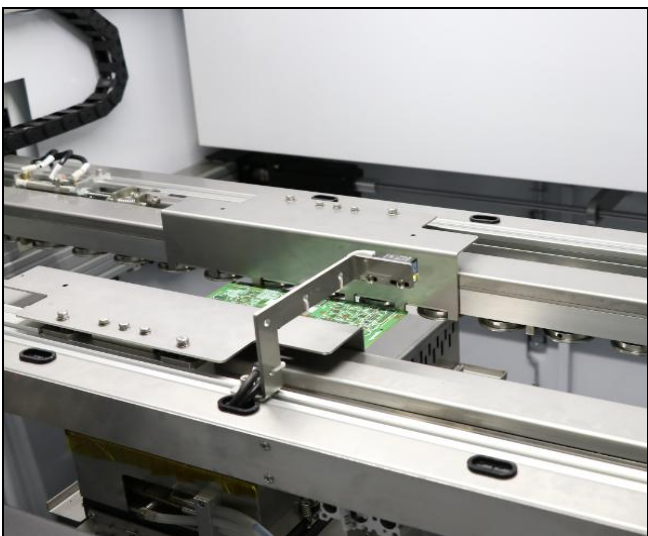


Transmission system

The transmission module is composed of three parts by roller.

The spray and soldering transmission tracks are equipped with a stop plate positioning device to ensure the accuracy.

The distance of weldable elements on PCB plate edge is much higher than that of chain conveyor structure.



Operation software

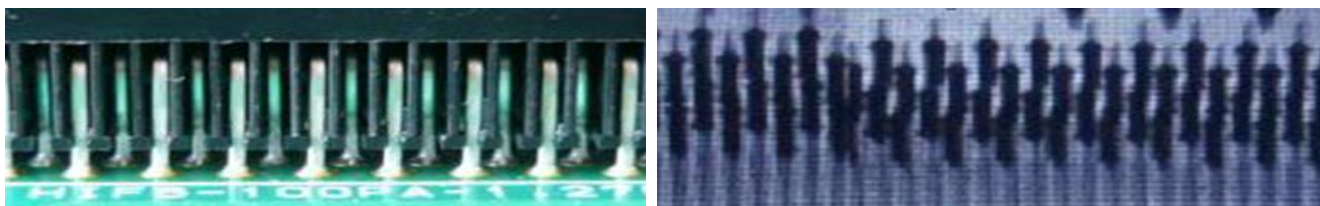
Compatible with CAD, Gerber, coordinate document and picture document. Mark the teaching camera and can be used for PCB image scanning. Can be programmed offline without taking up the production time of the machine. The process parameters of different solder joints can be set independently.



Application:



Xray Examination:



Materials List:

| No. | Item | Brand | Original |
|-----|------|-------|----------|
|-----|------|-------|----------|

| | | | |
|----|----------------------------|-----------------------|--------|
| 1 | Spray Nozzle | Kuroda | Japan |
| 2 | Touch Screen | Proface | Japan |
| 3 | PLC | Panasonic | Japan |
| 4 | SSR | OMRON&FUJI | Japan |
| 5 | Solder Nozzle | Customized | Japan |
| 6 | Rail | THT,IKO | Japan |
| 7 | Ball Screw | TBI | Taiwan |
| 8 | Sensor | OMRON, KEYENCE | Japan |
| 9 | Servo motor | Yaskawa | Japan |
| 10 | Stepper motor | Oriental | Japan |
| 11 | Pneumatic Component | SMC | Japan |
| 12 | Bearing | NSK | Japan |
| 13 | Other Electrical Component | IDEC, Mitsubishi,Fuji | Japan |
| 14 | Heating Tube | SAKAGUCHI | Japan |

Specification:

| | |
|-------------------------------------|--|
| Model | ETA-SS350 |
| Flux & Preheating System | |
| Spray Speed | 1~20 mm/sec |
| Flux Storage Tank | 0.7L |
| Flux Support | Flux Alarm, Automatic |
| Spray Nozzle | 0.5mm Spray valve(Optional linear sprinkler 130um) Japan |
| Spray Moving Speed | 1~200mm/sec |
| Spray Flow Control | Electronic Flow Meter |
| Exhaust Capacity | 8m ³ /min(Φ98mm) |
| Preheating Mode | IR |
| Preheating Control Mode | PID + SSR |
| Preheating Zone | Top:1,Bottom1(Three stage control) |
| Preheating Temp. | (Room Temperature)-200℃ |
| Warm-up Time | Approx.15min (setting 150℃) |
| Soldering System | |
| PCB CCD | Camera scanning programming and mark positioning recognition function |
| Soldering CCD | Soldering process monitoring, video cycle coverage |
| Nozzle Inner Diamete | Φ3-20mm(Special nozzle can be customized) |
| Wave Height Adjustment | Automatic height correction, production quantity or time correction can be set |
| Max. Wave Height | 5mm |
| Wave Height Accuracy | ±0.3mm |
| Wave Height Control | Step Motor RPM |
| X-Y Moving Speed | 1~200mm/sec |
| Z Moving Speed | 1~100mm/sec |
| Soldering Speed | X-Y:1~100mm/sec, Z:1~50mm/sec |
| N2 | Purity of N2: 99.99%, 0.4~0.5 MPa,25 L/min,Outer diameter Φ6mm |
| Solder Pot | SUS316+ Surface Treatment |

| | |
|--------------------------|--|
| Solder Capacity | 16Kg |
| Heating Tube Quantity | 6 pcs |
| Max. Temperature | 320℃ |
| Warm-up Time | Approx.40min (setting 270℃) |
| Basic | |
| PCB Size(mm) | <450*350 |
| PCB Top Clearance(mm) | 100 |
| PCB Bottom Clearance(mm) | 50 |
| PCB Weight(Kg) | <5 |
| PCB Thickness(mm) | 1-6 |
| Clearance from PCB edge | 3mm |
| Transport Direction | Left-Right |
| Width adjustment | Auto |
| Transport Speed | Max 1200mm/min |
| Transport Height | 900 ±30mm |
| Barcode Recognition | Entrance barcode recognition, Error proofing and automatic switching of production program according to machine type |
| Air Pressure | 4.5~6Kg/cm ² |
| Power Supply | AC:220±10%,50/60HZ,20Kw |
| Dimension(mm) | Flux & Preheating Module:L1505*W1350*H1540 Soldering Module:L1145*W1350*H1540 |
| Weight | Flux & Preheating Module: Approx:550kg Soldering Module: Approx:750kg |

* The data is obtained under ambient temperature of 25℃ and humidity of 60%

**Thanks for choosing ETA.
ETA looks forward to win-win cooperation.**