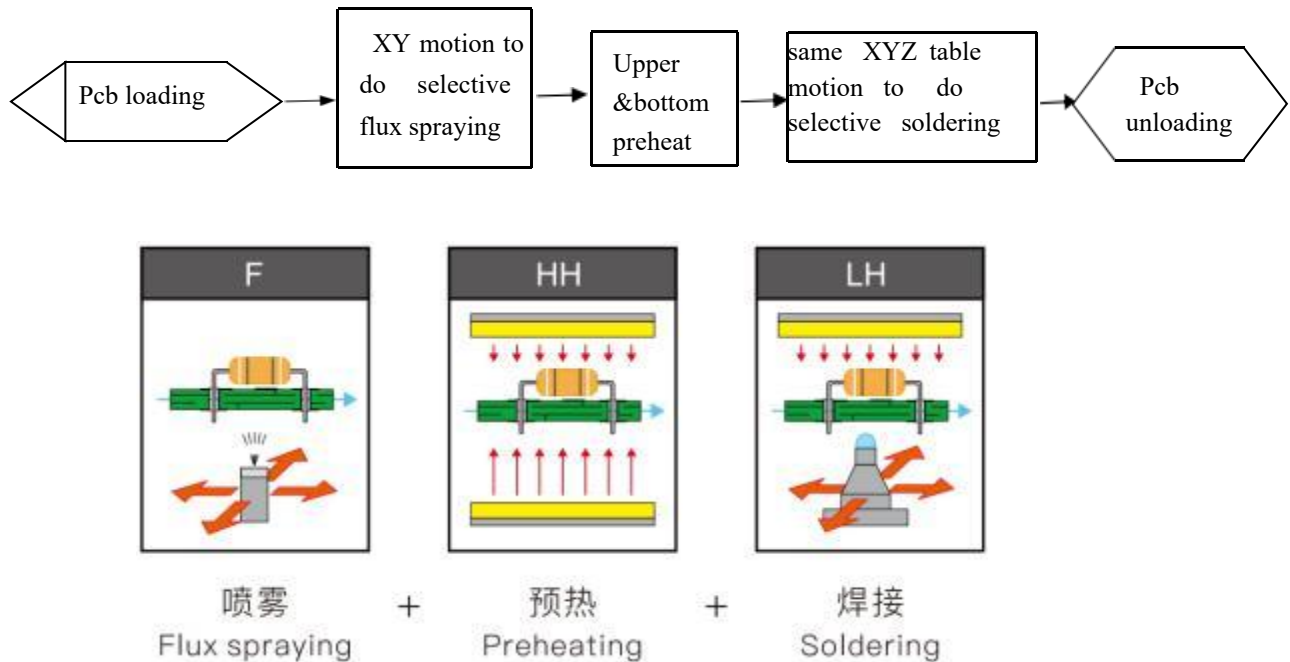


SI-2006 Selective Wave Soldering Specification:





Overview of scheme advantages:

- Turntable type full functional model, there are 6 PCB boards or 6 jigs in the whole machine at the same time, which work respectively at the place of putting board 1, putting board 2, spraying, preheating, welding and taking board, so as to improve the overall productivity of the machine.
- Individual spray flux table & soldering table.
- High soldering quality.
- Manual up and down board, convenient wiring.
- Computer and PLC control. All parameters can set in PC and saved to PCB menu,

like moving path, solder temperature, flux type, solder type ,N2 temperature etc, best trace-ability and easy to get repeat soldering quality.

Standard machine include:

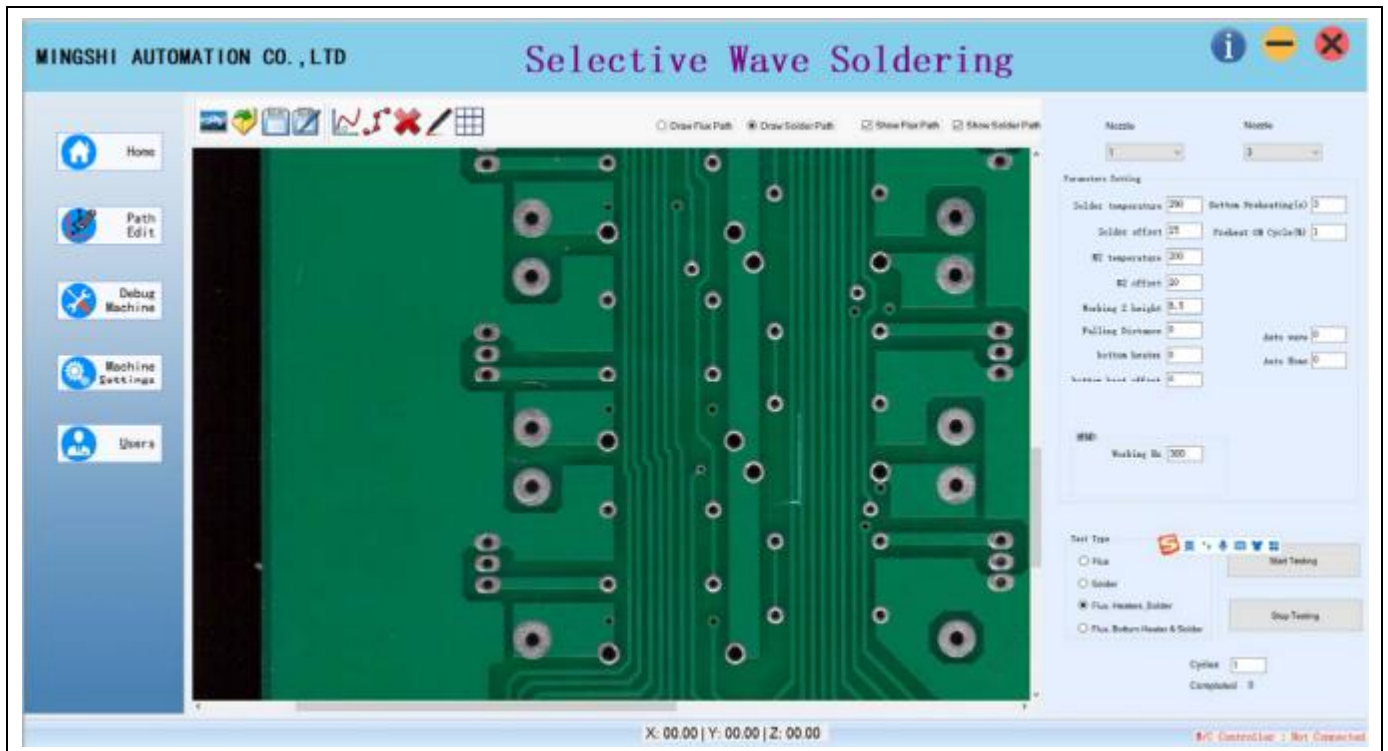
No.	Item	Content	Quantity
1	Controlling system	Computer & monitor	1 set
		Live on monitor camera	
		PLC and motion control	
2	Motion table(fluxing)	Fully cast iron xy motion table	1 set
		2 axis equipped with ball screw & linear guild rail	
		Two equipped with stepping motor axis fully and driver stepping	
3	Fluxing system	Imported jet fluxing valve	1 set
		Flux tank	
		Flux pneumatic system	
4	Preheating system	Lower infrared heating tube	1 set
5	Motion table(soldering table)	Fully cast iron xyz motion table	1 set
		3 axis equipped with ball screw & linear guild rail	
		3 axis equipped with servo motor & driver	
6	Soldering pot	15kg capacity solder pot, impeller, tunnel, servor motor	1 set
		solder temperature over heat alarm system	
		solder temperature controlling system	

		Nitrogen inline heating system	
		3mm, 4mm, 5mm, 6mm, 8mm Standard equipped solder nozzle	
7	Conveyor system	Rotary transportation system	1 set
		6 stations in total	
		Dedicated index control to ensure the accuracy of each time	
		Special stepper motor control for indexing plate	
8	Machine chassis	machine frame/cover & painting	1 set

Machine explanation

Part1: Software

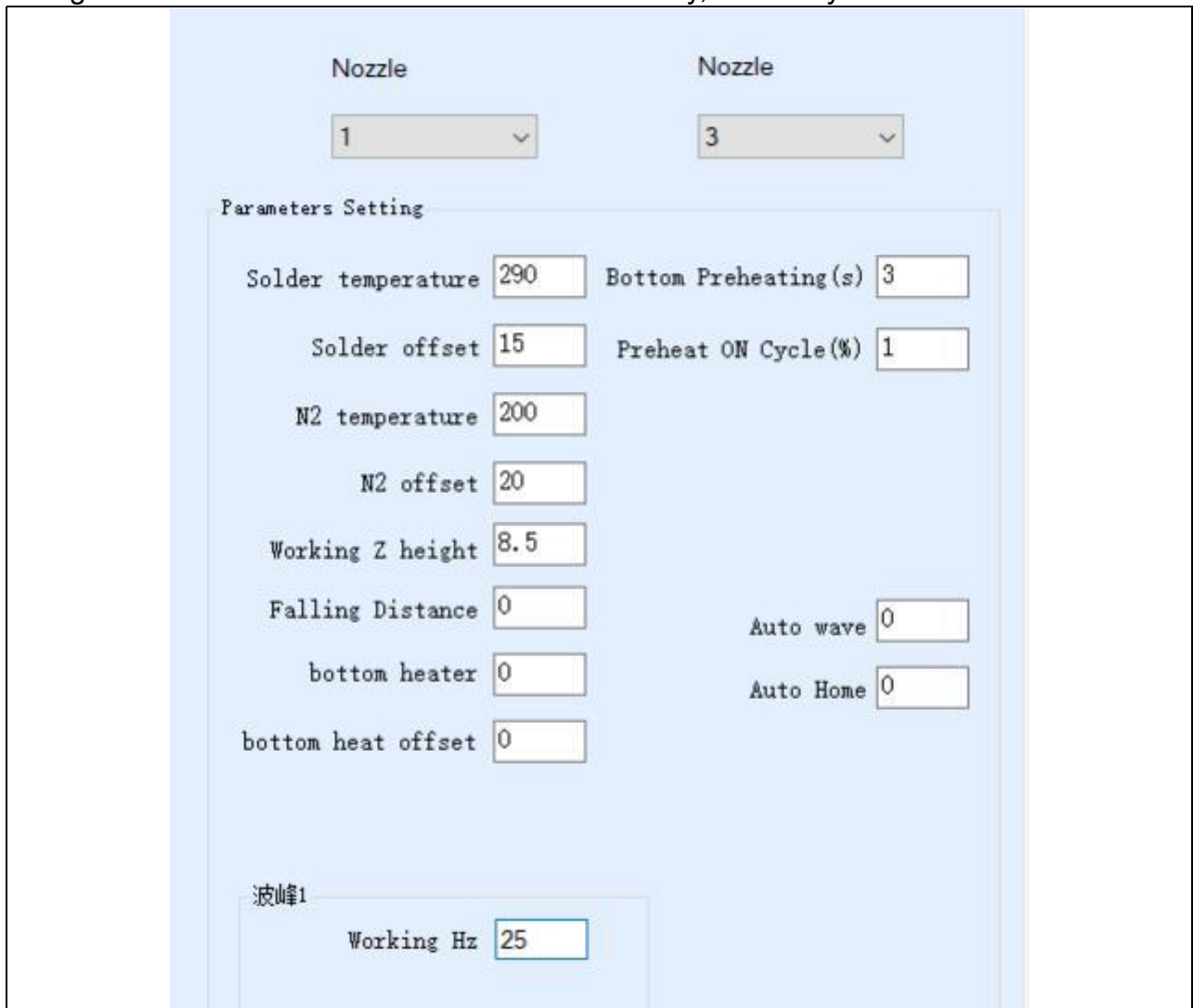
- All software system developed by company from USA, with our 8 years experience about selective soldering, base on Windows 10 system, with good trace-ability.



- Use scanned picture as background for path programming, moving speed, dwell time, empty move speed, Z height , wave height etc all programmed for different solder site.

- Showsolder process with live on camera.
- Critical parameters are totally under monitoring by PC software, like temperature, speed, pressure etc.
- Can upgraded to be with auto wave height calibration function, to check & calibrate wave's height after every certain pcb, so to keep a very good stability of wave.
- About PCB's menu in soldering machine, all information will be stocked in one file. It will include PCB dimension and picture, used flux type, solder type,

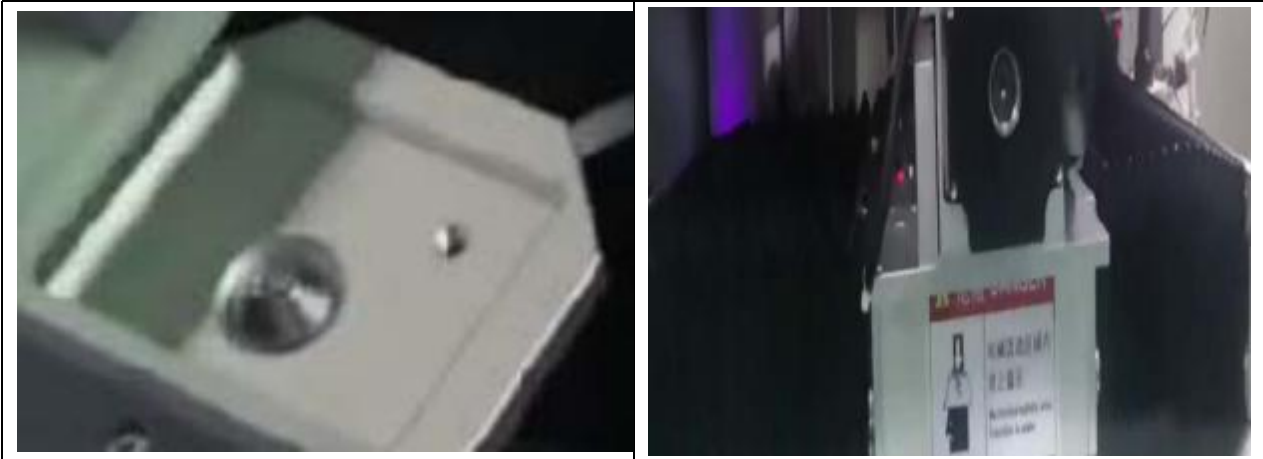
solder nozzle type, solder temperature, N2 temperature, motion path and each site's related wave height and Z height etc. When customer to solder same PCB, they can get full information about how it's done in history, also easy for trace.



- With LOG function, provide 3 level to enter software with different rights. Meanwhile, can record machine's operation & alarm.

Part2: motion system

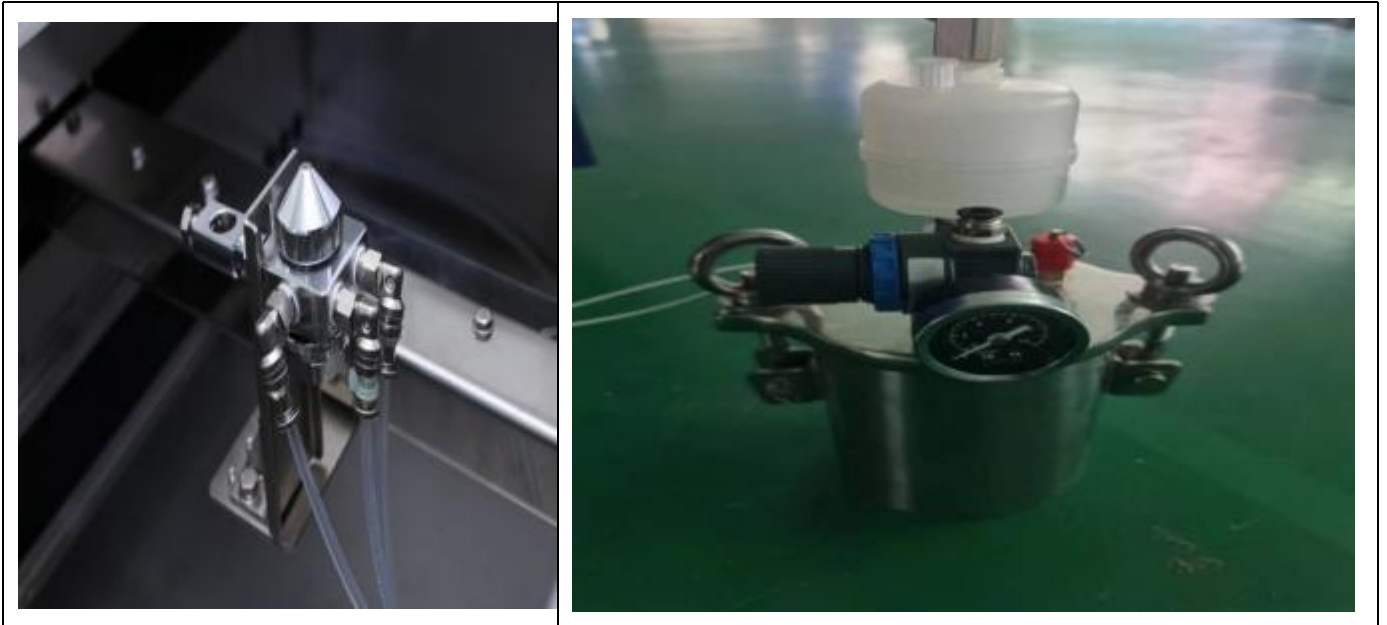
- Self design motion table with cast aluminum, lighter weight with quick motion speed.



- Panasonic servo motor & driver provide stable driving power, with screw pole & linear guild rail for guidance. Precious position, less noise, stable movement.
- With dust proof plate above motion table, so to avoid flux or solder drop to damage ball screw.

Part 3: fluxing system

- 1.0MM Japanese original two fluid nozzle, nozzle size



- Flux is stocked by PP plastic pressure tank, make sure pressure stable without influenced of amount of flux.



Part 4: Preheat

- The lower part is equipped with infrared heating plate



Part 5: solder pot

- One solder pot system with individual temperature control, N₂ temperature control, wave height control. All installed in one same table.
- Solder temperature, N₂ temperature, wave height, wave calibration etc all able to set in software.
- Solder pot is made of Ti, not leakage. With cast iron heater outside, robust & quick heat up.
- Solder pot is wired with quick connector. When exchange solder pot without re-wiring required, just plug & play.
- N₂ heating system, to wet the soldering perfectly and reduce the solder dross. With solder liquid level checking & alarm.



Part 6: conveyor

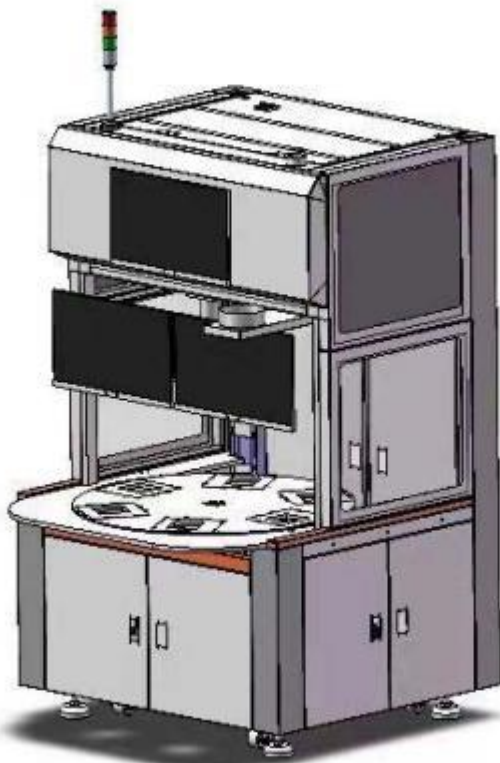
- The indexing plate of the rotary table is driven by an independent stepping motor.
- The thickened cast aluminum disc is used, and the surface is finely ground to ensure the flatness of the whole machine.



Part 7: machine chassis

Metal welding structure, with thick metal plate as base, so to reduce vibration and make machine more stable.

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Machine specs

Machine name	SI-2006
General	
Dimension	L1350 x W1450 x H1850mm
General power	3kw
Consumption power	1--2kw
Power supply	Single-phase 220V
Net weight	500KG
Required	3-5 Bars

air source	
Required air flow	8-12L/min
Required N2 pressure	3-4 Bars
Required N2 flow	greater than 1.5 m ³ /hour
Required N2 purity	» 99.999%
Required exhausting	400---600cbm/h
Carrier or PCB	
Carrier	Necessary
Max carrier size	L200 X W200MM Size customize available
Max solder area	L200 X W200MM
Pcb edge	3mm Above
Controlling & conveyor	
Controlling	PLC + controller
Conveyor width	200mm
Conveyor type	Rotary table type
Conveyor thick	1----4mm
PCB Direction of rotation	Anti-clockwise
PCB conveyor up clearance	100mm
PCB conveyor bottom clearance	30MM
Conveyor load	< 10kg
Conveyor rail	Aluminum rail

Conveyor height	700+/-30mm or 900+/-30mm
Motion table (fluxing)	
Motion axis	X, Y
Motion control	Stepping motor
Position accuracy	+ / - 0.05 mm
Chassis	Metal welding
Flux management	
Flux nozzle	Jet valve
Nozzle durability	Stainless steel
Flux tank capacity	1L
Flux tank	Pressure tank
Alcohol tank capacity	1L
Alcohol tank	Pressure tank
Preheat	
Preheat method	Infrared preheating
Heater's power	0.8kw
Temperature range	25--150c degree
Motion table(soldering)	
Motion axis	X, Y, Z
Motion control	Servo control
Motion motor	Panasonic servo motor
Ball screw	Hiwin
Position accuracy	+ / - 0.05 mm
Chassis	Metal welding
Solder pot	
Standard pot number	1
Solder pot capacity	15 kg /Furnace
Solder	PID

Temperature range	
Melting time	60--90 Minutes
Max solder temperature	350 °C
Solder heater	1.2kw
Solder nozzle	
Nozzle dim	Customized
Material	high carbon alloy
standard equipped nozzle	Standard configuration of 5 pieces per furnace (inner diameter of 3mm, 4mm, 5mm, 6mm, and 8mm)
N₂ management	
N ₂ heater	standard equipped
N ₂ temp range	0 - 250 °C
N ₂ consumption	1-2m ³ /h/pot total: 4 m ³ /h