

I.C.T Automatic Soldering Robot



Soldering Principle:

Operation mode: Multi-axis drive manipulator and software control to achieve precise positioning of the soldering head.

Soldering method: High temperature eddy current heating with a soldering iron.

Working principle: Fix solder iron at the manipulator, move to the appointed soldering coordinate, feed solder wire automatically at head of solder iron; solder wire solders under high temperature and come into joint with the target.

Introduce:

I.C.T soldering robot is a soldering robot with soldering wire feeding motion system. High frequency heating system with rapid heat recovery, soldering tip is easy to the exchanged with low cost. Break tin automatic solder wire feeder can reduce flux remaining problem after soldering.

Features:

1. Cost saving: High-efficiency operation is achieved by only one person. One person's efficiency amounts to 3-5 persons' efficiency.
2. X,Y,Z,R and soldering wire feeding motion system are all controlled by one combined 5 axis motion control card with PC, so it can integrate all the functions into one software.it makes machine running more stable and easy to operate.
3. X,Y,Z,R axis adopt quality step motor with it's control system, make machine run smoothly and precisely.
4. It is equipped with automatic soldering tip cleaning device, which can improve soldering quality and prolong lifetime of soldering tip.
5. Break tin solder wire feeding system can pierce holes when feeding solder wire, it can reduce burst tin that causes flux remaining on PCB when soldering under high temperature to improve the soldering quality. Solder wire feeding accuracy can reach 0.1mm.
6. High frequency induction heating system has rapid temperature recovery time, heating element adopt silver coil which can ensure long lifetime. Soldering tip can be easily changed with lower cost.
7. Self-developed advanced software, fool-style programming with wireless controller like play game, all parameters can be set in one program, such as moving path, solder wire feeding quantity, soldering time etc,very easy to use.
8. Optional smoke cover and smoke extractor can provide a very clean work environment.
9. Various soldering tips can meet different process requirement. Customized soldering tips is also available.
10. One worker can operate 2-3 robots. What this worker does is only pick and place fixture.
11. Robot is strictly customized based on requirements on products and soldering, in line with requirements of production line.

TOP Advantage:

1. Spot soldering, drag soldering, automatic cleaning and multi-angle soldering are available.
2. Position calibration, soldering dot array, parameter copy, automatic location and skip are available.
3. Teaching programming enables customers to implement all types of hand soldering upon their requirement.
4. Program calibration achieves workpiece integral coordinate position compensation.
5. Program insertion and deletion make program revised easily and rapidly.
6. Intelligent control system achieves accurate delivery of solder, speed, time, temperature and quantity of solder can be adjusted and

controlled accurately



Single and double platform options, can soldering parts in different positions to ensure the best soldering results.

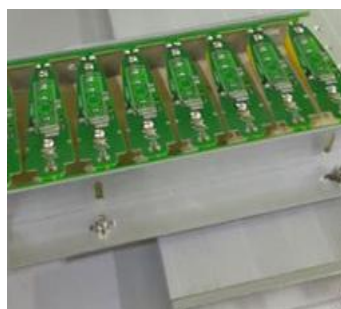
Special structural design ensures good supply of tin wire, no broken wire, stuck and other problems.



Flexible operation, simple programming, fast switching between different products.

Vision options to monitor the soldering effect throughout the process, and can handle high-precision product soldering.

Applications:



Specification:

Model	I.C.T-SR300	I.C.T-SR530	I.C.T-SR250D	I.C.T-SR250DD
Platform Number	1	1	2	2
Head Number	1	2	1	2

Heating Power	150w	300w	150w	300w
Max. PCB Size	300*300mm	500*300mm	250*250mm for each Platform	250*250mm for each Platform
Max Move Speed	X,Y axis: 600-800mm/s. Z axis: 400 mm/s. R axis: 300°/s			
Soldering Tip Clean	Steel wire and air pressure (Optional: Rotating Brush Clean)			
Solder Wire	Φ0.6~1.2mm solder wire			
Solder Feeding Speed	1~50mm/s			
Repeated Accuracy	±0.02mm			
Temperature Range	Room temperature-500C°			
Temperature Accuracy	±1°C			
Driving Mode	Step Motor			
Control Mode	Teach Pendant			
Air Pressure	4.5~6Kg/cm ²			
Power Supply	AC220V±10%, 50/60HZ			
Dimension	750*650*880mm	780*660*770mm	930*650*880mm	1280*750*950mm
Weight	Approx 65kg	Approx 70kg	Approx 80kg	Approx 85kg

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

Materials List:

No.	Item	Brand	Original
1	Rack	I.C.T	China
2	Temperature controller	wheeler	Germany
3	Linear guide	HIWIN	Taiwan
4	Ball spline	TBI	Taiwan
5	Ball screw	PMI	Taiwan
6	Synchronous gear	MITSUBOSHI	Japan
7	Sensor	OMRON	Japan
8	Electromagnetic valve(24V)	SMC	Japan
9	Stepping motor	Shinon	Japan
10	Step driver	RCON	Japan

Standard Accessories:

No.	Item	Quantity
1	Teach Pendant	1set
2	Soldering Tip	5pcs
3	Manual	1book
4	Send tin tube	1M
5	Send tin nozzle	6pcs

* I.C.T keeps working on quality and performance, specifications and appearance may be updated without particular notice.

Thanks for choosing I.C.T.

I.C.T looks forward to win-win cooperation.

Thank you.