



Bonding Category

Company Profile

Shenzhen Jiemai Precision Automation Co., Ltd. was formed from 2003. It is a service provider integrating research and development, manufacturing, and sales on customized machine of pulse soldering & hot pressing, hot melting, normal pressing, and bonding for 3C electronic products such as Bluetooth headsets, cell phones, smart watches, tablets and so on.

After nearly 20 years of development, the company has cultivated a group of experienced and innovative senior engineers, and has a pre-sales, in-sales, and after-sales service team with excellent business quality, willing to provide you with Professional technology consultation, technical support, training, and other services.

Shenzhen Jiemai Precision Automation Co., Ltd. always adheres to the product concept of high reliability, high quality, and high performance, and continues to reduce costs and improve production quality and efficiency for customers!

Introduction to Bonding Process

COF/COG bonding machine is a device that precisely determines the IC chip on the LCD glass and binds it. The whole machine is composed of PLC+HMI control core. The image automatic alignment system PV310 completes the alignment data calculation of the target object, and the product is transmitted to the local pressure by the platform for binding and crimping after completing alignment and prepressing.



Introduction to Bonding Equipment

Performance characteristics:

1. PLC control system, platform servo drive positioning, constant temperature heating, with stainless steel hot press head, to achieve constant temperature crimping. The down parposition mode is used to crimp the IC. Product MK point clear automatic alignment.
2. After the parameters of the equipment are set according to the product demand, the equipment automatically executes production according to the indicators.
3. Set according to different temperature, time, pressure and other data of product demand to provide data for production.
4. The system automatically detects the functions of the equipment, and displays and alarms when faults occur.
5. The software decomposes and executes the mechanical actions of the equipment, which is suitable for manual production for equipment debugging.
6. Password setting and password modification can be carried out to strengthen the confidentiality of product data and unified management of equipment.
7. No need for the operator to carry out temperature test through the instrument, the system automatically detects and sets.
8. In the operation interface, the system will display the running status of each component and the fault alarm display.
9. The use of double start system and emergency stop switch can make the production process safer.
10. The system can automatically store the location of each IC, and the operation can automatically go to the location of the repaired IC according to the need.
11. 20 kinds of product parameters can be pre-edited and stored, which can be directly invoked without setting again when used next time.

Manual
loading

vac-sorb




Manual
counterpoint

Intrinsic
pressure

Manual
blanking



Bonding machines Comparison

Description	M-118C Single station COF Bonding Machine	M-650C Double Station COG Bonding Machine	M-980C Semi-automatic COG Bonding Machine
Picture			
Weight(kg)	约 150	约 300	约 350
Used for	Suitable for full screen OLED AMOLED The COF (green screen) of TFT-LCD process is integrated	Meet high precision IC TO STN-LCD, COLOR STN-LCD, TFT-LCD, OLED-LCD local pressure.	Meet high precision IC TO STN-LCD, COLOR Automatic alignment preloading for STN-LCD, TFT-LCD, OLED-LCD.
Hot head material	Tungsten steel	Tungsten steel	Stainless steel
Hot head size	L70*W1mm (customization)	L38*W5mm (customization)	L30*W1mm (customization)
Product platform size	L200*W150mm (customization)	L165*W165mm (customization)	L220*W130mm (customization)
Levelness of hot pressing head	≤50um	≤0.03mm	≤0.05mm



Hot press head operation mode	cylinder	Cylinder+guide rail	Servo motor+cylinder
Levelness adjustment method of hot press head	Add steel balls between two components and fix them with screws for adjustment.	Add steel balls between two components and fix them with screws for adjustment.	Add steel balls between two components and fix them with screws for adjustment.
Thermocouple model	K type	K type	K type
Number of hot pressing heads	1 pcs	2 pcs	1 pcs
Product Workbench	Universal/Positioning Block Positioning Device	Universal/Positioning Block Positioning Device	Universal/Positioning Block Positioning Device
Product workbench Z-axis direction adjustment distance	Lift table adjustment, travel 0-10mm	Lift table adjustment, travel 0-10mm	Japan SIGMA lifting table adjustment, travel 0-10mm
Product platform vacuum hole diameter	φ1mm	0.8mm	0.8mm
Platform working mode	Fixed	Fixed platform, three stations	Automatic high-speed X, Y θ Servo motor control ACC: ± 0.3um
Platform driven mode	Adopting imported cylinder and guide rail drive	Adopting imported cylinder and guide rail drive	Servo motor



LCD mold material	Imported hard magnesium aluminum	Imported hard magnesium aluminum	Imported hard magnesium aluminum
Alignment system	Down alignment	Down alignment	Panasonic vision
FPC workbench X, Y direction adjustment distance	15mm	15mm	15mm
FPC workbench θ Direction adjustment angle	± 5 度	± 5 度	± 5 度
FPC workbench Z-direction adjustment distance	4mm	4mm	4mm
FPC workbench X, Y, Z θ Adjustment method	Micrometer adjustment	Micrometer adjustment	Micrometer adjustment
LCD /FPC/TCP mold flatness	$\leq 100\mu\text{m}$	$\leq 0.05\text{mm}$	$\leq 0.05\text{mm}$
Beat time	3.2 - 4.5 S	3.2 - 4.5 S	3.2 - 4.5 S
Hot pressing accuracy	X : $\pm 3 \mu\text{m}$; Y : $\pm 5\mu\text{m}$	X : $\pm 3 \mu\text{m}$; Y : $\pm 5\mu\text{m}$	X : $\pm 3 \mu\text{m}$; Y : $\pm 5\mu\text{m}$
Heating method	Constant temperature	Constant temperature	Constant temperature



Pressure control	precision regulating valve	precision regulating valve	precision regulating valve
Temperature controller accuracy	$\leq \pm 5^{\circ}\text{C}$	$\leq \pm 5^{\circ}\text{C}$	$\leq \pm 5^{\circ}\text{C}$
Vacuum generator	Digital pressure gauge, unit: Mpa	Digital pressure gauge, unit: Mpa	Digital pressure gauge, unit: Mpa
Product adsorption	Vacuum generator	Vacuum generator	Vacuum generator
Pressure setting range	0.1 - 0.5 Mpa	0.1 - 0.5 Mpa	0.1 - 0.5 Mpa
Working pressure range (measured)	2 - 40 Kg	3 - 40 Kg	2 - 40 Kg
Temperature setting range	30°C - 400°C	30°C - 400°C	30°C - 400°C
Working temperature range (measured)	Room temperature-250°C	Room temperature - 250°C	Room temperature - 250°C
Hot pressing time range	1 - 99 S	1 - 99 S	1 - 99 S
Alignment system/method	2 sets of CCD bottom alignment	2 sets of CCD bottom alignment	Panasonic Vision/2 sets of CCD bottom alignment
Light source system	2-way 25MA	2-way 25MA	White 1W cold light LED point light source (color can be changed according to the product)
CCD	color	color	color
CCD minimum center distance	5mm	5mm	5mm



Lens	8x 100 focal length	8x 100 focal length	20x 100 focal length
CCD direction adjustment stroke	X:100mm Y:30mm Z:8mm	X:100mm Y:30mm Z:8mm	X:10mm Y:10mm Z:5mm
Monitor specifications and quantity	12 inch LCD display 1 PCS	12 inch LCD display 1 PCS	12 industrial display 1 PCS
The device safety self-locking function	Yes	Yes	Yes
The device fault self check function	Yes	Yes	Yes
Two hand activation function	Yes	Yes	Yes
Buzzer	Yes	Yes	Yes
Prevention measures	Yes	Yes	Yes
Work indicator light	Yes	Yes	Yes
Leakage protection function	Yes	Yes	Yes
Over temperature protection function	Yes	Yes	Yes
When there is no air pressure supply, there is no downward pressure on the pressure head.	Yes	Yes	Yes



Pressure parameter alarm function	Yes	Yes	Yes
the equipment has no production parameter alarm function.	Yes	Yes	Yes
Belt shortage alarm	Yes	Yes	Yes
Emergency stop switch	Yes	Yes	Yes