



鼎华科技
DING HUA TECHNOLOGY

Shenzhen Dinghua Technology Development CO., Ltd
Shenzhen Dinghua Innovation Automation CO., Ltd
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Dinghua Full-Auto BGA Rework Station DH-A2E



Auto de-soldering, feeding & re-soldering, with intelligent reminder for next step

High temperature control system, Panasonic optical system, laser positioning



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Specification:

Total Power	5700W
Top heater	1200W
Bottom heater	2nd 1200W, 3rd IR heater 2700W
Voltage	AC220V/110V $\pm 10\%$ 50Hz/60Hz
Feeding system	Auto feeding system for chip
Operation mode	Two modes: manual and automatic, free choose! HD touch screen, intelligent human-machine, digital system setting.
Temperature profile storage	50,000 groups(un-limited number of groups)
Optical CCD camera lens	Automatic stretching out and folding to pick and place BGA chip
Camera magnification	1.8 million pixels
Workbench fine-tuning:	$\pm 15\text{mm}$ forward/backward, $\pm 15\text{mm}$ right/left
Chip Placement Spacing Deviation	0.015mm
Bga positioning	Laser positioning, fast and accurate position of PCB and BGA
PCB position	Intelligent positioning, PCB can be adjusted in X direction with "5 points support" + V-groov pcb bracket + universal fixtures.
Lighting	Taiwan led working light, any angle adjustable
Temperature control	K sensor, close loop
Temp accuracy	$\pm 2^{\circ}\text{C}$
Applicable PCB size	Max 440 \times 380 mm Min 22 \times 22 mm
Applicable Chip size	2x2 - 80 \times 80 mm
External temper sensor	1pc
Dimensions	L850 \times W600 \times H700 mm
Net weight	70KG



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Features:

● Humanized Design

- 1) Stepper motor driving system: auto soldering, feeding, placement, heating and cooling, with intelligent reminder for next step, very easy to operate.
- 2) Windows OS interface, with PLC control of multi-functional integrated programs, which makes the operation quite conveniently and easily, in English and Chinese + USB interface, easy to operate.
- 3) Auto feeding system: auto chip pick-up and placement accurately.
- 4) Two operation modes: manual and automatic shifted freely. Manual mode is an optional work, mainly used to touch HD screen for temperature curve/profile set-up or adjustment, make top heater height adjustment with joysticks, the external temperature test, and to pick up chip with vacuum pen, in occasional case.
- 5) HD optical alignment and high precise micrometer adjustment, with laser position: make the tin ball alignment easy and accurate.
- 6) Auto folding optical lens, freely optional set-up of temperature curve, for very wise use of chips.
- 7) Three heaters are individually set up, but run coordinative, and the IR infrared pre-heater is in big size for wise range of product repair.
- 8) High quality build-in vacuum: pick up chip conveniently and efficiently.
- 9) High quality radiating fan with big volume wind-force, run automatically right after the heating work(down to $< 45^{\circ}\text{C}$) to support high efficient cooling, and protect heaters from aging.

● High Temperature Control

- 1) High temperature control system, with precise k-type thermocouple closed-loop control, PID auto temperature compensation system, external temp. sensor, which make the deviation $\pm 2^{\circ}\text{C}$.
- 2) Able to set up 8 segments of temperature, with changeable top heating and lower heating (up to 16 segments). And un-limited number of temperature profiles stored in program.
- 3) The 3 zone temperature curve lines appear on display in different colors, visually and straightly.
- 4) Free to adjust or re-set up the curve during the work, once it necessary to make the change.

● High Precise Alignment System

- 1) Panasonic branded optical alignment system + CCD color lens system
- 2) 2 color separation, magnification, micro adjustment
- 3) Auto focus, auto correction, auto color differentiation.
- 4) Light brightness adjustment system.
- 5) 90° auto folded camera, moves and positions intelligently and accurately.



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● **Precise Components and Assemblies**

- 1) Precise fine-tuning knob with micrometer to turn in X,Y,Z angles to align tin ball .
- 2) Laser position + movable V-groove clamp + universal fixture, suit to fix and position all kinds of PCB easily and conveniently.
- 3) High temp. resistance ceramic shelf to protect chip in case dropped down, and for more secure operation over the work station.
- 4) Provide 5 different sizes of stainless steel made vacuum suckers for free: flexibly use for different sizes of chips.
- 5) Provide 5 different sizes of nozzles for free: 3 top nozzles and 2 bottom nozzles.
- 6) Any size of nozzle can be customized, Titanium alloy material, never deformation, never rusty.
- 7) Nozzle with magnet, rotate in any angle, easy replace and operate.
- 8) High power LED light for observing machine work more visually.

● **Security System**

- 1) Own fan failure protection, thermocouple failure protection function.
- 2) Own overheating protection, emergency stop function.
- 3) Able to set up and modify password for confidential protection.

Application:

1. Complete range of rework applications in medium and large scale service centers, mobile and radio systems devices repair, mobile phones, PDAs, handhelds, laptops, notebooks, portable medical equipment LAN devices, network nodes, military communication equipment, etc.
2. Applicable to repair all kinds of chips, such as BGA, PGA, POP, BQFP, QFN, PLCC, TQFP, TSOP, etc. with tin in lead and lead-free.

Notes:

1. Manual and CD-ROM of demonstration video is provided for free, which is easy to understand.
2. Training also included if needed.
3. Provide full set of equipment, tools and materials for rework processing.