

HR 600/2

Ersa HR 600/2

Automated assembly repair – flexible, efficient, reliable!

The task formulated for the Ersa HR 600/2 Hybrid Rework System was to offer professional, automated rework of sub-assemblies for the electronic industry. With the system now at hand, almost all high pin-out components that may be found on modern board assemblies, and of virtually any shape, can be reliably reworked. The core competencies of this universal rework system are the placement of components, their lifting off and their controlled setting down, as well as the soldering process.

Special attention was placed on the automation of the individual process steps. All operations can be controlled in a step-by-step mode by the operator himself, or they can be combined to automated operation, requiring very few interventions by the operator.

To preheat the complete board area of the assembly mounted in the board holder, the system utilizes highly dynamic IR-heating elements in the lower heater cassette. A hybrid heating head combines the heat transfer method of IR radiation with that of convection heating for a targeted, and therefore highly efficient, warming of the components to be worked on. Applying this method, quick and top-quality desoldering and soldering results are being achieved. An optional Reflow Process Camera (RPC) with LED illumination is available for process monitoring and documentation. Placement of the components is a largely automatic process; the integrated image processing software assesses data of images generated by the two cameras installed. The required component position is automatically calculated, and the component is placed, independent of an operator, using a vacuum pipette mounted on an axis system.

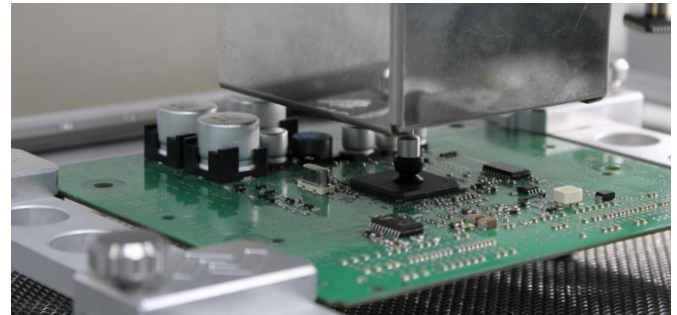
The system is prepared for the mounting of the Ersa Dip&Print frame. Printing the solder paste onto the component takes place externally on the Dip&Print Station; dipping the component into the flux depot is equally a fully automated process.

Technical Highlights:

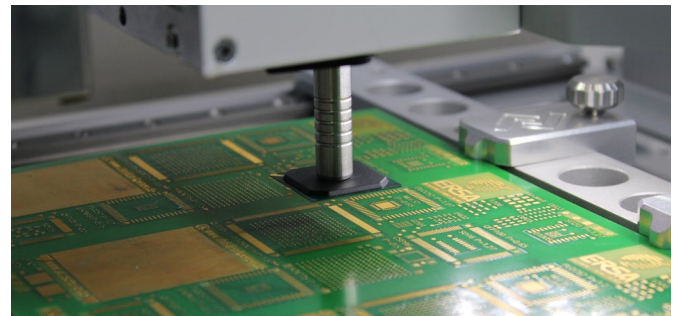
- Automated component placement
- Automated desoldering and soldering process
- Hybrid heater head with two heating zones for effective heat transfer
- Extensive, powerful IR bottom-side heating cassette with 3 zones
- Non-contact temperature measurement with digital sensor
- Two K-type thermocouple inputs
- Accu-TC sensor
- Effective assembly cooling with compressed air

Technical Data:

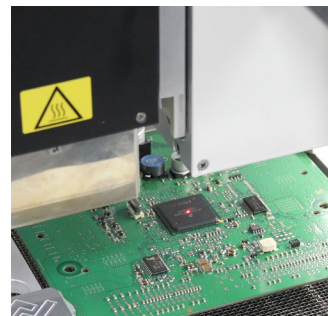
Dimensions (W x D x H)	850 x 660 x 620 mm
Weight	appr. 57 kg
Voltage	230 V AC, single phase, 50 Hz, 16 A
Air supply	compressed air, 6 bar (free of oil), ¼ inch quick connect (required to generate the vacuum for the component gripper and for bottom-side cooling)
Volume of air cooling	between 50-100 l/min (adjustable)
Bottom emitter data	380 x 250 mm, 3 zones with 800 W each, 2400 W total
Bottom emitter technology	medium wave, reactive, ceramic IR emitters
Upper emitter data	60 x 60 mm, 2 zones with 400 W each, 800 W total, aperture attachments 40 x 40 mm, 30 x 30 mm, 20 x 20 mm
Upper emitter technology	hybrid emitter with medium wave length IR heaters combined with convection, motorized height adjustment, integrated motorized pipette (to hold components)
Board cooling	hybrid blower on top, compressed air pipe (400 mm) on bottom
Board dimensions	390 x 285 (+x) mm [area exceeding (+x) is not fully preheated], thickness up to 6 mm
Component dimensions	1 x 1 up to 50 x 50 mm
Working distance (typ.)	40 mm, adjustable
Axis system	precision guidance, stepper motors (X, Y, Z, rotation)
Placement accuracy	up to +/- 25 µm
Placement nozzles	10 mm, 4 mm (magnetic mounting)
Placement camera, top	1.3 MP color camera, USB 2.0, LED illumination, dimmable
Component camera, bottom	1.3 MP black-and-white camera, USB 2.0, LED illumination, dimmable
Reflow Process Camera (option)	10 MP high-resolution color camera, USB 2.0, LED illumination, dimmable
Interface	USB 2.0
Operating software	Ersa HRSoft for Microsoft™ Windows operating system
Computer specification	PC is not included in the scope of supply, for details, please contact Ersa.
CPU	CPU Intel Pentium 4, 3 GHz or better (recommended: Core 2 Duo), AMD Athlon XP 64, 3000+ or better (recommended: Athlon X2)
RAM	min. 1 GB, recommendation 2 GB or more
Graphic	ATI Radeon™ Series or NVidia® Geforce® Series, TFT screen/monitor min. 7" (better 19")
Interface	USB 2.0 or better



Automatic desoldering



Automatic component placement



Laser marking of the targeted position



Dip&Print Station with "MLF32" stencil

Order Information:

Order No.	Description
0HR600/2	Ersa HR 600/2, Hybrid Rework System
0HR600/2BHL	Ersa HR 600/2BHL, Hybrid Rework System with lowered bottom heater
0HR600/2L	Ersa HR600/2L, Hybrid Rework System with PCB holder 300 x 535 mm
0HR600/2LBHL	Ersa HR 600/2LBHL Hybrid Rework System with PCB holder 535 x 300 mm (+x) and lowered bottom heater

Accessories

0HR610P	Reflow Process Camera for HR 600/2
0PR100	Dip&Print Station, complete



further information on our website or webshop

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