kurtz ersa

HR 600P

Automated Rework precision
for best results

AIDING
SUSTAINABILITY

REWORK INNOVATION
SINCE 1997

GLOBAL. AHEAD. SUSTAINABLE.

HR 600P HYBRID REWORK SYSTEM

Automated Rework porcesses right with the first board

Technical Highlights:

- High-precision axis system an high-resolution camera
- Automated component placement and soldering and desoldering process
- Hybrid heating head with two heating zones
- Process monitoring with Reflow-Process Camera
- Powerful large-area IR bottom-side heating in three zones
- Non-contact temperature measurement with digital Virtual Thermocouple (VTC)
- Three K-type thermocouple inputs for AccuTC sensor
- Effective assembly cooling with compressed air
- Optional residual solder removal with AUTO SCAVENGER (retrofitable)

With the HR 600P, Ersa takes the next technological step in professionalizing and automating the repair of electronic assemblies. A solid and highly accurate machine frame forms the basis for precise component placement and reliability.

For reliable soldering results, HR 600P features the proven infrared heating elements in the bottom-side heater, which provide for a homogeneous heating of the assembly.

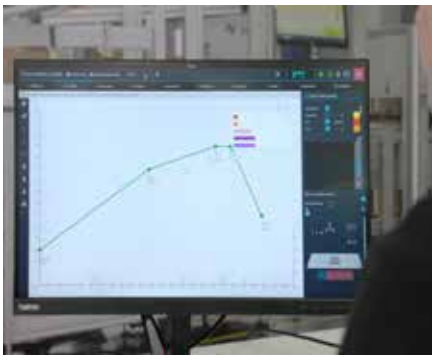
The highly dynamic hybrid heating head combines infrared radiation and convection heating for targeted and efficient top-side component heating.

Closed-loop temperature control is provided either by high-precision thermocouples or by the non-contact Virtual TC.

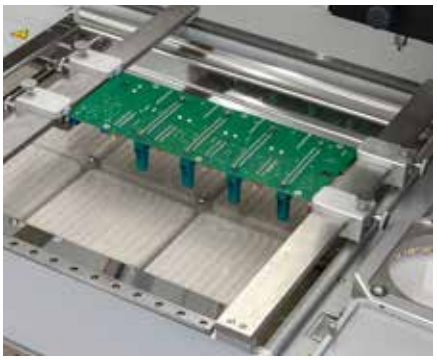
The exact calculation of the component position is performed automatically. After the position has been calculated, the component is placed by means of a vacuum

Homogeneous and reproduceable component heating thanks to the hybrid heating head

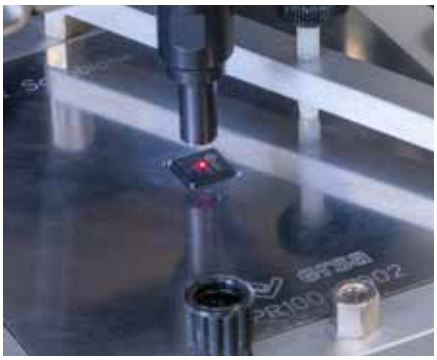
Metallic BGA above the light dome for detection of component connections



HRSoft 2: Intuitive user interface for operation, profiling and documentation



Option with lowered bottom heating and large PCB holder for large assemblies with high components on the bottom side of the PCB



MLF component printed with solder paste is lifted out of a print stencil

gripper via a precisely operating axis system.

A powerful Reflow Process Camera with LED illumination is available for process monitoring and documentation. The HRSoft 2 operating software (for Windows™) accompanies the user during all work processes and documents them. Furthermore, HRSoft 2 also allows the integration of the HR 600P into customer MES systems.

The HR 600P is available in different versions and can be optimally adapted to the customer's needs in the processing of electronic assemblies. In the version with the large PCB holder, significantly larger assemblies can be operated. A version with a lowered heating cassette creates additional free space on the underside of the assembly in case of high superstructures. Both versions can be combined.

The HR 600P is prepared for use with the Ersa Dip&Print Station, with which defined application of flux or solder paste to the components.

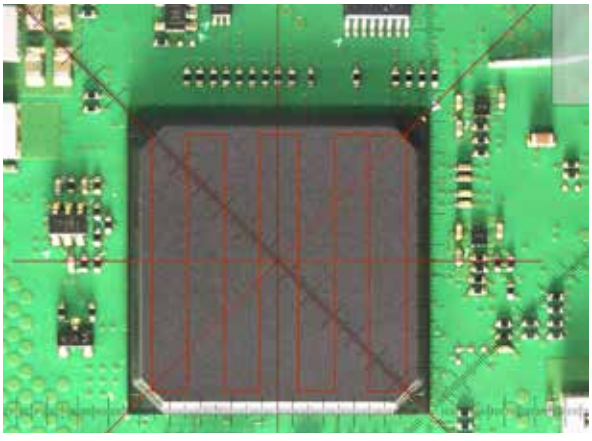
SC 600 SCAVENGER MODUL

Automatic residual solder extraction

Before a new component can be soldered onto a PCB, the solder remaining on the board after desoldering must be removed. In an automated process the Auto Scavenger SC 600 gently removes the residual solder from the pads of the PCB. The module can also be retrofitted and is fully integrated into the HRSoft 2 software.

Technical Highlights:

- Automatic height adjustment
- Automatic track definition
- Individual setting of the suction parameters
- Operation with N_2 as protective gas
- Available as option or as retrofit for all HR 600P systems



Route definition

Process step: residual solder removal

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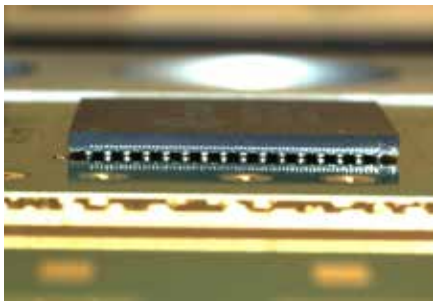
The HR 600P functional units (from left to right): Scavenger, heating and placement head

Technical Data HR 600P & Auto Scavenger

Rework system (HR 600P)	
Length:	1.450 mm
Width:	800 mm
Height:	600 mm
Weight:	110 kg (118,5 kg inkl. SC600)
Antistatic Design:	yes
Test symbol:	CE
Power rating:	3.200 W
Supply voltage	220 - 240 VAC
Frequency:	50 - 60 Hz
Current consumption:	16 A
Upper heating:	Hybrid emitter, 800 W, two zones, 60 x 60 mm
Bottom heating:	IR emitter, 3 x 800 W, 380 x 250 mm
Measuring channels:	3x K-Typ, 1x IRS
PCB size:	up to 380 x 300 mm (+x), optional: up to 642 x 423 mm (+x)
Component size:	1 x 1 mm up to 60 x 60 mm
Axis accuracy:	bis +/- 25 µm
Working distance (typical):	30 - 60 mm to the upper heating, 35 mm to the bottom heating
Placement camera (top):	5 MP GigE color camera
Component camera (bottom):	5 MP GigE monochrome camera
Reflow process camera:	10,7 MP, CMOS GigE color camera, 50 mm focal width, 2x LED lighting, adjustable
Compressed air connection:	1/4 Zoll, free of oil, 6 - 10 bar
Operation software:	HRSoft 2
Compatibility:	Windows 10 and 11

Auto Scavenger (SC 600, optional)	
Length:	300 mm
Width:	210 mm
Height:	420 mm
Weight:	18,5 kg
Antistatic Design:	yes
Test symbol:	CE
Power rating:	400 W
Supply voltage	220 - 240 VAC
Frequency:	50 - 60 Hz
Power consumption (max.):	500 W
Secondary voltage:	30 VAC
Current consumption:	2,5 A-T
Upper heating:	hot air
Compressed air connection:	1/4 Zoll, free of oil, 6 - 10 bar
Compressed air consumption:	60 l/min
Nitrogen supply:	1/4 Zoll, free of oil, 6 - 10 bar, l/min Class 5.0, purity (1:2:1) according to ISO 8573-1
Nitrogen consumption:	30 l/min
Cleaning speed:	up to 5 mm/s
Component size:	all standard SMD pad formats

Environment	
Temperature range (constant)	18 - 26 °C
Humidity (non-condensing)	40 - 60 %



Process visualization with the RPC process camera

CLOSED LOOP CONTROL

HYBRID HEAT

NON-CONTACT SOLDER REMOVAL

FIRST SHOT PROFILING

HIGHLY FLEXIBLE

PRECISE PLACEMENT

AIDING SUSTAINABILITY

REWORK INNOVATION SINCE 1997

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