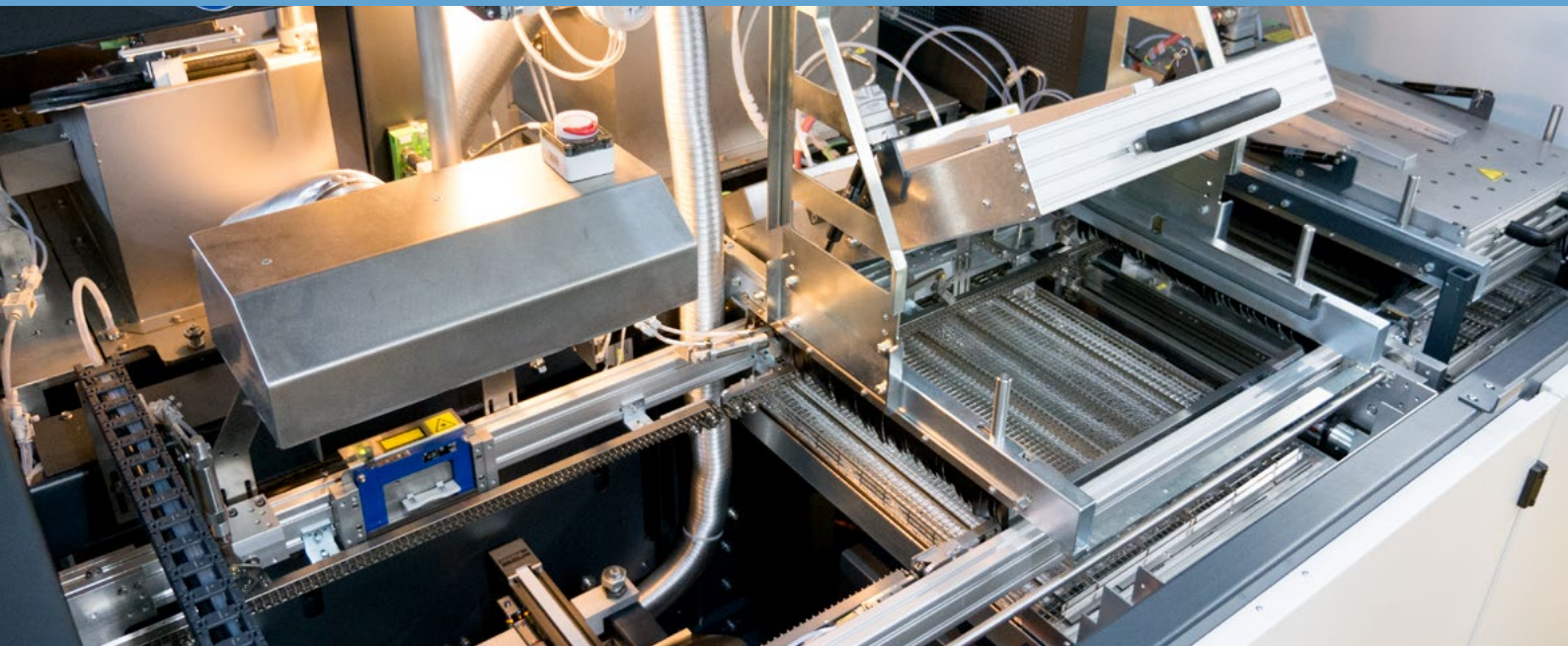


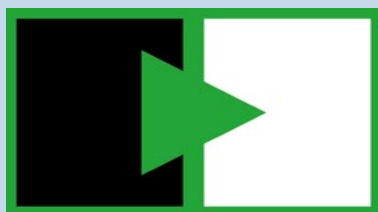
ECOCELL

Selective Soldering System in-line and off-line:
Uncompromising throughput – flexible layout.



Ersa ECOCELL

Ideal for manufacturing islands



The Hermes Standard
for "M-to-M" in SMT Assembly



Highlights ECOCELL

- High-end selective soldering system for integration into manufacturing islands (U-shape)
- Miniwave soldering for high flexibility or multiwave soldering for high-volume applications
- Product change without loss of production time even for multiwave processes
- Parallel process through separation of fluxing, preheating and soldering
- Ideal for linking with manual work stations and peripherals

With the Ersa ECOCELL, the worldwide technology leader in selective soldering systems expands his product range with a system that fully responds to the demands of modern production methods. The ECOCELL works according to the Toyota principle, and conveys the PCBs in the counterclockwise direction. This U-shaped arrangement makes the system ideal for use as part of a production island, but it can also be operated as a "side-line".

The notions of high throughput and high flexibility, mentioned together in one sentence, are not contradictory to each other. With 2 integrated preheaters, up to 4 PCBs can be processed simultaneously. Dual pot systems open up the possibility to efficiently solder PCB panels. And equally, when using miniwave and multiwave systems, dif-

ferent solder alloys can be handled. This function, together with the possibility to service one multiwave bath while the other one is in operation, reduces setup time during a product change to a minimum.

The well-proven spray fluxing unit is also installed in the ECOCELL. With the integrated flux spray control, flux deposition, whether in single points or in tracks, is performed on a high quality level.

The short-wave IR emitter cassettes, mounted on the bottom side of the boards, can be optionally augmented with a top-side convection preheating unit, thereby assuring a homogeneous soak of even the most complex board assemblies. A further available, optional upper convection preheater over the miniwave bath assures that the boards



High-precision spray fluxer with integrated spray jet control



Both short-wave IR emitters can optionally be upgraded with top-side convection heaters

Basic configuration

- Pin-and-chain conveyor for pallet-less PCB transport
- Integrated shuttle conveyor
- Conveyor width adjustment (manual)
- Precision spray fluxer with spray test function and flux level monitoring
- Bottom-side preheater, short-wave, dynamic IR emitters
- Solder module with low-maintenance electromagnetic solder pump
- Solder level- and solder wave height monitoring

maintain the optimal process temperature for the duration of the solder process. The “peel off” effect developed by Ersu for soldering at a 0° angle eliminates the risk of bridging and ensures achieving the lowest DPM rate. For the solder bath itself, only induction pumps are being deployed to pump the solder into the wave, which makes these pumps a low-maintenance and wear-part-free item.

The intuitive system software allows effective programming of the system and records all production relevant data (traceability) as per ZVEI standard. The graphical interface of the CAD assistant permits quick and easy off-line programming while the system is in operation, thereby ensuring the maximum availability of the system for production.



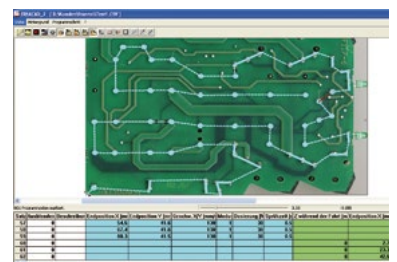
In- and offline selective soldering system in a U-shape arrangement for modern manufacturing layouts



Option: automation for individual customer requirements

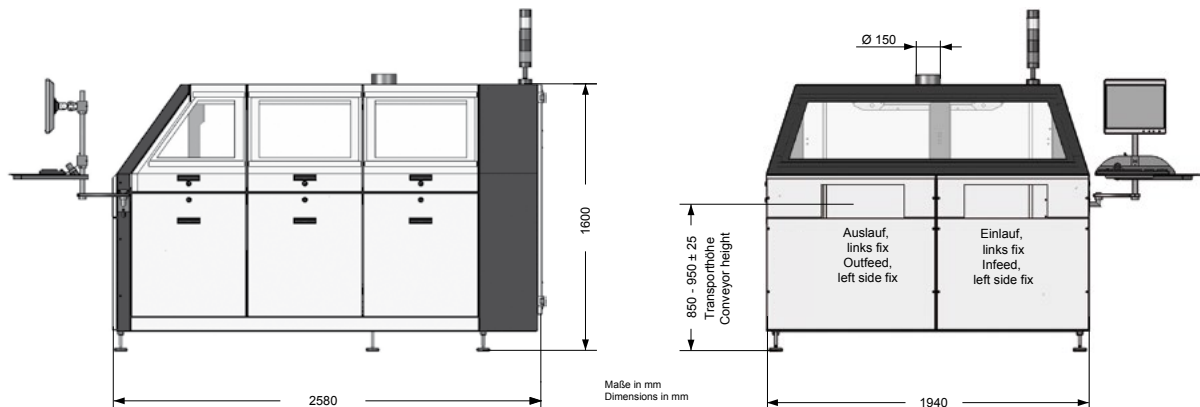


It is also possible to operate two multi-wave solder pots.



Simple offline programming via DXF files or scanned PCBs

Technical data ECOCELL



ECOCELL (basic system)	
Length:	2,580 mm
Width:	1,940 mm
Height:	1,600 mm
Weight:	1,250 kg
Type:	batch/inline

Transport	
Type:	pin-and-chain conveyor for frameless PCB transport
PCB width:	60 – 356 mm
PCB length:	120 – 450 mm
Clearance from PCB edge:	3 mm
PCB top side clearance:	max. 80 mm
PCB bottom side clearance:	max. 30 mm
Speed:	0.2 – 10 m/min
Mask/PCB weight:	8 kg
Heavy load conveyor (option)	(12 kg)

Compressed air & Nitrogen	
Compressed air supply:	to be supplied locally
Required pressure:	each 6 bar
Consumption:	< 5 m³/h
Nitrogen consumption :	min. 1,5 m³/h
Particle cleanliness: (recommendation)	5.0

Flux module	
Type:	high-precision spray fluxer
Positioning system:	2 axis, servo motor driven
Flux storage tank:	1.8 l
Positioning speed:	1 – 300 mm/s
Fluxer speed:	20 mm/s
Positioning accuracy:	±0.25 mm
Spray width:	2 – 8 mm (130 µm nozzle)

Preheat module	
Type:	IR bottom-side (basis), top-side convection (option)
Power:	10.4 kW
Temperature:	200 °C

Miniwave solder module	
Solder wave height:	max. 5 mm
Solder volume:	approx. 13 kg (Sn63Pb); approx. 12 kg (lead-free)
Solder temperature:	max. 330 °C
Warm-up time:	75 min to 280 °C
Positioning speed:	x/y: 2 – 200 mm/s z: 2 – 100 mm/s
Positioning accuracy:	±0.25 mm

Multi-wave induc. solder module	
Max. soldering area	356 x 356 mm
Max. PCB-/mask size	356 x 450 mm
Solder volume	lead-free approx. 230 kg
Maximum pass through height	+80/-25 mm
Solder level monitoring	yes
Solder wave height monitoring	yes
Solder pot for product-specific solder nozzle plates	yes
Solder bath service frame for maintenance	yes

Electrical data	
Voltage:	5-wire system, 3 x 230/400 V, N, PE
Power tolerance range:	+6 %, -10 %
Frequency:	50/60 Hz
Power consumption:	18 kW
Safety fuse:	max. 34 A

Exhaust rating	
Exhaust stacks:	1 pc., OD 150 mm
Exhaust volume per stack:	300 m³/h

Environmental specs/noise level	
Ambient temperature:	15 – 35 °C
Permanent sound level:	< 65 dB(A)

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