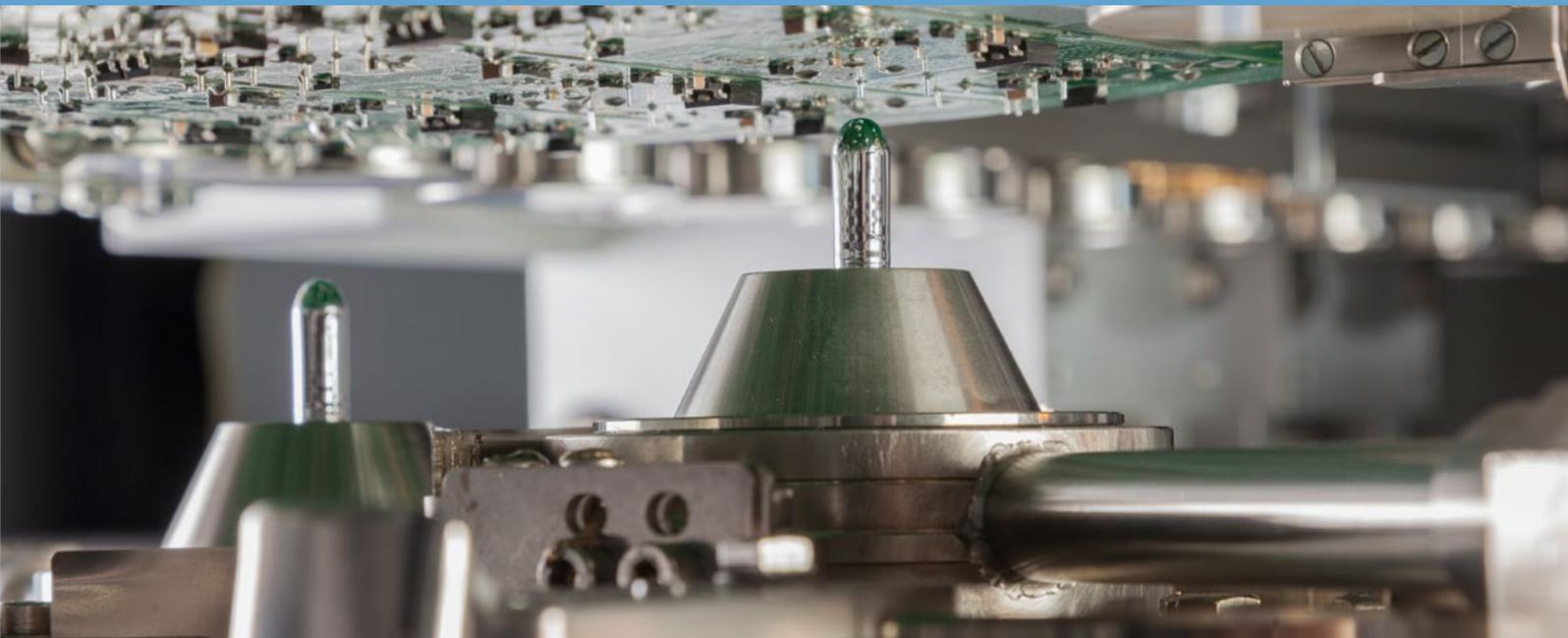# Ersa Selective Soldering Systems
In a class of its own!

kurtz ersa

SMARTFLOW 2020 and ECOSELECT
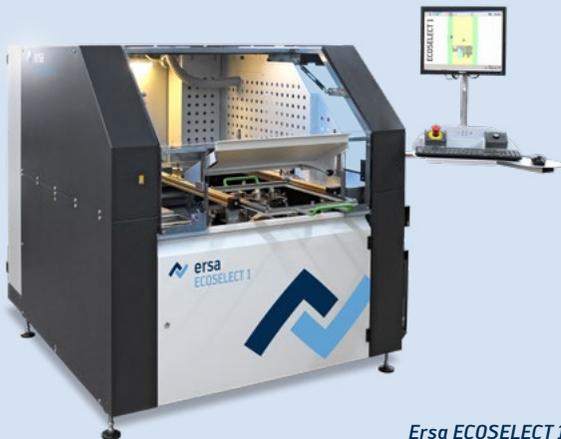## Compact systems with high-end technology.
No compromises in quality.

Ersa SMARTFLOW 2020

The perfect start-up solution
Compact without compromises, extremly smart!

Highlights SMARTFLOW 2020
■ VERSAFLOW technology on small footprint
■ Award-winning user interface ERSASOFT 5
■ Extremely maintenance-friendly
■ Full-area upper/lower IR preheating (adjustable)

Ersa ECOSELECT 1

Small footprint – high-end technology
Selective soldering for small series and prototypes.

Highlights ECOSELECT 1
■ Compact batch system with small footprint
■ Up to two solder pots and two flux heads to increase thoughput
■ Full-area lower IR preheating (adjustable)
■ Upper convection heating

Ersa ECOSELECT 4

Inline and batch system
For highest selective soldering quality

Highlights ECOSELECT 4
■ Compact selective soldering system with small footprint
■ Batch or inline production
■ Up to two flux heads and solder pots to increase throughput
■ Full-area lower IR-preheating (adjustable)
■ Upper convection preheating/power convection
■ Upper convection heater in the solder module
■ Award-winning user interface ERSASOFT 5
■ VERSACAM
■ PCB size 508 x 508 mm

VERSAFLOW 4 and VERSAFLOW 3
The best made even better.
The next generation with new features.

The world's leading inline selective soldering system
The modular platform offers always the right combination.

Ersa VERSAFLOW 3

Highlights Ersa VERSAFLOW 3

- Working area:
  VERSAFLOW 3/45: 16" x 20" (option 20" x 20")
  VERSAFLOW 3/66: 24" x 24"
- Single-wave soldering for higher flexibility or multiwave soldering for high-volume processes
- Product changes without downtime even in multiwave processes
- Parallel process due to the separation of fluxing, preheating and soldering
- Operation of up to four spray heads
- Up to five lower preheatings with optional upper convection heating
- Perfect for the connection to assembly stands and periphery
- Connection to traceability systems for process control

VERSAFLOW 4 – The next generation
The best made even better!

Ersa VERSAFLOW 4

additional Highlights VERSAFLOW 4

- Working area:
  VERSAFLOW 4/55: 20" x 20"
  VERSAFLOW 4 XL: 24" x 48"
- Fluxer y-variable
- Solder module y-/z-variable
- Continuous roller conveyor
- Award-winning user interface ERSASOFT 5
- Power convection
- VERSACAM ■ VERSAFLEX ■ VERSAFLUX

VERSAFLUX & VERSAFLEX
The new freedom for fluxing and soldering

*Parallel processes in certain modules for highest throughput*

VERSAFLEX module – 2 solder pots mounted on 2 independent axis systems

With the all-new VERSAFLUX and VERSAFLEX modules, Ersa is setting benchmarks in quality, flexibility and throughput. As the name suggests, there is a flux (VERSAFLUX) and a solder module (VERSAFLEX).

Both modules work with two mutually independent axis systems, allowing the pots and spray heads to be adjusted and moved individually in x-, y- and z-direction. Assemblies can thus be fluxed or soldered synchronously or asynchronously. In synchronous mode, the two axes with the flux heads or pots move in parallel at a predetermined fixed distance to one another – ideal for panel processing.

In asynchronous mode, each axis follows its own travel path. This means an assembly can be processed with two different nozzle diameters at the same time, for example. Through this, and through operation with different solder alloys and/or fluxes without changeover necessary, they also create a tremendous added value for production an offer maximum flexibility.
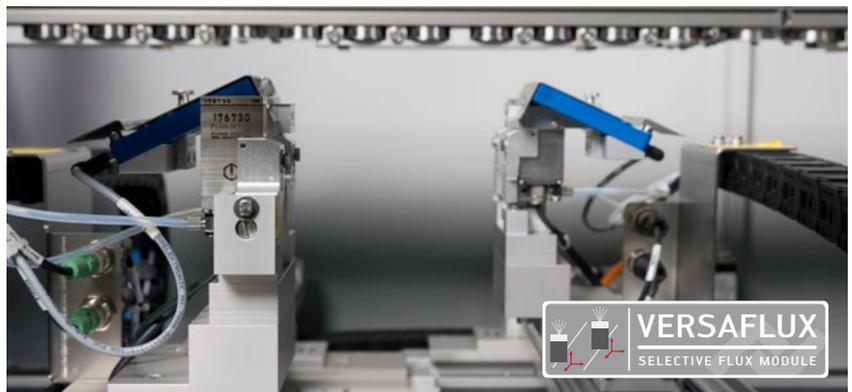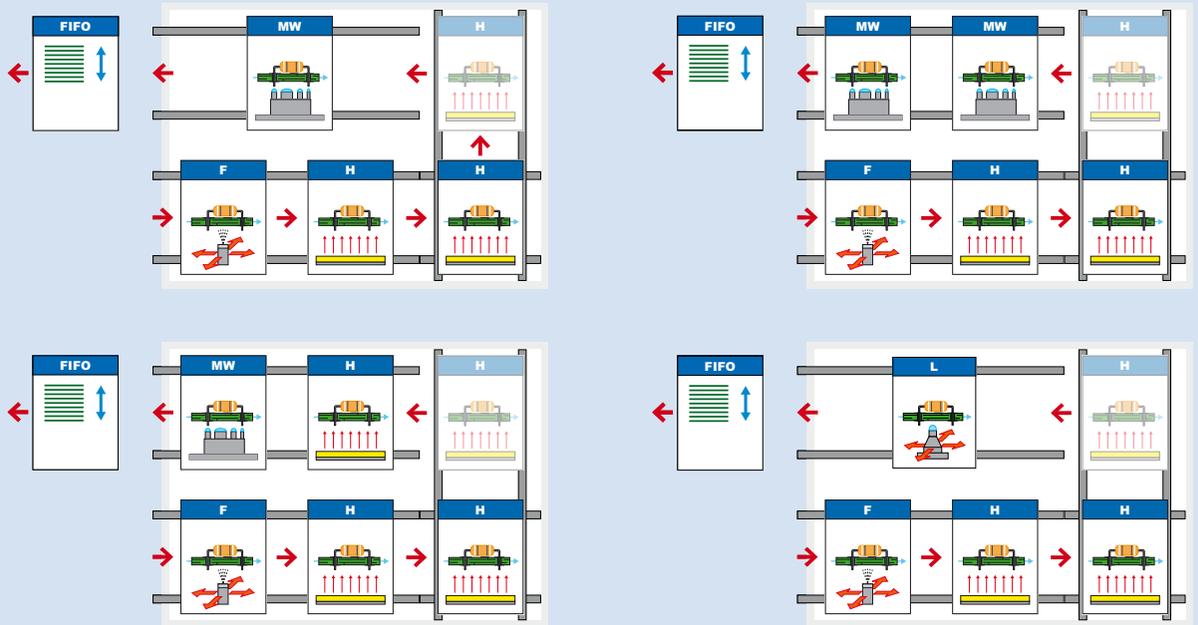

VERSAFLUX module – 2 fluxers mounted on 2 independent axis systems

CAD-Assistent 4 – fast, intuitive and comfortable

ECOCELL
Uncompromising in throughput and quality –
Flexible in production layout

Inline and batch system
### Highest flexibility in production layout

Highlights ECOCELL

- High-end selective soldering system for lean production processes (U-shape)
- Single wave soldering for highest flexibility or multiwave soldering for high-volume applications
- Product changes without downtime even in multiwave soldering processes
- Parallel processes due to the separation of fluxing, preheating and soldering
- Operation of up to four spray heads
- Up to two lower preheatings and optional upper convection heating
- Perfect for the connection to assembly stands and periphery

Ersa ECOCELL with FIFO-TOWER

The Ersa Modular System
Always the right combination for your needs and your budget
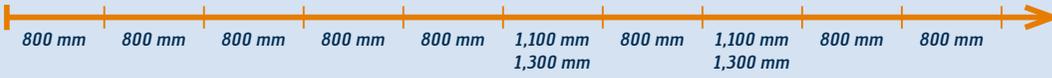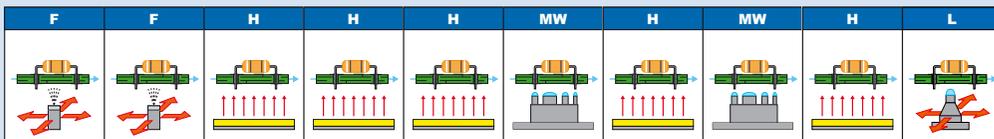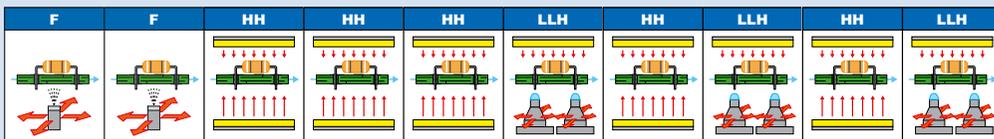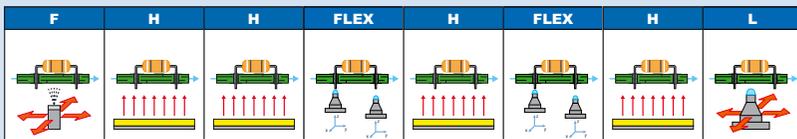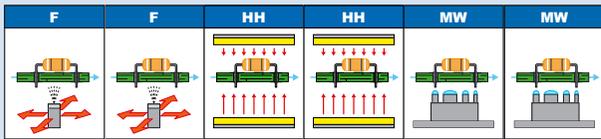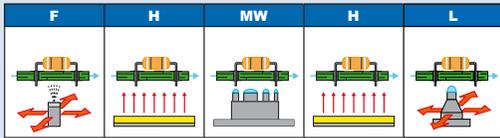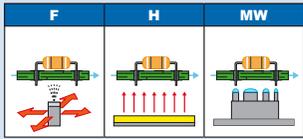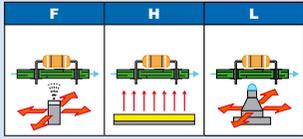
Configuration examples

The combinations of the arrangement of different modules show only some of the possibilities of the extremely flexible Ersa modular system concept.

Depending on a customer's request, with the addition of the optional dual pot feature and/or the dual track feature, throughput could be substantially enhanced without increasing floor space requirements.

Configuration example 1: F | H | L

Configuration example 2: F | H | MW

Configuration example 3: F | H | MW | H | L

Configuration example 4: F | F | HH | HH | MW | MW

Configuration example 5: F | H | H | FLEX | H | FLEX | H | L

Configuration example 6: F | F | HH | HH | HH | LLH | HH | LLH | HH | LLH

Configuration example 7: F | F | H | H | H | MW | H | MW | H | L

Module widths: 800 mm | 800 mm | 800 mm | 800 mm | 800 mm | 1,100 mm / 1,300 mm | 800 mm | 1,100 mm / 1,300 mm | 800 mm | 800 mm

Legend:

Symbol	Description
F	Flux module with spray fluxer
H	Preheat module with bottom-side preheating
L	Solder module with single pot
MW	Solder module with multiwave solder bath
HH	Preheat module with bottom- and top-side preheating
LH	Solder module with single wave unit and top-side preheating
LLH	Solder module with dual pot and top-side preheating
FLEX	Solder module with VERSAFLEX unit
DT	Dual track feature with two parallel single wave units
FLUX	Flux module with VERSAFLUX unit
HH	Preheat module with power convection

ersa VERSAFLOW 4/55

Bottom configuration: F | HH | HH | LL | HH | LL

Equipment configuration

	SMARTFLOW 2020	ECOSELECT 1	ECOSELECT 4	ECOCELL	VERSAFLOW 3/45	VERSAFLOW 3/66	VERSAFLOW 4/55	VERSAFLOW 4 XL
Modules								
Flux module	1	1	1	1	2	1	2	1
Max. number of spray heads per flux module	1	1 – 2	1 – 2	1 – 4	1 – 4	1 – 2	1 – 4	2 – 4
Number of spray heads per flux module	1	1 – 2	1 – 2	1 – 2	1 – 2	1 – 2	1 – 2	1 – 2
Preheating module	1	1	1	1 – 3	1 – 5	1 – 5	1 – 5	2
Solder module	1	1	1	1 – 2	1 – 3	1 – 3	1 – 3	1 – 2
Number of solder pots per module	1	1 – 2	1 – 2	1 – 2	1 – 2	1 – 2	1 – 2	2
VERSASCAN					■		■	
VERSAEYE					■		■	
Conveyor system								
Autom. conveyor width adjustment			■	■	■	■	■	■
Dual track conveyor system					■	■		
Center support			■		■	■		
Heavy-load conveyor system			■	■	■	■	■	■
Conveyor extension			■		■			
Fluxer								
1 fluxer 1 tank	■	■	■	■	■	■	■	
2 fluxers 1 tank		■	■	■	■	■	■	■
2 fluxers 2 tanks		■	■	■	■	■	■	■
3 fluxers 1 tank				■	■		■	
4 fluxers 1 tank				■	■		■	■
4 fluxers 2 tanks					■		■	■
VERSAFLUX: x-z-/y-z-variable								■
VERSAFLUX ultra: x-y-z-variable + optimization of process time								■
Additional area spray head				■	■	■	■	■
Spray test function	■	■	■	■	■	■	■	■
Fiducial recognition		■	■	■	■	■	■	■
PCB clamping in flux module			■	■	■	■	■	■
Flux pressure control		■	■	■	■	■	■	■
Preheating								
Segmented heating				■	■	■	■	■
Temerature monitoring, pyrometer			■		■	■	■	■
Top-side heating with IR emitters	■							
Upper convection heating		■	■	■	■	■	■	■
Upper heating in soldering module		■	■	■	■	■	■	■
Failure monitoring emitter heating	■	■	■	■	■	■	■	■
Top-side heating with power convection			■				■	
Solder module								
Second solder pot in the solder module		■	■	■	■	■	■	■
y-variable		■		■	■	■		
z-variable		■		■	■	■		
y/z fix		■		■	■			
y/z variable			■				■	
VERSAFLEX: x-z-/y-z-variable							■	■
VERSAFLEX ultra: x-y-z-variable + optimization of process time							■	■
MINI-VARIO-WAVE	■	■	■	■	■	■	■	■
MINI-DIP	■	■	■	■	■	■	■	■
Multiwave mechanic solder pump					■			
Multiwave inductive solder pump				■	■			
Multiwave inductive solder pump, XL					■		■	
Automatic solder wire feeder	■	■	■	■	■	■	■	■
Automatic nozzle cleaning		■	■	■	■	■	■	■
Roller conveyor in solder module		■	■	■	■	■	■	■
Fiducial recognition		■	■	■	■	■	■	
Recognition of PCB deflection		■	■	■	■	■	■	
Process control camera	■	■	■	■	■	■	■	■
VERSACAM solder wave height control „on the fly"			■				■	■
N$_2$ heating	■	■	■			■	■	■
PCB downholder system			■	■	■	■	■	■
Residual O$_2$ measurement dip module				■	■	■		
Interface								
SMEMA			■	■	■	■	■	■
Scanner	■	■	■	■	■	■	■	■
Traceability	■	■	■	■	■	■	■	■
Transponder reading device	■	■	■	■	■	■	■	■
Additional								
Touchscreen	■	■	■	■	■	■	■	■
CAD-Assistant	■	■	■	■	■	■	■	■
Peripherals/inlet/outlet		■	■	■	■	■	■	■
Upper sensors			■	■	■	■	■	■
Locking for viewing panels			■		■	■	■	■
Glass panes, ESD-fit		■	■	■	■	■		■
"On the fly" maintenance				■	■		■	■

Electronics Production Equipment
Worldwide Presence

kurtz ersa

■ Production plants / subsidiaries
■ Local agents
■ other presenc
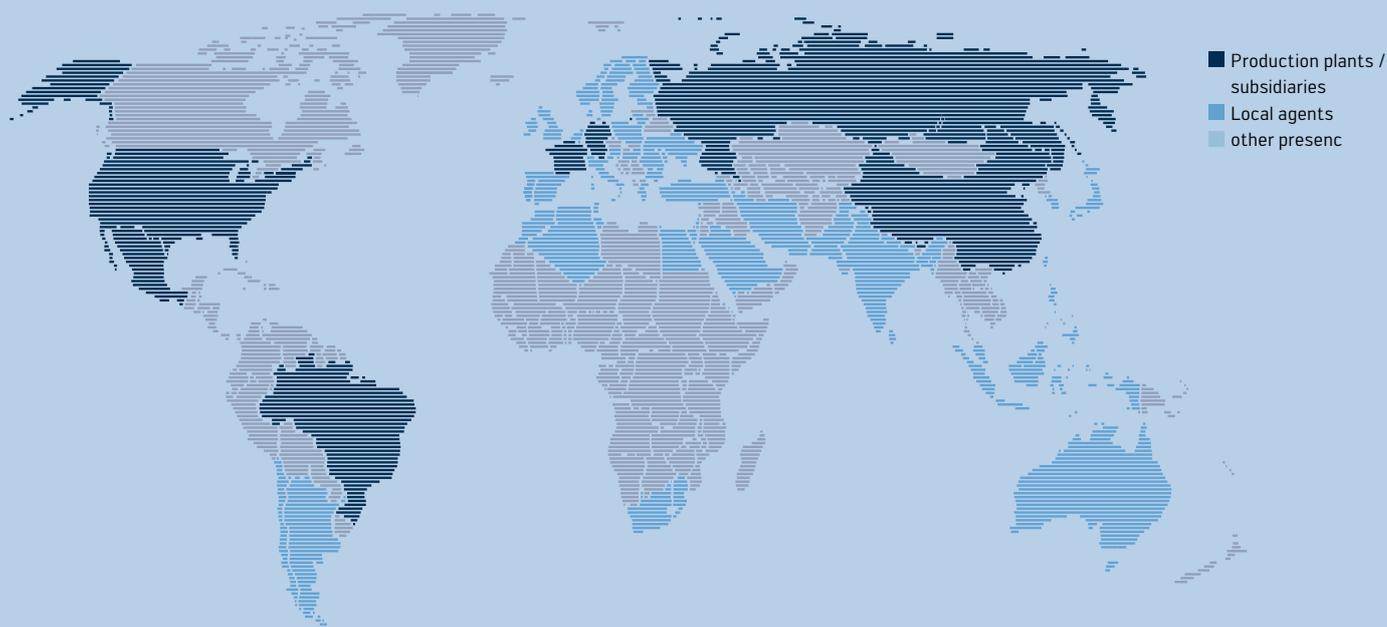
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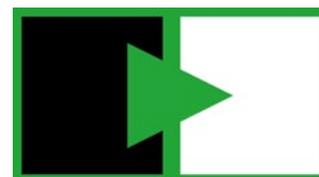info-kmx@kurtzersa.com
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