

# Kurtz Ersä Selective Soldering Systems

## Technical data



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## SMARTFLOW 2020

## ECOSELECT 1

## ECOSELECT 4

## ECOCELL

General				
Length	1,750 mm	1,700 mm	2,000 mm	2,600 mm
Width	1,450 mm	1,500 mm	1,800 mm	1,950 mm
Height	1,520 mm	1,612 mm	1,600 mm	1,600 mm
Weight	1,000 kg	900 kg	1,200 kg	1,250 kg
Type	Batch	Batch	Batch/inline	Batch/inline
Load	Manual	Manual	Manual/automatic	Manual/automatic

Conveyor System				
Type	No PCB conveyor	No PCB conveyor	Roller conveyor	Pin-and-chain conveyor with port without v
PCB width (single track)	15 – 508 mm	15 – 406 mm	50 – 508 mm	63.5 – 356 mm
PCB length	15 – 508 mm	15 – 508 mm	127 – 508 mm	127 – 356 mm
Clearance from PCB edge	3 mm	3 mm	3 mm	3 mm
PCB top-side clearance (basic machine)	max. 80 mm	max. 120 mm	max. 120 mm	max. 80 mm
PCB bottom-side clearance	max. 60 mm	max. 60 mm (30 mm at z-var)	max. 60 mm	max. 60 mm
Conveyor speed	-	-	0.2 – 15 m/min	0.2 – 10 m/min
PCB/mask weight (heavy load optional)	3 kg	8 kg (15 kg)	8 kg (15 kg)	8 kg (15 kg)

Flux module				
Type	Precision spray flux system	Precision spray flux system	Precision spray flux system	Precision spray flux system
Positioning system	Separate x/y axis with stepper motors	2 axis (x/y) servo-motor driven	2 axis, servo-motor driven	2 axis (x/y) servo-motor driven
Flux tank	1.8 l	1.8 l	1.8 l	1.8 l
Positioning speed	1 – 200 mm/s	1 – 200 mm/s	1 – 200 mm/s	1 – 400 mm/s
Flux speed	20 mm/s	20 mm/s	20 mm/s	20 mm/s
Accuracy	±0.25 mm	±0.25 mm	±0.15 mm	±0.25 mm
Spray width	2 – 8 mm (127 µm spray head)	2 – 8 mm (127 µm spray head)	2 – 8 mm (130 µm spray head)	2 – 8 mm (130 µm spray head)

Preheat module				
Type	IR	bottom-side IR (basic), top-side convection (option)	bottom-side IR (basic) top-side convection (option) top-side power convection (option)	bottom-side IR (basic) top-side convection (option)
Power (basic)	8 kW	10.4 kW	12 kW	10.4 kW
Temperature	up to 200 °C	up to 200 °C	up to 200 °C	up to 200 °C

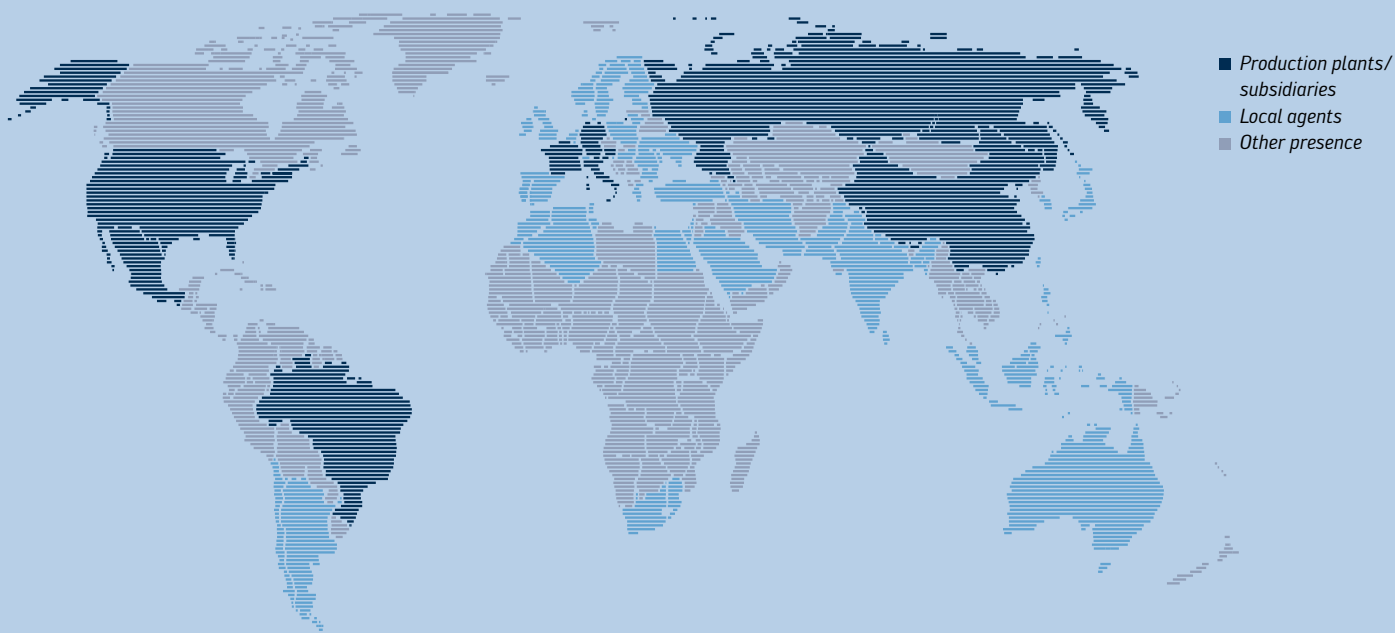
Single wave solder module				
Solder wave height	max. 5 mm	max. 5 mm	max. 5 mm	max. 5 mm
Clearance from PCB edge	min. 3 mm	min. 3 mm	min. 3 mm	min. 3 mm
Solder volume	approx. 13 kg Sn63Pb; approx. 12 kg lead-free alloy	approx. 13 kg Sn63Pb; approx. 12 kg lead-free alloy	approx. 13 kg Sn63Pb; approx. 12 kg lead-free alloy	approx. 13 kg Sn63Pb; approx. 12 kg lead-free alloy
Solder temperature	max. 330 °C	max. 330 °C	max. 330 °C	max. 330 °C
Warm-up time	75 min to 280 °C	75 min to 280 °C	75 min to 280 °C	75 min to 280 °C
Positioning speed	x/y: 2 – 200 mm/s; z: 2 – 100 mm/s	x/y: 2 – 200 mm/s; z: 2 – 100 mm/s	x/y: 2 – 200 mm/s; z: 2 – 100 mm/s	x/y: 2 – 200 mm/s; z: 2 – 100 mm/s
Soldering speed	10 mm/s	10 mm/s	10 mm/s	10 mm/s
Positioning accuracy	±0.25 mm	±0.25 mm	±0.15 mm	±0.25 mm

Solder module versions				
Mini wave	■	■	■	■
Number of miniwave solder pots	1	1 – 2	1 – 2	1 – 4
MULTIWAVE mech. pump				
MULTIWAVE induc. pump				
MULTIWAVE induc. XL pump				■

Solder module		multi-wave m.	multi-wave in
Max. soldering area		370 x 425 mm	356 x 356 mm
Max. PCB-/mask size		380 x 508 mm	406 x 508 mm
Solder volume		lead-free approx. 450 kg	lead-free approx. 450 kg
Maximum pass through height		+100/-40 mm	+80/-25 mm
Solder level monitoring		yes	yes
Solder wave height monitoring		no	yes
Solder pot for product-specific solder nozzle plates		yes	yes
Solder bath service frame for maintenance		yes	yes

	VERSAFLOW 3/45	VERSAFLOW 3/66	VERSAFLOW 4/55	VERSAFLOW 4/XL
	2,450 mm	2,950 mm	2,600 mm	5,500 mm
	1,750 mm	1,900 mm	1,800 mm	1,800 mm
	1,650 mm	1,620 mm	1,600 mm	1,600 mm
	1,100 kg	1,700 kg	1,500 kg	2,500 kg
	Inline	Inline	Inline	Inline
atic	Manual/automatic	Manual/automatic	Manual/automatic	Manual/automatic
on conveyor for PCB trans- workpiece carrier	Segmented pin-and-chain conveyor/ roller conveyor for PCB transport without workpiece carrier	Segmented pin-and-chain conveyor/ roller conveyor for PCB transport without workpiece carrier	Roller conveyor	Roller conveyor
m	63.5 – 406 mm	63.5 – 610 mm	50 – 508 mm	50 – 610 mm
n	127 – 508 mm	127 – 610 mm	127 – 508 mm	127 – 680 mm (1,200 mm option)
	3 mm	3 mm	3 mm	3 mm
	max. 120 mm	max. 120 mm	max. 120 mm	max. 120 mm
30 mm at z-var)	max. 30 mm	max. 30 mm	max. 60 mm	max. 60 mm
in	0.2 – 10m/min	0.2 – 10m/min	0.2 – 15 m/min	0.2 – 15 m/min
	8 kg (15 kg)	8 kg (15 kg)	8 kg (15 kg)	15 kg
ay flux system	Precision spray flux system	Precision spray flux system	Precision spray flux system	Precision spray flux system
ervo-motor driven	2 axis (x/y) servo-motor driven	2 axis (x/y) servo-motor driven	2 axis (x/y) servo-motor driven	2 axis (x/y) servo-motor driven
	1.8 l	1.8 l	1.8 l	1.8 l
s	1 – 400 mm/s	1 – 400 mm/s	1 – 400 mm/s	1 – 400 mm/s
	20 mm/s	20 mm/s	20 mm/s	20 mm/s
	±0.25 mm	±0.25 mm	±0.15 mm	±0.15 mm
0 µm spray head)	2 – 8 mm (130 µm spray head)	2 – 8 mm (130 µm spray head)	2 – 8 mm (130 µm spray head)	2 – 8 mm (130 µm spray head)
IR (basic), vection (option)	bottom-side IR (basic), top-side convection (option)	bottom-side IR (basic), top-side convection (option)	bottom-side IR (basic) top-side convection (option) top-side power convection (option)	bottom-side IR (basic), top-side convection (option)
	12 kW	12 kW	12 kW	2 x 20 kW
	up to 200 °C	up to 200 °C	up to 200 °C	up to 200 °C
	max. 5 mm min. 3 mm	max. 5 mm min. 3 mm	max. 5 mm min. 3 mm	max. 5 mm min. 3 mm
Sn63Pb; lead-free alloy	approx. 14 kg Sn63Pb; approx. 13 kg lead-free alloy	approx. 14 kg Sn63Pb; approx. 13 kg lead-free alloy	approx. 14 kg Sn63Pb; approx. 13 kg lead-free alloy	approx. 14 kg Sn63Pb; approx. 13 kg lead-free alloy
°C	max. 330 °C	max. 330 °C	max. 330 °C	max. 330 °C
°C	75 min to 280 °C	75 min to 280 °C	75 min to 280 °C	75 min to 280 °C
mm/s; n/s	x/y: 2 – 200 mm/s; z: 2 – 100 mm/s	x/y: 2 – 200 mm/s; z: 2 – 100 mm/s	x/y: 2 – 200 mm/s; z: 2 – 100 mm/s	x/y: 2 – 200 mm/s; z: 2 – 100 mm/s"
	10 mm/s	10 mm/s	10 mm/s	10 mm/s
	±0.25 mm	±0.25 mm	±0.15 mm	±0.15 mm
	■	■	■	■
	1 – 6	1 – 6	1 – 6	1 – 4
	■			
	■			
	■			
nduc.		multi-wave induc. XL		
n		360 x 460 mm		
n		406 x 508 mm		
rox. 230 kg		lead-free approx. 300 kg		
		+80/-25 mm		
		yes		
		yes		
		yes		
		yes		

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