



## ESS310 & ESS500 SELECTIVE SOLDER MACHINES

Your Economic Solution for:

- Prototyping
- Product Development
- Short Run, High-Mix
- Manufacturing Applications

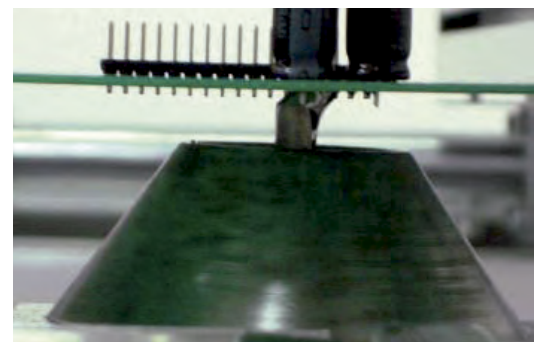
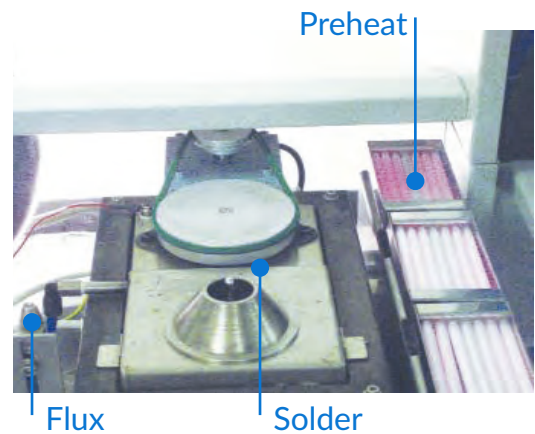
*Convert your hand soldering to automated selective soldering with an ESS*

*Achieve greater throughput, accuracy, and reliability...*

- Through-hole soldering flexibility - single point, drag, mini-wave, or dip soldering
- Exceptional accuracy and repeatability, with near "zero defect" solder joint yields
- Programming control and flexibility with on-board touch screen and off-line software
- Ease of operation, less handling, small footprint & durable construction

### System Benefits & Features

- Precise, accurate, reliable soldering of through-hole components in mixed boards with previously soldered SMT components
- Reduce board processing time as compared with hand soldering
- Reduce direct labor costs, decrease rework costs, increase consistency over hand soldering
- through-hole components
- One, all inclusive system - Flux, Preheat, and Solder
- Touch screen interface for easy on instrument setup, programming and parameter control
- Instrument programming flexibility and control over preheat, temperature, soldering dwell times, location, direction, and more...
- Off-line programming with photoscan and Gerber import
- software for convenient machine setup
- Variety of Nozzles available for flexibility - Wettable and Specialty Nozzles\*
- Lead-free compatible



SPECIFICATIONS	ESS-310	ESS-500
Max. PCB Size	310 x 310mm (12" x 12")	500 x 500mm (19.7" x 19.7")
Max. Clearance on Solder Side*	25mm (1")*	25mm (1")*
Max. Transport Speed	6m/min	6m/min
Transport Angle	0° fixed	0° fixed
Position accuracy above fluxer, preheater, and solder nozzle	± 0.1mm (± 0.004")	± 0.1mm (± 0.004")
<b>Precision Spray Fluxer Module</b>		
Flux Tank	2L Stainless Steel & Fittings, including Flux Level Monitoring	2L Stainless Steel & Fittings, including Flux Level Monitoring
Flux Speed Max.	6m/min	6m/min
Spray Width (Nozzle d= 0.3mm)	3mm - 6mm (0.12" - 0.24")	3mm - 6mm (0.12" - 0.24")
<b>Preheat Module</b>		
100% IR Preheat	900W	1200W
<b>Solder Module</b>		
Nozzles	Wettable, Special	Wettable, Special
Smallest Nozzle Diameter	4.0mm on Wettable Nozzles	4.0mm on Wettable Nozzles
Min. Neighbor Component Clearance*	1.5 - 3mm (0.06" - 0.12") depending on nozzle type*	1.5 - 3mm (0.06" - 0.12") depending on nozzle type*
Solder Capacity	Approx. 15kg (33 lbs.)	Approx. 15kg (33 lbs.)
Max. Temperature	400°C (725°F)	400°C (725°F)
Warm-up Time	Approx. 45 minutes	Approx. 45 minutes
<b>Nitrogen Technology</b>		
N <sub>2</sub> Supply (bottles, tank, or generator suitable, supplied by user)	N <sub>2</sub> -covering over solder bath & pump unit	N <sub>2</sub> -covering over solder bath & pump unit
N <sub>2</sub> Pressure	2 bar (30 psi)	2 bar (30 psi)
N <sub>2</sub> Consumption	0.8 - 1.7 CFM (23 - 49 litres/min) dependent on nozzle and nozzle shroud	0.8 - 1.7 CFM (23 - 49 litres/min) dependent on nozzle and nozzle shroud
<b>Air</b>		
Pressure	5.5 bar (80 psi)	5.5 bar (80 psi)
<b>Electrical Data</b>		
Power	220 VAC, 1Ø, 15A	220 VAC, 1Ø, 16A
Max. Power Consumption	2.5kW	3.0kW
Max. Fuse Rate	15A	16A
<b>Exhaust</b>		
Exhaust Power (supplied by customer)	150 m3/hour	150 m3/hour
Exhaust Duct	100mm (4") in dia.	100mm (4") in dia.
<b>Dimensions</b>		
Size Dimensions	1240mm L x 1050mm W x 1400 mm H (48.8" x 41.3" x 55.1")	1440mm L x 1250mm W x 1400 mm H (56.7" x 49.2" x 55.1")
Weight	354kg (780 lbs.)	403kg (887 lbs.)

\*Consult factory on PCB Layout