

The Electrovert® Electra™  
is an advanced,  
precision engineered  
wave soldering system  
designed for high-mass  
and high-volume  
manufacturers.



# Electrovert® Electra®

Wave Soldering System

Technology + Performance + Reliability

# Electrovert

## Electra

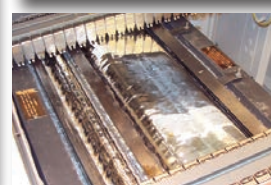
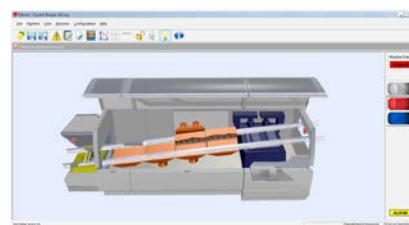
Electra's proven performance has provided the electronics assembly industry with world-class soldering results. The Electra system is designed with computerized, closed-loop controls that deliver the required accuracy and repeatability for demanding production environments.



### Proven Performance, World-Class Results

**The Electra is the most advanced wave soldering system available.**

- Originally launched in 1996, the Electra has outperformed and outlasted all competitive soldering systems
- Process control, process capability, and process flexibility are all competitive advantages to Electrovert wave soldering
- All-in-one touchscreen PC with Windows 7 based operating system. The PC is mounted on an articulating arm.
- Intuitive graphical user interface that makes set-up and operation easy
- Data logging of all critical machine parameters and trending are standard in the machine software
- The ethernet based I/O system is common across all Electrovert wave, reflow, and cleaning products (commonality of spare parts)
- The Electra is UL Listed for Factory Automation as standard
- All Electrovert systems are made in the USA



# Features and Options:



Fume Extraction

## Lead Free

- All Electrovert waves are lead free qualified and optimized as standard
- Integrated fume extraction into back hood



Rolled out Solder pot

## Solder Module

- All Electrovert wave systems have a lifetime warranty on the solder pot casting (applies to original owner)
- See the specifications section for the comprehensive list of features for every soldering process and application
- For N2 soldering applications, the available features include:
  - N2 boundary soldering (inerts at the waves)
  - Short N2 tunnel (inerts the entire solder module area and wave)
  - Full N2 tunnel (inerts all preheat sections, the entire solder module and at the waves)



Optional Dual Head ServoJet

## Fluxer Types

- ServoSpray spray fluxer (single head or dual head)
- ServoJet jetted spray fluxer (available in single head, dual head and OA types)
- ServoSonic ultrasonic type spray fluxer



IsoThermal Convection Preheat (ICP)

## Preheat

- All preheaters are wired with quick connect plugs and can be moved to any position or location
- The IsoThermal convection preheat utilizes heat on intake technology. The heating uniformity is very effective and efficient across the entire heating area
- See the specifications section for the comprehensive list of features



Front step with storage

## Accessibility

- A single rear door allows complete access to all modules from the rear of machine
- Integrated pull-out step across entire front of machine

## Conveyor

- Single continuous finger type conveyor through the entire length of machine
- No limitation on board length (min and max)
- Robust conveyor design capable of 100 lbs (43.4 kg) evenly distributed throughout the conveyor length



View from back with rear door open

**WORLD HEADQUARTERS**  
 16 Forge Park, Franklin  
 MA 02038, USA  
 Tel: +1 (508) 520-0083  
 Fax: +1 (508) 520-2288  
 info@speedlinetech.com

www.speedlinetech.com

**MANUFACTURING AND CUSTOMER SUPPORT FACILITIES**

**ELECTROVERT/ACCEL**  
 1629 Old South 5  
 Camdenton, MO 65020, USA  
 Tel: +1 (573) 346-3341  
 Fax: +1 (573) 346-5554

**CAMALOT/MPM**  
 16 Forge Park, Franklin  
 MA 02038, USA  
 Tel: +1 (508) 520-0083  
 Fax: +1 (508) 520-2288

ITW Speedline Equipment (Suzhou) Co., Ltd.  
 Blk F, Export Processing Zone  
 200 Su Hong Middle Road  
 Suzhou Industrial Park  
 Jiangsu, P.R. China 215021  
 Tel: +86 (512) 6258-8850  
 Fax: +86 (512) 6258-8860

**SALES AND CUSTOMER SUPPORT OFFICES MEXICO**  
 Carretera Base Aerea #5850  
 Km. 5, Edificio 21  
 Zapopan, Jalisco, México  
 Tel: +52 (33) 33-65-6511  
 Fax: +52 (33) 38-18-9019

**EUROPEAN OFFICE**  
 Im Gefierth 14,  
 D-63303 Dreieich, Germany  
 Tel: +49 (0) 6103-8320  
 Fax: +49 (0) 6103-832-299

**ASIA/PACIFIC**  
 500 Chai Chee Lane  
 Singapore 469024  
 Tel: +65 6286-6635  
 Fax: +65 6593-0175  
 asiemarketing@speedlinetech.com

© 2015 Speedline Technologies. All rights reserved.  
 Covered by patent rights issued and/or pending.

Speedline, Electrovert, Camalot, Accel, MPM, Electra, IsoThermal, UltraFill, Dwellmax Plus, ExactaWave, Rotary, FloLift and ElectroCoat are trademarks of Speedline Technologies or its subsidiaries and affiliated companies. Windows is a registered trademark of Microsoft Corporation. ServoJet, ServoSpray and FluxJet are trademarks of New Plateau Technologies. All other brands may be trademarks of their respective holders.

04/15



		Feature	Electra (EC-4)		
Process	Alloy Type	Lead Free (Qualified and Optimized)	S		
	Process Width	Maximum PCB Width	S 20" (508 mm)		
O 24" (610 mm)					
Physical Characteristics	Machine Length	Length of machine with rail guides (Load/Unload)	S 187.9" (4.77 m)		
			O 213.1" (5.4 m)		
	Conveyor	Maximum Load Weight	100 lb (45 kg)		
		Motorized Width	S		
Preheat	Preheat Type	IR Platen	S		
		IsoThermal Forced Convection	S		
		Fast Response IR	O		
	Preheat Length	Bottom	S (Qty. 2) at 4' (1.2 m)		
			O (Qty. 4) at 8' (2.4 m)		
			O (Qty. 3) at 6' (1.8 m)		
Solder	Soldering Environment	Environment	S Air		
			O N2		
	Main Wave	UltraFill Air	S		
	Dual Wave (2nd)	Chip Wave	S		
		DwellMax Plus	O		
	Nozzle Material	Melonite Coated, Stainless Steel		S	
		Titanium		O	
		N2 Soldering	UltraFill N2 (Boundary Type)		O
			Short Tunnel (Inerts entire solder pot area)		O
	Wave	Full Tunnel (Inerts entire solder pot and ALL preheat areas)		O	
		Wave Height	S 12.7 mm		
			O Up to 25 mm		
ExactaWave (Automatic wave height control)		O			
Casting		Lifetime Warranty on Solder Pot Casting		S	
Fluxer	HMP	High Melting Point Capability (Special Warranty Applies)		RFQ	
		Fluxer Types and Options	ServoSpray		S
			ServoJet		O
			OA ServoJet		O
			ServoSonic		O
			Flux Spray Start/Delay		S (ServoSpray/ServoSonic)
			Precision Selective Fluxing (includes flux spray start/delay)		S (ServoJet)
Dual Flux Capability			ServoSpray/ServoJet		
Operating System	Software and Controls	Windows 7 PC Based Software		S	
		Ethernet Based I/O		S	
	UL	UL Listed for Factory Automation Equipment		S	
Country of Origin	Made in USA	Factory based R&D and Software Engineering, Manufacturing/Assembly and Applications Support	Camdenton, MO USA		

O = Optional; S = Standard; RFQ = Request Factory Quote

**Process Knowledge and Support**

At Speedline Technologies, we deliver world-class products, performance, and unparalleled service and support programs. With the Electra comes the proficiency of our Electrovert process experts that allows us to solve real-world applications issues. *Knowledge in Process* for superior performance.

**ABOUT SPEEDLINE TECHNOLOGIES**

Speedline Technologies, a division of Illinois Tools Works, Inc. (NYSE: ITW), is the global leader in process knowledge, services and manufacture of capital equipment used in the printed circuit board assembly and semiconductor industries. Based in Franklin, Massachusetts, USA, with Electrovert & Accel manufacturing based in Camdenton, Missouri, the company markets four best-in-class brands: ACCEL microelectronics cleaning equipment; CAMALOT dispensing systems; ELECTROVERT wave soldering, reflow soldering and curing, and cleaning equipment; and MPM stencil and screen printing systems. For more information about Speedline Technologies visit [www.speedlinetech.com](http://www.speedlinetech.com).

Speedline Technologies maintains an ongoing program of product improvement that may affect design and/or price. We reserve the right to make these changes without prior notice or liability.

