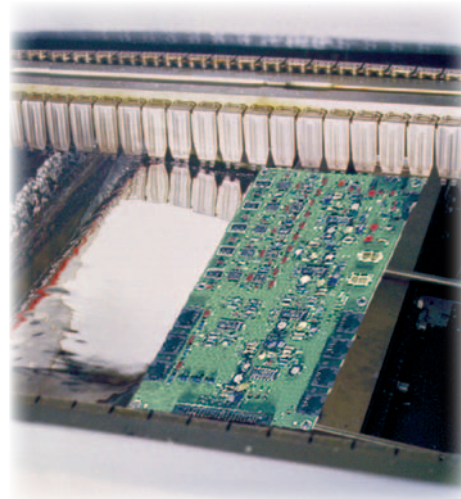


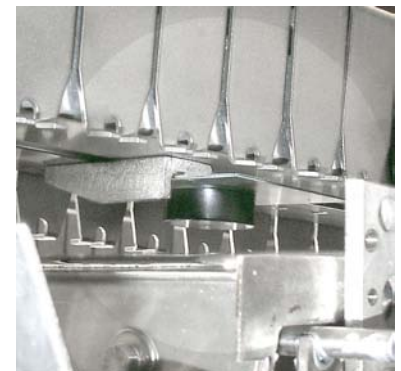
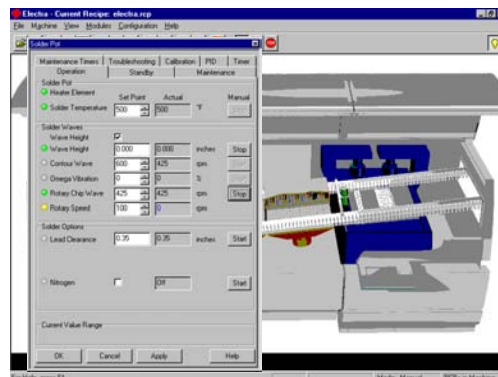
The ExactaWave is a patented, high-reliability sensor with closed-loop feedback designed to control solder wave height relative to the board. Its ability to withstand temperatures up to 300°C makes it indispensable for precision soldering applications.



High Reliability, High Temperature Wave Height Sensor

The patented ExactaWave wave height control system is designed to measure solder wave height relative to the conveyed PCB. Newly enhanced, the ExactaWave is capable of withstanding temperatures up to 300°C (572°F). This innovative system automatically maintains consistent solder wave height for more stringent process control and increased yields without operator intervention. Because the PCB is conveyed at a fixed distance below the rails, a precise area of contact between the board and the solder wave is maintained.

The ExactaWave system compensates for changes in solder level, dross accumulation and setup changes made during maintenance. Thus, a set-point entered in a recipe always produces the same result. In addition, the system compensates for incorrect adjustment of lead clearance and simplifies process setup by providing an initial wave height setting. The ExactaWave's seamless integration into the soldering machine's software also allows it to operate in the standby mode.



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Closed-Loop Wave Height Control

A sensor mounted in the conveyor rail measures the height of the solder wave relative to the PCB. These real-time measurements are used to adjust the solder pump speed to precisely maintain wave height.

Process Accuracy

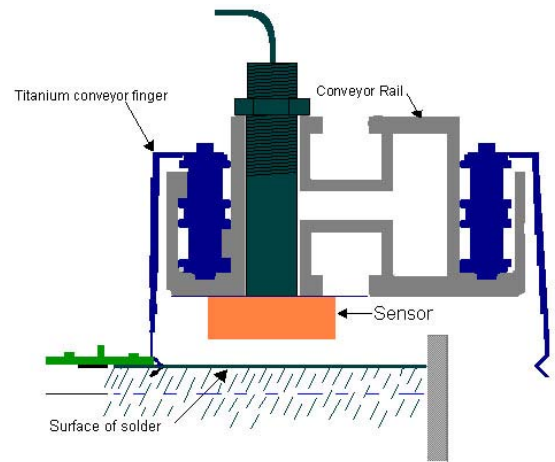
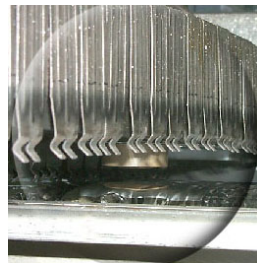
The proximity of the ExactaWave sensor to the PCB traveling through the solder wave enables instantaneous and accurate measurements of wave height.

Wave Height Control and Board Tracking

Integration of the ExactaWave into system software yields two significant benefits. First, by using the board tracking function, the solder wave runs only when needed. When no boards are in the system, the wave stays in the standby mode. As a board enters the system, the pump speed required to achieve the desired wave height is calculated by the software, and the solder wave is initiated in time to produce a stable wave of the proper height. Second, the board tracking integration makes it possible for the ExactaWave measurements to compensate for distortions caused by the board passing through the solder wave.

Solder Coil

The heart of the ExactaWave system is the sensor coil, which is custom designed and manufactured to Speedline Electrovert's precision specifications.



EXACTAWAVE SPECIFICATIONS

Control Range	6mm (0.240") below V-groove to 5.5mm (0.220") above V-groove (Note: center of V-groove of fingers is zero reference)
Control Tolerance	±0.10mm (0.005")
Maximum operating temperature	300°C (572°F)
Minimum board spacing of 203mm (8.0") required for system to take reading and control wave height.	

ABOUT SPEEDLINE TECHNOLOGIES

Speedline Technologies is the global leader in process knowledge and expertise for the PCB assembly and semiconductor industries. Based in Franklin, Massachusetts, U.S.A., the company markets five best-in-class brands — Accel microelectronics cleaning equipment; Camalot dispensing systems; Electrovert wave soldering, reflow soldering, and cleaning equipment; MPM stencil and screen printing systems; and Protect global services, support, and training solutions. For more information, visit us at www.speedlinetech.com.

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