ITW EAE Electronic Assembly Equipment

News Release

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Electrovert 'DwellFlex 4.0' Wave Solder Nozzle Wins New Product Innovation Award at IPC APEX 2020

Lakeville, Minnesota, February 4, 2020 – ITW EAE, the Electronic Assembly Equipment division of ITW is the proud recipient of an IPC APEX 2020 New Product Innovation (NPI) Award. The award recognizes the Electrovert DwellFlex 4.0 wave solder nozzle. The NPI Award was created to honor outstanding products and services for the electronics industry. ITW EAE will be showcasing the DwellFlex 4.0 in APEX booth 813 through Thursday, February 6, 2020 in San Diego.

The DwellFlex 4.0 variable contact wave solder nozzle is the first wave solder nozzle that allows the wave width to be adjusted on-the-fly as variable board types are run through the wave. The patent-pending design ensures solder contact time is optimized for a high-mix of board types without changing conveyor speeds. This eliminates lost production time and improves solder results.

Dwell time is a critical calculation to achieve proper topside hole fill without introducing copper dissolution. DwellFlex 4.0 allows precise control of the wave contact length specific to the PCB complexity. The intelligent software compares the recipes between the products. The wave contact length, pump speed rpm, forced convection blower speeds, and fluxer settings are all adjusted on-the-fly as needed.

As a single wave solution, DwellFlex 4.0 eliminates the temperature drop that occurs between a typical dual wave configuration. The turbulent wave promotes transfer of thermal energy into the PCB which promotes good wetting in tight spaces and delivers strong upward force for topside hole fill. The laminar section of the wave provides good continuation of thermal transfer into the PCB. It also provides the wave characteristics needed for the PCB to peel away while exiting the wave, which is critical to reducing bridge defects. A single wave solution improves the nozzle efficiency, promotes better topside hole fill, and promotes the reduction of flux degradation in the soldering process. All these benefits equate to reduced defects and improved line efficiency.

ITW EAE, a division of Illinois Tool Works, Inc., is the global leader in process knowledge, services and manufacture of capital equipment used in the printed circuit board assembly and semiconductor industries. The group brings together the world's leading brands of electronics assembly equipment: MPM Printers, Camalot Dispensers, Electrovert Cleaners and Soldering Solutions, Vitronics Soltec Soldering Solutions and Despatch Thermal Processing Technology. For more information visit www.itweae.com.