

News Release

For Immediate Release

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ITW EAE Granted Patent No. 10,780,516 for Electrovert® DwellFlex™ 4.0 Variable Contact Wave Solder Nozzle

Camdenton, Missouri, June 14, 2022 – The U.S. Patent and Trademark Office has issued Patent No. 10,780,516 protecting Electrovert's DwellFlex 4.0 Variable Contact Wave Solder Nozzle. Invented by ITW EAE engineers, John Dautenhahn and Greg Hueste, the DwellFlex 4.0 is the first nozzle that allows the wave width to be adjusted on-the-fly variable board types are run through the wave. This ensures solder contact time is optimized for a high mix of board types without losing production time to change conveyor speeds.

Optimizing the length of time the PCB is in contact with the wave is critical to achieve proper topside hole fill without introducing copper dissolution. DwellFlex 4.0's software compares the recipes between the products and adjusts the wave contact length, pump speed, blower speeds, and fluxer settings on-the-fly as needed. It takes less than ten seconds to make the adjustment between high mass and low mass boards and ensure superior solder results.

DwellFlex 4.0 is a single wave solution that includes both the turbulent and laminar dynamics of the wave within one continuous solder wave, eliminating the temperature drop that occurs between typical dual-wave configurations. This single wave solution improves nozzle efficiency, promotes better topside hole fill, and reduces flux degradation.

Electrovert is a brand of ITW EAE, a division of Illinois Tool Works, Inc. They are the largest manufacturer of wave soldering and cleaning equipment for the electronics industry.

ITW EAE brings together world-leading brands of electronics assembly equipment including MPM, Camalot, Electrovert, Vitronics Soltec, and Despatch. For more information visit www.itweae.com.