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Ersa POWERFLOW ULTRA - the future may come!

Full-tunnel wave soldering system for maximum flexibility and throughput

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The POWERFLOW ULTRA is the latest innovation in Ersa GmbH's wave soldering product portfolio. The full-tunnel wave soldering machine meets current and future flexibility and throughput requirements in every respect. The machine is available with frame and finger conveyor, the working widths range from 330 to 610 mm in the XXL version. The POWERFLOW ULTRA XXL can also be used to solder 5G server boards, for example.

The heart of the POWERFLOW ULTRA is the new soldering module with unique process control and flexibility. Its innovative drive achieves speeds of up to 5 mm/s. The distance between the soldering nozzle and the PCB is defined via the ERSASOFT 5 operating software. This allows assemblies to be soldered at a precise distance. The nozzle distance and solder wave height can also be adjusted as required within an assembly. For this purpose, the PCB is divided program-controlled into sectors, which are stored with parameters. This means that each sector can be soldered with individual configurations, ensuring highly flexible processes. In addition, the contact time of the solder wave with the assembly can be stored in the soldering program. This offers maximum process control when moving the assembly in and out of the solder wave. In combination with the nozzle spacing, an optimum solder flow is achieved, resulting in perfect solder joints — especially for assemblies that are equipped, in addition to power electronics, with a high proportion of digital components.

A particular highlight is the permanent measurement of the real solder volume — independent of the pump speed and tin level — using a patented sensor and the automatic solder feeding. This significantly shortens measuring times and increases system availability. Together with the nozzle combinations that can be flexibly adapted to the products, customers are equipped for any challenge and can optimally adapt production processes to individual requirements.

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The modular design of the POWERFLOW ULTRA enables optimum adaptation of the system configuration to customer-specific requirements. For example, three different preheating lengths are available – 1.8 m, 2.4 m and 3 m. This ensures that the cycle time is not negatively affected by the preheating throughput. As a standard machine, the POWERFLOW ULTRA offers a choice between frame conveyor (working widths of 330 or 400 mm) and finger conveyor with a maximum working width of 406 mm. The POWERFLOW ULTRA XL offers larger working widths, with a frame conveyor width of 500 mm and a finger conveyor width of 520 mm. The POWERFLOW ULTRA XXL version can even handle working widths of 610 mm and a maximum PCB length of 850 mm – this version is only available with finger conveyor and a preheating length of 2.4 m.

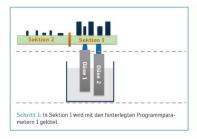
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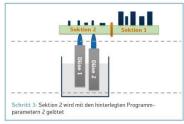


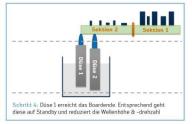
<u>Caption:</u> The POWERFLOW ULTRA full-tunnel wave soldering system meets current and future flexibility and throughput requirements in every respect. At its heart is the new soldering module, which enables unique process control.

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<u>Caption:</u> With the new soldering module, the distance between the soldering nozzle and the PCB is defined via the ERSASOFT 5 operating software. This allows assemblies to be soldered at a precise distance. The nozzle distance and solder wave height can also be adjusted as required within an assembly.