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## SEHO SelectLine: Future-Proof through Continuous Development

With the SelectLine platform, SEHO developed a selective soldering system that provides the highest precision and solder joint quality, and features maximum flexibility even for unusual assembly dimensions.



The SelectLine machine concept is consistently modular, thus ensuring clear cost benefits. Several modules with different dimensions can be configured individually with fluxer, preheatings, soldering units, cooling modules, selective brush unit and AOI system. Thus, the SelectLine adapts to virtually any manufacturing requirement and if the production conditions should change, it may be expanded, the configuration can be modified, or SelectLine modules can be shifted to different manufacturing lines at any time. Up to six soldering units and more than 15 parallel workstations can be integrated in one system.

„It is our aim to continuously create added value for our customers by constantly improving our machines and existing processes, optimizing them for future applications and implementing innovative ideas,” says Alexander Blum, Product Manager Selective Soldering Equipment at SEHO. Many of these innovative ideas are integrated in the SelectLine and have made the selective soldering machine one of the most successful within the SEHO portfolio.

Electro-magnetic soldering units with innovative nozzles for mini-wave and multi-wave soldering processes are part of the standard machine equipment. Maximum throughput requirements are met with the Synchro concept, patented by SEHO. This intelligent software feature coordinates the soldering process with several soldering units for one assembly type in such a way that the cycle time is nearly halved without the need for significant investment. If different products are manufactured in mixed operation, the SmartSplit function ensures automatic split of the available soldering units, thus providing maximum throughput rates.

Automatic ultrasonic cleaning of solder nozzles is another highlight in the soldering area. What previously had to be done manually and with aggressive chemicals, is automatically and environmentally friendly performed through the machine. The solder nozzle is gently cleaned and completely re-wetted.

The SelectLine is ideally suited for using the new LongLife mini-wave solder nozzle. This new nozzle features a lifetime that is at least three times longer than that of conventional nozzles. Therefore, the annual savings potential is remarkable. Maintenance requirements for the new nozzle are significantly reduced. The LongLife solder nozzle does not need to be cleaned or re-activated throughout a complete production shift. In addition, there is no activation needed prior to production start.

Moreover, the SelectLine is perfectly prepared for the constantly growing requirements in the manufacturing of next-generation products, such as 5G antennas or LED technology. By means of an automatic software switch the system is able to process virtually endlessly long PCBs. The software automatically coordinates and optimizes the assembly transport and the positioning of the process stations. As the individual processing stations thereby do not have to match the actual length of the assemblies, the SelectLine stands out for its very compact design. This minimizes production floor costs, resulting in an excellent cost-efficiency.

Like all selective soldering systems from SEHO, the SelectLine provides a complete hardware and software package for 100% automated process control. The flux quantity monitoring system and gradient-controlled temperature profiles in the preheat area, automatic monitoring of the nitrogen quantity and nitrogen quality, the touchless wave height control or automatic setup control and tool measurement are only some of the monitoring functions that ensure a reliable process.

The SelectLine, however, has even more to offer: The machine can be equipped with a selective brush system for automatic removal of solder balls and an AOI system for automatic inspection of solder joints immediately after the soldering or brushing process. The advantages of these integrated additional processes are obvious: Safe and reliable processes on the one hand, and reduced overall production costs on the other hand.