Seica
Productronics

FIREFLY

LASER SOLDERING SYSTEMS

NEXT SERIES

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FIREFLY NEXT› SERIES

LASER SELECTIVE SOLDERING SYSTEMS

After many years of development and several installations worldwide, the **FIREFLY** line has completely redesugbed its architecture, taking a major step forward and setting the way for the **NEXT›** generation generation.

FLEXIBLE AND CONSTANTLY MONITORED PROCESS

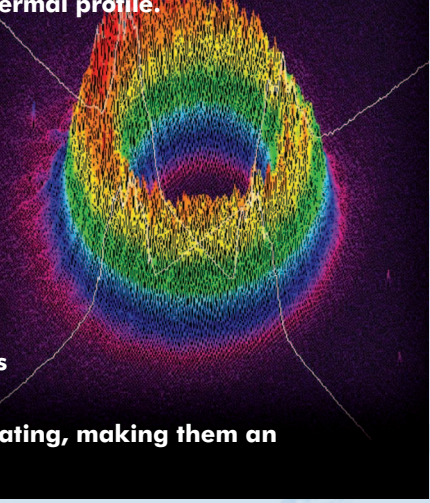
The **FIREFLY NEXT› SERIES** line offers an excellent alternative for the selective soldering process, taking full advantage of laser technology to provide a clean and efficient solution. The modular hardware architecture of the **FIREFLY NEXT› SERIES** systems, combined with its sophisticated software, enable deployment in different **manufacturing environments**: multi-product, which require flexibility and fast setup times, or high-volume production, where process control and repeatability are key.

FIREFLY NEXT› SERIES introduces a laser beam which is orthogonal to the solder joint, and the donut spot, to improve the focusing of laser energy where required, and offering suitability for very small-sized pads providing clear advantages in terms of applicability and process repeatability.

A minimized footprint, efficiency and cleanliness (low maintenance), accompany a **flexible, monitorable and certifiable soldering process**, making the **FIREFLY NEXT› SERIES** Selective Soldering System the ideal soldering solution to resolve manufacturing issues, both in EMS (Electronic Manufacturing Services) and OEM industries, such as Automotive.

THE ADVANTAGES OF LASER TECHNOLOGY

- **Allows point by point adjustment of the power needed for soldering; the lack of thermal inertia of the laser combined with real-time temperature readings, enable the dynamic correction of the thermal profile.**
- **The orthogonal position improves the energy transfer**
- **The donut beam allows to radiate energy only on the pad and not on the hole, preventing damages to components and harmonizing the temperature of pin and pad**
- **The ability to apply all of the energy in a single point makes this technology applicable in all those situations where it is not admissible to heat the whole board, or where there is limited access.**
- **Changing from "Lead" to "Lead-Free" soldering is simply a matter of changing a spool of solder wire.**
- **The laser soldering process is clean, which eliminates the need to clean, and subsequently handle, the processed boards, and the power consumption of the Firefly is extremely low compared to other types of soldering technologies.**
- **The Firefly systems are ready to solder as soon as they are switched on, without preheating, making them an extremely flexible tool in a manufacturing environment.**



DIVERSE SOLUTIONS

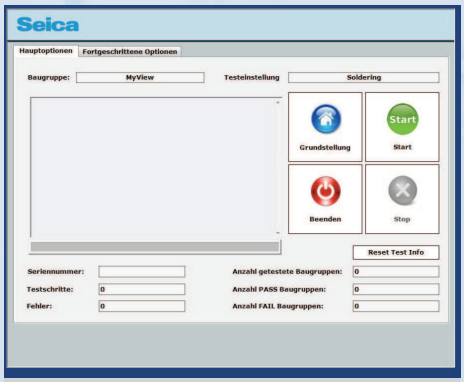
The soldering head, which is the core of the system, is common to both the FIREFLY B60 and T60 NEXT›SERIES machine configurations. The two solutions are characterized mainly by the side of the board where processing is performed: the **BOTTOM** solution, where the soldering process is carried out from below the PCB, and a **TOP** solution, where the soldering process is carried out from above the printed circuit board. This configuration is particularly suitable for automated processes where the system is integrated into an existing conveyor line.

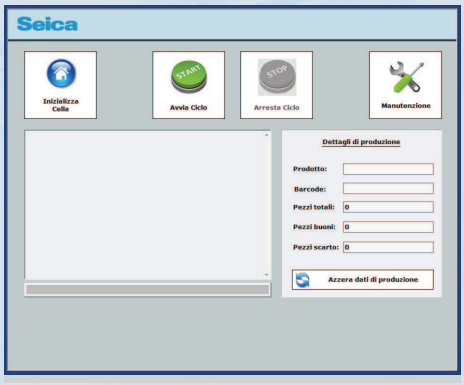
The FIREFLY NEXT›SERIES soldering systems can be successfully integrated into high-volume production lines, as well as in those cases where the products to be soldered are continuously changing and ***Lead*** and ***Lead-free*** processes are often mixed.

VIVA: A GROWING SOFTWARE

VIP VIVA INTEGRATED PLATFORM

The FIREFLY NEXT›SERIES is managed through the VIVA software, common to all Seica systems. By means of its intuitive graphical interface, the software guides the programmer. When CAD data are available, the software can import the coordinates automatically, otherwise, the coordinates of the points to be soldered can be acquired through the camera. VIVA will automatically generate a soldering program, optimized according to the geometrical and dimensional characteristics of the points to be soldered, allowing to modify the soldering parameters.





MyView

An innovative **graphical operator** interface is available, specifically designed for manufacturing environments, which allows the customization of the layout of the control buttons and the information displayed on screen, translatable into any language.

Industry 4.0

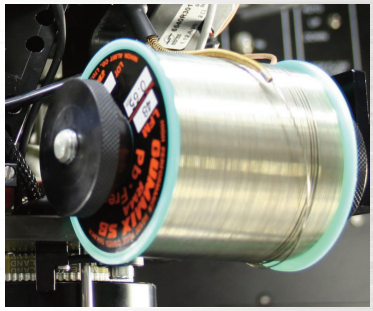
The FIREFLY NEXT›SERIES has all of the capabilities needed for implementation in any **Factory 4.0** scenario, providing the possibility to plug in any proprietary or third party information system to achieve the desired goals.

Process traceability

Process traceability is ensured by the possibility to collect the ***video*** recording and ***thermal profiles*** acquired for every solder joint, and to associate them to the serial number of the printed circuit board. The collection of this data is also valuable as a debug tool of the soldering process.

Environment-friendly

With a maximum power absorption of 2.5 KW/h, the **FIREFLYFLY NEXT>Series** is easy to manage and maintain. In addition, the utilization of flux-based soldering alloys eliminates the need to use ***external fluxing stations***, as well as the ***necessity for nitrogen***. The consumption of solder alloy is limited to the amount applied to each joint, generating zero waste and eliminating disposal costs.



Global Support Network

Thanks to the global extension of Seica and its subsidiaries, Seica can ensure local service support wherever the customer needs it, in addition to 24-hour telephone assistance.

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