

Dusslingen, 7 May 2024

Contactperson: Florian Schildein  
Fon: +49 30 585 846 011  
Mail: fs@butter-and-salt.de



For immediate publication

## **Zollner Elektronik AG relies on energy-efficient and cycle time-optimized alternative to thermode soldering**

**The Laser Knife developed by Eutect enables optimum results when soldering flex foils, cable strands, ribbon cables and battery pins. The Laser Knife soldering process is characterized by high quality results and high reproducibility, combined with high energy efficiency and process speed. Particularly in high-volume production, as at Zollner Elektronik AG, for example, the Laser Knife enables cycle time-optimized soldering for various end products.**

"The Laser Knife offers our customers another controlled and adaptive soldering process, including process data acquisition," explains Matthias Fehrenbach, Managing Director of Eutect GmbH. The Laser Knife consists of a path and force-controlled hold-down device which brings the two surfaces to be soldered together in a defined manner and a laser which enables the temperature to be applied contact-free. The temperature-controlled laser is equipped with an integrated pyrometer and a camera and guarantees the user maximum process stability, quality and traceability. "The Laser Knife is useful for applications where a fast, cycle time-optimized, reproducible, energy-efficient soldering process is required for SMD contacts, flex foils, cable strands and ribbon cables, for example, or wherever complex or very small geometries need to be soldered," says Fehrenbach. Depending on the product and application, extremely short cycle times of up to  $\geq 0.5$  seconds per solder joint are possible.

"The laser has enabled us to massively speed up the soldering process without losing reproducibility and quality of results.

Depending on the component, the Laser Knife is 10 times faster than the former thermode soldering. We have also achieved a 70% reduction in energy consumption," says Fehrenbach. Furthermore, no product-specific thermode molds or Kapton bands are required. There is also no need to convert the process head or production system due to a change in production. The Laser Knife can be converted for new or additional products with little effort, allowing the customer to get the maximum benefit from the system. "In addition, the Thermode has limits in terms of geometry size due to the technical possibilities. This limitation no longer plays a role when using the Laser Knife," emphasizes Fehrenbach. The contactless soldering of the surfaces and the elimination of thermode abrasion also reduces the maintenance and service costs for the entire module.

Another important aspect is the reduction in consumables by using the Laser Knife.

The soldering process requires a minimum amount of solder and flux, as solder and flux deposits are provided by the previous reflow soldering process. Additional consumables such as flux, solder, nitrogen, etc. are not required. "This also means that there are no downtimes during which consumables have to be refilled or provided again for other soldering processes," highlights Fehrenbach. In addition, all process data is recorded and stored during the soldering process via the Eutect control technology. This enables 100% traceability. "This allows us to maximize quality based on real process data," Fehrenbach continues.

Zollner Elektronik AG was convinced of this process concept right from the start and is using the Laser Knife successfully.

"We at Zollner Elektronik AG are very open to the use of newly developed processes. We therefore took a very close look at this new, innovative soldering process when Eutech GmbH presented the Laser Knife concept to us for the first time. For us, the focus was on the energy- and resource-efficient, high-quality soldering process, which, in addition to a high cycle time optimization, also enables the reduction of overall process costs," explains Tobias Pongratz, responsible for Production Technology (MBPTF) Business Division Mechanics at Zollner Elektronik AG. "Every innovation also needs an innovation promoter to ensure that it reaches the market. With Zollner Elektronik AG, we have found an ideal partner to support us in the consistent development of the Laser Knife process," continues Fehrenbach.

\*\*\*\*\*

### **About EUTECH**

For over 25 years, soldering and joining systems have been developed, manufactured, installed, and programmed at EUTECH as well as at customers operating worldwide. The Swabian team of experts offers an extensive, constantly evolving module construction kit for process solutions in the field of soldering.

Process-related and commercially optimal modules for the task description will be selected from a wide variety of soldering-technology process modules and combined into proven stand-alone, revolving, or inline production designs for complete solutions.

The EUTECH module construction kit shows that a slim, individual solution comprising proven building blocks for a customer product's task description can often be achieved via individual modules or free combinations.

A technologically comprehensive, innovative EUTECH technical center is available for optimal solution through evaluation or the manufacture of A-B-C prototypes ready for serial production.

More information: [www.eutech.de/en/](http://www.eutech.de/en/)

Bilder:



Bildunterschriften:

Eutect's Laser Knife application

Deeplinks:

<https://eutect.de/en/modular-soldering-automation/connecting-technology/#laser-knife>

Press office:

BUTTER AND SALT tech marketing GmbH

Contact: Florian Schildein

Pommernallee 5 · 14052 Berlin

Fon: +49 30 585 846 011

Mail: fs@butter-and-salt.de