



In electronics manufacturing, Helmut Hund GmbH from Wetzlar places its faith in Ersä

HUND plant in Wetzlar, at the centre of Hesse.

Fully-automatic pollen monitor provides relief for allergy sufferers

With its main focus on electronics, optics, fibre optic fibre technology, plastics technology and precision engineering, Helmut Hund GmbH is at the centre of scientific and technical innovations activity. With its know-how, an interdisciplinary team of scientists and engineers guarantees the reliable implementation of complex and innovative solutions.

The maxim of the company is the consistent application of this potential, with the claim "We bring technologies together". In doing so, the Wetzlar-based EMS service provider HUND relies, among others suppliers, on the support of system supplier Ersä – most recently in the form of a reflow soldering system of the type HOTFLOW 4/14.

Author
Stefan Wurster
Area Sales Manager
Ersä GmbH

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Ersa HOTFLOW 4/14 in the HUND electronics manufacturing.

It is the same story year after year. As soon as the weather gets warmer, and shrubs, trees and flowers start to bloom, millions of long-plagued allergy sufferers – in Germany alone this figure is around 30 % of all citizens – find that their eyes begin to itch and their noses to run. In order to be able to simply enjoy the spring days, allergy sufferers are particularly dependent on up-to-date information on pollen counts. Whether to allow them to adapt their daily medication accordingly or plan outdoor activities. This is where the latest development from Helmut Hund GmbH, based in Wetzlar, a central location in the middle of the state of Hesse, provides relief: the BAA 500 pollen monitor. The latest product from HUND was developed over many years until it reached series production readiness, together with the Fraunhofer-Institute FIT, Sankt Augustin and ITEM Hanover.

How BAA 500 works: The electronic measuring equipment extracts pollen fully automatically from the ambient air it draws in, deposits it on special sample carriers and carries out an analysis under an automatic light optical microscope with connected image processing. The result: highly-precise determination of the allergy-relevant pollen in real time (currently recognition of 38 different types of pollen), regardless of temperature and time of year, without human intervention in the recognition process, data retrieval 24/7 by means of internet and app. In this way, allergy sufferers receive information in real time so that they can plan their daily routines when birch, oak, ash, alder, hazel and so on are in bloom.

In addition to the Wetzlar site, information on pollen count can also be called up for other locations such as Berlin, Munich, Wiesbaden or Leipzig, further pollen monitors are in planning.

Just recently, an electronic pollen information net (ePIN) based on the HUND pollen monitors was commissioned in Bavaria. One of the eight pollen monitors erected in Bavaria is located very close to Ersa in Wertheim.

HELMUT HUND GMBH, FOUNDED 1967

The origins of Helmut Hund GmbH go back to 1967, the zenith of what is known as the German economic miracle when West Germany was enjoying absolutely full employment – in this Golden Age, the then 17-year-old Helmut Hund founded his company in Wetzlar. The first product back then was a patented ICL for electric motors. In 2015, almost 50 years after the company's establishment by Helmut Hund, Verena Schön, the founder's daughter and Dr. Stefan Schäfer have taken over the management. The product range too has changed in this time, becoming significantly more complex:

In keeping with their company claim "We bring technologies together", HUND brings technical components from the areas of optics, fibre optics and light engineering and plastics technology together with high-performance, durable modules and equipment to customer specifications.

A chat among HUND and Ersa experts on the topic of electronics manufacturing.



The main focus, however, is on what is known as the OEM business, the production of modules for system solutions in the areas of medical technology, sensor systems, automation and environmental engineering. Located in the business park of the same name in Wetzlar's Nauborn district, Helmut Hund GmbH today employs 110 people and has a production area of 3,000 m² (www.hund.de).

INITIAL CONTACT WITH ERSA THROUGH THE WAVE

The first contact between Helmut Hund GmbH and Ersa GmbH came about in the mid-1990s with the purchase of a wave soldering machine which, over 25 years later, is still in reliable use for small series and miniseries production.



HUND BAA 500 pollen monitor.

In 2012, the pressing question was: upgrade the wave soldering system or purchase a new selective soldering machine? Following thorough examination of both technologies, the ultimate decision was in favour of the second option – more specifically an Ersa VERSAFLOW 3/45 selective soldering system. "Due to the throughput it offers, we decided on the VERSAFLOW 3/45 with two pots. This allows us to process products with the greatest possible speed," reports Alexander Müller, Head of Production Electronics.

As a variety of soldering tools can be mounted on the pots of the miniwave soldering system, a high level of flexibility with low cycle time is guaranteed. In this way, both extremely delicate double-sided modules can be processed and surface solutions executed. Then, at the end of last year, a further soldering equipment decision had to be taken: Within the investment planning framework, the existing and somewhat outdated reflow soldering system was to be replaced with a new model. Thanks to the positive experience with the already-installed Ersa machinery and the well-established relationship between the two companies, Helmut Hund GmbH also involved Ersa GmbH in this decision-making process.

Those involved met up for a testing session in the Ersa Application Centre in Wertheim, just 150 km from the HUND site. The focus of the testing was, on the one hand, on the evaluation of just how the Ersa system had developed further in technological terms by comparison with the previous model



With two pots, ideally equipped for the highest-possible throughput: ErsafLOW 3/45 in the HUND manufacturing process.

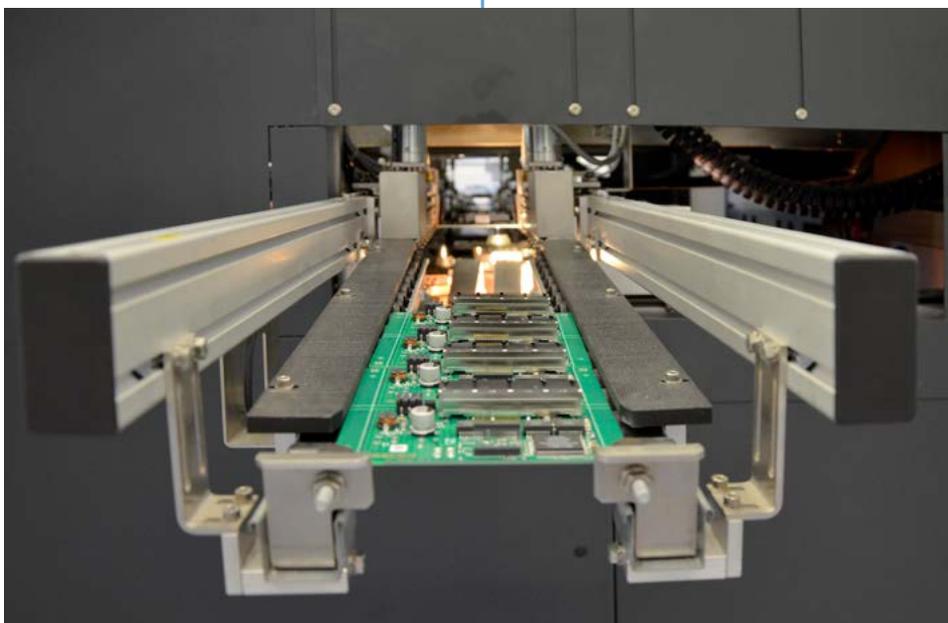
and, on the other hand, on the question of the extent to which the processes of the relevant reflow system matched the products planned for it.

At the very top of the list of requirements was the important issue of traceability. Which is of major significance in medical technology in particular. "Up to then, we had perceived Ersaf as a strong manufacturer, primarily in the areas of selective and wave soldering. We have to admit that we were more than very positively surprised when the requirements we make of a reflow soldering system were best met by the Ersaf HOTFLOW 4/14," was the comment from the Process Technology Department at HUND.

MUTUALLY-FUNCTIONING RELATIONSHIP BETWEEN HUND AND ERSA

The special feature of the relationship between the two business partners Helmut Hund GmbH and Ersaf GmbH is the fact that the companies are one another's customers, on the one hand, and suppliers on the other.

Hund GmbH produces the camera systems built into the Ersaf VERSAPRINT 2 Ultra³ stencil printer, the only printer on the market with integrated 100% inspection in 2D or 3D.



The selective soldering system supplies perfect, repeatable soldering results.

Still in use for small series and miniseries after 25 years:
Ersa reflow soldering system.



“This give and take is the essence of our business relationship and creates a high level of trust on both sides,” summarises Alexander Müller, Head of Production Electronics at Helmut Hund GmbH, and continues: “We have now changed over our complete soldering technology to Ersa. Everything comes from one source, even the hand soldering iron.”

The comprehensive product range from the No. 1 system supplier for electronics manufacturing has been extraordinarily well-received at Helmut Hund GmbH – as an important success factor for the production of complex HUND products such as the pollen monitor, many of the production processes at the company based in central Hesse would be unimaginable without it. No matter what the HUND developers next advance to series production readiness – when it comes to the necessary electronics manufacturing, the Ersa hardware will be on hand to provide reliably repeatable quality. ■

Ersa GmbH

Leonhard-Karl-Str. 24
97877 Wertheim

Phone: +49 9342 800-0
info@ersa.de
www.ersa.com

Ersa North America
usa@kurtzrsa.com

Kurtz Ersa France
kefrance@kurtzrsa.com

Ersa Shanghai
info-esh@kurtzrsa.com

Ersa Asia Pacific
asia@kurtzrsa.com

Kurtz Ersa Mexico
info-kmx@kurtzrsa.com

Kurtz Ersa Vietnam
info-kev@kurtzrsa.com

DEB **Anlaufstrom-Begrenzer ASB 4 für Wechselstrommotore**
Patent angemeldet

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The first HUND product from the year 1967: An ICL for ac motors.