

User report | Best practice



ELOTEC & Ers

ELOTEC plant in Furth im Wald.

Top selective soldering quality, maximum testing rigour!

ELOTEC Fischer Elektronik GmbH produces a whole range of electronic products to order, working in a close cooperative partnership with its clients. The company, based in Furth im Wald, often gets a chance when a high testing level is required – whether for flat assembly placement or the assembly of complete de-

vices and systems. The full-service EMS service provider of prototypes, small and large series, currently has 240 employees – now that the production area has been doubled to 6,000 m² an Ers

Author
Mark Birl
Area Sales Manager
Ersa GmbH

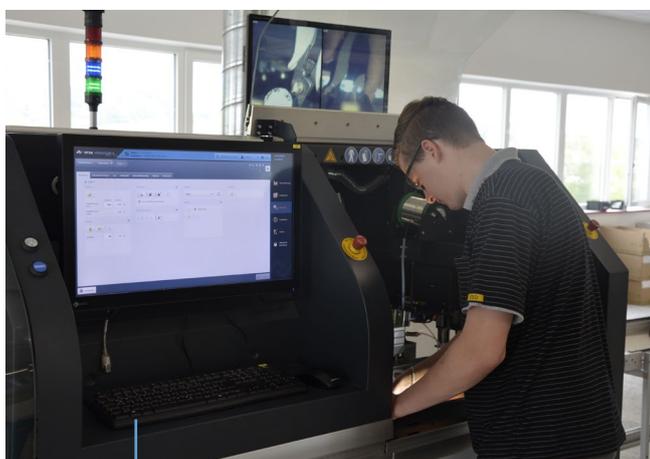
 **kurtz ersa**

Furth im Wald is just a few kilometres from the border to the Czech Republic – in an idyllic setting, surrounded by mountains, rivers and woods, a holiday region with a high leisure and recreation value. But not everything revolves around tourism – the town with 9,000 inhabitants also has an industrial estate to its name. At the age of 50 and with 30 years of professional experience behind him, Franz Fischer founded ELOTEC Fischer Elektronik GmbH more than 20 years ago in September 1996. At that time, the 2-man company in the Furth start-up centre was one of the first electronic companies in the Cham district, and its first products were temperature sensors. The business plan stated that the company hoped to employ 20 people one day. Just four years later, ELOTEC already had 40 employees, today there are 240 – twelve times more than originally planned! The company was successful right from the very beginning, and regularly presented solid growth figures. Having started as a pure manufacturing service provider, ELOTEC Fischer changed over the years into a development partner and component supplier for its customers, most of whom are based in Germany. Yet the electronics business is international and knows no national borders, which consequently means that the company also has business contacts abroad, even as far as China.

URGENTLY REQUIRED: MORE PRODUCTION AREA

In autumn 2016 the 20th birthday celebrations at the company had to be put on hold as company priorities were focussed on preventing the company literally bursting its capacities – production space had to be found urgently. So an additional production hall with offices, rooftop terrace, social rooms and canteen were planned at the ELOTEC site in Nordgaustraße, at investment costs of 2.5 million euros. In April, the new production hall with a new high-end selective soldering system of the

Ersa Area Sales Manager Mark Birl (right) with colleagues from the ELOTEC production line.



The Ersa VERSAFLOW 4/55 in the ELOTEC production hall.

type Ersa VERSAFLOW 4/55 was officially put into operation. "We produce virtually everything except automotive parts – with a particularly strong focus on assemblies which require rigorous testing. From golden sample to a group of four boards, our testing station covers everything – convincing many of our customers," says Klaus Fischer, 35, son of the founder and joint managing director since 2013. ELOTEC builds its racks itself, writes its own software – here in Furth im Wald there are experts at work who know exactly what they are doing and put their know-how completely at the service of their customers. ELOTEC often trains its own specialists; the trainee quota is five percent on average or around 20 apprentices every year at different stages of their

Infobox

ELOTEC Fischer

Location
Furth im Wald

Turnover (2016)
18 million euros

Employees
240

Thorsten Götz (front), head of THT placement at ELOTEC, during set-up of the VERSAFLOW 4/55.



—○ apprenticeship. "No matter what the customer wants testing, he can get it from us," the 35-year-old Fischer adds. It is fitting, then, that ELOTEC recently opened a development department covering areas such as high-speed design, operating systems and power electronics. A further logical step, so to speak, because the inquiries about redesign for PCBs have significantly increased recently, prompting the ELOTEC management to decide to set up the subject of development on a broader base. And it goes without saying that the ELOTEC developers should always aim to secure the series order following a pilot or pre-series – with the new production capacities, particularly in the form of the new Ersa selective soldering line, providing powerful arguments in their favour.

MORE OUTPUT, REDUCED FAULT RATE

How did the cooperation between ELOTEC and Ersa come about, what are the advantages of selective soldering technology? "Within the company, we had numerous jobs that were done manually, so it was only a matter of time before we had to face up to considering how to improve our services, to become faster yet significantly reduce our fault rate at the same time. It was clear that we would have to go with the times in order

to meet the dynamically growing requirements in electronic production. We got to selective soldering technology in no time. We were all in agreement that automated selective soldering would really move us forward in terms of productivity and quality," recalls Thorsten Götz, head of THT placement at ELOTEC, describing the initial situation. The market was sounded out, various suppliers were compared, in the end all the signs pointed to the market leader in selective soldering: Ersa. An initial meeting with Ersa Sales Managers was held in Furth im Wald. This was followed up by a visit to the Ersa booth at the Productronica electronics manufacturing trade fair in Munich to take a live look at the machines in action.

EXHIBITION IN THE DEMO CENTER

To be able to go into even more detail, Ersa issued an invitation to sample soldering in the company's own demonstration and application centre. "Our VERSAFLOW 4/55 is the world's first inline selective soldering system designed both for series production with high unit quantities and low product changeovers as well as for small series production with frequent product changeovers – with almost endless configuration options the machine can be adapted perfectly to individual customer requirements. At our Demo Center we can demonstrate the system's capabilities under ideal real conditions," says Mark Birl, the Ersa Area Sales Manager responsible. A delegation from ELOTEC made their way to Wertheim am Main – and took a giant board along to put the VERSAFLOW 4/55 through its paces. "We were absolutely delighted with the results that were presented to us live – operating and programming of the Ersa machine couldn't be simpler, maintenance effort is kept to a minimum and the flux dispensing is extremely precise. In a nutshell: the standard version of the VERSAFLOW already fulfilled all our requirements – the selective machine

with its maximum processing range of 508 x 508 mm even managed the format of our sample board with no problem," says ELOTEC Managing Director Klaus Fischer. ELOTEC writes about the latest addition to its machine park in a company bulletin: "The program-controlled adaptation of fluxing station and soldering pot makes it possible to process a high product mix in parallel and achieve short processing times for our customers. Another decisive advantage is the quality of series production. Process reliability and reproducibility have been significantly increased compared with manual soldering spots."

PRODUCTION CAPACITY INCREASED

The new production hall and new selective soldering line allowed ELOTEC to remedy the space situation to a significant extent – in the meantime the company is receiving more and more concrete orders and projects which are perfectly suited for the VERSAFLOW 4/55. Where empty spaces could be seen here and there in spring 2017, production planning has taken effect and integrated the new production area perfectly into ongoing operations – the testing station has now been moved to the new building, where before there were two SMD lines there are currently three, and the warehouse has also been moved to new premises. The return on investment is looking very good. "Once the VERSAFLOW had arrived, we received new orders and products every day, from first batches, sample placement or sample boards, so that we were able to increase the utilisation capacity of the machine very quickly and now work with 2-shift production," Klaus Fischer is happy to report. Throughput has been increased compared with manual production (more boards than by hand) and productivity has been increased (much faster than with manual soldering). "In some cases, there is no longer even the need for washing – dispensing with a whole working step – because there is

no longer any residue thanks to the new fluxing agent. Customers are impressed – and so are we. We are extremely satisfied with our Ersa VERSAFLOW 4/55," says Thorsten Götz, head of THT placement. The VERSAFLOW 4/55 manages the many changes in production with ease, a clear example is illustrated by the impressive changes from manual soldering to selective soldering: For a 4,000 order, a specialist solderer needs 45 minutes for manual soldering of one board, whereas the selective machine produces four of the same board in just 15 minutes. "That is a time factor that pays off – also in terms of quality. More and more products made by ELOTEC are now being planned for production on the VERSAFLOW. Programs have to be written for these first, which can be done in offline mode with the CAD Assistant, allowing the machine to produce other goods in the meantime. This all works without a hitch and just as we imagined, connection to traceability systems was also straightforward. And should we have any questions, Ersa Service is quick to answer and provide help," Thorsten Götz adds.

STABILISING VOLUME REACHED

With the new production hall, ELOTEC has raised production to a new level and delivered the goods to customers. Over the past few years, the EMS service provider was forced to grow as the customer base steadily increased. This led to the erection of a new building which was urgently required. Now there is room for everything and new capacities can be utilised. The management would now like to stabilise the current volume level. But this will not prevent ELOTEC thinking about the possibilities of a further production line – the new building includes reserve capacities for future growth. What is next on the agenda? Lots of orders – and a belated birthday party, even if ELOTEC should be 21 by then. But no-one in Furth in Wald minds about that ... ■

Ersa GmbH
Leonhard-Karl-Str. 24
97877 Wertheim
Phone: +49 9342 800-0
info@ersa.de
www.ersa.com

Kurtz Ersa, Inc.
usa@kurtzersa.com

Kurtz Ersa Mexico
info-kmx@kurtzersa.com

Kurtz Ersa Asia Ltd.
asia@kurtzersa.com

Ersa Shanghai
info-esh@kurtzersa.com

**Kurtz Ersa Vietnam
Company Limited**
info-kev@kurtzersa.com

Ersa France
info-efr@kurtzersa.com