

Application report | Best practice



International EMS service provider places its trust in Erska selective soldering technology

Kitron UAB Production Manager Daumantas Barčas and Erska Area Sales Manager Tobias van Rossem focussed at the VERSAFLOW 4/55.

Yes, Kitron can!

Kitron operates worldwide as an EMS service provider and can boast the most modern production sites in Norway, Sweden, Germany, China, USA and Lithuania. With over 50 years experience and comprehensive competence in the sector, the 1,450-strong global Kitron team contributes to quality and efficiency in all the product lifecycle stages so that innova-

tions can be brought to market faster and with less outlay. The Kitron subsidiary in the Lithuanian city of Kaunas, in particular, impresses with astonishing results in terms of output and quality – placing its faith, among other things, in inline selective soldering technology from system supplier Erska.

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Ersa selective soldering system VERSAFLOW 4/55 with VERSAFLEX in the Kitron production in Kaunas.

It is just 17 years since Kitron UAB commenced production in Lithuania, with 30 employees. In 2018, 28 years after Lithuania declared its independence from the Soviet Union, the Baltic subsidiary in Kaunas employs multiples of this number: current staff levels run at 750. Nowadays, almost every second Kitron employee works in Lithuania's second-largest city. On a current production area of 11,000 m², the Lithuanians' EMS production has grown by 30 % for the third year in succession – anything but a coincidence. A business plan and a strategy are being carefully implemented, using the available area with impressive efficiency. With only 10 % of the site still unused, Kitron UAB is already planning the next expansion – just where this new site will be has still not been decided. But one thing is sure; it will be coming next year under the management of the Lithuanian Kitron UAB. "With our constant growth rate in the last three years of up to 30 % annually, action is urgently required. We are proceeding on the assumption that our development will continue at this high level, and are therefore working hard at finding a suitable site," says Daumantas Barcas, Production Manager at Kitron's Kaunas site. "At the beginning of the 21st century, Kitron produced mainly cable harnesses and simple electronic components. Hardware and equipment came in from other Kitron sites in Sweden and Norway – an outstanding starter kit for our subsidiary here in Kaunas/Lithuania," reminisces Senior Soldering Technologist Kęstutis

Žukauskas, a native of Kaunas, who has been part of Kitron UAB from the very beginning. Within the shortest space of time, "Kitron succeeded in setting up clean processes and in achieving good results, so that we earned the trust of customers, and Kitron UAB was able to build up its own customer base. The percentage of internal orders from Sweden and Norway dropped quickly, while at the same time the level of direct orders from our own customers rose until we were able to speak about a genuine switch to direct selling." Today, the proportion of direct customers for Kitron UAB – predominately from the Baltic, Scandinavia, Europe and the US – is over 90 %!

Kitron UAB

at a glance

- Turnover 2017:
EUR 87 million (Kitron total EUR 210 million)
- Production area:
11,000 m² (Kitron worldwide 40,000 m²)
- 750 employees (Kitron worldwide 1,450)
- Branches:
Defence/Aerospace,
Data/Telecoms,
Industry, Medical devices and Offshore/ Marine

Kaunas (Lithuania), site of Kitron UAB.



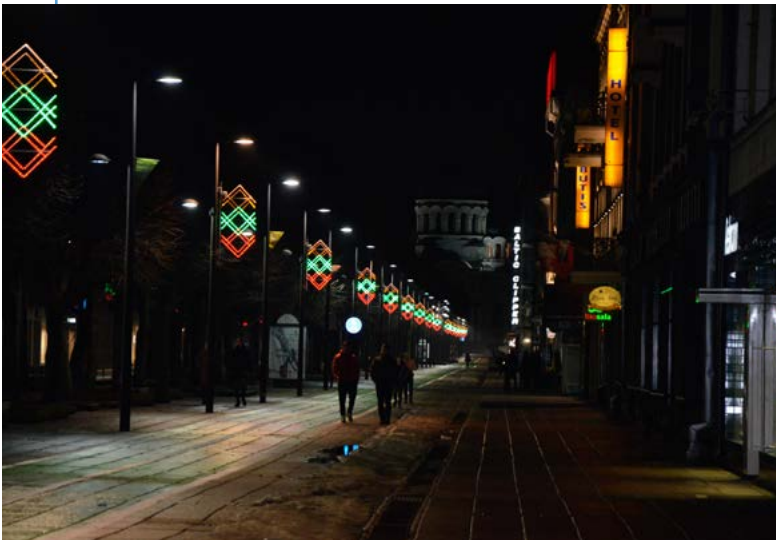
Every step fits: Kitron employee assembling PCBs.



POWER START IN LITHUANIA

Within just three years of the start-up in Kaunas, Kitron placed the management of the subsidiary completely into Lithuanian hands. In the following four years, Kitron was one of the fastest-growing companies in the region, and was rewarded with an award – although this was no reason for the Lithuanians to rest on their laurels. Rather, from 2008 onwards, the company focussed on the implementation of lean management methods and is now operating a second site 17 km from Kaunas, where cables are assembled and electromechanical assembly is carried out.

Kaunas at night – in the background the church of Holy Archangel Michael.



“Lean management has become a natural element of our day-to-day business, practically second nature by now – the developments in recent years with corresponding growth rates for Kitron in Lithuania are the result, and speak for themselves,” Daumantas Barčas says self-confidently.

No matter where you look: Automotive, electro mobility, smart home – electronics manufacturing is a dramatically expanding market with almost infinite demand. “At the forefront of our activities are top quality and development expertise – customers bring along an idea, arrive with the question: How can we turn this into a competitive product? The assumption is that, in addition to the actual production process, we can provide support at product development level and then also look after testing. Customers don’t want to carry out testing themselves, or take a third or fourth partner on board; they commission us with the provision of a fully-manufactured product and require a partner on an equal footing,” explains Kitron Production Manager Daumantas Barčas.

Of course Kitron UAB also benefits from the affiliation with the Kitron headquarters in Norway and the over 50 years of comprehensive experience in the sector – this finds its way, for example, into site-spanning audits leading to standardised processes and standardised



Thorough assembling as an essential part of the whole soldering process.

equipment at Kitron. These are always discussed and decided at global level then implemented across the board in Sweden, Norway, Lithuania, and at other locations. When a supplier has been decided on, all the branches call on this source. And of course there are a number of meetings at Kitron level every year, in which corporate executives and production managers discuss processes, procedures and best practice – an outstanding basis for decision-making at international level, leading to the highest efficiency at all levels.

QUALITY FIRST AS A MOTTO

Because, in addition to output and productivity, the Kitron team places enormous emphasis on quality – where possible as so-called “one piece flow” – the Lithuanian production management introduced selective soldering technology eight years ago. The Scandinavian Kitron colleagues had been availing of this for years, as inline technology on the basis of two Ersas VERSAFLOW B machines which still continue in service today, operating smoothly. Positive experience with Ersas selective soldering technology had already been gained in the Kitron Group. Logically, the Kitron machine pool in Kaunas was expanded three years ago with an Ersas ECOSELECT 1 badge machine – the selective soldering system with two solder pots provided the great-

est capacity on the smallest footprint. The enquiry about a high-volume product followed one year later – definitely a candidate for inline selective soldering. In this case, Kitron asked two companies for support and suggestions on how the product could best be manufactured – back then, the contract went to one of Ersas competitors. One year on, the next high-volume product followed, for which a further selective soldering system was to be purchased. In the meantime, Ersas had launched the VERSAFLOW 4/55 – with the extremely flexible VERSAFLEX dual pot selective soldering module, built on two independent axes and individually adjustable in x/y/z-direction. “In addition to the performance of the VERSAFLOW 4/55, our decision was based on the extreme flexibility of the VERSAFLEX selective soldering module, which best met our requirements in every respect.

High output in highest quality: VERSAFLOW 4/55 in the Kitron UAB production.



Trimmed to efficiency and having fun (from left to right): Kitron Production Manager Daumantas Barčas, Kitron technologist Kęstutis Žukauskas and Ersa Area Sales Manager Tobias van Rossem.



This machine allows us to run the current high-volume production – but also to react flexibly should customer requirements change,” says Senior Soldering Technologist Kęstutis Žukauskas. “For the current generation of our selective soldering systems, VERSAFLEX gave us the revolutionary vision of being able to position the pots completely flexibly. Because, as we know, the life cycle of the product can deviate from the service life of a machine – and then what happens? No problem thanks to VERSAFLEX,” says Ersa Area Sales Manager Tobias van Rossem, who, in addition to Scandinavia, also looks after the Baltic.

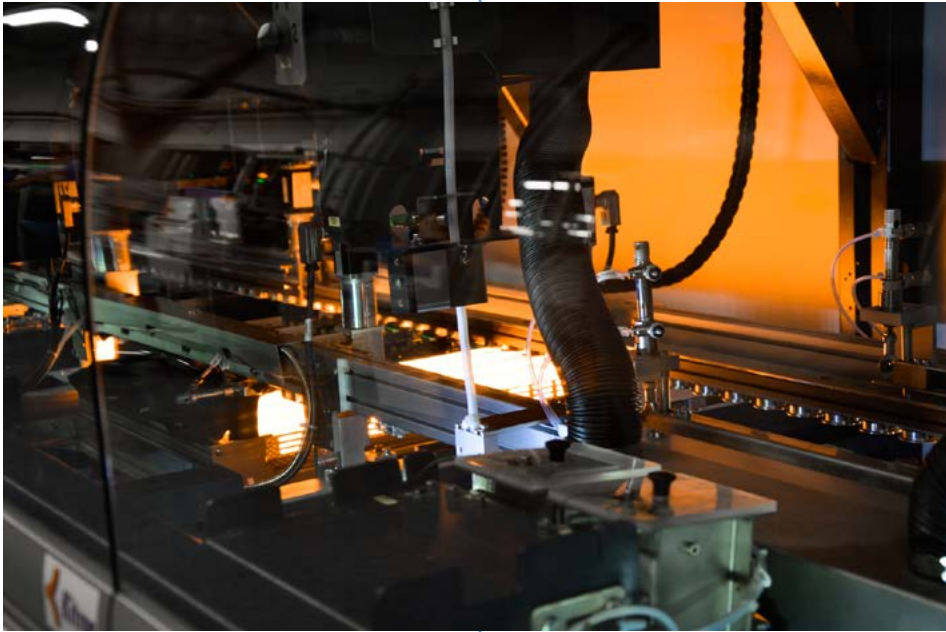
REQUIRED CYCLE TIMES IN OPTIMUM QUALITY

The VERSAFLOW 4/55 was calculated by Kitron UAB for a certain product – why the changeover to selective soldering for a comparatively simple, one-sided board with ten connectors which was designed for wave soldering? With wave soldering, the quality was not as high as desired; further treatment would have been required due to solder bridges in some areas. Kitron UAB therefore came to the conclusion that the design was not ideal for wave soldering – the process was expanded towards selective soldering, in order to permit error-free soldering. And what do you know? During the process, the Lithuanians got

exactly what they expected in terms of cycle time, process and quality with the Ersa soldering technology. Even though, initially, a higher level of investment had to be taken into account, in order to achieve similar capacities – the exclusion of further treatment made the investment more than justifiable. The decision to go with the VERSAFLOW 4/55 with VERSAFLEX was then only a matter of form – this was undoubtedly also based on the training in the Democenter in Wertheim, where exhaustive testing was carried out to determine whether the machinery could actually do what was needed – in a nutshell: it did, and the order went to Ersa!



Kitron technologist Kęstutis Žukauskas with Ersa Area Sales Manager Tobias van Rossem at the ECOSELECT 1 which is providing first-class selective soldering quality since 2015.



The VERSAFLOW 4/55 makes the selective soldering process transparent.

With the actual installation in Kaunas, carried out by Ersa technicians, Kitron expanded its machinery with a selective soldering system with which the production team had already thoroughly familiarised itself. "With the investment in the Ersa VERSAFLEX system, we achieved the required cycle times with optimum quality – the feedback from our customers is also very positive. But this is only the beginning for us. We are keeping a close look-out for products with which we can achieve a similarly strong solution with the aid of this high-performance inline-selective soldering technology and, on the same lines, undertake a transfer from wave soldering to selective soldering. We are highly satisfied with the Ersa systems and the associated fast technical support. We will undoubtedly be needing further reliable systems in the future and a system partner on whom we can rely completely when it comes to electronics manufacturing," says Daumantas Barčas, in anticipation of upcoming projects. Also with a view to equipping the new site and clearly defined objectives – such as the duplication of a perfectly attuned system with the greatest possible rate of automation. No matter what Kitron's demands may be in terms of soldering technology – Ersa will respond with the same clarity: Yes, we can! ■

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