



FUTURE BY TRADITION.

DRIVEN BY KURTZ ERSA.

Handover of the baton

CEO Rainer Kurtz moves to Advisory Board, Ralph Knecht becomes new CEO,
Michael Fischer follows as new Ersa Managing Director

Yesterday, Tomorrow & Beyond.

Ersa celebrates 100 years of existence at Productronica

A sustainable journey through time

50 Years of Kurtz Particle Foam Machines

Change – our only constant



Rainer Kurtz,
Chief Executive Officer
of the Kurtz Ersa Corporation

We started the year 2021 full of confidence. Unfortunately, we were then only able to celebrate our anniversaries “100 Years of Ersa” and “50 Years of Foam Machines” at Kurtz with restrictions due to the pandemic. In the year 242 of our company history, however, there were many more changes to cope with, which we report on in this issue of the Kurtz Ersa Magazine. We have once again proven that we are serious when it comes to responding adequately to upcoming changes. In the field of technology, our “Print Your Production” concept has presented us with a major challenge, which we are tackling with enthusiasm. Connectivity and software are also becoming increasingly important for us. The issue of sustainability has now taken on a dominant position in all our business units.

We have recently strengthened our company through inorganic growth in the area of automation in order to be perceived even more strongly by our customers as a total concept developer. The strategic positioning with three strong pillars has proven itself for our company in the past and it is now significantly more stable again as a result of an acquisition. At the end of the year, the brothers Walter, Bernhard and Rainer Kurtz left the company as shareholders. Thus, the transition from the sixth to the seventh generation of our family business has now been completed. The transition from one generation to the next is a practiced tradition at Kurtz. Here, too, we are continuously renewing ourselves.

Consequently, renewal is also the order of the day in the management – Rainer Kurtz will hand over his long-standing function as CEO to Ralph Knecht. He in turn will be succeeded as Ersa Managing Director by Dr. Michael Fischer. The entrepreneurial family agrees that Kurtz Ersa should remain a diversified industrial group. To this end, it is committed both on the Advisory Board and through the newly elected spokespersons of the family council. The corporate design, including the company’s guiding principles under the motto “ONE FAMILY”, has also been completely aligned with the family business theme. And a word on my own behalf. Over the past few years, I have had the privilege of writing umpteen editorials for the Kurtz Ersa Magazine – an exciting task that has been a lot of fun.

I hope you, dear readers, will again enjoy this new issue and remain with a heartfelt “Glück auf”!

A handwritten signature in blue ink, appearing to read 'Rainer Kurtz'.

Your Rainer Kurtz



No.1 Team for Sustainable Production Solutions

With a new corporate mission statement, the entire management including the Group Works Council has developed a suitable basis so that the Kurtz Ersä team can face the challenges of the coming years in a united and determined manner. In addition to reviewing common values, a new vision, mission and so-called purpose statement were developed.

The corporate vision describes the state a company wants to reach "in a few" years. Kurtz Ersä developed a new vision over several months and with the participation of all managers and described who we want to be in the future: **"THE NO.1 TEAM FOR SUSTAINABLE PRODUCTION SOLUTIONS"**. Team spirit has always been one of Kurtz Ersä's key strengths. We support each other, benefit from each other and stand together in difficult times. In addition, the new vision describes what we want to offer more of in the future – sustainable production solutions. Our sustainability offensive "GoGreen250" plays a major role here – as does the aspect of always offering reliable solutions for our customers. This is also clearly reflected in our mission statement, which we have entit-

led **"WE LIVE SUSTAINABILITY"**. The mission describes how we want to behave with the help of guiding principles. We focus on passion for our customers, but also on respecting our history and always trying to achieve the best results. New is our Purpose Statement, which describes the deeper meaning of what we do. With it, we define what drives us at our core every day: **"WE OPTIMIZE OUR CUSTOMERS' PRODUCTION PROCESSES. Global. Ahead. Sustainable."** The core of our new mission statement and what we feel every day in our cooperation at Kurtz Ersä are the values that connect us: high reliability, great trust, team spirit across borders. And not to forget: „We are one family!"



Newly established – the Global Board of the Kurtz Ersä Group (from left to right): Albrecht Beck, President and COO Kurtz Ersä, Inc., Uwe Rothaug, Managing Director Kurtz GmbH, Michael Fischer, Managing Director Ersä GmbH, Michael Wenzel, Managing Director Kurtz Ersä Automation GmbH, Ralph Knecht, former Managing Director Ersä GmbH and future Kurtz Ersä CEO, Rainer Kurtz (still CEO), Bernd Schenker, President & COO Kurtz Ersä Asia, and Thomas Mühlecke, CFO

Handover of the baton at Kurtz Ersä

CEO Rainer Kurtz moves to Advisory Board, Ralph Knecht becomes new CEO, Michael Fischer follows as new Managing Director

After 40 years with the Kurtz Ersä Group, Rainer Kurtz is stepping down as CEO at the turn of the year. At the end of March 2022, he will move to the Advisory Board and continue to work for the company as a consultant.

Rainer Kurtz studied mechanical engineering (specializing in machine tools and production technology) at the Technical University of Berlin from 1974 to 1979. After an initial period at Heidelberger Druckmaschinen AG, Dipl.-Ing. Rainer Kurtz joined the company as Managing Director in 1982. This marked the transfer of operational management from Otto Kurtz (fifth generation) to his sons Walter, Bernhard and Rainer Kurtz. In 2003, an advisory board was installed and Rainer Kurtz was appointed Chairman of the Management Board. In addition, in 1993 he took over the sole

management of Ersä GmbH, which was purchased in the same year.

In the 40 years of his work, Rainer Kurtz attached great importance to strategic orientation. The company underwent major changes in recent years and today, with its three business segments, is the world market leader with an export share of over 80 percent. There was a targeted expansion in the direction of information technology and digital transformation. The success of new product segments such as automation or metallic 3D printing are particularly close to Rainer Kurtz's heart.



Ralph Knecht becomes new Kurtz Ersä CEO

As of January 01, 2022, Rainer Kurtz will hand over his responsibilities to future CEO Ralph Knecht, who earned his Dipl.-Ing. (FH) at Reutlingen University (1990–95) and additionally earned an Executive MBA at the University of St. Gallen in 2016. Previously, Ralph Knecht spent 22 years in various management positions at Schlafhorst, the international market leader for spinning and textile machines. Born in Swabia, he has significantly advanced the electronics manufacturing division as Ersä CEO since 01.10.2017 and has also been Managing Director of the Kurtz Ersä Group for some time. Ersä GmbH was able to further expand its leading market position as a manufacturer

of soldering machines and soldering tools and further develop important trends in the electronics industry such as 5G communication or electromobility. Under his aegis, a new organizational structure and active talent management have put Ersä's management responsibilities on a broader footing.

"After four decades in the Group, the time has come for the baton to be handed over – in Ralph Knecht we have an extremely capable manager and excellent leader who has sustainably expanded the Ersä business. I would like to thank him not only on behalf of the management and the workforce, but also on a very personal level. Dear Ralph, I am convinced that the position of CEO is in the best hands with you. And I also wish the new Ersä CEO Dr. Michael Fischer every success – with the Ersä team behind you, you will continue to drive the electronics manufacturing business forward well," said Rainer Kurtz.

Michael Fischer new Managing Director at Ersä

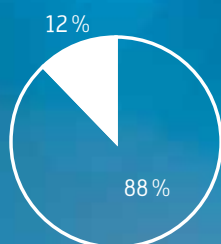
Dr. Michael Fischer has already taken over the vacant position of Ersä Managing Director as of October 01, 2021. Dr. Fischer most recently worked at power tool manufacturer Fein in Schwäbisch Gmünd, where he was responsible for all technical and administrative departments of the group as co-CEO. Born in the Rhineland, Dr. Fischer brings many years of experience in the capital goods industry and in particular in process technology, fluid mechanics, plant engineering and software. The 53-year-old studied aerospace engineering at the Technical University of Munich, where he also completed his doctorate in plant engineering. Dr. Fischer has also joined the Management Board of the holding company and, from this position, will also handle the global coordination of the Electronics Production Equipment product area in the Group from January 01, 2022.





Can you imagine driving
a hybrid or electric car?

☐ Yes ☒ No



Switching to a more sustainable vehicle fleet

As part of the GOGREEN250 initiative, Kurtz Ersa has decided to become climate-neutral by 2029. Today, the group fleet already meets the CO₂ requirements of the European Union. In this context, work is also being done to reduce CO₂ emissions in the group's own vehicle fleet by increasingly purchasing vehicles with alternative drive types. Already, 12 % of the fleet consists of hybrid and 4 % of purely electrically powered vehicles. By the end of 2021, the proportion of vehicles with alternative drives will already be just under 20 %.

In order to implement the changeover to a more sustainable vehicle fleet and the expansion of charging stations at the Kurtz Ersa sites in a coordinated manner, a mobility and charging infrastructure concept is being developed in the form of a master's thesis. For this purpose, a survey was launched among all company car users and fleet officers. The aim was to obtain feedback on the use of electric drives and to identify possible challenges as well as wishes. The survey asked about driving behavior, the type of drive currently used, the general willingness to switch to an electrically powered vehicle, and what the biggest obstacles to switching to an alternative drive concept were. The survey was very well received – after one week, the participation

rate was already 60 %. The positive feedback from participants was particularly pleasing – 88 % of respondents said they would consider a vehicle with a hybrid drive. Also encouraging: More than

85 % of current users of an electrically powered vehicle would choose a hybrid or electric car again.

Mobility and charging infrastructure concept

The main problems cited are an insufficient range of purely electric vehicles and the currently unsatisfactory charging options at Kurtz Ersa locations. Obstacles that will be minimized or eliminated by technical progress and the charging infrastructure concept, among other things. The path to successful CO₂ reduction in the vehicle fleet is therefore clear!



HR Manager Judith Seindl and Kurtz Ersä CFO Thomas Mühleck (both in the foreground) receive the “Successful.Family-Friendly” award from the hands of Bavaria’s Minister of Economic Affairs Hubert Aiwanger (left) and Bavarian Family Minister Carolina Trautner. Source: StMWi/E. Neureuther

Kurtz Ersä is among Bavaria’s Top 20 Machine builder receives “Successful.Family-Friendly” award

Erfolgreich. Familienfreundlich

Bayerns Top 20 • Preisträger 2020/2021

In the company competition “Successful.Family-Friendly”, the Kurtz Ersä Group is one of this year’s award winners. This means that the seventh-generation owner-managed machine builder belongs to the select group of Bavaria’s top 20 companies that were honored for their particularly family-friendly corporate culture. All small, medium-sized and large companies based in Bavaria with a “profit-making intention” were eligible to take part – with almost 300 applications,

the 2021 competition set a record in terms of numbers. The cross-section from all sectors is striking – everything was represented, from craft businesses to medium-sized companies and global market leaders.

“Family-friendly HR policies stand out and will be the business card that gets people talking in the future. In the case of the award winners, one can see that the compatibility of family and career is possible without any problems and is a matter of course.

The central challenge for the future of the economy is the search for skilled workers. A family-friendly environment pays off in two ways: Finding skilled workers, retaining skilled workers. After all, family-friendliness is a seal of quality that future skilled workers attach great importance to when choosing a job,” said Bavaria’s Minister of Economic Affairs Hubert Aiwanger at the award ceremony in the Kaisersaal of the Residenz.

Entrepreneur 2021 – Kurtz Ersä among the nominees in the “Family Business” category

The global auditing and consulting firm Ernst & Young organizes the “EY Entrepreneur Of The Year” competition annually in 60 countries. Top business performance is honored in the categories “Digital Transformation”, “Industry”, “Services”, “Consumer Goods/Trade”, “Young Companies” and “Family Businesses”. This year’s award ceremony took place on November 04, 2021 at the Verti Music Hall in Berlin. The evaluation focused on growth,

future potential, innovative strength, employee management and social responsibility. “We are very pleased to be part of the illustrious circle of nominated companies. As a family-owned company with almost 250 years of tradition, this award is both a pleasure and an incentive for us to continue on our successful path and not stop getting better all the time,” said CEO Rainer Kurtz.

How did Kurtz Ersä Asia cope with the Corona crisis?

Insights into day-to-day business in Asia

时代的一粒灰，落在个人头上，就是一座山。

A Chinese proverb went viral during the pandemic – translated as follows: “One grain of dust from an era may not seem like much, but when it falls on your head, it is like a mountain crashing down on you.” When Covid-19 swept across the world in early 2020, manufacturing companies faced major challenges. Some factories had to close temporarily, but at Kurtz Ersä Asia, demand increased, leading to a quick recovery in 2021 thanks to stringent measures.

Global Situation.

During the global pandemic, Kurtz Ersä Asia faced a number of challenges: The first problem was the restriction of travel and face-to-face meetings due to the lockdown. Employees moved to home offices, production sites were divided into shifts to reduce face-to-face contact, whereas customer-facing employees could not relocate their work. Second, there was a logistical crisis due to disrupted supply chains. Shipping capacity became a scarce commodity, driving up shipping costs.

The third wave led to shortages of numerous materials. Despite all the turbulence, Kurtz Ersä Asia was able to further expand its business and supply customers with machines and services for their production. By the end of 2021, KEA even achieved the highest sales in its history.



Logistics crisis and global sourcing.

The Covid-19 crisis has shaken up global delivery schedules. While the largest US retailers chartered private cargo ships, Kurtz Ersä found other solutions: a mix of ocean freight, air freight and, for the first time, shipping by rail. Using the train connection between Germany and China is a sensible compromise of cost and delivery time. The combination of different shipping methods came about through detailed analysis and control of worldwide inventories, as well as a forecast for the coming months.

With targeted measures, Kurtz Ersä has succeeded in maintaining processes and production at a high level. This was made possible by systematic key measures, some of which were implemented in response to new and rapidly changing situations.

Safety first!

To ensure the safety of personnel beyond the immediate crisis, KEA management integrated parts of the emergency guidelines into the plants' standard operating procedures. These included increased health surveillance and access control, regular disinfection of equipment, and basic cleaning of workstations and vehicles. Following the lifting of the closure of various cities in China,

factory management in Zhuhai ensured that work and production resumed in an orderly manner. Instead of business trips, exchanges with customers took place virtually via telephone and/or video conferencing. External events were canceled or postponed and the company switched to digital communication channels.

Communication.

Due to the strong global IT infrastructure in the Kurtz Ersa Group, working groups could be formed quickly to address problems. KEA regularly informed customers and suppliers about the latest developments. In July, Bernd Schenker, President of Kurtz Ersa Asia, reported on the very good results and continued growth in an online conference for employees from Hong Kong, Shenzhen, Shanghai, Ho Chi Minh City and other locations, and thanked the team for their efforts.

KEA communicated openly and proactively with customers and clients regarding the pandemic situation as well as the shortage crisis, which led to adjustments in delivery times. Each individual machine delivery was discussed with the customers. In close communication and by mutual agreement, some major customers changed delivery times for individual orders. Other customers changed the shipping method. Individual solutions were found on a case-by-case basis, and no order was cancelled. In addition to communication to coordinate all incoming orders, Kurtz Ersa Asia uses social media to inform customers and clients about the actions taken. For the Chinese market, Kurtz Ersa Asia launched two official WeChats in 2021 to strengthen its connection with customers. Similarly, an online demo service was installed, and live seminars and E-exhibitions were organized in China and Vietnam.



Promoting productivity.

Despite the current difficult situation, KEA is sticking to its long-term strategy. For employees' professional development, KEA offered online training for employees during the closure activities in China in early 2020. "We made good use of the time during the closure after the 2020 Chinese New Year," says Michael Feng, head

of the Chinese service team, whose team received the latest updates and training during the period, keeping them motivated.

As infection rates in China dropped significantly and business resumed, the KEA service team did everything it could to implement the service commitment to customers. In June 2020, when the epidemic had just subsided and many customers resumed production, a German-owned company in Jiangsu asked to perform annual maintenance over the weekend, including internal cleaning of several soldering systems and replacement of consumable parts. KEA engineers completed the work professionally and to the highest quality standards.

Even during the Corona crisis, KEA systematically prepared for a gradual ramp-up of production. Kurtz Zhuhai Manufacturing (KZM) reached the next milestone for its successful model in April 2021 with the production of the 2,000th reflow soldering system – a HOTFLOW 3/26 XL. Thanks to the optimized product line, production volume in Zhuhai recorded a slight increase of 3.5 % for 2020 and a record 20.5 % for 2021. The KEA team is ready for the future!



**Kurtz Ersa Vietnam
Company Limited:**
Vic Le Thuy, Operation Manager



Kurtz Far East Ltd.:
**Perkas Raman, Service Manager
Southeast Asia**



Kurtz Ersa Zhuhai Factory:
**Sam Ho, General Manager
Zhuhai Factory**

From July to September 2021, the "3 on site" plan or "one-way commute" was in effect – meaning employees lived in provided housing from where they commuted to and from the factory. For effective on-site service, Kurtz Ersa Vietnam moved the stay to safer areas to support customers. In agreement with one of our customers, the Vietnamese team stayed in a dormitory and provided technical support for the implementation of "3 on site" for almost two months. From October 1, 2021, the Vietnamese team slowly returned to the new normal.

Malaysia also experienced lockdowns and strict travel restrictions. Due to a strategic project in Thailand, the Service Manager Southeast Asia left his residence in Malaysia – this was done on the basis of a Thai-Malaysian special permit from the health authorities for business travel. After a 14-day hotel quarantine and remote customer support, he went directly to the commissioning of a selective soldering system. After the work was done, another 14-day quarantine took place in Malaysia. The Thai customer appreciated the personal commitment very much – and placed further orders!

During the pandemic, Zhuhai sold a complex soldering machine with automation system to Hong Kong. It was planned to be commissioned by the service team from Shenzhen. Due to quarantine regulations in mainland China and Hong Kong, our technical manager in Zhuhai activated his know-how as a service technician (first job at Kurtz Ersa) and commissioned the machine with remote support from our service team. Again, a way was found to overcome difficult situations and Kurtz Ersa once again proved its reliability in terms of customer support.



ERSA CELEBRATES 100 YEARS OF EXISTENCE AT PRODUCTRONICA

100 years ago, Ernst Sachs launched industrial soldering with the first electric soldering iron and registered the first patent. November 18, 2021 marked the anniversary of the company's founding. Under the motto "Yesterday, Tomorrow and Beyond.", the company looks back on an

eventful century in which it was regularly able to establish groundbreaking technologies and product innovations in the electronics industry. Above all it looks to a future in which the pioneering achievements of yesteryear merge with the megatrends of today and tomorrow. >>





High-ranking visitor at the Ersä booth: Mohit Yadav, Consul General of the Republic of India for Bavaria and Baden-Württemberg (center), with Kurtz Ersä CEO Rainer Kurtz (left) and Ersä General Sales Manager Rainer Krauss

100 years of Ersä – looking back to the future

“100 years of Ersä is truly a great success story,” said Kurtz Ersä CEO Rainer Kurtz at the company anniversary celebrations of Ersä GmbH at Productronica 2021. “Exactly 100 years ago to the day, the foundation stone for this now very successful company was laid on November 18, 1921. We are very pleased to be able to celebrate this anniversary with our customers, business partners and our Ersians in the spirit of the ‘One Family’ idea. We look back with pride on the last 100 years and what we have achieved – but we are also very much looking forward to the next 100!”

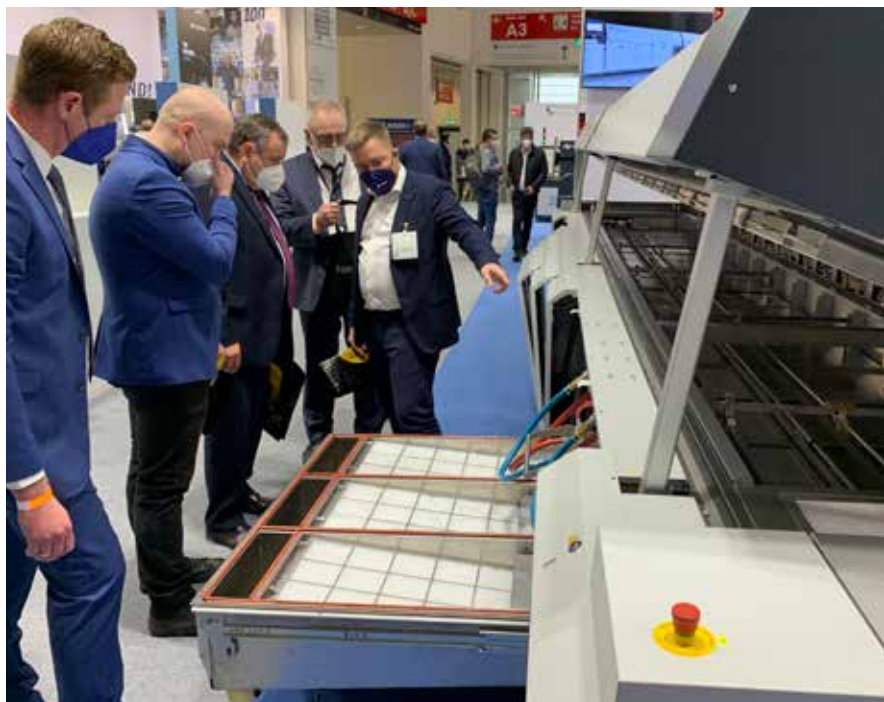
The birthday party was celebrated according to 2G-plus rules in Munich’s Wappenhalle. Around 350 guests were able to toast with Ersä – of course in strict compliance with all legally prescribed regulations. After the opening and welcoming of the guests by Ersä General Sales Manager Rainer Krauss and the speech of CEO Rainer Kurtz, words of greeting were played by Nicole Hoffmeister-Kraut, Minister of Economic Affairs of Baden-Württemberg, as well as by Markus Herrera Torrez, Mayor of Wertheim, whose Head of “Economic Development” Jürgen Strahlheim presented the honorary certificate of the City of Wertheim to Rainer Kurtz.



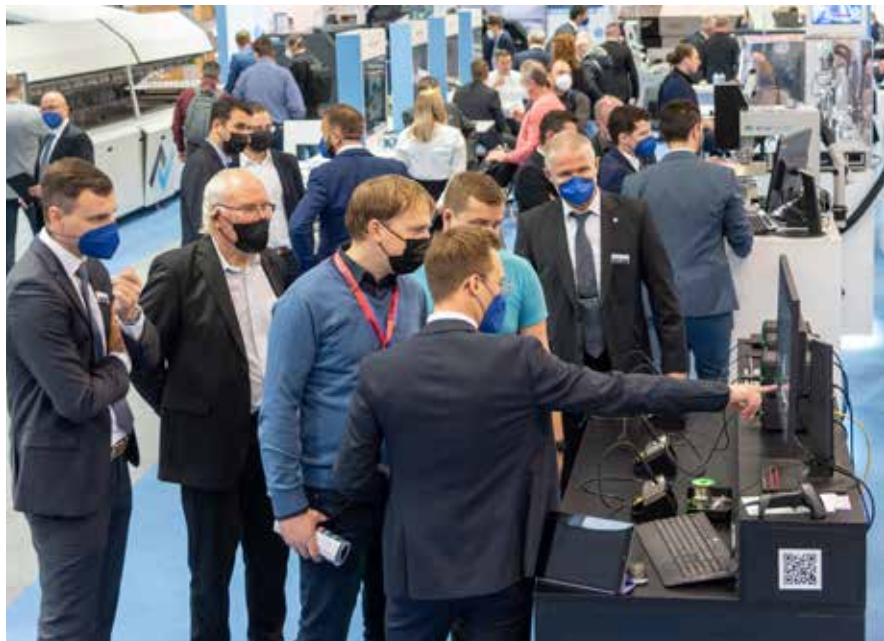
With a spacious booth covering 600 m², Ersä presented its comprehensive product range under the anniversary motto “Yesterday, Tomorrow and Beyond.” – including three absolute world premieres for electronics manufacturing alone

Leading soldering technologies at the pulse of time

Also this year Kurtz Ersa showed product novelties at the Productronica and demonstrated with many soldering technologies its leading market position at the pulse of time. A new era in reflow is represented by the HOTFLOW THREE. With the SMART CONVECTIONPOWER UNIT, SCPU® for short, it has a unique selling point in the industry. This exclusively developed motor and control unit ensures an optimized soldering profile and even better soldering results. In addition, the SCPU® makes optimum use of the energy employed by only consuming the power that is actually needed. With the VERSAFLOW ONE, Kurtz Ersa offers an ideal entry into the VERSAFLOW world and shows how decades of know-how from the market leader is made available even in entry-level models (detailed article on page 16). The third highlight is the i-CON TRACE, the world's first fully networkable soldering station that already offers 100% connectivity when delivered. Thanks to integrated WLAN, Bluetooth and network card, it can be fully integrated even into MES-controlled production processes and makes the entire manual soldering process traceable and documentable. Read more about the i-CON TRACE on page 14.



Great interest at the well-attended Productronica booth – the picture shows the HOTFLOW THREE with its patented SCPU® motor-and-control unit, with which Ersa heralds a new era in reflow soldering



Convincingly clear operating concept: With only one on/off switch and three LEDs, the intuitive operating concept of the i-CON TRACE clearly differs from other industrial stations



Let's get virtual: At the touch of a button, visitors to the Ersä booth were able to find out about the entire Ersä product portfolio by means of a VR presentation



Long-standing business partners based on trust: representatives of Christian Koenen GmbH, technology leader in the manufacture of precision tools for technical printing, and Kurtz Ersä CEO Rainer Kurtz (mi.)



A welcome visitor at our booth: Günter Lauber, CEO of ASM Assembly Systems, at the gift handover with Rainer Kurtz



Successful conclusion for the Ersä anniversary trade fair: In Munich's Wappensaal, the Ersä team celebrates together with representatives and customers in 2G-plus format

But also the increasing digitization and networking is taken into account with a broad service portfolio. With the I4.0 approach "Kurtz Ersä Connect", customers are offered a smart solution via which services, machines and production can be centrally networked and controlled.

Current trends mapped on the system side

The performance show at the trade fair was rounded off by an automation system plus ROBOPLACE station, which presented a modular system with various transport/handling modules as well as manual or in-line workstations. In addition, customers and visitors could enter virtual worlds and learn about a VR presentation with the digital 3D experience of all Ersä products at the touch of a button. "Kurtz Ersä's appearance at Productronica has once again proven that our products and solutions fully serve current trends such as 5G communication or electromobility and meet the needs of our customers across the board – many thanks at this point to our customers and interested parties for the fantastic reception," said Ersä CEO Ralph Knecht.



THE MISSING LINK



Best connected: The i-CON TRACE finally closes the gap in terms of traceability for hand soldering in industrial electronics production. The latest Ersa soldering station convinces with a unique operating concept, best performance and low running costs

Ersa i-CON TRACE

Finally complete traceability in manual soldering!

With the i-CON TRACE, Ersa presents the world's first IoT soldering station that enables seamless traceability during manual soldering. With integrated WLAN, Bluetooth and network card on board, the i-CON TRACE already offers 100% connectivity in digitally networked manufacturing processes when delivered. This means that tasks that previously could only be reworked by machine can now be processed by

hand. Every single soldering process is recorded and documented electronically: Circuit board, component to be processed, soldering tip used, process temperature, soldering duration.

Unlike before, the i-CON TRACE software does not have to be installed on each station, but is available as a download and only needs to be installed once on the customer's server. Once a soldering station is

integrated into the company network, all authorized terminals can access it via web browser. Specific soldering tasks can be assigned centrally to each soldering station – via MES, PC or mobile device. All essential parameters are preset centrally so that each workpiece is soldered according to its exact specifications. The operator concentrates on soldering, and the susceptibility to errors is reduced. Device manage-

ment also becomes much easier: firmware updates, calibration intervals, soldering tip wear – everything remains in view thanks to connectivity and can be adjusted centrally.

The possible MES connection allows the integration and storage of soldering parameters used in complex, networked manufacturing processes that already run via an MES. Thus, a recording of the entire soldering task can already be downloaded via a desired file format and stored in a higher-level control system. Real-time communication between the soldering stations in production and the customer's MES is also possible via gateway. Via a mobile app, the i-CON TRACE can also be used like a conventional stand-alone soldering station without being connected to the company network.

Easy to operate via on/off switch

With an on/off switch and three LEDs, the i-CON TRACE operating concept is clearly different from other industrial soldering stations. The user initially scans the assembly, soldering tip used, solder wire and flux. This way, the system "knows" that all conditions for the assigned soldering task are met. The LED interface literally gives the user the green light as soon as the pre-defined temperature at the soldering tip is reached. This ensures that each solder joint is soldered with exact temperature and suitable material. Any malfunctions (e.g. incorrect soldering tip) are detected by the system and reported to the operator. Only when all parameters are correct, soldering can be performed.

The i-CON TRACE impresses with maximum performance and minimum operating costs. With 150 watts of power, it heats up quickly, reheats even faster and can be controlled extremely precisely. Proven technologies have been further developed – the heating element and soldering tip can still be changed separately without sacrificing soldering performance. By changing the soldering tips independently of the heating element, each wear part only needs to be replaced when it is really necessary. The patented Tip'n'Turn concept of the matching i-CON TRACE soldering tips all-

ows tips to be changed in record time and without the risk of burns. Each soldering tip has a bayonet lock which, in conjunction with the multifunctional storage stand, allows a safe change. To do this, the soldering iron including tip only needs to be placed in one of the openings provided for this purpose and rotated by approx. 10°. The powerful soldering iron itself delivers the energy to the soldering point with pinpoint accuracy using the soldering tips, which have been redesigned from the ground up. The i-CON TRACE soldering station closes the gap in terms of Industry 4.0 and traceability in industrial electronics production – as a "missing link", it now also enables complete traceability in the manual soldering process. With a unique software concept and intuitive user interface, the manual soldering process is safer than ever before!



The LED interface gives the green light and the user can start the soldering process



Ersa Tip'n'Turn allows tips to be changed in record time



Rainforest Edition



Premium Performance. Minimum Cost.

Sustainably into the future.

On the occasion of our 100th anniversary, we are donating the proceeds of the "Rainforest Edition", which is limited to 300 i-CON TRACE® stations, to a sustainable rainforest project run by a large international aid organization.

www.i-con-trace.com

THE ONE. FOR EVERYONE.

VERSAFLOW ONE – The new entry into VERSAFLOW selective soldering excellence.



Set up, switch on, solder. Optimum selective soldering could not be faster or easier. Despite compact dimensions and a particularly attractive price, the user of the VERSAFLOW ONE does not need to compromise on quality and throughput.

As a system supplier to electronics manufacturing, Ersas has long been the undisputed technology leader in inline selective soldering. The VERSAFLOW ONE now complements the Ersas range of inline selective soldering machines as an entry-level model. It incorporates decades of know-how in the form of proven hardware and intuitive software (ERSASOFT 5). Set up, switch on, solder – optimal selective soldering could not be faster or easier. With the highest demands on quality, throughput and ease of maintenance. In addition, the VERSAFLOW ONE scores with the highest availability worldwide and a delivery time of about two to four weeks.

QUINTESSENCE OF SELECTIVE SOLDERING

When developing the VERSAFLOW ONE, Ersas developers focused on the requirements that most customers need for successful selective soldering. This resulted in the smallest VERSAFLOW, which consistently focuses on productivity and cost-effectiveness. With its flexible configuration, it offers direct access to more quality, performance, variability as well as global Ersas support. Sustainability played a key role in the selection of components and materials – as it does in all Kurtz Ersas development departments. The group aims

to become CO₂ neutral in all business areas and across the entire supply chain by 2029. With this approach, the Ersas VERSAFLOW ONE received improved heating in the cross profile, which reduced the machine's power requirements by 10 %. The VERSAFLOW ONE is available with one or two soldering modules and has thousandfold proven Ersas quality on board – such as automatic nozzle activation, process camera or IR bottom heating. A special added value is the x-variability variant (2-stopper solution optionally available), which significantly increases throughput – a unique feature in the entry-level class. With fast setup and intuitive operation, the VERSAFLOW ONE further increases the productivity and profitability of any electronics production!

Kurtz Ers establishes 100 % subsidiary in India

With “Kurtz Ers India – Smart Production Technologies Private Limited”, the tenth international subsidiary of the Kurtz Ers Group was launched on 01.08.2021.

Headquarters of the Indian subsidiary is Bangalore, where a perfectly equipped Demo Center with Ers high-tech soldering systems is also available. “We are very pleased to celebrate the opening of the Indian subsidiary in the year of Ers GmbH’s 100th anniversary. This reflects the importance of India in our global expansion plans and marks a new chapter in the partnership between German technology and Indian entrepreneurship,” said Rainer Krauss, Ers General Sales Manager and CEO of Kurtz Ers India, on the opening of the Indian office. Kurtz Ers has been represented on the Indian subcontinent for almost 35 years by its partner Bergen Associates. More than 150 employees are spread across the country to support Indian electronics manufacturing. Forecasts predict high double-digit growth for the Indian market and electronics manufacturing in the coming years.



**FACTORY
OF THE YEAR**

SV Veranstaltungen KEARNEY

GEO Global Excellence Award goes to Kurtz Ers

Agile and lean – the new process landscape at Ers. We won the GEO Award when participating in the industry competition “Factory of the Year”. This award is one of the most coveted awards for European companies and confirms our high operational excellence across the entire value chain.

In a multi-stage selection process, the entire value chain and high value generation in the processes were evaluated. The final stage involved a corporate audit led by management consultants Kearney. The jury, consisting of renowned experts from industry and science, selected Kurtz Ers as the winner of the special award “GEO Award – Global Excellence in Operations 2021”. In addition to the holistic approach, the jurors particularly appreciated the results achieved in the areas of “Digitization”, “Processes & Products”, “Performance” and “People & Spirit”. A nice prize for all involved and an incentive to become even better in the future!





Ernst Sachs (left) in 1922 as a participant at the Spring Fair in Leipzig

YESTERDAY, TOMORROW AND *BEYOND!*
YESTERDAY, TOMORROW AND **BEYOND!**
YESTERDAY, TOMORROW AND *BEYOND!*

From the beginnings to today: Smart solutions for electronics production – from Wertheim around the world

It is hard to imagine electronics production without Ersa. 100 years ago, Ernst Sachs brought industrial soldering to life with the first electric soldering iron. November 18, 2021, marked the anniversary of the company's founding – and coincided with Productronica 2021. With "100 Years of Ersa", the view goes back to a century in which Ersa continuously fueled an entire industry with innovations – and into the future, where pioneering achievements of yesterday merge with the megatrends of today and tomorrow.

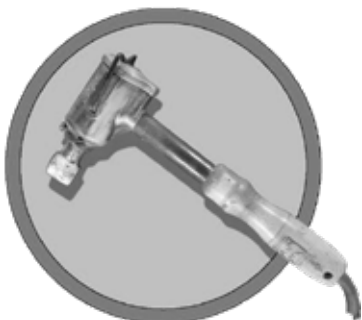
When Ernst Sachs applied for a patent for the first electric soldering iron on July 08, 1921, and founded his company Ersa in Berlin on November 18, 1921, major electrical pioneers such as Siemens and Bosch had already been active for years. In the early years, business was good with the H1 soldering iron. Fundamental inventions of the time, such as the grounding contact plug, promoted the international distribution of Ersa standard soldering irons. With the new start in Wertheim after the end of the Second World War, the pace of innovation picked up: in 1947, the original version of the Ersa 30 soldering iron was presented in Hanover, followed in the 1950s by power set soldering irons.

The economic upswing of the post-war period was linked to an increasing demand for consumer electronics. In the early 1950s, demand was so great that manual assembly reached its limits. In this situation, the industry remembered Paul Eisler, who had already applied for a patent for

the printed circuit board in 1943. Its introduction into electronics production in the 1950s made it possible to manufacture electronic assemblies in high volumes. The soldering of wired components continued to be done manually. However, as the number of components on the assemblies increased, the manual soldering process became too time-consuming.

Revolution in electronics production

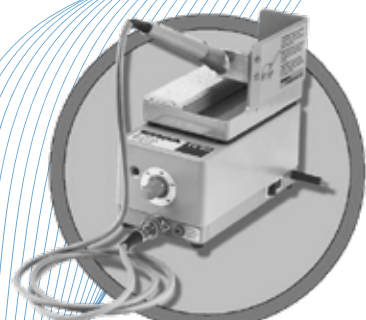
This challenge was solved by the English company Fry's Metals Ltd by inventing the solder wave in 1955, which received a patent in 1958 and enabled economical mass production of PCBs. Based on this technology, companies such as Grundig, Saba and Nordmende designed their equipment for assembly line production. Ersa recognized the potential of this development and in 1961 included Fry's-Metals soldering systems in its sales, and in 1968 began to develop its own Ersa soldering systems. ▶



Legendary: the first soldering iron from Ersa – the H1



Ersa TC 70: first temperature-controlled hand soldering iron (1971)



Ersa TE 50 soldering station



HR 600 XL: With an active heating area of 625 x 625 mm and a processable PCB thickness of up to 10 mm, professional repair succeeds on XL boards

The i-CON TRACE is the first fully networked soldering station worldwide



► In the history of wave development, Ersas has set many innovations – automatic transport systems, double wave soldering units, program-controlled soldering systems and soldering under inert gas atmosphere are just a few of them. Formats up to 600 x 850 mm are processed on today's Ersas wave soldering systems. In manual soldering technology, products such as the temperature-controlled Ersas TC 70 and the electronically controlled TE 50 soldering station followed in the early 1970s.

SMT heralds electronics miniaturization

Surface mount technology heralded a further upheaval in electronics manufacturing in the 1980s. This marked the beginning of the successful miniaturization of electronic devices that we encounter everywhere today. With the dynamic development in the field of SMDs (Surface Mount Devices), wave soldering quickly reached its limits, so Ersas focused on new SMT manufacturing technologies and the development of reflow soldering systems – the first Ersas ERS reflow generation was launched in 1986. Increasing demands led to the introduction of HOTFLOW full convection soldering systems in 1993.

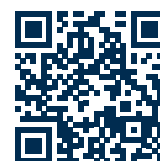
In the Tools range, further soldering stations with internally heated, exchangeable soldering tips, sensor-based temperature measurement and control were developed at this time. Increasingly, the Tools application area was expanded – away from pure production tools to tools for development and prototype construction, rework and service. Around the

turn of the millennium, Ersas established new product branches with the optical inspection of hidden solder joints and rework technology for BGA repair. Today's Ersas rework systems reliably achieve reproducible quality – whether for the smallest 01005 chips or automatic repair of complex assemblies up to 625 x 625 mm. Europe experienced a technology boost from 2006 with soldering stations due to the introduction of lead-free solders: Ersas responded to the increasing heat requirements of solder joints with the i-CON soldering station and the 150 watt i-TOOL including a connectable heating plate.

On the machine side, the product range grew in 2007 with the VERSAPRINT, the first generation of stencil printer – followed ten years later by the VERSAPRINT 2, the only printer in the industry with integrated 100 % inspection in 2D or 3D (on the ULTRA³ type).

Selective innovation push

In the 1990s, wired components had to continue to be soldered onto already reflow soldered assemblies – this gave rise to VERSAFLOW technology from 1996 onwards, which advanced to become the world's leading technology. In September 2021, the 1,500th system was delivered to the customer. The Ersas Spirit – with a dedicated team that puts the customer at the center of everything it does – creates the basis for a sustainable, innovation-driven future. **Yesterday, Tomorrow and Beyond.**



With the HOTFLOW THREE, Ersas established a new era in reflow soldering



TECHNOLOGIES FOR THE FUTURE OF ELECTRONICS PRODUCTION

Which technologies will be particularly significant in electronics production in the future and how can companies prepare for them now? This was the central question of the Technology Day organized by Ersas together with its Austrian industrial representative Stepan GmbH in Linz at the end of September. In various contributions, Ersas presented its solutions for power electronics requirements and applications such as 5G, e-mobility, LED lighting or high-current technology – in addition to void-free vacuum soldering and highly flexible selective soldering, also possible uses of press-fit

technology for high-current applications as well as normal connectors. The opportunities opened up by the use of additive manufacturing, another subdivision of the Kurtz Ersas Group, were demonstrated by Automotive Product Manager Clemens Frenzel. Metallic 3D printing can be used to produce the most complex structures with the greatest geometric freedom and using numerous metal materials without the need for tools. The program was complemented by the presentation "Nitrogen Systems 5.0" by Imatec Gase Technologie GmbH. Ersas General Sales Manager Rainer

Krauss thanked the long-standing partner for the first-class organization and is already looking forward to the continuation of the event series with his team.



BUNA ZIUĂ DIN ROMÂNIA – TECH DAYS IN TIMIȘOARA

Romania's third largest city, which is also home to the headquarters of long-time Ersas partner EEE SA, hosted the "Seminar of Technology in Electronics" on September 21 and 22. The 120 participants were looking forward to top-class lectures and exciting hands-on sessions covering all process steps of electronics manufacturing. Ersas dived into the world of soldering together with them – from selective, wave and reflow soldering machines to auto-

mation solutions and rework systems to modern and efficient soldering stations, questions about various configuration options were answered in detail in personal discussions directly at the equipment. Besides a VERSAFLOW 4/55 selective soldering system, two rework systems as well as a fully equipped manual soldering workstation around the i-CON VARIO 4 station were present. The participating business partners Fritsch, Linde, Schnaidt and Tamura

Elsold rounded off the successful event with their contributions.

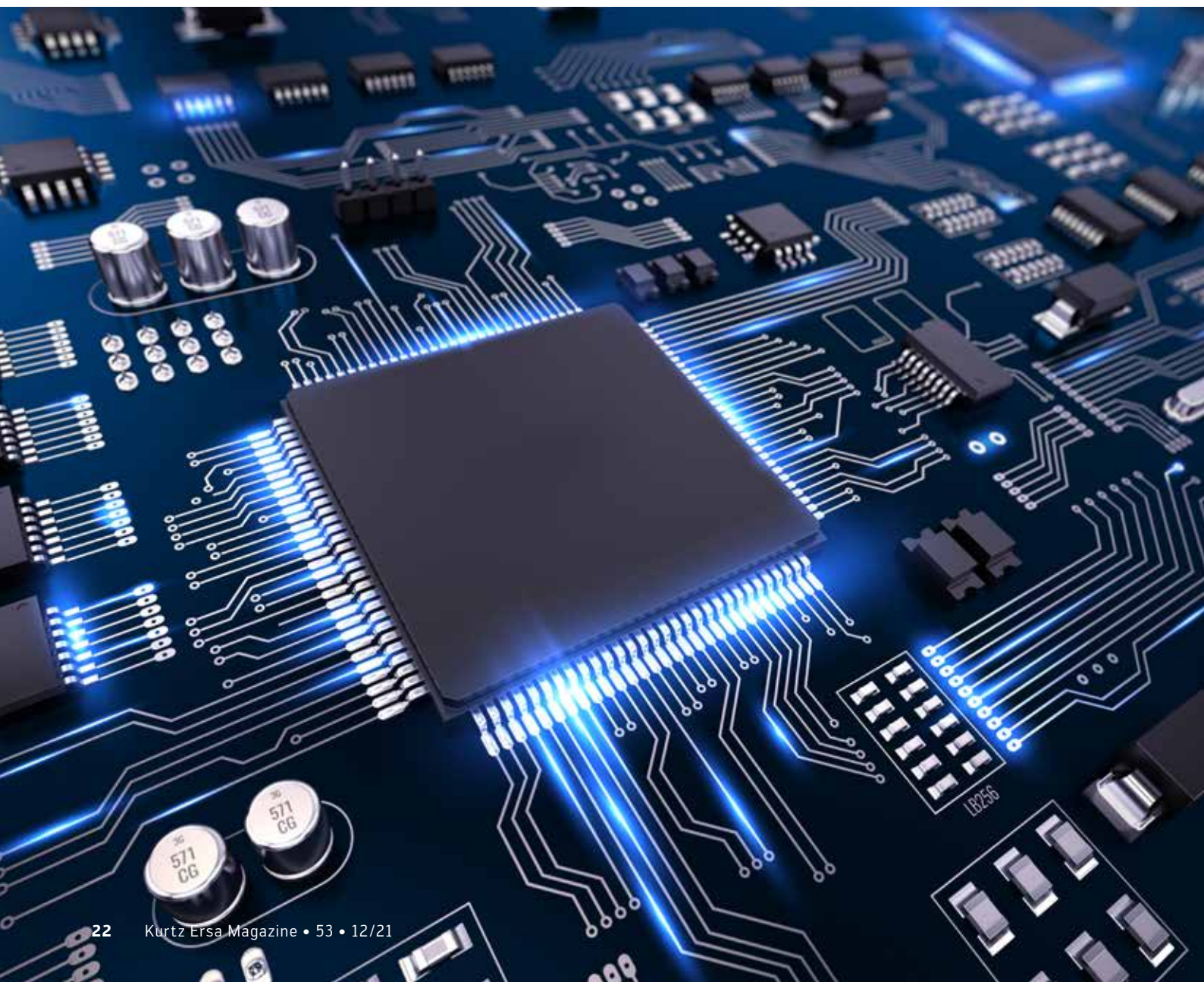


Symposium „Soldering in Electronics Production”

Soft soldering continues to be the most important joining technology in the production of electronic assemblies. This is due to the special electrical, thermal and mechanical properties of soft solder joints. Over two days, the specialist conference on electronics production at the Erska Wertheim site imparted comprehensive basic knowledge on manufacturing technologies for soft soldering. In order to always achieve the highest quality at the lowest cost in electronics production,

trends and developments in materials and processes must be included in addition to basic principles. Therefore, the two-day symposium “Soldering in Electronics Production” in mid-October covered all relevant boundary conditions of the soft soldering process. For the first time, the event was held at the Erska Seminar Center in Wertheim and was jointly organized by several companies – naturally in compliance with a comprehensive hygiene concept.

In Cooperation with:





Specialist conference "Soldering in Electronics Production" at the Erska Seminar Center in Wertheim am Main



Dr. Hans Bell (right) and Dipl.-Ing. Ralf Schmidt from the Fraunhofer Institute for Reliability and Microintegration (IZM)



The breaks during the symposium were also used for the exchange of experiences on both sides

More than 60 participants from the DACH region were looking forward to a densely packed program. As moderator and long-time expert in packaging technology, Dr. Hans Bell introduced the topic of soldering technology. In doing so, he highlighted trends and distinguished soft soldering from other areas. Günter Grossmann (EMPA) addressed the basic knowledge of materials technology, the mechanisms of the soldering process and the properties of different solders in "Fundamentals of Soft Soldering".

The theoretical content was underlined with experiments. The technical lecture "Properties of solder pastes and fluxes" by Manu Noe Vaidya (Heraeus) focused on the structure and modes of action of solder pastes and fluxes and explained areas of application including the reliability of solder alloys.

Ralph Fiehler (KSG) spoke on "Properties of base materials", highlighting in particular solder heat resistance, delamination, torsion and warpage, and solder resist. He also contrasted drying with tempering with regard to the storage of base materials. In his presentation, Kurt-Jürgen Lang (Osram) discussed the solderability of electronic components as well as their solder heat resistance and moisture classification. He

also discussed trends in IC packages and passive components as well as special features of QFN soldering. Ralf Schmidt (Fraunhofer IZM) dealt with the layer structure and properties of different PCB surfaces, process reliability and risk factors in "Characterization of PCB surfaces" and

concluded with an outlook on new surfaces in the electronics industry.

The second day dealt with soldering processes of soft soldering and stencil printing. Harald Grumm (Ersa) discussed fundamentals and requirements for materials and equipment and gave a future outlook on stencil printing applications in terms of new technologies. Dr. Hans Bell completed the SMT line manufacturing processes with "Reflow Soldering", focusing on challenges and trends. Using temperature profiles, he demonstrated measurable process windows in reflow soldering.

The THT soldering section was opened by Jürgen Friedrich (Ersa) with presentations on wave and selective soldering, covering fundamentals, trends and differences in

the processes – as well as process limits, influences on assembly design, soldering defects and how these can be eliminated. Dr. Thomas Ahrens (Trainalytics) looked at metallurgy in "Hand and Repair Soldering", describing process windows, associated process optimization and the aspect of

heat stress. Finally, in the technical lecture "Reliability of lead-free solder joints" by Günter Grossmann (EMPA), the deformation of soft solders, degradation mechanisms and the reliability of solders were dealt with

intensively and in descriptive experiments. The subsequent discussion rounds after the respective lectures always resulted in a lively dialog. During the evening social program at the hammer mill and a dinner on the Erska roof terrace, the exchange was continued and intensified.

All aspects of soft soldering

Interested in the 2022 symposium?

New impulses. Additional expertise. Program expansion. Secure your place on the list of interested parties today – you will then be the first to find out everything important about the 2022 date; please send any questions to Laura.Schulz@kurtzersa.de or call +49 9342 800-261.



Trainings, seminars and trainings – the comprehensive Erska training program covers all areas of soldering soldering in theory and practice.



An aerial photograph of a lush green forest. A dark, winding river or stream flows through the center of the image, surrounded by dense, vibrant green trees. The text is overlaid on the top portion of the image.

**50 YEARS
KURTZ
FOAM**

Sustainable Foams

50 YEARS KURTZ PARTICLE FOAM MACHINES

A sustainable journey through time.

On December 19, 1971, the first EPS moulding machine left the Kurtz Maschinenfabrik. A good 50 years later, more than 7,000 particle foam machines are to the credit of the market and technology leader from Kreuzwertheim. Kurtz Ersa Magazine had the opportunity to talk to Harald Sommer, former General Manager Kurtz Protective Solutions, about “50 years of Particle Foam Machines”. » » »



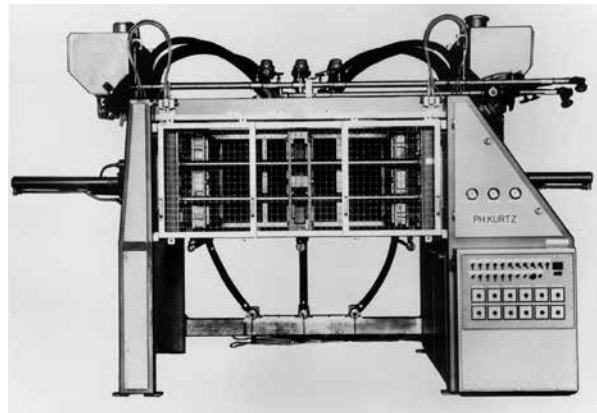
A lifetime of professional activity for Kurtz GmbH: Harald Sommer (left) with Kurtz Managing Director Uwe Rothaug

Of the 50 years of particle foam machines, you have been with the company for a proud 47 years. What distinguishes the sales work today from the past?

Harald Sommer: Clearly, speed and complexity have changed dramatically compared to the 1970s. Back then, there were many small family businesses that were active regionally, perhaps even nationwide. Today, the Internet, WhatsApp and video calls are the new communication tools. This fits in with our global business as a pure machine builder with an export share of over 80 percent. Of course, in international business it is also extremely important to have a local presence with branches and representatives and to support customers in their own language.

What were the milestones?

Harald Sommer: After initial positioning, the company moved relatively quickly to nearby foreign countries – France, the Netherlands and the UK. The absolute milestone was, of course, to see how an idea sketch turned into a project and finally the first 610D EPS moulding machine developed and built in Germany on the test stand. "D" stood for Duo Machine, which had two forming surfaces and thus delivered double productivity. 7,000 installed EPS/EPP lines have now descended from this first. That is impressive in itself. Other important milestones were the development of transfer machines and, in the early 1980s, our pre-expanders and block moulds. Another milestone was the use



With Johann Friedrich Jegelka, the construction of machines for the processing of expandable polystyrene began at Kurtz in 1970. At the end of 1971 the first Kurtz moulding machine (type 610D) was delivered

of vacuum technology in the manufacturing process.
How have markets shifted over the years?

Harald Sommer: In 1983, we started building block moulds, and one year later Kurtz North America (now Kurtz Ersä, Inc.) was established in Plymouth as the first overseas subsidiary. As the founder of the EPS machinery industry, the expansion of the target market Europe to include North America was an important strategic step, which was followed by others – such as the establishment of Kurtz Far East in 1987, further international subsidiaries and Kurtz Zhuhai Manufacturing in China in 2003.

Is it too much to call Kurtz a cradle of patents?

Harald Sommer: Particle foams were and are materials with many positive properties – to name just two: They are lightweight and provide excellent insulation. Characteristics that have led to worldwide use. Of course, you have to look at this holistically in terms of a circular economy. Our machines are the result of ongoing research and development to continuously make our systems even better. Our current systems have long been developed on a resource-saving and energy-efficient basis, for example to process recyclable or biodegradable materials. With patented processes such as LTH technology (low-temperature foaming, 1993), Kurtz finally made a name for itself as an innovation driver in the industry, with which energy requirements in EPS production could be reduced by up to 70 percent. This



On the way to becoming a global player – Walter Kurtz and Erich Streichsbier and the Asian colleagues in Hong Kong, where in 1988 the branch office Kurtz Far East was founded

was very well received by white goods manufacturers, where we equipped entire factories with it. Most recently, the revolutionary RF technology for particle foaming with radio frequency caused a sensation, enabling potential savings of natural resources and 70% less CO₂ emissions.

Do turnkey projects play a significant role?

Harald Sommer: Increasingly, we have not only built good machines, but have also developed more and more a comprehensive approach as a general contractor, through which we provide our customers with holistic support – including, for example, energy supply, factory layout and materials management. Over the years, Kurtz has made a name for itself as a complete solution provider and stands for well thought-out concepts and quickly implemented turnkey projects.

What is Kurtz doing to convince its customers of sustainable technologies?

Harald Sommer: We all live with the need to jump on the “green wave” – everyone and anyone is called upon to make his or her contribution. For us, this means bringing “green” systems onto the market as far as possible. We are, of course, operating in the area of tension between politics and legislation, which in turn include climate protection movements in their considerations and decisions. Definitely, everything must be done against the rampant

plastic waste, so that future generations will find an environment worth living in. Kurtz is making sure of this with new technologies. Customer interest is high and the first projects have already been implemented, with many more to come.

Is it a burden to be the world market leader?

Harald Sommer: I would like to respond to this with an example: With our RF technology, we have succeeded in dramatically reducing water consumption. Considering that clean water is becoming one of the most important factors of the future, I think this is a good environmental protection measure that also benefits us as a company in terms of market opportunities and growth. Growth today only works from a sustainable point of view. RF’s revolutionary fusing process also allows us to process newly developed materials that are biodegradable and renewable. As the world market leader, you also have the chance to set the future path of the industry.

What trends can be observed?

Harald Sommer: Foams are the future. This makes the products lighter, provides excellent insulation, and very stable products can be manufactured with special designs. Nature provides many solutions here. With new technologies, we have also succeeded in creating top surfaces. In addition, foams are particularly resource-friendly due to their low weight.

With our particle foam machines, we enable innovative solutions in terms of lightweight construction, use of recycled materials, surface properties of moulded parts, resource-saving packaging design and in many other areas we have been an essential partner to industry over the past five decades and will continue to be so in the future.

ADDITIVE MANUFACTURING

DRIVEN BY KURTZ ERSA

Kurtz Ersä entered the world of additive manufacturing a little more than a year ago with the Alpha 140 and now already installed the prototype of its much bigger brother "Flying Ray". In August 2020, with the signing of the cooperation agreement between Kurtz Ersä and LMI, the foundation stone was laid for the products of the metal 3D printing in the Future Business division at Kurtz GmbH. The first product available was thus the best-price 3D metal printer Alpha 140.

Together with our colleagues from LMI, we have further developed this entry-level printer to an industry standard that enables customers – regardless of company size – to enter additive manufacturing at a competitive price. The interest of our existing and new contacts, who were reached via numerous advertising measures, was enormous. We were able to carry out countless test prints and hold numerous live and online demos. Everyone was and is consistently enthusiastic about the possibilities of additive manufacturing, the cost-effective

entry-level option and the easy handling of our Alpha 140 with the usual 100% Kurtz Ersä industrial quality. In addition to our in-house showroom, interested parties also have the opportunity to experience the Alpha 140 live in operation at LMI in Aachen.

Our foreign colleagues at the Kurtz Ersä, Inc. plants in the USA and Kurtz Ersä Asia in China have also recently received an Alpha 140 and now have corresponding demo areas. This means that we are always available locally for our customers and inte-

rested parties at the same time and in the same language.



LMI Showroom in Aachen

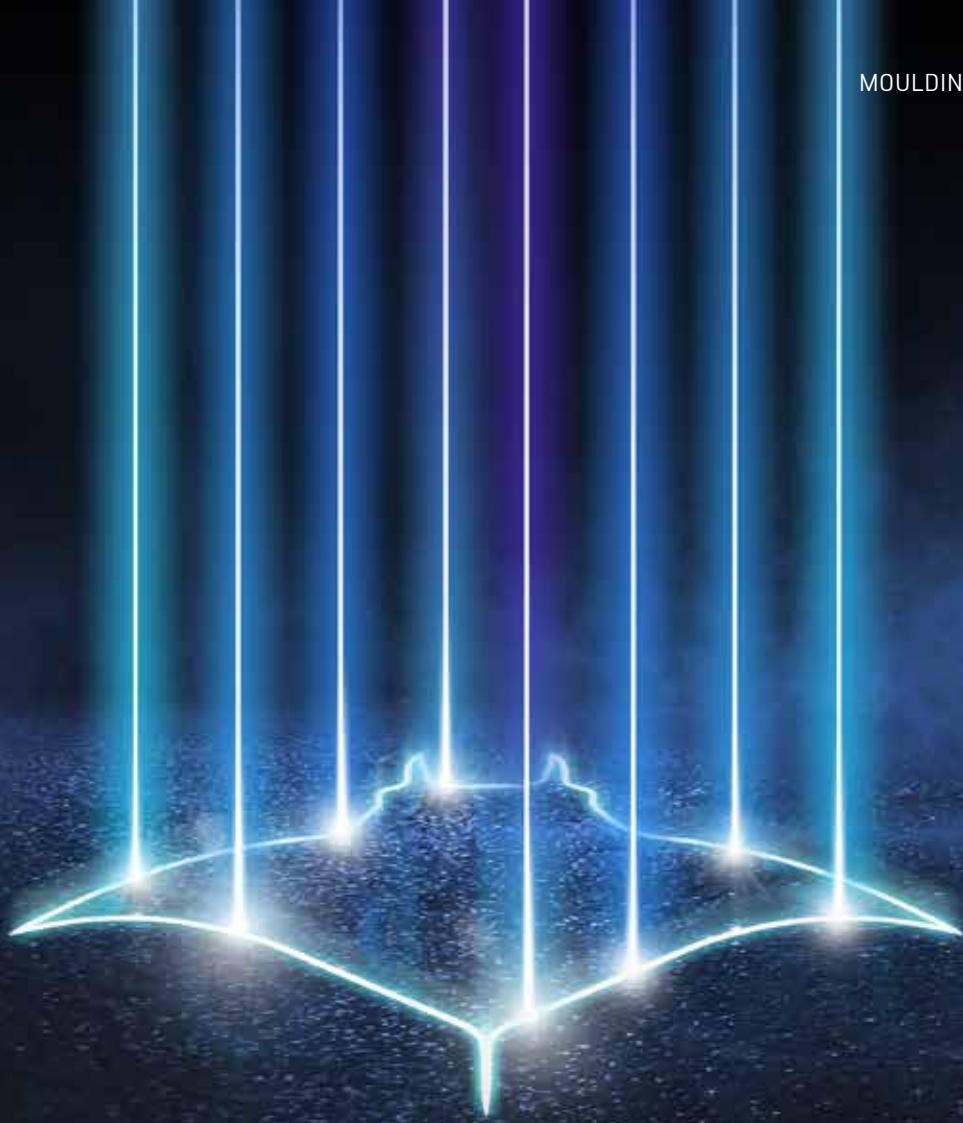


PLUG'N'PRODUCE. 

Alpha 140 goes America

Immediately after announcing our cooperation with LMI and thus our entry into additive manufacturing, our long-time friend, partner and customer Versevo Inc. from the USA (Hartland, Wisconsin) showed great interest in our Alpha 140 and its possibilities. With an ongoing commitment to always be at the forefront of technology and provide value to customers, we were able to quickly convince Versevo of our Alpha 140, and we received the order in June 2021. After just under four months, including sea trans-

port, the Alpha 140 reached its destination in the USA, where it was installed and commissioned in line with its simple plug'n'produce concept. This means that nothing stands in the way of generative and bionic components for Versevo's customers, and Versevo can now take advantage of the almost unlimited possibilities of metallic 3D metal printing. Have fun and success with our Alpha 140!



Flying Ray – Next Level of Metallic 3D Metal Printing

Parallel to the launch of the Alpha 140, the development of the revolutionary 3D multi-head printer "Flying Ray" was in full swing: With installation space dimensions of 1,500 x 1,000 mm and an installation height of 500 mm – an installation volume 240 times larger (!!!) than that of the Alpha 140 and so far not even remotely available on the market – the Flying Ray will set new standards in the industrialization of additive manufacturing in the metallic sector. The highly innovative and disruptive process concept, which is fundamentally based on the laser powder bed fusion (LPBF) pro-

cess, has already been evaluated by means of an assembly prototype and is now being tested in a machine prototype under real conditions. In mid-November, we were able to present the concept, the current status and the further planning of the Flying Ray at the 3D industry trade show Formnext in Frankfurt am Main – the feedback was overwhelming: All interlocutors definitely want to be among the first in the first quarter of 2022, when the functionality of the multi-head system will be presented at demo shows at the Kurtz Development Center ETC in Kreuzwertheim.



The mode of operation of the "flying ray" in the model (from left to right): impingement of the beam, general view, swivel arms with cast part

Kurtz by far the best choice

Low-pressure on the rise in Turkey.

This year the two strong partners Kurtz and Korkmaz Çelik completed a joint low-pressure die casting project with the Turkish supplier Altun Döküm Sanayi A.Ş. With an annual casting capacity of 1,800 t of aluminum, the contract foundry processes numerous alloys using gravity, high-pressure and low-pressure casting processes. How Altun Döküm was able to further increase product quality with low-pressure casting is reported in an interview with Kenan Pulat, Assistant Production Manager at Altun Döküm.

About the interviewee



Born in 1988, Kenan Pulat completed his bachelor's degree in casting technologies at Gazi University in Ankara. Kenan is Assistant Production Manager at Altun Döküm Sanayi A.Ş. He is responsible for the cast part production. Since 2011, Kenan has been an integral part of Altun Döküm's production and became an expert in the field of low-pressure die casting.

Kurtz: How and when did you make first contact with Kurtz and Korkmaz Çelik?

K. Pulat: We met at the GIFA fair in 2019. Some of my colleagues and I met at the Kurtz booth and got in-depth technology and machine information. We kept in live-ly contact, Korkmaz Çelik took care of the communication in our mother tongue and supported us in technical topics.

Kurtz: How did the collaboration with Kurtz begin?

K. Pulat: We have been producing by low-pressure die casting (LPDC) method for many years. Machines that we use are mostly outdated technology. New parts requests coming from our clients directed us to use newer technological systems. That is why we travelled to GIFA fair. Kurtz Foundry Machines convinced us the most. Kurtz technologies are state of the art, have great references and are the most powerful on the market. We need a very flexible casting machine to produce our wide range of products at Altun Döküm.

Kurtz: What equipment did the machine need to bring?

K. Pulat: We explained the Korkmaz Çelik team our present and future projects. Besi-

des the parts in metal die, with and without sand cores, we also need to cast complete core packages in low-pressure. We asked for a machine which can do both processes, metal die and sand core in one machine, which is not usual at all. Our projects have high quality requirements, lot sizes are mostly low. We are casting high weight products up to 700 kg and very light products up to 0.2 kg. According to our projects, the Kurtz team determined the machine's requirements.

Kurtz: Which machine did you order?

K. Pulat: We decided for Kurtz low-pressure machine, tailor-made for our needs. This is the first Kurtz Foundry Machine which is of shuttle type system, perfectly suited for changeable crucible furnace. We have to use many different kinds of alloys. Therefore a changeable furnace is a big advantage. We bought two 900 kg furnaces with different kind of alloys or for highly efficient casting, which means high quantity. One furnace can cast, and one furnace can be prepared with new material in parallel outside of the machine. We change the furnace with a crane. Kurtz convinced us with their cooling technology and the accuracy of the Kurtz low-pressure control system. Based on that, we can cast structural parts, massive parts, and hollow parts. All we need to

cast as a jobbing foundry. We are able to change dies fast and can store all the casting recipes on the machine. That means we are able to change from one product to another in a very short time.

Kurtz: *How did the following project handling work out?*

K. Pulat: There is an extremely professional manner at Kurtz starting from the specifying of machine's requirements to the bid, layout plan, pre-acceptance procedure, shipping, installation, and training. We haven't had any problems, even though we had the pandemic situation and a lot of restrictions due to it.

Kurtz: *Service staff is sometimes traveling longer distances. In your case the service team from Kurtz Ost in Russia was involved ...*

K. Pulat: The Russian team was planned and organized with the Altun Döküm team. The installation was completed on time and tests were conducted successfully. The worldwide Kurtz Ersä network is working very well. The teams are working hand in hand.

Kurtz: *What about the machine service and the process support?*

K. Pulat: We are completely satisfied. The Kurtz team solved all possible and unforeseen problems after and before the installation on the field. Remote control was helpful for us because we wanted to have additional software features afterwards which could be handled via the remote control system.

Kurtz: *Are there already any follow-up projects planned?*

K. Pulat: Our first goal is increasing capacity of casting in terms of tonnage and improve our casting abilities. But Kurtz will surely be the first choice for our new projects.

Über Altun Döküm



Altun Döküm was founded in 1977 by Ahmet Altun and Mehmet Altun as foundry and machining company, and is located in Konya, a city in the south of Ankara in the region of Central Anatolia. 95 people are currently working in production or administration. In 2016, the company moved into a new factory with 20,000 m² of production and office area.



Assistant Production Manager Kenan Pulat (left) with Managing Director Ahmet Altun in front of the new Kurtz LPDC machine



First Kurtz Machine Proudly Assembled in the USA goes to Huntington Solutions!

With new challenges for suppliers and customers as a result of the 2020 and 2021 world's supply chain and logistics adversities, Kurtz Ersä, Inc. has set a newly welcomed precedent by building the first ever A-LINE model at the Plymouth Wisconsin, KEI production hall, with plans to continue assembling locally. Beside the pandemic related impacts, the "Built in America" bonus as well as our sustainability goals made it clear that we should build these machines locally to better support our EPS customers.



Benjamín Raygoza,
Chief Operating Officer of
Huntington Solutions

During the month of August, KEI's Kurtz technicians worked diligently on assembling the very first A-LINE L in our 22,500 square foot production hall which previously was utilized by rebuilding used equipment only. With the support of our cutting edge, robust design by our German engineering team, not only did this dynamic team successfully assemble Huntington Solutions' newest A-LINE L in about a month's time, they also organized and prepared the production facility to streamline future assemblies.

"The vision of Kurtz Ersä, Inc. in the particle foam business division is to provide a local USA made machinery that fulfills our customer needs while providing an exceptional service and an unbeatable delivery time," said Marcelino Espelós, Corporate Manager, Particle Foam Business (Americas).

Founded in 1992, Huntington Solutions became a leading producer of custom shape moulded foam products and packaging. Recently acquired by Wynnchurch Capital, the company merged with Drew Foam and ICA to create Foam Holdings, one of the largest foam applications producers (EPS – EPP – ARCEL – EPE and others) in North America. The newly created company is headquartered in Nashville, Tennessee with 12 facilities across the US and Mexico. The company's leadership and top management team has trusted Kurtz Ersä as a key supplier through the years in multiple projects.

"Kurtz has been a partner for Huntington Solutions since our beginning almost 30 years ago, and we rely on them to supply a large portion of our process equipment needs. We value the quality, reliability, in-



From left to right: Ben Wiebe, Eric Klemme, Albrecht Beck (KEI's President and COO), Michael Ritterling and Tyler Atkinson pictured in front of their first ever USA assembled A-Line L

novation and exceptional service they have provided through the years; we are excited to be part of this moment in the history of Kurtz North America, as they have decided to start assembling equipment in the US. Our industry is growing in a complicated environment with several challenges and having a partner betting on the future of our business with actions that will improve the support, response time and flexibility is really encouraging for us," describes Benjamín Raygoza, Chief Operating Officer of Huntington Solutions.

"We would like to thank Huntington Solutions for this fantastic opportunity and look forward to many more locally assembled machines in the future! As a global team, we celebrate this win together," said Albrecht Beck, KEI's President and COO.



BIG PARTS ARE BEAUTIFUL!

KURTZ T-LINE L PRODUCES OVERSIZED LOAD CARRIERS

Kurtz has been manufacturing moulding machines for 50 years. One model that has become an all-rounder over the years is the T-LINE. The Kurtz Moulding Machine can process both EPS and EPP up to 5 bar and produces moulded parts in high-end quality.

The Kurtz T-LINE has been delighting our customers for decades. In the size "L" like "Large" it comes up with a foaming area of up to 2.5 m². The areas of application of the T-LINE range from dual density foaming and in-mould skinning to skin moulding. With the shortest cycle times, low energy consumption, long maintenance intervals and optimum accessibility, the T-LINE is convincing all over the world – including Philippine GmbH & Co. Technische Kunststoffe KG, headquartered in Lahnstein (Germany), which offers a wide range of innovative products made of various plastics. As a supplier to the automotive industry, one of Philippine's main focuses is on applications made of expandable polypropylene (EPP), which

is used in motor vehicles. EPP particle foams are also used to produce specialty packaging, food transport containers and insulated boxes. The Kurtz T-LINE L meets Philippine's high production demands and ensures quality, maximum productivity and energy efficiency in the production of load carriers made of EPP, which impress with their high energy absorption and structural strength. At the same time, the foam has a very low weight and provides excellent insulation against heat or cold as well as noise. This makes EPP ideal for transport and lightweight construction. In addition, it has very good chemical resistance. In line with Kurtz's anniversary motto "50 Years of Sustainable Foams", EPP can be fully recycled.



Proudly holding an oversized load carrier in front of the new Kurtz machine, from left to right: Joachim Kempe, Managing Director Philippine GmbH & Co. Technische Kunststoffe KG, Stephan Gesuato, General Manager Protective Solutions Kurtz GmbH, and Axel Jansson, Production Manager EPP at Philippine

Oversized EPP load carriers

At Philippine in Lahnstein, large quantities of EPP load carriers with a unit weight of approx. 13 kg are produced on a Kurtz T-LINE L. The lids are also made of EPP. The associated lids are also produced from EPP with a unit weight of 8 kg on the Kurtz Moulding Machine. Such large EPP packaging is extremely rare on the market. In the load carriers, complete plastic rear doors are transported safely and reliably from the production plant to an assembly plant at a German vehicle manufacturer. For the production of the load carriers, Philippine needed a machine supplier whose systems were designed with great process and material know-how and which can produce such big-size parts – of course, technically flawless and reliably repeatable. Both are fulfilled by the Kurtz plant T-LINE L. Philippine's Managing Director Joachim Kempe summarizes: "Our automotive customer is extremely satisfied with the technical design and the quality of the EPP packaging. Thanks to the Kurtz line, we can manufacture highly complex components safely and profitably with motivated employees and modern machinery."



The company **Philippine GmbH & Co. Technische Kunststoffe KG** offers a wide range of innovative products made of plastics. It is part of the Philippine Saarpur group of companies and produces with 400 employees in the plants in Lahnstein (headquarters) and at the subsidiaries in Schkopau and Oroszlány in Hungary. With the help of its own development department, as well as its own toolmaking and modern production facilities, customers are supported from the conception phase to series delivery. The company is intensively involved in energy-saving lightweight construction concepts and attaches great importance to the energy-efficient production of safety components and comfort parts made of plastic for automobiles and other industrial applications. Mainly polyurethane foams (PU) and polypropylene particle foams (EPP) are processed.



Success product of Kurtz Protective Solutions: the Kurtz T-LINE

Robot assembling a PCB.
Once it has completed the
conversion, it releases the
next step itself via a release
switch



Human labor is still irreplaceable in many areas. The use of collaborative robots is always particularly useful when monotonous and repetitive tasks are involved. Another argument in favor of procuring and integrating a collaborative robot system (cobot) is the assumption of physically demanding tasks, such as moving heavy packages in the field of logistics over a longer period of time. Ergonomically unfavorable positions cannot harm a cobot. Back pain? A cobot does not know that! Another advantage of professionally installed cobot systems is their accessibility. Robots and humans work side by side in the same work area without the need for bulky and costly protective enclosures.

An industrial robot that works together with humans in electronics manufacturing was presented by Kurtz Ersa Automation at this year's leading global trade fair Pro-ductronica. Collaborative robots (cobots) very often come into play when it comes to automating processes and manufacturing equipment. An exemplary application scenario with a Fanuc CRX-10iA/L was shown by the Kurtz Ersa Automation team at the Ersa booth. With its lightweight, compact design, the CRX can be integrated into any workspace or existing system. A cobot can be trained within a few hours using a manually guided programming function. Often, a detailed task analysis shows that the sole use of a cobot does not lead to the desired success. Other features from the field of gripping technology, image processing and existing plant networking must be included

FASCINATION COLLABORATIVE ROBOTICS

Kurtz Ersa presents new cobot for electronics manufacturing

to ensure optimum integration. This was also the case with the trade show exhibit. The interest of the trade audience in the CRX was enormous. Known for its efficiency and unique flexibility, it received consistently positive feedback. When the Kurtz Ersa Automation booth team drew attention to further possible applications of cobots in manufacturing, discussions about installation in customized production environments were sparked and a creative stream of conceivable implementation solutions took its course.

Can you also imagine the use of a "Cobot Colleague" in your company?

The Kurtz Ersa Automation team will be happy to assist you with detailed task analysis, conceptual design, project planning, commissioning and testing.

Simply contact our team at
+49 9342 9636-0 or write to
automation@kurtzersa.de





Headquarters of the owner-managed family company Schiller Automation GmbH & Co. KG is Sonnenbühl in the North of the industrial region Neckar-Alb

KURTZ ERSA TAKES OVER SCHILLER AUTOMATION



Automation business unit to be further expanded

Kurtz Ersa and Schiller Automation GmbH & Co. KG will appear together on the market for automation solutions in the future.

Schiller Automation Managing Director Stefan Schiller informed the workforce on 23.11.2021 about the 100 % takeover by the Kurtz Ersa Group. Schiller Automation is a leading niche supplier for automation solutions in the automotive and electronics industry. Kurtz Ersa is thus continuing its strategy of providing sustainable production solutions for its customers with its three business units "Electronics Production Equipment", "Moulding Machines" and "Automation". "Thanks to Schiller Automation's excellent market position, existing know-how and many years of industrial experience, we are thus significantly developing our 'Automation' business unit," said Kurtz Ersa CEO Rainer Kurtz.

Schiller Automation was founded in 1978 and is today one of the leading suppliers of integrated automation, process and system solutions. The company focuses on assembly lines for the automotive industry and medical technology. Schiller Automation is particularly strong in the holistic approach to a wide variety of tasks – from the initial product idea to series production readiness. The focus is on engineering, manufacturing and assembly as well as commissioning of automation solutions – complemented by after sales and customer support services. The headquarters of the owner-managed family company with currently 160 employees is Sonnenbühl in the Neckar-Alb industrial region. "By becoming part of the Kurtz Ersa Group with its worldwide sales and service network and a long-term growth strategy, completely new growth opportunities and development possibilities are opening up for Schiller Automation in the Kurtz Ersa business segment 'Automa-

tion' – while at the same time providing security for the employees' jobs and the Sonnenbühl site," said Stefan Schiller.

Kurtz Ersa Automation is the central point of contact for automation competence in the Kurtz Ersa Group, which stands for holistic turnkey solutions, robust modular construction in the series business and innovative system integration. Dr. Michael Wenzel, Managing Director of Kurtz Ersa Automation, added: "With the acquisition of automation expert Schiller Automation, we are further expanding our portfolio of automation solutions and will continue to offer our customers the highest level of functionality, quality and on-time delivery."



Here's to good cooperation: Stefan Schiller, Managing Director Schiller Automation (right), and Dr. Michael Wenzel, Managing Director Kurtz Ersa Automation



Festive event in the Bernhard Hall of the Bronnbach Monastery – the Kurtz Ersen jubilarians with more than 25 years of service in the group picture with the Managing Directors and Works Council Chairmen of the Kurtz Ersen companies; from left: Joachim Kraft, Chairman of the Works Council of Kurtz GmbH and Kurtz Ersen Group; Uwe Rothaug, Managing Director of Kurtz GmbH; Eugen Jabs, Chairman of the Works Council of Kurtz Ersen Automation; Matthias Hofmann, Managing Director of Kurtz GmbH; jubilarian Conny Stöhr (25), Thomas Mühleck, CFO Kurtz Holding; jubilarians Samir Babaca (30), Barbara Böxler (35); Kurtz Ersen Automation Managing Director, Dr. Michael Wenzel; jubilarians Gerd Röttinger (25), Anita Dosch (25), Michael Schäfer (25), Walter Rüppel (50), Frank Bauer (25), Willi Hammerle (40), Michael Prokopp (25), Bernhard Brosch (25), Stefan Bachmann (30), Stefan Brauner (25); Christoph Löffler, Deputy Chairman of the Ersen Works Council; jubilarian Peter Aulbach (25), Ersen Managing Director Ralph Knecht and Kurtz Ersen CEO Rainer Kurtz

Kurtz Ersen honors 53 jubilarians in Bronnbach Monastery

After several attempts, the Kurtz Ersen jubilee ceremony took place in a new format on September 15 at the Bronnbach Monastery. Until now, the jubilarians were honored during the monthly information events, which, due to the pandemic, have only existed in virtual form in the Kurtz Ersen Group since the spring of 2020. 53 jubilarians had confirmed their attendance and made their way to the former Cistercian abbey. Of course, the event took place in compliance with 3G regulations.

"Dear jubilarians of Ersen GmbH, Kurtz Ersen Automation GmbH,

Kurtz Ersen Logistik GmbH, Kurtz Holding and Kurtz GmbH – we are giving you a podium today to thank you for your commitment over many years in the company. You can rightly stand on it with pride, because you are the backbone of our companies. We by no means take it for granted that you have remained loyal to the company for so long – for us, this is a sign of a healthy working atmosphere that is so invaluable to the overall success of the company. As a family of companies, we stand together for mutual success. Many thanks for this," said Kurtz Ersen CEO Rainer Kurtz.



Anniversaries 30 and 35 years (from left to right): Thomas Mühleck, CFO Kurtz Holding; Ralph Knecht, Managing Director Ersen, Barbara Böxler (35), Samir Babaca (30), Stefan Bachmann (30), Dr. Michael Wenzel, Kurtz Ersen Automation Managing Director; Uwe Rothaug, Managing Director Kurtz GmbH, and Matthias Hofmann, Managing Director Kurtz GmbH

Anniversaries 25 years (from left to right): Matthias Hofmann, Managing Director Kurtz GmbH; Uwe Rothaug, Managing Director Kurtz GmbH; Peter Aulbach (25), Thomas Mühleck, CFO Kurtz Holding; Anita Dosch (25), Bernhard Brosch (25), Stefan Brauner (25), Conny Stöhr (25), Michael Schäfer (25), Gerd Röttinger (25), Michael Prokopp (25), Frank Bauer (25), Ralph Knecht, Managing Director Ersä GmbH and Dr. Michael Wenzel, Kurtz Ersä Automation Managing Director



20-year anniversaries (from left to right): Martin Dosch (20), Uwe Rothaug, Managing Director Kurtz GmbH; Michaela Samstag (20), Thomas Mühleck, CFO Kurtz Holding; Jürgen Weber (20), Steffen Vath (20), Udo Beck (20), Johannes Gräder (20), Johann Konrad (20), Dr. Michael Wenzel, Kurtz Ersä Automation Managing Director; Ersä Managing Director Ralph Knecht and Matthias Hofmann, Managing Director Kurtz GmbH



15 years with the company (from left to right): Matthias Hofmann, Managing Director Kurtz GmbH; Heike Ebert (15), Thomas Mühleck, CFO Kurtz Holding; Uwe Rothaug, Managing Director Kurtz GmbH; Jürgen Geiger (15), Gitta Mattern (15), Karl-Heinz Zang (15), Sabine Meixner (15), Daniela Rückert (15), Lukas Schwab (15), Dr. Michael Wenzel, Kurtz Ersä Automation Managing Director, and Ersä Managing Director Ralph Knecht



10 years in the company (from left to right): Thomas Mühleck, CFO Kurtz Holding; Matthias Hofmann, Managing Director Kurtz GmbH; Uwe Rothaug, Managing Director Kurtz GmbH; Dr. Michael Wenzel, Kurtz Ersä Automation Managing Director; Ralph Knecht, Ersä GmbH Managing Director; Carolin Kurtz (10), Andre Wilhelm (10), Annette Weiss (10), Elisabeth Boleks (10), Franziska Pfannes (10), Gashi Feriz (10), Bernhard Alexander (10), Barbara Dümmig (10), Martin Krichbaum, Alexander Leisering (10), Katharina Fertig (10), Florian Geier (10), Horst Fuhrer (10), Jennifer Bauer (10), Luis Kressmann (10), Susanne Wohlfahrt (10), Tobias Rossem (10), Willibald Uhlein (10), Manuel Meixner (10), Christoph Liebler (10)





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Technology fan?

In the HAMMERMUSEUM the history of Kurtz Ersä comes alive – experience the enthusiasm for technology with which we are also successfully on the move in the 21st century. Please refer to our website for current opening hours.



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Imprint

Publisher

Kurtz Holding GmbH & Co.
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Frankenstr. 2
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according to the press law:
Rainer Kurtz
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Beteiligungs KG, 12/2021

