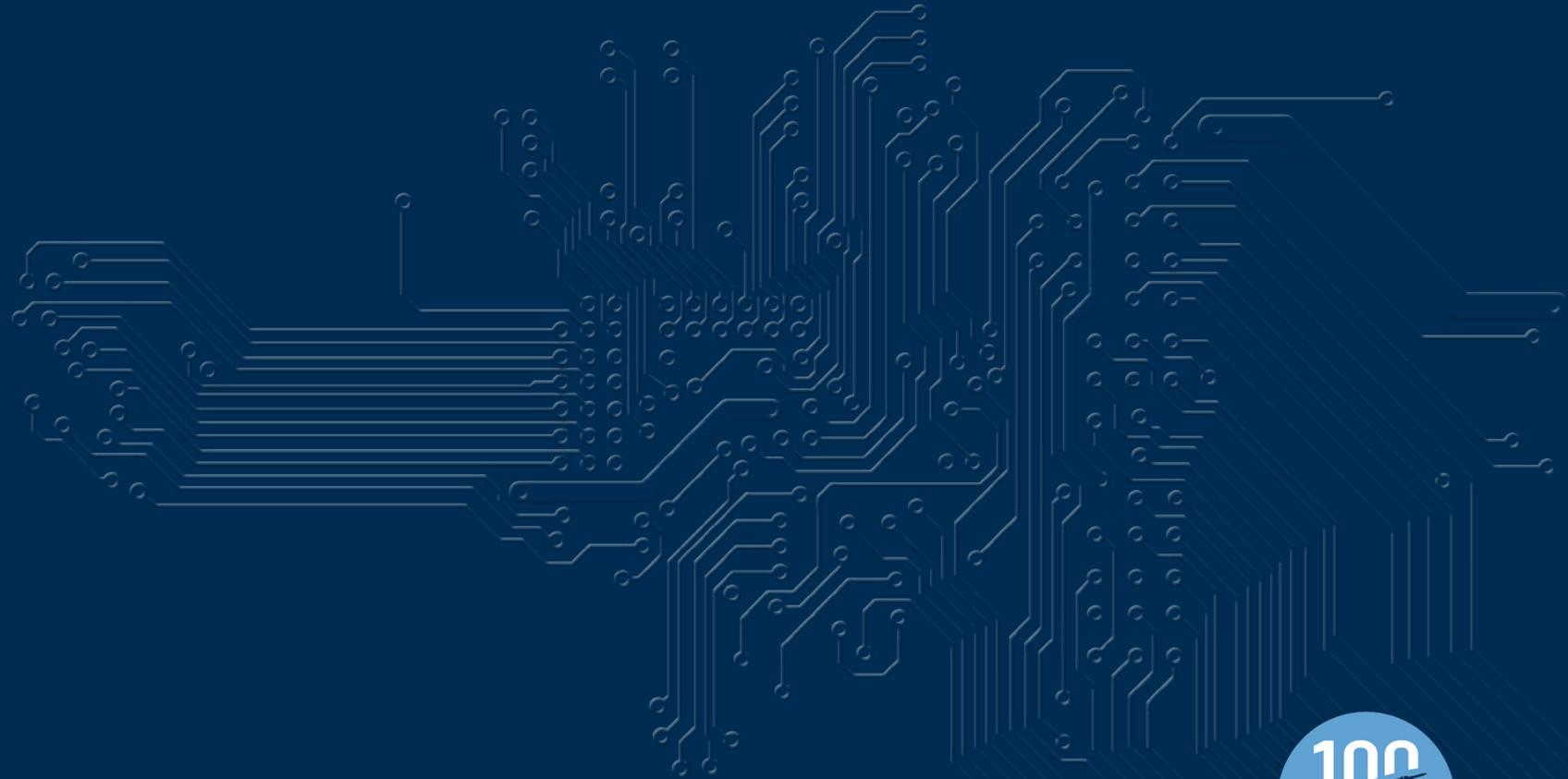


Electronics Production Equipment



Ersa GmbH

Solutions for the most successful companies.





Ersa DNA

The essential elements of the Ersa DNA are customer-oriented action, profound process knowledge and experience, a calculable cost-benefit ratio, maximum flexibility and worldwide presence. Starting from this, we develop high-performance products and systems at the highest level of quality and with long life expectancy, which is why we use only the best components available on the market. For us, this is the basis for our technology and market leadership in all areas of soldering.

Our competitive lead in technology optimizes our customers' production process.

Kurtz Ersa corporate vision

Global Connections

Strong technologies and innovative systems for electronic manufacturing

Being the world's largest manufacturer of soldering systems, Ersa ensures worldwide perfect connections in electronic manufacturing, and is responsible as system supplier for trouble-free production processes of its customers. From having had the pioneering role almost one hundred years ago, we have since then advanced soldering to be a branch of industry in its own right – and today, more than ever, we are setting new standards with innovative, seminal technologies.

Superior technologies, a worldwide presence and service support perfectly aligned to the individual customer's need – you will receive everything from Ersa that is required for competitive production in our extremely dynamic industry. Simply help yourself and make your selection from the worldwide most comprehensive product portfolio in the field of electronic manufacturing. We will be pleased to assist you in defining the configuration ideal for you!

Our Portfolio

- Stencil printers
- Reflow soldering systems
- Selective soldering systems
- Wave soldering systems
- Rework systems
- Inspection systems
- Soldering stations
- Solder fume extraction units
- Solders, fluxes and more
- Services
- Personnel qualification



The Roots of Kurtz Ersa

Beginning in 1779 with the iron hammer in Hasloch, a success story started in which Ersa plays an instrumental part.



Production Erska soldering irons (1965)



Paced production Erska soldering systems & stencil printers



Erska factory in Wertheim

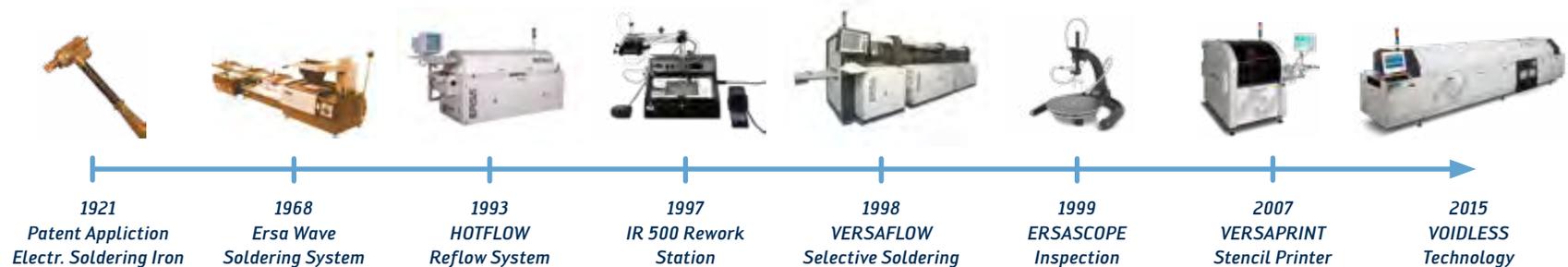
Sustainable Development

Integral part of the corporate culture

Since 1921, when the first electrical soldering iron was introduced to the market, Erska is a well-known participant in the world of soldering. Now, almost 100 years later, the system supplier located in Wertheim decisively and sustainably partakes, with its breakthrough technologies, in defining the future of electronic manufacturing.

In the family-owned Kurtz Erska group, which has started its operations in 1779 with a waterpowered forge hammer and is still guided today – now in the 6th generation! – by the Kurtz family, sustainable growth is an integral part of the corporate culture, lived out daily throughout the group, and is inseparably linked to our product development

and to our manufacturing processes. For example, the initial requirement specification for new products already defines the improvement potential for the usage of resources – this is sustainability lived out at Kurtz Erska!





Together We Are Strong

Our staff considers themselves to be part of a team. Whether in Wertheim, China, the U.S. or in Mexico – the joy in soldering, the openness for new ideas and the desire to attain the highest level of customer satisfaction is common to all of them.



Working together, celebrating together – the Wertheim employees at the Erska Summer Festivity 2016

A Strong Team & Efficient Processes

Committed action when serving the customer

Kurtz Erska has worldwide over 1,200 motivated and highly competent employees, who generated a turnover of over €235 million in 2015 – the business division Electronics Production Equipment accounting for the substantial portion of more than €100 million.

At the system supplier Erska, with its headquarters in Wertheim on Main and subsidiaries in Asia, Europe and North America, a total of 450 highly skilled employees with tremendous process knowledge are working on advancing to the next level of electronic manufacturing, a level that will further increase and optimize productivity.

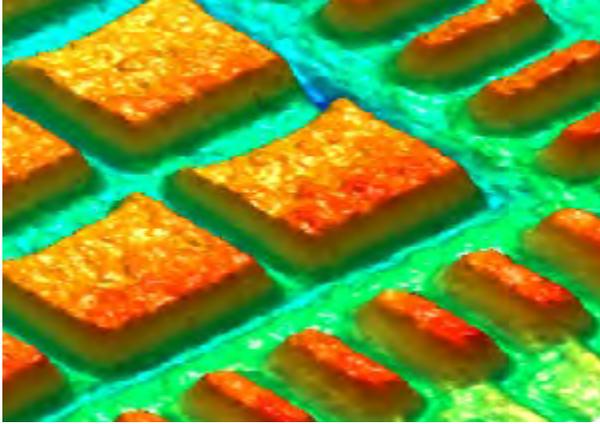
Rightfully, our customers expect that we take the extra step, and that is why we have an understanding of quality not permitting any compromises. Permanently monitoring our customers' expectations and matching these to our own strategic objectives defines our target. To achieve our target, we build on integrated quality management as our guiding principle, on comprehensive internal and external certifications as well as on competent, quality-conscious employees.





Process of Continuous Change

Permanent innovation is our motor for technological advantages, from which our customers benefit.



VERSAPRINT – the first Stencil Printer with integrated 3D-SPI



HR 550 – Rework with computer assisted component placement



Ersa IMAGESOFT – Augmented Reality Tool

Permanent Innovation

Ideas, born from know-how and our Vision

Innovation is based on experience which has been accumulated and deepened over the course of many years. In the case of Ersa, in 1921 a singular success story started with the patent application for the first electric soldering iron. Since that time, we have revolutionized our branch of technology numerous times by introducing innovative technologies – and as a driver of innovation we will continue to do this!

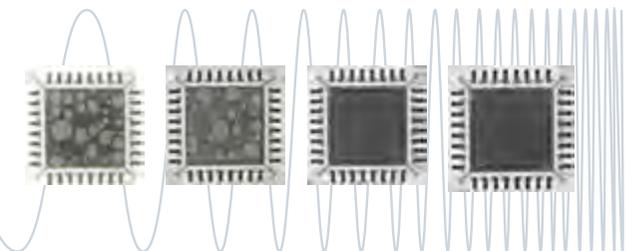
We have long-standing business relations with many of our customers, from which

groundbreaking technologies have arisen. The basis for this is Ersa's experienced team of engineers, software specialists and technicians who realize those technologies of tomorrow which offer our customers, in the time of Industry 4.0, the decisive advantage in their production processes. Maintaining a steady process of change, Ersa has become the technology and world market leader.

We are open to new ideas – for us the basic requirement to make new things happen. What is your idea?



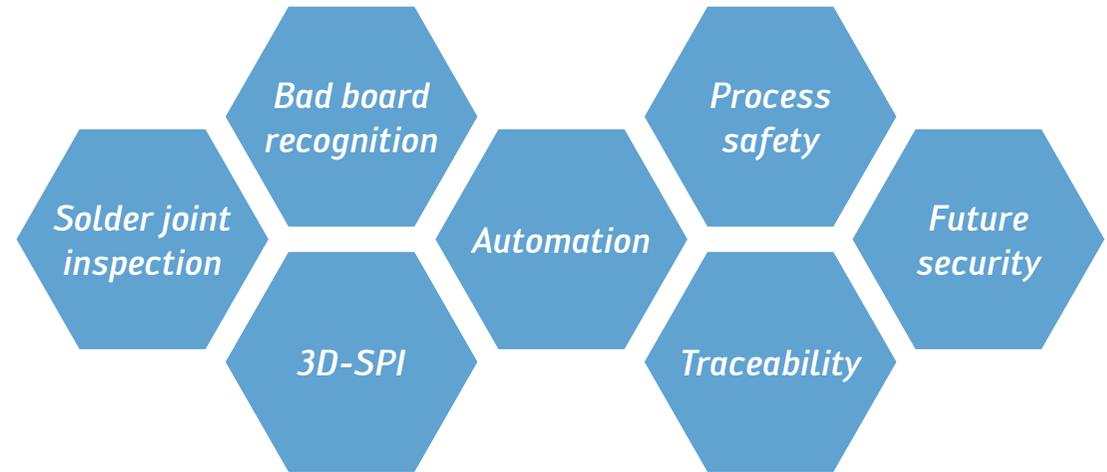
2016 – Ersa is the first company to win 4 NPI awards in 1 year





Factors for Successful Electronic Production:

- Coded board assemblies
- Trace data to raise quality/traceability
- Transparent, economical manufacturing aiming towards "zero defect"
- Industry 4.0 as per individual need



Processes Always in Sight

Complete transparency

As a system supplier of production systems and equipment for electronic production, the concepts of Industry 4.0 and Internet of Things are our daily bread. As a result, Erska offers to its customers a unique product range of systems, equipment and tools for process-safe manufacturing, reworking and inspection of electronic board assemblies.

With regard to the diversity of components and to traceability, we have early counted on controlled and repeatable processes in connection with traceability and Manufacturing Execution Services (MES) and the subsequent data evaluation. This user advantage is used by us for the customized implementation of the Industry 4.0 linkage at the customer. We are ready for Industry 4.0, we are driving ahead the concept of the Smart Factory!

INDUSTRY 4.0



Perfect Solutions

High Mix – Low Volume,
High Mix – High Volume,
Low Mix – Low Volume or
Low Mix – High Volume.
Whatever your requirements
– Ersca has always the right
solution!



Comprehensive range of soldering tips for each application



One station – 10 tools to connect, up to 4 in parallel operation



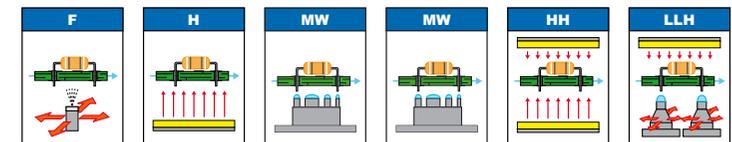
Single or Dual Pot, Mini-Vario, Dip and Multi-Wave, ...

Flexible Diversity

Suitable systems. Modular design. More than 1,000 possible configurations

Flexibility in the fast-changing electronic production is an extremely important factor. And right from the outset, it has been part of our corporate DNA. Flexibility in the complete product portfolio is the key to success. It is demonstrated here with the example selective soldering, starting with different hand soldering stations to systems for manual component placement right through to inline systems and the globally leading VERSAFLOW series.

With its systems based on the modular concept, Erska offers an intelligent platform for electronic manufacturing, which allows to successfully realize even the most specific solutions required by the customer. Benefit from a production system which provides you the highest degree of flexibility for all your requirements. Today and in the future! Independent of batch size, production mix and of your current selective soldering process.





Ersa – Synonym for Soldering

Since Ernst Sachs, the founder of the company, applied for a patent for the first electric soldering iron, Ersa has continuously perfected the technology of hand soldering. The result: professional soldering and desoldering tools with which users worldwide successfully perform their different jobs.



Indispensable – Ersa EASY ARM solder fume extraction



Precise desoldering of SMDs with the Ersa CHIP TOOL VARIO



Highly efficient heat-up and large selection of tips for the i-TOOL

Savvy Hand Soldering Intelligent and powerful – Ersa Tools

For decades, Ersa soldering tools are the epitome of solidity, reliability and performance power. High-tech, diversity and precision are conjoined for a unique combination. Ersa tools are reputed for their permanently evolving technology. For example, the i-CON VARIO soldering and desoldering station, where up to 4 tools may be operated in parallel – such as the powerful, light and ergonomic i-TOOL HIGH POWER soldering iron with 250 W and extremely short heat-up time. Desoldering through-hole components with the

X-TOOL or X-TOOL VARIO, precise desoldering of SMT components with the CHIP TOOL VARIO desoldering tweezers or working with the moderately dosed i-TOOL AIR hot-air iron: And naturally the most varied soldering applications are performed with the i-TOOL with its outstanding variety of low-cost, easy to change tips. Intelligent technology ensures the best energy efficiency, and interfaces are available to connect and control peripheral equipment, such as an IR heating plate or Ersa solder fume extraction.





Successful Rework

Thousands of users worldwide are successfully using the Ersu IR and HR rework systems. Here, perfect scaling and innovative technology is the key for success in board assembly repair.



Rework made easy with computer assisted component placement



Everything easy! – HR 200 Rework “Out of the Box”



Ersa Rework – no dedicated component insert or nozzles required

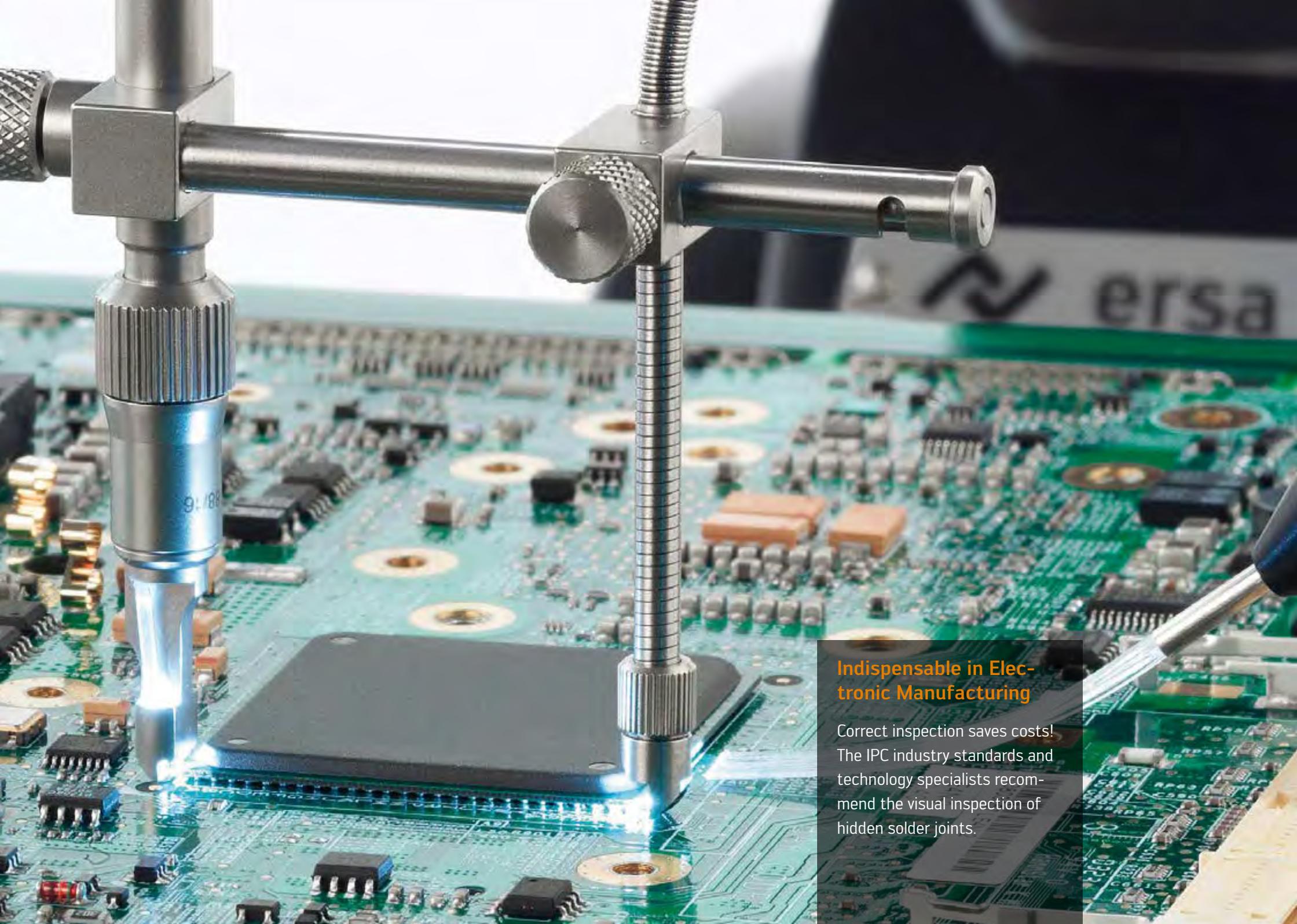
Ersa Rework Systems

Flexible, efficient, automated, process-safe

Ersa rework systems are the guaranty for a professional repair of board assemblies and ensure at the same time the value creation for the user. The ever increasing complexity of boards is answered by Ersa with application-oriented, innovative solutions. With thousands of installed IR rework systems worldwide, Ersa has available a unique system base – a convincing proof for

the top technology with the largest rework application range, covering everything from the smallest 0201 chip up to THT pin grid arrays and BGAs, and not to forget plastic processor sockets. From the “Out of the Box” starter system and the mid-range favorite right up to the HR 600/2 high-end model offering fully automated “one click” rework and if desired also available with the VOIDLESS technology developed by Ersa.



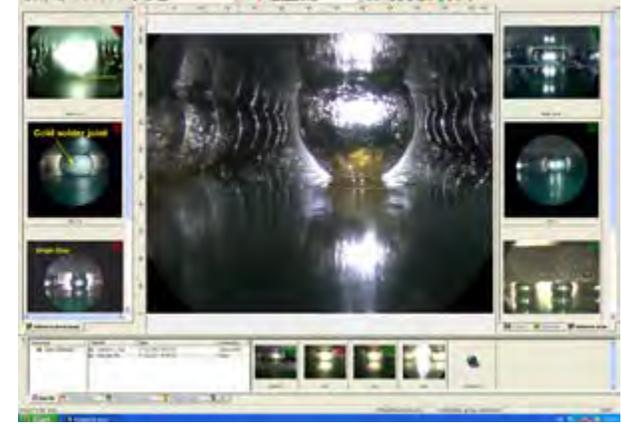


Indispensable in Electronic Manufacturing

Correct inspection saves costs! The IPC industry standards and technology specialists recommend the visual inspection of hidden solder joints.



Ersa MOBILE SCOPE for mobile inspection



Ersa IMAGEDOC software with problem solution database

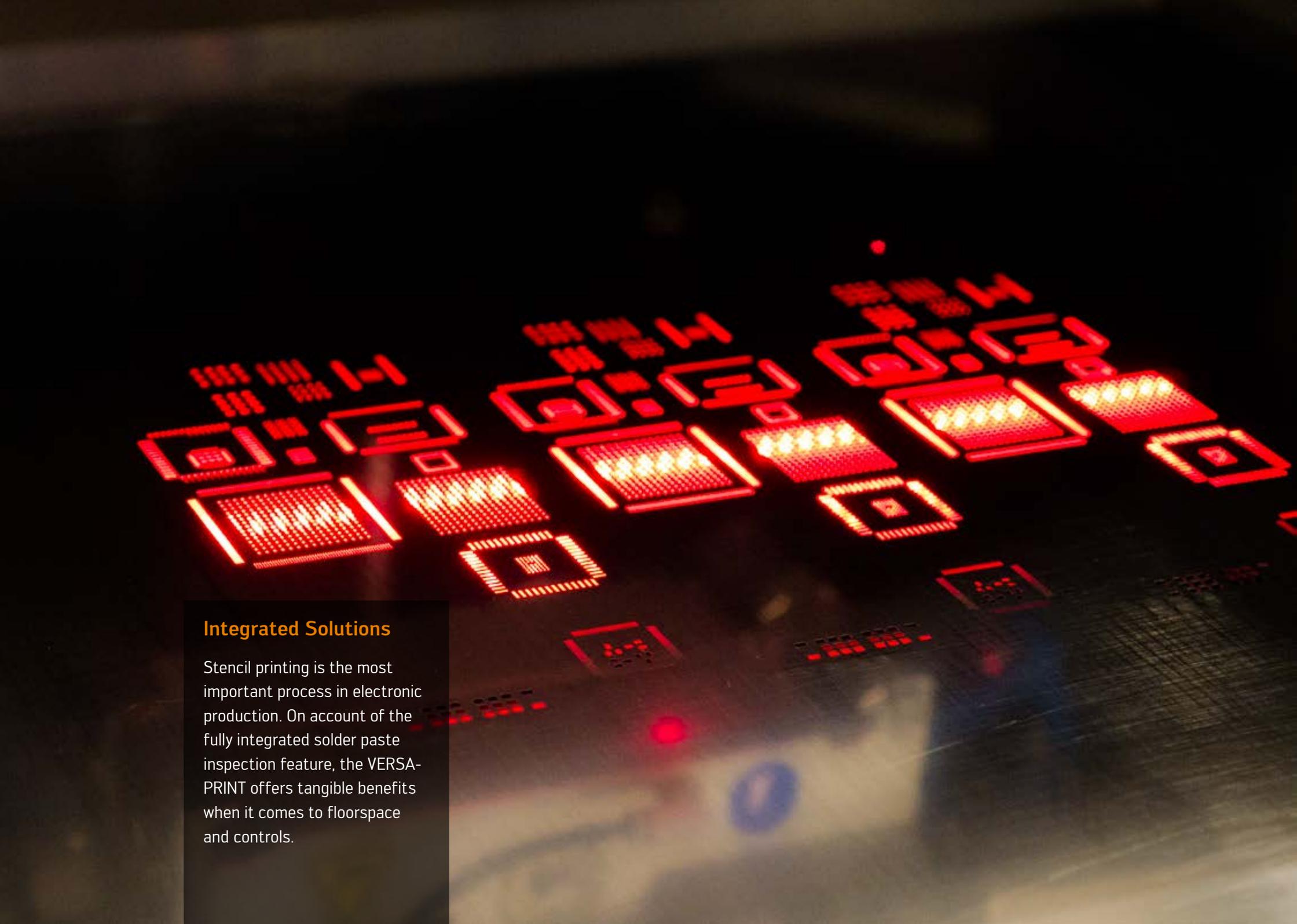
Inspection – reaching deeper than the eye

Reliable verification of hidden solder joints

Optical inspection of solder joints supports all users in electronic manufacturing in their effort to safeguard the quality of their manufacturing process. ERSASCOPE inspection systems are the only systems worldwide which allow to view hidden solder joints of, for example, BGAs or flip chips with the help of a patented endoscope optic.

When combined with X-ray inspection, the non-destructive visual ERSASCOPE inspection delivers a complete picture of potential sources of defects in the production process – very useful: Ersa IMAGEDOC software with its extensive problem solution database and the extended recording, measuring and documenting function.



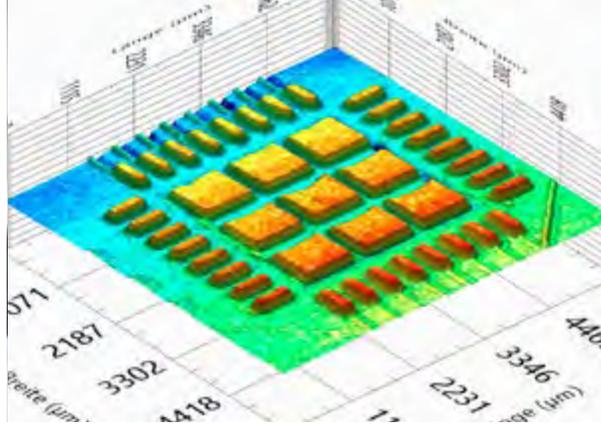


Integrated Solutions

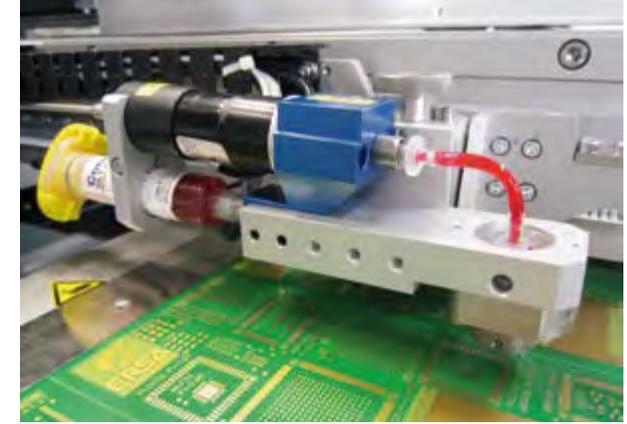
Stencil printing is the most important process in electronic production. On account of the fully integrated solder paste inspection feature, the VERSA-PRINT offers tangible benefits when it comes to floorspace and controls.



Printerhead and squeegee with paste height control



VERSAPRINT 3D inspection result



For increased need of paste, simply repeat dispensing

Stencil Printer with Fully Integrated Solder Paste Inspection

As required – partial, 100 % in 2D or 100 % in 3D

Ersa's patented VERSAPRINT stencil printers offer the user singular advantages with the completely integrated, full area SPI after the print. The parallel process of printing and inspecting achieves the cycle times of two separate systems with the obvious advantage of only one software structure, one piece of hardware and a substantially reduced floorspace requirement.

Almost 70 % of all process defects in an SMD line can be traced back to the stencil printer. Ersa, with the SPI integrated into the stencil printer, is the only supplier worldwide that is able to provide a 100 % print inspection at line speed. Defects can thus be recognized before they arise. This represents a saving of cost and cycle time. And again as the first supplier worldwide, Ersa offers, for even more process safety, fully integrated SPI in 3D.





Maximum Availability

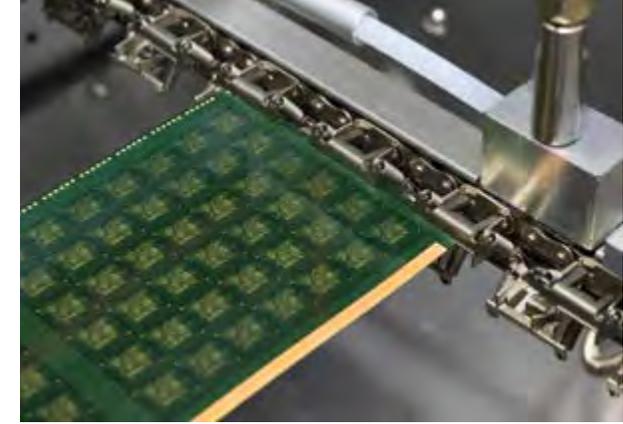
Ersa HOTFLOW reflow systems are manufactured from the highest grade materials and offer, on account of their "on the fly" maintenance feature and their excellent accessibility, a very high degree of availability for production.



Highest system availability through easy access



Condensation management with cleaning granulate



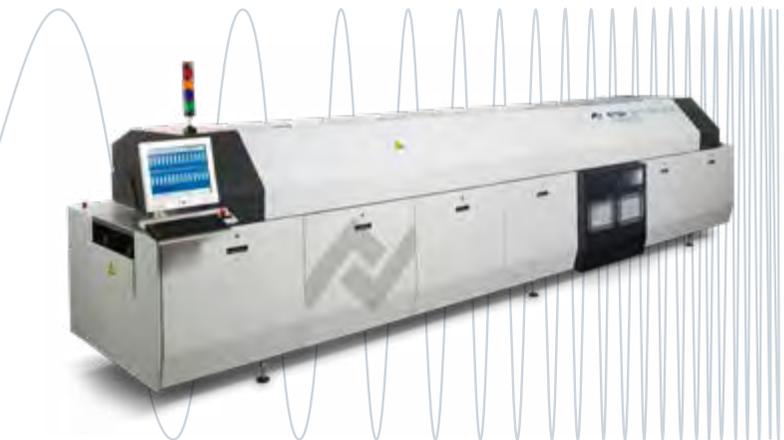
Ersa grip conveyor for very thin boards or copper foils

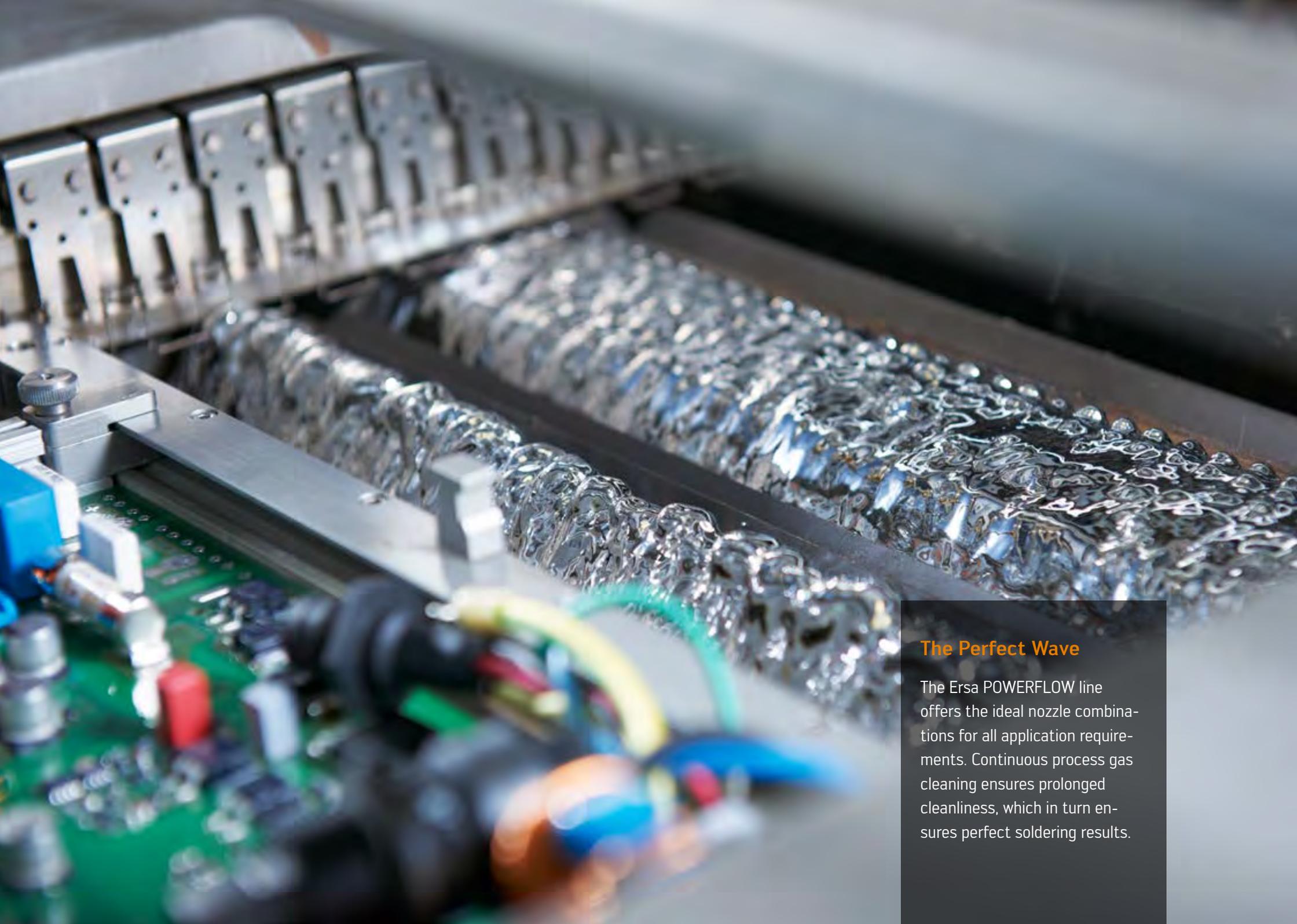
Reflow Soldering Systems

Maximum solder joint quality and performance at lowest operating costs

Energy efficiency and resource conserving reflow soldering achieving a maximum in solder joint quality and performance, combined with the lowest operating costs – these are the hallmarks of the Ersa HOTFLOW reflow systems. Since their introduction in 1993, the constant introduction of new technical highlights has ensured the user of the highest economic efficiency and stable processes.

The current HOTFLOW generation sets new standards again – with an excellent temperature performance and further decreased energy and N_2 consumption. Also available is the VOIDLESS system that can be activated or deactivated for each PCB. The Ersa VOIDLESS technology allows to efficiently reduce voids in solder joints at line speed without requiring additional maintenance or increasing operating costs.





The Perfect Wave

The Erska POWERFLOW line offers the ideal nozzle combinations for all application requirements. Continuous process gas cleaning ensures prolonged cleanliness, which in turn ensures perfect soldering results.



Precise flux deposition with precision spray fluxer



Energy efficient through intelligent heat and nitrogen control algorithms

Ersa Wave Soldering Systems

Highest process safety at maximum throughput

Complex electronic assemblies pose high demands on the manufacturing process – wave soldering finds itself in an area of tension between flexibility and efficiency. With the modularly designed POWERFLOW series, Ersa offers a manufacturing system that can flexibly be adapted to the most varied requirements. For example, two solder baths can be installed in the POWERFLOW system, which will allow to solder

boards with leaded or lead-free solder right after another – the same goes for solders with different melting points. With its numerous options available and the virtually unlimited configuration possibilities, each POWERFLOW can be tailored individually to the customer's needs. To your needs as well!





Leading Worldwide

As the market and technology leader, Erska features a singular, perfectly coordinated product range of different selective soldering systems and selective soldering technologies.



Single nozzles – used on single or dual pot, subject to the solder module



Multiwave nozzle for high-speed selective soldering



Miniwave nozzle on a selective soldering bath

Ersa Selective Soldering Systems

In a class of its own!

When the subject turns to selective soldering, there is no getting around Ersa. Its superior technology and the comprehensive model range have convinced users worldwide already for many years. Maximum flexibility? High throughput? Or both? Whatever the demands may be, with the selective soldering systems VERSAFLOW, SMARTFLOW, ECOCELL and ECOSELECT Ersa always supplies the perfectly matching solution.

Far more than 2,000 systems are installed in productions worldwide, and the satisfied customers, earning good money are the impressive proof for Ersa's market leadership in automated selective soldering. We invented the electric soldering iron – and it is our obligation and our motivation to always go new ways in all areas of electronic manufacturing and to find groundbreaking solutions for the benefit of our customers. Today and tomorrow!





Automation for Higher Productivity

Streamlined manufacturing processes raise process safety and throughput and free up employees to perform other duties.

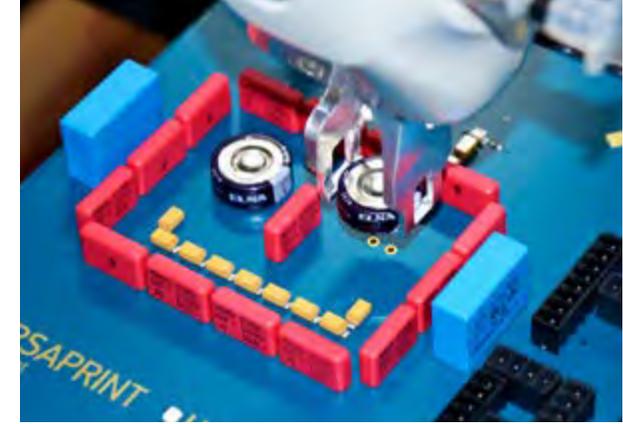
ROBOPLACE



Automated processes – either standard or individual solutions



Individually programmable, simultaneously operating arms



Precise handling for inserting THT components

Increasing Automation

Optimal process safety, optimal costs

There is an unstoppable trend towards automation in electronic manufacturing – and with its comprehensive product portfolio, Ersaprint offers the widest range to rationalize work processes, raising its customers' productivity.

For populating boards with THT components, the collaborative Ersaprint ROBO-PLACE heralds a new area in the man-machine collaboration.

The Ersaprint equipment concept, developed in close coordination with our customers, is geared towards the intelligent use of handling systems for board delivery and transport, so as to fully realize all rationalization potentials.

Peripheral equipment such as the universally deployable Ersaprint FIFO TOWER C, used to cool down board assemblies, ensures optimal process safety and sustainable economic production conditions.





Competitive Advantage – Employee Training

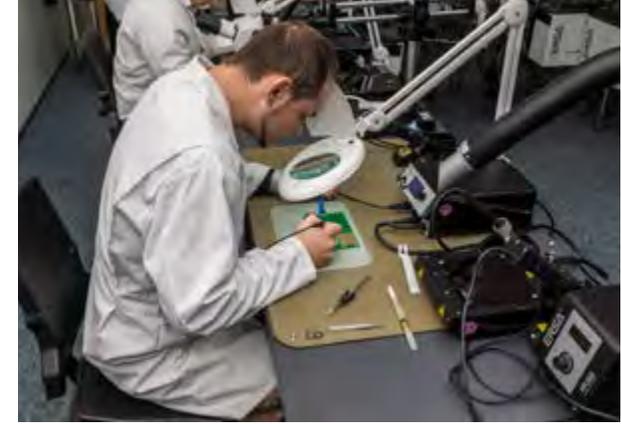
Customized professional training offered from Ersa to qualify employees and to transfer know-how in electronic manufacturing.



Service and maintenance training



Schooling to become a specialist for soldering technology



Practice-orientated first-class soldering training

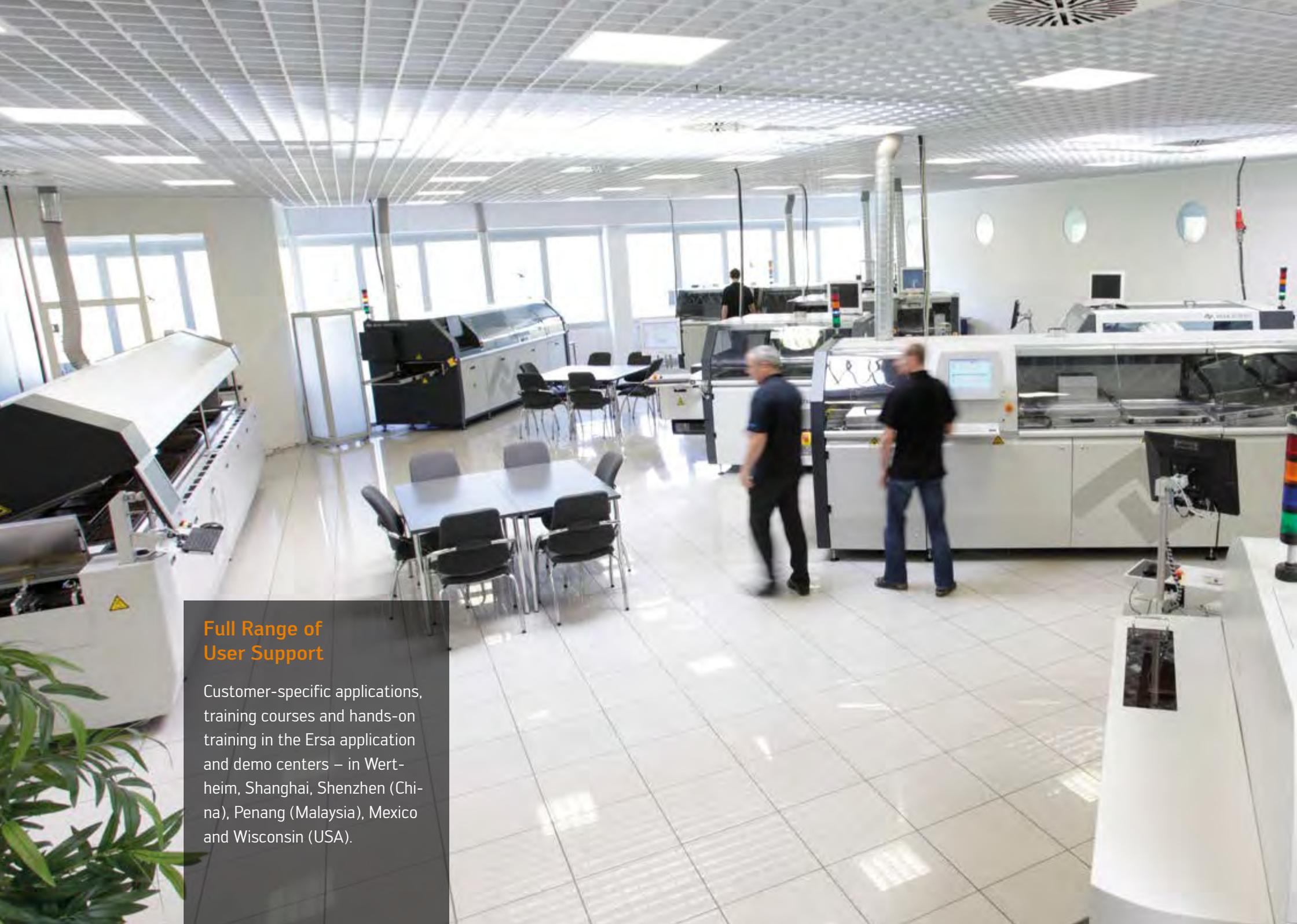
Employee Qualification

Perfectly customized for your team

Electronic manufacturing undergoes continuous dynamic development – to be able to survive the global competition, your production needs qualified personnel in all positions. The Erska Know-How Seminars, with more than 6,000 satisfied participants so far, is extensively used by companies to qualify their employees to better fulfill their functions in the production departments. Whether it be know-how or technology seminars or individual technology days – with these practice orientated formats Erska offers individually tailored know-how transfer.

As a certified training site Erska offers courses according to unified standards for hand soldering specialists in cooperation with the training association "Ausbildungsverbund Löttechnik Elektronik", in short AVLE. The intensive, multi-level courses leading to a soldering license convey both theoretical and practical knowledge and skills, which will save costs and reduce defects in a production environment during soldering, desoldering or rework. What is your need for employee qualification?



A wide-angle photograph of a spacious industrial training facility. The room features a high ceiling with a grid of recessed lights and large windows on the left side. In the foreground, there are several white industrial machines, some with control panels and monitors. In the middle ground, there are two tables with black chairs, suggesting a training or meeting area. Two men in dark clothing are walking towards the right side of the frame. In the background, more industrial equipment and a person are visible. The overall atmosphere is clean, professional, and well-lit.

Full Range of User Support

Customer-specific applications, training courses and hands-on training in the Ersa application and demo centers – in Wertheim, Shanghai, Shenzhen (China), Penang (Malaysia), Mexico and Wisconsin (USA).



Application and demo center Wisconsin, USA



Application and demo center Shenzhen, China

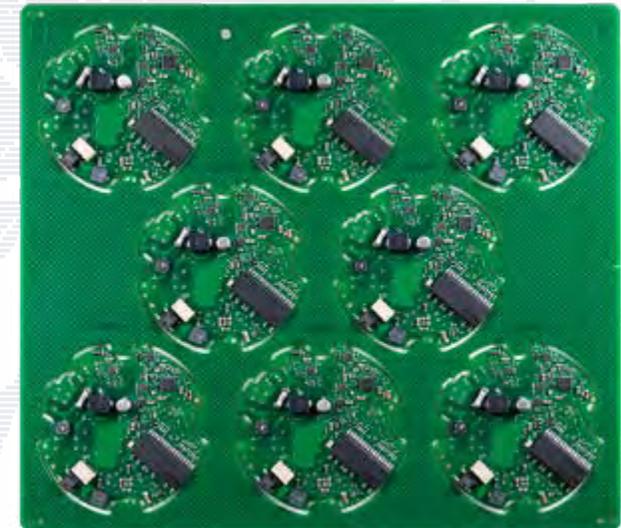


Application and demo center Shanghai, China

Ersa Application and Technology Support Global Sales & Service network

In accordance with our corporate philosophy, we offer full service and production solutions which assist the drive of our customers to optimize their production processes. We are particularly proud of our comprehensive system advice for all aspects of soldering – from application to process details up to total cost of ownership, an invaluable added value for our customers. We are present all over the world and at home in all cultures – the optimal basis for a perfect application service.

In our fully equipped application centers in Europe, North America and Asia customers can, supported by our Ersa specialists, determine the optimal parameters for their own board assemblies. Support at the customer's own facility by one of our experts is also available worldwide, as are system and process audits and ramp-up support. Make use of our Sales & Service network, there is a location close to you!





24/7
SERVICES

Germany

Ersa GmbH
info@ersa.de

France

Kurtz France S.A.R.L.
info-kfr@kurtzrsa.com
Ersa France
info-efr@kurtzrsa.com

USA

Kurtz North America Inc.
info-kna@kurtzrsa.com

Ersa North America
info-ena@kurtzrsa.com

Mexico

Kurtz Ersa S.A. de C.V.
info-kmx@kurtzrsa.com

Russia

000 Kurtz Ost
info-kru@kurtzrsa.com

China

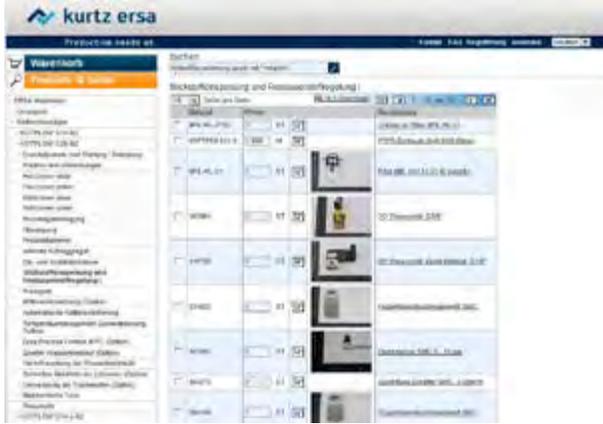
Kurtz Ersa Asia Ltd.
info-kfe@kurtzrsa.com

Kurtz Shanghai Ltd.
info-ksl@kurtzrsa.com

Kurtz Zhuhai Manufacturing Ltd.
info-kzm@kurtzrsa.com

Ersa Asia Pacific
info-esh@kurtzrsa.com

Ersa Shanghai
info-esh@kurtzrsa.com



Ersa Web Shop for spare and wear parts



Ersa Augmented Reality Tools



Ersa Service 24/7 worldwide reachable

Ersa Service Support 24/7 Networked for global success

Which service level do you need? From Ersa you will receive service support perfectly and individually aligned to your requirements – whether it is EDI connectivity of your ERP systems, iCCS system configurator for perfect matching solutions at the touch of a button, remote control maintenance or augmented reality tools like Ersa IMAGESOFT, a powerful feature for maintenance and service.

This naturally also extends to the supply of wear and spare parts: We ship to you the quickest way from our own warehouses. From Europe, China or the USA. Spare and wear parts are also available online at our web shop. Worldwide and around the clock. The same applies to our maintenance and repair service – it is available 24/7!



 kurtz ersa

Electronics Production Equipment 

Festival of
Innovations

Festival of
Innovations

Festival of
Innovations

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Innovations

Worldwide Presence

As the system supplier with the most comprehensive product range for electronic manufacturing, Erska is present at all major exhibitions worldwide.



*Diversity is our strength – regardless of what you are looking for on the subject of soldering:
Think Ers!*

Unique Ers! Product Portfolio

The perfect solution for each requirement



Stencil printers



Reflow soldering



Selective soldering



Wave soldering



Automation



SMT/BGA inspection



SMT/BGA rework



Hand soldering & solder fume extraction



Solders, fluxes and more



Services & employee training



 kurtz ersa

 kurtz ersa

Our Mission

- We produce components, systems and equipment for the optimization of manufacturing processes.
- We want to understand the processes used by our customers.
- We are a strongly diversified global player.
- We aim for the top position in all markets we participate in.
- We are a family based enterprise with tradition and values.
- We include our employees in the decision-making processes.
- We strive for a reasonable return on and increase of the equity capital.



Kurtz Ersä HAMMER MUSEUM with the historical hammer mill in Hasloch

Kurtz Ersä Production needs us.

Kurtz Ersä is a supplier and technology corporation with a tradition of almost 240 years, diversified in the three business areas Electronics Production Equipment (Ersa), Moulding Machines and Metal Components. The owner-operated group of companies follows the strategy of long-term, healthy and sustainable growth.

As a leader in technology with 14 facilities in Germany and abroad, Kurtz Ersä continuously sets new standards, thereby raising the productivity of its customers to higher levels. An essential part of this is its willingness to change and the permanent search for means to achieve the optimum of quality, cost and delivery service – combined with open communication both inside as well as outside the corporation, which is considered a necessary precondition for the common success.

With the Kurtz Ersä HAMMER ACADEMY, initiated in October 2015, a continuous education platform exists for our employees. To raise their level of qualification and to stay abreast of changes in the global market, employees can choose from amongst different subjects. The HAMMER ACADEMY also offers special courses for customers.



Metal Components

Metal processing

- Grey cast-iron/nodular cast iron
- Machining
- Sheet metal technology

Moulding Machines

Particle Foam Machines

- Pre-expanders
- Shape moulding machines
- Block moulds
- Cutting lines

Foundry Machines

- Low-pressure casting machines
- Tilttable gravity casting machines
- Gravity casting machines
- Trimming presses
- Pre-processing machines
- Automation tools and components

- Engineering
- Complete plants

Ersa GmbH

Leonhard-Karl-Str. 24
97877 Wertheim

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

Ersa France

15 rue de la Sucharde
21800 Chevigny Saint Sauveur

Phone: +33 3 80 56 66 10
info-efr@kurtzersa.com
www.ersa.com

Ersa North America

1779 Pilgrim Road
Plymouth, WI 53073

Phone: +1 920 893 1779
info-kna@kurtzersa.com
www.ersa.com

Kurtz Ersa S.A. de C.V.

Felipe Angeles No. 52
Col Bellavista Tacubaya
01140 Mexico City

Phone: 01-800-099-0357
info-kmx@kurtzersa.com
www.ersa.com

Ersa Shanghai

Room 720, Tianxiang Building
No. 1068 Mao Tai Road, Shanghai 200336

Phone: +86 21 3126 0818
info-esh@kurtzersa.com
www.ersa.com

Ersa Asia Pacific

Unit 3-5, 8th Fl., One Island South
No. 2 Heung Yip Road, Wong Chuk Hang
Hongkong

Phone: +852 2331 2232
info-esh@kurtzersa.com
www.ersa.com

