



***FUTURE SERVICES***  
***& ADDED VALUES***

*PERFECT SOLUTIONS FOR  
YOUR ELECTRONICS PRODUCTION.*

**GLOBAL. AHEAD. SUSTAINABLE.**

# FUTURE SERVICES & ADDED VALUES

## ADDED VALUE THANKS TO DIGITALIZATION – THE NEW ERA OF ELECTRONICS MANUFACTURING HAS ALREADY BEGUN



Dear Ersä Customers,

Productronica once again promises a new level of innovations and technologies for the electronics manufacturing industry. Under the motto "**Future Services & Added Values**", we will be presenting our wide range of innovative systems and services in Munich as the leading system supplier.

The **Kurtz Ersä CONNECT** platform is a universal hard- and software infrastructure. It combines a comprehensive range of digital services on one platform under the keyword "**SERVITIZATION**". Usable regardless of location and equipment and available for the entire Kurtz

Ersä machine portfolio, Kurtz Ersä CONNECT represents **real added value** that can optimize processes, make them future-proof, and significantly increase productivity. The **E-Learning** module opens innovative possibilities to qualify or further educate your personnel efficiently and conveniently.

**HOTFLOW THREE** represents the new benchmark in high-volume reflow soldering. With its patented three-stage cleaning system, it can run in three-shift operation for up to twelve weeks or more without a maintenance interval. The **VERSAFLOW ONE** marks the entry into the excellence class of selective soldering. The new **VERSAFLOW ONE X-SERIES** features an x-variable axis system and can be configured into a high-speed machine – unique in this class. With its new soldering module **POWERFLOW ULTRA** offers unrivaled process control and flexibility in the wave soldering sector thanks to patented sensor technology, innovative solder bath drive and flexible nozzle combinations.

A novelty in Ersä's portfolio is **VERSAFIT 500**. This machine uses press-fit technology as an alternative connection technology for the production of high-performance electronic assemblies and is thus a useful addition to soldering technology.

In the field of repair soldering and rework, we are successfully meeting the increasing demands with the complete range of Ersä **hybrid rework systems**, which offer suitable solutions for all applications and impress with new features such as automated non-contact residual solder removal. The next step towards digital manual soldering is marked by the IoT soldering station **i-CON TRACE**, whose revolutionary Tip'n'Turn soldering tip technology also features in the new **i-CON MK2 series** soldering stations.

With our systems and services, you will always be a decisive step ahead in the dynamic competition of electronics production – future-proof, sustainable and all along the line.

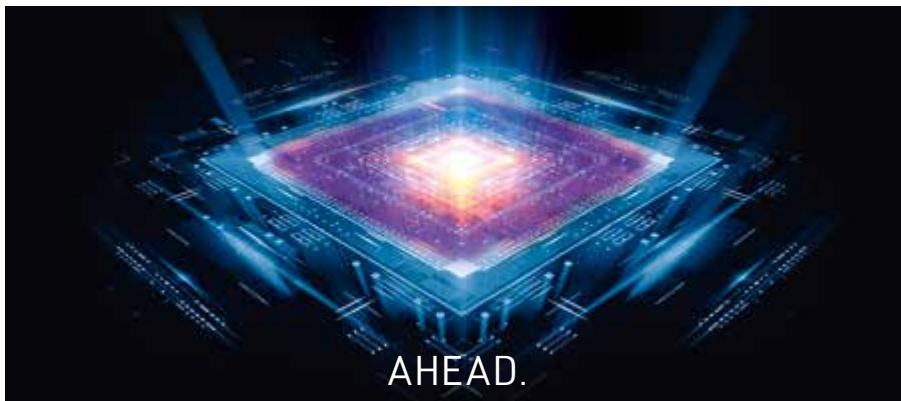
Yours

Rainer Krauss  
General Sales Director

Hansjürgen Bolg  
Vice President Ersä Tools,  
Rework- & Inspection Systems



WORLDWIDE APPLICATION CENTERS  
**ONE FAMILY** **CUSTOMER SERVICES**  
 WORLDWIDE ANY TIME – ANYWHERE  
 PARTNERSHIPS MADE BY KURTZ ERSA  
 MULTICULTURAL · CONNECTIVITY **GLOBAL PLAYER**  
 PROCESS KNOW HOW UNIFIED QUALITY STANDARD



SERVICES · TRAINING & SUPPORT  
**REWORK** **AUTOMATION**  
 PROCESS MONITORING INSPECTION & VISION  
 TURN KEY SOLUTIONS · SYSTEM SUPPLIER **SOLDERING**  
 INDUSTRY 4.0 REFLOW · VACUUM · WAVE · SELECTIVE · HAND  
 PRINTING 3D-SPI ROBOTIC



**FAIRNESS & TRUST** **RESPECT**  
 TRADITION SINCE 1779 OUR COMMITMENT FOR YOUR SUCCESS  
 ENERGY SAVING & CO<sub>2</sub> NEUTRALITY · SAFETY TEAM SPIRIT  
**FAMILY BUSINESS** **GOGREEN250**  
 GENERATIONS OF RELIABLE PARTNERSHIPS RESOURCE EFFICIENT · RECYCLING  
 SUSTAINABLE PRODUCTS

# YOU SHAPE THE FUTURE. WE SUPPORT YOU.

## SMART WORK & LIVING

Never before have the worlds of professional and private life changed so much, so quickly. Highly productive interaction at all levels is unimaginable without intelligently networked systems. Whether "work" or "living" - support from electronic assemblies that reliably deliver their job is becoming increasingly important.



## AUTONOMOUS VEHICLES

For the new vehicle concepts of tomorrow we already offer you the perfect equipment today. This includes intelligent and safe connections of sensor technology, safety systems and power electronics with automotive electronics as well as internal and external networks.

## AUTOMATION

We offer you individual process optimization through perfectly synchronized handling and automation solutions. The Kurtz Ersa modular system impresses with a wide range of conveyor systems, work stations for assembling or quality inspection, ROBOPLACE robotic solutions and much more.



# MEGATRENDS – DRIVEN BY KURTZ ERSA.

## GREENTECH

Environmental and climate protection have been the biggest technology drivers on a global scale for a long time already. Energy efficiency and sustainability are essential requirements in the development of our systems, so that we contribute to a climate-neutral economy all along the line. As Kurtz Ersa Group, our goal is CO<sub>2</sub> neutrality by 2029!



## CONNECTIVITY & 5G

5G is the new generation in mobile communications. This technology is creating the basis for new applications, such as the networking of machines in industry and communication between smart devices. In addition, 5G is becoming the technical basis to further expand digitalization in many areas of life. Ersa delivers convincing solutions for all challenges around connectivity and 5G electronics production.

## ELECTROMOBILITY

Just as electromobility is gaining more and more momentum, also electric drives are becoming increasingly important in all areas of everyday life: from automobiles to scooters and e-bikes on the one hand, to tools and outdoor equipment on the other - less and less runs without batteries. Kurtz Ersa offers individual systems for these market segments for practically all tasks that require a secure connection of all conceivable components and assemblies.





# KURTZ Ersa CONNECT

## ADDED VALUE WITH DIGITIZATION.

Through the use of modern communication and information technologies people and machines can be networked. As a leading system provider for electronics production, Erska offers under the keyword "SERVITIZATION" a comprehensive range of digital services on one platform that represent

real added value. These can optimize processes, make them fit for the future and significantly increase productivity.

### Kurtz Erska CONNECT

With Kurtz Erska CONNECT, Erska provides a platform with an integrated hardware and software infrastructure that extends from the Kurtz Erska machine portfolio via standardized interfaces to the systems

in use by customers. The digital offerings are accessible regardless of location and device from any computer/mobile device via web browser and increase the reliability and availability of each individual system. Whereas in the past it was only possible to react according to the situation, information can now be interpreted and evaluated in advance.

### FEATURES

- Integrated hardware and software infrastructure
- Available for the entire Kurtz Erska machine portfolio
- Standardized interfaces and systems
- Available for web browsers and mobile devices
- Location- and device-independent access

### MODULES

- Intelligent ticket system for optimized service processes
- Remote Service Remote analysis & fast support
- Digital machine database The entire machine park at a glance
- Document management All relevant documents directly accessible
- E-learning Professional personnel qualification
- Machine monitoring KPIs for production professionalization
- Chat & video calls Fast, simple & face-to-face communication

### YOUR BENEFITS

- Faster service processes, reduced machine downtimes, higher machine availability, shorter training time for employees
- Obtaining important data for process and machine monitoring
- Intelligent & easy-to-use ticket system
- Benefit from expert know-how through integrated digital service and training processes
- Securing competitiveness through increased efficiency and better capacity utilization of the overall systems

# DIGITIZATION

## SAFETY FIRST! KURTZ ERSA CONNECT OFFERS A SAFE FUTURE AND SECURE DATA



### Data Security: Safety first!

The security of the data generated and stored is guaranteed at all times – for the currently highest possible protection of customer data and interests, all common standards such as MQTT (Message Queuing Telemetry Transport) and AMQP (Advanced Message Queuing Protocol) are applied. In addition, if required a digital switch is available to be able to interrupt the connection.

### HIGHEST POSSIBLE SECURITY

- End-to-end encryption
- Edge Device
- Location Kurtz Ers Server
- Continuous monitoring
- Digital Switch

### Technical infrastructure

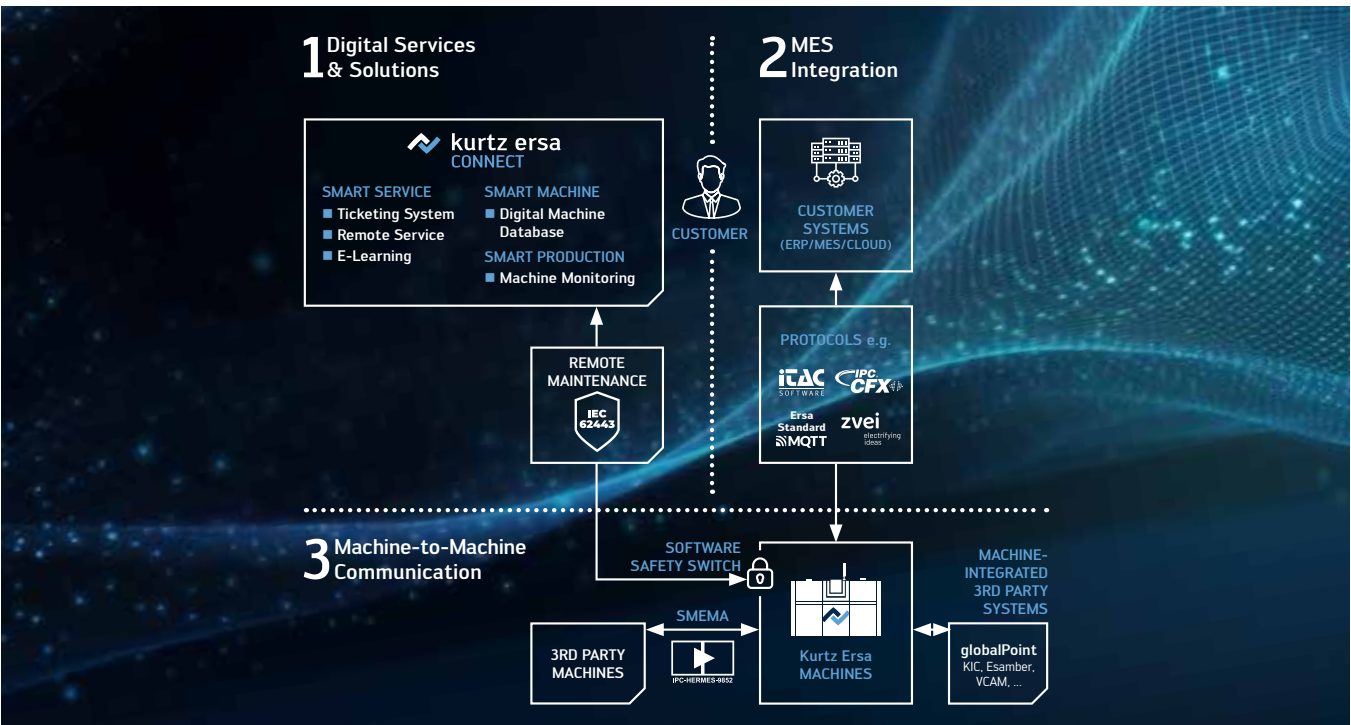
Our gateway (Edge Device) ensures a secure and standardized connection between Ers systems and the outside world – including communication between cloud, applications and systems. The gateway processes the acquired measurement data and information and transmits it securely to the Kurtz Ers cloud or optionally directly to the systems of customers.

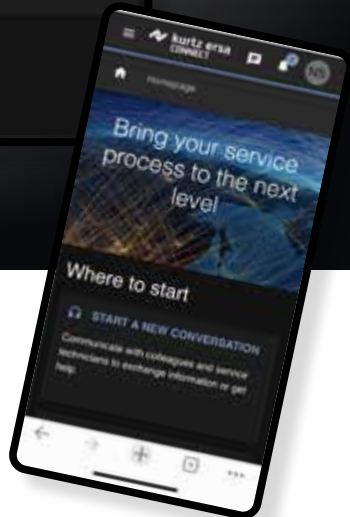
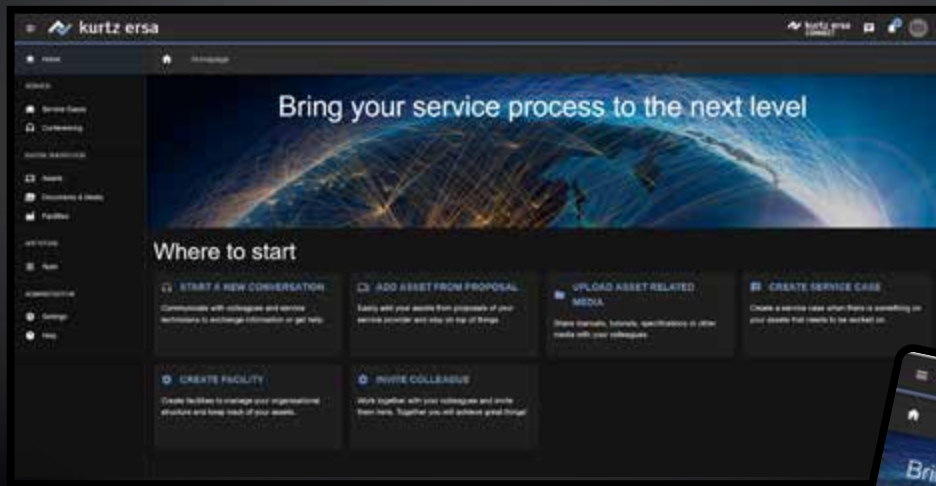
Thanks to the Edge Device capabilities of Kurtz Ers GATE, Ers can offer intelligent solutions and functions even without a permanent internet connection. In addition to transmission, e.g. of live information for real-time monitoring applications, the gateway offers many other options, such as remote access in urgent service cases.

### YOUR BENEFITS

- Standardized basic system for all digital service offerings
- Options for intelligent data processing
- Centralized information
- Connection with the highest possible security: Intelligent Edge Gateway with optional offline operation

## INDUSTRY STANDARDS FOR INTERFACES ENSURE TRANSPARENCY AND FUNCTIONAL BENEFITS





# KURTZ ERSA CONNECT

## One Tool. All Services. Your Access to us.

### Intelligent ticketing system "Service Cases" Optimized service processes

With the intelligent ticket system "Service Cases", Ersa GmbH optimizes service processes worldwide. Thanks to standardized communication between the customer and Ersa Service via ticketing, error situations can be resolved quickly. In the process, digital real-time information from the machine and other modules is supplemented, e.g. digital machine database, monitoring or machine data. In addition, there is access to modules such as E-Learning or E-Maintenance, including an intelligent evaluation of completed tickets.

### Remote Service Remote analysis and quick support

Malfunctions in the customer's systems must be remedied immediately, as these machine downtimes are often associated with high costs. The remote service of Kurtz Ersa CONNECT offers a simple and safe possibility for remote diagnosis and fast first aid. With the help of the Edge Gateway Ersa Service immediately carries out a detailed troubleshooting and repairs. Good to know: Remote maintenance is always carried out via digital switch at the invitation by the customer and cannot be started externally.

### E-Learning Location and time-independent access to the knowledge database

The interactive and module-based E-Learning courses include 3D animated machine illustrations and training videos. Learning progress is documented and verified via exams and certificates. The access to the E-Learning platform is independent of location and time. Via this knowledge database personnel worldwide can be trained uniformly. Thus, the need for on-site training is reduced, and waiting times for classroom training are eliminated – best conditions for increasing efficiency in the production process.

SMART SERVICE

INTELLIGENT  
TICKET SYSTEM



SMART SERVICE

CONNECTED  
REMOTE  
SERVICE

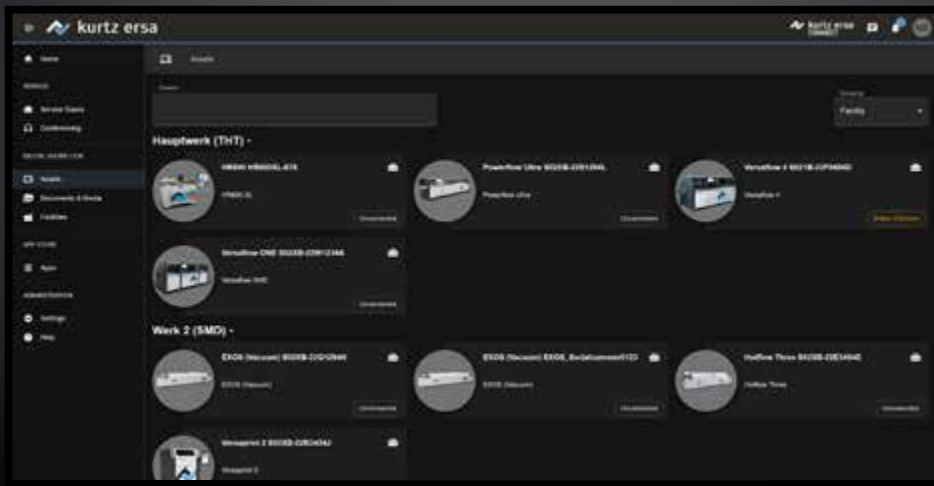


SMART SERVICE

E-LEARNING



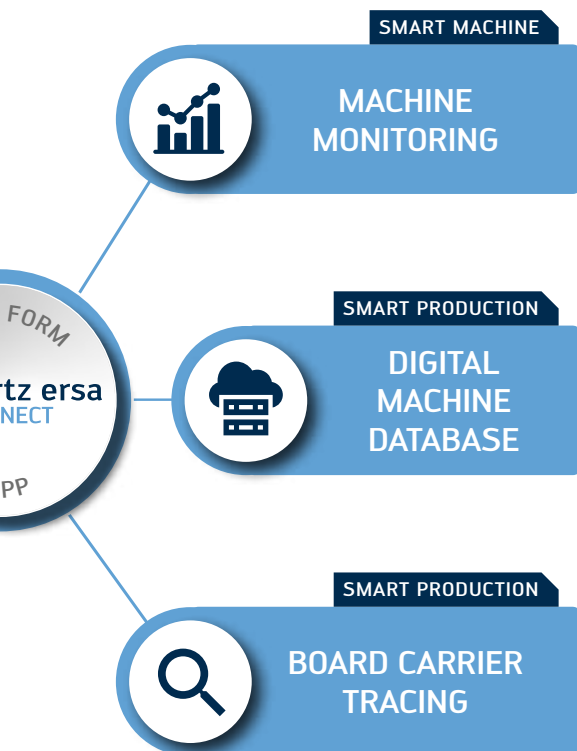




## Machine monitoring

### KPIs for the condition monitoring of your production

This provides real-time monitoring of relevant machine and process data. Location-independent access to the status of machine parts allows for quick actions if necessary. Machine monitoring enables the visualization of key figures and deviations within the range of predefined tolerances. Limit value violation is displayed in order to keep an eye on the control loop of the production.



## Digital machine database

### Your plant and machinery at a glance

With the digital machine database, you always have relevant real-time data at your fingertips, such as customer data and general machine information, the visual representation of the current configuration (hardware and software) and the location of the machine.

Also within reach are important documents such as customer acceptance tests/machine capability tests (MCT), service reports and instructions, safety documents and waybills/customs documents.

## Workpiece carrier tracing/Kurtz Ersä line control

### Monitoring, tracking and process control

In the case of product carrier tracing, all product movements and related processes within a complete line are controlled. Individual PCBs, e.g. with product carriers, masks or holders are linked using the product IDs. The used components and parts are recorded and important process data of the line is linked with the product IDs. Automatic product carrier cycles are likewise managed.

**You too can benefit from our future-oriented service offers.  
Feel free to contact us!**

# TECHNOLOGY TRANSFER



## OUR TRAINING OFFERS

- Know-how seminars
- Customer-specific technology days in theory and practice
- Practical trainings
- LIVE streaming applications
- AVLE training modules
- E-Learning offerings

## YOUR BENEFITS

- Flexibility due to modular training concept
- Competitive advantages thanks to certified staff
- Up-to-date standardized training materials
- Build in-depth knowledge and gain decision-making confidence
- Understand and verify the interaction and interplay of influencing parameters and boundary conditions
- Make use of the information exchange with other companies

During our exclusive Technology Days, you are welcome to explore the limits of the industrial soldering technology in theory and practice. These Technology Days are organized individually and carried out to your company's needs and requirements so that an exchange across departments and locations is also possible. Whether manufacturer-neutral or specifically aligned to Erska soldering systems - with you are the focus! Whether customer-specific Technology Days, process technology and optimization or further topics from the wide world of soldering - what would you like to focus on?

Numerous global players have already benefited sustainably from our individual Technology Days - face the future demands of the market with the support of Erska! The exclusive Technology Days are also available for users, such as auditors or quality managers, who purchase their

products, for example from EMS service providers or suppliers.

Being the no. 1 system supplier for electronics manufacturing, we also offer you a wide range of soldering courses, including manufacturer-neutral seminars with seminars for beginners to machine experts. All courses consist of a balanced mix of theory and practice. Due to the small groups of participants, it is possible for the trainers to answer questions individually.

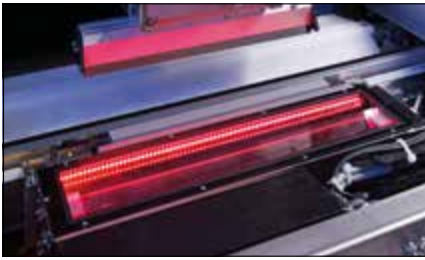
With the our E-Learning program, which is available via the web-based service platform Kurtz Erska CONNECT we are expanding our range of training courses digitally, so that you can continue your training at your own pace, independent of time and place (24/7), and refresh your knowledge with new course material at any time. In the modularly structured online courses, you can click through our service and training processes interactively and also receive quick direct help with maintenance, operation and other topics related to the machine.



Further Information:



# STENCIL PRINTERS

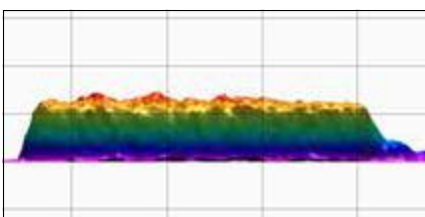


## THE STENCIL PRINTERS THAT CONTROL THEMSELVES.

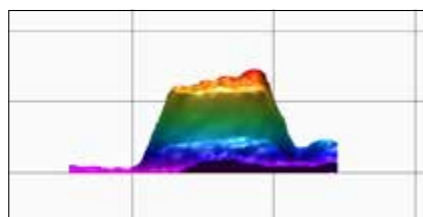
The VERSAPRINT 2 is the latest generation of stencil printers from Erska, based on the proven concept of the VERSAPRINT series. Modern drive technology with encoders enhances control and verification of positioning processes on all process relevant axes. The VERSAPRINT 2 uses modern camera technologies for fast setup and integrated 100 % inspection of the print area. The new software design, together with touch monitor and compact 180 degree rotatable monitor arm provides for an efficient and space-saving operation of the printer. "Features on demand" flexibility means that the VERSAPRINT 2 can be ideally adapted to customer requirements.

Five models are available. The VERSAPRINT 2 ELITE and VERSAPRINT 2 ELITE plus are ideal printers for the entry into line production or when a 100 % inspection is not desired – for example, because a SPI system already exists in the line. The VERSAPRINT 2 ELITE plus can be retrofitted with 2D or 3D SPI. If a 2D or 3D inspection is necessary from the outset, the VERSAPRINT 2 PRO<sup>2</sup> and the VERSAPRINT 2 ULTRA<sup>3</sup> fulfill all requirements. VERSAPRINT 2 TIM offers efficient and reproducible print technology for heat dissipation.

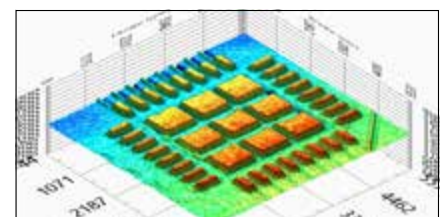
## The inspection results are clearly displayed on the monitor.



Profile picture of the inspection result with height indication



Profile of the inspection result incl. height indication – rotated by 90°



Inspection result



### VERSAPRINT 2 ULTRA<sup>3</sup>

The ULTRA<sup>3</sup> model uses the very latest measuring technology provided by the 3D-LIST camera. The shape of the smallest solder paste depots plays a major role in the printed volume and ultimately for the shape of the solder connection. Is the height of the paste depot consistent or does it drop towards the edges? The ULTRA<sup>3</sup> can answer this question for you. It is both a stencil printer and 3D-SPI in one. It can also be upgraded or retrofitted with all the options of the VERSAPRINT 2 series.



### VERSAPRINT 2 PRO<sup>2</sup>

With its fast 2D-LIST camera (LIST = Line Scan Technology), this system is particularly suitable for products with a high inspection requirement. It can also be upgraded or retrofitted with all the options of the VERSAPRINT 2 series.



### VERSAPRINT 2 ELITE plus

The sturdy basic version uses an area camera to align the substrate to the stencil and can use this to carry out optional inspection tasks. The stencil support can be adjusted without tools for frame sizes from 450 mm to 740 mm. The ELITE plus can be upgraded or retrofitted with all the options available for the VERSAPRINT 2 series, including 2D and 3D-camera.



### VERSAPRINT 2 TIM

VERSAPRINT 2 TIM offers all the advantages of stencil printing together with precise process parameters for optimum processing of thermal pastes. A reproducible application of the paste volume is achieved, which can also be monitored using the printer's integrated inspection system.

# A new era in Reflow Soldering.

## **HOTFLOW THREE**

The Best Reflow Performance in every Aspect:  
Quality. Efficiency. Flexibility. Cleaning. Connectivity.



With the new HOTFLOW THREE, Ersas adds another chapter to the long success story of its reflow soldering systems – more than 6,000 HOTFLOW reflow soldering systems have been installed worldwide in the past 20 years. By making a successful generation even better, system supplier Ersas is making a clear statement for even more quality in soldering

launching the HOTFLOW THREE – a reflow oven that has matured in all aspects. This system marks the beginning of a new era in reflow soldering. Absolutely unique selling point is the SMART CONVECTION POWER UNIT, or SCPU<sup>®</sup> for short. The motor and control unit which has been developed exclusively for Ersas ensures an optimized soldering profile

# REFLOW SOLDERING



and thus an even better soldering result. Single zones can be controlled individually, which enables perfect alignment with the requirements of material and solder paste. In addition, the SCPU<sup>®</sup> of the new Ersä reflow system only consumes the power it requires, ensuring optimized use of the energy input. The same applies to the cooling zones and the

installed high-performance cooling unit. Overall, this results in further increased machine availability with impressive productivity, short maintenance times and easy operation via the intuitive ERSASOFT 5 user interface - with lower energy consumption.

# REFLOW SOLDERING

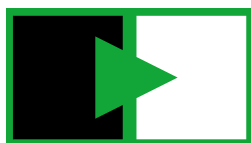
## HOTFLOW ONE AND HOTFLOW THREE: PERFORMANCE TAILORED TO YOUR NEEDS

**HOTFLOW ONE:** An excellent price-performance ratio and outstanding efficiency are core features of the HOTFLOW ONE reflow soldering systems. They are the new Erska entry-level models for the reflow process. Based on over 35 years of experience and know-how in this soldering technology economical and technological solutions have been optimally combined. The ideal thermal performance, a good cross profile and the best zone separation ensure excellent soldering results. The HOTFLOW ONE is available with 14 heating modules and a 3.35 m process zone, or 20 modules and a 4.84 m process length.

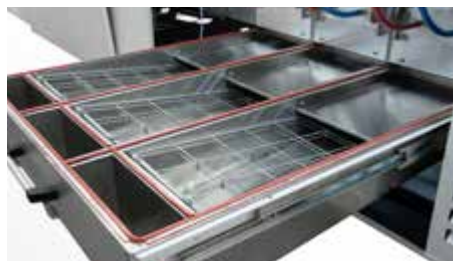
**HOTFLOW THREE: The new benchmark for high-volume reflow soldering.**

With the HOTFLOW THREE, Erska is making a clear statement for even more quality, cost-effectiveness and sustainability in reflow soldering. With its patented three-stage cleaning system, it can operate 24/7 three-shift operation for up to twelve or more weeks without a maintenance interval. The motor and control unit (SCPU®) developed exclusively for Erska ensures optimized soldering profiles and perfect soldering results. This works highly efficiently and ensures that only the power actually required is consumed

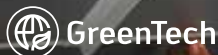
and that energy and nitrogen consumption is reduced to a minimum. Thanks to the future-proof interface and Kurtz Erska CONNECT, the HOTFLOW THREE is ideally positioned for all digital services and precise process data acquisition. Thanks to its wide range of configurations and equipment options, the HOTFLOW THREE is always the right choice for your requirements. It is available with 16, 20 or 26 heating zones and offers single-track and variable dual-track systems.



**IPC-HERMES-9852**  
The global standard for "M2M" in SMT assembly



Impressive machine availability (OEE) thanks to the 3-stage Erska SMART CLEANING system with perfect accessibility.



Unique efficiency: the SCPU® motor and control units were developed exclusively for Erska



HOTFLOW THREE

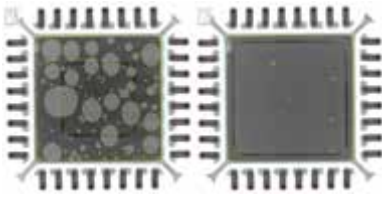


HOTFLOW ONE



Exemplary visualisation of single or dual track transport and centre support

# REFLOW SOLDERING



Before and after comparison:  
more than 99 % void reduction



Infeed    Heating zone    Vacuum module    Cooling zone

The Erska EXOS conveyor system is available in four segments, in the vacuum section free of lubricants and therefore extremely low-maintenance.

## Ersa EXOS 10/26: Voidless reflow soldering with vacuum.

With the EXOS 10/26, Erska offers a vacuum reflow soldering system with eleven heating zones, three heating circuits for the vacuum chamber and four cooling zones for extremely voidfree connections in electronics production.

The absolute highlight of the EXOS is the vacuum chamber, which is part of the peak process area - this allows the void rate (depending on paste, component and PCB) to be reduced by up to 99 %.

The conveyor system is divided into four segments. Infeed, preheating and peak zone, vacuum module as well as cooling zone are equipped with their own individually controllable conveyor. The conveyor



The vacuum module's roller conveyor is free of lubricants.

system of the vacuum section is free of lubricants and therefore - like the system as a whole - of very low-maintenance. The EXOS software also allows the operator simple and intuitive operation of the various functions and ensures safe continuous operation.



Ersa EXOS 10/26 convection reflow soldering system with vacuum module

## HORUS – SMART TEMPERATURE PROFILING AND MONITORING IN REAL TIME FOR FASTEST PROFILING AND PERFECT TRANSPARENCY.



GlobalPoint is a Kurtz Erska subsidiary and develops measuring systems for process recording, analysis and optimization as well as online monitoring in real time. With its precise, innovative measuring electronics and matching measuring boards, including intelligent, user-friendly software, GlobalPoint has been setting standards for all soldering processes worldwide for more than 20 years. The new **horus Smart Temperature Profiling** System is suitable for machines by

all manufacturers and features state-of-the-art technology that opens its own hotspot via WIFI. Totally easy, without administrator rights - but with real-time data for the fastest profiling. In future, **horus Smart Temperature Monitoring** will provide perfect data transparency in all Erska reflow ovens.

**globalPoint**

# THE ONE. FOR EVERYONE.

**NEW: VERSAFLOW ONE –**  
Your Entry into Selective Soldering Excellence.  
Available as F-SERIES and new X-SERIES.



**NEW X-variability version  
guarantees a significant  
increase in throughput.**

As system supplier for electronics manufacturing, Ersa GmbH is the longstanding undisputed technology leader in inline selective soldering. The VERSAFLOW ONE is the entry-level model into the world of VERSAFLOW inline selective soldering machines - on board the most popular and/or proven configuration options such as pin-chain

conveyor with automatic conveyor width adjustment, bottom-side IR emitters and a solder pot with electromagnetic pump. The VERSAFLOW ONE incorporates decades of know-how from the market leader in the form of proven hardware and intuitive software (ERSASOFT 5). Despite its compact dimensions and attractive price, this



# SELECTIVE SOLDERING



machine does not require the user to make any compromises in terms of quality and throughput. Set up, switch on, solder. Selective soldering can't be any faster or easier. And this is also true in times when delivery situations are not always easy. In addition to throughput and ease of maintenance, the VERSAFLOW ONE also scores in areas such as

availability, which has recently become a decisive factor in purchasing decisions. With a delivery time of about two to four weeks, Erska offers the highest availability worldwide – another important argument. The VERSAFLOW is THE ONE. FOR EVERYONE!

# SELECTIVE SOLDERING



VERSAFLOW 4 series,  
available as VERSAFLOW 4/55  
or VERSAFLOW 4 XL

## VERSAFLOW 3 AND 4: EXACTLY CONFIGURABLE FOR EVERY NEED.



Thanks to the modular design, the systems can be optimally configured to meet individual requirements. A large number of highly efficient standard modules are available for this purpose.

Having sold and installed more than 5,000 selective soldering systems worldwide, Ersas is both market as well as technology leader. The product range is always ideally tuned to the user's requirements. In the "classical line" version, the flexible modular concept of the VERSAFLOW 3 offers virtually unlimited combination possibilities, while the ECOCELL with its U-layout of the process zone offers the ideal prerequisites for manufacturing in production islands. ECOCELL can also be used universally: from mini wave soldering for high flexibility to multi-wave soldering for high-volume applications.

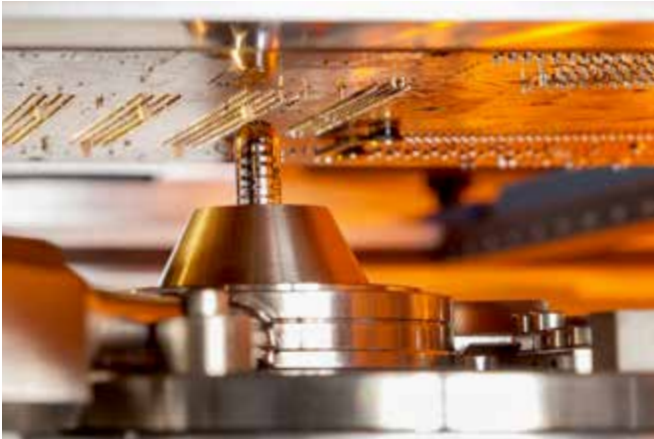
The ECOSELECT line is appropriate for those situations where the production volumes are not very high, but where the quality and the repeatability have to be up to the highest standards and may not be compromised.

The models of the VERSAFLOW 4 series convince not only by the flexible modular concept and the improved process flexibility, but also with a ultra-modern user interface – the new ERSASOFT 5.

Part of this machine generation is the VERSAFLOW 4 XL, which is especially designed for the soldering of PCBs in "XL" sizes. With the new VERSAFLUX and VERSAFLEX modules the machine offers revolutionary flexibility at highest soldering quality.

The compact system SMARTFLOW 2020 convinces with technology without compromise on smallest footprint – the ideal system for small batches or prototypes.

# SELECTIVE SOLDERING



The innovative "Peel-Off" function of the Erska mini wave soldering modules in single solder pots enables to optimally form solder joints when soldering on a horizontal level, and the formation of solder shorts (bridging) can be almost eliminated. Since there is no preferred direction in the run-off of the solder from the nozzle, the solder wave can be moved in any direction.



In addition to mini wave soldering modules in single solder pots, Erska offers multi-wave soldering modules for large quantities, which are used in the VERSAFLOW series and the ECOCELL. This allows the cycle time to be reduced extremely and the throughput – with reproducible soldering results – to be increased to the max.



SMARTFLOW 2020: Perfect start-up solution! Compact, extremely easy to maintain and with full-area IR preheating top and bottom side



ECOSELECT 1: Small dimensions - big technology. Compact batch system with up to two flux heads and two solder pots for small and special series



ECOSELECT 4: Compact inline and batch system with up to two flux heads and two solder pots, power convection, VERSACAM and 508 x 508 mm soldering area



ECOCELL: Inline and batch system for maximum flexibility in production layout; ideal for connection to working stations and peripherals



VERSAFLOW 3 series, available as VERSAFLOW 3/45 or VERSAFLOW 3/66



The Ersa CAD Assistant creates four optimal soldering programs quickly and easily - with autorouting and 3D views.

# WAVE SOLDERING

## POWERFLOW: INDIVIDUAL SOLUTION IN EACH SIZE.

The POWERFLOW ULTRA full-tunnel nitrogen wave soldering system represents the maximum expansion stage of this generation of machines and offers a wide range of configuration options, thanks to which the system can be adapted for special customer requirements.

The machine is available with both frame and finger conveyor. Working widths from

330 mm up to 610 mm are possible in the XXL version. Thus, for example, server boards for 5G telecommunication can also be soldered with the POWERFLOW ULTRA XXL.

The POWERFLOW PRO wave soldering system has been conceived for average production volumes and batch sizes, and its design concept allows achieving substantial cost savings through the drastic reduction of dross generated. It is available, as is the high-end model of the POWERFLOW series, with a pallet as well as a finger type conveyor.



POWERFLOW ULTRA



POWERFLOW PRO



POWERFLOW

### ERSA POWERFLOW ULTRA XXL

Full-tunnel nitrogen wave soldering machine, perfectly designed for 5G soldering tasks.

- Maximum working width up to 610 mm
- Industry 4.0 capable – with Kurtz Ersa GATE and Kurtz Ersa CONNECT
- ERSASOFT 5 – award-winning user interface
- Modular preheating configuration for flexible and reproducible heat input
- 2.4 m preheating distance for maximum throughput
- Long-lasting cleanliness due to continuous process gas purification

# WAVE SOLDERING

## PERFECT SOLDER JOINTS WITH UNMATCHED PROCESS CONTROL AND FLEXIBILITY

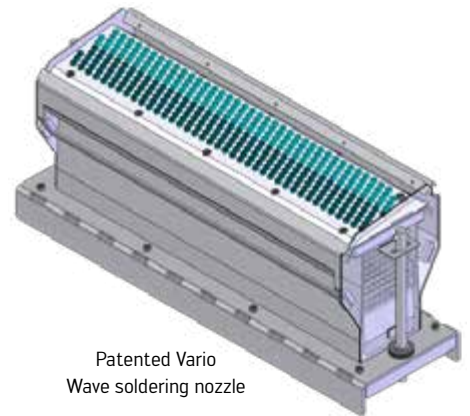
The new soldering module of the POWER-FLOW ULTRA offers unique process control and flexibility. Its innovative drive achieves speeds of up to 5 mm/s. The distance between solder nozzle and PCB is set via the ERSASOFT 5 operating software. In this way, all assemblies can be soldered with the appropriate distance.

Nozzle clearance and solder wave height can also be adjusted within an assembly. For this purpose, the printed circuit board is divided program-controlled into sectors which are assigned parameters. Thus, each sector can be soldered with individual configurations, which ensures highly flexible processes.

In addition, the soldering program allows the contact time of the solder wave with the assembly to be stored in the soldering program. This offers maximum process control both when moving the assembly into and out of the solder wave. Together with the nozzle distance, an optimum solder flow is achieved. The result: perfect solder joints!

A special highlight is the permanent measurement of the actual solder volume, independent of pump speed and tin level, using a patented sensor and automatic solder feed. This significantly shortens measuring times and increases system availability.

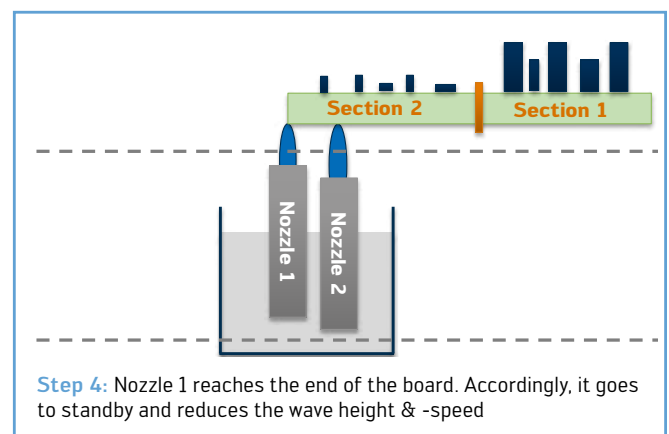
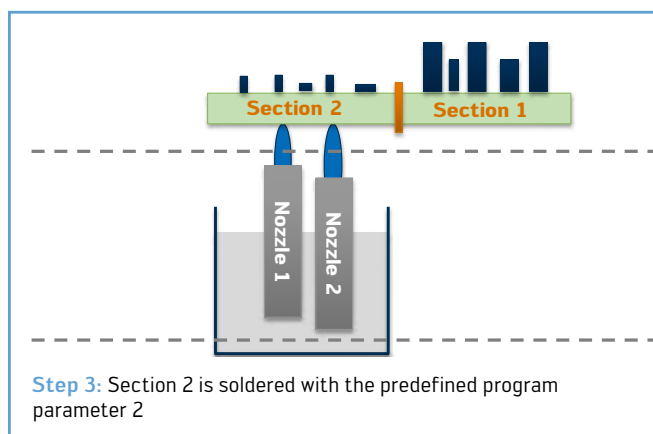
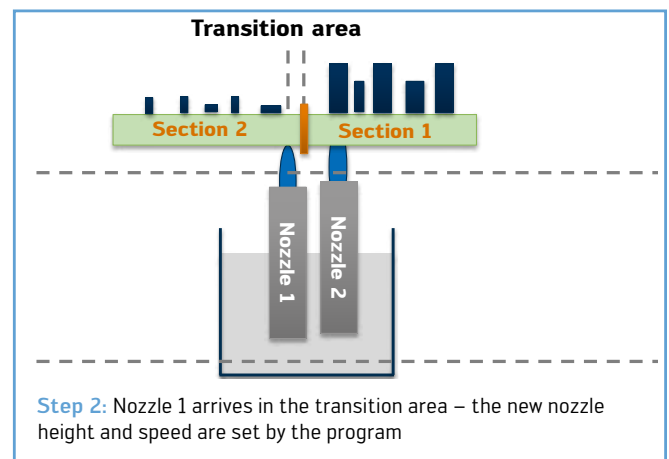
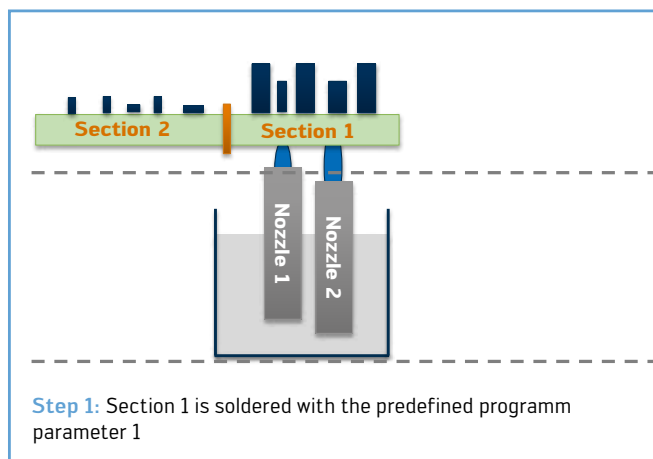
Together with flexible nozzle combinations that can be adapted to the products, you are ready for every challenge and can optimize production processes perfectly to your needs.

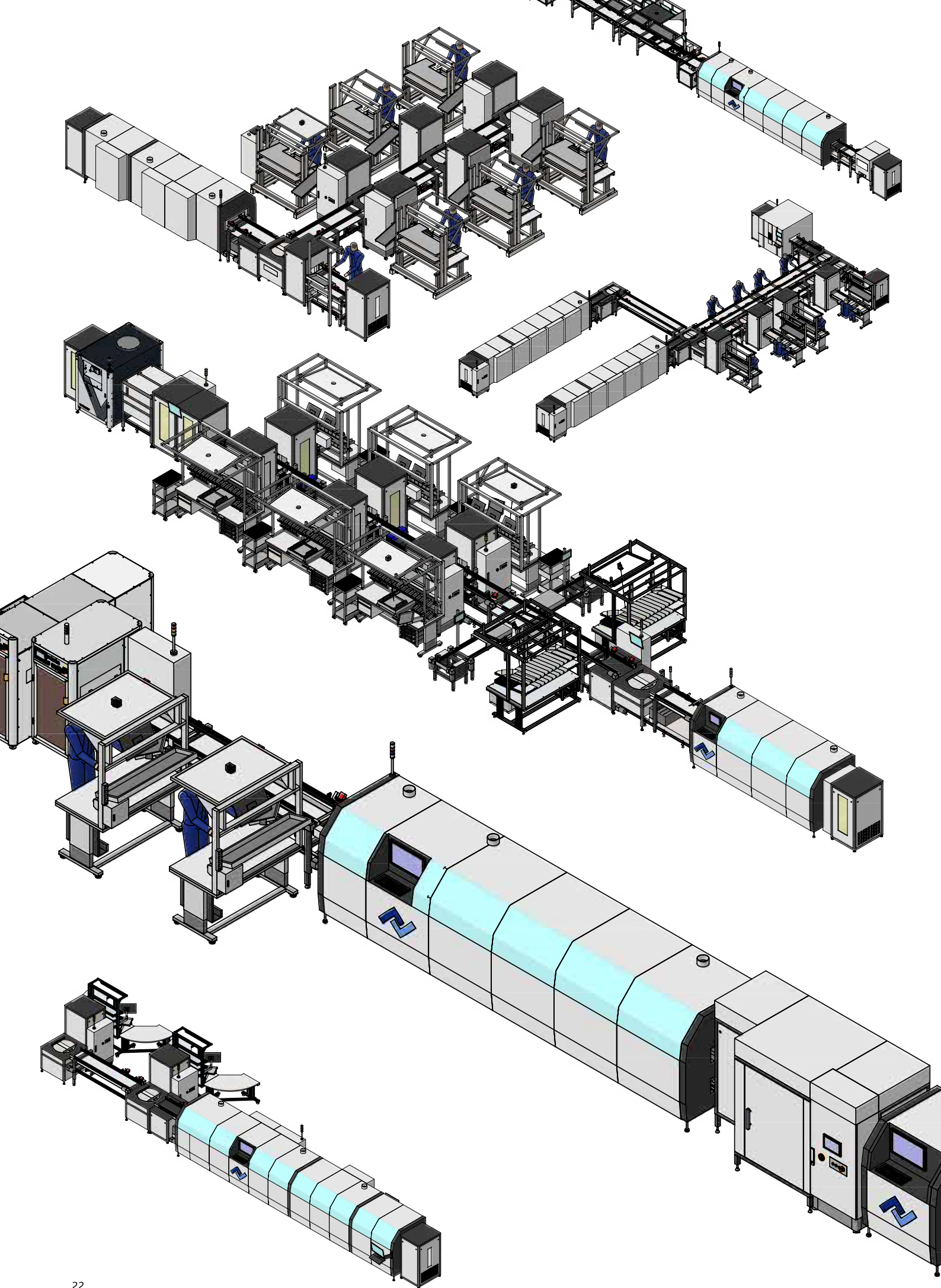


Patented Vario  
Wave soldering nozzle

### Soldering in sections

- 5 - 18 mm solder nozzle height adjustment
- Component clearance up to 18 mm from the bottom
- Traversing speed of 5 mm/s
- Micro weight measurement of liquid solder





# HANDLING & AUTOMATION



## SYSTEM OF ALMOST UNLIMITED POSSIBILITIES.

Ersa is the No.1 system supplier for systems and equipment for the production of electronic assemblies - in terms of individual machines, but increasingly also, for complete solutions. In other words, if a comprehensive perspective on entire production lines including end-to-end process automation is required. This applies to the requirements of mass production as well as to the demand-oriented production of customized products, where there is an increasing demand for individual solutions that enable flexible production strategies. Either way - Ersa has the right know-how and the optimal solution for the most challenging requirements.

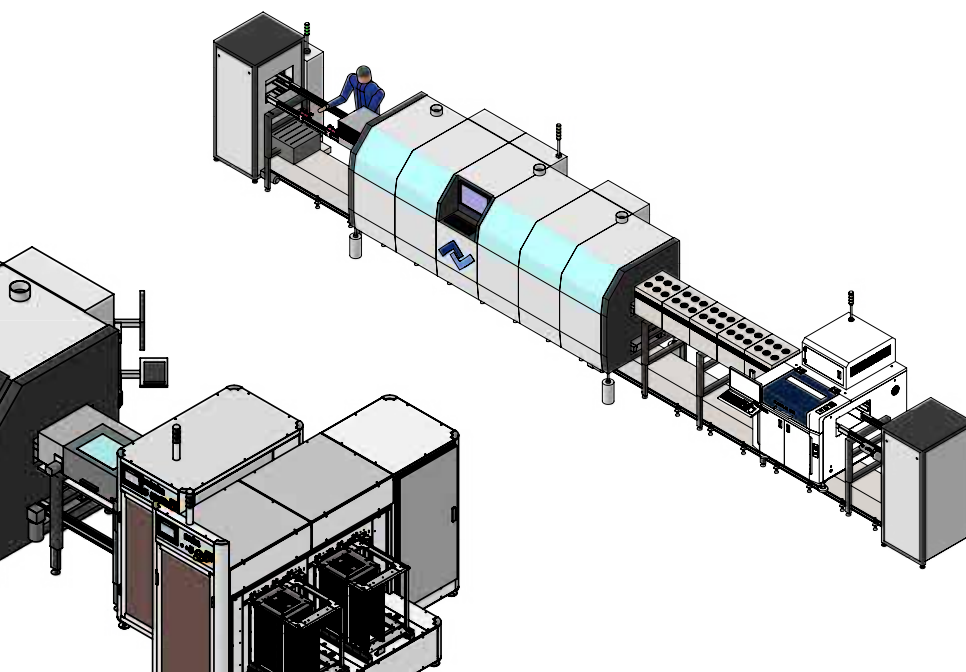
In addition to its broad portfolio of machines equipped with innovative technology for practically every requirement and its extensive process know-how in electronics manufacturing, Kurtz Ersa also offers customized handling and automation solutions. The basis for this is the many years of expertise of the Kurtz Ersa Automation business unit, which is optimally organized with motivated teams at the sites in the Swabian town of Sonnenbühl (Schiller Automation GmbH & Co. KG) and in Wertheim (Kurtz Ersa Automation GmbH). As a business unit, Kurtz Ersa Automation has been able to realize a number of successful projects in the last few years. With a modular system that includes a variety of transport and handling systems as well as manual and inline workstations and the use of robotics, tailor-made automation solutions

have been developed. No matter what the solution will be – the aim is always to make production and processes more efficient and economical, and thus to increase the customer's earnings.



### HIGHLIGHTS KURTZ ERSA AUTOMATION

- Industrial robotics
- Transport and palletizing systems
- Industrial image processing
- Process simulation
- Automation consulting
- Modular systems
- Overall plant concepts



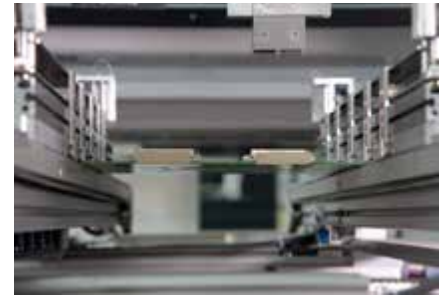
# PRESS-FIT TECHNOLOGY



Top-side press unit



Lower press unit with tool changer



Proven Erska conveyor system

## VERSAFIT 500 – THE ALTERNATIVE CONNECTION TECHNOLOGY

The market for press-fit components for electronic assemblies keeps on growing. For many years, connectors and plug pins were the manageable components in this connection technology, but now classic components such as inductors, power semiconductors, relays and even electrolytic capacitors are increasingly conquering this market.

The reason for this is the advantages of this technology compared to soldering. A further increased reliability of the joints, shorter cycle times in production, no additional heat load on the assembly, no flux residues. The absence of nitrogen and

a considerably lower energy consumption also are strong arguments for the use of press-fit. However, with this technology, the requirements on PCBs are increasing, e.g., with regard to the tolerances of the diameters of metallized vias.

Ersa VERSAFIT 500 is a highly flexible inline system. Its core component is a servo-electric press cylinder which can be precisely controlled and monitored in terms of force and distance. The PCBs are positioned under the press tool on a high-precision X-/Y-table, which also is the conveyor system for the assemblies. To meet the demands for high flexibility,

VERSAFIT 500 has a magazine for a wide variety of press-in tools. Programming is based on automatic placement machines. The positions of the X-/Y-table under the press cylinder result from the position of the components on the assembly. The number of pins per component as well as the geometry of the press-in zones result in the press force. The symbiosis of Ersa's many years of experience in soldering machine construction with the challenges of automated, inline press-fit technology offers customers completely new possibilities in the design and manufacture of electronic assemblies.



VERSAFIT 500 with VERSAPRINT 2 stencil printer and peripherals



## EXCELLENT SERVICES - AROUND THE GLOBE.

Ersa and soldering have been a uniquely successful combination in the electronics processing industry since 1921. Right from the start, the focus was on the entire manufacturing process - in addition to first-class products.

In accordance with its corporate philosophy, Ersa offers attractive services and service packages that optimize the manufacturing processes on the customer side. We are particularly proud of our comprehensive system consulting for every aspect of soldering, which our customers use in their production to create invaluable added value - whether as a concrete application, in the form of complex process details or in terms of total cost of ownership!

In our fully equipped application centers, our customers in Europe, North America and Asia - supported by Ersa engineers - determine optimum process parameters for their assemblies.

With 10 application centers worldwide and over 85 highly qualified service employees, we are excellently positioned around the globe to offer our customers first-class service - complemented internationally by 10 sales and service offices and over 75 high-performance Ersa agencies with their own service teams and spare parts warehouses.



### OUR APPLICATION CENTERS

- Wertheim, Germany
- Plymouth, USA
- Guadalajara, Mexico
- Juarez, Mexico
- Shanghai, China
- Shenzhen, China
- Penang, Malaysia
- Ho-Chi-Minh-City, Vietnam
- BacNinh, Vietnam
- Bangalore, India
- Bangkok, Thailand

### OUR ADDED VALUE FOR YOU

- Weltweites Service-Netzwerk und 24/7 hotline
- Central spare part warehouse with spare part shipment within 24 h
- Local spare part warehouses around the globe
- Online webshop to order spare parts
- Digital Services with Kurtz Ersa CONNECT: Ticket System, E-Learning or Remote Service
- Varied portfolio of trainings and seminars
- Process consultation, optimization & support
- Maintenance and repair
- Service and maintenance contracts
- Machine capability studies
- Retrofits
- Coming soon: performance checks & energy counselling

ONE TOOL. ALL SERVICES.  
YOUR ACCESS TO US.



Further information

# THE MISSING LINK

## **NEW:** i-CON TRACE

The world's most connected  
soldering station.



## i-CON TRACE

**Complete traceability for manual soldering at last!**

Manufacturers of electronic assemblies are currently facing numerous challenges – including the advancing miniaturization of the components to be processed, an ever increasing component density on the PCBs to be processed and the growing variance of different assemblies. In order to keep the overview here and to be able to continuously improve processes, traceability and precise process data documentation in assembly production are becoming more and more important.

Traceability has long been an integral and indispensable part of the machine soldering process. The situation is different with traceability in the manual reworking of assemblies with a hand soldering station. However, as soon as rework is carried out with a soldering iron, the complete documentation of the entire soldering process was previously no longer possible. For this reason, many electronics manufacturers have completely dispensed with a manual soldering process or only permitted this following elaborate special approval.

100 years after the patent application of the first electric soldering iron by company founder Ernst Sachs, Erska has reinvented hand soldering - for the digital age. The i-CON TRACE is the world's first IoT-enabled soldering station. With its integrated WLAN and network card, it can be fully integrated into production processes and makes the entire hand soldering process traceable and verifiable.

Further  
Information:



# HAND SOLDERING



## PRECISION TOOLS FOR EACH INDIVIDUAL TASK.

For the Erska soldering tool division, the emphasis is on soldering and desoldering stations for the use in microelectronics and SMD assemblies up to thick-copper applications. Erska stations impress by their compact size, high performance and

energy efficiency and low operating costs, since inexpensive exchange soldering tips are used.

Fast, efficient and good value for money – these requirements are met by both the i-CON PICO MK2 and the i-CON NANO MK2. They are the entry-level stations for professional soldering within Erska's i-CON

soldering station series. i-CON PICO MK2 suits semi-professional and ambitious users in the DIY sector who can do without ESD capability, while i-CON NANO MK2 realizes ESD safety including potential equalization up to the soldering tip and has been designed for the professional sector and the industry.

# SOLDER FUME EXTRACTION

## FOR CLEAN AIR IN SILENCE.

The highly flexible solder fume extractions EASY ARM 1 and EASY ARM 2 are based on over 25 years of experience in the field of process air cleaning. The functional design combined with a high extraction rate, an efficient filter system and the silent operation characterize both devices. A large choice of extraction arms allow the easy adaption to any individual workspace.



EASY ARM 1 & 2



# HAND SOLDERING



i-CON PICO MK2



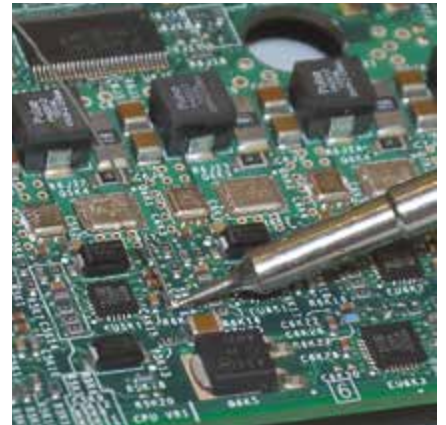
i-CON NANO MK2

The soldering and desoldering stations i-CON 1V MK2 and i-CON 2V MK2 are the advancement of the popular i-CON series on basis of the future-oriented VARIO platform. Both soldering stations are equipped with an intelligent and, dynamic power

management and are able to run additionally to the hitherto soldering and desoldering tools the SMD desoldering tweezers CHIP TOOL or CHIP TOOL VARIO.

The i-CON VARIO 2 MK2 multi-channel soldering and desoldering station makes it possible for the user to operate two tools at the same time. A portfolio of six soldering and desoldering tools offers a suitable tool for every application. Starting with the improved i-TOOL MK2 with its new portfolio of tips, the i-TOOL AIR S for professional soldering and desoldering of components with hot air, to the i-TOOL HP for highest solder heat requirements.

The multi-channel soldering and desoldering station i-CON VARIO 4 MK2 is the flagship of the i-CON family. It meets the highest demands of professionals with up to four soldering and desoldering tools which can be attached at the same time.



Further Information:



i-CON 1V MK2



i-CON 2V MK2



i-CON VARIO 2 MK2

# INSPECTION

## ERSASCOPE: IF YOU NEED TO KNOW IT EXACTLY.

It does not matter whether the purpose is to inspect a BGA which has just been replaced using the rework system, or whether the aim is to establish or verify correct process parameters – the ERSASCOPE inspection system has established itself as the preferred tool to non-destructively inspect hidden solder joints, and as such it should be at hand in each and every electronics manufacturing environment. The MOBILE SCOPE is the mobile version of Ersa inspection systems.



ERSASCOPE M plus



# REWORK

## REWORK MADE EASY. IN ALL DIMENSIONS.

For more than 25 years, thousands of users worldwide are drawing benefits from using the patented Erska rework technology. Aside from its very attractive price-performance ratio, the units have gained their strong market position because they deliver excellent results even with the most complex rework tasks.

Ersa has a model diversity that extends to automated hybrid stations with extensive accessories.

The hybrid rework system HR 600/2 sets standards in the automated rework of PCBs.

In addition, Erska offers the HR 550 – a further high-performance model for safe and easy manual rework with guided processes. The HR 600 XL has been developed for large PCB formats of up to 625 x 1,250 mm and handles component sizes of 60 x 60 mm without any problems. Thanks to the innovative IR Matrix Heater™ and 16 kW power, the HR 600 XL ensures the safe processing of large, high-mass assemblies.



The compact system HR 200 for rework applications “out of the box” convinces professionals and beginners not only with its easy setup, but also with its intuitive operation.



HR 600 XL: For the largest Erska rework system, an XL heating head is also available as an option. 120 x 120 mm edge length can be processed.



HR 500



HR 200



HR 100



HR 550



HR 550 XL



HR 600/2

### News from the Rework family.

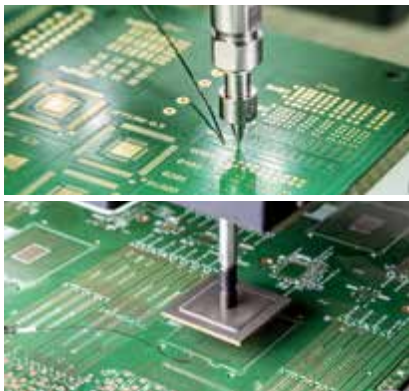
The youngest members of the family inspire with their interesting technological features in the field of heating and placement technology and expand the variety of options for users.

With the HR 550 XL, Ersa provides a semi-automatic system for large assemblies up to approx. 530 x 610 mm – a real high-performance system with eight bottom-radiation heating zones and motorized X/Y fine adjustment and component rotation. The system is suitable for industrial and power electronics and large-format boards and is particularly attractive for service providers.

The HR 500 offers the full Ersa hybrid rework technology for budget-oriented users. The little brother of the HR 550 allows flexible repairs of standard assemblies up to 380 x 300 mm and 50 x 50 mm component size.



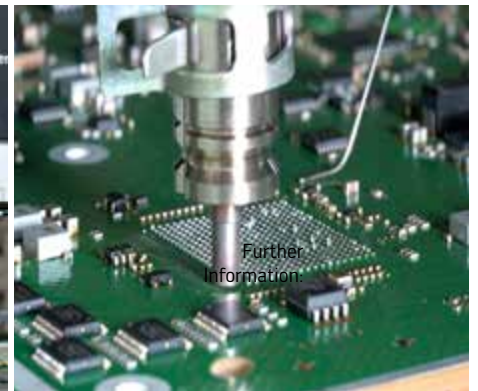
Further information:



Highest precision and reliability for every conceivable component size (from 01005) is guaranteed with Ersa rework systems.



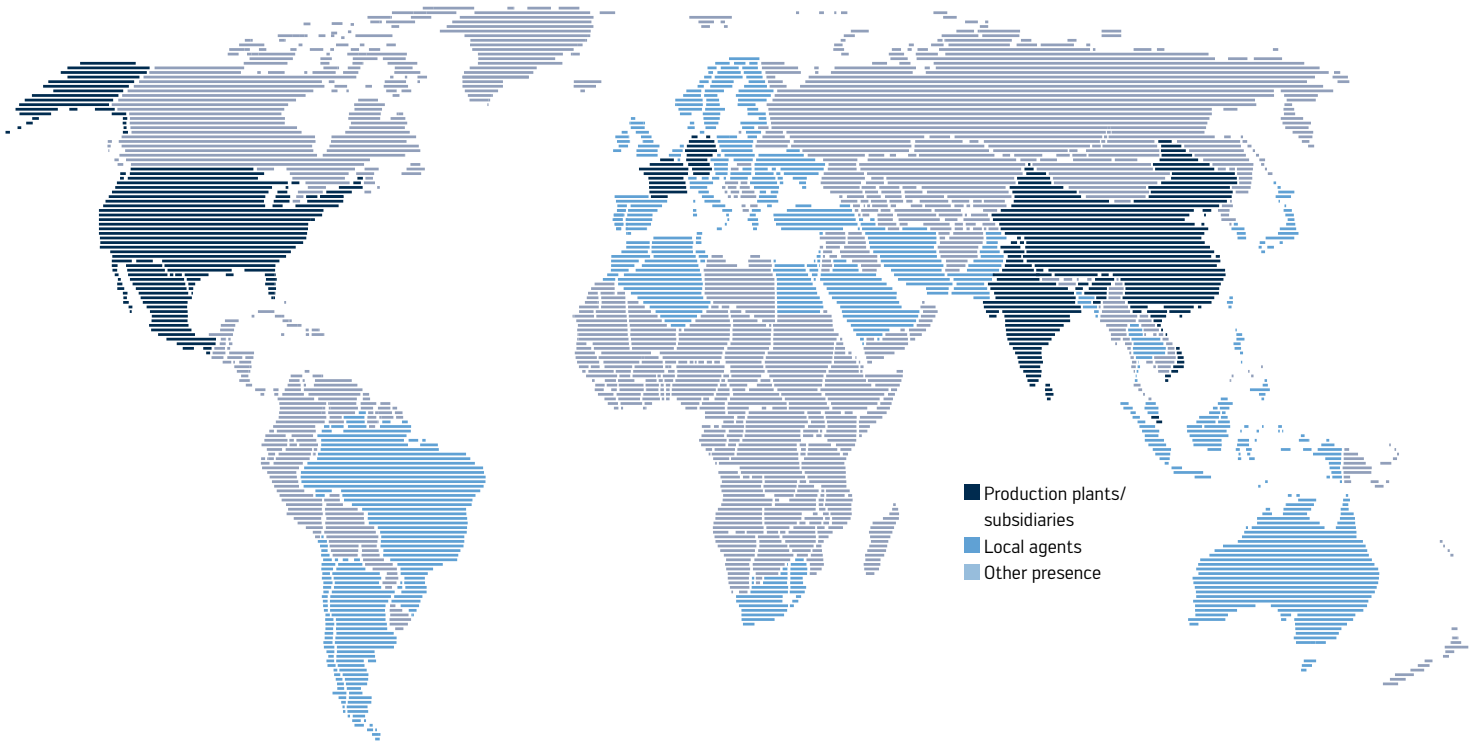
Left: Auto Scavenger module of the HR 600 XL for non-contact residual solder extraction. Right: After the component has been automatically lifted off the PCB, remaining solder is removed completely.



Guided processes in HRSOft 2.0 and with a 5-MPx camera ensure perfect and reproducible rework results. Screenshot shows the screenshot of a 01005 component placement.

# ELECTRONICS PRODUCTION EQUIPMENT

Worldwide presence



## USA

Kurtz Ersa, Inc.  
Plymouth, WI  
usa@kurtzrsa.com

## Mexico

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

## China

Kurtz Ersa Asia Ltd.  
Hongking  
asia@kurtzrsa.com

Ersa Shanghai  
Shanghai  
info-esh@kurtzrsa.com

## Vietnam

Kurtz Ersa Vietnam Company Limited  
Ho-Chi-Minh-Stadt  
info-kev@kurtzrsa.com

## Singapore

Kurtz Ersa Singapore (Pte. Ltd.)  
info.kes@kurtzrsa.com

## India

Kurtz Ersa India  
Smart Production Technologies  
Private Limited  
Bangalore  
india@kurtzrsa.com

## France

Kurtz Ersa FRANCE  
Haguenu  
kefrance@kurtzrsa.com

Ersa GmbH  
Leonhard-Karl-Str. 24  
97877 Wertheim/Deutschland

Phone: +49 9342 800-0  
Fax +49 9342 800-127  
info@ersa.de

[www.ersa.de](http://www.ersa.de)  
[www.ersa.com](http://www.ersa.com)

 **kurtz ersa**