



product line.

HIGH-QUALITY EQUIPMENT FOR FLEXIBLE ELECTRONICS PRODUCTION

RCAB

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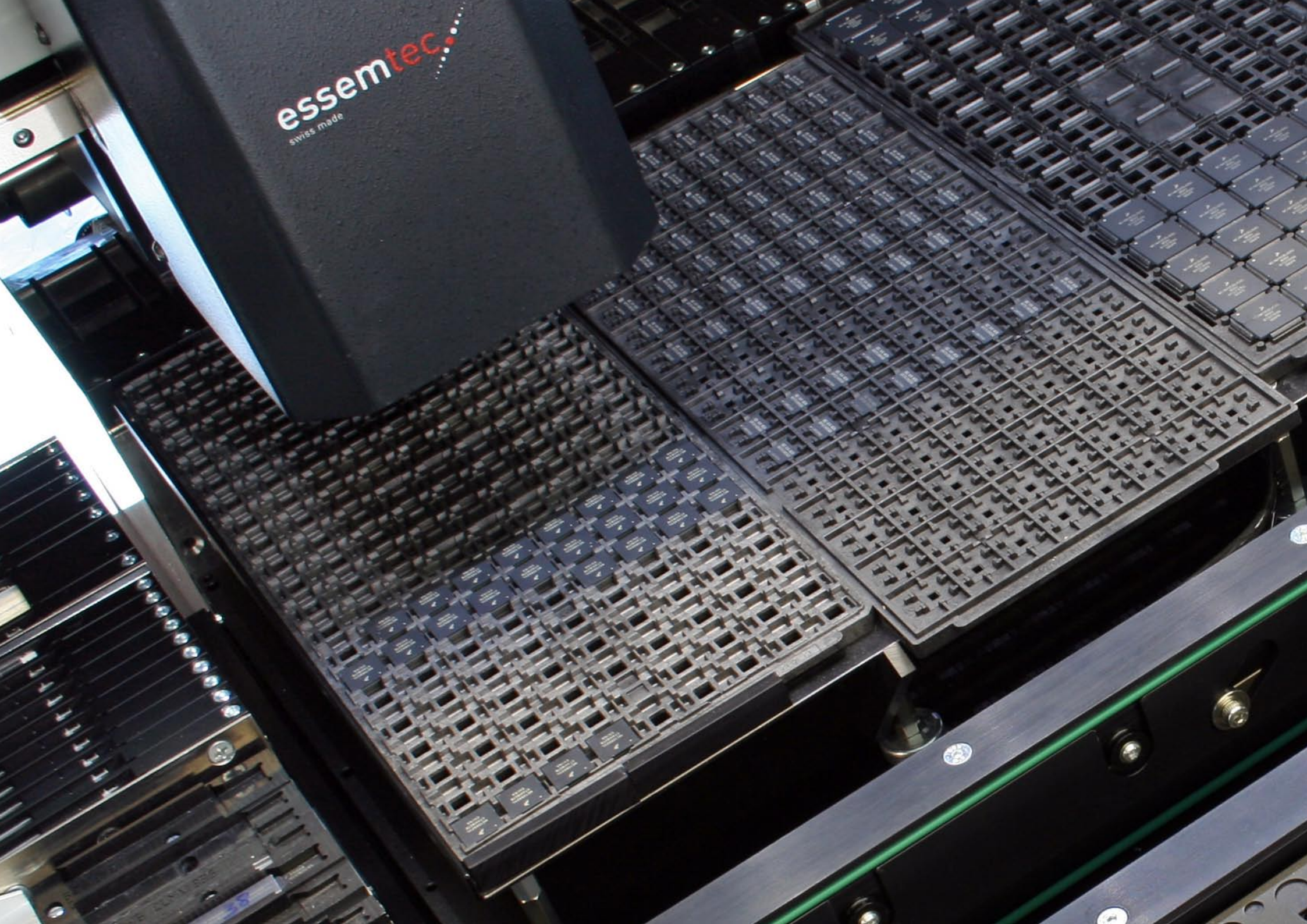
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essemtec.

swiss made

essemtec.
swiss made





swiss made.

Essemtec is the global innovation leader in the manufacturing of highly flexible Surface Mount Technology (SMT) production equipment. Essemtec systems

are optimized for maximum flexibility. Users can switch from one product to another quickly, making maximum use of available production capacity.



tucano. plus



Fully Automatic Inline Printer

- Print format: 608x540 mm
- Post-print inspection
- Quick changeover
- Stencil frames: 29" (737 mm)
- Automatic stencil frame positioning
- Auto-setup functionality

The Tucano provides a versatile printing system. It optimally combines required quality and accuracy with speed and reliability. The equipment is affordable, features lowest cost of ownership and provides a full range for state-of-the-art SMT manufacturing.

paradable.



Modular Automatic Inline Pick-and-Place

- Increased CPH: Up to 30,000
- Up to 360 feeder positions
- Component range 01005 to 80x70 mm
- Up to 2 dispensing valves per machine
- Job and quality management integrated
- Recipe optimization on each machine

The Paradable offers unmatched changeover times, the highest number of feeder slots per square meter in the market, intelligent kitting without production stops and the ability to combine placement, dispensing and component verification in one system. Easy integration is achieved with modern ERP and production planning systems.



NEW Solder paste jetting

High Flex Inline SMT Assembly

The Real Turnkey Supplier

Essemtec is the global innovation leader of SMT production equipment. Essemtec is the only manufacturer worldwide to cover the entire production process, from printers and dispensers to pick-and-place and soldering

equipment to handling and storage solutions. Customers benefit from the experience and the know-how of a complete process solution supplier. Essemtec provides turnkey lines and customized adaptations from one single source.



Modular Automatic Inline Pick-and-Place

- Throughput: 21,000 cph
- Intuitive operation using ePlace
- 8-axis SMD placement head
- PCB size: up to 800x600 mm
- Changeover without downtime
- Component range: 01005 to 80x70 mm

A pick-and-place system for high volumes, the Cobra features the flexibility that is required in highly versatile production. Innovative technology and new materials make the Cobra one of today's most modern and accurate machines worldwide.

cobra.



ePlace eMis hyQ.

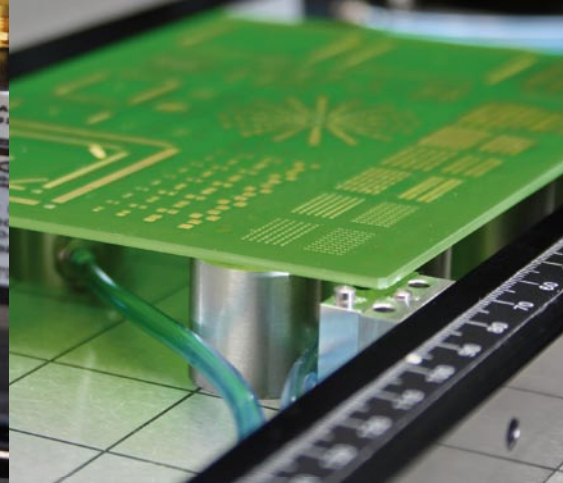
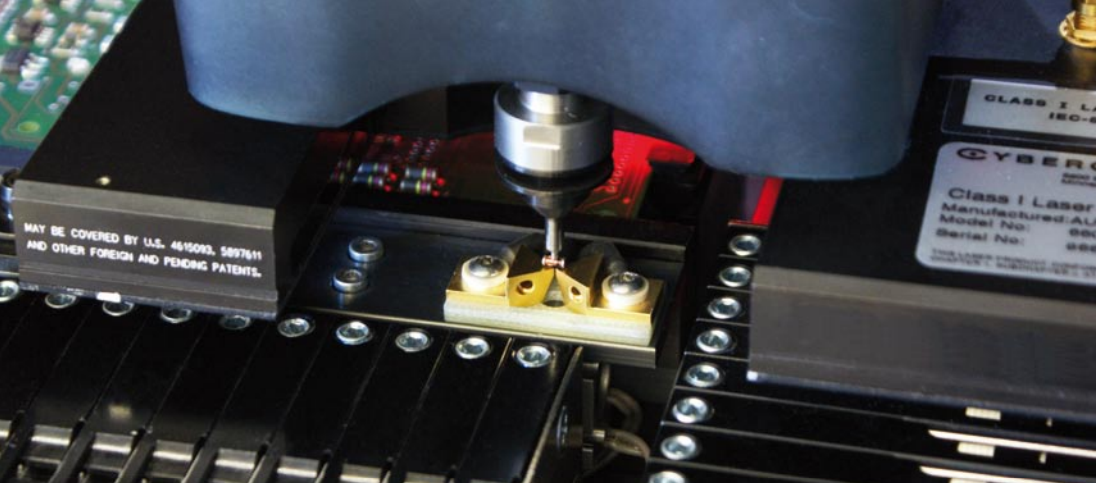
zonda.

Modular Full Convection Reflow Oven

- 7 to 13 zones; Lead-free process approved
- Speeds up to 140 cm (55") per minute
- Performance in either air or nitrogen
- Lowest cost of ownership
- Turnkey line offer only

The Zonda series support high mix/medium volume up to high mix/high volume throughput at different speeds to accommodate the fastest pick-and-place systems, while conserving valuable factory floor space. Rapid response times and precise temperature controls ensure process uniformity.





sp150 sv.



Standalone Semiautomatic Printer

- 23" (584 mm) stencils
- Front-side shuttle
- Semiautomatic vision
- Integrated stencil cleaning system
- Alignment by vision system
- Short setup and changeover time

The SP150-SV is an affordable fine-pitch printer available with or without vision alignment. Its front-side shuttle makes it easy to load and unload PCBs. The printer features a through stencil vision system, and guarantees high precision printing due to integrated quality control.

paraquda4.



Modular Automatic Pick-and-Place

- Throughput: 15,000 cph
- Intuitive operation using ePlace
- 4-axis SMD placement head
- PCB size: up to 600x470 mm
- Component range: 01005 to 80x70 mm
- Up to 2 dispensing valves, 20,000 dots/h

The Paraquda is a highly flexible SMT pick-and-place system with an extraordinarily large feeder capacity. It is equipped with high-resolution Fly-by-Cognex vision for 01005, fine pitch, micro BGAs and odd-shape components. Intelligent, programmable feeders can be exchanged during running production, and changeovers are made without downtime.



NEW Solder paste jetting

High Flexible, High-Mix SMT Production

Ideal for prototyping, high mix and series production, and providing quality production from the first PCB, the high-mix production line is suitable for subcontractors or product

manufacturers producing a large variety of different PCBs. This line offers highest flexibility regarding applications and allows quick changeover between different jobs.

Rapid Prototyping Center

- Throughput: 10,500 cph
- Intuitive operation using ePlace
- 2-axis SMD placement head
- PCB size: up to 600x470 mm
- Component range: 01005 to 80x70 mm
- Up to 2 dispensing valves, 20.000 dots/h

NEW Solder paste jetting

5 Zone Full Convection Reflow Oven

- Full convection reflow oven
- Lead-free process capable
- Integrated microprocessor control
- Chain or belt transport
- Equal heating rates – Minimum Delta-T

The RO400FC is a versatile reflow oven for medium-volume soldering (lead-free or leaded solder) and 16" (400 mm) process width. An integrated microprocessor for profile control and storage, extra high air volume for perfect soldering of complex boards, and extra large circulated air volume for complex and heavy PCBs.



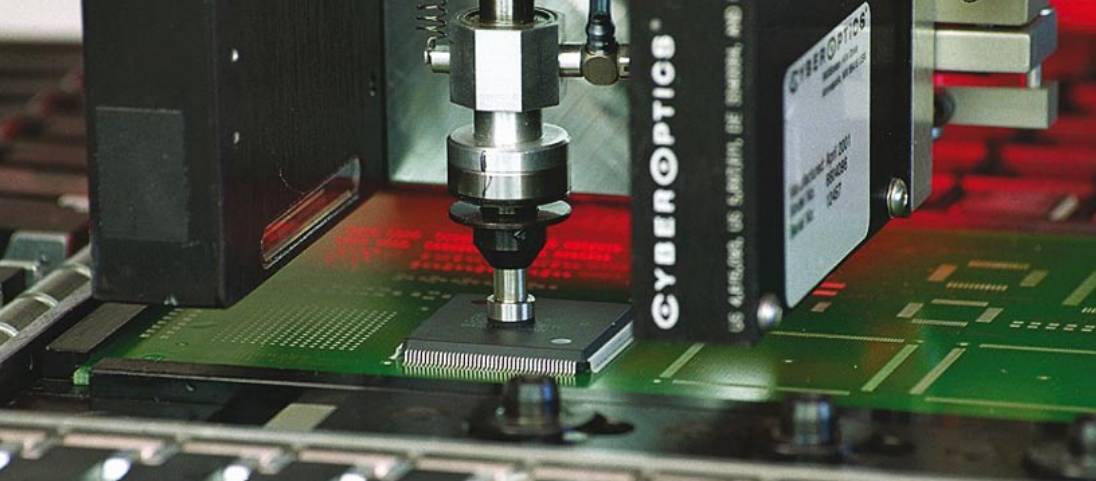
paraquda2.



e_{Place} e_{Mis} hyQ.

ro400fc.





fino.

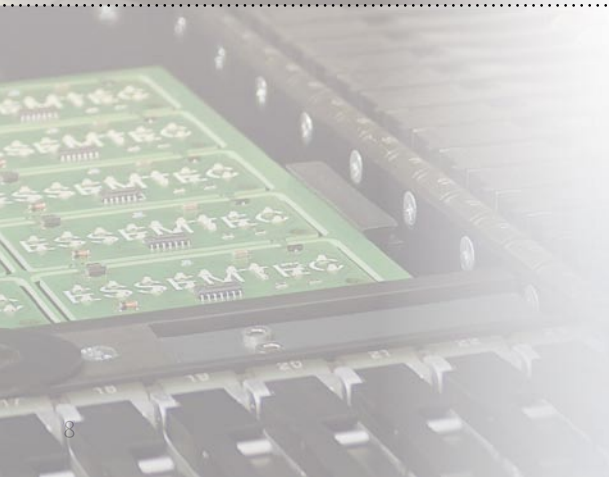


Semiautomatic Fine-Pitch Printer

- Print format 450x500 mm
- 23" (584 mm) stencils, with adapter > 23"
- Double camera vision (laser optional)
- Small footprint
- Quick changeover

The Fino makes it easy for the operator to print accurate and reproducible fine structures. Stencil alignment is precise and fast due to the use of two vision cameras. All printing parameters are software controlled and can be saved if required. Easy access to the printing area makes stencil cleaning and changeovers quick and easy.

pantera xv.



Highly Flexible SMT Pick-and-Place

- Throughput: 4,500 cph
- Component range: 0201 to 50x50 mm
- PCB size: 450x350 mm
- Intelligent single feeders
- Feeder Capacity: up to 115 feeders
- Inline or standalone

The Pantera-XV is a flexible automatic SMT pick-and-place for medium size batches. Equipped with on-the-fly laser centering and X-Vision for fine pitch and BGA. Ideal for small and medium enterprises (SME) for production of prototypes and small series.

Entry-Level Automatic SMT Production

Automatic assembly of small batches, flexible and easy to program, this assembly line is suitable for companies looking for an inexpensive entry into automatic SMT assembly. The

modular line produces high-quality electronics with low effort. The line features quick setup and a large application range.



4 Zone Full Convection Reflow Oven

- 4 zone convection
- 12" (300 mm) soldering width
- Lead-free process approved
- Soldering or curing
- Equal heating rates – Minimum Delta-T
- Small dimensions – high throughput

The RO300FC exclusively heats with hot air convection and can be used for different tasks in SMT assembly, especially for reflow soldering of lead-free solder pastes or adhesive curing. It features easy operation, perfect reflow results and a robust construction. It is well suited for continuous production, small batch manufacturing and prototyping.

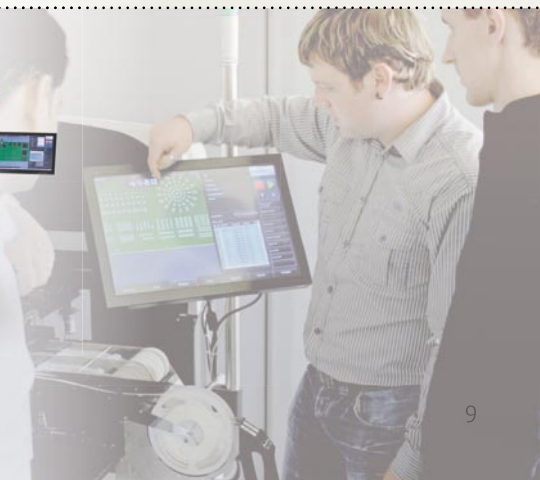
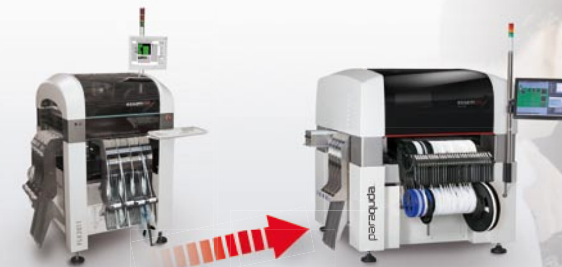
ro300fc.



flex²²

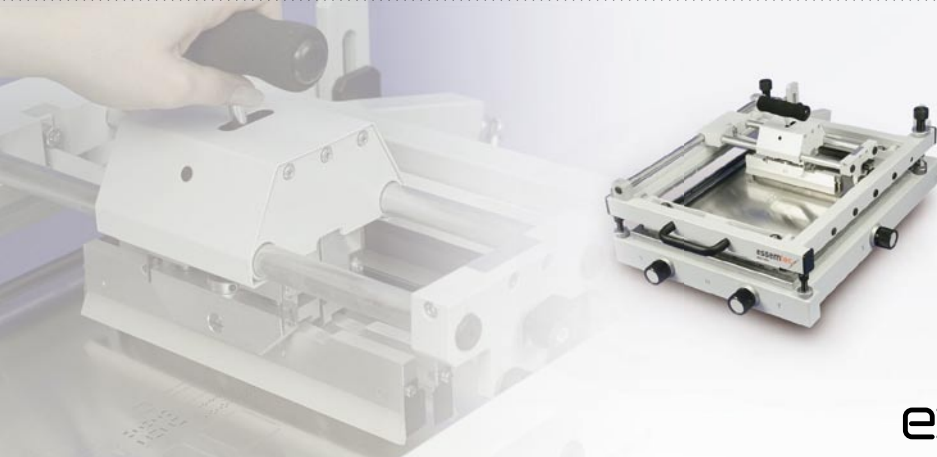
» *Grow your production capability from a single machine to a fully integrated SMART solution with Essemtec's modular approach to high mix SMT production.*

Essemtec offers predefined investment protection programs. If the additional modules do not fit your growing requirements and you need faster or different machines simply trade in your current equipment for a predefined attractive price and get the latest equipment for your next bold move.





sp002.

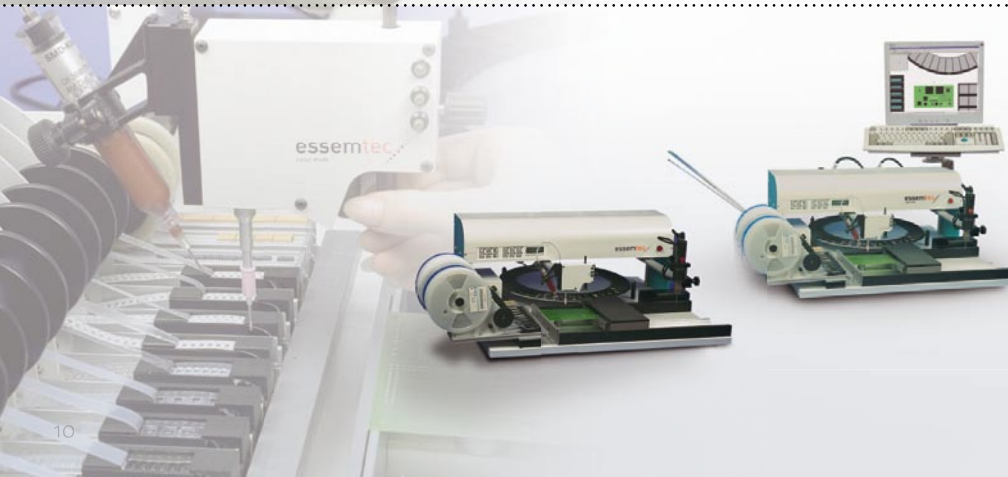


Manual Fine-Pitch Printer

- Simple setup and operation
- Print frame size 23" (584 mm)
- Pneumatic parallel separation
- Test print frame for quick setup
- Squeegee guidance for precise printing
- Gas spring support for frame opening

Easy to use, the SP002 features a highly accurate and reliable printing system, precise mechanical adjustment, and excellent repeatability. Also, available is optional precise squeegee guidance with double squeegees.

expert.



Manual/Semiautomatic Pick-and-Place

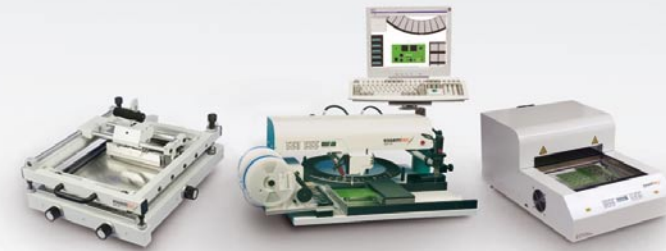
- Air suspended pick-and-place head
- Integrated dispensing system
- UP3100 can integrate BGA, QFP and QFN
- FP split optic for fine pitch alignment
- Integrated linear measuring systems (SA)
- Universal CAD interface (SA)

The Expert placement system is designed for rapid prototyping and small batch manufacturing. The integrated dispensing system and hot air soldering tool make this machine a complete production center in one single unit. The Expert-line system provides a complete family of pick-and-place machines.

Smart Products or High-Quality Prototyping

This line provides flexible manufacturing of prototypes and small series, quick production, and high quality. SMT prototyping is best suited for laboratories, development, universities, for

start-ups or as a prototyping line beside the automatic SMT production. This line also allows for fast changeovers in every versatile production environment.



Microplacer for High Precision Placement

- Placement of BGA, QFP & QFN
- High precision alignment by Vision
- Motorized placement process
- Wide zoom range for CSP to QFP
- MPL3200: placement force control
- MPL3200: automatic pickup and placing

The Microplacers MPL3100 and MPL3200 are versatile placement machines. Complex components such as BGAs or QFPs require special optical aids for placement, even for manual or semiautomatic placement for prototypes or small batches. The machines allow highly accurate placement of modern components, such as BGA, micro-BGA, CSP, flip chip and fine-pitch QFP.

mpl.

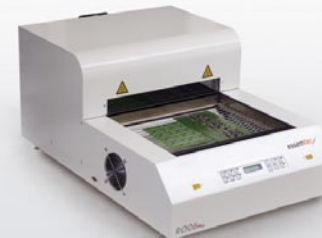


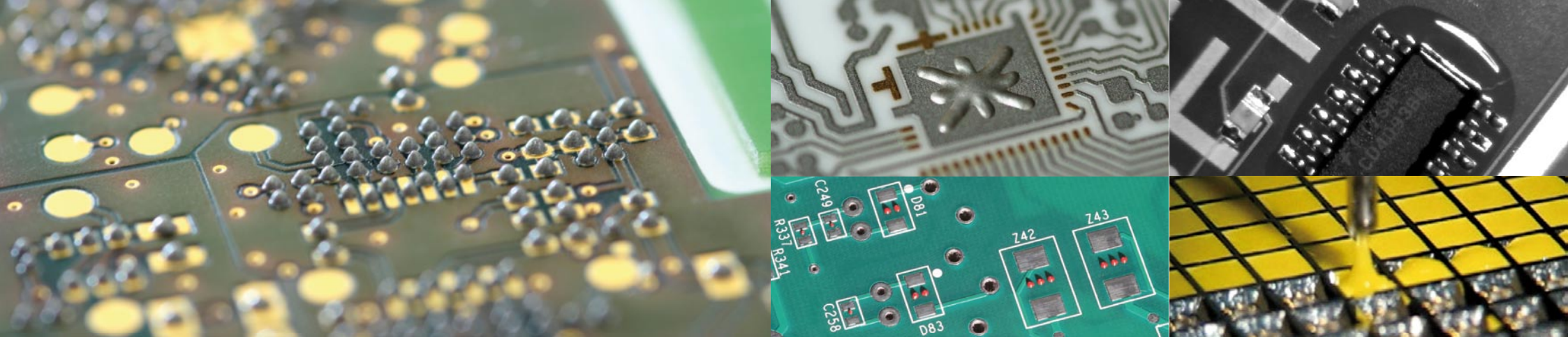
Batch Reflow Oven for Prototypes

- Motorized drawer
- Automatic processing
- Process area of 300x400 mm
- Integrated temperature measuring
- Automatic cooling

The ROo6 is an oven for prototyping and small series. Combi-heater for homogeneous temperature distribution and fast heat-up. Integrated microprocessor for profile control and for storage of customer-specific soldering profiles. Unique pausing function is integrated for easy temperature profile finding.

roo6.





scorpion.



Fully Automatic Dispensing System

- Dispensing of dots, lines and curves
- Up to 100,000 dots/h
- Accuracy 51 μm (3 σ)
- Free choice of dispensing valve (up to 4)
- Automatic height compensation
- Parameter adjustment on viscosity change
- Intuitive operation using eDis

The Scorpion can modularly be adapted to many applications. It provides a large standard choice of valves and functions. The Piezo jet valve solves many otherwise difficult dispensing tasks. Programming and operation are easy and allow the flexible customization of process parameters.

NEW Solder paste jetting

Dispensing Valves

- Jet valve
- Solder paste jet valve
- Piezo flow valve
- Time/pressure valve
- Archimedean screw valve
- Others on request

Applications (examples)

- | | | |
|-------------------|-------------------------------|-----------------------|
| • Glue | • LED production | • Hot melt glue |
| • Solder paste | • Blob top / globe top | • Colors |
| • Conductive glue | • Potting | • Lubricants |
| • Sealing | • 2.5/3D packaging | • Liquid polymers |
| • Underfill | • Selective conformal coating | • Polymeric solutions |
| • Dam & fill | • Selective flux application | • Others on request |





Revolutionary 3D Placing and Dispensing

The system operation of Hydra is similar to a standard SMT pick-and-place machine. The robot positions the substrate holder on an always horizontal placement level. Because of the machine concept, the 3D assembly machine Hydra is able to use the

same component feeders as a normal SMT placement machine, the same spare parts, the same vision system and even the same pickup tools. Therefore, it can be integrated easily into a typical electronics production.

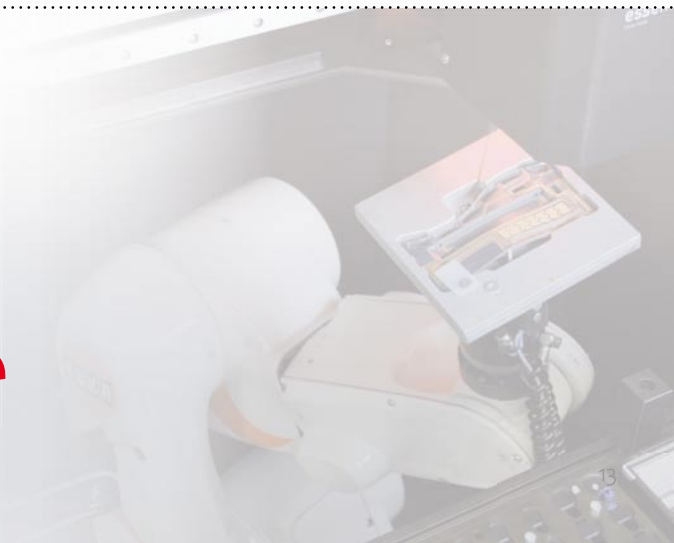


hydra.

3D MID Dispensing and Placing System

- Based on the proven Paraquda platform
- Substrate dimensions 300x300x50 mm
- Accuracy: robot system (± 0.02 mm)
paraquda system ($45 \mu\text{m}$ @ 3σ)
- Output: 1,000-2,500 cph in 3D mode
12,000 cph in 2D mode

Essemtec combines a standard SMT pick-and-place machine from the Paraquda series with a 6-axes robot. Hydra is the first standard machine for dispensing and assembling in 3D that can be integrated easily into a standard production line. This machine allows for fully automatic production with low manufacturing cost.



Essemtec Support and Services – Global, Local Help

We are here to help you if needed. Essemtec has experienced, globally distributed service engineers that maintain and support more than 6,000 installations worldwide.



Context-Sensitive Help

All machines are based on our eez-technology (essemtec easy) and include online manuals with context-sensitive help. Wherever you are in the user interface, simply touch the help button and the needed explanation pops up.



Trainings

Dedicated equipment and process training takes place during installation. Follow up training for new employees and brush up courses can be provided at our training centers or directly at your site. Computer-based training courses also are available for self-assessed learning.

Hotline Support 24/7

Our thoroughly trained hotline engineers are available to answer your questions around the clock and quickly resolve most issues via phone.

Maintenance

Get a maintenance contract directly after the warranty period ends. Benefit from properly maintained equipment and spare parts at a reduced price.



Regional Support and Spare Part Hubs

Local service staff will support you on a daily basis and ensure that necessary spare parts are sent to you as quickly as possible.

» *Do you have a particularly tricky SMT application?*

Application Support

Our application support can help you to find the right solution for all your problems. We have highly skilled, cross-functional teams in most areas of SMT production. Our solutions may entail process development for jet dispensing or simulating oven profiles for a given substrate load. Furthermore, we do not shy away from hardware modifications, special tooling & automation, customized grippers and nozzles as well as other specialties.

Remote Access

With the customer's permission, our hotline engineers are able to access Essemtec equipment without jeopardizing the safety of the machine or humans around it. A thorough look at the log files usually is enough to find the root cause of any given issue quickly and to initiate appropriate action.

Lowest Cost of Ownership

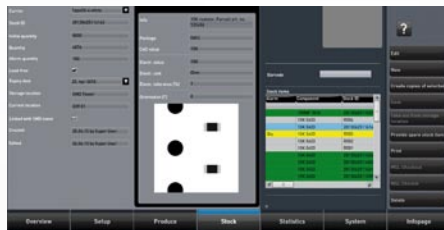
Essemtec machines are designed with the entire assembly process in mind to achieve lowest cost of ownership. Price and placement speed are only two factors in the COO calculation and must be weighed against many others. These include reliability and low maintenance time, number of serviceable parts, quick job setup, fast changeover times, low defect rates, operational efficiency and reduced waste cost for dispensing applications.

Essemtec – more than Machines



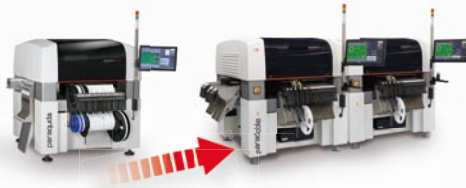
Today's business is not predictable. Essemtec gives you more flexibility to adjust

your equipment set to match the actual economic situation.



Software Licensing Program

Try before you buy! All our SMART suite software modules can be licensed for a limited period at a nominal fee. Experience your productivity gain before you decide to invest in one or all modules. We are convinced that the cost savings will quickly justify the additional investment.



Investment Protection

Essemtec offers predefined investment protection programs. If the additional modules do not fit your growing requirements and you need faster or different machines, simply trade in your current equipment for a predefined price and get the latest equipment for your next bold move.



Rental Programs

Feeders and even complete machines can be rented for a certain time to overcome production peaks without needing of a full investment. If you decide to keep the feeders or machines, a large part of the rental fee will be applied towards the purchase price. (Not available in all countries).

Modular Approach

Hardware and software is fully modular and can be added when needed. Add functions to your existing Essemtec products in the field and get more out of your installed equipment base at a small additional cost.

Financing

We can help you to get local financing for your new equipment. Simply contact our local specialists for such cases.

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