

## OVERVIEW

ONYX and SSM product range



# LEVEL OF AUTOMATION



## SSM 4A & SSM 9 – Repair of THT PCBs

The SSM 4A and SSM 9 soldering and desoldering machines deliver person-independent, repeatable soldering results.

**SSM 4A** Manually adjustable parameters.  
**SSM 9** Programmable parameters.

The PH 4 preheater module can be used to preheat the PCBs.  
 Heating power of 3500 W.



## ONYX 24 – Repair of standard SMD PCBs

- Configured for PCBs up to 300 mm x 300 mm.
- The **integrated vision system** guarantees the precise alignment of components.
- The **multi-functional hot gas head** can be used for soldering and de-soldering components and for non-contact residual solder removal.
- **Integrated force measurement.**
- **Automatic process control.**



## ONYX 25 – Repair of large SMD PCBs

- Configured for PCBs up to 560 mm x 300 mm.
- Up to **two preheating modules.**
- **2000 W top heating.**
- **Integrated force measurement.**
- **Automatic process control.**

# LEVEL OF AUTOMATION



## ONYX 500 – Fully automated SMD PCB repair

The ONYX 500 is the fully automated version of the proven ONYX 29. This versatile unit is designed for fully automated rework processes. Thanks to its flexible design and modularity, even the most demanding processes can be realized.

- **Multi-functional hot gas head.**
- **All axes are motorized** and controlled in real-time in a **closed loop control.**
- **Automatic** and comprehensive **process control.**



## ONYX 1000 – Fully automated repair of large SMD PCBs

The ONYX 1000 is the only truly fully automated rework solution on a large platform, allowing the entire process to be completed autonomously at the click of a mouse.

- **Large board handling** for PCBs up to 800 x 630 mm.
- **Individually adjustable temperature zones:** Hot and cold zones.



## ONYX 29 – Semi-automated SMD PCB repair

- Processing of PCBs with a size of up to 500 mm x 500 mm.
- Placement accuracy of <math><10\ \mu\text{m}</math>.
- **Seven motorized axes.**
- The **integrated MFOV vision system** allows viewing of components up to 70 mm x 70 mm (optional 110 mm x 110 mm).



## ONYX 49 – Repair of large SMD PCBs

The ONYX 49's robust design and fully automatic axes ensure maximum process accuracy and repeatability.

- **Very large and heavy PCBs up to 800 mm x 630 mm.**
- **Up to 10 mm thickness.**
- **Components from 01005 to 110 mm x 110 mm.**

## MAIN FEATURES ONYX

### Three-dimensional vision system

The high resolution vision system clearly displays any displacement in the theta, X and / or Y axis. An adjustable LED lighting provides bright illumination protected from ambient light.

### From positioning to soldering: Everything is under control

Using the vision system, both the component and the board layout are projected into the image plane, free of parallax errors, and then magnified onto the screen using a camera.

### Hot gas nozzles for standard and special components

A wide range of hot gas nozzles are available for selective soldering and de-soldering. From simple chip capacitors and SOIC's to flat packs, PLCCs, flip chips and BGA's. All are designed for quick and easy nozzle change. All components can be soldered and de-soldered safely and easily, even on high density boards.

### Non-contact residual solder removal

Especially when replacing BGA's, the fully automated and contactless residual solder removal option is an important performance feature.

### Options

The ONYX machines are complemented by a wide range of options including:

- Alternative preheaters
- Infrared temperature sensors
- Bridge tray (ONYX 29 only)
- Fluxer option
- Board cooling system
- Site solder removal system
- Dispenser
- Pyrometer
- Direct view camera system
- Component feeder
- Machine base

### Processable SMT-parts:

- 01005
- $\mu$  BGA
- QFN
- Flip Chip
- $\mu$  LED
- CSP
- BGA / CCGA
- SMD's on flex circuit boards
- SMD-plug / -base
- Shields
- POP
- SMD's with underfill

## COMPANY

ZEVAC was founded in 1978 and moved from Germany to Solothurn, Switzerland in 1988. Solothurn is renowned for the development and manufacture of precision industrial products. In this environment, ZEVAC has been able to recruit a team of highly qualified personnel and a group of reliable consultants and suppliers to meet the requirements of ZEVAC's superior quality standards. Since its inception, ZEVAC's dynamic team has pioneered this young technology, making ZEVAC a world leader in the supply of selective soldering and desoldering equipment, automation products and processes to the electronics industry in the field of micro placement, bonding and automation.

## VISION

In addition to standard solutions, ZEVAC is uniquely specialized in consistently finding a solution for new applications in the areas of Repair of printed circuit boards or substrates in the areas of removal, micro placement, interconnection and automation. Customers and potential customers are invited to challenge ZEVAC's capabilities by submitting their respective tasks for a professional evaluation. Precision, reliability and flexibility characterize our products and internal processes.

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