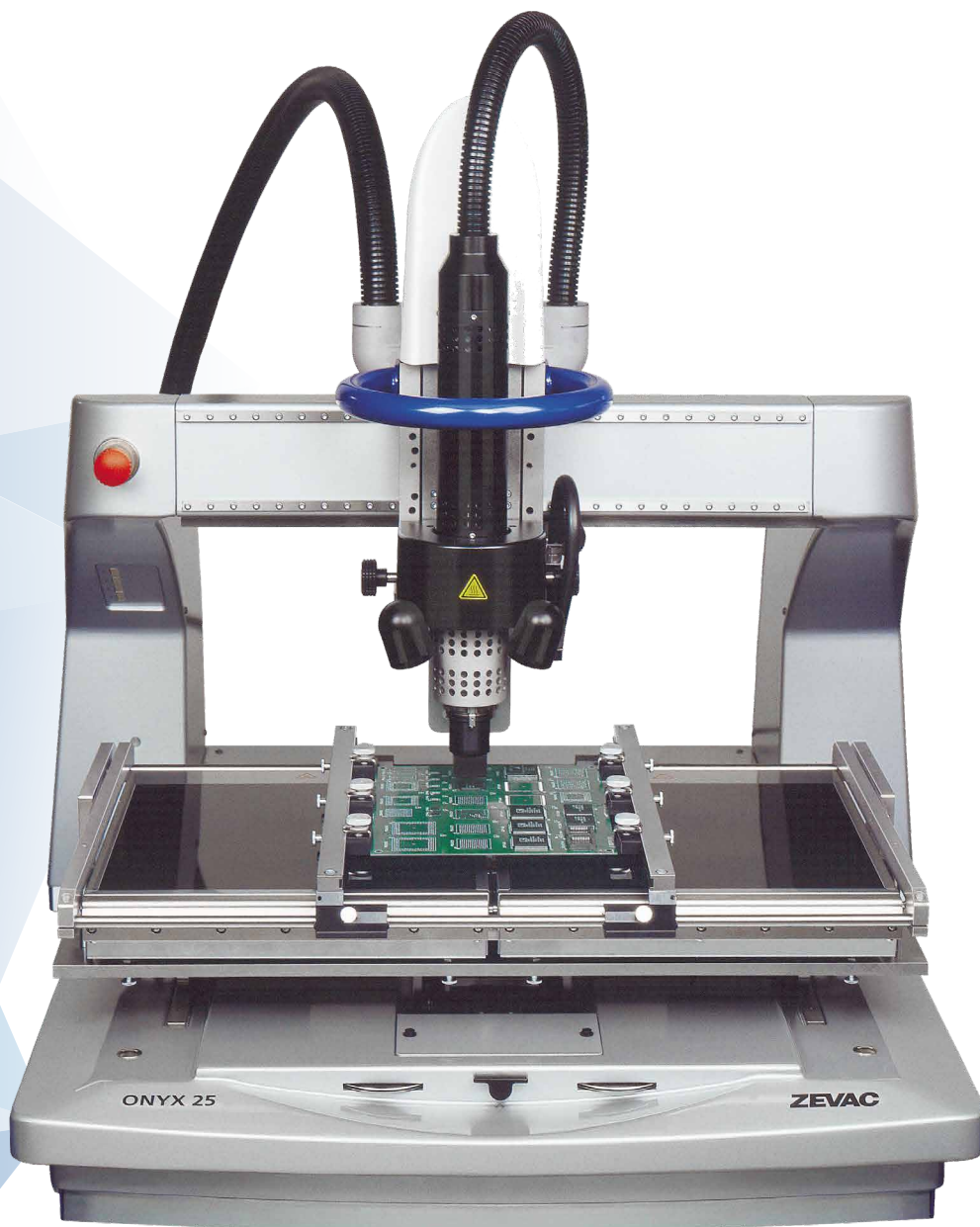


ZEVAC

ONYX 25

Repair of large circuit boards



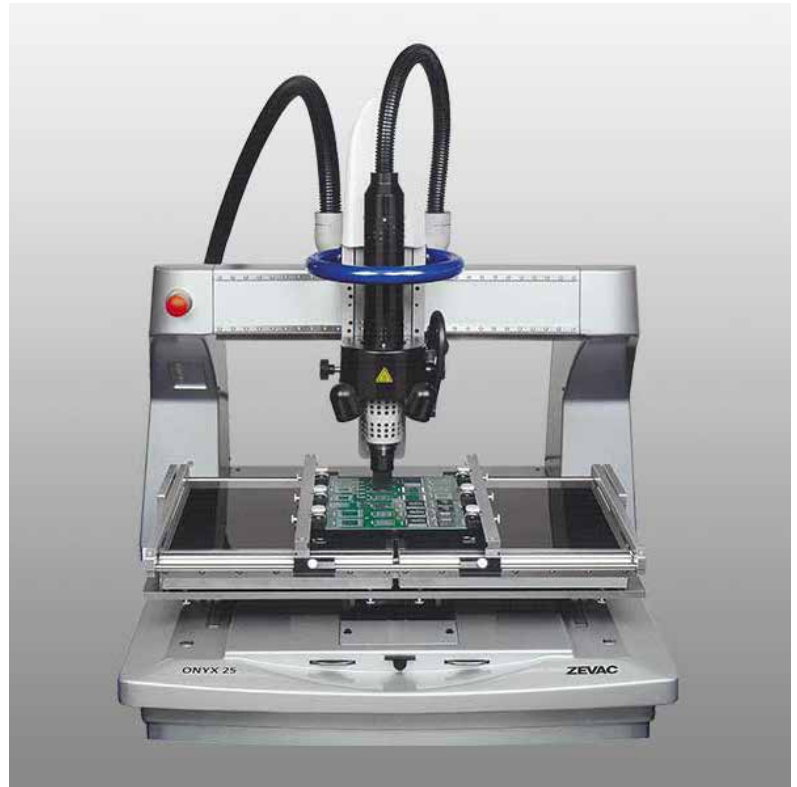
Swiss Engineering

ONYX 25

The ONYX 25 is used to process printed circuit board with a width up to 560 mm and, thanks to the open construction, with an unlimited length. Due to the integrated vision-system the precise orientation of components is guaranteed. The multifunctional hot gas heater head can be used to solder components, to remove components and for site clean processes (contactless removal of residual solder). In addition many unique options for several additional processes are available.

MAIN FEATURES

- **2000 watt multifunctional hot gas heater head:** Solder components, remove components, site clean (contactless removal of rest solder), customer specific application upon request
- **Four motorized axes** with closed loop motion control
- **Integrated hand wheels** for quick and precise positioning of the hot gas head
- **Automatic process control**
- **Up to eight thermocouple ports** to control process temperature
- **Large board handling for boards up to 560 mm width, no limitation for length** thanks to the open construction
- Board carrier handles irregular-shaped assemblies without special fixtures
- **Bottom pre-heater with a performance of 3500 watt** and the dimensions of 300 x 300 mm per module (maximum 2 pre-heaters with a total area of 600 x 300 mm) with integrated board cooling
- **Automatic closed loop force control of the Z-axis** for automatic picking, fluxing, placing and removing processes to protect sensitive parts
- **Closed loop gas flow control from 8 to 80l/min**
- **The MFOV system allows viewing components with dimensions up to 75 x 75 mm** and allows an excellent adjustment of the image contrast
- **Semi-automated, contactless site cleaning** for the removal of residual solder with a motorized Z-axis



HIGHEST PRECISION, REPRODUCIBLE RESULTS

Thanks to the high placement accuracy of <math><10 \mu\text{m}</math>, the integrated force measurement and the control via four motorized axes, reproducible results and highest quality are guaranteed for serial repair and many other applications. Because of the open construction of the ONXX 25 the length of the edited printed circuit boards is not limited. Moreover, due to the movable soldering head the flexible positioning on the X-axis is possible, without moving the printed circuit board.

The open architecture of the ONYX 25 and the variety of closed loop controlled parameters of the application software VisualMachines™ allow simple lab applications as well as high complex production processes repetitive and extremely precise.

APPLICATION RANGE

Repairs

Misaligned devices can accurately be repositioned and defective components can reliably be replaced.

Prototyping

The components of small and extreme large printed circuit boards can be assembled and soldered with the ONYX 25 semi-automatically. It allows already used expensive components to be re-used.

Post-assembly

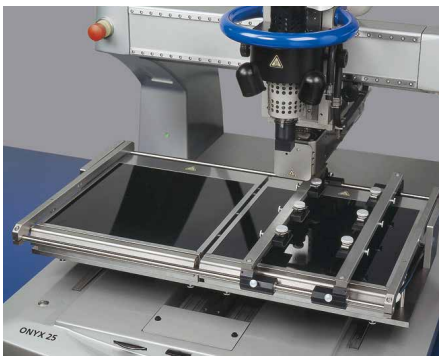
Components that are missing at assembly time can be placed and soldered later, or individual components which cannot be handled by the available production machines can be retrofitted with the ONYX 25.

Assembly

When printed circuited boards with only a few components need to be assembled, then the ONYX 25 often can provide a reliable semi-automated solution.

Components

Zevac`s standard gas nozzles from the proven DRS selective soldering machines can be used on the ONYX 25 without any modification. With the ONYX 25 all electronic SMD components and all customer specific components can be handled easily.



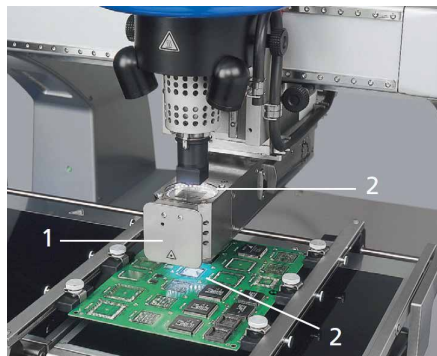
IR PREHEATER SYSTEM

For leadfree applications

Single preheater: 300 x 300 mm
3500 W

Double preheater: 600 x 300 mm
7000 W

Optional board cooling for faster cool down.

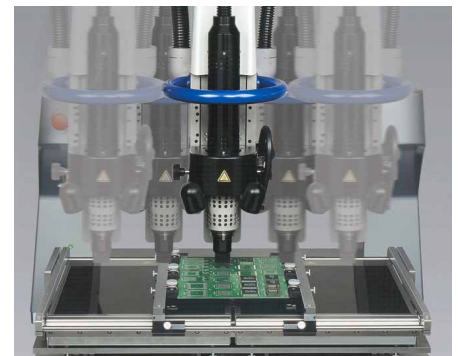


VISION (MFOV)

Guarantees a highly accurate positioning

With the motorized VISION system, the component and the layout of the board are projected on top of each other, verifying the position on all 4 sides. The LED illumination, one for the component and one for the board-layout, guarantees an optimum view independent of surrounding conditions.

- 1 Vision system
For components up to 70 mm.
- 2 LED illumination



MOVABLE SOLDERHEAD

For fast and reliable rework

The solderhead can be moved to any place of the 520 mm x-axis. Large boards can be left in their position and don't need to be turned around. An optimal position can be found very easily. Ergonomic and open design for simple to complex applications.



TECHNICAL DATA

Product designation	ONYX 25
Max. board size	560 mm width, depth unlimited
Max. component height	20 mm bottom side (optional 30 mm) 30 mm top side (optional 70 mm)
Gas pressure	4 – 6 bar
Angle rotation of heater head	± 15°
Hot gas	Compressed air or nitrogen 20-80l/min
Max. power consumption	3 x 400 / 230 VAC, 50 / 60 Hz
Power requirements	6400 VA (+3500 VA per add. preheater module)
Dimensions (W x D x H)	898 x 1050 x 1022 mm
Weight	150 kg (basic machine)
Max. component size	70 x 70 mm
Hotgas temperature	20 - 475°C

DIMENSIONS

