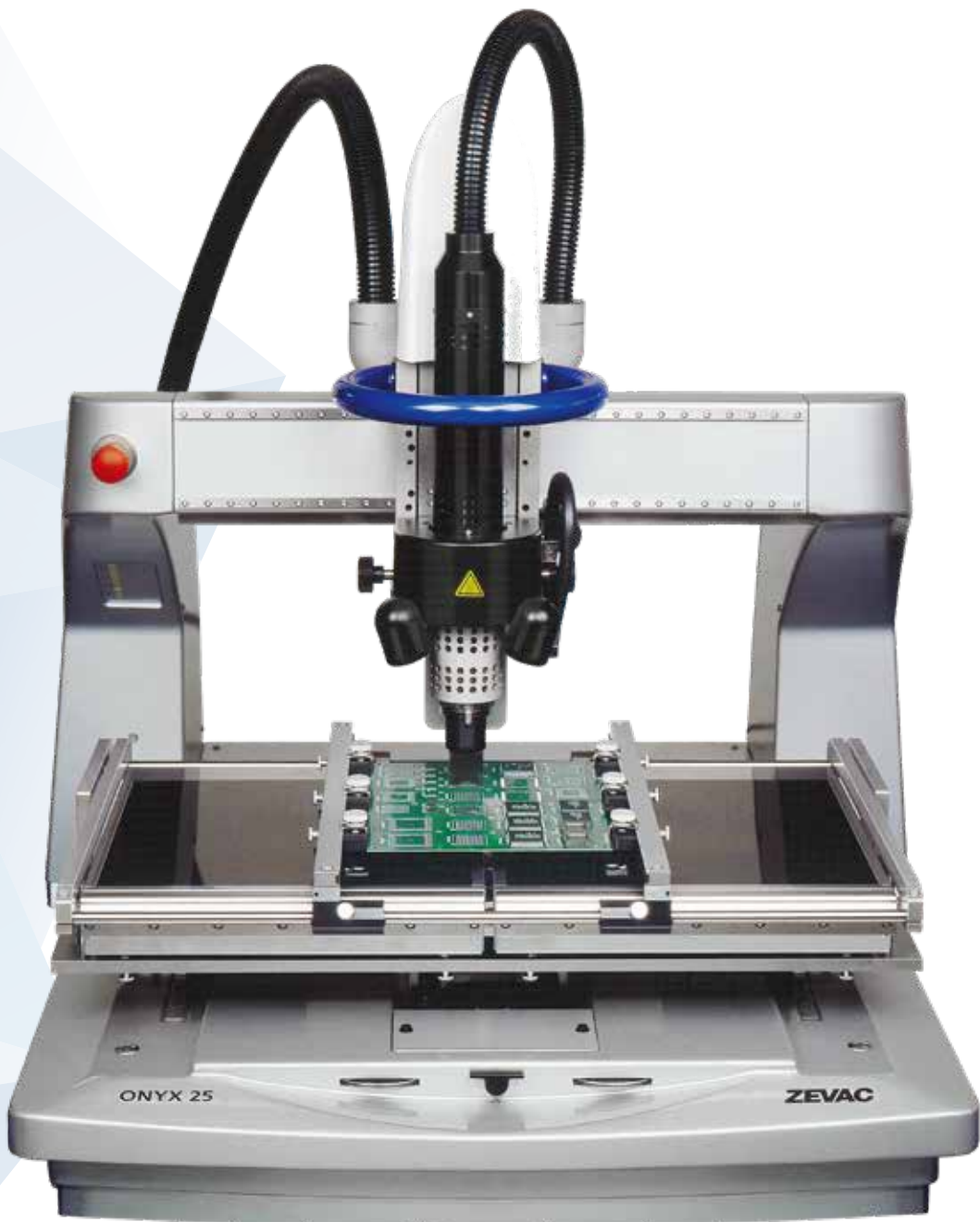


ONYX 25

Repair of large circuit boards

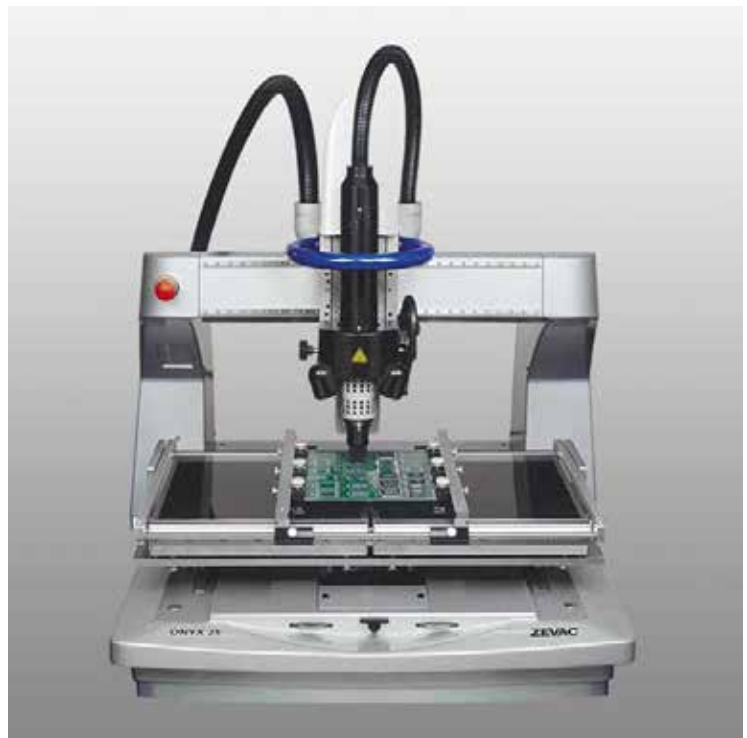


ONYX 25

The ONYX 25 is used to process printed circuit boards with widths up to 560 mm and, thanks to the open construction, with 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 cleaning 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:** Soldering components, removing components, site cleaning (contactless removal of rest solder), and additional customer-specific applications, 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**, due to the convenient open construction
- Board carrier handles irregular-shaped assemblies without special fixtures
- **Bottom preheater 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, providing protection for sensitive parts
- **Closed-loop gas flow control from 8 to 80 l/min**
- **The MFOV system allows viewing components, with dimensions up to 75 x 75 mm** and allows for precise adjustment of the image contrast
- **Semi-automated, contactless site cleaning** for the removal of residual solder with a motorized Z-axis



HIGHEST PRECISION, REPEATABLE 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 of the highest quality are guaranteed for serial repair and many other applications. The open construction of the ONYX 25, allows the length of the edited, printed circuit boards to be unlimited. Moreover, due to the movable soldering head, 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 for simple lab applications, as well as highly complex production processes that are repetitive and extremely precise.

APPLICATION RANGE

Repairs

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

Prototyping

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

Post-assembly

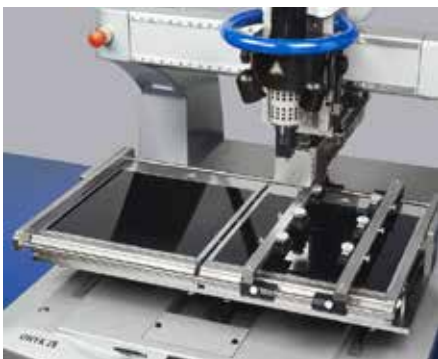
Components that are missing at the time of assembly, are able to be placed and soldered at a later time, or individual components which the production machines are unable to handle, can be retrofitted with the ONYX 25.

Assembly

When printed circuit boards with only a few components need to be assembled, then the ONYX 25 can often 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 easily handled.



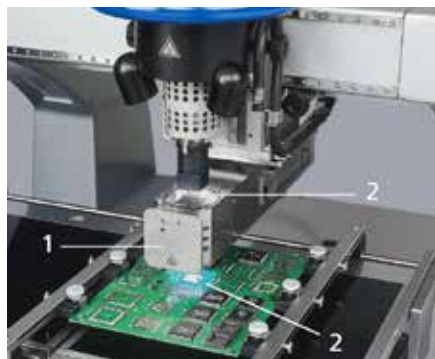
IR-PREHEATER SYSTEM

For lead free 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 highly accurate positioning

With the motorized VISION system, the component and the layout of the board are projected one 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 SOLDERING HEAD

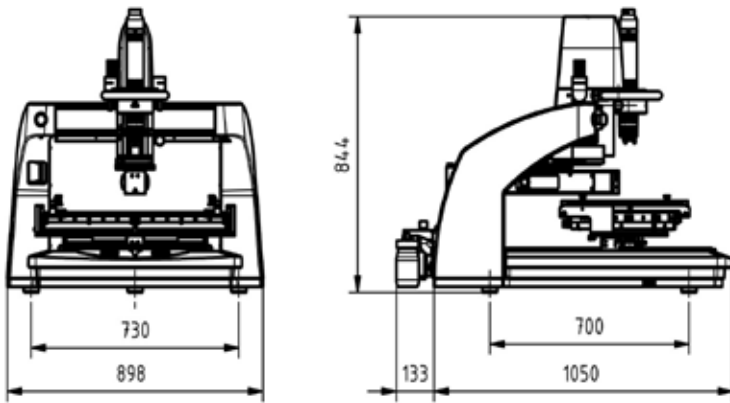
For fast and reliable rework

The soldering head can be moved to any position on the 520 mm x-axis. Large boards do not require any repositioning. Optimal positioning can be easily found, with an ergonomic and open design for simple to complex applications.

TECHNICAL DATA

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

DIMENSIONS



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