

ONYX 49

Repair of SMD circuit boards up to 800 mm x 630 mm



ONYX 49

With the ONYX 49, very large and heavy PCBs can be processed with a high level of user-friendliness.

The robust construction and the fully automatic motorized axes guarantee highest precision and repeatability:

- PCB size up to 800 mm x 630 mm.
- PCB thickness up to 10 mm.
- Processing of components from 01005 up to 110 mm x 110 mm.

The ONYX 49 is based on the world renowned and proven technology of the ONYX 29.

The ONYX 49 offers maximum flexibility by allowing the work area to be divided so that each process step can be performed independently and at different temperatures. For example, a cold zone can be defined for dispensing applications before the boards are moved to a hot zone for soldering.

MAIN FEATURES

- **2000 W multi-function hot gas heating head:**
 - Soldering of components.
 - Removing of components.
 - Contactless and automatic removal of residual solder.
- **All axes are motorized** with closed loop motion control.
- **Manual movement via integrated handwheels** for fast and precise positioning of the hot gas head.
- **Automatic and total process control.**
- **Eight thermocouple ports** for process temperature control.
- **Large board handling for boards up to 800 mm x 630 mm.**
- **Flexible board carrier for easy handling of irregularly shaped boards** without additional fixtures.
- **Adjustable bottom preheaters with a performance of up to 12'000 W** including integrated board cooling.
- **3 different controlled cooling systems** to observe the temperature profile with the highest precision.
- **Automatic closed-loop force control of the Z-axis** for automated pick and place, fluxing and removal processes in order to protect sensitive parts.
- **High-precision closed-loop gas flow control** from 8 to 80 l/min.
- **MFOV system for high-resolution inspection of components up to 70 mm x 70 mm (optional 110 mm x 110 mm) with high-resolution images.**
- **Automatic contactless site cleaning** to remove residual solder with a motorized X / Y / Z system.

THE LARGEST AND THE MOST FLEXIBLE

The high flexibility and modularity of the ONYX 49 allows the machine's level of automation to be adapted to individual customer requirements. Various options can also be added to the work area to automate all process steps.

This proven ONYX 49 solution is recognized for its ability to handle the most complex components on the market.

Its unique technology allows the exact amount of heat to be applied exactly where it is needed to ensure the highest standards at every stage of the process: from component removal, automatic and non-contact cleaning of residual solder, dispensing of flux or fresh solder paste, positioning and soldering of new components.

APPLICATION RANGE

Repairs

Misaligned equipment can be precisely repositioned and faulty components can be reliably replaced.

Prototyping

The ONYX 49 can automatically assemble and solder components on small and large PCBs with high efficiency. It allows the reuse of expensive components that have already been used.

Post-assembly

Components that are missing at the time of assembly can be placed and soldered later, or individual components that cannot be handled by the existing production machines can be retrofitted with the ONYX 49.

Assembly

The ONYX 49 provides an efficient solution for assembling PCBs with a small number of components.

Components

ZEVAC's standard gas nozzles from the proven ONYX and DRS selective soldering machines can be used on the ONYX 49 without modification. The ONYX 49 can easily handle all electronic SMD components and all customer specific components.

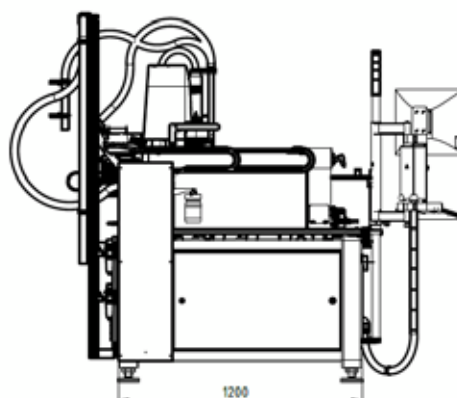
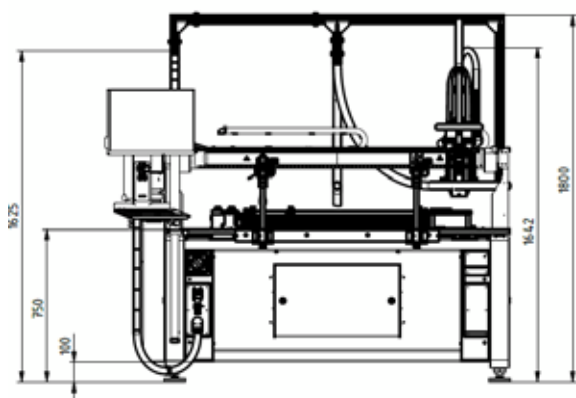
Reuse, Recycle, Upcycle

Salvage components from defective products, replace them, reball BGAs, update PCBs with the latest generations of components, upgrade, redesign, extend product life and reduce e-waste.

TECHNICAL DATA

Product designation	ONYX 49
Max. board size (W x D)	800 mm x 630 mm
Robot travel area	730 mm x 1200 mm
Board thickness range	Up to 10 mm
Max. component height	20 mm bottom side (30 mm optional) 70 mm top side (including board thickness)
Max. part size	Standard 70 mm x 70 mm (up to 110 mm x 110 mm optional)
Vision system object size	0.1 mm x 0.1 mm - 65 mm x 65 mm (up to 110 mm x 110 mm optional)
Component and board illumination	Adjustable LED lights
Top heater power	2000 W
Hot gas flow range	20 - 80 l/min (closed-loop controlled flow)
Preheater system	8 independent zones of 1500 W each Heated area: 650 mm x 860 mm
Hot gas pressure	4 - 6 bar
Temperature range	20 - 475 °C
Hot gas	Air or nitrogen
Cooling gas	Heater element by-pass pneumatic system
Power requirements	3 x 400 / 230 VAC 3 PNE 50 HZ 16 A
Controller	Computer controlled, Windows, VisualONYX™
Dimensions (W x D x H)	1820 mm x 1450 mm x 1720 mm

DIMENSIONS



ZEVAC
www.zevac.ch

info@zevac.ch



Vogelherdstrasse 4
4500 Solothurn
Switzerland

Tel. +41 32 626 20 80
Fax +41 32 626 20 90

