

ONYX OPTIONS

OPTIONS

4.301

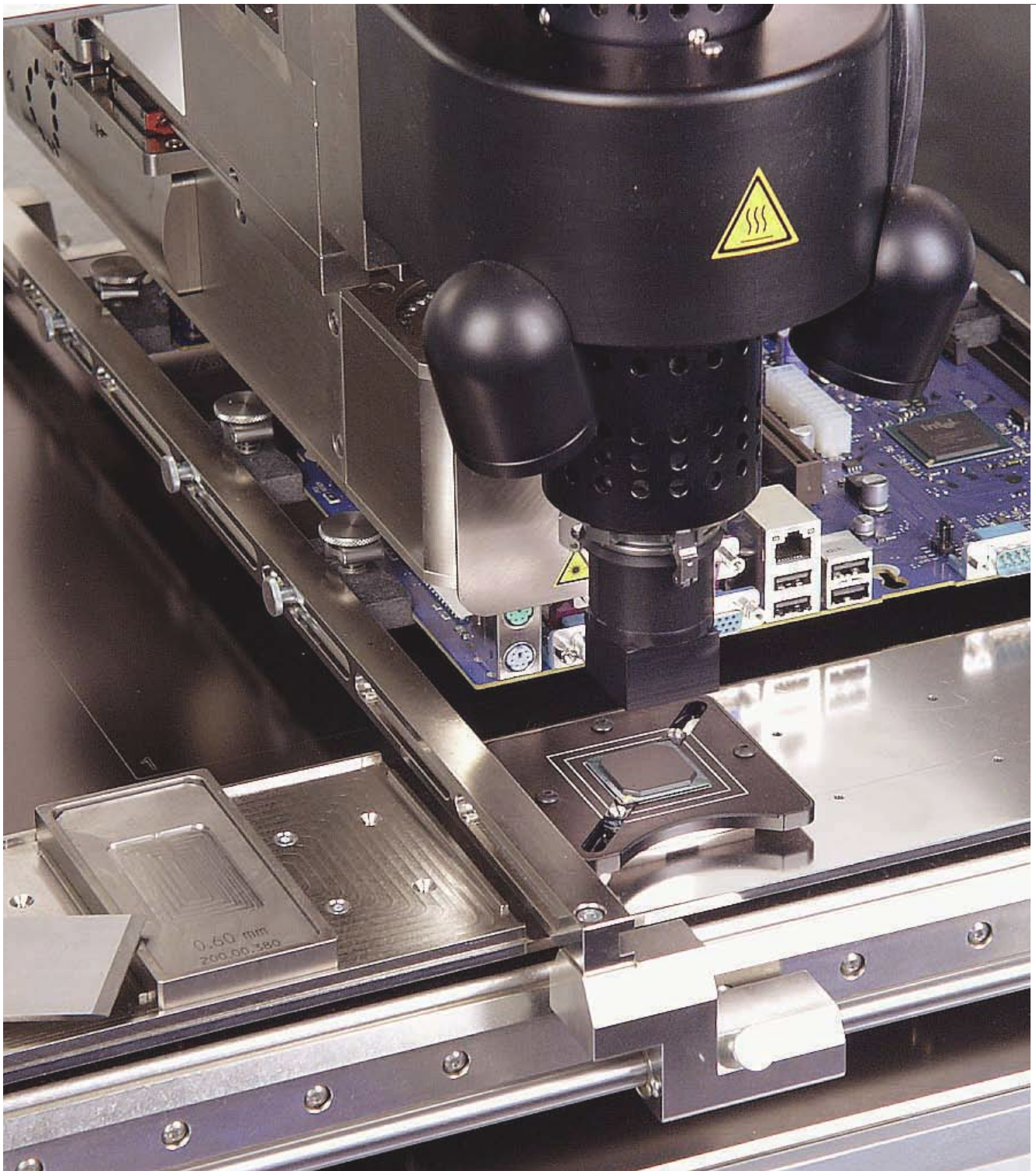


APPLICATION:

SMT

ZEVAC LINE:

ONYX





ONYX 21

The ONYX 21 combines compact machine dimensions with the outstanding features of the ONYX range.

ONYX standard features include:

- Force measurement
- Powerful preheater 3500 W (to 7000 W)
- Powerful top heating 2000W
- Vision system
- Visual Machines software
- Nitrogen connection
- Top heater cooling



ONYX 24

The ONYX 24 provides greater operator control with a flexible print holder to support printed circuit boards over a 300x300 mm 3500 W preheater.

The ONYX 24 / 25 / 29 / 32 can include a non-contact site solder removal system to clean the pads after desoldering a component and to prepare a perfect surface for soldering a new component.



ONYX 25

The ONYX 25 has been designed to rework extra large printed circuit boards. It is equipped with one 300x300 mm 3500 W preheater as standard and can be upgraded with a second providing 600 x 300 mm and 7000 W of preheat.

All ONYX machines can have an optional underboard cooling system providing additional temperature control to reduce cycle times and provide a finer, more uniform grain structure with lead free alloys.



ONYX 29

Using 7 automated axes, the ONYX 29 provides the highest degree of automation possible with a semi-automatic rework machine. Computer controlled movements increase repeatability, quality control and process integrity.

This unique machine concept can be provided with options to fulfil the highest industry demands in selective soldering and desoldering.



ONYX 32

With fully automated process control, the ONYX 32 is best suited to batch rework. Once the printed circuit boards are loaded by the operator, all process steps are executed by the machine leaving the operator free to do other tasks or operate other machines.

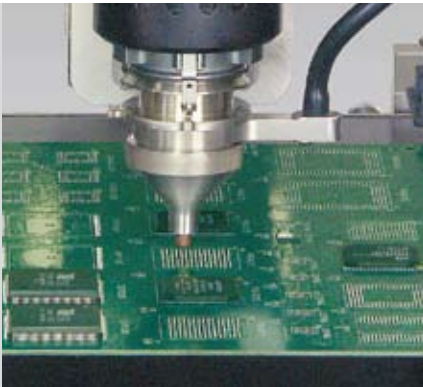
The open construction of the ONYX 32 provides high flexibility with other tooling.



NOZZLES

A wide range of hot gas nozzles is available for the selective soldering and desoldering of any component from simple chip capacitors to OSICs, flatpacks, PLCCs, flipchips and BGAs.

Nozzles are changed without the use of tools in seconds. All surface mount components can be soldered and desoldered safely and without affecting adjacent components, even on high density boards.



NON-CONTACT SITE SOLDER REMOVAL

For removal of the residual solder after desoldering a component. Provides a perfectly clean site for the subsequent replacement of a component, without touching or damaging the surface. Essential for lead free applications.

Micro tips for the site solder removal system are available in different diameters.

ONYX 24, ONYX 25, ONYX 29



MICRO SITE CLEAN SYSTEM

Residual site solder removal for small components.

ONYX 24, ONYX 25, ONYX 29



ONYX 21 SITE CLEAN SYSTEM

Especially designed for use on the ONYX 21, in order to enable site solder removal for SMD rework applications on the ONYX 21.

ONYX 21



TWO ZONE PREHEATER 245X490MM

If only used for smaller printed circuit boards, the machines can be equipped with a smaller 245x490mm 3550W preheater.

Retrofitable at works.

Other preheater sizes are available on request.

ONYX 29

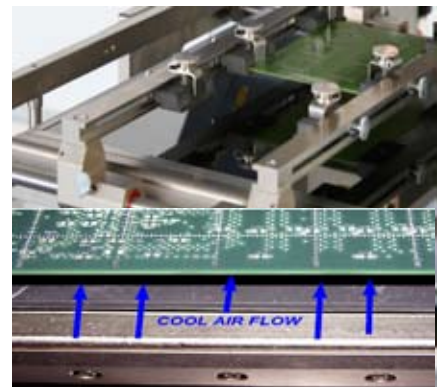


PREHEATER 300/600X300MM

If large printed circuit boards are to be handled, a second preheater can be fitted to the ONYX 25 providing uniform preheating of larger areas.

300mmx300mm Standard
600mmx300mm with second preheater (option)

ONYX 25

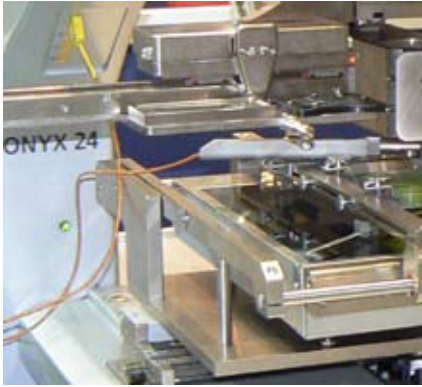


BOARD COOLING

The underboard cooling option provides and additional profiling parameter to reduce cycle times and improve joint formation.

Board cooling can be provided for all preheater sizes.

ONYX 21, ONYX 24, ONYX 25, ONYX 29



COMPONENT PICKUP SHUTTLE

The Component Shuttle is used to position the component for pick up by the nozzle and to position the fluxer beneath the component.

Force control is used for pickup, dipping and placement.

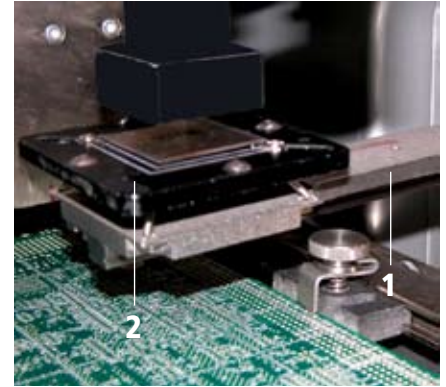
ONYX 21, ONYX 24, ONYX 25



TOOL CHANGER

As part of the automated process cycle, different tools or nozzles can be mounted in a tool changer at the edge of the work area and picked up automatically by the machine under programmed control.

ONYX 29, ONYX 32



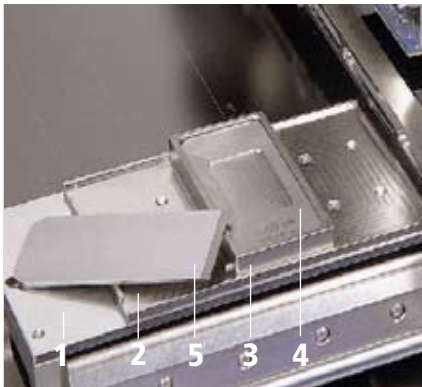
AUTOMATIC COMPONENT SHUTTLE

Fully automated loading, fluxing and unloading of components away from the heated work area.

The optional adjustable area array insertion tool is available in two sizes for devices from 4 to 45 mm square or 9 to 56 mm square.

- 1 = Automatic component shuttle
- 2 = Adjustable area array insertion tool

ONYX 29



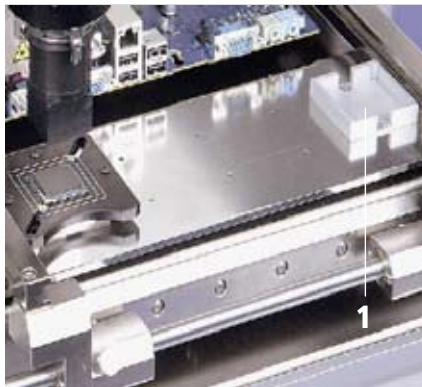
TRAY BRIDGE AND DIP FLUXER

The tray bridge and tray plate provide a platform for a component pickup tool, component reject bin or dip fluxer.

Various dip fluxer modules are available for use on the tray bridge (or component pickup shuttle).

- 1 = Tray bridge
- 2 = Tray plate
- 3 = Fluxer body
- 4 = Fluxer plate
- 5 = Squeegee

on demand

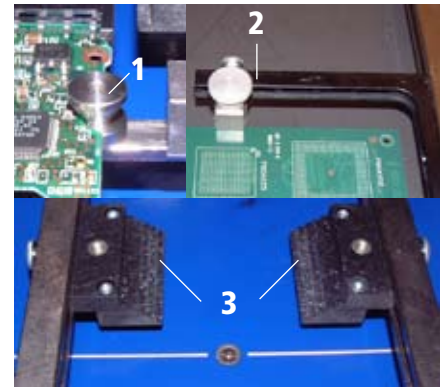


COMPONENT REJECT BIN

To collect removed components.

- 1 = Reject bin

ONYX 29, ONYX 32



BOARD SUPPORT ACCESSORIES

- 1 = Print holder finger, one unit
- 2 = Board end stop ONYX 29
- 3 = Print holder clamp -10mm Kit, 2 pieces each

on demand



FUME EXTRACTION

To collect fumes emitted during the soldering process. The fume extraction manifold mounted on the machine can be connected to an external fume extraction system.

ONYX 24, ONYX 25, ONYX 29



3D MICROSCOPE

Provides a 3D view of the soldering process. Fast inspection of solder and placement quality.

ONYX 24, ONYX 25



DIRECT VIEW CAMERA

To monitor the rework process in real time. Can be used to record the process using suitable video capture tools (not supplied). The camera option is ideal to provide documentation and useful for training. All mounting brackets are provided for the camera and illumination can be provided as an option.

ONYX 21, ONYX 24, ONYX 25, ONYX 29



MACHINE SUPPORT BENCH COMPLETE

Machine support benches are available for ONYX models providing a rigid and stable platform for the machine. Benches include monitor stands and can be upgraded with an adjustable height option.

ONYX 24, ONYX 25, ONYX 29



DISPENSER

Provides in line dispensing of flux, solder paste, adhesive epoxy and underfill. A proprietary time/pressure system is used, providing automatic pressure compensation and programmable vacuum adjustment for accurate and repeatable results. Automatic pattern generation software simplifies the creation of dispensing patterns.

ONYX 29, ONYX 32



TOP SIDE CLEARANCE 70MM (2.75")

If an increased top side clearance is required to avoid components or other objects on the printed circuit board, the ONYX can be manufactured with a top side clearance increased from the standard of 30mm to 70mm.

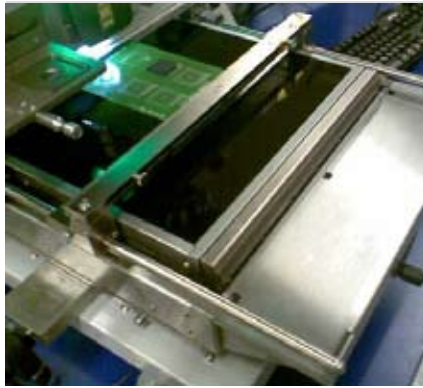
ONYX 24, ONYX 25, ONYX 29



NOZZLE PREHEAT STATION

A preheater for nozzles, providing faster cycle times from a repeatable process start temperature.

ONYX 29, ONYX 32



BOARD CARRIER EXTENSION

For larger boards, the board carrier can be increased by +100mm in depth.

ONYX 21



MICRO STENCIL ADAPTOR

The micro stencil adaptor is used to hold microstencils which are custom made in accordance with component data sheets. It is used with solder paste.

ONYX 21, ONYX 24, ONYX 25, ONYX 29



THERMOCOUPLE MODULE

All ONYX machines are equipped with four K type thermocouple inputs to monitor temperature. The ONYX 29 can be equipped with a module providing an additional four inputs.

ONYX 29



IR SENSOR WITH LASER POINTER

This IR Sensor has an integral laser pointer to facilitate easy positioning using a rotational pivot. A non-contact sensor, it monitors topside board temperature, automatically triggering the reflow process once set temperature is reached.

ONYX 24, ONYX 25, ONYX 29



IR SENSOR

This IR temperature measuring sensor remotely monitors component or board temperature and provides constant process control when desoldering or soldering a component.

ONYX 21 - ONYX 32



ADVANCED TRAINING MODULE

Recommended for supervising programmers and trainers within the production supervising group, this module will provide extended software access and includes additional multiple component rework techniques.

ONYX 24, ONYX 25, ONYX 29



CAD DATA IMPORT

Component location and other dimensional information can be imported into the Visual Machines™ software.

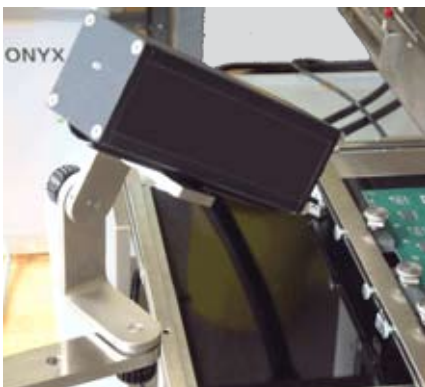
ONYX 24 - ONYX 32



TRACEABILITY

Management software including customised reporting files for documentation and quality control.

ONYX 24 - ONYX 32



PYROMETER

A pyrometer to measure an area of 1mm diameter at the solder joint or BGA housing during the solder process. This guarantees a totally controlled and always reproducible result. The pyrometer option includes all mounting brackets and fittings to mount to the machine.

ONYX 24, ONYX 25, ONYX 29



2ND BOARD CARRIER ON SAME LEVEL

The 2nd board carrier on same level is used to offer a separate working space in addition to the printed circuit board, for example to pick up components from a Jedec tray.

ONYX 29



NOZZLE ACCESSORIES

- 1 HGS SMD nozzle tool for Juki tips
- 2 Pick and place tips
- 3 Nozzle holder for 6 nozzles
- 4 Nozzle pliers GNT-4 (large)
- 5 Nozzle pliers GNT-1 (small)

on demand

Option	ONYX 21 Part no.	ONYX 24 Part no.	ONYX 25 Part no.	ONYX 29 Part no.	Retrofit at site	Retrofit at works
Board cooling	50.21.003	50.24.631	50.25.131	50.29.132	-	✓
2nd preheater	-	-	50.25.130	-	-	✓
2nd board cooling (2nd preheater)	-	-	50.25.132	-	-	✓
Non-contact site solder removal	50.21.022	50.24.620	50.25.120	50.29.120	-	✓
Micro site clean system	-	50.24.654	50.25.149	50.29.166	-	✓
Additional thermocouple module	-	-	-	50.29.101	-	✓
Two zone preheater 245x490mm	-	-	-	50.29.156	-	✓
Component pick up shuttle (w/o acc.)	50.21.006	50.24.646	50.25.105	-	-	✓
Automatic component shuttle 4-45mm	-	-	-	50.29.172		
Automatic component shuttle 9-56mm	-	-	-	50.29.173	-	✓
Tray bridge	-	-	-	50.29.124	✓	✓
Tray plate to tray bridge	-	-	-	50.29.119	✓	✓
Fluxer body	-	-	-	50.32.105	✓	✓
Fluxer squeegee	-	-	-	50.32.106	✓	✓
Fluxer plate	-	-	-	on demand	✓	✓
Component reject bin	-	-	-	50.29.136	✓	✓
Fume extraction manifold	50.21.005	50.24.617	50.25.117	50.29.117	✓	✓
Microscope	-	on demand	on demand	-	-	✓
Direct view camera	50.21.008	50.24.647	50.25.135	50.29.161	-	✓
IR sensor	50.21.004	50.24.612	50.25.102	50.29.102	✓	✓
IR sensor with laser pointer	-	0029.11.041	0029.11.041	0029.11.041	✓	✓
Nozzle holder for 6 nozzle GNS-1	-	-	-	10.30.522	✓	✓
Nozzle pliers GNT-1 (small)	19.37.101	19.37.101	19.37.101	19.37.101	✓	✓
Nozzle pliers GNT-4 (large)	19.37.105	19.37.105	19.37.105	19.37.105	✓	✓
Nozzle preheat station ONYX 29	-	-	-	50.29.115	✓	✓
2 nd Board carrier ONYX 29 same level	-	-	-	50.29.103	✓	✓
Print holder finger one unit	-	-	-	22.29.019	✓	✓
Board end stop	-	50.24.653	50.25.142	50.29.164	✓	✓
Print holder clamp -10mm, Kit	-	-	-	50.29.165	✓	✓
HGS SMD nozzle tool for Juki tips	-	-	-	50.32.062	✓	✓

Technical data subject to change

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