

ONYX21

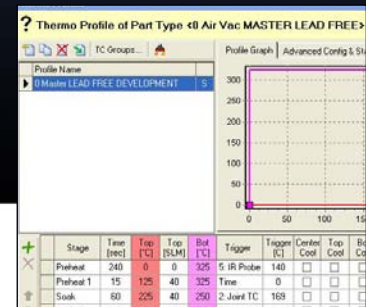
SMT Rework of Small to Medium Size Boards



The NEW ONYX21 offers many of the same high performance features and capabilities as the ONYX29 but in a smaller, less automated design.



Program Development Wizard



Interactive Soldering

Features/Benefits

Heating & Cooling

- 2000 watt Top Convection Heater
- 3500 watt Indirect IR Bottom Heater (12" x 12")
- Linear Air Knife rapidly cools down board and solder joints

Vision

- Camera-based Beamsplitter with motorized zoom lens and programmable green/white LED illumination provides superior image quality during alignment.
- SFOV provides full viewing of smaller components while MFOV provides corner-based viewing of components up to 70mm.

AXIS Movements

- Motorized Z and Vision Axis
- Manual X/Y/Theta adjustments

Force Measurement

- High precision load cells provide real-time force measurement for removal, pickup, dipping and placement.

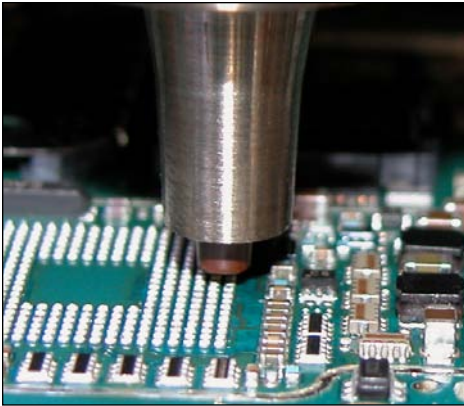
Gas Flow

- Mass Flow Controller provides programmable, closed-loop gas flow control

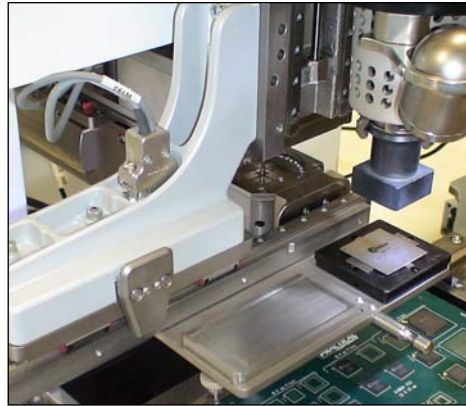
Software/Thermocouple Ports

Visual Machines™ Software with Process Development Wizard creates a new program in 5 simple (prompted) steps.

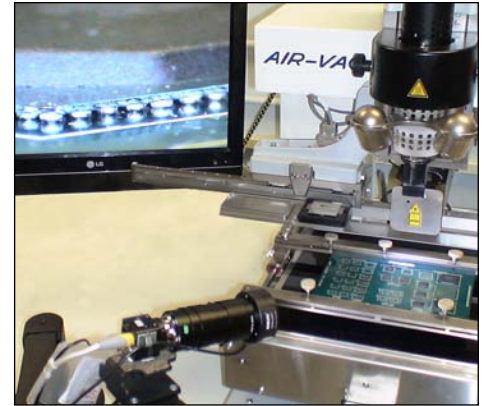
Interactive Soldering Process, combined with four (4) thermocouple ports, provides the capability to quickly develop new Thermal Profiles including on-the-fly changes.



STANDARD & MICRO SITE CLEANING



COMPONENT SHUTTLE



DIRECT VIEW CAMERA

All ONYX21 Standard Systems Include:

- IR Preheater Single Zone 12 x 12" (3500 watts total)
- Top Heater (2000 watt)
- Board Cooling System (Air-Knife), programmable
- Cool-Air Injection (Nozzle)
- Motorized Z-axis Control
- Precision Force Placement System
- Multiple Field of View Vision with Top/Bottom LED Lighting (x and y motor drives)
- 70mm Maximum Component Size
- 4 Thermocouple Channels
- Adjustable LED Lighting for PCB
- Thermal Tutor Software
- DELL PC/ Flat Screen Monitor/Keyboard/Mouse
- Tool Kit & Board Supports

Specifications *(subject to change)*

- **Machine Weight & Dimensions:** 150 lbs. (47 kgs), 21"W x 36"D x 35"H (530 x 910 x 890 mm)
- **Heater, Top:** 2000 watt convection
- **Heater, Bottom:** 3500 watt, 12"x12", Indirect IR
- **Force Measurement:** 50-3000 grams
- **Placement Accuracy:** 15 microns
- **Maximum Board Size:** 16"W x 13"D (400 x 300 mm)
- **Minimum Board Size:** 2"W
- **Component Size:**
 - Minimum (in vision): .005" (0.1mm)
 - Maximum (in vision): 2.75" (70mm)
 - Maximum (reflow): 6"

Recommended Options:

- **Site Cleaning System** (0029.03.012)
Proprietary system combines heat and vacuum to provide non-contact site solder removal. This is an essential requirement for safe and effective removal of Lead-Free solder from fragile, fine pitch pads without damaging pads or solder mask.
- **Universal Insertion Tool** (AU6LGA47R)
Holds and centers square or rectangular components.

Other Options:

- **Component Pickup & Dipping Shuttle** (50.21.006)
Provides force-controlled component pickup and flux/paste dipping.
- **Pivoting IR Sensor with Laser Pointer** (1012.02.017)
Provides non-contact board temperature measurement and process control.
- **Direct View Camera System** (0027.15.010)
Provides magnified, multi-angle viewing of site. Includes camera with zoom and light ring, pivoting camera mount and monitor.
- **EZ Nozzle Package** (NTSTD)
Includes 14 EZ Nozzles (5-44mm)