Circuit Board Rework Product Line

Innovative Solutions for the most Challenging Assemblies

AVX1000M: *"Cold" Component Milling/Removal without Heat*

- Automatic laser height measurement for board and component.
- Fiducial-based automatic alignment of component.
- High precision milling with zero adjacent clearance.
- Automatic tool changing.
- Static eliminating ionizer system
- Vacuum-based particle removal system.
- Machine Enclosure (operator safety with door sensor/locks)

AVX1200HG/1000HG: *Automated Rework for Today's Largest Components*

- ***NEW Large Component Capability: to 180mm x 180mm***
- Small component capability: 01005 gram force placement & accuracy
- Under Board Spot Heater/Cooler with ***AIRWELL Focus***
- Fully Automated/Consecutive Processes for:
  - Component Removal, Site Cleaning and Installation (pick-up, vision alignment and component placement with reflow).
- Custom AVX Designs available for optional Board/Housing Edge Heaters and an AVX1200XL with 36" x 48" Board Capacity and Preheaters

ONYX29: *High Performance Automation Rework*

- High level of automation and placement accuracy:
- Graphical interface to identify & quickly position sites. Multiple site rework.
- Auto nozzle changer. Auto site cleaning, any pattern.
- Precision alignment with ease (camera-based)
  - High magnification with 4 corner & center viewing
  - Placement accuracy: 9 microns, Component capability: 70mm sq
- Gram-Touch component placement: 15 grams
- Large application flexibility for multiple components, tape strips, waffle trays

DRS27: *Large Capacity Rework*

- Powerful heating for large, thermally challenging assemblies:
- Precision alignment (camera-based)
  - High magnification
  - Placement accuracy: 18 microns
  - Component capability: 70/125mm sq
- Spot Heater for special applications

DRS25: *Standard BGA Rework*

- Factory Reconditioned BGA/SMD Rework
- Mid-range Industrial Standard

PCBRM15 • PCBRM System 5.2 — *Mini-Wave Through-Hole Rework & Selective Soldering*

- Fast: Flow well heats all leads simultaneously.
- Assembly and Operator Safe: Uniform controlled heating and wave flow and rigid linear bearing rails hold pcb parallel to solder wave.
- Precise Process Control: Temperature, time, solder flow preset

PCBRM System 5.2 adds:

- 6500 watt top & bottom preheater with pcb temperature sensor

MODEL	DRS25 / 25XLT	DRS27T.3Z / 27T.6Z	ONYX29	AVX1000HG / 1200HG
Max Board Size (w" x d")	18 x 24 / 24 x 24	18 x 60 / 32 x 60	20 x 24	24 x 24
Max Component Size in Vision	50mm	70mm / 125mm (opt)	70mm	125mm / 180mm
Place Force (z-axis)	125 gram min	50 gram min	15 gram min	25 gram min
Place Accuracy	25 microns	18 microns	9 microns	18 microns
Place Repeatability	7 microns	7 microns	3 microns	7 microns
Thermocouple Channels	8	8	4 / 8 optional	4 / 8 optional
Top Heater – Watts	1000	2000	2000	2000
Bottom Heater (w" x d") • Watts • Zone	16 x 16 / 16 x 24 5000 / 7500 2 / 3	16 x 24 / 32 x 24 7500 / 15000 3 / 6	19 x 19 5600 4	24x16 7500 3
Temp Range (Top/Bot) max	500 / 350 C	500 / 350 C	545 / 350 C	500 / 350 C
Cooling Source (Upp/Bot Htr)	Cool Air/Board Cool	Cool Air/Board Cool	Cool Air/Board Cool	Cool Air/Board Cool
Air Flow Control (Method)	Mass Flow Controller	Mass Flow Controller	Mass Flow Controller	Mass Flow Controller
Vision System Type	Beam Splitter/Micro-scope Bi color LED lighting	Beam Splitter/Camera Bi color LED lighting, MFOV	Beam Splitter/Camera Bi color LED lighting, MFOV	Dual Camera, LED lighting, MFOV/SFOV
Board Clearance • Topside • Bottom Side	 31mm / 58mm 22mm / 29mm	 71mm 44mm / 44mm	 34mm / 73mm 19mm / 19mm	 152mm 34mm
Automated Axes • Robot "x" • Robot "y" • Robot "z" • Theta Rotation • Vision "x" • Vision "y" • Vision Zoom • Component Shuttle • Tool Changer	 No No Yes Manual (+/- 15˚) No No No Yes No	 No No Yes Yes (Joystick +/- 15˚) Yes Yes Yes Yes No	 Yes Yes Yes Yes (+/- 15˚) Yes Yes Yes Yes Yes (Option)	 Yes Yes Yes Yes (+/- 135˚) Yes Yes Yes Yes Yes (optional)
Process Descript/Automation • Component Removal • Site Cleaning • Component Pickup • Alignment • Force Placement & Reflow • Flux/Paste Dip/Paste on Device • Multi-Component Process BZF	 Automated / Manual Manual x/y, Auto z Automated / Manual Manual x/y/theta Automated Automated No	 Automated Manual x/y, Auto z Automated Man. x/y (motor theta) Automated Automated No	 Automated Automated Automated Man. x/y (motor theta) Automated Automated Yes	 Automated Automated Automated Manual / Automated Automated Automated Yes
IR Sensor Option	Yes (arm)	Yes (arm)	Yes (vision)	Yes (vision)
Direct View Camera Option	Yes	Yes	Yes	Yes
Spot Heater/Cooler Option	No	Yes	No	Yes

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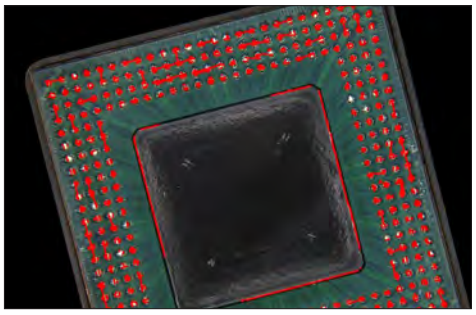
NPI
NEW PRODUCT INTRODUCTION AWARD

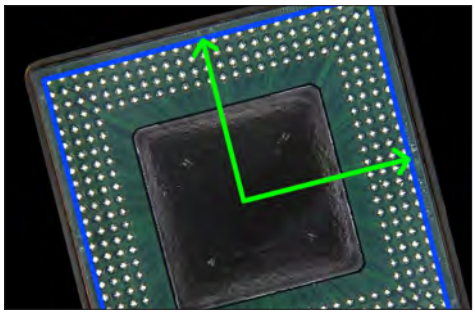
AIR-VAC

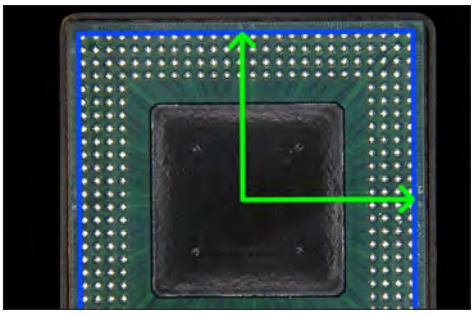
AVX1200

Large Component SMT Rework & Repair System

For Todays Largest Components, the *NEW AVX1200* can easily handle parts up to 180mm x 180mm!



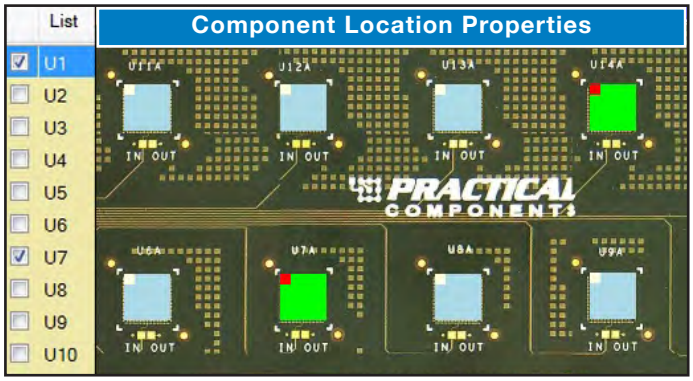




Automatic Component Feature Recognition, Orientation Detection, and Precision Vision Alignment.

Board Image Interface for Program Execution

- Camera Scans a board, providing the ability to execute rework operations on single/multiple sites in one run.
- Fiducial Recognition System can eliminate the need for vision alignment for faster throughput.
- Side View Camera (option) allows for placement and solder reflow verification.



Automatic Component Precision Alignment

- Dual Digital Camera System with Auto Feature Recognition Software.
- Component Single or Multiple Field of View with Optical and Digital Zoom for clear viewing and alignment from 01005 up to 180mm.

Closed-Loop, Programmable Automation

- Motorized X, Y, Z, and Theta axis for fully automated rework minimizes operator involvement.
- Vacuum Sensor Control for gentle and automatic component removal. Site clean non-contact tip height is accurately monitored and fully automatic.
- Automatic nozzle loader/changer to insure process speed and operator safety.
- Programmable Board Preheat with thermocouple or optional IR Non-Contact Sensor.
- High Speed Force Feedback provides gram force sensitivity for delicate component placement.

(Above) Actual Scanned/On-Machine Board Image Background Simplifies and Positively Identifies Rework Sites.

AVX1200: Advantages & Specifications

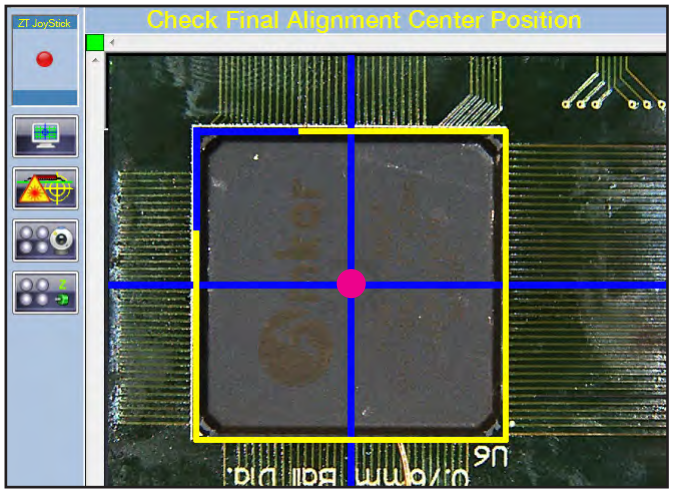
Robust 7500 watt Bottom Heater
- Radiant IR panel bottom heaters provide for high thermal uniformity.
- Board preheat is temperature-based via non-contact IR temperature sensor or thermocouple.
- Automatic board cooling via high velocity air knife.
- Optional spot heater for localized bottom heating.

Repeatable Thermal Performance
- Mass flow controller (option) regulates precise heat flow (accuracy/linearity +/- 1% repeatability, .1% full scale).
- Heat temperature stabilization for hot/cold machine repeatability.

Automatic Non-Contact Site Cleaning
- Non-contact, composite vacuum tip (scavenging tool) safely removes residual solder. Eliminates damage to pads/solder mask caused by contact-based methods.
- X, Y, and Z tip movement is fully automated, no need for operator involvement.
- Micro and Ultra Micro site clean options safely clean sites down to individual 01005 size pads.
- Optional site clean cameras move with the nozzle to keep site in focus during the entire cleaning process.

Custom Nozzles for Any Surface Mount Component
- Standard nozzles for conventional components.
- Special nozzles for thermal control needs, joint temperature uniformity, limitation of heat to adjacent devices or sensitive areas and production concerns.

Easy-To-Use Auto Profiling Software
- User-friendly, simple thermal profile development.
- Master templates for standard rework processes.
- Proprietary profile analysis software confirms successful profile development.
- Profile build automatically creates production, remove, site clean and solder processes after development.



Manual Checking Final Alignment Center Position of Component using Profile Tutor Software.

Options:
- Direct View Camera
- Site Cleaning Packages (Hardware & Site Clean Kits)
- Site Cleaning Cameras (Head Mounted)
- Adjustable X/Y Spot Heater, 3500 watts
- Universal Insertion Tool (6-47mm parts)

General Specifications:

- **Maximum Board Size:** *24” x 24”*
- **Machine Dimensions:** *71”W x 80”D x 72”H (machine, base, table, spot heater)*
- **Max Component Size:** *up to 180mm (in vision)*
- **Placement Force (z-axis):** *25 gram min*
- **Placement Accuracy:** *18 microns*
- **Placement Repeatability:** *7 microns*
- **Thermocouple Channels:** *8*
- **Heater-Top:** *180mm*
- **Heater-Bottom:** *24” x 16”, 7500 watts, 3-zones*
- **Heater/Cooler-Spot:** *Optional*
- **Temp Range:** *500/300℃ (top/bot, hot gas)*
- **Cooling Source:** *Top/Bottom Heater, Cool Air/Board Cool, Spot Heat/ Cool w/AirWell*
- **Air Flow Control:** *Mass Flow Controller from compressed air*
- **Vision System Type:** *Dual Camera, LED Lighting, MFOV/SFOV*
- **Board Clearance:** *Top = 152mm*
- **Board Clearance:** *Bottom = 34mm*
- **Automated Axis:** *X, Y, Z, Theta*

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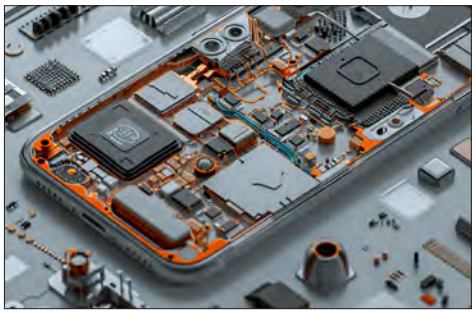
NPI NEW PRODUCT INTRODUCTION AWARD

AIR-VAC

AVX1000M

High Precision Component Milling/Removal

Laser-Guided Removal of Electronic Components, including Residual Solder on Heat Sensitive Assemblies.



High-Tech Devices

Defense/Aerospace

Medical Industry

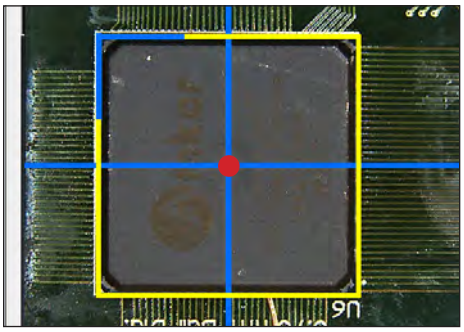
Key Features

- **Auto Board/Part Height Laser Measure**
- **Auto Vision Align (Model based)**
- **On-Machine Board Scanning**
- **Auto Component Locating**
- **Precision Direct-View Camera**
- **Auto Tool Changing**
- **Universal Board Holding Fixture**
- **Vacuum-Based Debris Removal**
- **Safety Enclosure & Robust Workstation**
- **Powerful, User-Friendly Software & more**

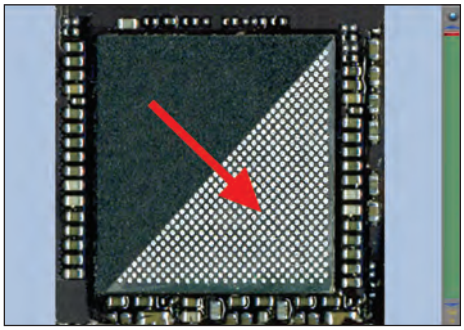
"With this capability, we can now service customers requiring high volume rework of underfilled PCB's." - Customer

AVX1000M: Advantages & Specifications

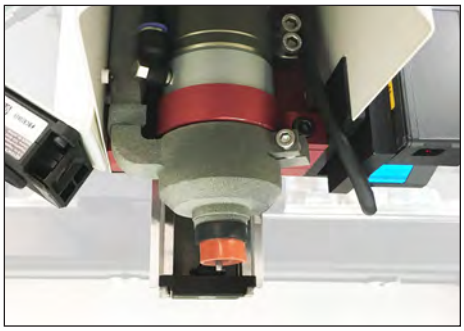
Automatic Multi-Point Laser Measurement. Measures board and components height distance.



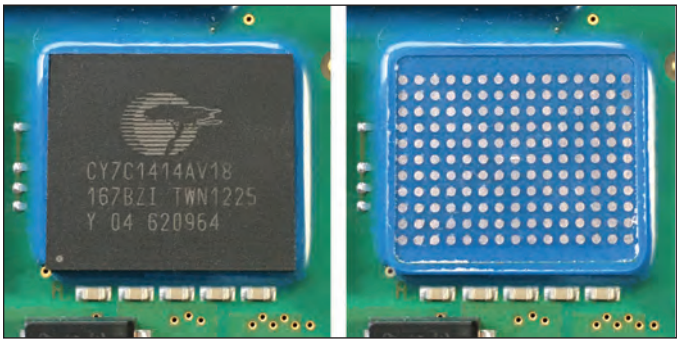
Flexible, Easy-To-Use Software including Virtual Milling. Milling patterns created for any part.



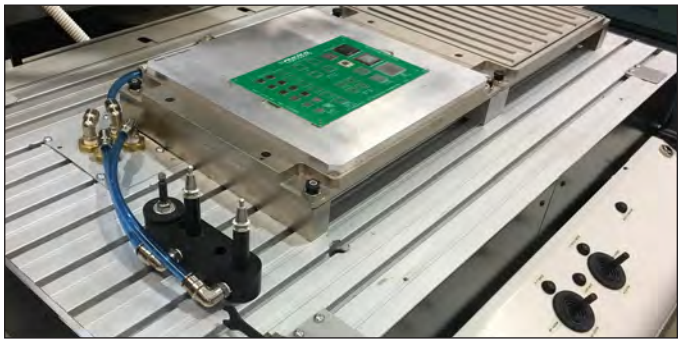
Advanced Cutting Tools, Side and Down View Cameras, Laser Sensor, Vacuum Removal System.



High Precision Milling, Zero Adjacent Clearance for Underfilled Components without using heat.



Universal Board Carrier for PCB Assemblies, Auto Tool Changer, Touch Probe and Front Panel Controls.



All AVX Standard Milling Machines include:

- **Automatic Component Locating** *using Digital Camera with Motorized Zoom and Focus*
- **Milling Head Assembly**
- **Laser Height Measurement System** *for Board and Component*
- **Vacuum-Based Debris Removal** *(On-Machine)*
- **Board Scanning** *(On-Machine)*
- **Auto Tool Changing & Tool Length Measurement**
- **PC with 19" Monitor**
- **Machine Enclosure with Safety Lockout System**
- **Static Eliminator System**
- **Particle/Dust Collection System, Hepa Filter**
- **Direct View Camera System**
- **Tooling/Milling Starter Kit**
- **Welded Workstation**
- **Universal Fixture**
- **One (1) Custom Fixture**
- **Spare Parts Kit**

AVX1000M General Specifications:

- **Maximum Board Size:** *24" x 32"*
- **Machine Dimensions:** *40"W x 40"D x 65"H*
- **Enclosure Dimensions:** *50"W x 50"D x 70"H*

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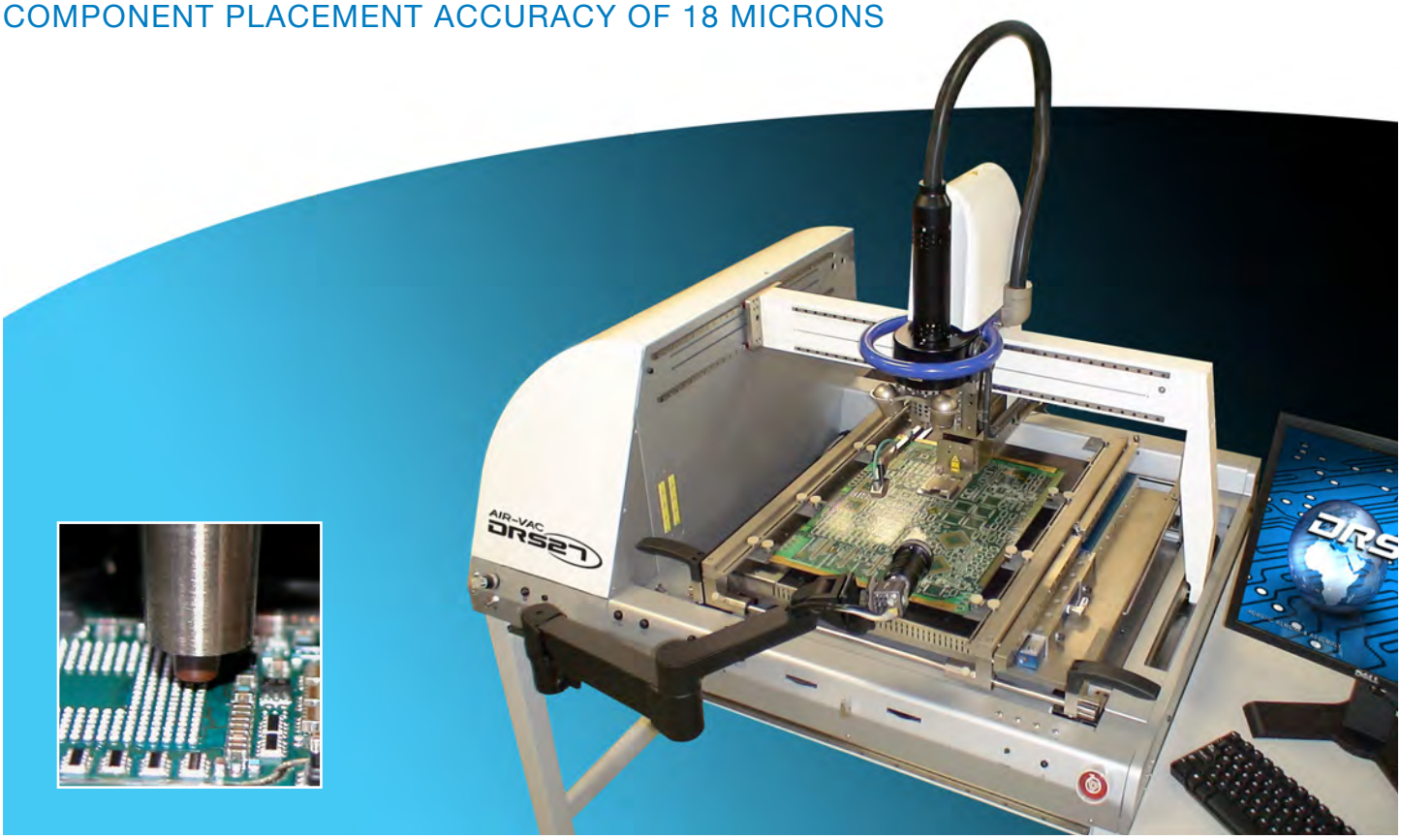
NPI NEW PRODUCT INTRODUCTION AWARD

DRS27

Large Board BGA/SMT Rework with 70 to 125mm Vision Alignment

COMPONENT PLACEMENT ACCURACY OF 18 MICRONS



High Efficiency IR Preheater
Excellent Thermal Uniformity
- Insulated heating elements/fast heat up (+/- 5˚C).
- Black ceramic, high-emissivity coating for higher preheat temperatures.
- 3 or 6 zone preheaters (Models on back)

Powerful & Repeatable Upper Heater
Any Standard or Special Device/Material
Heat is restricted to the solder joints on large connectors down to 01005 components.

State-of-the-Art Vision System
High Magnification, High Resolution
Camera allows for extremely close-up viewing of all four corners plus center area of part.

Consistent, Precision Vision Alignment
Moveable X/Y Head & Fixed Board Locations
Robotic head picks, aligns and places components with an 18 micron placement accuracy.

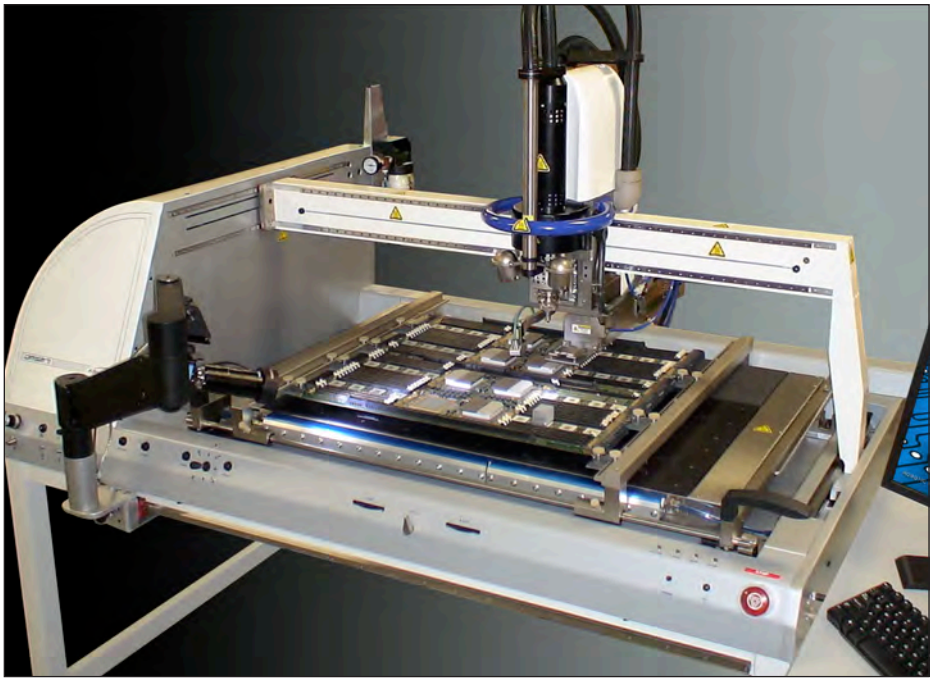
Expandable Carrier
Flexible Bottom-Side Clearance
Carrier = 18” or 32”W x any D, up to 1.62” clearance.

Automatic Component Pick and Place
Motorized Z-Axis & Theta Rotation
Programmable pick-up and adjustable force placement (20-2000 grams).

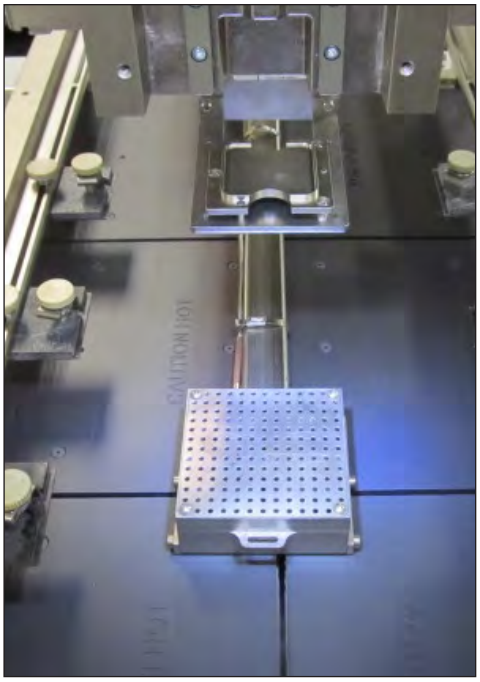
Integrated Board Cooling System
Programmable Cool Down
Cool air injection flows directly to component.

Site Cleaning Nozzles
Standard & Micro Sizes
Remove residual solder without damaging pads or disturbing adjacent components.

User-Friendly Thermal Tutor Software
On-The-Fly Adjustments
Profile library and master thermal templates included.



DRS27T.6Z for High Mass and Extra Large Assemblies



Bottom Side Convective Spot Heater

DRS27 Models:

DRS27T.3Z (standard)

- 3-zone, 16” x 24” IR Preheater, 7,500 watts

DRS27T.6Z (extra large)

- 6-zone, 32” x 24” IR Preheater, 15,000 watts

DRS27 Models Include:

- High Efficiency IR Preheater
- 70mm Topside Clearance
- Programmable Board Cooling System
- 2000 Watt Top Heater
- Cool Air Injection (Nozzle)
- Motorized Z-Axis and Theta Control
- Multiple Field of View Vision (70mm)
- Thermocouple Channels
- Welded Steel Frame with Side Table
- Adjustable LED Lighting for PCB
- Thermal Tutor Software
- PC/Monitor/Keyboard/Mouse
- Tool Kit & Board Supports

DRS27 Specifications:

Dimensions:

- 67”W x 57”D x 72”H (DRS27T.3Z)
- 82”W x 57”D x 72”H (DRS27T.6Z)

Weight:

- 750 lbs., est. (DRS27T.3Z)
- 1,000 lbs., est. (DRS27T.6Z)

DRS27 Recommended Options:

- EZ Nozzle Package (14 Standard Component Nozzles)
- Pyrometer with Fine Spot Laser Pointer
- Site Cleaning System (Standard and Micro Nozzles)
- Universal Component Insertion Tool (6-47mm)
- Large Component Insertion Tool (6-100mm)
- Bottom Side Convection Spot Heater
- Direct View Camera with Slide Mount Track
- 125mm Vision System (70mm is standard)
- Spare Part Kit (Heater Element, Relay, Filters, Tubing)

Visit *air-vac-eng.com* for more machine detailed information.

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CIRCUITS ASSEMBLY'S SERVICE EXCELLENCE AWARDS NPI IPC

DRS27.6Z

SMT Rework & Repair

High Magnification, High Resolution
State-of-the-Art Vision System
Multiple field-of-view camera allows for extremely close-up viewing of all four corners plus center area of part/location for precision alignment.

Consistent, Precision Vision Alignment
Moveable X/Y Head and Fixed Board Locations
Assemblies remain at a fixed position in the carrier while the overhead robotic head picks, aligns and places components with an 18 micron placement accuracy.

Automatic Component Pick and Place
Motorized Z-Axis & Theta Rotation
Control motion via front mounted joystick control. Programmable component pick-up and adjustable force placement (grams).

Enhanced Force Placement
Load Cells Measure 20-2000 Grams

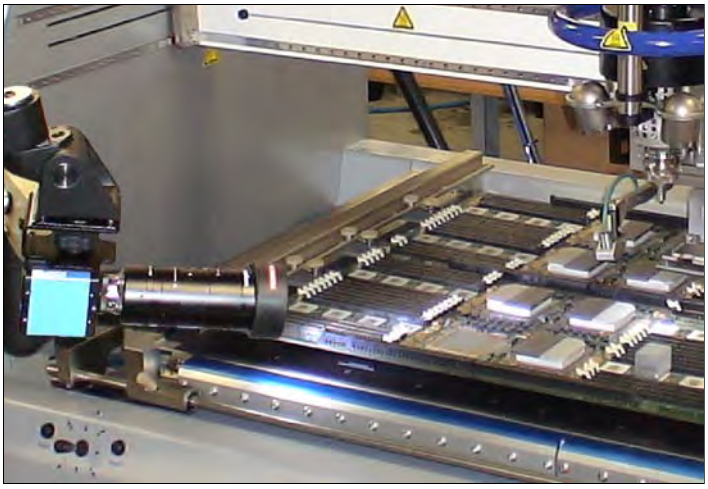
Programmable Cool Down
Integrated Board Cooling System
Built into the carrier, upper cool air injection bypasses heating element and air flows directly into nozzle (component).

Extra Large Carrier
Preheaters for Large Assemblies
Standard 6-zone preheater, 32″ x 24″, 15,000 watts.

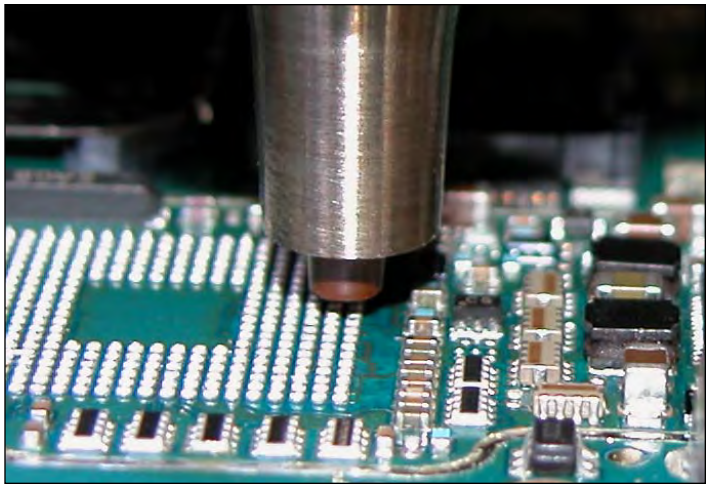
Excellent Thermal Uniformity
High Efficiency IR Preheater
- Insulated heating elements provide ultra-fast heat up (+/- 5 degrees C).
- Black ceramic, high-emissivity coating dramatically increases radiant energy to produce the significantly higher preheat temperatures required for lead-free rework.
- Excellent for high thermal mass, military type assemblies (metal frames).

Flexible Bottom-Side Clearance
User Adjustable
Keep close for better performance - move away for up to 1.62″ bottom-side clearance.

User-Friendly Software
8 Thermocouple Channels
Profile assemblies with Thermal Tutor Software. "On the fly" temperature and air flow adjustments are standard. Profile library and master thermal templates are part of the software package.



Side View Camera



Standard & Micro Site Cleaning

DRS27.6Z Standard Systems Include:

- **6-Zone, High Efficiency 32" x 24" IR Preheater (15,000 watts total)**
- **Programmable Board Cooling System (Air-Knife)**
- **2000 Watt Top Heater**
- **Cool-Air Injection (Nozzle)**
- **Motorized Z axis and Theta control**
- **Multiple Field of View Vision with Top/Bottom LED Lighting, (x and y motor drives)**
- **70 mm maximum component size**
- **Board Carrier Size 32"W x 24"D**
- **Joystick operation for all motor controls**
- **8 Thermocouple Channels**
- **Welded Steel Frame with Side Table**
- **Adjustable LED Lighting for PCB**
- **Thermal Tutor Software**
- **DELL PC/ Flat Screen Monitor/Keyboard/Mouse**
- **Tool Kit & Board Supports**

Specifications:

- **Machine Dimensions: 86"W x 48"D x 66"H**
- **Machine Weight: 450 lbs. (204 kgs)**
- **Maximum Board Size: 32"W x 24"D (812 x 609mm)**
- **Facility Requirements: 208-220 volts, 50 amps, 3 Phase**

Recommended Options:

- **Pivoting IR Sensor w/Laser Pointer (**0029.11.041)
  Provides process repeatability by insuring that the board is at the exact same target temperature each time
- **Site Cleaning System (**0029.03.012)
  Includes standard and micro nozzles for **c**omplete removal of site solder.
- **Universal Insertion Tool (**AU6LGA47R)
  Mechanically self-centers any device for accurate pick up.
- **Direct View Camera (**0027.15.012)
  Provides high magnification site viewing.
- **Dipping Kit for Solder Paste or Flux (**FASET1)
  Superior to applying paste via component or board stencils.
- **70mm Topside Clearance** (Std is 30mm) (0029.01.052)
- **Fume Extraction Manifold (**300.00.547)
- **Air Purification Unit (**1020.01.105)
- **Paste-On-Device Stencil Adapter** (0024.24.111)
- **4 Additional Thermocouple Ports** (300.00.504)
- **Colored LED Lighting**

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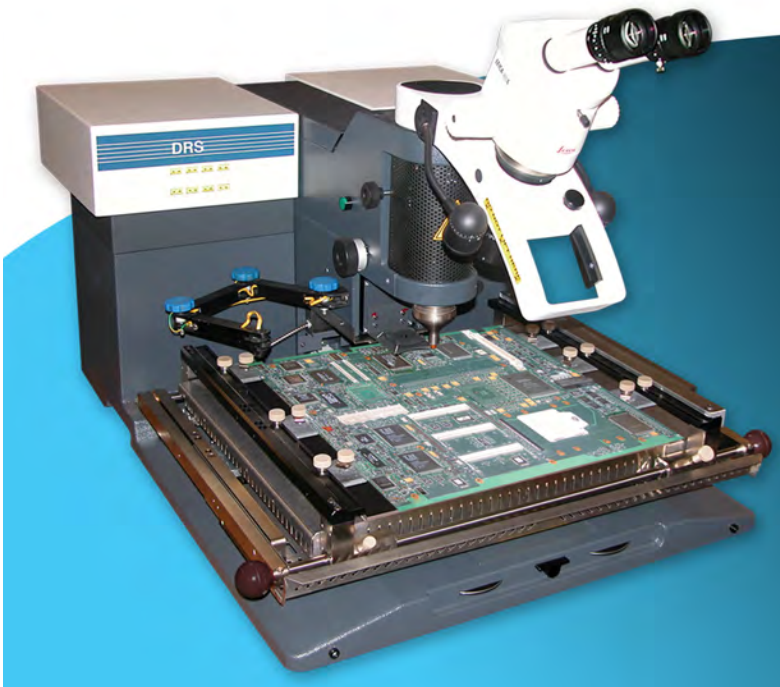
DRS25

High Performance, Semi-Automated SMT Rework

FACTORY RECONDITIONED • RELIABLE & SIMPLE OPERATION



Precision Vision Alignment
- Inspection-Quality Microscope or High Definition Camera

Precision Vision Alignment

- Leica Inspection-Quality Stereo Microscope OR HD Camera with HD Monitor for clear, fast, precise distinction of pads and leads.

Non-Contact Site Cleaning

- Vacuum sensor automatically adjusts tip height, compensating for variable residue solder volume.
- Non-abrasive vacuum tip removes residual solder.

Thermal Performance

- Mass Flow Controller: Regulates precise heat flow combined with 1000 watt high efficiency (patented) heater provide repeatable, closed-loop results.
- Powerful Radiant IR Panel PreHeater: Delivers extreme uniform bottom side heating.
- Board Cooling System: Cools down assembly after rework resulting in safe operator handling of pcb and bringing system back to initial thermal conditions.

Robust Platform for Long Term Performance

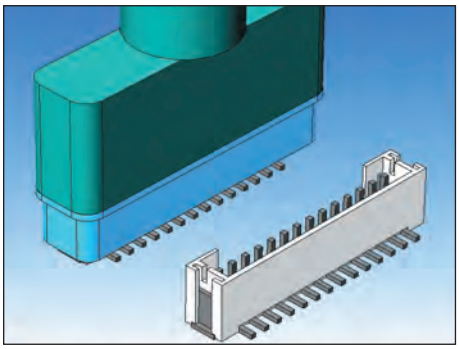
- Cast frame supports board carrier movement and vision system.
- Precision vertical mechanism includes die-set bearings and high-grade shaft to ensure long term accuracy.

Closed-Loop Automation

- Force Placement Control: Load cell indicates real-time and target setting (50-2000 grams).
- Motorized Z and Vision Axis: component place, pick, flux/solder dipping and drop off.
- Vacuum Sensor Control: Activates automatic component removal (no solder squeeze out).
- Temperature-Based Preheat: Regardless of board conditions, the non-contact IR sensor triggers and automatically advances the program when preheat setting is reached.

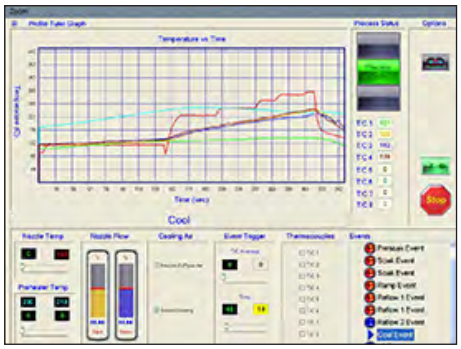
Custom Nozzle Design

- Air-Vac has made thousands of nozzles for virtually any type of surface mounted device.
- Nozzles made for special attention to thermal control, joint temp uniformity, limitation of heat to device or sensitive areas and production concerns.



Auto Profiling Capability

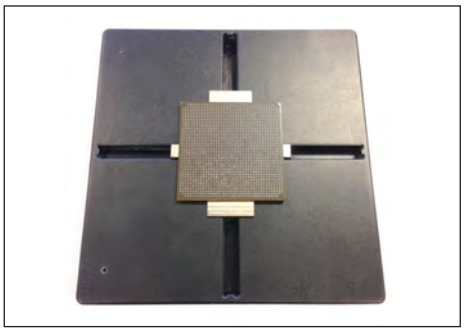
- Profile Tutor Software: fast and easy, first run, automatic thermal profile of any device with on-the-fly capability. Simply set the component size and go.
- The entire rework process (removal, site cleaning and replacement) is built automatically and ready to run.



Recommended Options:

Pivoting IR Sensor w/Laser Pointer
(1012.02.017)
Measures board temp to trigger end of board preheat and monitors PCB temperature throughout the process.

Universal Insertion Tool
(AU6LGA47R)
Mechanically self centers device for accurate pick up. Component range 6-47mm.



Site Cleaning System
(0029.03.012)
Includes standard & micro nozzles for complete removal of solder.

All DRS25 Standard Rework Systems include:

- High Efficiency, 16” x 16” Preheater (5000 watts), 2-Zone
- Programmable Board Cooling System
- Thermal Tutor Software with Auto Profile Build
- Leica Stereo Microscope with Zoom Lens OR HD Camera with HD Monitor
- Green/White LED Vision with Independent Adjustment
- Closed-Loop Air/Gas Adjustment
- Real-Time Force Placement
- Nozzle “Cool-Air” Injection
- Desktop Computer (Windows 10) and Monitor
- 8 Programmable Thermocouple Channels
- Maintenance and Verification Kit

Other Options:

- Recommended Spare Parts Kit (0025.00.040)
- Direct View Camera w/20” Video Monitor (0025.03.016) Provides high magnification of site viewing.
- Paste-On-Device Stencil Adapter (0024.24.111) Applies solder paste directly to the component spheres.

Workstation and Options:

- Ergonomic Workstation with CPU Holder (1003.05.10)
- Monitor Stand Option for Workstation (1003.05.005)
- Nozzle Stand Option for Workstation (1003.05.006)
- Locking Drawer Option for Workstation (1003.05.007)

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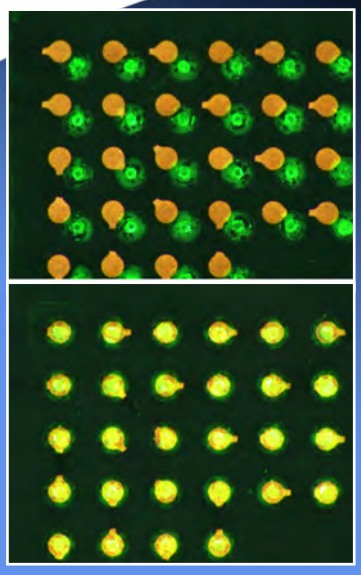
Print Date 02-25

ONYX29

AIR-VAC

High Performance, Robotic SMT Rework, Assembly & Production

THE HIGHEST LEVEL OF PLACEMENT ACCURACY IN THE INDUSTRY



BGA Corner: Unaligned/Aligned

Precision Placement Accuracy
Linear encoders and a “worm gear” z-axis drive provide an industry leading 9 micron placement accuracy with no mechanical calibration ever!

Robotic Rework System
Seven (7) automated axes virtually eliminates operator involvement.

Vision System
Beam-splitter, color camera with zoom lens and programmable LED’s (green/top-white/bottom), simplify the alignment process.

Board Image
- All component locations are scanned for the ability to select the location(s) and processes to be run.
- Multiple component locations can be reworked in a single cycle.

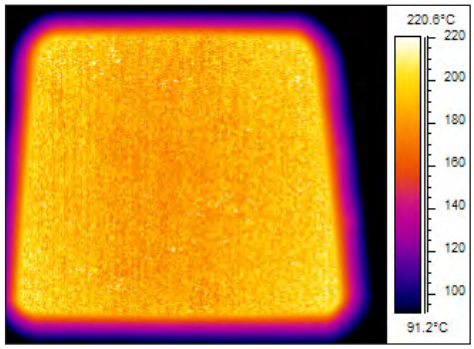
Thermal Repeatability
- A heater stabilization routine heats the machine if it is cold or cools the machine if it is hot.
- In addition, temperature-based board preheat provides excellent thermal repeatability from run-to-run and machine-to-machine.

Non-Contact Site Cleaning
- Proprietary, non-contact site cleaning nozzle provides heat and vacuum needed to remove residual site solder after component removal.
- A vacuum sensor automatically and continuously adjusts the vacuum tip height above the board.
- Eliminates pad and mask damage caused by mechanical contact solder wick.

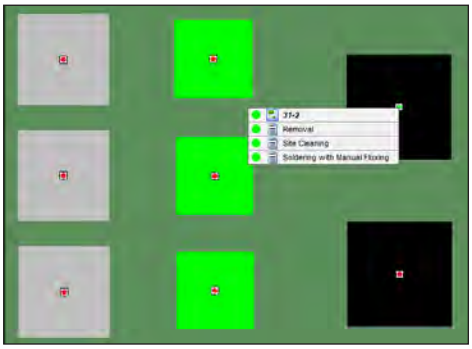
Program Development Wizard (PDW) Software
Adjust-on-the-fly feature creates thermal profiles for new applications. Profiles are automatically created.

High Performance Automation Rework

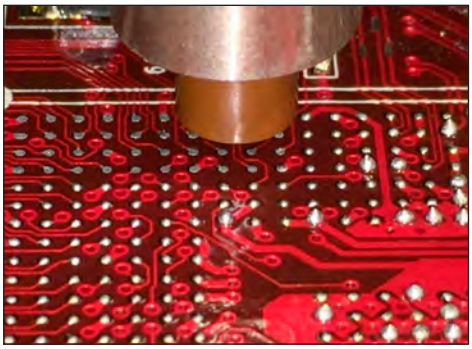
Direct View HD Camera System



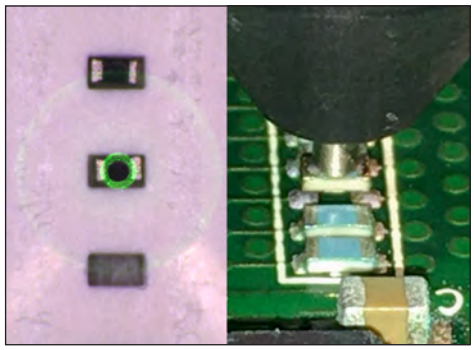
Bottom Heating Panels: Proprietary Technology with Thermal Uniformity.



Board Image for Process Development

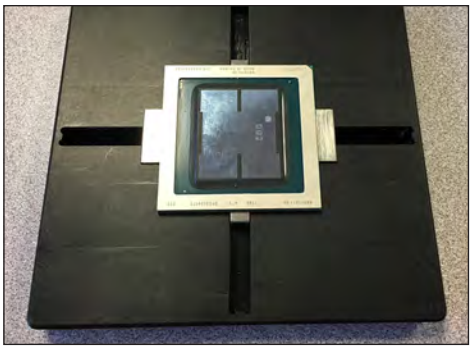


Non-Contact Site Cleaning

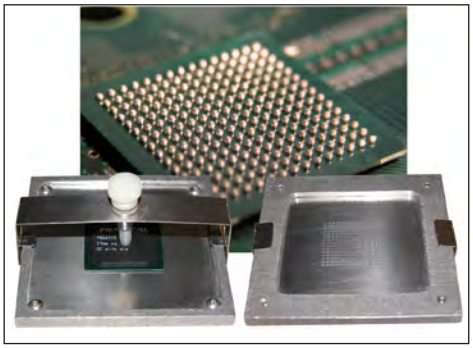


Micro-Component Rework

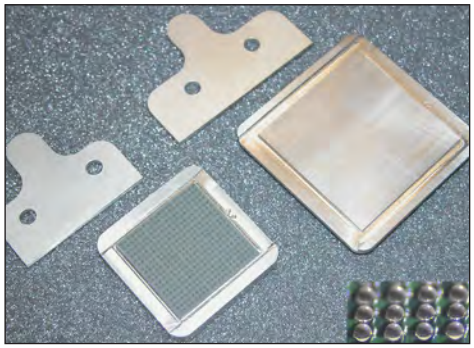
Standard and Custom Nozzles



Adjustable Component Pickup Tool



Solder Paste on Device Stencil Adapter



Dipping Kit: Tacky Flux/Solder Paste

Options

- **Board IR Sensor with Laser Pointer** (0029.12.040)
- **Site Cleaning System (Std/Micro Nozzles)** (0029.03.012)
- **Adjustable Component Pickup Tool** (AU6LGA47R)
- **Direct View HD Camera System** (0029.04.044)
- **Fume Extraction Manifold** (0029.22.010; with Vacuum Unit)
- **Flux/Paste Dipping Kit** (FASET1)
- **Paste-On-Device Stencil Adapter** (0024.24.111)
- **ESD-Safe Workstation with CPU Holder** (1003.05.010)
  - **Monitor Stand** (1003.05.005)
  - **Locking Drawer** (1003.05.007)
- **Four (4) additional Thermocouple Ports** (300.00.504)
- **Recommended Spare Parts** (0029.00.040)

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PCBRM15

The Most Cost Effective Choice for Through-Hole Selective Soldering

RELIABLE, DEPENDABLE, FLEXIBLE

Reliable Process Control
- Allows safe selective soldering or removal on the most delicate or thermally challenging assemblies.
- High thermal mass equates to low operating temperatures.
- No scraping pads or reheating incomplete desoldered joints.

Precise Operating Control
- Closed loop control of set temperature. System can be set to 615˚F (325˚C).
- Adjustable solder flow to control wave height for any tooling configuration.
- Cycle duration sets time solder contacts the board.

Reliable Solder Pot and Pump
- 2500 watt solder pot.
- Cast iron pump, high temp bearings and belt.

Simple, Reliable, Robust
- Closed loop control of set temperature. System can be set to 615˚F (325˚C).
- Adjustable solder flow to control wave height for any tooling configuration.
- Cycle duration sets time solder contacts the board.

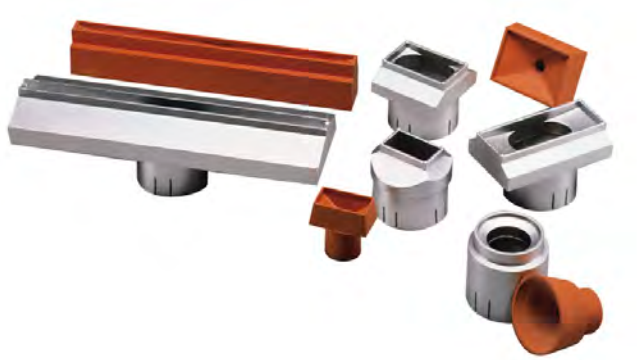
Robust Construction
- Cast framework for continuous, industrial, long-life usage.
- Alignment System insures board is parallel to solder wave.
- Board Carrier provides large PCB holding with precision rail movement and positioning.

Flow Wells & Cleaning Hoods for Successful Reflow Soldering

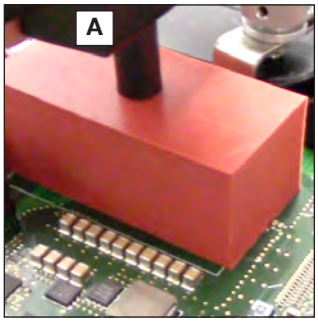
Tooling

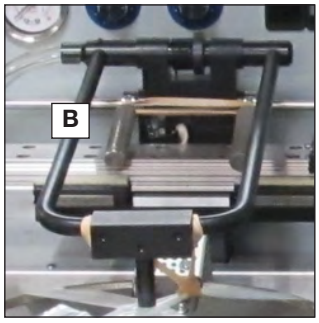
Titanium Flow Well Set (#FWLSTD)
23 standard component size flow wells.

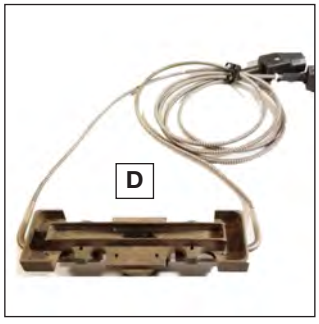
Cleaning Hood Set (#CHSTD)
23 standard component size cleaning hoods.
Contact Air-Vac if Custom Flow Wells are required.

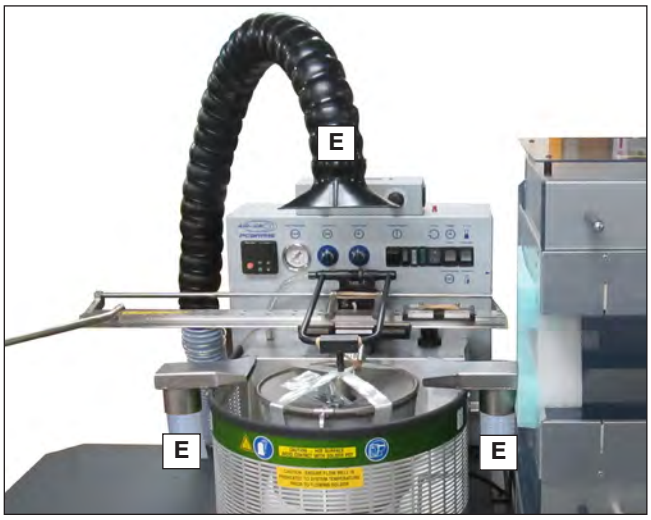


Options









(A) - Air Blow Off System (#APS)

(B) - Component Locating Arm (#APS-1)
Aligns component over solder wave. After component removal, low pressure air is applied to the lead pattern, forcing the molten solder from the barrels.

(C) - Flow Well Heater Control Module (#ST350)
Independent power source maintains uniform heat on larger flow wells **(D)**.

Carrier Arm Extension Assembly (not shown)
(#3006.01.010 *set of 4*) (#3006.01.040 *single*)
Used when component is near or against the carrier rails. Positions board away from rails.

(E) Fume Extraction Manifolds (#3005.02.040)
Removes solder fumes and flux vapors. Connects to central exhaust or fume extraction unit (sold separately).

Fume Extraction Unit (#1020.01.105) High suction force and HEPA efficiency of 99% at 0.3 micron. (not shown)

Nitrogen Inerting of Solder Pot (#4004.03.040) (not shown)

Stand Alone Preheater (#PHS1500, PHS4000) (not shown)
Infrared Preheaters are ideal for high thermal mass assemblies, providing near perfect uniform heat.

Technical Data

- **Operating Dimensions:** 49”W x 27”D x 25”H
- **X/Y Board Carrier Size:** 22”W x 24”D (standard)
- **Solder Capacity:** 35 lbs.
- **Total Weigaht with Solder:** 125 lbs.
- **Electrical:** 208/220 VAC, 15 amps, single phase
- **Compressed Air:** 60-80 psi, clean moisture free

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CIRCUITS ASSEMBLY'S SERVICE EXCELLENCE AWARDS NPI IPC®

PCBRM Systems

AIR-VAC

Through-Hole Selective Soldering of Thermally Challenging Assemblies

FLEXIBLE PREHEAT AREA FOR EXTRA LARGE BOARDS

PCBRM SYSTEMS 5.2 | DSP

Simple, Reliable Procedure
- Operator loads board and slides into preheater.
- Audible tone indicates preheat temp is reached.
- Board slides back to a set module position. Module activates, dwell time is auto controlled.

Reflow Process Provides Many Advantages
- Components can be removed in 5-10 seconds.
- High thermal mass equates to low operating temperatures.
- No scraping pads or reheating incomplete desoldered joints.

Preheat Benefits
- Dual Slide Preheater (DSP), 12” x 18” movable preheat area for boards up to 20” x 20”.
- Minimizes heat absorption to component/assembly.
- Eliminates operator handling of preheated PCB.
- Reduces PCB warpage.

Reliable Solder Pot and Pump
- 2500 watt solder pot.
- Cast iron pump, high temp bearings and belt.

Precise Operating Control
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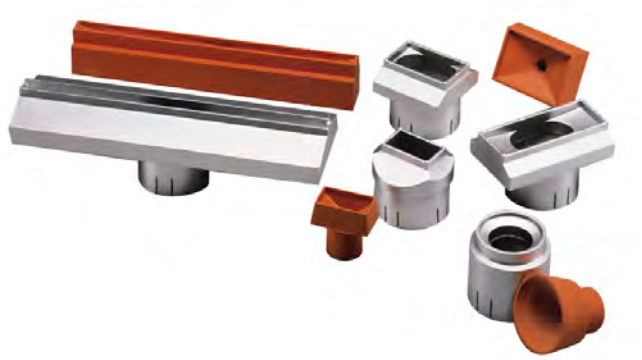
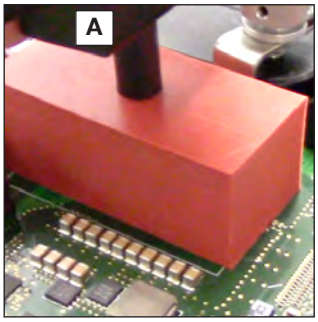
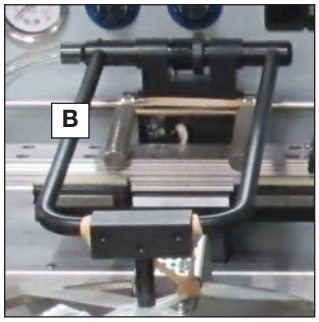
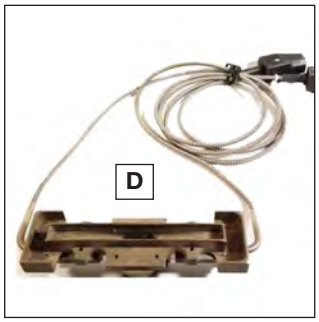
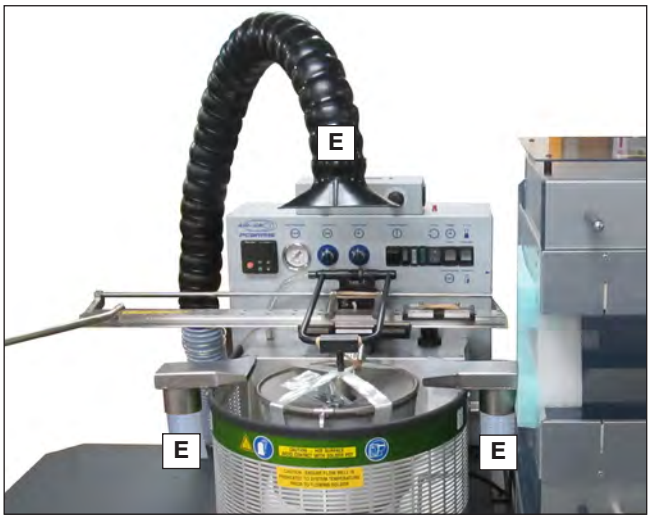


Options









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- **Total Weight with Solder:** 230 lbs.
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