

DRS25

Superior Features Provide the Highest Quality & Most Efficient SMT Rework



Powerful Process Heating • Flexible Software • Precision Automation
Site Pad Cleaning • Nozzle Design/Component Alignment • Service & Support

Powerful, Closed-Loop Process Heating

BOTTOM HEATER

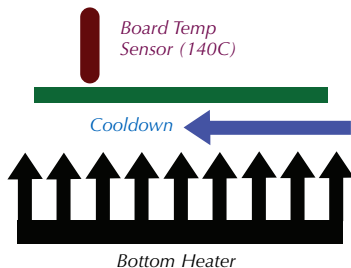
- Thermally balanced heating elements provide ultra-fast heat up with excellent thermal uniformity.

- Black ceramic, high-emissive coating dramatically increases radiant energy, providing the capability to pre-heat high thermal mass and lead free boards to the significantly higher preheat temperature (140C) required for lead-free rework.

- Uniform, overall heating minimizes PCB warpage and localized thermal stress of upper heating.

- Closed-loop board temperature sensor monitors and triggers board preheat to target temperature regardless of machine or board thermal conditions. Eliminates taping thermocouple to the assembly.

- Board cooling system provides fast, controlled cool down of component to control time over reflow. Promotes process repeatability and stabilizes machine conditions.

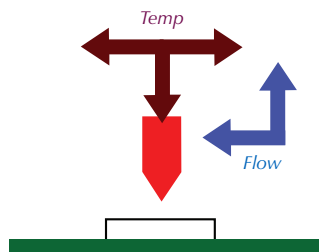


UPPER HEATER

- High Efficiency, 1000 watt patented element provides stable, precise heat to maintain uniform & repeatable joint temperatures.

- Closed-loop mass flow controller monitors and regulates precise air flow.

- Temperature and flow rate are auto-calibrated at multiple set points insuring machine to machine repeatability.



Customer parameters can be dynamically adjusted to specific requirements. Ambient air cooldown system for controlled time over reflow and reduced component temperatures.

Intuitive, Flexible Software

- Provides fast and easy, first run, automatic thermal profiling of any device with adjustable on-the-fly capability. Simply set the target temperatures and go.

- After the thermal profile is complete, the entire rework process (removal, site cleaning and replacement) is built automatically and ready to run immediately.

- Flexible – process templates can be customized, any parameter can be modified, added, or deleted to meet specific requirements. Custom software changes are greatly simplified.

Automation

- Motorized component pick-up, drop-off, flux dipping, solder paste dipping or paste-on device application, and vision alignment system.

- Closed-loop force sensor component placement system with real time display of actual and programmed set value.

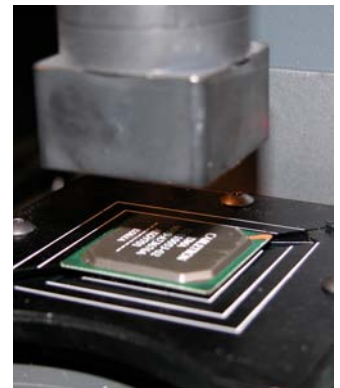
- Vacuum sensor insures component removal without any solder displacement to adjacent areas.

- Processes Simplified:

- Removal:** The operator locates the site, everything else is automatic.

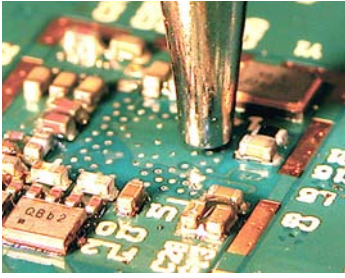
- Site Cleaning:** The vacuum sensor automatically adjusts to insure that the tip does not contact board pads.

- Replacement:** Operator aligns device. Component force placement, board preheat and thermal heating/cooling processes are automatic.



Site Cleaning

• Standard & Micro site clean nozzles remove residue solder using a non-contact-composite vacuum tip from virtually any assembly.



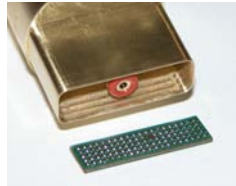
- Air flow heats the pads after component is removed.
- Vacuum height sensor automatically and continuously adjusts to the safe tip height above the pads regardless of residual solder deposit or board thickness.
- Cleans pads for replacement device or uniform solder deposits.

der deposit, prevents component misalignment or uneven solder deposits.

- Enhances paste dipping, flux dipping and stencil usage.
- Eliminated are manual processes (wick, desoldering tools) that cause pad, mask and assembly damage due to scraping and overheating.

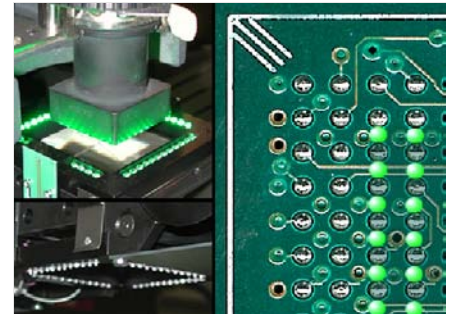
Nozzle Design/Component Alignment

- Nozzle design is a key element and is a daily service to our customer's continuing success.
- In addition to the "standard" (BGA, CSP, MLF's, Pop, Connectors, 0201, etc) customer nozzles tailored to



emerging technologies are designed to transfer uniform joint heating, minimize device temperatures and to provide nozzle/component fixturing.

- Over 1500 designs are available for quick manufacturing turn around. Standard nozzles in stock for next day delivery.
- Stereo Microscope with zoom lens combined with independent intensity adjustment LED's (green-leads and white-pads) make alignment quick, easy and accurate.



Service & Support

- *Air-Vac is committed to provide service for the initial and continual usage of our equipment.*
- *Technical and process support is viewed as a major value-added component of our product offering.*
- *Our vast experience and knowledge on a wide range of the latest and most challenging assembly issues provide the best solutions for your applications.*
- *Process development and free in-house training are Air-Vac standards.*

All DRS25 Standard Rework Systems Include:

- High Efficiency, 16"x16" Preheater (5000 watts)
- Programmable Board Cooling System
- Thermal Tutor Software with Auto Profile Build
- Leica Stereo Microscope with Zoom Lens
- Green/White LED Vision with Independent Adjustment
- Closed-Loop Air/Gas Adjustment
- Real-Time Force Placement
- Nozzle "Cool-Air" Injection
- Desktop Computer (Windows XP) and Monitor
- 8 Programmable Thermocouple Channels
- Maintenance & Verification Kit
- Board Size of 18" x 24" (see below for other board sizes)
- Topside Clearance of 1.0" (see below for other clearances)

Board Carrier & Preheater Configurations

• Model	DRS25	DRS25XL	DRS25T	DRS25XLT
• Description	Standard machine	Extra large boards	Extra topside clearance	XL boards, extra topside clearance
• Preheater				
- size	16" x 16"	24" x 16"	16" x 16"	24" x 16"
- zones	2	3	2	3
- watts	5000	7500	5000	7500
• Board Size	18" x 24"	24" x 24"	18" x 24"	24" x 24"
• Clearance				
- topside	1.0"	1.0"	2.3"	2.3"
- bottom	1.0"	1.0"	.97"	.97"

Recommended Options

- **Pivoting IR Sensor w/Laser Pointer** (1012.02.017)
Allows for precise measurement of board temperature.
- **Site Cleaning System** (0025.04.010) - Includes standard and micro nozzles for complete removal of solder.
- **Universal Insertion Tool** (AU4LGA45SQ) - Mechanically self-centers any square device for accurate pick up.
- **Recommended Spare Parts** (0029.00.040)

Other Options

- **Ergonomic Workstation with CPU Holder** (1003.05.010)
- **Monitor Stand Option for Workstation** (1003.05.005)
- **Nozzle Stand Option for Workstation** (1003.05.006)
- **Locking Drawer Option for Workstation** (1003.05.007)
- **Direct View Camera w/20" Video Monitor** (0025.03.010)
Provides high magnification site viewing.
- **Paste Dipping Pedestal Kit** (contact Air-Vac)
- **Paste-On-Device Stencil Adapter** (0024.24.111)
Applies solder paste directly to the component spheres.
- **Thermocouple Organizer** (0024.90.047)
- **Fume Extraction Manifold & Hose Assembly** (1020.01.040)
- **Lead Free Rework Training Kit** (1023.02.010)



AIR-VAC ENGINEERING

30 PROGRESS AVE • SEYMOUR, CT 06483 • 203-888-9900

2131 LAS PALMAS DRIVE, SUITE D • CARLSBAD, CA 92009 • 760-438-9363

www.air-vac-eng.com