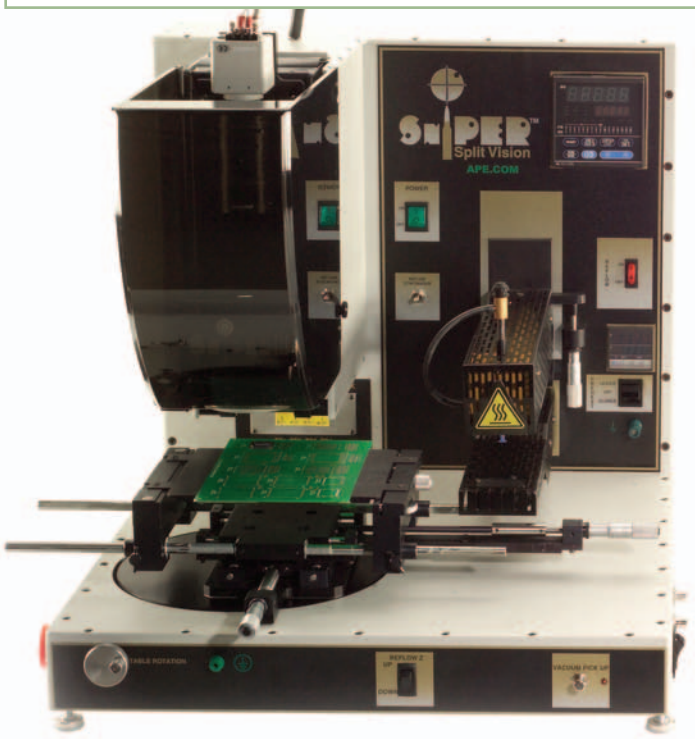
APE NEW PRODUCTS Sniper III Split Vision Rework System

The Sniper III is the latest in BGA and Micro BGA Rework system design. With On-Board control and powerful computer profile generation, including data logging. The system also includes a Thermalcouple Bank to develop the rework profile and monitor the component, board and environment. A 17" monitor reflects the image of the bottom of the chip and the footprint on the board, these images are then adjusted to exactly overlay each other and the component placed automatically.



Energy Reflow

The Sniper III Vision Rework system combines Closed-Loop energy reflow control that precisely measures the temperature of the heated air and the very latest technology in optic alignment design. These features provide absolute control in positioning all ultrafine pitch, Micro BGA, QFP, and CSPs (Chip Scale Packages), together with large ceramic or plastic BGA devices.

DABIS Prism

A Dichroic Alignment Beam Image Splitter (DABIS) is a contemporary innovative refinement in imaging dual fields using a split prism to enhance and clarify the image.

Precision

Once aligned, the component is automatically positioned by pneumatic control, lifting the camera system clear of the placement vector. A Vertical Placement Drive (VPD) accurately orients the component to the contact land patten.

Vacuum Pick-Up

A Venturi Vacuum Pick-Up system supports the component during alignment and automatically snap releases the component during placement.

Sniper III Specification:

Power	110–220V 1800 Watts
Current	25 Amps @ 110V, 15 Amps @ 220V
Dimension	21.75" x 29.12" (552 x 740 mm)
Board Holder Standard	12" x 16" (305 x 406 mm)
Reflow Nozzles included	Six Nozzles of Choice with 12 months free exchange
Preheat Nozzles included	All included
Temperature	Select Celsius or Fahrenheit
Reflow Air Velocity	Internal Motor <12.7 CFM
Component Pick Up	Venturi Generator Reflow & Imaging
Factory Air	60-80 psi for Placement System
Controller	On Board Computer
Profile Generation	Pentium IV with 17" Monitor included
Board Alignment	Micrometer Controls
Reflow Operation	Close Loop
Maximum Board Size	16" x 20"(406 x 508 mm)
Air Flow	Up to 1 SCFM
Weight	165 lb (75 kg)
Communication	RS232 Sniper II Only
Operational Software	On Board Computer and Specview Graphic Display

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Look Up Look Down

The DABIS Prism permits the contact array of the component to be viewed from the underside and superimposed over an image of the contact land pattern on the PCB.

Component Alignment

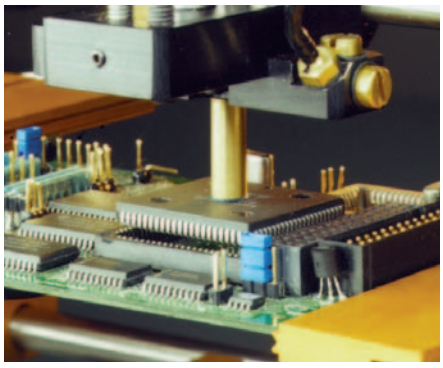
Precision Micrometers align the two lead patterns; the camera's zoom and focus are adjusted to comfortably align and view the PCB and component on the monitor.

Focus and Split

Using a prism simplifies the alignment procedure and ensures repeatability during continuous operation. It is also possible to view many different types of components without additional setup. To view the diagonal corners of very large components, an optional Macro Imager 7000-2500 can be inserted when required.

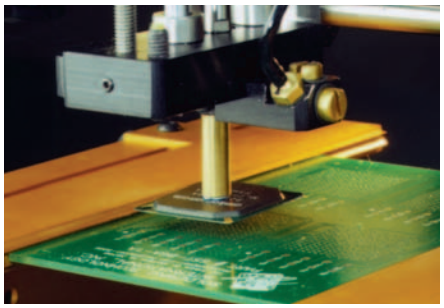
Vertical Placement Drive (VPD)

When placing delicate components to fine tolerances, emphasis on stability of engineering is a priority, the reinforced VPD provides a stable final positioning operation, and is adjustable in the Z-axis for pressure sensing.



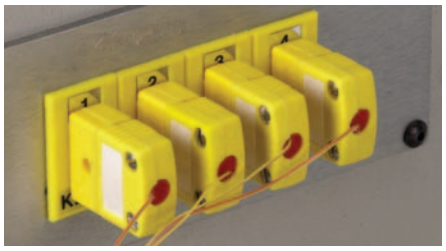
Order Information

Part #	Description
7750-0033	Sniper III 110V 60Hz
7500-0034	Sniper III 220V 50Hz
7000-2500	Macro Imager



Rotary/Staged Vacuum Board Holder

The Sniper III includes a standard 12" x 16" (305 x 406 mm) vacuum actuated Board Holder, which quickly glides to position. Precision micrometers adjust in X- and Y-axis and the "Rotary/Staged" feature of the table provides "Theta." Optional Board Holder Extender Kits are available for smaller and larger board types.



Thermocouple (TC) Bank

Thermocouples are used to develop a Rework Thermal Profile. Placing thermocouples strategically in and around the component environment during the creation of a profile will assure an optimum profile pattern for the rework process. Note that the TC Bank is used for development and need not be used in production rework.

Features:

- Registration without mirror adjustment for components 0.040"–2.00" sq. (1.02–50.8 mm^2)
- Automatic placement
- Vacuum pick-up of component
- Vacuum actuated Rotary Board Holder
- X, Y, Z and Theta Micrometer adjustments
- High Resolution Camera and 17" Monitor for 10-80X viewing
- Widest range of component types accommodated from Micro BGAs to high pin count Ceramic CBGA
- Board sizes up to 16" X 18" (406 x 457 mm)
- Low Temperature Technology

On-Board Computer

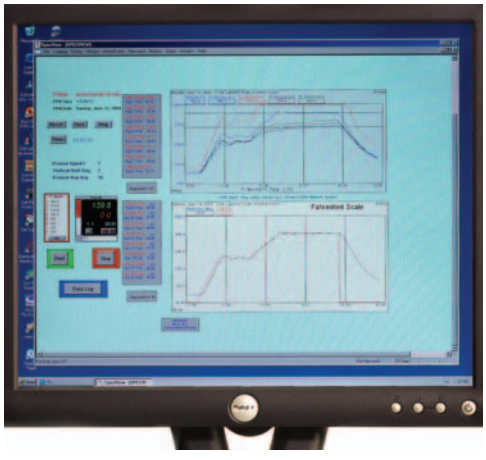
The Sniper III can be operated without an external computer directly from the on-board computer, which can run pre programmed profiles or patterns. The Bottom Heater is automatically controlled by the on-board computer ensuring complete process control.

Profile Control

The Sniper III stores up to sixteen (16) multi segment (Ramp & Soak) profiles on the machine or any number of profiles by using Windows-based software. Programs can be created and entered directly on the Reflow Controller keypad or created using Graphical Display software (included). Data Logging events is provided in PDF format. The rework cycle is automatically controlled and shut off after completion.

Graphical Display Window (GDW)

The computer software provided operates in a Windows-based environment. Profile Pattern Recipes are easily created, stored, recalled, and edited using a Graphical Display Window (GDW).



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