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Power Series



The **Power Series** of Semiconductor Assembly Equipment from K&S has established itself as the leading capability in package assembly. These products reinforce two key principles, the **Powerful** performance built into these products, and the **Power** of K&S as the Technology Leader of its market space for more than five decades.

The **Power Series** has set new standards for performance, productivity, upgradeability, and ease of use. The technical success and customer acceptance of the **Power Series** products since their introduction are evidence of the K&S continued commitment for providing products with the **Power** to handle not only today's most challenging packaging applications, but also tomorrow's.

From K&S — the most **Powerful** name in Package Assembly.



Wafer Level Bonder



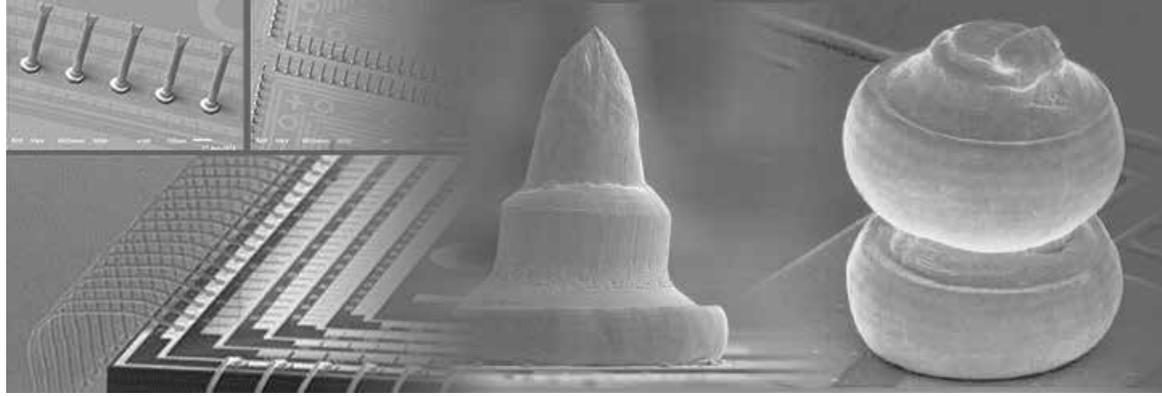
The **ATPremier^{PS} PLUSTM** is another extension of the successful Power Series platform. The superior wafer level stud bumping and wire bonding of the **ATPremier PLUS** delivers high productivity with increased efficiency.

Features

- Able to bond up to 300 mm diameter wafers, ceramics or substrates
- Bond Placement Accuracy
 - $\pm 3.5 \mu\text{m}$ @ 3 sigma (200 mm work piece)
 - $\pm 5.0 \mu\text{m}$ @ 3 sigma (300 mm work piece)
- Power Series Advanced Hardware and Software controls
- Best-in-Class Low Temperature Gold Bumping
- Improved Serviceability with easy access to lower console
- Programmable Power Supply System with back-up
- Upgradeable Capabilities
 - Optional Copper or Silver Allow capability and kits
 - Optional Wafer Level Wire Bonding capability
- Smallest footprint in the market

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Wafer Level Bonder include:

力 User interface that retains the familiar K&S look and feel; minimal training needed to become familiar with new performance enhancing and productivity increasing features

力 Semi E10 Compliance for Run Time Statistics and MTBA / MTBF calculations

力 Programmable Power Supply System to bond through factory power spikes or dips

力 Optional standalone Wafer Mapping SW capability

Wafer Level Bonder



PROCESS CAPABILITY

Pitch

50 μ m in-line @ 3 sigma

Total Bond Placement Accuracy

$\pm 3.5 \mu$ m @ 3 sigma (200 mm work piece)
 $\pm 5.0 \mu$ m @ 3 sigma (300 mm work piece)

Standard User Processes

Standard Bump
AccuBump
Stack Bump

Bump Height Variation

AccuBump: $\pm 3 \mu$ m @ 3 sigma
Standard Bump: $\pm 15 \mu$ m @ 3 sigma

Optional Process Loops (Wire Bonding)

Standard Forward Loop
Stand off Stitch Bump (SSB)
Security Loop / Bump
Vertical Wire

Maximum Wire Length

5.0 mm

Minimum Loop Height

100 μ m Forward Loop
70 μ m SSB (reverse loop)

Wire Sway

Wire Length < 2.54 mm: 25 μ m @ 3 sigma
Wire Length > 2.54 mm: $\pm 1\%$ wire length @ 3 sigma

MATERIAL HANDLING CAPABILITY

BARE WAFER / SUBSTRATES / WAFER IN FRAME / RECONSTRUCTED

Diameter: 50 mm - 300 mm
Min. thickness: 75 μ m
(Min. thickness varies with manual or auto wafer loading. Thickness can be < 75 μ m with wafer mounted on frame)

MAN-MACHINE INTERFACE

Monitor

17" color LCD display

Durable Control Panel

with function keys and dedicated buttons, and user-friendly mouse

Compatibility

ATPremier bond programs are upwardly compatible

Industry-Recognized User Interface

Simple pull-down menus. Color-overlays of wire groups for easy programming and teach

FACILITY REQUIREMENTS

Minimum Air Pressure

3.52 kg / sq cm (50 psi)

Nominal Air Consumption (flow rate)

185 liters / min @ 4.6 kg / sq cm (6.5 CFM @ 65 psi)

Input Voltage

Standard

200 to 240 VAC; - 15 % to + 10 %
Single Phase 50 / 60 Hz (± 3 Hz)

Optional

100 to 115 VAC; - 15 % to + 10 %
Single Phase 50 / 60 Hz (± 3 Hz)

Power Consumption

2.0 KVA (nominal), 2.4 KVA (max.)

Footprint

780 mm wide x 1118 mm deep (31" x 41")

Weight (estimated)

Machine 680 kg (1499 lbs)
Machine & Crate 770 kg (1698 lbs)



For sales, services and manufacturing locations, visit:

www.kns.com

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