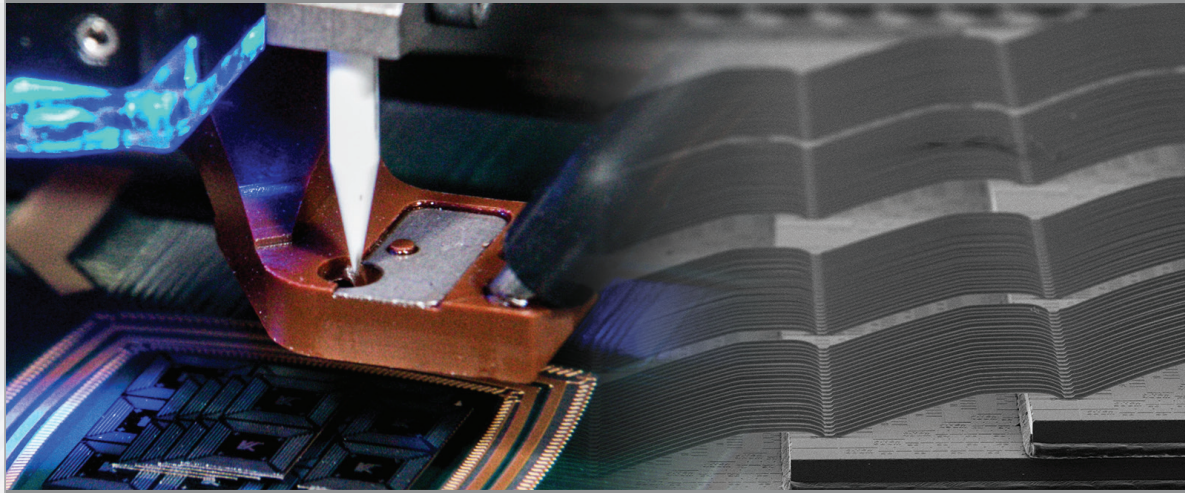


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Power Series



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** of 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



High Performance Wire Bonder for Memory Devices

IConn^{PS} MEM PLUS™ is the new high performance Memory device bonder for gold and silver alloy wire bonding.

With its advanced process, looping, overhang control and ease of use capabilities, it delivers high quality and productivity benefits in complex multi die stack package applications.

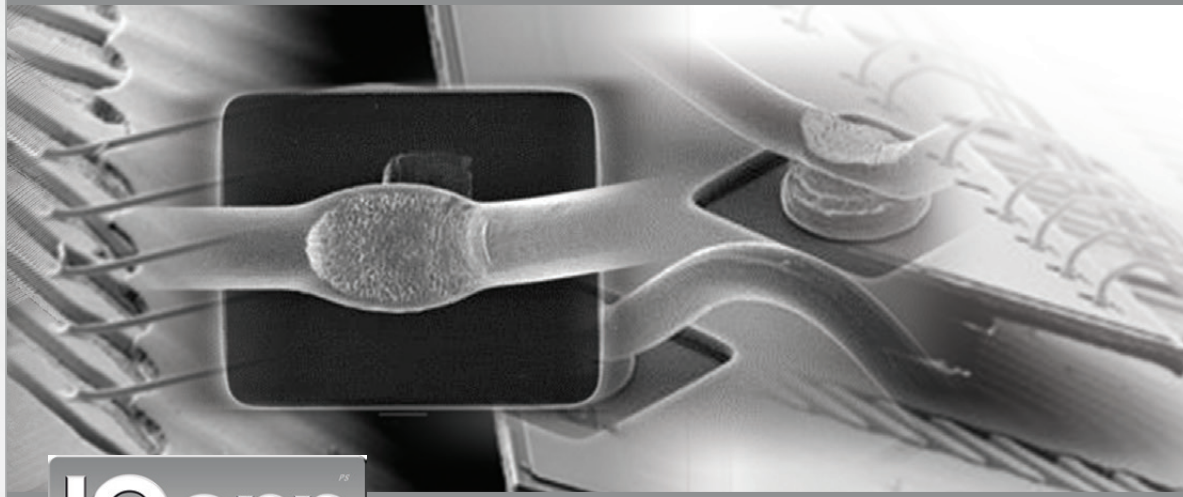
Features

- Advanced Process Capabilities support bonding on complex stacked die packages with thinner die, longer overhang and ultra-low loops
 - Multi-Stitch Bonding (MSB and MSBoB)
 - Overhang Die Optimization Tools
 - Bonding on 25 μ m Die Thickness
- Package Cost Reduction
 - Simplifies transition to Ag Alloy wire with newly optimized ProAg and ProStitch PLUS Ag response-based processes
- Increased Productivity
 - Multi-Stitch Bonding and ProAg PLUS processes enable maximum throughput
 - Improved MTBA performance
- Enhanced inert gas delivery and programmable pneumatics metering for optimal Ag alloy Free Air Ball formation
- New extended range programmable focus range from +2.5 mm and -1 mm to the bond plane
- New BITS capability (patent pending) to enable Lifted Stitch Detection for MSB process



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Power Series



High Performance Wire Bonder for Memory Devices

Power Series Wire Bonders include:

✦ 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

✦ CE Certification

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

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

✦ Industry leading K&S Tray and Gripper Magazine Handling system

✦ Full KNet PLUS compatibility and readiness

GOLD/SILVER ALLOY WIRE BONDING CAPABILITIES

Ultra Fine Pitch

35 µm pitch
0.6 mil to 2.0 mil Gold wire
0.6 mil to 2.0 mil Silver alloy wire

Bonding Area

X Axis: 56 mm
Y Axis: 80 mm

Total Bond Placement Accuracy

2.0 µm @ 3 sigma

Pattern Recognition/Optics/Vision

Progressive Scan Vision Engine
CCD Camera

- Dual Magnification Optics (2x & 6x)/(2x & 8x)
- Extended Programmable Focus for High Magnification

Standard User Processes

Compatible with all Legacy Processes and Power Series Loops
New – ProAg, ProStitch PLUS Ag, and ProOverhang
New – Multi-Stitch Bonding

Compatibility

Power Series bond programs are upwardly compatible
IConn MEM PLUS models - optimization is recommended for full performance
Process Programs are NOT backward compatible

LOOPING CAPABILITY

Maximum Wire Length

7.6 mm with 1.0 mil wire
3.0 mm with 0.6 mil wire

Minimum Loop Height

Ultra-low loop with Power Series Low Loop
40 µm with 0.6 mil wire

Wire Sway

Wire length < 2.54 mm: 25 µm @ 3 sigma
Wire length > 2.54 mm: ± 1 % wire length @ 3 sigma

SET UP & CONVERSION TIMES

If Wire Type remains unchanged, the time estimated below applies.
If Wire Type changes, the time estimated would be doubled.

Same Leadframe Type: < 4 min

(Heat block insert & clamp changes, program load from disk)

Different Leadframe Type: < 8 min

(Leadframe width & length changes, magazine size change, heat block insert & clamp change, program load from disk)

KNET PLUS ASSEMBLY EQUIPMENT NETWORK

KNet PLUS improves efficiency and productivity, by monitoring equipment status in real-time. It collects data and controls process programs locally or from anywhere on a customer's network.
Contact your K&S Sales Representative to learn more.

MATERIAL HANDLING CAPABILITY

Package/Leadframe Dimensions

Length: 90 to 300 mm
(L/F shorter than 100 mm will require optional injector kit)
Width: 15 to 92 mm
Thickness: 0.10 to 0.9 mm
(L/F thicker than 0.9mm will require optional Flat Boat Kit)
Die Pad Downset: Up to 2.3 mm

Magazine Dimensions

Width: 20 to 98 mm
Length: 127 to 305 mm
Height: 50 to 178 mm
Slot Pitch: 1.27 to 25 mm
Max. Weight: 5.22 kg

MAN-MACHINE INTERFACE

Monitor

17" color LCD display

Durable Control Panel

Function keys and dedicated buttons, and user-friendly mouse

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)

Cover Gas Consumption (flow rate)

Minimum 0.6 liters/min
Maximum 1.4 liters/min
Nominal 0.9 liters/min

Input Voltage

Standard

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

Optional

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

Power Consumption

1.5 KVA (nominal), 2.6 KVA (max.)

Footprint

Base machine with MHS
889 mm wide x 1009 mm deep (35" x 39.7")

Weight (estimated)

Machine 620 kg (1367 lbs)
Machine & Crate 682 kg (1504 lbs)