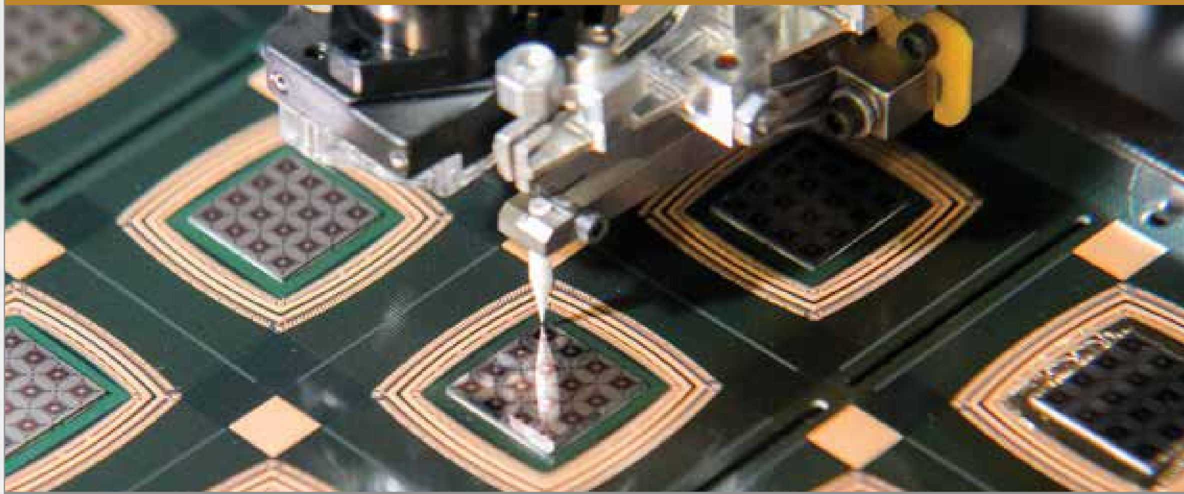
力 Power Series



*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

For Bonding Today... PLUS Tomorrow

IConn^{PS} ***PLUS***$_{TM}$ is the new State-of-the-Art in Fully Automatic Wire Bonding. With its upgraded and enhanced subsystems, it is engineered to deliver all the capability you will need — for *Wire Bonding today, **PLUS** tomorrow*.

To meet all leading edge wire bonding challenges, the **IConn *PLUS*** was designed with new capabilities and features in five key focus areas:

- Process Robustness
- Production Portability
- Ease of Use
- Robust Hardware Performance
- Upgradeability

Features

- Upgraded Control System that provides the latest available technology.
- +/- 2.0 µm accuracy.
- High Performance X-Y-Z motion control system.
- Dual-frequency transducer allows two selectable frequencies for each bond.
- Power Series Advanced Loop for tight control of the last kink height.
- On-board process optimization tools.
- 1pF Auto-BITS self-teach and optimization.
- WAVI (Wide Angle Vertical Illumination) system with programmable red and blue lighting.
- Optional programmable focus with a full 2.5 mm focus range.
- Optional copper wire bonding kit.
- Optional Large Area (LA) upgrade kit.

力 Power Series

Power Series
Wire Bonders 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 *CE Certification*
- 力 *Semi S2 Safety Certification**
- 力 *Semi S8 Ergonomic Certification**
- 力 *Semi E10 Compliance for Run Time Statistics and MTBA /MTBF calculations*
- 力 *Upgradeability with Power Pack Upgrade Kits*
- 力 *Programmable Power Supply System to bond through factory power spikes or dips*
- 力 *Industry leading K&S Tray and Gripper Magazine Handling system*
- 力 *Full KNet PLUS compatibility and readiness*

** Tested to SEMI S2-0706 (Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment) and S8-0705 (Safety Guidelines for Ergonomics Engineering of Semiconductor Manufacturing Equipment)*

For Bonding Today... PLUS Tomorrow

WIRE BONDING CAPABILITY

Ultra Fine Pitch for Au Wire
35 µm inline @ 3 sigma
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 Video Camera
- Dual Magnification Optics (2x & 6x)
- Optional Programmable Focus for High Magnification

Standard User Processes
Compatible with all Legacy Processes
Power Series Advanced Loop
Power Series Low Loop
Compatibility
Power Series bond programs are upwardly compatible with the IConn *PLUS* models - optimization on the newer bonder is recommended for full performance.
Process Programs are NOT backward compatible. Programs taught on a new bonder model will not run on an older model.

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
80 µm with 1.0 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

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 1.1 mm
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)
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	590 kg (1300 lbs)
Machine & Crate	670 kg (1477 lbs)

Technology Innovation Solutions ®

For sales, service and manufacturing locations, visit **www.kns.com**

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