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Power Series

The **Power Series** for Kulicke & Soffa - a new generation of semiconductor assembly equipment for today's most challenging applications. In continuation of our tradition of innovation and technology leadership, **Power Series** products set new standards for performance, productivity, reliability, and ease of use

Driven by the most powerful X-Y-Z motion control system available on the market, **Power Series** products deliver the highest levels of speed, accuracy, and throughput for reduced cost of ownership

Power Series from Kulicke & Soffa - the most **Powerful** name in assembly equipment.

Visit us at www.kns.com

IConn PS

High Performance Wire Bonder

As its name implies, the **IConn^PS High Performance Wire Bonder**, represents the state-of-the-art in **IC** inter-**Conn**-ect performance for the advanced packaging requirements of both today and tomorrow.

Features

- Extra large 56mm x 80mm bond area
- +/- 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 last kink height
- Power Series Low Loop allowing forward loops under 50 µm in height
- On-board process optimization tools
- Auto-BITS self-teach and optimization
- WAVI (Wide Angle Vertical Illumination) system with programmable red and blue lighting
- Optional programmable optics with a full 2.5 mm focus range
- Optional copper wire bonding kit

Kulicke & Soffa ®

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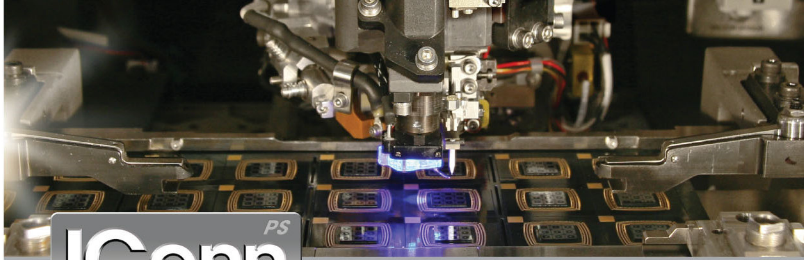
Power Series



High Performance Wire Bonder

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 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)

WIRE BONDING CAPABILITY

Ultra Fine Pitch
35 µm inline @ 3 sigma

Bonding Area
X Axis: 56 mm
Y Axis: 80 mm

Total Bond Placement Accuracy
± 2.0 µm

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
Power Series is compatible with all K&S legacy bonder processes.
KLoop: Up through KLoop4
ULL: Up through ULL4

Optional Premium Processes
Power Series Advanced Loop
Power Series Low Loop
SSB Suite, AccuBump, 25,000 wires

LOOPING CAPABILITY *(with 25.4 µm wire diameter)*

Maximum Wire Length
7.6 mm

Minimum Loop Height
100 µm standard & worked loops
70 µm folded & reverse loops
50 µm ultra-low loop with Power Series Low Loop

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

CONVERSION TIMES

Same Leadframe Type: < 4 min
(Heat block insert & clamp changes, program load from disk)

Different Leadframe Types: < 8 min
(Leadframe width & length changes, magazine size change, heat block insert & clamp change, program load from disk)

KNET ASSEMBLY EQUIPMENT NETWORK

KNet enhances efficiency and productivity, and reduces yield loss. KNet monitors equipment status in real-time, collects data, and controls process programs locally or from anywhere on a customer's network.

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

MAN-MACHINE INTERFACE

Monitor
17" color LCD display

Durable Control Panel
with function keys and dedicated buttons, and user-friendly mouse

Compatibility
Maxµm Series bond programs are upwardly compatible with ***Power Series*** Bonders

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

Footprint
Base machine with MHS
889 mm wide X 990 mm deep (35" x 39")

Weight (estimated)

Machine	556 Kg (1250 lbs)
Machine & Crate	670 Kg (1474 lbs)

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

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