8090

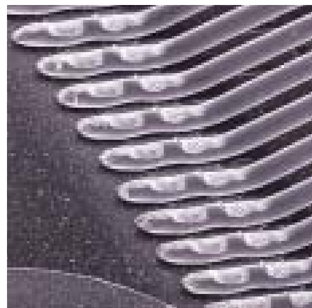
Large Area Wedge Bonder

The 8090's rotary bondhead attaches up to 5 wedge bonds per second; significantly faster than its competition.

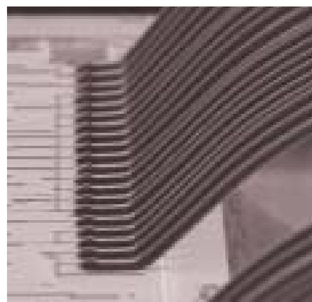
The K&S Model 8090 combines 5 wire per second speed with a bonding area of 16" (406.5 mm) x 14" (355.6 mm) and fine-pitch capability to 70 µm, making it the fastest, most accurate, and most versatile large area wedge bonder in the entire industry.

The foundation for a vast array of wedge bonding solutions!

World-leading speed and precision, in conjunction with the largest table travel in the industry, have established the K&S Model 8090 as the cornerstone for an ever-increasing number of fine-pitch wedge bonding applications. An X-Y table that delivers 0.1 µm resolution and a precision rotary bondhead, combined with a specially engineered cross-groove wedge and high-frequency transducer, allow wedge bonding at pitches significantly finer than any other large area wedge bonding solution available. What's more, its architecture is adaptable to almost any material handling challenge.



With its large payload and fine-pitch capability, the 8090 opens the door to a wide range of applications.



The 8090 provides ±5 µm positional accuracy at 3 sigma; the precision necessary for 70 µm fine pitch bonds.

- **Up to 5 bonds per second**
- **Wedge bonding to 70 µm pitch**
- **±5 µm positional accuracy at 3 sigma**
- **16″ (406.5 mm) x 14″ (355.6 mm) bondable area**
- **Adjustable angular feed of wire as fine as 18 µm**
- **Excellent choice for BGA, COB, leadframe, flex substrates, COG, VFD, MCM and hybrid applications**

Kulicke & Soffa

8090

Large Area Wedge Bonder

Machine Specifications

BOND HEAD

Z-Axis Travel
12.7 mm (0.5")

Z-Axis Resolution
0.29 μm

Theta Travel Resolution
0.04° / pulse (total of 360° rotation)

Wire Size
Au: 18.0 to 50.0 μm
Al: 25.4 to 50.0 μm

Wire Feed Angle
38°, 45°, 60°, 68°

Bond Speed Rate
5 wires per second (200 msec/bond) based on 2.5 mm (0.100″) wire and clamp tear

XY TABLE

Bondable Area
406.5 mm x 355.6 mm (16.0" x 14.0")

Resolution
0.1 μm

Bond Placement Accuracy
2.75 μm

Bond Placement Repeatability
1.84 μm at 1 sigma

Bond Pitch
70 μm at 3 sigma

VISION SYSTEM

ESI Digital Vision System w/CCD Camera Pattern Recognition System

Image Rotation Handling
± 5° from taught image

Tilt
± 2° maximum

OPTICS

Magnification
2X (4.5 um / pixel)

Working Distance
3.75 inches, aperture f 5.7

Focus range
.5 inch (programmable focus)

ENVIRONMENTAL SPECS

Temperature Required
15 – 30°C (59-86°F)

Humidity
30 – 70% Relative Humidity (non-condensing)

Atmospheric Pressure
540-810 mm Hg (21.2 – 31.9" Hg)

UTILITIES

Voltage
100 to 240 VAC

Frequency
50-60Hz, 30 amp

Power Consumption
2.5 KVA nominal

Air Consumption
65 psi minimum at 5 CFM

Factory Communications
Ethernet Interface
(EIA RS-232-C) SEC I
RS-232 Interface
(EIA RS-232-C) SEC I

Safety Protocol
CE Compliant

Dimensions
43.5″ (1105 mm) W x 55″ (1397 mm) D x 70.5″ (1792 mm) H

Weight
Machine: 1,088 kg (2,400 lbs)
Crated: 1,270 kg (2,800 lbs)

MATERIAL HANDLING

Package Types
- Ceramic Substrates
- Snapstrates
- PC Boards
- Hybrids
- MCM
- Chip on Flex
- Smart Cards
- Chip on Board
- Chip on Glass
- RFID
- Leadframes
- BGA

Automatic Material Handling Options
- Material Width:
  2″ (51 mm) to 10.5″ (267 mm)
- Material Length:
  4″ (102 mm) to 12″ (305 mm)
- Boat Handling
- Custom Handling Solutions

Manual material handling options also available.

For sales, service and manufacturing locations, visit:

www.kns.com

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