The iBond5000 series integrates the proven K&S manual wire bonder mechanical design with an advanced graphical user interface.

The iBond5000 Wire Bonder series is based on the proven K&S 4500 Series, the market leader for nearly a decade.

The iBond5000 series include 3 basic models: Wedge, Ball and Dual. The basic machine has a TFT touch screen control interface and has the ability to attach an analog panel for those that prefer working with analog knobs.

The iBond5000 main control board is based on a Cortex A9 Dual-core CPU that runs at a speed of 1GHz. The operating system is Windows CE-based and the system is controlled using a 7” 600X800 TFT touch screen.

The system enables the user to save and load profiles, but it also comes with factory preconfigured profiles for ease of use.

The iBond5000-Wedge is an advanced wedge bonder used for process development, production, research or added manufacturing support. The iBond5000 provides the high yield and excellent repeatability needed for every wedge bonding application including: Optoelectronic Modules, Hybrids/MCMs, Microwave Products, Discrete Devices/Lasers, Chip-on-Boards, Leads, Sensors, High Power Devices and much more.

Features

- 7” TFT Touch Screen Management
- Cortex A9 Dual-Core CPU-based hardware system
- Windows CE based-management software
- USB connectivity - External Mouse, Keyboard, Disk on Key
- Load/Store wire bonding profiles, Disk on Key backup
- K&S Bonding profiles internal library
- 800MB Capacity
- On-Line Manual
- Optional Analog Pots Kit
- Internal Tools database
- Semi-automatic/manual mode with ‘Z’ option
- Designed for aluminum wire, gold wire, ribbon and copper
- Large 6.3” x 5.3” bonding area
- Consistent tail length with fine adjustment on panel
- Deep access capability (optional)
- ‘Z’ axis DC servo motion with closed loop control
- Phase Locked Loop (PLL) ultrasonic generator and high-Q transducer
- Built-in temperature controller
- Wide range of microscopes and optical accessories available
- RoHS compliant
- Chessman/Mouse & Manual ‘Z’ convertible left or right
- Bonding Types: Wedge, Tab, Stitch and Ribbon
- Advanced Wedge Automatic Wire Re-Feed
iBond5000-Wedge
Technical Specifications

- Wire feed angle 90°, vertical feed/Wedge 30°, 45°
- Gold wire diameter
  - Wedge bonding
    - 0.7 mil to 3.0 mil diameter
    - 17 micron to 75 micron diameter
- Copper Wire
  - 0.7 mil to 2 mil
  - 17 micron to 50 micron
- Gold ribbon
  - Wedge bonding
    - Up to 1 x 10 mil
    - Up to 25 x 250 micron
- Aluminum wire diameter
  - Wedge bonding
    - 0.8 mil to 3.0 mil diameter
    - 20 micron to 75 micron diameter
- Spool size
  - Wedge bonding
    - 2" x 1" double flange spool
    - 1/2" spool (type TS-1)
    - 2" x 1" spool holder for ribbon
- Bonding tool specification
  - Wedge bonding wedge length
    - 0.750"
    - 0.800"

XY Table
- Bonding Area
  135 mm x 135 mm (5.3" x 5.3")
- Throat Depth
  143 mm (5.6")
- Cross Table Motion
  140 mm (5.5")
- Fine Table Motion
  14 mm (0.55")
- Mouse Ratio 6:1 (Choose Mouse Type)
  - Left side mouse with right side manual 'Z' lever
    - Recommend optional Portable Dials Kit
    - Locates critical dials on right side
    - For operator comfort (Search 1st, Search 2nd, Loop and Tail)
    - Right side mouse with left side manual 'Z' lever
    - Right side mouse with integrated manual 'Z' lever
- Motorized Y
  - Step back up to 4 mm (160 mil)
  - Reverse up to 0.25 mm (10 mil)
  - Kink height up to 0.5 mm (20 mil)
- Z Axis Control
  DC Servo with closed loop tachometer feedback
- Z Axis Travel
  - 0.500" (12.5 mm) 'Z' travel
  - Increased travel range
  - Full range of control with the 'Z' motor
- Ultrasonic System
  - High-Q 60kHz K&S transducer
  - Phase Lock Loop self-tuning ultrasonic generator

Parameters
- Low Ultrasonic Power
  1.3 watts
- High Ultrasonic Power
  2.5 watts
- Bond Time (Selectable range)
  10-100 milliseconds
- 10-1000 milliseconds
- Bond Force (Static force adjust)
  10-250 grams (requires added weights >80 grams)
  - No springs
  - Bond Force Coil Range
    - Added 3-60 grams (depends on Force parameter setting)
  - Separate 1st bond and 2nd bond parameters
  - No springs
- Wire Termination
  - Clamp/Tear, adjustable ‘Tear’ parameter and ‘Tail’ parameter
  - Wire tail feed
  - Programmable clamp motion for wedge bonding
- Temperature Controller
  - Built-in
  - Range up to 250°C, +/- 5°C

Facility Requirements
- Electrical: 100 - 240V 50 / 60Hz
- Dimensions: 680 mm (27") W x 700 mm (27.5") D x 530 mm (21") H
- Weight: Shipping: 55 kg (122 lb), Net: 31 kg (69 lb)

Options and Accessories
Single-Point TAB Kit w/Programmable Z Axis

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

RoHS Compliant

©2012 Kulicke & Soffa Industries, Inc.
Specifications may change without notice.
The K&S logo and Kulicke & Soffa are trademarks of Kulicke & Soffa Investments, Inc.