

# 4500digital

## Programmable Wire Bonders

### 4500digital Benefits

- Dedicated models for wedge bonding, ball bonding, ball bumping and single point TAB
- Deep access option on all models
- 200 program storage capacity with up to six independent channels per program
- Versatile operation modes-from manual to fully automated
- Direct access and simple adjustment to all bond parameters and programs
- Digital display of all bond parameters
- From K&S, the world's leading supplier of assembly equipment

### Streamline your manual bonding operations with the 4500digital Series

Programmable bonding cycles for expanded capabilities

Our new 4500digital Series manages 200 programs, with up to six channels per program, allowing you to store even more complex process programs and load them instantly. Its programmable, automated wire cycle combines the flexibility and consistency essential for high yields.

### Select the best model...

- 4523D Wedge Bonder
- 4523AD Auto-stepback Wedge Bonder
- 4524D Ball Bonder
- 4524AD Auto-stepback Ball Bonder

### ...and the best mode of operation

- Fully manual Z-control and X-Y positioning
- Semi-automatic Z-control and manual X-Y positioning

- Semi-automatic Z-control with auto-stepback and loop formation
- Auto mode for complete wire performance for all your applications.

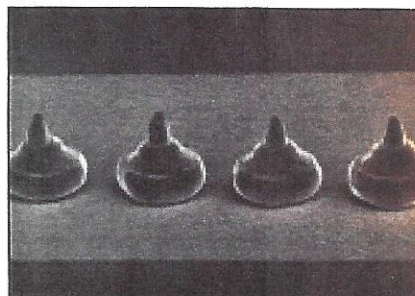
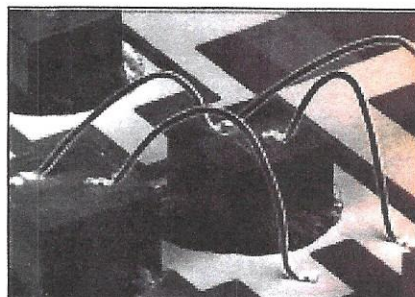
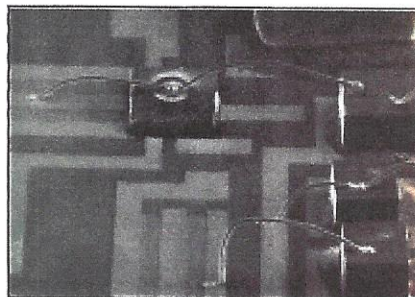
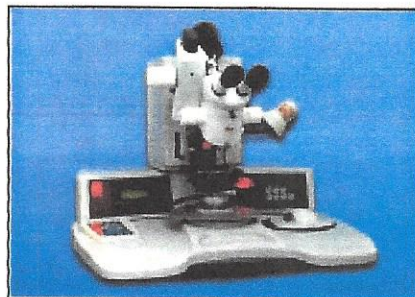
### Digital technology for greater productivity

The 4500digital Series increases your productivity by combining easy operation with digital capabilities. Stored process programs are loaded at the touch of a button, for consistent results.

Accurate, repeatable bonds make the 4500digital Series the ideal choice for your most challenging applications.

### Main features

- 200 program storage capacity
- Display of all bonding parameters
- Six independent bonding channels per program
- MultiMouse single-hand operation control
- Deep-access option for all models
- DC-servomotor with closed-loop control
- Phase Locked Loop (PLL) ultrasonic generator and high-Q transducer
- High-resolution, real-time tail control
- Digitally-controlled Negative Electronic Flame-Off system for precise control in ball bonder models
- Large bonding area
  - 135 mm x 135 mm (5.3" x 5.3") for wedge bonding
  - 152 mm x 152 mm (6.0" x 6.0") for ball bonding
- Built-in temperature controller
- Overhead microscope and spotlight targeting system
- Manual and motorized index workholders





# 4500 Series

## Positioning Control Kit

### Integrated bonding solutions

Kulicke & Soffa capillaries, wedges and TAB tools deliver excellent performance in a variety of standard and custom geometries to accommodate all types of package access requirements.

K&S also offers a wide range of wire products to suit virtually any ball or wedge bonding application.

### Gain extra flexibility and control.

In response to our customers' requests, K&S is introducing a Positioning Control Kit which separates the manual Z operation from the X-Y chessman. The kit prevents movement of the X-Y table when using manual Z in the bonding cycle, for greater stability and control.

Now 4500 Series users can benefit from left-handed chessing capability and right-handed manual Z operation, for added convenience and flexibility.

The lever style is similar to the K&S 41XX Series bonders. The Positioning Control Kit includes two items: Manual Z Lever (picture 2) and Left-handed Chessman (picture 3) as indicated in the photos at right.

### Left-handed chessman for increased efficiency.

As shown, the left-handed chessman is designed so operators can use the left button to control stitch bonding and the right button to operate the semi-automatic cycle.

### A variety of options.

The Positional Control Kit is available in a configuration to suit every customer's requirements:

### Positioning Control Kit for Analog Bonders

Includes the Manual Z Lever and Left-handed Chessman for new machines.

A field retrofit kit will be available for standard machines shipped after December 1, 1999.

### Positioning Control Kit for Digital Bonders

Includes the Manual Z Lever and Left-handed Chessman for new machines.

A field retrofit kit will be available for standard machines shipped after December 1, 1999.

### Manual Z Lever

The Manual Z Lever is also available in conjunction with the standard right-handed X-Y chessman.

Installed on the left side of the machine, the Manual Z Lever enables left-handed Z operation as an alternative to the standard Z chessman push-button.

### Your one source for assembly solutions.

Series 4500 analog/digital wire bonders are part of Kulicke & Soffa's portfolio of integrated assembly solutions, which includes dicing, die bonding, wire bonding and alternate assembly technologies. As the world's largest semiconductor assembly equipment provider, K&S is uniquely positioned to provide world-class product, process and service solutions for the IC and MCM/hybrid industries.

To learn more about the 4500 series or our other innovative assembly solutions, please contact your nearest sales office or visit our website at [www.kns.com](http://www.kns.com).

