

# WEST·BOND, INC.



**4500E – 4600E SERIES**

**SEMI-AUTOMATIC WIRE BONDERS**

*Continuing a Tradition of Quality*

# 4500E - 4600E Series Semi-Automatic Bonders

**4500E - 45° Wire Feed Wedge Bonder**  
**4600E - 90° Wire and Ribbon Feed Wedge Bonder**



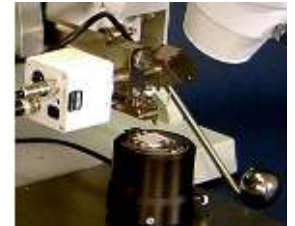
**AUTOMATIC PRECISION** at a fraction of the cost. Microprocessor controlled motor drives for both Y and Z-axes bond a succession of parallel, single or multiple arched wires maintaining identical loop and bond shapes. Unlimited deep-reach access to bond targets on IC packages of any X-Y dimension with West•Bond's throatless chassis and micromanipulator designs. Ideal for bonding high power, high frequency devices where identical bond and loop shapes are critical.

**CONVERTIBILITY** for angled and vertical wire feed wedge bonding is easily accomplished with a simple change of clamping mechanisms, both of which are included with Model 4546E. Model 4546E expands convertibility with a 45° tool head and 90° tool head. All program variables and bond settings for each configuration are retained in memory between conversions.



**PROGRAMMING** for different types of wire connections are entered into separate buffers, each with individual ultrasonic power, time, force (high or low) and loop control data. Each type may have up to 100 bonds, and may be repeated for any number of wires for up to a maximum of 6,000 individual bonds. Program values, action prompts and fault diagnostics are exhibited on the easy to read 4 line, 40 character LCD sequentially with machine operation.

**ADDITIONAL FEATURES** include 63 kHz ultrasonics, orthogonal X-Y-Z axes with pure vertical Z, color video and microscope targeting, motion slaved Z encoder, pneumatic braking of X-Y-Z axes during bonding, and built-in tool heat. Available with the base and work platform for tabletop applications, or without base and work platform for mounting above any work handling system.



## STANDARD SPECIFICATIONS:

**CONTROL LOGIC:** Motorola 68000 microprocessor  
**MEMORY:** 256KB RAM  
**DATA ENTRY:** Keypad -12 keys  
**DISPLAY:** 4 line, 40 character LCD  
**DEVICE STORAGE:** Battery Backup RAM  
**MONITOR:** LCD Flat Screen  
**TOOL Z STROKE:** 0.5 inch  
**TOOL Y STROKE:** 0.5 inch  
**MOTORIZED Z RESOLUTION:** 0.000208 inch per micro-step  
**MOTORIZED Y RESOLUTION:** 0.000208 inch per micro-step  
**MANUAL Z ENCODER RESOLUTION:** 0.001 inch  
**FORCE RANGE:** Adjustable, 10-250 grams,  
**BOND FORCE:** Two levels, adjustable  
**TRANSDUCER:** 1/2 wave, 63 kHz (nominal)

**ULTRASONICS:** Built-in, 8 bit, 5 watts  
**ESD PROTECTION:** Protection against Electrostatic Discharge  
**TAIL AND PULL STROKES:** Programmable  
**ANGLED FEED TOOL LENGTH:** 0.750 inch  
**VERTICAL FEED TOOL LENGTH:** 0.750 inch  
**WIRE RANGE:** 0.7 to 2 mils, 1/2 x10 mil gold ribbon (vertical feed)  
**WIRE SPOOL MOUNT:** 0.5 inch with ball bearing roller  
**MICROMANIPULATOR:** Counterbalanced, single lever X-Y-Z  
**RADIANT TOOL HEAT:** Built-in  
**WORK PLATFORM:** Fixed height. Adjustable height priced separately  
**MICROSCOPE:** Selection available (ESD types available)  
**ILLUMINATOR:** Selection available (ESD types available)  
**WORK HOLDERS:** Selection available (ESD types available)  
**DIMENSION:** W=24.218" x D=22.297" x H=11.000"  
**WEIGHT:** 75 lbs uncreated, or 110 lbs accessorized and created

[www.westbond.com](http://www.westbond.com)

**WEST•BOND, INC.**  
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