HYBOND

Soft Touch™

DIGITAL THERMOSONIC WIRE & RIBBON WEDGE BONDER

For 0.5 to 3.0 mil (12,5 to 75µm) diameter Wire and up to 1x15 mil (25x381µm) Ribbon

STANDARD FEATURES:

- Motorized Z control in auto and manual modes (fast & slow speeds for manual).
- 200 bond schedules programmable in non-volatile memory.
- Selectable/adjustable Reset Heights (Constant or Adaptive).
- 1-2-2; 1-2-1 & 1-1-2 auto stitch or manual continuous stitch in manual & auto modes.
- Sensor bond actuation for variable bond height bonding.
- Audio and visual bond indicators.
- 0.740in (18,8mm) max. vertical bonding window.
- Vertical deep access of 0.53in (13,5mm) when using a 0.750in (19mm) capillary.
- Horizontal reach of 6.5 inches (165mm).
- Programmable loop and search heights.
- Built-in digital temperature controller.
- High/low power PLL ultrasonic generator.
- Swing away wire/ribbon clamps.
- 2 inch and 0.5 inch inertial spool holders.
- Z control by foot-switches or manipulator.
- Static dissipative enclosure.

Model 676 is a Deep Access, Long Reach Thermosonic Wedge Bonder for wire diameters from 0.5 to 3.0 mil (12 to 76µm) and ribbon up to 1.0 x 15.0 mil (25 x 381µm) featuring HYBOND's unique Soft Touch^{tm} energy system. It was specifically designed for applications that require bonding at extreme height differences between 1st and 2nd bond and bonding wires to sensitive devices such as gallium arsenide FET's, MMICs and LED's. Model 676's motorized wire feed and wire/ribbon clamping system provides superior wire/ribbon control and allows the operator to increase or decrease tail length in 1 mil (25µm) increments at a touch of a switch. The amount of clamp "pull-back" required to break the wire at final bond may also be varied in relation to wire elasticity allowing the use of softer wires (higher elongation) than conventionally used in wedge bonding. The 676 shows actual units for set up of bond parameters.

Partial List of Available Options:

- **OP-06S7E:** Leica S7E Zoom Stereo Microscope.
- **OP-06B:** Nikon SMZ745 Microscope.
- **OP-08A-LED:** Dual Fiber Optic Illuminator.
- **OP-08R1-LED:** White LED Ring Illuminator.
- **OP-30A:** 8:1 X-Y Manipulator (4:1 Standard)
- **OP-31:** Tool Heater and Temp. Controller
- **OP-47A:** Beam Lead/Die Pick, Place & Bond.
- **OP-54:** Motorized X-Y and Y Step-back.
- **WST-15A:** Heated Work Stage, 2.125 in. top.
- **WST-19A:** Heated Work Stage, 4 x 6 in. top.
- **WST-65:** Heated Work Stage, 10 x 6 in top.
- **Wire & Wedge Tool** as ordered per application.

Specifications for Model 676:

Ultrasonic (U/S) System:	PLL self tuning 62.5KHz (nominal) system (±2.5KHz).
U/S Power Range:	0-0.2 watt on low setting and 0-2 watts on high setting.
Bond Time Range:	0mSec. to 900mSec.
Bond Force Range:	12gr. to 250gr.
Temperature Control Range:	Ambient to 250 degrees Celsius.
Bondable Wire Diameters:	0.5 to 3.0 mil (12,7 to 76µm).
Bondable Ribbon Dimensions:	Up to 1 x 20mil (25,4 x 510µm). Up to 1x15mil with ribbon in tool. Ribbon wider than 15mil by Peg Bonding.
Bondable Wire/Ribbon Materials:	Gold, Aluminum, Copper, Silver, Platinum.
Bond Head Movement/Reach:	Motorized (servo). Activated by manipulator mounted switches or foot switches / Horizontal reach up to 6.5in (165mm).
Bond Actuation/Bond Height Detect:	By sensor at bond surface contact.
Z Travel/Vertical Bonding Window:	0.750 in. (19,0mm)/0.740 in. (18,7mm).
Table Motion:	4:1 manual manipulator, Standard.
Input Power Requirements:	90 – 260VAC 50/60Hz @ 10A max. (range limited by options).
Minimum Bench Space Required:	Width: 25in., Depth: 30in. (63,5 x 76,2cm).
Unit Weight/Shipping Weight:	70 lbs. (31,8Kg)/150 lbs. (68,2Kg). Shipping weight may vary.
Vacuum Requirement:	Vacuum = 20 inHg min. (only for use with work stage if needed).
Industry Standards:	CE.

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