



*Soft Touch*<sup>™</sup>

## MODEL UDB-206A

### Manual Ultrasonic Eutectic Die Bonder

For devices from 4 x 4mil (100 x 100um) up to 0.10 x 0.10in (2.54mm x 2.54mm)



#### Standard Features:

- HYBOND's *Soft Touch*<sup>™</sup> bond force system.
- Servo-motorized vertical (Z axis) control.
- 1.10in (28mm) vertical travel range.
- Variable height bonding within travel range.
- Search height adjustable in 0.001 inch increments.
- 62.5KHz ultrasonic scrub system.
- Digital parameter adjustment in actual units (watts, milliseconds and grams).
- Storage for up to ten bond schedules in non-volatile memory.
- Built-in temperature controllers for work stage and collet heat.
- Independent preform and die cycles.
- Dual foot switch control for bond head vertical (up and down) movement.
- Bond head vertical movement can be controlled in fast or slow speed on manual mode.
- Bond level sensor stops Z axis movement upon contact with bond surface and activates bond cycle.
- Deep access capable (when using long collet).
- Single axis (Y direction – front to back) scrub.
- Collet heat independent from work stage heat.
- 120VAC std. input power (240VAC with OP-12 ).

HYBOND's Model UDB-206A is a manual eutectic die bonder that bonds devices using heat and vibration at an ultrasonic frequency. It provides precise control of ultrasonic scrub energy, force, and time (scrub duration) to provide consistent wetting without damaging die. An optional pulse-heating stage and controller can be easily added to minimize thermal stress on delicate die. The UDB-206A is ideal for low to medium volume and high reliability production.

### Partial List of Available Options:

- **OP-06A:** Nikon SMZ660 Microscope.
- **OP-08A:** Dual Fiber Optic Illuminator.
- **HY-Pulse 900A:** Pulsed Heat Stage w/force N<sub>2</sub> cooling, heated N<sub>2</sub> cover gas package enclosure.
- **OP-06S6:** Leica S6 Zoom Stereo Microscope.
- **OP-08R-LED:** White LED Ring Illuminator.
- **Color CCTV Systems** with or without single reticle (target) generator.

### UDB-206A Specifications:

- Scrub System: Ultrasonic, 62.5KHz.
- Scrub Amplitude: 0-3 um (approx.).
- Bond (Scrub) Time Range: 10 to 900mS.
- Dwell Time (before scrubbing): 0 to 9.9 seconds.
- Bonding Force Range: 12 to 300g.
- Work Stage Temperature Range: Ambient to 500°C.
- Collet Temperature Range: Ambient to 250°C.
- Bondable Die Size Range: 4 x 4mil up to 100 x 100mil (100 x 100um to 2.5 x 2.5mm).
- Placement Accuracy: ± 1 mil (± 25.4 um).
- Bondable Preform Alloys: AuSn, AuSi, AuGe, and others.
- Bond Head Movement: Servo-motorized vertical movement only.
- Bond Actuation: By touchdown sensor.
- Z Travel/Vertical Bonding Window: 1.10in (28mm) vertical travel range.
- Placement Table Motion: Manual 4:1 manipulator (8:1 option available).
- Input Power Requirements: 120VAC standard or 240VAC (with OP-12).
- Minimum Bench Space Required: Width: 25in (63.5cm) Height: 21in (53.3cm) Depth: 30in (76.2cm).
- Minimum Facilities Required: Vacuum: 23in.Hg (584mmHg), Inert gas: 60psi (4,2Kg/cm<sup>2</sup>).
- Unit Weight / Shipping Weight: 48 lbs (22Kg) / 150 lbs (68Kg) ship wt. varies with options ordered.
- Approximate Units Per Hour (UPH): Up to 180 if not using preform (operator dependent).

For more information contact us:



330 State Place, Escondido, CA. 92029, USA  
Tel. 760-746-7105 Fax. 760-746-1408

e-mail: [mailus@hybond.com](mailto:mailus@hybond.com) or visit us online at: [www.hybond.com](http://www.hybond.com)