

TODDCO TG-1000 Hotbar Bonder

▶ TG-1000 HOTBAR BONDER



▶ AVAILABLE OPTIONS

- Up to 64" Panel Capacity
- Motorized Camera Systems
- Look-up and/or Look-down Cameras
- Automated or Manual TAB Alignment
- Camera Assisted Alignment
- Motorized Interposer Feeder
- Custom Tooling

Versatile Hotbar Bonding System with a Wide Range of Options

With modular options for virtually any hotbar bonding operation, the TG-1000 Hotbar Bonder easily transforms from a feature rich, flexible prototyping system to a high-throughput production cell optimized for your specific process requirements. Manual, semi-auto and automated alignment of parts is available on the TG-1000. Dual look-up or look-down cameras facilitate critical fine pitch alignment of TAB, COF, COG or other flex circuit component attachment to Glass or PCB's. TODDCO's production-ready philosophy includes custom tooling and ceramic hot bars designed for specific process requirements.

TODDCO bonders use a closed-loop, pulsed heat temperature control system with durable G3 ceramic hot bars which provide the industry's fastest thermal cycling rates. A servo-driven bond head achieves high precision force control for both high and low force bonding. Process parameters are easily monitored and compared to the target profile using the real time graphical display. The user interface provides an intuitive platform for quickly developing and executing a process that meets your exact production requirements. Modular options provide configuration flexibility and easy retooling for high-mix manufacturing.

Use the intuitive HMI for quick bond profile development. A graphical bond profile screen guides development of critical process parameters. The data logging feature saves actual performance versus bond profile for selected bonds. Auxiliary thermocouple inputs can be displayed for thermal analysis. Saved bond profiles are easily recalled for quick changes in high mix production. Motion Control X-Y positions are incorporated into process files for a complete, repeatable production process.

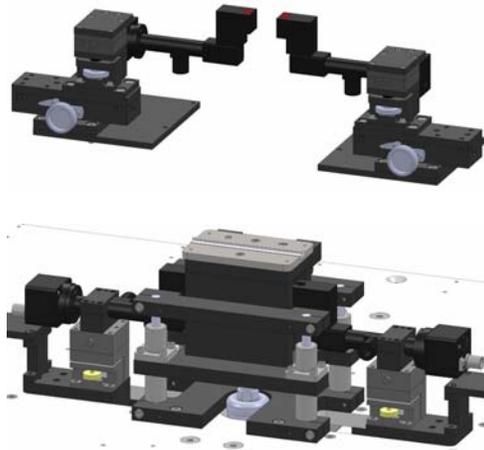
BENEFITS

- ▶ For Medium to Large LCD/PDP Panels
- ▶ Fine Pitch Alignment & Bonding in One System
- ▶ Precision Co-planarity & Temperature Control
- ▶ Works for Most TAB Sizes & Shapes
- ▶ For High-mix Production and Rework Processes

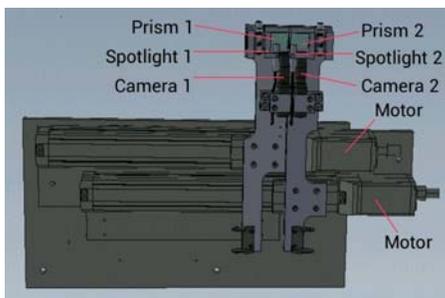
FEATURES

- ▶ Ceramic Hot Bars
- ▶ Closed Loop Temperature Control
- ▶ Precision Motorized Servo-Actuator
- ▶ Real Time Graphical Display
- ▶ Easy, Intuitive Process Development
- ▶ Advanced Process and Quality Controls

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Bond Pedestal with Look-up Cameras



Dual Look-Down Cameras



Auto XYZ-Theta Positioner



Manual XYZ-Theta Positioner

Optics Modules

Dual Look-up Cameras

Camera Type	Digital
Smallest Pitch Size	25 microns
Dual Camera Pitch	9-75mm
Y Axis Adjustment	+/- 7mm Travel
X Axis Adjustment	+/- 3mm Travel
Lighting Options	Off Axis LED Array, Coaxial, Programmable Intensity
Positioning Options	Manual Or Motorized with programmable positioning

Single Look-up Cameras

Camera Type	Digital
Smallest Pitch Size	25 microns
Y Axis Adjustment	+/- 7mm Travel
X Axis Adjustment	+/- 3mm Travel
Lighting Options	Off Axis LED Array
Positioning Options	Manual Or Motorized with programmable positioning

Dual Look Down Cameras

Camera Type	Digital
Smallest Pitch Size	25 microns
Dual Camera Pitch	9-100mm
Y Axis Adjustment	+/- 12mm Travel
X Axis Adjustment	+/- 7mm Travel
Lighting Options	Off Axis LED Array, Coaxial, Programmable Intensity
Positioning Options	Manual Or Motorized with programmable positioning

Automated Vision Recognition

Alignment	See Automated XYZ-Theta Positioner
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Positioner Modules

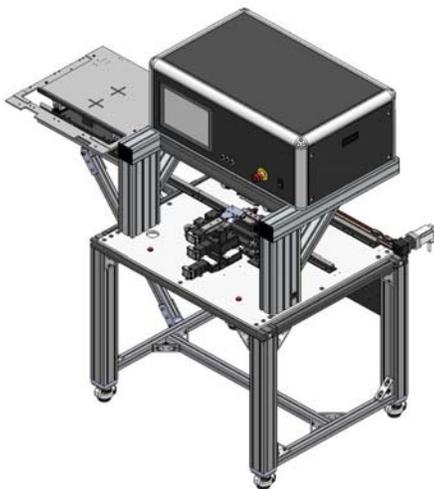
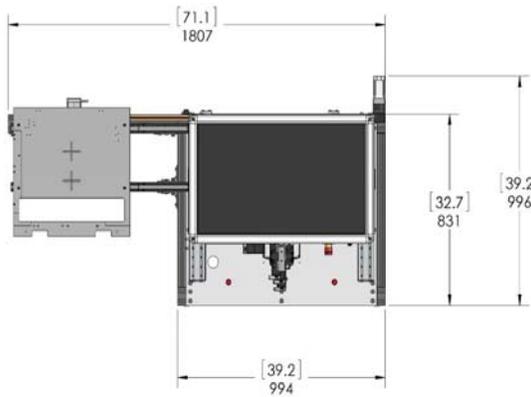
Automated XYZ-Theta Positioner

X-Axis	50mm travel, 0.3µm resolution
Y Axis	50mm travel, 0.3µm resolution
Z-Axis	15mm travel, 0.5µm resolution
Theta Axis	0.32 arc-sec
Lighting	LED Array on Retractable Shuttle
Part Holding	Vacuum

Manual XYZ-Theta Positioner

Adjustment	Micrometer Screw
Part Holding	Vacuum

TODDCO TG-1000 Hotbar Bonder



Specifications

Size and Weight

Base Frame	994mm (39")W x 831mm(31")D x 1661mm (65")H
... with Single Outrigger	1807mm(71")W x 996mm(39")D x 1661mm (65")H
Weight	218kg (480lb)

Facility Requirements

Power	110/220VAC 50/60Hz
Air	90-120psi (0.6-0.8MPa) Clean, Dry Air

Bond Actuator

Drive	Motorized Servo
Operation	Low Force, High Force, and Precision Control Modes
Bond Force	5-650N
Z-Travel	100mm
Leveling Adjustment	U- V- Micro Pitch Adjustment Screws

Hotbar

Operation	Pulsed Heat, Closed Loop Control
Material	G3 Ceramic
Temperature Feedback	Embedded Thermocouple
Ramp Rate	Up to 150°C/s
Temperature Range	Up to 450°C
Size	1.5mm - 5mm Wide, Up to 100mm Long

Bond Pedestal

Operation	Motorized Servo
Z-travel	15mm
Bonding Block	Borosilicate Glass

Glass Transport

X-Travel	1500mm
Y-Travel	100mm
Part Holding	Vacuum

Outriggers

Base

Max Panel Size	500mm x 500mm
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Single Outrigger

Max Panel Size	900mm x 900mm
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Dual Outrigger

Max Panel Size	1800mm x 1800mm
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