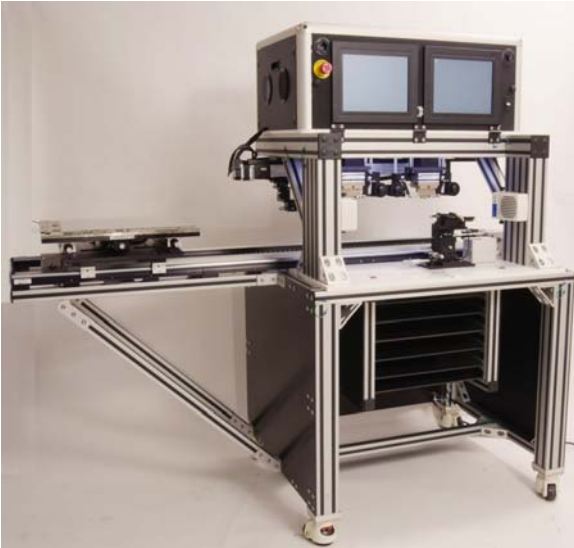


TODDCO TG-2000 Hotbar Bonder

▶ TG-2000 HOTBAR BONDER



Dual Hotbar Actuator Reduces Changeover Time

The new TG-2000 Dual Hotbar Bonding System includes two independent, high pressure, hotbars for ACF tacking and bonding of TABs to fine pitch glass ITO and associated PCBs. TG-2000 is a floor standing, semi-auto production or rework cell that can tack ACF material to ITO, align TAB or COF to ITO with 4-axis TAB pedestal and dual look-down camera system, and bond ACF with two high pressure (650N), pulsed heat, ceramic hotbars. TODDCO's modular design allows a broad range of standard options to be configured to meet customer specific automation and production requirements.

The TG-2000 motorized dual look-down camera system facilitates alignment to fine pitch ITO. Additional targeting features and embedded LED illumination enhance visualization of fiducials beneath tacked ACF. TG-2000 incorporates a closed loop temperature controller for precision temperature control of TODDCO ceramic hotbars. The versatile system design provides a wide force range for two independent, servo-driven bond heads. TODDCO's production-ready systems include custom tooling and ceramic hot bars designed for the exact process requirements.

System software provides a graphical bond profile screen to guide development of critical process parameters. Motion controlled positions of X-Y transport and dual look-down cameras are incorporated into process files for a complete, repeatable, hotbar production process. Operator prompts displayed on a front panel HMI are easily incorporated into the sequence file for customer specific operation. Easy recall of saved sequence files quickly accommodates high-mix production. Two levels of password security identify users and allocate access levels.

▶ 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

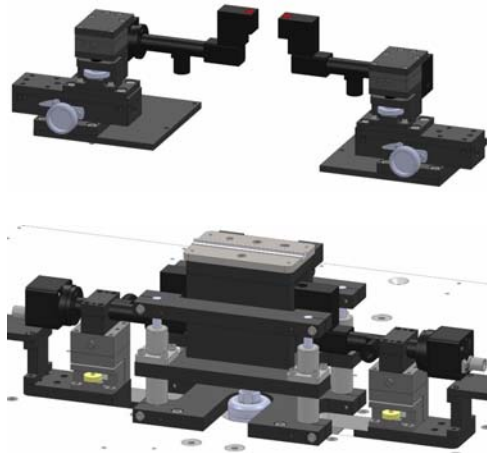
▶ BENEFITS

- 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

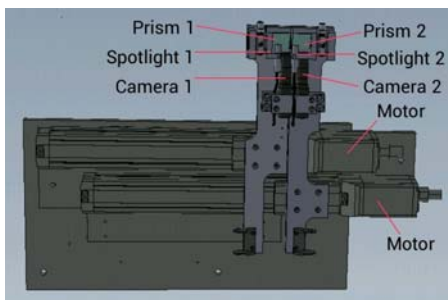
▶ FEATURES

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

TODDCO TG-2000 Hotbar Bonder



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

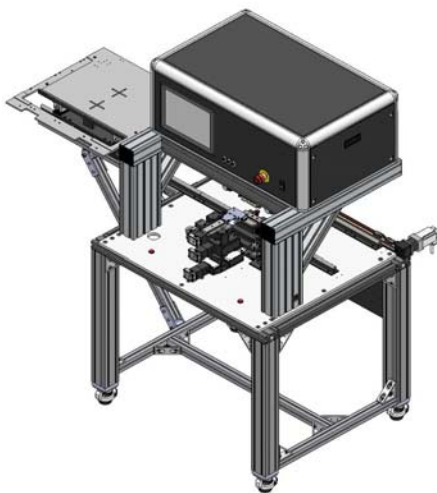
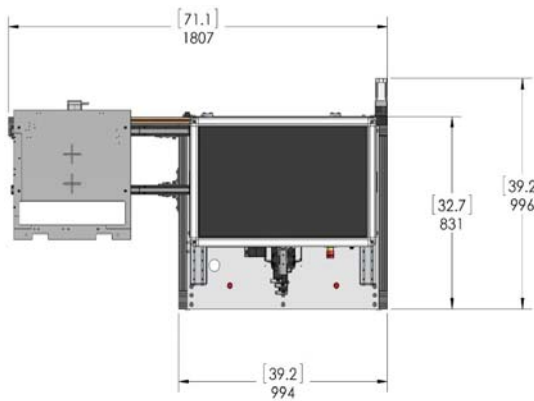
Automated XYZ-Theta Positioner

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-2000 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

Dual 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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