Apogee™ Bonder

Semi -Automated Temporary Bonder With DataStream™ Technology

Accelerate product development and lower production costs with the Apogee™ bonding system. Achieve high yield and throughput without the high cost and complexity of full automation. Maximize your process options with a tool that bonds wafers from 50 to 300 mm and supports all debonding processes.

Serving the Semiconductor Industry Since 1987

BENEFITS

- Substrate size range: 50-300 mm
- Dual platens heat wafer stack from both sides, minimizing thermal defects
- Self-leveling platens minimize total thickness variation
- Evacuated bond chamber eliminates voids
- Carrier and device are separated during pre-bond evacuation

PROGRAMMABILITY

- User-friendly touch screen interface and display
- Remote access to the bonder with a familiar browser user interface
- Push notifications sent to any web-enabled device
- Bonding programs: virtually unlimited recipes & steps
- 0.1-second resolution for step times (time: 0-9,999.9 s/step)
- Security: password protection
- View process status and download for offline analysis
- Process traceability for every wafer
- On-line graphical process charts and logs for piston pressure, force, temperature, vacuum, and cycle time
- Update process bonding parameters from outside the lab or clean room

RELIABILITY AND THROUGHPUT

Temporary Wafer Bonding Tool Platform Reliability	
Total Throughput	Est. 14-20 WPH (process dependent)
Qualified Wafer Materials	SiC, GaN, GaAs, InP, sapphire, silicon, glass
System Uptime	>99% over 12-month period
Mean Time to Repair (MTTR)	< 24 hours
Mean Time between Failures (MTBF; hours,cycles)	>600 hours, 6,000 cycles

UTILITIES AND DIMENSIONS

- Bonder dimensions: 48 in W x 31 in D x 15 in H
- Nitrogen or CDA: 50 psi (1 cfm)
- Vacuum pump provided
- Electrical requirements: 208-240 VAC: 50/60 Hz, 3,400 watts (17 A)
- Machine weight: 320 lb
- Shipping weight: 680 lb

CostEffectiveEquipment.com
(573) 364-0300

DATASTREAM™ TECHNOLOGY: CONNECTING THE SEMICONDUCTOR INDUSTRY

Cee® has released DataStream™ technology on its new Apogee™ tool line. DataStream™ technology gives you access to all of your connected Apogee™ manufacturing equipment in one place to track, access, and modify your systems via a website or mobile app. This technology will give manufacturers the ability to process and visualize data in real time and search and export that data into a number of different formats.

Real-Time Process Information

- Constant feedback of process information for monitoring critical process parameters
- Streamlined interface between different tool types
- Visual cues on process status & health

Advanced Recipe Creation

- Seamless switching between basic and advanced recipe creation methods
- Plain-English recipe translation
- Pre-defined process commands
- Unlimited process steps
- Unlimited recipe storage

Environmental Monitoring

- Monitoring of temperature & humidity allows for stricter control of critical processes
- Set preconditions and tolerances for monitored parameters
- On-screen, colored visual cues for deviation from controlled specs

Data Logging & Export

- Export data logs into commonly readable formats for further analysis and process troubleshooting
- Increase process efficiency
- Identify process control deviations
- Analyze multiple processes for best known method (BKM) development

TOOL FEATURES & SPECIFICATIONS

- Max. temperature: 300°C (higher temperatures available)
- Piston force: 3.5-12k N
- Force resolution: 10-N steps
- Precision pneumatic system used to control force
- Dual heated platens with independent temperature controls
- No-contact extraction arm for loading and unloading (safely handles bonded pair at process temperatures)
- Bond chamber evacuation time: <90 seconds
- Carrier and device are separated during pre-bond evacuation
- Platen temperature uniformity: <1%
- Mechanical alignment fixtures are compatible with wafer notches/flats and support the use of nonstandard wafers
- Alignment accuracy: ≤0.5 mm (dependent on substrate tolerances)

© 2017 Cost Effective Equipment, LLC.

All statements, technical information, and recommendations contained herein are based on tests we believe to be accurate, but the accuracy or completeness thereof is not guaranteed and the following is made in lieu of warranty expressed or implied. Neither the seller nor the manufacturer shall be liable for any injury, loss, or damage, direct or consequential, arising from the use or inability to use the product. Before using, user shall determine the suitability of the product for his intended use, and user assumes all risk and liability whatsoever in connection therewith. No statement or recommendation contained herein shall have any force or effect unless in an agreement signed by officers of the seller and manufacturer.

F.6.6.7098.A Effective Date: 08/04/2014