Apogee™ 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.

Serving the Semiconductor Industry Since 1987

BENEFITS

- Substrate size range: 50-300 mm
- Dual heated platens minimize thermal defects
- Self-leveling platens minimize total thickness variation
- Evacuated bond chamber eliminates voids
- Carrier and device are separated during pre-bond evacuation
- DataStream™ technology

TOOL FEATURES & SPECIFICATIONS

- Max. temperature: 300°C
- Piston force: 550 -12,000 N
- Force resolution: 10-N steps
- Dual heated platens with independent temperature controls
- Bond chamber evacuation time: <90 seconds
- Carrier and device are separated during pre-bond evacuation
- Platen temperature uniformity: 0.3% across working surface
- Mechanical alignment fixtures are compatible with wafer notches/flats
- Alignment accuracy: ≤0.5 mm (dependent on substrate tolerances)

PROGRAMMABILITY

- Touch screen interface and display
- Push notifications sent to any web-enabled device
- A virtually unlimited number of user-defined recipe program steps
- 0.1-second resolution for step times (time: 0-9,999.9 s/step)
- 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
- Connectivity: USB/Ethernet port for communications for uploading/downloading process parameters with DataStream™ technology

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

- Electrical requirements: 208-240 VAC: 50/60 Hz, 3,400 watts (17 A)
- Nitrogen or CDA: 50 psi (345 kPa) .02 cfm (.5 liters/min)
- Vacuum pump provided: 100-120VAC,50/60 Hz

DIMENSIONS

- Bonder dimensions: 48” (122cm) W x 42.5” (108cm) D x 53.5” (136 cm) H
- Machine weight: 500 lb
- Shipping weight: 750 lb

DATASTREAM™ TECHNOLOGY: CONNECTING THE SEMICONDUCTOR INDUSTRY

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 web browser. 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

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

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

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

© 2019 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: 4/1/2019