



AW-B3000

Introduction

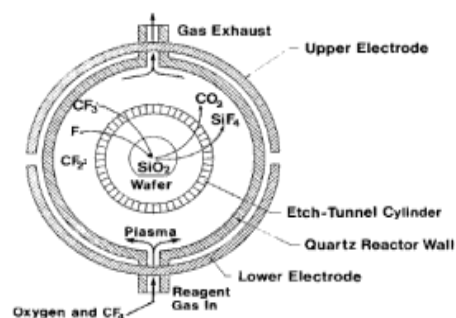
The AW-B3000 batch/barrel photoresist asher is a manual load tool designed as a flexible 13.56 MHz RF plasma photoresist removal system for high-volume wafer fabrication. The AW-B3000 is in direct response to manufacturer's concerns for Uptime, Reliability, Production-Proven technology. and low cost of ownership.

AW-B3000 Key Features

- ⊕ Production-proven plasma Stripper/Asher/Descum technology.
- ⊕ Up to 25% Uniformity. Much lower if used with a Faraday Cage.
- ⊕ Consistent wafer-to-wafer uniformity.
- ⊕ TC Option can be used with an N₂ Plasma to heat the wafers up to 170°C (Chamber) to increase ash rate.
- ⊕ End-of-Process (EOP) Option automatically stops the Process after all wafers are fully stripped regardless of wafer quantity or photoresist thickness.
- ⊕ Samples, 6" square, and up to 8" round wafers capable.
- ⊕ Many wafer sizes capability without hardware change.
- ⊕ Can handle different thickness wafer with different carriers.
- ⊕ New controller with PC with Advanced AW Software
- ⊕ Up to 5 isolated gas lines with MFC's
- ⊕ 13.56 MHz RF Generator. (Air-cooled Optional)
- ⊕ Pressure Control Throttle Valve for better process repeatability. (Optional)
- ⊕ MKS Baratron (Optional)
- ⊕ Touch screen GUI
- ⊕ EMO, Interlocks and Watchdog function
- ⊕ GEM/SECS II (Optional)
- ⊕ Made in U.S.A.

AW-B3000 Applications

- ▶ Low cost production-proven plasma Asher / Descum
- ▶ Front and backside isotropic photoresist removal.
- ▶ Barrel/Batch Manual Load Process
- ▶ Descum



Production-proven Reactor

AW-B3000 Software Key Features

- Real time graphics display (GUI), process data acquisition, display, and analysis.
- Closed-loop process parameters control.
- Precise parameters profiles tailored to suit specific process requirements.
- Programmable comprehensive calibration of all subsystems from within the software. This allows faster, easier calibration, leading to enhanced process results.
- Recipe creation. It features a recipe editor to create and edit recipes to fully automate the processing of wafers inside the process chamber.
- Validation of the recipe so improper control sequences will be revealed.
- Storage of multiple recipes, process data and calibration files so that process and calibration results can be maintained and compared over time.
- Passwords provide security for the system, recipe editing, diagnostics, calibration and setup functions
- Simple and easy to use menu screen which allow a process cycle to be easily defined and executed.
- Troubleshooting features which allows engineers and service personnel to activate individual subassemblies and functions. More I/O, AD/DA "exposure".
- DB-25F parallel (printer) port. The computer interfaces to the Allwin21 system with only one cable: the control interface cable.
- The control board inside the machine that translates the computer commands to control the machine has a watchdog timer. If this board loses communication with the control software, it will shut down all processes and halt the system until communication is restored.
- GEM/SEC II function (Optional).
- Advanced Allwin21 EOP function (Optional)

AW-B3000 Specifications*

- ❖ Wafer Size: Sample to 200mm Capability. Multiple wafer size without hardware change
- ❖ High Throughput: Up to 75 WPH. Process Dependent.
- ❖ Temperature: Only TC Option can be used for N2 plasma to heat the substrates up to 170°C.
- ❖ Gas Lines: Up to 5 isolated gas lines with MFCs.
- ❖ Asher Rate: 0-0.1u/min. positive PR; >0.2u/min. negative PR. Slower if Faraday Cage is used
- ❖ Uniformity: Up to 25%. Much lower with Faraday Cage.
- ❖ Particulate: <0.05 /cm² (0.03um or greater)
- ❖ Damage: Low damage with Faraday Cage.
- ❖ Selectivity: >1000:1
- ❖ MTBF/MTTA/MTTR: 450 Hours/100 Hours/3.5 Hours or Better.
- ❖ 95% uptime

* Contact Allwin21 sales for other applications and specifications

AW-B3000 Configuration

- ❖ Main Body with wires
- ❖ Control Box
- ❖ Pentium Class PC with AW Software
- ❖ Keyboard, Mouse, USB with SW backup and Cables
- ❖ Main Control PCB and DC
- ❖ Transformer, Circuit Breaker, Contactor
- ❖ 1-5 Isolated Gas Lines w/ Pneumatic Valve and MFC
- ❖ Purge has manual regulator in controller box to control speed.
- ❖ Quartz Chamber: Dia 12" x Depth 23";
- ❖ RF Match Network Integrated in the Main Body of tool.
- ❖ Chamber Door with quartz plate in the Main Body.
- ❖ Gas and vacuum lines Connections in the Main Body
- ❖ 13.56MHz RF Generator (Air-Cooled is Optional)
① 300W; ② 600W; ③ 1000W; ④ 1200W
- ❖ Lamp tower alarm with buzzer
- ❖ Main Vacuum Valve
- ❖ MKS Baratron
- ❖ Throttle Valve
- ❖ Front EMO, Interlocks
- ❖ 15-inch Touch Screen GUI

Options:

- ◆ End-of-Process (EOP) function.
- ◆ Throttle Valve for pressure control.
- ◆ Air-cooled RF Generator.
- ◆ GEM/SECS II function (Software)
- ◆ Thermocouple for Chamber Temperature
- ◆ Vacuum Pump



Main Menu Screen

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