



AutoGlow 200

AUTOGLOW 200 - FOR ACTIVATION, ASHING, CLEANING AND ETCHING

The AutoGlow 200 is A Table-Top Plasma System that can be used for Plasma or RIE Processing. Can Process as low as 10 Watts, or as High as 300 Watts in One Watt Increments. 13.56 MHz with Automatic Tuning. For 200 mm wafers or 8" x 8" substrates. The AutoGlow 200 is suitable for lab, Failure Analysis, university or production applications. Can perform a host of applications from cleaning, removing photoresist, prebonding, organic removal, activation and plasma etching.

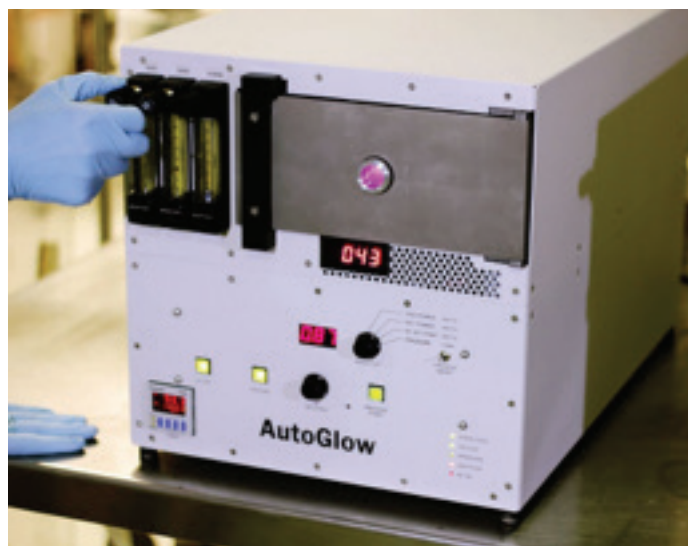
RIE OR PLASMA

The system comes with two removable sample shelves that can be removed and arranged for bottom powered (RIE), or top powered (plasma) processing.

CHAMBER (10" W x 4" H x 10 D) The plasma chamber is constructed of high grade 6061-T6 aluminum, and is anodized to accommodate processing with fluorine chemistries such as CF₄. Other gases such as oxygen or argon are typically used as well. The chamber is resistant to chemicals and easy to clean. Power is supplied to the sample holder via an RF feed through. A larger chamber is optional.

PROCESS CONTROL

The selectable display will show the pressure (torr), set power (watts), reflected power (watts) and the actual power (watts) going into the chamber. For any plasma process, it is important to know the chamber pressure to ensure a proper and repeatable process.



Two flowmeters can be mounted on the front of the AutoGlow 200 for easy gas flow adjustment and viewing. Internal solenoids will shut the gas off after the process has timed out. This will allow for repeatable production processing without having to continually adjust the gas flow for subsequent plasma processing. Chamber pressure is controlled by the flow of gas into the chamber. A Pirani gauge is used to report the chamber pressure. As a safety protection, process gas is only allowed to flow in to the reaction chamber once all the interlocks are confirmed.

POWER and MATCHING NETWORK

The AutoGlow 200 plasma system is equipped with 13.56 MHz, 300 Watt RF generator and a built in RF matching module for automatic tuning. A 600 w RF generator is available as an option.



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SAFETY

Standard features include a switch that terminates RF power and gas flow. Safety interlocks prevent activation of the RF power and gas flow when the chamber door is open or if covers are removed. The AutoGlow 200 has passed rigorous testing and is CE Marked. The system is used worldwide.

AUTOGLOW 200 IS IDEAL FOR:

- Plasma Cleaning
- Organic Removal
- Cleaning of Devices, Hybrids
- Etching or Removing Films
- Plasma Activation/Modification
- Photoresist Ashing or Removal
- FA work
- Cleaning prior to Bonding or Plating
- Etch back of IC's
- Etching—RIE or Plasma
- Pre-Bonding of Oxides
- Pre-Bonding PDMS
- Parylene Etching or Removal



Optional DC Bias Readout

AUTOGLOW 200 SYSTEM SPECIFICATIONS

Dimensions:

(Door Closed): 16" W x 16" H x 26" L. (406.4 mm W x 406.4 mm H x 660.4 mm L)

Weight:

With Vacuum Pump: 95 lbs. (43 kg)

Chamber:

10" W x 4" H x 10" D

254 mm W x 101.6 mm H x 254 mm D

Hard Anodized, High Grade 6061-T6 Aluminum Custom sized chamber are available

RF Power:

13.56 MHz

300 Watts, solid state, one watt digits Automatic impedance matching

* Optional 7cfm Vacuum Pump System with Fomblin Type Oil

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FACILITIES REQUIREMENTS:

Power Supply: Single Phase 110-220 VAC 10 amp 50-60 Hz 16, 3 wire.

Process Gases: Regulated to 10 PSIG Connections made by either .25" O.D. Stainless Steel or Teflon tubing

External Gas Fittings: .25" FPT, Vacuum Pump: KF40 Flange

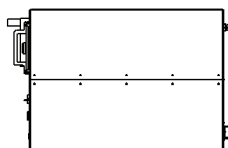
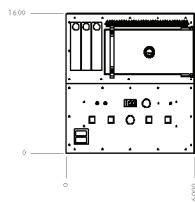
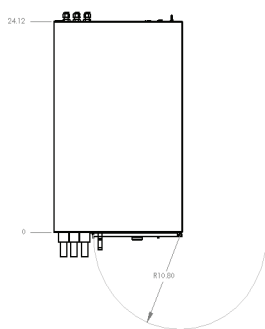
INTERNAL RF POWER MODULE:

Power Supply (powered by the system)

Power Output: 300 Watts +/-5% @ full load output into 50 Ohm impedance.



Diagnostic LED's and Easy Control



AutoGlow 200 Work Area

FEATURES OF THE AUTOGLOW 200

- RIE or Plasma Processing
- Cleaning, Activation, Ashing or Etching
- Oxygen, Argon or CF4 gas
- 300 Watts for Plenty of Power
- Process as Low as 10 Watts or as High as 300 Watts
- Power control in one watt increments
- Modular RF Generator
- The Proprietary RF Matching Network and RF Generator are designed to provide for minimal reflected power throughout the range of power settings—this improves sample uniformity and the time to accomplish the processing task.



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- **Chamber Pressure Display**—so the operator can monitor chamber pressure relative to gas flow.
- **Automatic Tuning**—the operator can easily process samples without constant tweaking and adjustment of the system. No Tuning Required!
- **Anodized Aluminum Chamber**—allows for etching with CF_4
- **Solid state electronics**—no RF vacuum tubes for high reliability and rugged design
- **Uniform plasma**—for uniform and repeatable results
- **Unique electrode design**—provides maximum power distribution and a uniform plasma regardless of where you place the sample on the sample holder.
- **Sheet metal used in the AutoGlow is custom coated to increase RF containment**—improves tuning and ensures a safe operation.
- **All joined sheet metal is bolted in close intervals to ensure RF containment**—improves tuning and ensures a safe operation.
- **Timer**—the operator can set the process to run for short or longer processing—automatic operation. Diagnostics LED Card—shows the status of the tool for troubleshooting and increased uptime.
- **Instructional video and users manual**—easy to start-up and operate
- **12 month parts and labor warranty**

Overall: The 13.56 MHz, 300 watt (optional 600 w) AutoGlow 200 is a table-top plasma reactor that provides an extremely efficient plasma for Lab or Production applications. It is designed with the latest in RF technology to allow users a safe, efficient plasma system at a reasonable price. Can perform a variety of cleaning, ashing or etching applications. RIE or Plasma processing. Can process 8" (200mm) wafers.

READY → SET → GLOW

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All modules (RF Gen, RF Match, Control System, Chamber)
are made by **GLOW RESEARCH**

Glow Research manufactures plasma systems for other
plasma companies under private label.

