AutoGlow Plasma Cleaning System

efficent, powerful and easy to use table-top lab system

The AutoGlow plasma system is an automatic tuning, 300 watt, Table-top RF plasma system that provides an extremely efficient, uniform plasma for lab applications. It has been designed with the latest developments in RF technology to allow users a safe and rugged RF plasma system at a reasonable price. This flexible system with variable power settings is suitable for R&D centers, universities, laboratories and small production facilities, who will find the AutoGlow plasma system a useful system for their plasma needs.

AutoGlow Plasma Cleaning System

Applications

- Surface cleaning for thin film applications
- Cleaning of optical devices
- Plasma ashing for EDX analysis, asbestos analysis
- EM sample preparation
- Surface etching
- Cleaning of electronic circuit boards and components
- Cleaning of medical parts
- Solar cells

Plasma Chamber

The plasma chamber is made of high purity quartz that is resistant to chemicals and easy to clean. The chamber design ensures the most efficient, uniform plasma processing for short or longer processing times.

Power and Matching Network

The AutoGlow plasma system is equipped with an automatic impedance matching network which works with the power settings selected by the user. Different plasma applications require different RF power settings. The auto-matching network makes the system easy to use and will give consistent results. RF power is available up to 300 watts.

Process Control

The AutoGlow control module monitors chamber pressure, forward power, reflected power, RF set point and power level. Up to three gasses can be connected to an optional Gas Control Module (GCM) that provides enhanced process recipe flexibility. The system provides automatic operation and ensures precise, reproducible process conditions.

Instrument Safety

The inherent design of the AutoGlow comprises RF containment, few moving parts and latest in RF technology to guarantee safe and reliable operation. Further safety features are a termination button for RF power and gas flow and safety interlocks to prevent activation of RF power and gas flow when the chamber door is open.

Gas Control Modules (optional)

There are 3 Gas Control Modules available; for 1, 2 or 3 gas inputs. The Gas Control Modules comprise precision flow meters and gas toggle switches to allow for precise pressure control with up to three different process gases.

Vacuum pumping system (optional)

Recommended vacuum pumping system would be a dual stage chemical rotary pump with a pumping speed of 6m³/hr (100l/min or 3.5 CFM). The pump must be charged with Krytox or Fomblin pumping fluid for use with oxygen.

Optional GCM-2
AutoGlow Gas Control Module

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Features and benefits of the AutoGlow

- **300 watt RF generator** - variable power setting with enough reserve to accomplish to task
- **Minimal reflected power** - accomplished by state of the art RF matching network and RF generator, delivers improved uniformity and reduces processing time
- **Quick auto tuning with solid state detector** - enables automatic sample processing without the need for constant manual tuning
- **High purity quartz chamber** - to ensure reliable processing
- **Uniform plasma** - for consistent results
- **Pressure output reading** - operator can monitor chamber pressure relative to gas flow
- **Displays for Forward power, Reflected power, RF set point and Pressure** - easy operation and quick processing
- **Safe design** - includes the latest safety features
- **Optional Gas Control Module** - metered gas flow for up to three process gases

AutoGlow Specifications

RF Power:	0 - 300W
RF frequency:	13.56 Mhz
RF matching network:	manual/automatic tuning
Timer:	6 seconds to 999 hours
Digital Display (selected):	Forward Power, Reflected Power, RF set point, Pressure
Processing chamber:	High purity quartz, ø5.8 x 7" (ø147 x 177mm)
Vacuum pump connection:	KF25 (NW25)
Gas input connections:	0.25 FTP, 20psi
Weight:	83 lbs (37.7 kg)
Dimensions:	16 W x 24.12 D x 16 H" (406 x 613 x 406mm)
Enclosure material:	Zinc coated steel, polyurethane painted
Power requirements:	120-220VAC, 10A, 50/60Hz, single phase
Optional pumping system requirements:	6 m^3/hr (100l/min or 3.5 CFM) dual stage rotary pump charged with Krytox or Fomblin pumping fluid for use with oxygen
Optional Gas Control Module:	1, 2 or 3 gas modules

Ordering information:

94000 AutoGlow Plasma System, each

94010-10 GCM-1, Gas Control Module for 1 gas, each

94010-20 GCM-2, Gas Control Module for 2 gases, each

94010-30 GCM-3, Gas Control Module for 3 gases, each

94020 3.8CFM Chemical Pumping System with Krytox Pumping Fluid, each

Consumables

94000-10 Quartz Process Chamber, each

94000-20 Quartz Process Chamber Door, each

94000-22 Spare Parts Kit, including door gasket and O-rings, each

891-42 Krytox 1525 Pumping Fluid, 2kg container, each

94020-10 Oil Mist Filter for 94020 pump, each

Krytox 1525 Pumping Fluid

www.tedpella.com/AutoGlow_html/AutoGlow.htm

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