



MARCH RIE-1701 Plasma System

Compact Bench-Top Reactive Ion Etching

The RIE-1701™ anisotropic reactive ion etch plasma system is completely self-contained, requiring minimal bench space.

The RIE-1701 system provides:

- Durable high-quality anodized aluminum with ceramic fixtures
- A plasma chamber that can be configured with 6" or 8" powered electrodes to accommodate a wide range of wafer sizes, piece-parts, IC packages and other components
- A compact, self-contained system chassis that houses the plasma chamber, control electronics, 13.56 MHz RF generator, and an automatic matching network for excellent process repeatability (only the vacuum pump is external to the system)
- Maintenance access through an interlocked door or removable panels
- Touch-screen control and a graphical user interface that displays real-time process data and feedback
- Support for a wide range of process gases, including: Ar, O₂, H₂/forming gas, He, CF₄, and SF₆.
- Two standard electronic mass flow controllers for optimal gas control, with an option for two additional controllers (4 maximum)

Key Applications

- Removal of interlayer films for failure analysis
- De-encapsulation and dielectric material removal
- Etching of oxides, nitrides, polyimides, silicon, metal, III-V and II-VI materials for MEMS, LED, or IC device manufacturing
- Epoxy removal
- Photoresist stripping
- Descum

Specifications

Enclosure Dimensions	W x D x H – Footprint	569W x 869D x 704H mm (22W x 34D x 278H in.)
	Net Weight	221 kg (487 lbs.)
	Equipment Clearance	Right, Left, Front – 569 mm (22 in.), Back – 254 mm (10 in.)
Chamber	Maximum Volume	1.2 liters (73.2 in ³)
Electrodes	6" Powered Working Area	152 mm Diameter (6.0 in. Diameter)
	8" Powered Working Area	203 mm Diameter (8.0 in. Diameter)
	Ground/Perforated Working Area	243 mm Diameter (9.6 in. Diameter)
	Part Height	12.7 mm (0.5 in.) max – Non-Conductive
RF Power	Standard Wattage	600 W
	Frequency	13.56 MHz
Gas Control	Available Flow Volumes	10, 25, 50, 100, 250 or 500 sccm
	Maximum Number of MFCs	4
Control System and Interface	Software Control	PLC Control with Touch Screen Interface
	Remote Interface	PlasmaLINK, ProcessLINK
Vacuum Pump	Purged Dry Pump	22 cfm
	N ₂ Purged Pump Flow	2 slm
Facilities	Power Supply	110 VAC, 20A, 50/60 Hz, Single Phase, 12 AWG, 3-Wire or 220 VAC, 10A, 50/60 Hz, Single Phase, 12 AWG, 3-Wire
	Process Gas Fitting Size & Type	6.35 mm (0.25 in.) OD Swagelok Tube
	Process Gas Purity	Lab or Electronic Grade
	Process Gas Pressure	0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulated
	Purge Gas Fitting Size & Type	6.35 mm (0.25 in.) OD Swagelok Tube
	Purge Gas Purity	Lab or Electronic Grade N ₂ /CDA
	Purge Gas Pressure	2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated
	Pneumatic Valves Fitting Size & Type	6.35 mm (0.25 in.) OD Swagelok Tube
	Pneumatic Gas Purity	CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm
	Pneumatic Gas Pressure	3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulated
	Exhaust	38 mm (1.5 in.) OD Pipe Flange
Compliance	SEMI	S2/S8 (EH&S/Ergonomics)
	International	CE Marked
Ancillary Equipment	Gas Generators	Nitrogen, Hydrogen (Requires Additional Non-Optional Hardware)
	Facilities	Chiller, Scrubber

For more information, speak with your Nordson representative or contact your Nordson regional office.

We have several global locations to serve you.

Americas
Asia Pacific
EMEA

<https://www.nordson.com/en/divisions/march/contact-us/global-locations-and-sales-contacts>