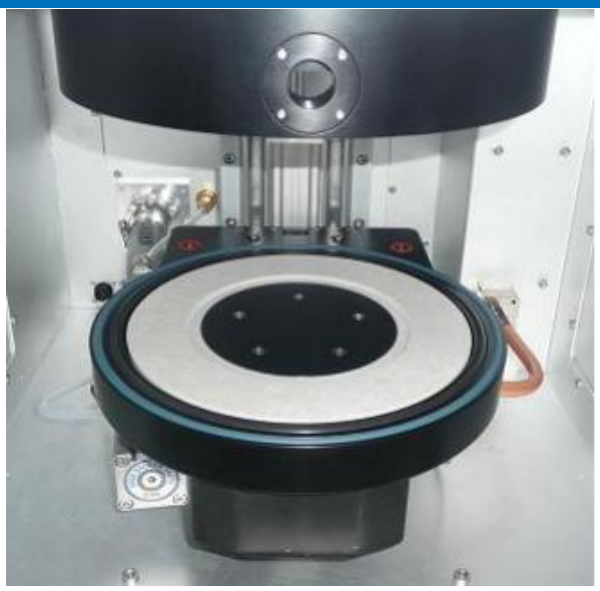
MARCH RIE-1701 Plasma System

Features and Benefits

- Touch screen control and graphical user interface provide real-time process data and feedback
- 13.56 MHz RF generator with automatic matching network delivers excellent process repeatability
- Temperature control loop integrated into plasma chamber enables precise control available
- Optional turbo-molecular pump package and butterfly valve pressure control available



Affordable reactive ion etching (RIE) in a compact, bench top configuration

The RIE-1701 anisotropic reactive ion etch plasma system from Nordson MARCH is completely self-contained, requiring minimal bench space. The system chassis, which also serves as an integrated safety enclosure, houses the plasma chamber, control electronics, 13.56 MHz RF generator, and the automatic matching network (only the vacuum pump is external to the system). Maintenance access is provided through an interlocked door or easily removed panels.

The plasma chamber is constructed of high-quality anodized aluminum with ceramic fixtures for superior durability. The plasma chamber can be configured with 6″ or 8″ powered electrodes to accommodate a wide range of wafer sizes, piece-parts, IC packages and other components.

High performance plasma etching for Failure Analysis of MEMs and LED device manufacturing

The RIE-1701 system is designed for advanced etching applications such as: 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 and descum.

The system can accommodate a wide range of process gases, including: Ar, O2, H2/forming gas, He, CF4, and SF6. Standard are two electronic mass flow controllers for optimal gas control, with two more available as options (4 total).

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Specifications: RIE-1701 Plasma System

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 & Interface	Software Control	PLC Control with Touch Screen Interface
	Remote Interface	PlasmaLINK, ProcessLINK
Vacuum Pump	Standard Wet Pump	19.5 cfm with Corrosive Oil Mist Eliminator
	Optional Purged Dry Pump	22 cfm
	N2 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 N2/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
	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 local representative or contact your regional office.

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