MARCH AP-1000

High-Performance Plasma Treatment for Batch Manufacturing

The AP-1000 plasma system meets the rigorous demands of 24-hour operation in high-performance manufacturing environments. The system delivers uniform plasma treatment with unmatched reliability, safety, and ease of operation.

The AP-1000 system provides the following:

- A compact enclosure that contains the pump, chamber, control electronics, and 13.56 MHz RF generator with impedance matching for unparalleled process repeatability.
- Superior durability through a plasma chamber constructed of 11-gauge stainless steel with aluminum fixtures.
- An intuitive touchscreen control panel for real-time process monitoring.
- Multiple removable and adjustable shelves to accommodate a range of part carriers, including magazines (up to 12), trays, wafers, and Auer® boats.
- A proprietary software control system that generates process and production data for statistical process control.
- Front access to all interior components and the pump is positioned on rollers for easy removal.
- Supports a range of process gases, including argon, nitrogen, and helium, is equipped with three mass flow controllers, and features vertically positioned slotted magazines that hold a minimum of 20 lead frames.

Key Applications

- Plasma cleaning
- Surface activation
- Adhesion improvement

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Specifications

Enclosure Dimensions	W x D x H – Footprint	680W x 1127D x 1890H (26.77W x 62.3D x 74.4H in.)
	Net Weight	485 kg (1069 lbs.)
	Equipment Clearance	Right, Left – 153 mm (6 in.), Front – 680 mm (27 in.) Back – 483 mm (19 in.) min.
Chamber	Maximum Volume	127 liters (7774 in^3)
	Variable Electrode Configurations	Power-Ground, Ground-Power, Power-Power
	Number of Electrode Positions	14
	Electrode Pitch	25.4 mm (1 in.) for 600 W 50.8 mm (2 in.) for 1000 W
Electrodes	Powered Working Area	349W x 425D mm (13.74W x 16.73D in.)
	Ground/Perforated Working Area	384W x 425D mm (15.12W x 16.73D in.)
	Floating Working Area	349W x 425D mm (13.74W x 16.73D in.)
RF Power	Standard Wattage	600 W
	Frequency	13.56 MHz
Gas Control	Available Flow Volumes	100, 250, 500, or 1000 sccm
	Maximum Number of MFCs	3
Control System and Interface	Software Control	EPC with PC-based touchscreen interface
	Remote Interface	PlasmaLINK, ProcessLINK, SECS/GEM
Vacuum Pump	Standard Wet Pump	53 cfm with Oxygen Oil Mist Eliminator
	Optional Purged Dry Pump	63 cfm
	N2 Purged Pump Flow	14 slm
	Cooling Water Purged Pump Flow	5 slm
Facilities	Power Supply	220 V, 25 A, 50/60 Hz, 3-Phase, 8 AWG, 4-Wire 380 V, 25 A, 50/60 Hz, 3-Phase, 8 AWG, 5-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 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
Auxiliary Equipment (Supplied by customer)	Gas Generators (Required depending upon application)	Nitrogen (Requires Additional Non-Optional Hardware)
	Facilities (Required depending upon application)	Chiller, Scrubber

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Essential System Capabilities

Nordson Electronics Solutions builds the future of electronics reliability all across the globe. We're proud of the decades of service and solutions we've provided to enhance semiconductor reliability. No matter where you are, you've likely manufactured or purchased a product made reliable with our equipment. The AP-1000 is a flexible plasma treatment system for semiconductor, microelectronic packaging and assembly, and medical device manufacturing applications, designed to last and provide cutting-edge capabilities continuing a time-honored tradition.

Explore the AP-1000 capabilities. Continue to see how we support the future.

For more information, contact us at info-electronics@nordson.com.

Essential Capabilities	Flexible batch processing.	An indispensable, compact plasma system with flexible shelf architecture to support batch processing of various part carriers in direct or downstream plasma mode. Ideal for a range of markets and applications.

For more information, visit our website to find your local regional office or representative.

We have several global locations to serve you.

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