

RollVIA™ Plasma System

Features and Benefits

- Handles and processes web widths from 48 to 600mm
- Configurable with 1, 3 or 5 plasma cells to meet process requirements
- Field-upgradeable to grow with production volume
- Patented plasma systems produce superior process uniformity
- Activates, cleans, desmears and etchbacks flexible PCB
- Isolative technology contains plasma within the process region



Superior Plasma Uniformity for Roll-to-Roll PCB Treatment

Nordson MARCH's RollVIA™ system is specifically configured to meet the demands of today's most advanced roll-to-roll production PCB manufacturing operations. Plasma treatment uniformity is a key operational feature in surface activation, desmear and etchback applications for flexible circuit board manufacturing technologies.

The integrated roll-to-roll material handling system ensures precise control of roll speed, tension, and edge guidance for substrates as thin as 25 µm. Optical based edge guide detection allows for reliable control during rewind operations. Substrate loading is simple with easy access to the load and unload sections via three doors.

Unlike any existing competitive products, the RollVIA system is completely self-contained. The vacuum system, plasma chamber, control electronics, and 40 kHz power supply are housed in a single enclosure. Full front and rear access allows for convenient service to all interior components. The pump is positioned on rollers for easy removal.

Application Specific Technology

The RollVIA system incorporates the best of Nordson MARCH's market leading-edge plasma technology combined with novel application specific technology development based on our greater than 30 years of

experience. Through extensive research and development, the RollVIA system presents unique vacuum and gas flow technology, new electrode designs, and superior temperature management. The careful balance of these critical design elements and process recipe parameters delivers a system that creates the most uniform treatment for key applications like desmear and landing pad cleaning.

The RollVIA system's superior performance capabilities are complemented by very attractive low-cost-of-ownership aspects. The system features a very compact and service-friendly design. The vertical loading concept allows for equal treatment on both sides of the substrate maximizing product quality and throughput. The fast vacuum pump down and greatly enhanced process cycle times further add to the throughput and productivity of the system.

Additional Features

Equipped with a touch-screen PC based HMI, the RollVIA system provides a wide breadth of control capability and data collection. Unlimited recipes can be stored for easy switching of plasma processes from batch to batch. Password protection ensures that no unauthorized entries can be made.



Specifications: RolVIA™ Plasma System

Enclosure Dimensions	W x D x H – Footprint	1737W x 2020D x 2323H mm (69W x 80D x 92H in)
	Net Weight	2812 kg (6200 lbs)
Chamber	Number of Available Cells	2 to 5
Electrodes	Configuration	Temperature Controlled Power-Power
	Roll Load / Unload Height	1032 mm (41 in.)
	Dwell Length / Electrode	750 mm (29.5 in)
RF Power	Standard Wattage	5 kW
	Frequency	40 kHz
Gas Control	Available Flow Volumes	500, 1000, 2000 or 5000 sccms
	Maximum Number of MFCs	5
Control	Interface	EPC with PC-Based Touch Screen Interface
Vacuum Pump	Standard Purged Pump Package	530 cfm
	Cooling Water Flow	9.5 slm
	N2 Pump Purge Flow	14 slm
Material Handling	Substrate Thickness	25 to 400 µm
	Substrate Width	60 mm (2.4 in.) to 600 mm (23.6 in.)
	Edge Guidance	+/- 1 mm (0.04 in.)
	Tension Control	10 – 100N
	Core Size	76 mm (3 in.), 152 mm (6 in.)
Facilities	Power Supply	208 – 230 VAC, 75 A, 3 Phase + Ground; 50/60 Hz
	Process Gas Fitting Size & Type	6.35 mm (0.25 in.) Swagelok
	Process Gas Purity	CF4 = 99.97%; O2 = 99.996%; N2 = 99.99%; Ar = 99.999%; H2 = 99.999%
	Process Gas Pressure	1.03 bar (15 psig) min. to 1.7 bar (25 psig) max., regulated
	Purge Gas Fitting Size & Type	6.35 mm (0.25 in.) Swagelok Tube
	Purge Gas Purity	N2 = 99.99%
	Purge Gas Pressure	1.03 bar (15 psig) min. to 1.7 bar (25 psig) max., regulated
	Pneumatic Valves Fitting Size & Type	6.35 mm (0.25 in.) Swagelok
	Pneumatic Gas Purity	CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm
	Pneumatic Gas Pressure	6.2 bar (90 psig) min. to 6.9 bar (100 psig) max., regulated
Ancillary Equipment	Gas Generators	Nitrogen, Hydrogen (requires Additional Non-Optional Hardware)
	Facilities	Chiller, Transformer, Inverter

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

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