

PX Series Plasma Treatment Systems

March[®]
A NORDSON COMPANY

Technology enhancing the Quality of Life

March is the global leader in gas plasma technology for medical product manufacturing. Successful implementation of plasma technology to improve quality, yield and reliability depends on expert knowledge in plasma science. March has over 20 years of applications experience in radio-frequency, low-pressure plasma technology. This experience is incorporated into the flexible and durable PX platforms, which are ideal for product development, small geometry or small volume production.

Gas plasma treatment provides a fast and efficient method for cleaning, surface modification and coating. It delivers better performance, higher quality and reliability with improved bonding, increased lubricity, wettability, hydrophilicity, hydrophobicity and biocompatibility.

FEATURES and BENEFITS

CHAMBER is constructed of Stainless Steel with Aluminum fixturing that is resistant to chemicals and easy to clean. Multiple removable shelves can easily be configured to provide downstream or direct plasma.

PROCESS CONTROL MODULE monitors and controls the vacuum and gas flow, chamber pressure, and power level. Up to four mass controllers are connected to a gas-mixing manifold to provide process recipe flexibility. The user friendly microprocessor provides automatic operation, and ensures precise, reproducible process conditions. Cycle duration is controlled by elapsed time and can be downloaded to a PC for further analysis.

POWER and MATCHING NETWORK is an automatic impedance matching network for ease of operation and consistent results. It optimizes the plasma process for a variety of applications that may require different configurations and power densities. RF power supplies are available in either 300 or 600 watts depending on application requirements.

SAFETY, emergency shut-off button, located on the front panel, immediately terminates the gas flow and RF power. Safety interlocks prevent activation of RF power when the chamber door is open. Safe viewing is ensured with a separate, full-length glass door that shields operators from plasma generated UV energy.



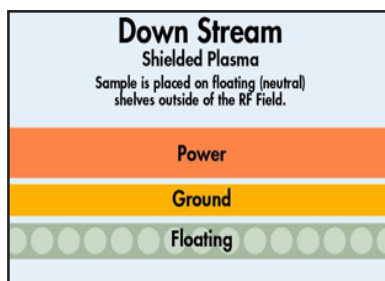
*March PX-250 plasma
cleaning system*

APPLICATION EXAMPLES

- Non-compatible Material Bonding
- Stent Cleaning and Bonding
- Catheter Bonding
- Surgical Tool Cleaning
- Hydrophilic Treatment for Dispensing
- Tack Reduction of Silicone Rubber Molded Parts
- Contact Lens Surface Functionalization
- Sensor Cleaning, Wetting and Functionalization
- PCB Bond Pad Cleaning
- Fixture and Component Cleaning
- Marking Adhesion

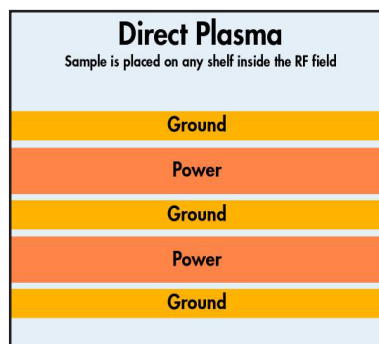
	PX-250	PX-500
Dimensions	597 W x 413 H x 508 D (mm) 23.5 W x 16.25 H x 20.0 D (in.)	660 W x 508 H x 775 D (mm) 26.0 x 20.0 x 30.5 D (in.)
Weight	45.3 kg (100 lbs.)	83.9 kg (185 lbs.)
Stainless Steel Chamber	229 W x 229 H x 305 D (mm) 9.0 x 9.0 x 12.0 D (in.) Max. 6 adjustable electrodes/shelves: 177.8 x 203.2 mm (7.0 x 8.0 in.)	305 W x 305 H x 508 D (mm) 12.0 x 12.0 x 20.0 D (in.) Max. 8 adjustable electrodes/shelves: 209.6 x 330 mm (8.25 x 13.0 in.)
RF Power	13.56 MHz 300 W Solid state	13.56 MHz 600 W Solid state
Control System	Microprocessor-controlled Mass flow controllers	Microprocessor-controlled Mass flow controllers
Pump System	11CFM Prepared, charged and tested with Krytox [®] fluid or hydrocarbon fluid	27CFM Prepared, charged and tested with Krytox [®] fluid or hydrocarbon fluid
Options	Hydrogen or Nitrogen generator Independent pressure controller Oil filtration system Oil mist eliminator for corrosive gas Remote Operator Interface software Dry pump package	Hydrogen or Nitrogen generator Independent pressure controller Oil filtration system Oil mist eliminator for corrosive gas Remote Operator Interface software Dry pump package

Shelf Configuration For Each Plasma Mode



Downstream or Shielded Plasma:

Sample is placed on floating shelves outside the RF field.



Direct Plasma:

Sample is placed on any shelf inside the RF field.

Our Applications and Customer Service departments bring to you more than 20 years of experience in RF plasma technology.

March Plasma Systems reserves the right to make design changes to products and components to improve their function. These changes may occur between printings.



Krytox[®] is a registered trademark of E.I. DuPont de Nemours and Company.

Leading Plasma Innovations

March Plasma Systems, Inc. 2470-A Bates Avenue Concord, California 94520 Telephone: 800-326-1151 Facsimile: 925-827-1189