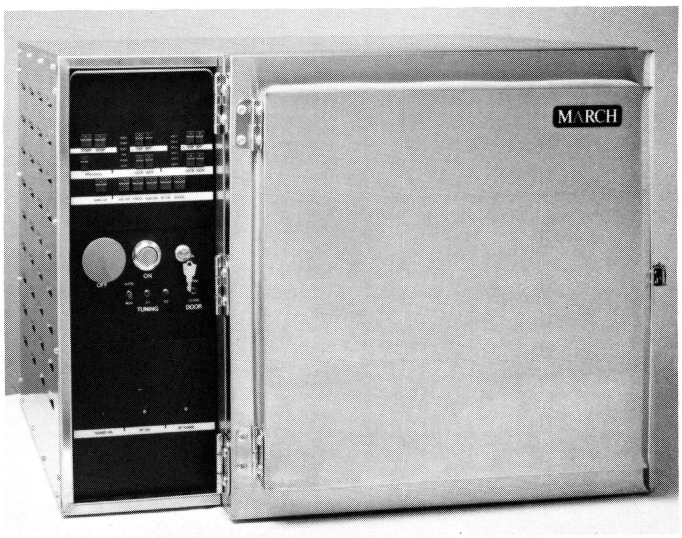
# PX PLASMA CLEANING SYSTEM

**Plasma cleaning is a dry etching process that uses no CFC's or organic solvents. It offers several advantages over conventional cleaning methods. There are no wet chemicals; therefore, there are no environmental concerns regarding the handling and disposing of solvents. Plasma cleaning does not leave any organic film residue that will interfere with subsequent bonding or adhesion processing steps.**




## Applications

Any part or product that requires either a cleaning step, stripping of various film layers, or a surface modification to improve wettability and/or bonding, as with Polyimides, is a good candidate for the PX Plasma Cleaning system. Applications particularly suited for the PX system are hybrids, multi-chip modules (MCM's), medical and electronic parts, optics, plastics where bonding is required and large parts such as flat panel displays.

## Chamber Design

For ease in cleaning and resistance to chemical attack, the chamber is constructed of stainless steel. To ensure that there is no contamination from chamber components, no Teflon or plastic parts which might degrade and redeposit are used within the chamber. Multiple removable shelves can be easily reconfigured by the user to provide downstream, direct or reactive ion etching. Other options include actively cooled shelves for temperature sensitive products.

## Power and Matching Network

Different applications require different configurations and power densities. Options available include: RF power supply of 300, 600 or 1000 watts. An automatic impedance matching network is recommended for ease of operation and consistent results.

## Process Control Module

The Process Control Module automatically controls and monitors the vacuum & gas flow, chamber pressure, power level, and controls the cycle by either elapsed time or endpoint detection. The PX system comes with 2 mass flow controllers or 2 flowmeters connected to a gas mixing manifold. An additional 2 mass flow controllers are available as an option. The optional microprocessor is user friendly and ensures precise, reproducible process conditions and automatic operation. Cycle duration through PC downloading of operating parameters is available with the microprocessor.

## Safety

Safety features include an emergency shut-off button on the front panel which terminates the gas flow and RF power. Safety interlocks are provided to prevent RF power from being activated when the chamber door is opened. A separate full length glass door allows the user to view the chamber during processing, and provides shielding from any plasma generated through UV energy.

MARCH

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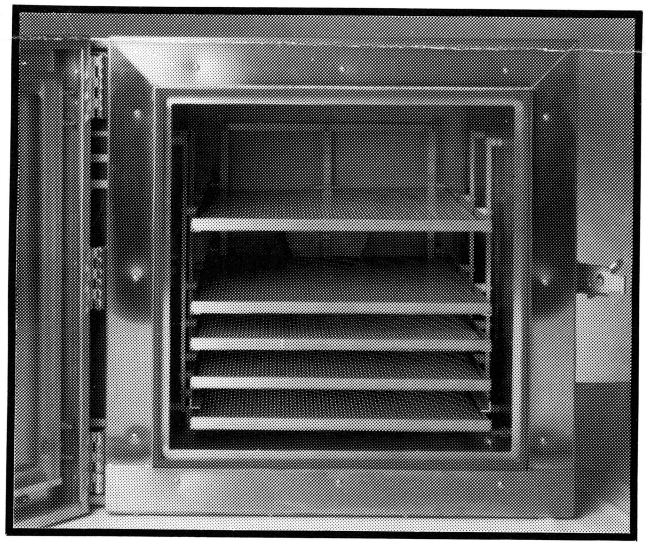
Melissa

# PX SPECIFICATIONS

| | PX-500 | PX-1000 |
|---|---|---|
| Dimensions | 26"W(66cm) x 19"H(48cm) x 28"D(71cm) | 32"W(81cm) x 24"H(61cm) x 30"D(76cm) |
| Weight | 185 lbs. | 210 lbs. |
| RF Generator | 13.56 MHz, solid state, 300, 600 or 1000 watts available | |
| | Forward/reflected power, automatic cutback | |
| Stainless Steel Chamber | 12"W(30cm) x 12"H(30cm) x 20"D(51cm) | 18"W(46cm) x 18"H(46cm) x 24"D(61cm) |
| | Max. 8 adjustable shelves, 10" x16" | Max. 11 adjustable shelves, 15" x 21" |
| Control System | Gas flow control-flowrators or Mass flow controllers | |
| | Automatic sequencing with manual overide | |
| | Microprocessor controlled models available | |
| Pump | 25 cfm, 110/220 v, 50/60 Hz or 50 cfm, 208 3 phase, 50/60 Hz | |
| | Prepared, charged and tested with Krytox fluid | |
| | or Hydrocarbon fluid pump available | |
| *Options* | *Optical endpoint detector* | |
| | *Independent pressure control* | |
| | *Oil filtration system, exhaust filtration system also available* | |
| | *Process parameter downloading via RS232* | |
| | *2 additional mass flow controllers* | |
| | *Remote operation via a PC* | |
| | *Statistical process control software* | |
| | *Water cooled shelf* | |
| | *Temperature monitoring system* | |

## PX INTERIOR



### *CLEAN OR ETCH*

- ***Polyimides***
- ***Parylene***
- ***Resist***
- ***Epoxy Bleedout***
- ***Kapton***

| Order Model PX-500 | |
|---|---|
| 015-2502 | PX-500 System with 2 flowrators, 0-300 watt RF generator |
| 015-2512 | PX-500 System with 2 flowrators, 0-600 watt RF generator, auto tuning |
| 015-2525 | PX-500 System with 2 mass flow controllers, 0-300 watt RF generator, auto tuning, and microprocessor |
| 015-2535 | PX-500 System with 2 mass flow controllers, 0-600 watt RF generator, auto tuning and microprocessor |
| **Order Model PX-1000** | |
| 015-2500 | PX-1000 System with 2 flowrators, 0-300 watt RF generator |
| 015-2510 | PX-1000 System with 2 flowrators, 0-600 watt RF generator, auto tuning |
| 015-2520 | PX-1000 System with 2 mass flow controllers, 0-300 watt RF generator, auto tuning, and microprocessor |
| 015-2530 | PX-1000 System with 2 mass flow controllers, 0-600 watt RF generator, auto tuning and microprocessor |