PLASMAVAC™

CHAMBER with PLASMA CLEANER SYSTEM

Our Ideal Vacuum **PlasmaVAC P50W** plasma cleaning and decontamination systems are ideal for Scanning (SEM) and Transmission (TEM) Electron Microscopy sample preparation. Plasma cleaning is a vital step as it removes organic contaminants from sample surfaces, improving image quality and analysis accuracy. The semiconductor industry uses SEM and TEM to identify and analyze failures in transistor devices, but in many cases evidence of the failure is only visible during in-situ testing while the device is running under its normal operating conditions. To observe these types of failures, electrical and cooling connections must be supplied to the transistor device while it is mounted inside the electron microscope. With these requirements in mind, the P50W has a chamber size of 16 x 16 x 16 inches with a spacious volume of 2.4 cubic feet and large side vacuum access ports. A feedthrough plate to the side port can easily be added that carries all the electrical connections and cooling supply lines so that all these parts can be decontaminated all in one step. That way the complete in-situ test stage mounted on a vacuum side port is de-contaminated and ready to be connected to your SEM or TEM, where the electrical devices can be operated under normal conditions and defects can be observed.

The **PlasmaVAC P50W** is ideal for removing hydrocarbon contamination from samples and substrates used in:

APPLICATIONS

- SCANNING ELECTRON MICROSCOPY (SEM)
- TRANSMISSION ELECTRON MICROSCOPY (TEM)
- X-RAY PHOTOELECTRON SPECTROSCOPY (XPS)
- X-RAY SPECTROSCOPY (EDX)
- CRYO-PLASMA FOCUSED ION BEAM (CRYO-PFIB)
- ATOMIC LAYER DEPOSITION (ALD)
- PHYSICAL VAPOR DEPOSITION (PVD)
- EXTREME ULTRAVIOLET LITHOGRAPHY (EUVL)

PLASMAVAC

PlasmaVAC P50W CLEANING & DECONTAMINATION SYSTEM

PlasmaVAC P50W SURFACE TREATMENT SPECIFICATIONS

- Remote Plasma Source by XEI Scientific
- Model Evactron E50 E-TC
- Power Adjustable Between 35 to 75 Watts
- Max of 50 Watts Continuous Operation
- RF Frequency at 13.56 MHz
- Two Gas Inlet Filter Options: 3 nm & 0.5 µm Pore Sizes
- The 3 nm Pore Sizes Follows Semiconductor Industry SEMI F38-0699 Directive
- Tested With O2, CDA, Ar/ H2, Ar/O2, N2/H2, and N2 Gases.
- Dedicated Evactron User Interface Controller
- Storage Of User Settings
- Recipes, Power, Cycles, and Length of Cleaning
- Front Viewport
- Side Access Vacuum Ports
- Turbo Throttling
- Heated Shelf (60 °C) Mounted Below The Plasma Source
- Heated Shelf Distance Is Adjustable In 1-inch Increments
- 2 Additional Slotted HV Storage Shelves

Ideal vacuum