米国 PIE SCIENTIFIC 社

プラズマクリーナー

～真空チャンバーとサンプルを同時にクリーニング致します。

概　要

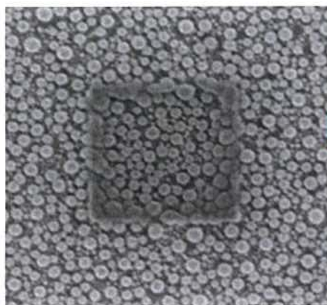
電子顕微鏡や真空チャンバーの試料観察にて、コンタミを確実に除去致します。

●リモートプラズマソース

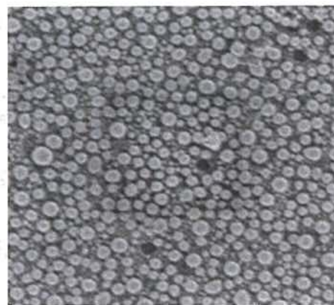
●プラズマコントローラーと電源

- ■0.1mTorrの低圧でプラズマに点火致します。
- ■プラズマの発光がモニタリングができます。
- ■自動でRFインピーダンスをマッチング致します。
- ■自動でガス流量を制御可能。

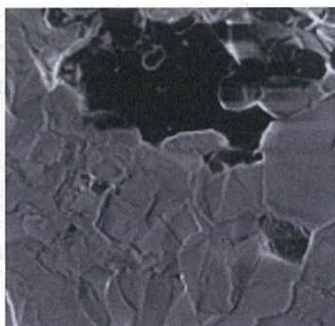
ラインアップ



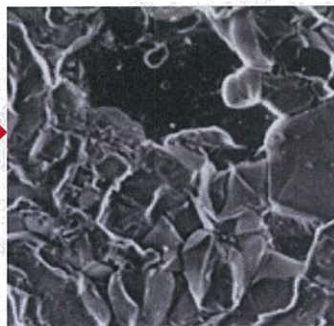
●クリーニング前



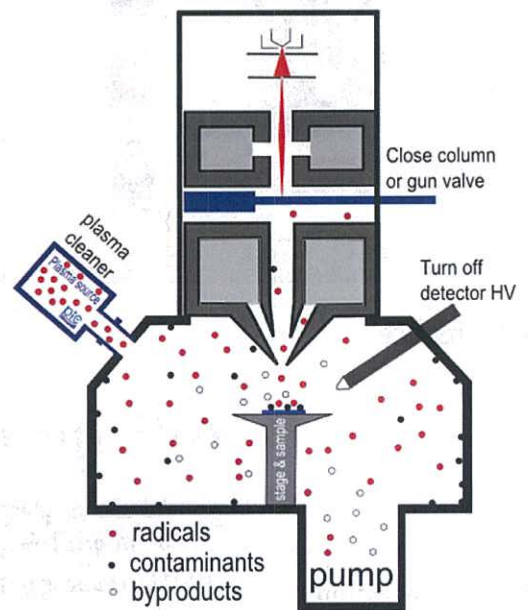
●クリーニング後



●クリーニング前



●クリーニング後



●インストール図

株式会社マツボー

情報精密機器部

TEL:03-5472-1728 / FAX:03-5472-1720

E-mail:precision21@matsubo.co.jp

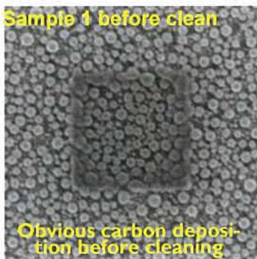
●LCD touchscreen plasma source controller and power supply

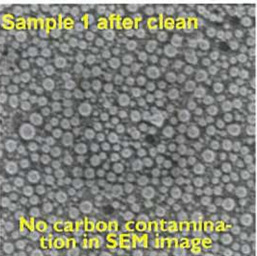
SEMI-KLEEN plasma cleaner

For SEM, FIB, TEM, EBL, CD-SEM, EBR, EUVL and other high vacuum system.
Clean vacuum chamber and samples at the same time!

Address: 63 Bovet Rd, Suite 106, San Mateo, CA, 94403, U.S. A.

Cleaning effect:





Contact
TEL: 650-204-0875
FAX: 650-240-8671
sales@piescientific.com
www.piescientific.com

Remote plasma source

LCD touchscreen plasma source controller and power supply

SEMI-KLEEN remote plasma cleaner system consists of a remote plasma source and a LCD touchscreen controller with embedded microcomputer. Remote plasma source should be connected to the vacuum chamber to be cleaned. Customized vacuum adapter flange is available if necessary. It can be used for contamination control in SEM, FIB, TEM, XPS, EUVL, ALD and other types of high vacuum systems.

Impact of contamination to electron microscopes and other high vacuum systems

Lubricant, vacuum grease, pump oil, polymer containing samples, or untreated air can all introduce hydrocarbon contaminations into vacuum systems. Low vapor pressure high molecule weight contaminants can condensate on chamber wall and are extremely difficult to be removed with conventional gas purging methods.

Electrons and energetic photons (EUV, X-ray) can breakdown hydrocarbon contaminants that exist in vacuum systems or on samples. The byproducts can be hydrocarbon deposit on irradiated sample surface or on exposed instrument components. It degrades EUV mirror reflectivity, reduces SEM image contrast and resolution, generates wrong surface analysis results, and even causes e-beam position and focus drift in slow scan if non-conductive hydrocarbon deposits on apertures or on other electron optics components.

Principle of remote plasma cleaning

Remote plasma source should be installed on the vacuum chamber to be cleaned. Controller provides the RF power to the remote plasma source. RF energy breaks down the process gas that contains oxygen or hydrogen and generates reactive oxygen or hydrogen radicals. Radical species will then diffuse into the chamber to be cleaned and react with the contaminants. The byproducts are usually low molecule weight, high vapor pressure molecules that can be easily pumped away. Remote plasma cleaner can clean vacuum systems and samples at the same time.