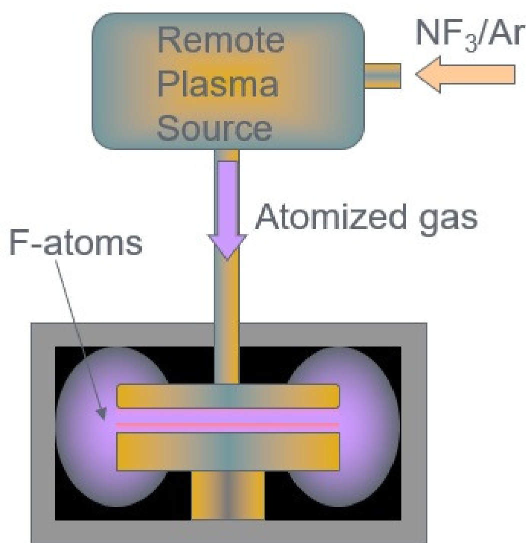
PERFORMANCE ENHANCEMENTS

Sustainable Solutions is Our Ongoing Commitment

Concept Part Solutions is dedicated to extending the lifetime of your maturing semiconductor manufacturing equipment. As your toolsets age and new processes emerge, we pursue every opportunity through our Continuous Improvement Program (CIP) to offer important enhancements that increase the reliability, productivity, and performance of your install base.

Concept One 200 Dielectric

Remote Plasma Clean



Remote Plasma Clean (RPC), is an alternative to direct plasma in-situ cleaning; it offers significant improvements in process clean time, hardware lifetime, and emissions control. CPS is pleased to offer this advanced cleaning method for the Concept One 200 platform.

With traditional in-situ RF cleaning, effectively removing deposits from the system's process chamber and surfaces relies on a combination of ion bombardment and chemically induced reactions. This method of cleaning is slow and inefficient. Parts of the process chamber not directly exposed to the plasma may not be thoroughly cleaned and the ion bombardment sputter can result in erosion problems in the chamber.

The Remote Plasma Clean eliminates the ion bombardment and relies solely on a faster more-thorough chemical cleaning process utilizing NF3. With the RPC method, NF3 is supplied to the remote plasma source, which dissociates the input gas into its constituent atoms. This method offers a more efficient cleaning — able to clean surfaces not directly exposed to the plasma — and results in a mixture of atomic fluorine (F), atomic nitrogen (N), molecular fluorine (F2) and molecular nitrogen (N2) leaving the plasma source. Typically, the RPC process dissociates >95% of the reactive gas.

Chamber after 50K Wafers Processed

Upgrade Benefits

- Reduced cleaning time - up to a 7% increase in system availability
- Elimination of PFC bi-product - Provides >95% dissociation of the reactive gas
- Reduction in chamber hardware erosion and elimination of Hot Showerhead wipes results in less PM frequency - up to 10 hours per week less maintenance
- Low and High aspect of RPC provide more thorough cleaning of deposits in all parts of the chamber

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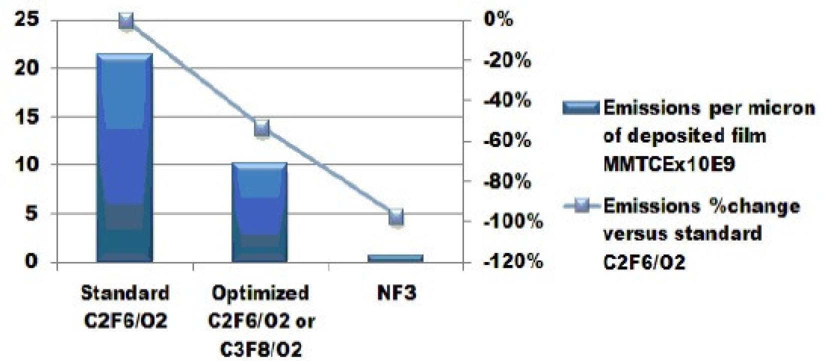
Concept One 200mm
emote Plasma Clean

C1 RPC Generator Location



Get More Information on System Performance Enhancements

To find out how to improve the performance and productivity of your CPS supported systems, call your local CPS Sales and Service Office for complete ordering information, or visit www.conceptpartsolutions.com.

System Prerequisites:

A Site Facility Survey must be performed to ensure all requirements are available. Highlights of facilities prerequisites are:

- Appropriate Abatement system for RPC generated emissions
- Electrical Requirements
- Cooling Liquid Requirements
- Argon and NF3 gas supply

Ordering Information:

A system audit will be required to ensure the appropriate kit is configured for the system to be upgraded

Some Upgrades may require an audit of your System; Contact your local CPS Representative to verify the Upgrade Kit before ordering.