PlasmaPro®**80** Range

Next Generation Plasma Systems
Compact open-loading tool for plasma etch and deposition

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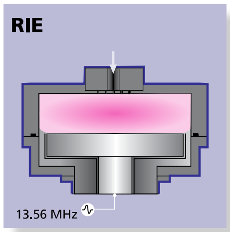
PlasmaPro **80**
Process technology configuration options

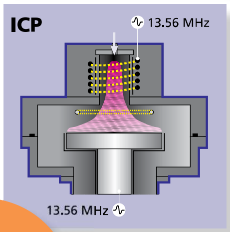
PlasmaPro **80 RIE**

Proven dry etch technology used successfully throughout the industry on a wide range of applications.

PlasmaPro **80 ICP**

High density plasma for high rate etching. Independent control of ion energy allows low damage, highly selective processing to be achieved.



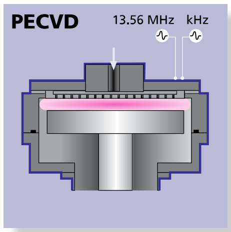


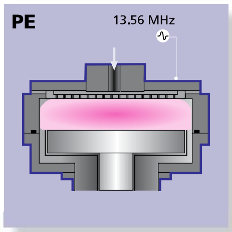
PlasmaPro **80 PECVD**

Designed to produce high quality uniform dielectric films. Stress control is provided by selectable or mixed high/low frequency plasma power, enabling deposited films to be tuned for tensile, compressive or low stress.

PlasmaPro **80 RIE/PE**

Combines anisotropy of RIE with selectivity of PE mode etching in a single system.





The 240mm electrode accommodates wafers up to 200mm in size for all system configurations

The electrostatic shield design in the **Plasma**Pro **80** ICP configuration avoids energetic ion bombardment and capacitive coupling, providing low substrate damage, with long life for the ICP tube and reduced maintenance.

Optimised showerhead design delivers high performance PECVD processes with excellent deposition uniformity.

System control and diagnostics

Process Control – Etch end point detection

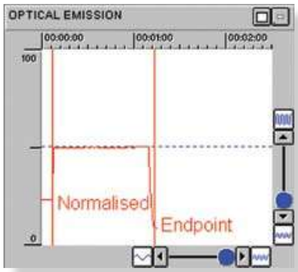
Excellent etch control and rate determination can be provided by optional end-point detection, integrated with **PC**4000™ process tool software.

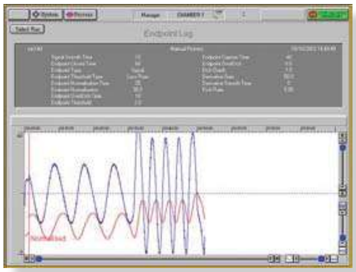
- Laser end-point detection using interferometry to measure etch depth in transparent materials on reflective surfaces (for example, oxides on Si), or reflectometry for non-transparent materials (such as metals) to determine layer boundaries
- Optical emission spectrometry (OES) for large sample or batch process end-pointing by detecting changes in etch by-products or depletion of reactive gas species, and for chamber clean end-pointing

Reliability and diagnostics

Fault and tool status diagnostics is achieved through the front end software. The system provides information about the status of key components, leading to rapid and detailed fault identification.

- Easy access to the main components for maintenance through quickly removable panels
- Extended 'uptime' via rapid component change and ease of chamber cleaning





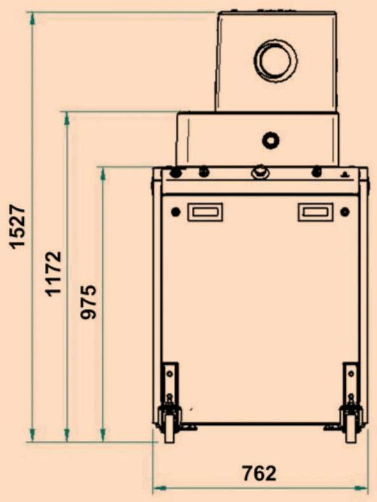
Gas Control System

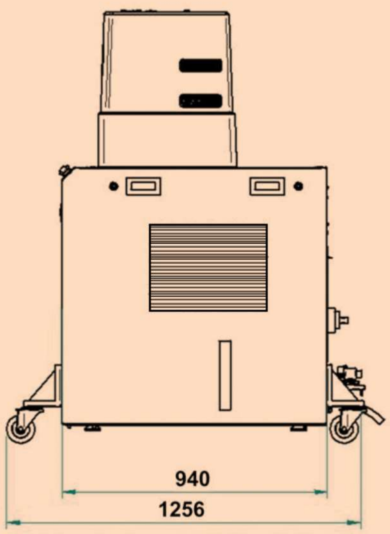
A modular upgrade path for gas lines enables users to maximise the flexibility of the **Plasma**Pro **80** system. The remote gas line by-pass facility allows broad functionality & ease of use.

- The gas pod offers maximum process flexibility. The design enables the easy addition of further gas lines, up to 12
- The gas pod may be sited remotely in a service area, and is vented and ready for ducting into an extraction system for full safety compliance
- Optional purge facility

Technical specifications

Overall dimensions of the **Plasma**Pro **80**





Wheels are removable and for transportation purposes only.

Dimensions in mm.

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Oxford Instruments is committed to supporting our customers' success. We recognise that this requires world class products complemented by world class support. Our global service force is backed by regional offices, offering rapid support wherever you are in the world.

We can provide:

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- Comprehensive range of structured training courses
- Immediate access to genuine spare parts and accessories
- System upgrades and refurbishments

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