



Advancing Plasma-Based Technologies

PLASMIONIQUE

À l'Avant-Garde des Technologies Plasma

PARADIS Series Vacuum Polymer Deposition Systems



**Turnkey Vacuum Polymer
Deposition Systems
For Research and
Manufacturing
Suitable for Parylene
Deposition**

Includes

**Multiple Heating Zones with
Independent Temperature
Control**

Substrate Cooling

Integrated Safety System

**Various Pumping Options
Cold Trap**

**Manual Operation or Fully
Automated**

**Options for Hybrid Systems
Including Plasma Assisted pre-
and post- Surface Treatment,
and many more**

Typical Applications:

***Hydrophobic Coatings, Dielectric Coating, Moisture Barrier, Protective
Barriers, Biocompatible Coating, Friction Reduction, etc***

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System Characteristics

Chamber: Typically made of stainless steel 316 . If required the chamber could be made of aluminium.

The shape and volume of the chamber depends on the model and application.

Access Ports: The main loading port gives access to the inner volume of the chamber. In addition to pumping port, vacuum gauge and visualization ports, user requested ports for addition of plasma sources or diagnostic applications could be included.

Pumping System: Typically, a two stage mechanical pump, is included.

Cold Trap: A basic cold trap is included between the pump and the chamber in order to trap the residual vapor from the polymer precursor.

Vacuum Gauges: A temperature controlled pressure gauge is included for process control.

Pressure Control: An optional throttle valve, in addition to the precursors flow rate, could be used for pressure control.

Flow Control: Typically, the differential pressure in between the chamber and the precursor vapour chamber, determines the flow rate. Optional carrier gas lines could also be included.

Vaporizer: A dedicated temperature controlled zone is used for vaporizing the polymer precursor.

Independent heating Zones: Additional heating zones, with independent temperature control is also included for, variety of applications, including pyrolysis (for Parylene coating), or prevention of condensation.

Sample Holder: Flexible in size and shape, sample holders are designed for specific applications.

Control System: A sophisticated hybrid computer and PLC control system, with numerous SAFETY interlocks could be included as an option for basic models, but is included on the advanced models.

Required Utilities: Depends on Model and required load. For laboratory units the typical requirement is the following:

Electrical Panel: 110 VAC, 100 A, 50/60 Hz, Single Phase with breakers included on control Cabinet

Cooling: Low conductivity Water, 1-2 GPM flow, User supplied

Air: 40-80 PSI User supplied

Pumping Exhaust: User supplied

System Characteristics

	PARA-10S / A	PARA-40S / A
<i>Chamber Volume (nominal)</i>	10 L	40L
<i>Chamber ID (h or w)</i>	8" (10")	12" (20")
<i>Temperature controlled Heating Zones</i>	2	4
<i>Fixed Temperature zones (optional)</i>	1 (2)	2
<i>Pump (nominal pumping speed)</i>	10-14 cfm	12-20 cfm
<i>Cold Trap</i>	Included (LN, or alternatives)	Included (LN, or alternatives)
<i>Sample Cooling</i>	Water cooled*	Water cooled*
<i>Base Pressure for chamber</i>	0.1 to 1 mtorr	0.1 to 1 mtorr
<i>Operation pressure</i>	0.1 to 1 torr	0.1 to 1 torr
<i>Vapour Distribution (Diffuser)</i>	Included	Included
<i>Input Voltage</i>	110 VAC (50/60 Hz) or as required	110 VAC (50/60 Hz) or as required
<i>Maximum Current for the Integrated System</i>	60 A	100 A
<i>Breaker Box Ratings</i>	4 x 15A (max)	8 x 15A (max)
<i>Water Cooling Requirement</i>	About 1 GPM	About 2 GPM
<i>Auxiliary Air Flow Pressure (recommended)</i>	40 PSI	40 PSI
<i>Standards and optional Safety interlocks</i>	Water, Heaters, Pressure	Water, Heaters, Pressure

***Effective only for flat samples**

**** For compatibility issues contact our technical experts at "info@plasmionique.com"**

For pricing, please contact your local representative