**Specifications for Plasma Treatment System for surface modification and Cleaning of TEM Sample Holders.**

**Introduction:** This should be microprocessor controlled benchtop plasma treatment system for surface activation, cleaning and modification of a wide range materials including polymers, metals, glass and ceramics.

**Broad Specification:** System should have:

* Stainless Steel Vacuum Chamber Dimension: Minimum 100mm Inner Diameter x 280 mm length
* Plasma Generator: Minimum 40 KHz with continuously power variable output 0-100W.
* Re-entrant style TEM (Thermo Fisher/FEI Talos 200 KV) holder adapter
* Dual Gas Channels with: Digital Mass Flow Controller.

Resolution: 0.1% of full scale

Repeatability: +/-0.3% of reading Leak rate: <0.1% of full scale

* Powered Electrode: Aluminum and Stainless Steel
* Microprocessor controlled system
* Color touchscreen interface
* Gas flow control via mass flow controller
* Software store of recipe parameters
* Chamber can remain under vacuum or automatically vent following process end

(software selectable)

* Administrator and user level software access
* Dry vacuum pump
* Vacuum pump minimum 5m3/hr pumping speed, two stage rotary type. Base pressure

< 5E-3mbar. Suitable for use with air, oxygen and non-corrosive gases

* Pirani vacuum gauge
* Maintenance kit: Include items like extra tipseal, spare vacuum clamp and seal, spare o-ring seals and spare replacement window glass.
* Manufacturer must supply representative results showing (i) Plasma cleaning: contamination removal e.g. XPS spectra of carbon peak reduction on metallic sample and (ii) TEM images/data of progressive removal of carbon from a suitable holey carbon grid.
* Warranty: At least one year. Additional warranty for two more years can be quoted as an additional item.
* Local Service support should be available through Indian Representative.