

**Technical Specifications for Table Top Oxygen Plasma
Asher/Cleaner**

S.No	Item	Description	Comply / Not comply	Catalogue Page No.
1)	Process Requirements/ Uses	1.1 Primary Application and process capabilities <ul style="list-style-type: none"> • Photoresist removal and stripping. Ashing of positive (Shipley) and negative photoresists. • Descum, prior to lift off of metals and passivation layers. • Ashing of PMMA, PMGI and novolac based photoresist. • Minimum surface damage post process. 		
		1.2 Secondary Application <ul style="list-style-type: none"> • Surface cleaning as part of the photolithographic process after the wet development of photoresist. • Plasma Treatment for Surface Modifications. 		
		1.3 Substrate Size Substrate size: small pieces 10 mmx10 mm to 100mmx100mm (4 inch wafer). Product yield: 1 wafer/run for 4 inch.		
2)	Power Supply Module	2.1 RF Power Source RF generator & Matching network (automatic type). Continuously adjustable, 1W- 150W (@13.56 MHz). Digital RF power meter, RF cable kit desirable. Power Supply: 220-230 V, Single Phase, 50-60 Hz		
3)	Process chamber	3.1 Chamber Size: suitable for 4 inch wafer processing.		
		3.2 Chamber Material: Quartz with chamber rear walls of Aluminum or SS. Quartz plate sample		

			holder suitable for 4 inch wafer.		
		3.3	Chamber Door: Compatible for 4" Silicon wafer processing. Port: View port is desirable.		
4)	Vacuum Module	4.1	Vacuum Pump: Suitable Dry Pump.		
		4.2	Base Pressure: 0.1 mbar		
		4.3	Operating Pressure: 0.6 to 2 mbar		
		4.4	Vacuum Gauge: Suitable Vacuum Gauge desirable.		
		4.5	Pumping port with Chamber Isolation valve during the venting required.		
5)	Gases	5.1	The system shall support two process gases. These should include oxygen and Argon. Purge & Vent: Nitrogen		
		5.2	Gas Flow Rate: Oxygen O₂: MFC (0-100 sccm). Argon Ar: MFC (0-100 sccm). Nitrogen: Flow meter, Desirable.		
		5.3	Proper venting arrangement using nitrogen gas should be provided.		
		5.4	Pneumatically operated or Solenoid valves are preferred.		
		5.5	Each process channel should include a solenoid/pneumatic valve and standard Mass Flow controller, orbital-welded stainless steel tubing with 1/4" Standard connections.		
6)	6. System controls, Hardware	6.1	Computer or Touchscreen based interactive suitable interface required.		
		6.2	Process control software User friendly recipe control. More than 10 editable recipe storage required. Safety interlocks and malfunction interlock required.		
		6.3	Power control panel Emergency switch OFF facility should be provided as safety measure.		

7)	Warranty	7.1	<p>Two years' Standard warranty should be provided</p> <p>Vendor to provide standard warranty for a period of 24 months.</p> <p>Vendor to give two Preventive Maintenance Visits in the Warranty Period of the tool.</p> <p>Vendor to provide all spares which will be required during preventive maintenance for the period of warranty.</p> <p>The supplier should support the system minimum for 10 years (post warranty) with all spares and services.</p>		
8)	Essential Requirements	8.1	<p>The company should have supplied at least three similar items to Indian/International academic and other Govt. of India R&D organizations in the last (5 or 10) years, and the proof of purchase order or performance certificate should be provided</p>		
9)	Onsite Process Demonstration	9.1	<p>The demo process of photoresist ashing and cleaning should be carried out at the customer site.</p> <p>PR ash rate needs to be demonstrated.</p>		
		9.2	<p>Training of Personnel:</p> <p>User Training required</p>		
10)	Mandatory documentation		<p>The Original Equipment Manufacturer should have authorized sales and service support in India.</p> <ol style="list-style-type: none"> i. Installation scheme showing the physical space (footprint) of the machine. ii. System applications are to remove resist and their residues, ashing, and descum. System capabilities to be listed and the list of recipes to be provided. iii. Cleaning procedure of the chamber between the processes to be provided. iv. A compliance sheet must be provided by the vendor. v. System user manuals: <ul style="list-style-type: none"> • User manuals. • System Hardware / Software manuals. • Maintenance 		

(Note: It is mandatory for the bidders to provide the compliance statement in tabular column format along with catalogue page number (comply/not comply) for the Above points with document proof as required. Failing which bidders will be technically disqualified)