

<u>Committed to providing innovative solutions</u> <u>for material surface treatment.</u>

NE-RE08

PLASMA PHOTORESIST STRIPPING MACHINE



NE-RE08 PROFILE

NE-RE08 is a dry - type plasma photoresist stripping device, suitable for the photoresist removal and ashing processes of wafers with a diameter of 8 inches or less. The equipment employs a high - density RIE plasma etching system and offers performance advantages such as a fast photoresist stripping rate, good uniformity, high selectivity ratio, and excellent anisotropy.

Applications:

- Strip positive/negative photoresists on 8 inch or smaller wafers (SOI, Si, glass, copper, etc.)
- Strip polyimide (PI) photoresist
- Remove organic substances
- PR Descum primer process post lithography
- Plasma activate substrate surface (O₂/Ar)

Features:

- RIE mode for fast resist stripping
- Full area gas showerhead and radial exhaust for high uniformity and speed
- Water cooled electrode controls substrate temperature
- Pneumatic lid for easy wafer handling

NE-RE08 SPECIFICATIONS

		ΟΡΤΙΟΝΙΑΙ			
	STANDARD MODEL	OPTIONAL			
Overall dimensions					
Size	670mm(L)X700mm(W)X1400mm(H)				
Weight	300KG(Including vacuum pump)				
Plasma generator					
Power	600W(Adjustable)				
Frequency	13.56Mhz				
Vacuum chamber					
Cavity material	316 stainless steel, military grade seal				
Workbench size	Ф260mm				
Sample size	8 " (Φ203mm)				
Cooling method	Water-cooled electrode				
Etching method	RIE				



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Gas Control						
Gas flow controller	MFC					
Flow value	0-300 SCCM	Specified by customer				
Gas channel	2 channels(supports various process gases, such as oxygen,	3 & 4 & 5 & 6 channels				
	argon, hydrogen, nitrogen, O2、Ar、N2、CF4、SF6、Cl2 etc.)					
Vacuum measurement						
Range	1.0×10 ⁵ ~1×10 ⁻¹ Pa					
Pumping system						
Vacuum Pump	Oil Pump	Dry pump				
Control system		-				
Touch screen	10''					
PLC	Siemens					
Software	re Plasma control system with independent patent: 3 - level					
	permissions, auto/manual modes, recipe param					
	setup/storage/call, alarm history query, IO monitoring.					
Real-time monitoring	Power, vacuum degree, air pressure, gas flow rate, working					
	hours, etc.					
Alarm function	Vacuum anti-misoperation, power anti-misoperation, air					
	pressure alarm, phase sequence alarm					
Condition						
Power Supply	220V	Specified by customer				
Type of air pipe	Φ6mm					
Gas purity	99.999%					
Air pressure	0.4-0.6Mpa					
Exhaust port	KF16					

NE-RE08 PROCESSING CAPABILITY

NAME	MATERIAL	INDICATOR	INDICATOR PARAMETERS
Key Process Parameters	SiO2	selectivity to sub-layer	>1
		etch rate	>50nm/min
		uniformity	<±5%
	SiNx	selectivity to sub-layer	>1
		etch rate	>50nm/min
		uniformity	<±5%
	Polymide	selectivity to sub-layer	>10
		etch rate	>100nm/min
		uniformity	<±5%
	Poly	selectivity to sub-layer	>2
		etch rate	10-200nm/min
		uniformity	<±5%
	Silicon	selectivity to sub-layer	>2
		etch rate	>100nm/min
		uniformity	<±5%



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NE-RE08 EFFECT OF PLASMA PHOTORESIST-STRIPPING

In this example, O $_2$ plasma is used to remove the positive photoresist with a thickness of 3.407 micrometers coated on the SiO $_2$ substrate. The photoresist layer can be removed within 3 to 5 minutes.



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Plasma Ashing: 7 Minute PR Thickness: 212.2 nm | Etched Depth: 3.195 µm



ABOUT NAEN TECH

Naen Tech are an international leader in the design, development and manufacture of plasma surface treatment systems & advanced plasma processes.

Our products are installed worldwide and trusted to deliver consistent, reliable results in both leading research institutes and in critical manufacturing steps.

We are experts in plasma technology and surface science. We are trusted partners, valued for our courtesy, professionalism and dedication to delivering the correct solution for our clients.

OUR SERVICES

Contract plasma treatment

We have more than 10,000 customer cases around the world, and we are equipped with technicians who can meet the plasma needs of various industries, and will provide a quick, no-nonsense feasibility solution for the surface treatment needs of different segments!

Surface testing laboratory

With a comprehensive suite of surface analysis equipment, we are able to conduct a wide range of surface property tests, both before and after plasma treatment, in order to provide you a professional report with the whole pictures and videos.

After sales support

The equipment is guaranteed for one year free of charge and provides lifetime technical services. If the equipment fails (non-human damage), we will arrange after-sales personnel to follow up within 24 hours until the fault is eliminated.

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Rental plasma systems

We carry a wide range of our standard equipment in stock and available for short or long term hire. This is particularly useful for in-house proof of concept trials or to satisfy short term contract work.

Method development

We have invested significantly in laboratory facilities to assess, test and investigate all aspects of plasma surface modification on a wide range of materials. Coupled with extensive in-house and real-world knowledge, we can usually deliver a tailored treatment quickly and efficiently to suit your individual product or production needs.

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