纳恩科技
NAEN TECH

Committed to providing innovative solutions
for material surface treatment.

NE-PE05F

5L (13.56Mhz) LOW PRESSURE PLASMA TREATMENT SYSTEM

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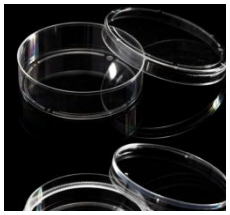
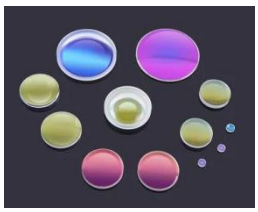
NE-PE05F PROFILE

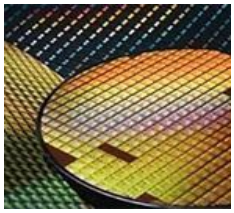
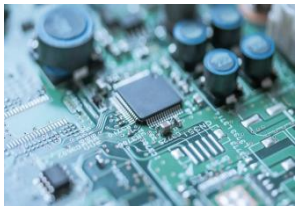
NE-PE05F is a RF desktop plasma treatment system which is used in a wide range of fields, from the manufacture of semiconductors and electronic components to medical applications. Plasma treatment cleans materials by decomposing and vaporizing microscopic organic matter adhering to the material surface. It also has the effect of surface modification by breaking molecular bonds on the material surface and changing the surface composition. In addition, the plasma decorates the surface of the material with hydroxyl groups, making it hydrophilic and less likely to repel liquids.

It is widely used in scientific research institutions, enterprise R&D units and small batch production proofing,including:

- Plasma cleaning organics
- Plasma surface activation to improve adhesion
- PDMS & microfluidic devices
- PEEK & other engineering polymers
- PTFE
- Metals
- Ceramics
- Glass & optical devices




NE-PE05F FEATURES

✧ **Compact, tabletop unit**

Weight: 50KG

Size: 550mm(L)×560mm(W) ×580 mm(H)

✧ **Easy to install**

Only need to connect the equipment with the vacuum pump, and then connect the power supply to use.

✧ **Adjustable power settings**

The max RF power is 200W which can be adjusted continuously.

✧ **Stainless steel cavity**

Durable high-quality stainless steel dedicated electrodes with tray.

Size : Φ140（W）×270（D）mm

✧ **Self-developed power supply**

Digital high-frequency plasma generator produces high-density contour particles to ensure outstanding cleaning effect.

✧ **High precision float needle valve flow controller**

Two gas channels are standard,supports various process gases, such as oxygen, argon, hydrogen, nitrogen, etc.

✧ **Pro-environment**

Dry processing, low gas emission, no hazardous emissions,no pollution to the air.

✧ **4.3'' Touch screen**

The whole process can be directly set and processed through the touch screen, which is intuitive and the process can be monitored in real time.

✧ **Vacuum pump**

Equipped with a high-speed vacuum pump, the ideal vacuum value can be reached within 30 seconds, saving the entire processing time.

✧ **Fast treatment time**

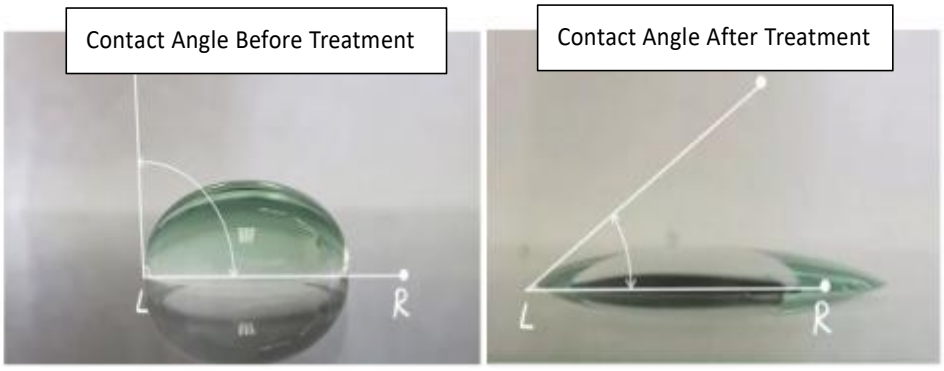
A cycle only takes two to five minutes, and processing times can be set according to demand, with a maximum processing time of 9,999 seconds.

NE-PE05F SPECIFICATIONS

	STANDARD MODEL	OPTIONAL
Overall dimensions		
Size	550mm(L)×560mm(W) ×580 mm(H)	
Weight	80KG(Including vacuum pump)	
Plasma generator		
Power	0-200W(Adjustable)	Specified by customer
Frequency	13.56Mhz	
Vacuum chamber		
Cavity material	316 stainless steel, military grade seal	
Cavity volume	5L	
Discharge Mode	CCP	
Discharge electrode	1 aluminum alloy special electrode + 1 tray	
Cavity size	Φ140（W）×270（D）mm	
Effective processing range	135（W）*250(D)mm	
Gas Control		
Gas flow controller	High precision float needle valve flow controller	
flow value	0-500ml	Specified by customer
Gas channel	2 channels(supports various process gases, such as oxygen, argon, hydrogen, nitrogen, etc.)	
Vacuum measurement		
Vacuometer	SMC	
Pumping system		
Pumping speed	8 m^3 /H, oil pump with filter	Dry pump

Limiting vacuum	1PA	
Control system		
Touch screen	4.3''	
PLC	Panasonic	
Software	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	Φ 6mm	
Gas purity	99.999%	
Gas pressure	0.3-0.6Mpa	
Exhaust port	KF25	

TYPICAL PROCESS RESULTS



Comparison of Dyne values

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.

❖ **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.