

## NE-PE40F

### 40L (13.56Mhz) LOW-PRESSURE PLASMA TREATMENT SYSTEM

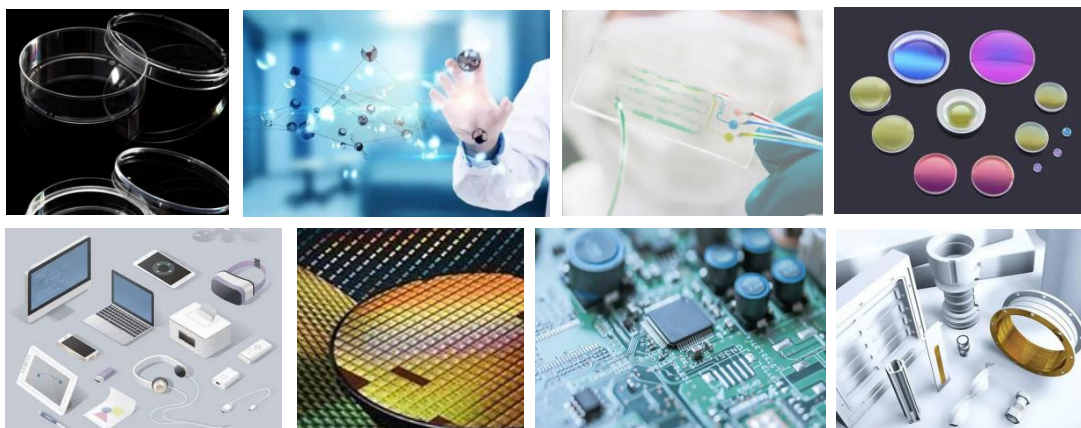


## NE-PE40F PROFILE

**NE-PE40F** is a large-scale industrial low pressure plasma treatment system, equipped with high power, large cavity, high density, high stability, for large-scale continuous production. It 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, including:

- ❖ Plasma cleaning organics
- ❖ Plasma surface activation to improve adhesion
- ❖ Form new functional groups and improve hydrophilicity
- ❖ Wafer Cleaning, remove the photoresist
- ❖ ITO & FTO & Glass & Pottery & Metal
- ❖ PP & PET & PVC & PEEK & PC



## NE-PE40F FEATURES

### ✧ AIO, small and exquisite

Weight:300KG

Size:685mm(L)X830mm(W)X1450mm(H)

### ✧ Adjustable power settings

Solid-state RF power supply can be adjusted from 50W to 500W continuously.



Shenzhen Naen Tech Co., Ltd

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✧ **Special cavity mechanism and discharge electrode for CCP & RIE**

The unique design of the chamber can adjust the distance between the electrodes, adjust the plasma intensity and density, greatly improve the processing capacity and efficiency, and ensure uniformity.

✧ **Self-developed power supply**

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

✧ **MFC high precision control of gas flow**

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.

✧ **Aviation-grade aluminum alloy cavity**

Durable high-quality aviation-grade aluminum alloy dedicated electrodes with tray.

Size: 350(L)×405(D)×300(H)mm; 42L

✧ **7" 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 90 seconds, saving the entire processing time.

✧ **Fast treatment time**

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

## NE-PE40F SPECIFICATIONS

	STANDARD MODEL	OPTIONAL
<b>Overall dimensions</b>		
Size	685mm(L)X830mm(W)X1450mm(H)	
Weight	300KG(Including vacuum pump)	
<b>Plasma generator</b>		
Power	50-500w(Adjustable)	
Frequency	13.56Mhz	
Radiation-resistant high-frequency matcher	High-speed automatic matching within 0.1s, network communication supported	
<b>Vacuum chamber</b>		
Cavity material	Aviation-grade aluminum alloy	
Cavity size	350(L)×405(D)×300(H)mm; 42L	
Effective processing range	300(W)×300(D)×34(H)mm	
Layers	4	Specified by customer



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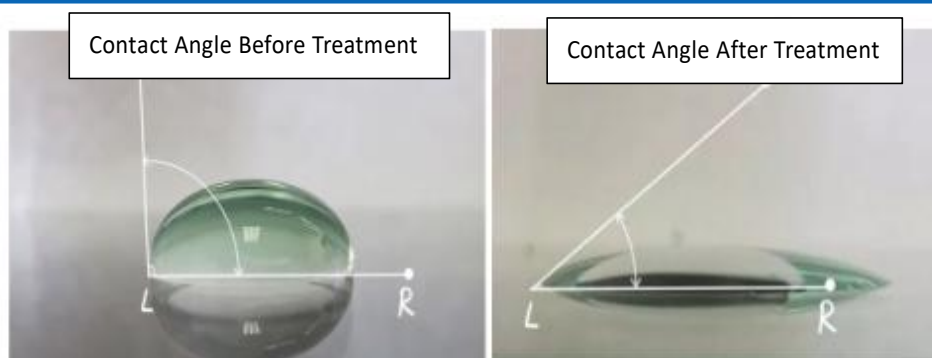
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<b>Discharge electrode</b>		
Electrode	High conductive aluminum alloy special electrode	
Discharge modes	CCP & RIE	
<b>Gas Control</b>		
Gas flow controller	MFC	
Flow value	0-500 SCCM	Specified by customer
Gas channel	2 channels(supports various process gases, such as oxygen, argon, hydrogen, nitrogen, etc.)	3 & 4 & 5 & 6 channels
<b>Vacuum measurement</b>		
Vacuometer	Pirani	
<b>Pumping system</b>		
Pumping speed	Oil pump	Dry pump
Limiting vacuum	1PA	
Operating vacuum degree	10-50Pa	
<b>Control system</b>		
Touch screen	7"	
PLC	Siemens	
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	
<b>Condition</b>		
Power Supply	AC380V,50/60Hz (Three-phase five little system,100A)	Specified by customer
Type of air pipe	Φ 8mm	
Gas purity	99.999%	
Air pressure	0.6-0.8Mpa	
Exhaust port	KF40	

## TYPICAL PROCESS RESULTS



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## 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.



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