

NE-PE13X

POWDER-SPECIFIC PLASMA TREATMENT SYSTEM



NE-PE13X PROFILE

NE-PE13X is a small rotary vacuum plasma processing system, mainly for surface activation and modification of various powders, especially nanoscale ones like carbon black, carbon nanotubes, etc. Bombarding powder surfaces with high-energy plasma particles can improve their hydrophilicity, dispersibility, etc.

The equipment features a unique dynamic rotary structure, making the glass bottle with powder rotate to ensure uniform treatment of the powder in the chamber.

Features:

- ◆ The processing chamber is made of detachable quartz glass, easy to clean and place samples.
- ◆ The dynamic rotary design ensures uniform powder treatment without dead angles.
- ◆ Touch screen UI + PLC control allows storing multiple process programs for automatic operation.
- ◆ Two independent gas channels help explore the impact of different gas ratios on cleaning.
- ◆ The detachable rotary mechanism can process other samples, realizing multi-function with one machine.

Effect:



NE-PE13X SPECIFICATIONS

	STANDARD MODEL	OPTIONAL
Overall dimensions		
Size	705mm(L)X710mm(W)X545mm(H)	
Weight	150KG(Including vacuum pump)	
Plasma generator		
Power	300W(Adjustable)	
Frequency	40Khz	
Vacuum chamber		
Cavity material	316 stainless steel, military grade seal	
Cavity size	Φ250×300(D)mm	
Powder container	Φ110×170(D)mm; 1.7L	
Effective processing volume	0.5L	
Discharge electrode	Aluminum alloy special electrode	
Gas Control		
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
Vacuum measurement		
Vacuometer	Pirani; $5 \times 10^{-2} \sim 1.0 \times 10^5$ Pa	
Pumping system		
Pumping speed	Oil pump	Dry pump
Limiting vacuum	1PA	
Operating vacuum degree	10-50Pa	
Control system		
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	
Condition		
Power Supply	220V	Specified by customer
Type of air pipe	Φ 6 mm	
Gas purity	99.999%	
Air pressure	0.4-0.6Mpa	
Exhaust port	KF40	



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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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