



passionate about plasma®

Activation | Cleaning | Coating | Etching

Plasma Surface Treatment

HPT-500
Benchtop Plasma Treater



HPT-500 Benchtop Plasma Treater

The **HPT-500** is a microprocessor controlled benchtop plasma treatment system which is ideally suited to surface activation, cleaning and modification of a wide range of materials including polymers, metals, glass and ceramics.

Available in single or dual gas inlet versions and with on-board gas mixing manifold, the **HPT-500** is able to handle a wide range of gases for optimised treatments, including air, oxygen, hydrogen, argon, nitrogen and many others.

An optional vapour delivery inlet extends the use to liquid precursors and a corrosion resistant version expands the choice even further to address specific material treatments including;

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

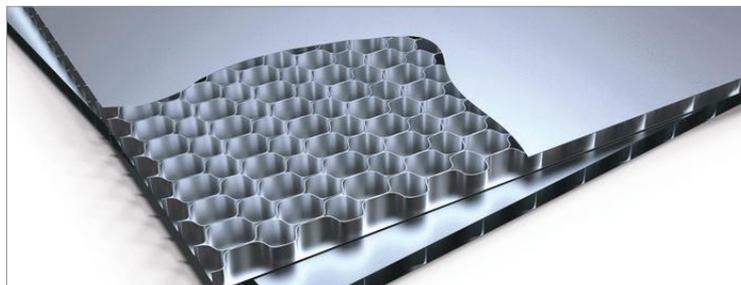


Markets & Applications



Aerospace & Automotive

Composites



Plasma Environment



Plasma Environment

The **HPT-500** features a 250mm diameter plasma process chamber in stainless steel with vacuum compatible materials throughout. Our proprietary, high stability HPS plasma generator is continuously variable over the entire 0-300W power range rather than being limited to discreet levels, delivering much finer control when processing delicate materials.



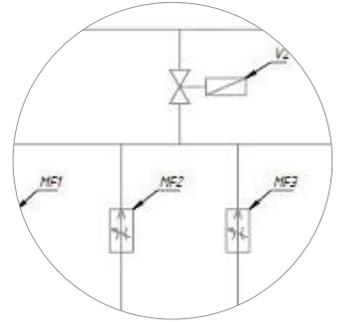
Process Control

The 5.7 inch colour touchscreen provides a rich, user-friendly interface. Variables such as gas flow rate, pressure, power level and plasma processing time can be freely set and then stored to produce a fully interlocked process cycle from a single keypress. A handy status display and end of process audible alarm informs the user of every step in the process.



Repeatable & Reliable

With precision digital mass flow controllers and integrated pressure gauge, the **HPT-500** delivers unmatched reliability and repeatability by removing common errors in gas flow and gas type settings which will be familiar to users of equivalent equipment that utilise manual needle valves.

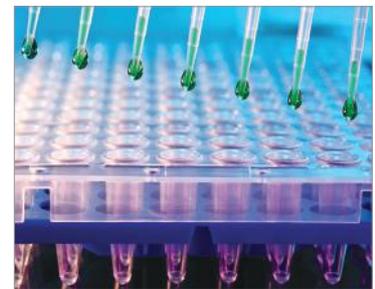


Versatile

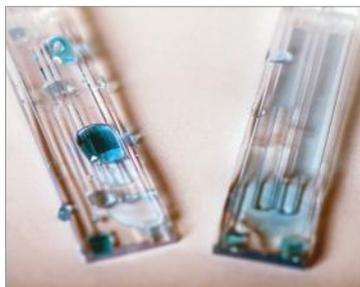
The base model **HPT-500** has a single gas inlet and optional second gas or vapour delivery inlet. The unit is prepared so that either option can be added at a later time if required, ensuring that future requirements can be accommodated without expensive reconfiguration.



Medical Plastics



Microfluidics



Some of Our Clients



"Henniker provided visible results from the outset and confirming that we made the right decision in choosing a local UK manufacturer."

Queen's University Belfast



"We obtained quality results with their unit within minutes of setup & consistent results thereafter. The support they have provided has been rapid and helpful."

Making Lab, Francis Crick Institute



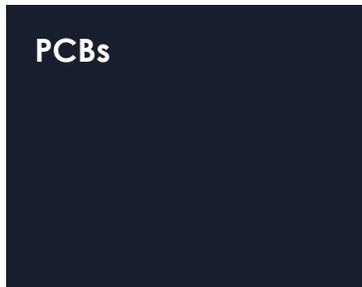
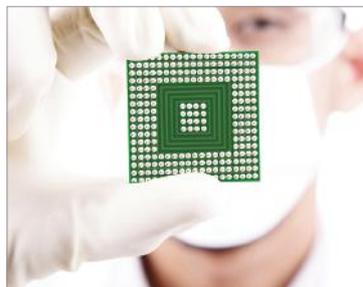
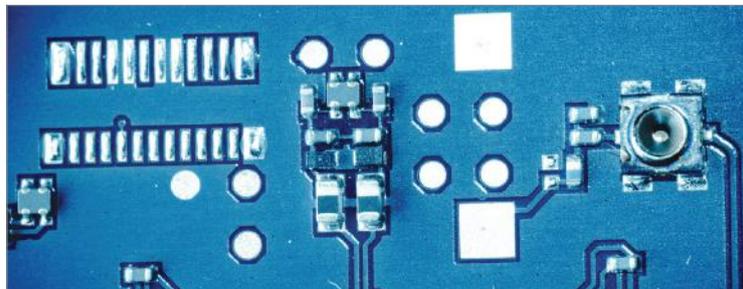
"We are very impressed with the ease of use and reliability of our plasma unit and were producing results within minutes of setting it up."

Warwick University



"Our collaborative work with the team at Henniker was a very positive experience and one that we look forward to developing further."

TWI



HPT-500 Specifications

Technical Specifications

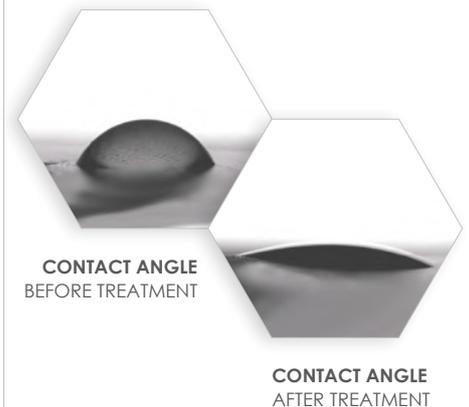
| | BASE MODEL | OPTIONS |
|--------------------------------|--|--------------------------------------|
| ENCLOSURE | | |
| Dimensions | W 533mm x H 600mm x L 615mm (+50mm on rear for cables) | |
| Weight | 45kg | |
| CHAMBER | | |
| Material | Stainless Steel | |
| Form | Cylindrical | Rectangular |
| Dimensions | 250mm dia. x 320mm L | |
| REMOVABLE PARTS CARRIER | | |
| Material | Aluminium | stainless steel |
| Form | Flat tray | multi-level shelf electrode |
| Dimensions | 240mm W x 310mm L | others to suit application |
| PLASMA POWER SUPPLY | | |
| Power | 0-300W, continuously variable output | |
| Frequency | kHz | |
| PROCESS CONTROL | | |
| Interface | 5.7" Colour TFT | |
| Gas channels | x1 MFC | x2 MFC or x1 MFC and x1 vapour inlet |
| Vent inlet | x1 | soft ventilation option |
| Connections | 6mm compression | |
| Process timer | 1sec – 99.59min | |
| Pressure gauge | Pirani sensor | |
| Vacuum pump | 2-stage rotary* | others to suit application |
| | *Suitable for use with air, oxygen and other non-corrosive gases | |
| SERVICES | | |
| Electrical | 110-250 AC, 50-60Hz, 750 VA (including pump), fused 6.3 A T | |
| Power cord | Suited to region | |
| Compliance | CE – ROHS - WEEE | |

Benefits

- compact benchtop unit
- user friendly TFT interface
- recipe store
- fast treatment time
- precise & repeatable
- no hazardous emissions

Typical Process Results

| | |
|------------------|---------|
| Gas | air |
| Process pressure | 0.4mbar |
| Power | 100W |
| Total cycle time | 120sec |



Henniker strive for continuous improvement and specifications are subject to change without notice



Products & Services

- benchtop systems
- high throughput systems
- atmospheric plasma
- robot systems
- surface test & analysis
- process development



We are an experienced, dynamic and expanding company already established as a leading global manufacturer of plasma treatment systems and innovative processes. Our success is built around an exceptional body of knowledge and expertise, backed by highly trained and dedicated staff who understand your application in

considerable detail. Our standard configurations cover most applications but we also understand that no two samples or surfaces are the same.

That's why, uniquely, we offer a wide range of options that allow us to customise any standard system for your exact requirement.

Henniker[®] passionate about plasma

CONTRACT PLASMA TREATMENT SERVICE

Our technical staff will be happy to discuss contract treatments, from small one-off batches to regular, large throughput requirements.

PROOF OF CONCEPT TREATMENT

Let's discuss your application and then we will provide a quick, no-nonsense feasibility study.

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 with the whole picture.

AFTER SALES SUPPORT

We are proud of our reputation for being approachable, thorough and easy to work with.

"Henniker's after sales support is first class. They have always been extremely responsive if we have ever had need to call on them."

Steve Rackham, Teledyne

RENTAL PLASMA TREATMENT 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.

"The low risk option of hiring a plasma unit for evaluation was a key reason that we chose to work with Henniker and one that enabled us to proceed with confidence."

Dr. Chris Nicklin, Reinnervate

METHOD DEVELOPMENT

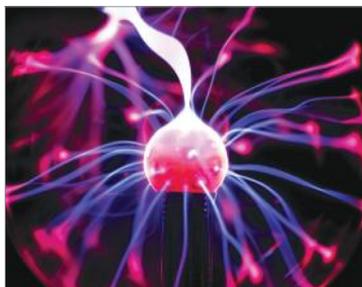
We have invested significantly in laboratory facilities to assess, test and investigate all aspects of plasma surface modification on a wide range of materials. Coupled with extensive in-house and real-world knowledge, we can usually deliver a tailored treatment quickly and efficiently to suit your individual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

"The technical team at Henniker are very knowledgeable and supportive and always approachable. I have found it a pleasure to work with them."

Simon Baxter, BAE Systems, AI

Henniker Plasma

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