

# Novascan PSD-UV, PSDP-UV and PSDP-UVT UV/Ozone Systems

Novascan's PSD and PSDP series UV Ozone systems are proven instruments that work. Contact Novascan today for help in selecting the proper system for your application.

- atomic cleaning of surfaces
- polymer bonding
- organic molecule stripping
- release of trapped inorganic molecules
- microfluidic fabrication
- micro and nano-patterning
- UV curing
- chemical surface modification
- surface sterilization
- surface oxidation
- metal bonding prep... and more



## Sample Applications

In addition to the above uses, Novascan's PSD series instruments are often used for scanning probe microscopy applications. Our instruments can be used to clean common oily films and trapped inorganic materials from AFM tips, SPM standards and surfaces. Treatment can also be used to alter surface hydrophobicity, assist in tip and surface chemical modifications, oxidize and harden tips helping to maintain tip geometry while scanning, and sharpen tips for improved lateral resolution.

Novascan instruments are used in nanotechnology, chemistry, biology, optics, electronics, semiconductor, and other scientific laboratories around the world. The PSD Series publication list continues to grow.

*Instruments that Work  
Easy-to-use, high quality, reliable  
and affordable*

### Sample Substrates

Silicon	Silicon dioxide	Metals	Gallium Arsenide
Silicon Nitride	Mica	Ceramics	Polymers such as PDSM
Borosilicate Glass	Quartz	Sapphire	Other Materials

## Instrument Specifications

The PSD and PSDP systems are similar in performance and dimensions, but vary in controller capability, upgradability and heated stage options.

### The PSD Series

The PSD series instruments are digitally controlled benchtop systems that are available in sizes ranging from 3" to 12X16". These systems feature a powerful UV grid system with reflector and adjustable height stage for optimal sample positioning and performance. In/Out Gas Ports are available on the 4" and larger systems. The system is controlled by a convenient preset controller that makes operation a breeze.

#### Features:

- Preset Digital Controller
  - Convenient 2 button operation is convenient and simple.
  - Automated 15, 30, 45, 60, 90, 120 minute process time
  - Process cycle can be manually interrupted at any time
  - System cannot be easily upgraded with a temperature stage
- Cost saving yet functional design makes this system a popular choice*
- Very simple setup and use*



### The PSD Pro Series

The PSDP series instruments are research grade UV/ozone cleaning systems that offer maximum versatility for molecular organic stripping and numerous other applications. Operate in ambient air or flow oxygen through one of two standard gas ports for increased ozone production. A programmable digital controller handles the system processing ensuring accurate timing regimes and optimum scouring parameters.

#### Features:

- Programmable Digital Controller for more operation control
  - Digital Count down display.
  - Easily upgradeable to the temperature controlled system
  - Function "pause" and "interrupt" capability
  - Internal Memory for previous settings
- A powerful system that offers enhanced process control*



### The PSD Pro Heated Series

The PSDP-UVT takes the power of the PSDP-UV to a new level with the addition of a temperature controlled stage designed to maximize the destruction of molecular organic materials. A digital controller with PID feedback loop accurately maintains stable temperatures of up to 150 degrees Celsius.

#### Features:

- Identical to the PSDP, but factory installed with the temperature stage.
- Offers maximum potential and flexibility*
- Ideal for multiple user environment*



## Common System Features and Information

Power:	100, 120, 220, 240 VAC, 50-60 cycle	Safety:	Safety interlock turns off UV lamps when chamber is opened.
Sample Height:	All systems have an adjustable height stage with an external stage lock for proper sample spacing from the lamp. Standard stages are the UV grid size or larger.	Gas Ports:	Two ports standard, more ports optional (PSD-UV3 ports are optional).
UV Grid:	Ozone producing Mercury vapor grid lamp with reflector. Half life approximately 5000 hours.	Vacuum Chamber:	Optional by special order - Aluminum and Quartz fabrication.
UV Reflector:	The UV Reflector is generally 1" larger than the grid size. For example for a 4x4" grid the reflector is 5x5"	Heated Stage:	Supports temperatures up to 150C (Standard for the PSDP-UVT or optional upgrade for PSDP).
Sample loading:	Chamber hinges up and away from the sample staging area allowing ~360 degree access for loading.	Ozone Neutralizer:	Neutralizer and Pump optional for PSD and PSDP systems.