

The 4 main IAQ pollutants: Bacteria and Virus; Dust Particles; Toxic Chemical; Bad Odor

Model	UV600	PTU600	Plasma600
Bacteria and Virus	*****	****	*****
Dust Particles	***	***	****
Toxic Chemical	***	****	*****
Bad Odor	**	****	*****
Brand	"innoclean"	"innoclean"	"innoclean"
Series	"OceanClean"	"OceanClean"	"OceanClean"
Model	UV600	PTU600	Plasma600
Product Name	"Germ Hunter"	"Toxic Hunter"	"IAQ Hunter"
Ceiling, wall mounted or stand	YES	YES	YES
TiO2 Filter	"ITP"	"PhotoTroph"	NIL
TiO2 filter size (mm)	300 x 120 x 20	300 x 120 x 20	NIL
TiO2 Filter	YES	YES	NIL
Filter Type	Metal	Honeycomb Ceramic	NIL
PCO Probe	NIL	Metal Type	NIL
Nano-Silver Antimicrobial Filter	NIL	NIL	Metal Type
Suggested Filters Lifetime (yr)	Lifetime	Up to 5 Years	Lifetime
UV Sterilizing Lamp	J Type	Straight Type	NIL
UV Lamp Output (μW / cm ²)	7,500	4,200	NIL
UV Lamp Output @1m (μW / cm ²)	57	32	NIL
Plasma Ions Generation	by Ions Generator Positive (+) and Negative (-)	by Ions Generator Positive (+) and Negative (-)	by "Plasma Air" USA: Model 102E Positive (+) and Negative(-)
Internal Fan	YES	YES	YES
Remote Control	YES	YES	YES
LED Lamp Indication	2 Sides (Optional)	2 Sides (Optional)	2 Sides (Optional)
Consumption Power (W)	40 Max	40 Max	48 Max
Voltage (V)	220 - 240	220 - 240	220 - 240
Safety Door Lock	YES	YES	YES
Colour	White (Standard)	White (Standard)	White (Standard)
Air Delivery (metre ³ / hour)	300	300	300
Area (sq. ft)	600 - 1,000	600 - 1,000	Up to 1,000 - 2,000
Suggest UV Lamp Replacement (years)	2 - 4 (25,000 hrs) (9,000 hrs. drop 20% - 30% Efficiency)	2 - 4 (25,000 hrs) (9,000 hrs. drop 20% - 30% Efficiency)	NIL
Suggest Ionization Tube Replacement (years)	NIL	NIL	3 - 4 (30,000 hrs) (9,000 hrs. drop 20% - 30% Efficiency)
Dimension (L x W x H) mm	480 x 320 x 165	480 x 320 x 165	480 x 320 x 165
Front Cover Dimension (L x W x H) mm	480 x 320 x 15	480 x 320 x 15	480 x 320 x 15
Weight (kg)	9.5	10	12
Noise Level (dB)	< 36	< 36	< 36

Remarks: The above specification subject to change without previous notice.
Suggested services area would be different by nos. of occupants and initial pollutant level.
Optional colour can be requested by customer e.g. Black, Silver, Brown, Blue, Red etc.....

More than 90%

of Bacteria and Virus listed below would be killed in only ONE Times pass through "OceanClean" - Germ Hunter



ORGANISM	Comment	UVC - LETHAL DOSE Required to kill the Bacteria (microWatt. sec/cm ²)	Germ Hunter: 4280 (microWatt. sec/cm ²) "OceanClean" would Kill the Bacteria and Virus Nos. of pass	Comment	UVC - LETHAL DOSE Required to kill the Bacteria (microWatt. sec/cm ²)	Germ Hunter: 4280 (microWatt. sec/cm ²) "OceanClean" would Kill the Bacteria and Virus Nos. of pass
Bacillus anthracis		1960	1	Spirillum rubrum	1900	1
Bacillus magaterium sp.	Spores	1190	1	Staphylococcus albus	800	1
Banillus magaterium sp.	Veg.	565	1	Staphylococcus aureus	1130	1
Bacillus paratyphus		3200	1	Streptococcus hemolyticus	940	1
Bacillus subtilis spores		11600	3	Streptococcus lactis	2670	1
Bacillus subtilis		2500	1	Streptococcus viridans	870	1
Clostridium tetani		5600	2	Vibrio comma	Cholera 1470	1
Corynebacterium dephtheriae		1460	1	Mucor racemosus A	White-gray color 7400	2
Eberthella typosa		930	1	Mucor racemosus B	White-gray color 7400	2
Escherichiae coli		1300	1	Oospora lactis	White color 2200	1
Leptospira Canicoal	Infections Jaundice	1370	1	Penicillium expansum	Olive color 1300	1
Micrococcus candidus		2630	1			
Micrococcus spheroides		430	1	PROTOZOA		
Mycobacterium tuberculosis		2700	1	Chlorella vulgaris	Algae 5650	2
Neisseria catarrhals		1900	1	Nematode	Eggs 1740	1
Phthomonas tumeficiens		1900	1	Paramecium	4780	2
Proteus vulgaris		1300	1			
Pseudomonas aeruginosa		2400	1	VIRUS		
Pseudomonas fluorescens		1520	1	Bacteriophage	E. Coli 1130	1
Salmonella enteritidis		1740	1	Infectious Hepatitis	2520	1
Salmonella paratyphi	Enteic fever	1390	1	Influenza	Common flue 1480	1
Salmonella typhosa	Typhoid fever	935	1	Poliovirus - Poliomyelitis	1370	1
Salmonella typhimurium		3470	1			
Sarcina lutea		8560	2	YEAST		
Serratia marcescens		1050	1	Brewers yeast	1430	1
Shigella dysenteriae	Dysentery	960	1	Common yeast	Cake 2610	1
Shigella flexneri	Dysentery	740	1	Saccharamyces carevisiae	2610	1
Shigella paradysenteriae		730	1	Saccharamyces ellipsoideus	2610	1
				Saccharamyces sp.	Spores 3470	1

TIPS: Please note that many variables (air flow, humidity, distance of microorganism to the UV light, irradiation time) take place in a real world environment that make actual calculating of the UV dosage very difficult. However, it is proven that UV light will kill any DNA-based microorganism given enough UV dosage. UV breaks down DNA on a cumulative basis. Therefore, as air circulates through the air cleaner containing an UV light, the UV light continuously disinfects the air. If a microorganism is not effectively deactivated on the first pass through the air cleaner, the UV light will continue to break its DNA down on subsequent passes. Microorganisms do not sit in a static environment in air cleaner except on cooling coils of a HVAC system, which can be exposed to UV light also. Microorganisms multiply rapidly if not controlled. The UV light helps to reduce airborne microorganisms from the indoor environment.

The above are incident energies of germicidal ultraviolet radiation at 253.7 nanometers wavelength necessary to inhibit colony formation in microorganisms (90%) and for 2-log reduction (99%).

OceanClean - Germ Hunter tell you that to disseminate the air cleaner can really kill the bacteria and virus in your environment, it's depends on the UV Dosage of the UV Lamp can provide.

Sailing with me...
by OceanClean



OceanClean

UV600 - Germ Hunter by Ultraviolet Sterilizing Lamp (UV) and Plasma IONS (+/-)

PTU600 - Toxic Hunter by Photocatalytic Oxidation (PCO) and Plasma IONS (+/-)

Plasma600 - IAQ Hunter by Bi-polar Ionization Plasma IONS (+/-)



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OceanClean Feature:

- Ceiling Mounted / Wall Mounted / Free Standing
- 3 different model available: UV600 / PTU600 / Plasma 600
- Durable Metal Casing with Epoxy Coating
- Cyber design - LED Lamp Indication
- Remote Controller
- Equip with internal fan
- Equip with Plasma Ions (+/-) Generator

UV600 - Germ Hunter

- Equip with "innoclean" high output UV Sterilizing Lamp
- Equip with washable "ITP" TiO2 coated metal filter

PTU600 - Toxic Hunter

- Equip with "PhotoClean" PTU102D / 102E PCO Probe
- Equip with washable "PhotoTroph" Ceramic Honeycomb PCO Filter (200 holes / inch.2)

Plasma600 - IAQ Hunter

- Equip with "Plasma Air" Bi-polar Ionization Units Model: 102E
- Equip with washable Nano-silver Antimicrobial coated metal filter

Functions:

- Bacteria and Virus kill
- Removal bad odor
- Remove toxic chemical e.g. TVOC and HCHO...
- Remove Dust Particles



Testing and Certificate:

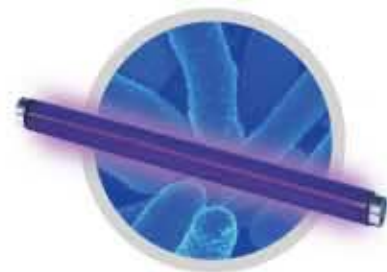
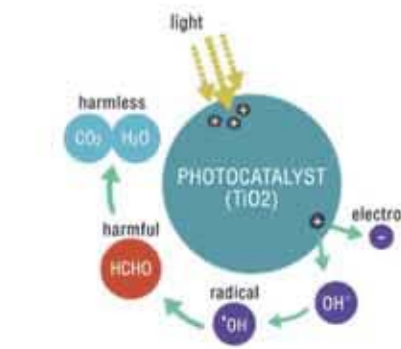
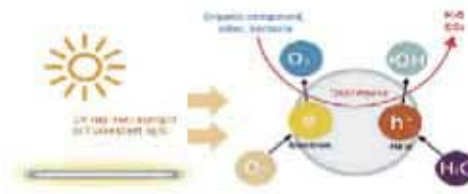
- ALS Testing – TiO2 Material
- ETL Testing – PCO Filter
- MSDS – TiO2 Material
- LAWN – IAQ Performance Test
- HK Fire Services Department approved – PCO (PTU600)
- Intertek – Mold and Dust Test Plasma Air Bi-polar Ionization tube (Plasma600)
- Intertek – CADR Test Plasma Air Bi-polar Ionization tube (Plasma600)
- Intertek – Ozone Removal Test Plasma Air Bi-polar Ionization tube (Plasma600)
- LAWN – IAQ Performance Test: Bacteria, TVOC, HCHO and Cigarette Smoke Plasma Air Bi-polar Ionization tube (Plasma600)
- UL Certified UL867 and UL2043 Plasma Air Bi-polar Ionization tube (Plasma600)



Photo Catalytic Oxidation (PCO)

The key to PCO is the Photo Catalyst. A photocatalyst is a chemical compound e.g. TiO2 Titanium Oxide that becomes highly reactive when exposed to various wavelengths of UV light. In the presence of organic pollutants, such as hydrocarbons, chlorinated solvents, alcohol, ketones and aromatics compounds, the active photocatalyst attacks the pollutants' chemical bonds, converting the toxic compounds into benign constituents, such as water and carbon dioxide.

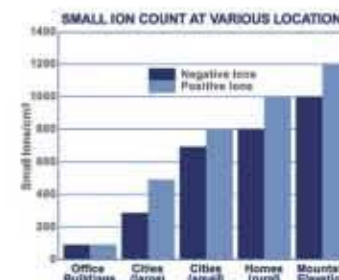
Photocatalytic systems have the ability to convert toxic carbon monoxide, at room temperature, to non-harmful carbon dioxide. This is a major development because carbon monoxide often is a cause of sick-building syndrome and it cannot be removed from the air with any type of absorption media.



Bacteria and Virus Kill
Prevent Cross-contamination
By "innoclean" Germ Hunter



Elimrate Chemical & Bad Odor
By "innoclean" Toxic Hunter



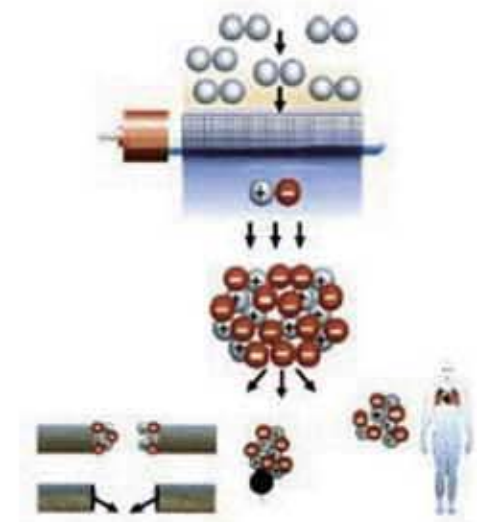
Total IAQ Improvement
Prevent Cross-contamination
By "innoclean" IAQ Hunter

Technology

- reproduces mountain elevation ion levels indoors

OceanClean – IAQ Hunter, equip with the "Plasma Air" ionization equipment, which is widely designed typically mounted in the central air conditioning system; either in the air handling unit or in the main supply ductwork. One to two million ions per liter are formed when air passes over the equipment. These ions travel through the duct system and out into the conditioned space attacking pollutants where they are most problematic –where we work, learn, live, eat, and sleep.

Much like sunlight does in the atmosphere, Plasma Air technology produces a natural bio-climate rich in active oxygen molecules, otherwise known as ions. The Plasma Air system creates a measurable and controllable quantity of positive and negative oxygen ions. The negative ions contain an extra electron while the positive ions are missing an electron resulting in an unstable condition. These unstable ions provide the following benefits:



Ceiling Mounted

