

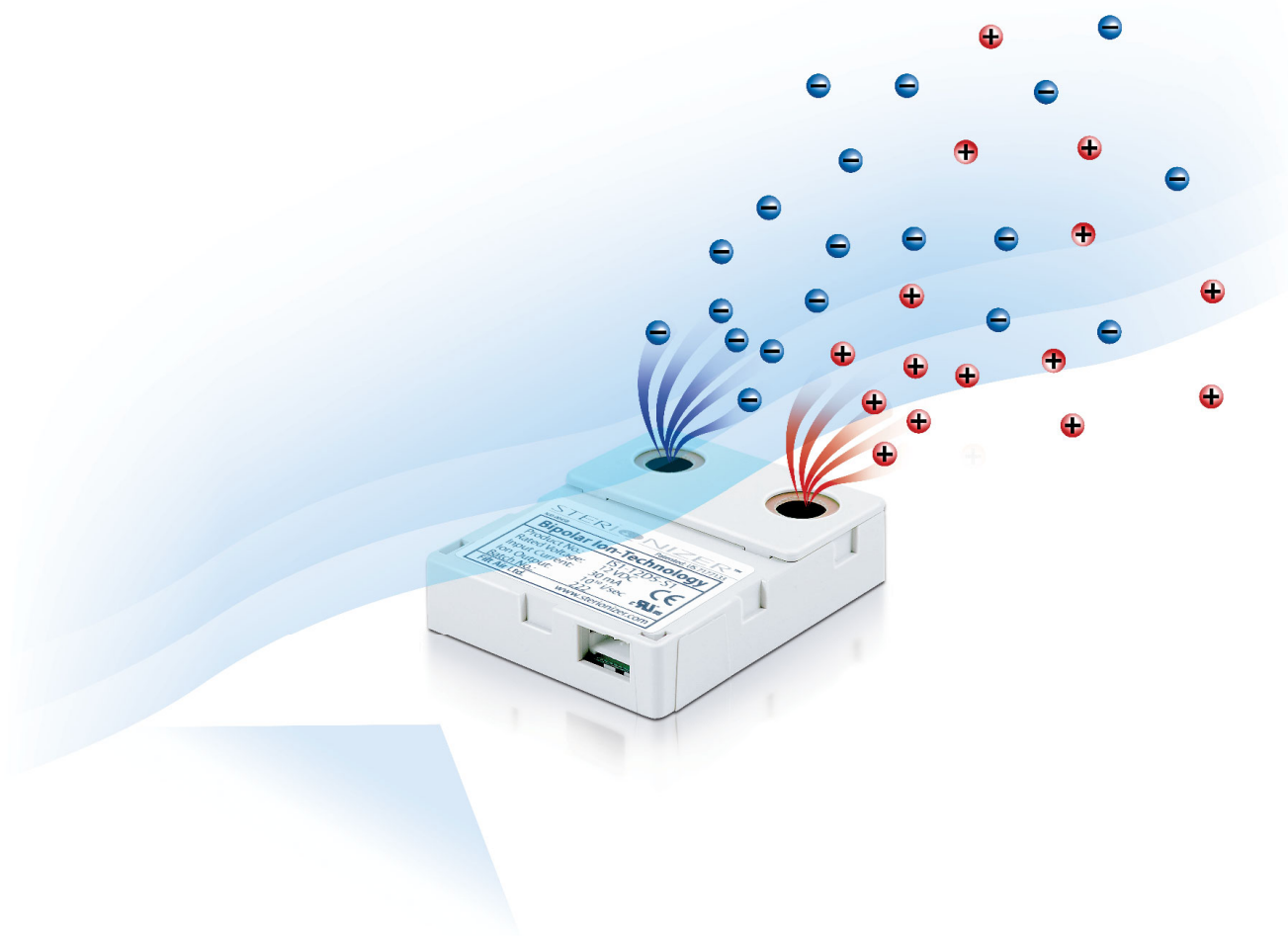


Healthy Indoor Air...
The Way Nature Intended

STERIONIZER™

Bipolar Ion Technology

Sterionizer D5 Series



Sterionizer™ - Bipolar Ion Technology

The Sterionizer™ is an air purification device based upon a patented bipolar ionization technology, specifically developed to bring the health and quality of nature's air to indoor environments.

In natural habitats, solar and earth-based thermal energies create positive and negative oxygen ions that clean and renew outdoor air by removing harmful pollutants, such as bacteria, viruses, fungi, and spores.

The Sterionizer™ generates these same positive and negative ions — just like those found in nature — that purify and freshen indoor air by reducing the harmful pollutants mentioned above.

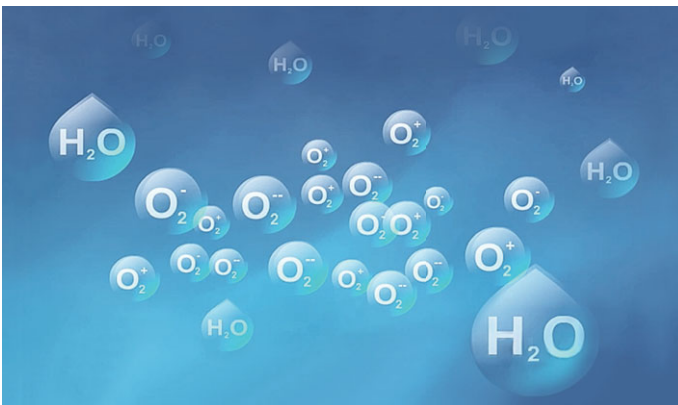
The Sterionizer™ D5 Series is a line of compact electronic modules that can be easily integrated into various air treatment products, such as air conditioners, refrigerators, air purifiers, humidifiers and de-humidifiers, blowers, ventilators, and more.

How Does the Sterionizer™ Work?

The Sterionizer™ uses a plasma discharge system to charge oxygen molecules into O_2^+ and O_2^- molecules.



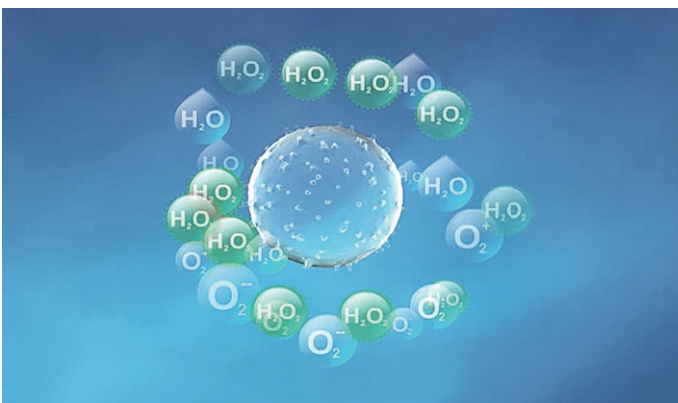
These molecules have very high chemical activity and when reacting with water molecules H_2O in the air, OH radicals and H_2O_2 (Hydrogen Peroxide) are formed.



Hydrogen Peroxide H_2O_2 together with OH radicals and water molecules cluster around harmful particles.



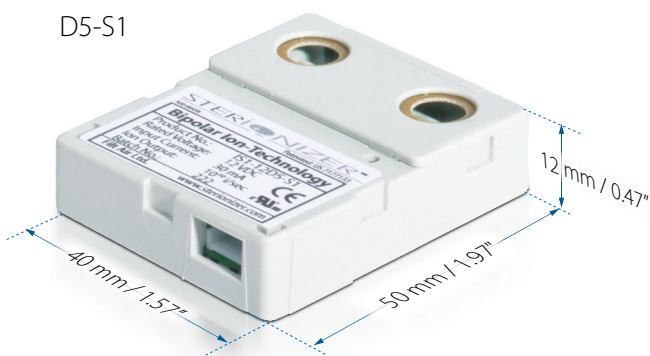
A chemical reaction occurs and oxidants break down the protein structure of pollutants, rendering them harmless.



Technology Highlights:

- The Sterionizer™ generates the same ions as in nature that purify the air we breathe in homes, cars, and office environments
- Reduces airborne pollutants, such as viruses, bacteria, fungus, and mold spores
- Neutralizes odors
- Reduces the allergic effects of dust for allergy sufferers
- Discharges static electricity and prevents electrostatic build-up
- Health benefits confirmed by leading international research institutions
- Compliant with the American standard for ozone generation
- Sterionizer™ – EMC, CE & UL certified

Dimensions:



Proven Technology

The Sterionizer™ bi-polar ionization technology was tested and proven effective in the reduction of a wide variety of harmful substances. Testing was carried out in cooperation with world-known research institutions.

Substance	Substance Name	Testing Organization	Removal	Year
Bacteria	Escherichia Coli	EMSL Analytical, USA	99%	2011
	Escherichia Coli ATCC	Istanbul University, Turkey	91%	2011
	Staphylococcus aureus	EMSL Analytical, USA	81%	2011
	Pseudomonas aeruginosa	Istanbul University, Turkey	99%	2011
	Staphylococcus aureus (MRSA)	EMSL Analytical, USA	99%	2013
Fungus	Aspergillus Niger	EMSL Analytical, USA	97%	2011
	Candida albicans	EMSL Analytical, USA	97%	2011
	Dichobotrys abundans	Prof. Joe F. Boatman, USA	90%	2006
	Penicillium	Prof. Joe F. Boatman, USA	95%	2006
Mold	Cladosporium cladosporioides	EMSL Analytical, USA	36 %	2011
Spores	Bacillus subtilis var niger	Istanbul University, Turkey	89%	2011
Viruses	Influenza H1N1	Kitasato Research Center, Japan	99%	2011
	Influenza H5N1	Kasetsart University, Thailand	99%	2011
	Influenza SARS-CoV-2, aerosolized	Innovative Bioanalysis	99%	2021
	Influenza SARS-CoV-2, surface	Innovative Bioanalysis	99%	2021

Note: The experiment results are solely applicable to the device used in the trial in a small sized environment.

Applications:

The Sterionizer™ can be integrated into a variety of systems for a wide range of applications:

- Air conditioners—home, office, automotive, railcars and aviation systems
- Air purifiers
- Blowers and ventilation systems - duct systems
- Humidifiers and de-humidifiers
- Refrigeration systems - cold storage
- Elevators
- Static Control (ESD)

Sterionizer™ D5 Series Product Line:

Model	IS1-12D5-S1	IS1-12D5-S2	IS1-12D5-S5
Ion output	10 ¹⁰ ion/sec	10 ¹⁰ ion/sec	10 ¹⁰ ion/sec
Ion balance	Self-balancing	Self-balancing	Self-balancing
Ozone	<0.005 ppm (according to UL2998)	<0.005 ppm (according to UL2998)	<0.005 ppm (according to UL2998)
Input voltage / current	12 V DC ±10%, 30mA average	12 V DC ±10%, 30mA average	12 V DC ±10%, 30mA average
Power supply requirement	12 V DC – 300mA	12V DC – 300mA	12 V DC – 300mA
Required airflow	> 0.3 m/s laminar	> 0.3 m/s laminar	Clean dry air 5-25 liter / min
Operating environment	Temp. -10°C - 70°C RH < 93% non-condensing	Temp. -10°C - 70°C RH < 93% non-condensing	Temp. -10°C - 70°C RH < 93% non-condensing
Enclosure	Polycarbonate-ABS blend	Polycarbonate-ABS blend	Polycarbonate-ABS blend
Dimensions	50 x 40 x 12 mm	64 x 41 x 17 mm	64 x 41 x 17 mm
Certifications	EMC, CE, UL, RoHS 2 compliant	EMC, CE, UL, RoHS 2 compliant	EMC, CE, UL, RoHS 2 compliant
Model Image	