

Water Proof Sterionizer

AIM Series



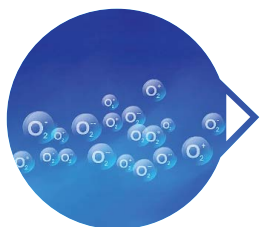


What is a Sterionizer™?

The Sterionizer™ is a patented bipolar ionisation air purification device that brings healthy natural air quality to closed 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 the same positive and negative ions that are naturally produced, which purify and freshen indoor air by eliminating harmful pollutants.



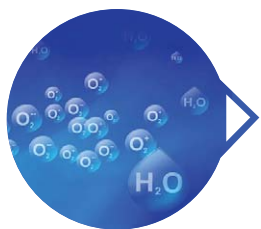
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The Sterionizer™ uses a corona discharge system to split oxygen molecules into positive and negative ions.



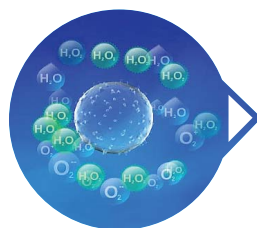
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The oxygen ions are highly volatile and react with air-borne water molecules to form hydrogen peroxide (H_2O_2).



2

The ions cluster around water (H_2O) molecules in the air.



4

Hydrogen peroxide (H_2O_2) is an oxidiser that inactivates bacteria and viruses in the air by destroying their protective coating, effectively sterilising the air in indoor environments.

Where we can use Sterionizer™?

The Sterionizer™ can be easily integrated into various air treatment products, such as air conditioners, air purifiers, blowers, ventilators, humidifiers, dehumidifiers, and more

Why use a Sterionizer?

Allergens in the air may cause an allergic reaction. Avoiding allergens, however, is easier said than done. Therefore, people have been searching a long time for something that neutralises allergens. Several studies have shown that air filtration systems and negatively ionised air may help to reduce allergic symptoms. The atmospheric air contains about 1000 - 4000 negative ions and 1200 - 5000 positive ions per cm^3 (depending on the environment). The air inside is deionised in the absence of an ionising source.

Regular air conditioners generate air free of ions. Research proved that the absence of positive and negative ions has a high impact on human health. It concluded that this deionised air causes headaches, irritability, drowsiness and fatigue.

Technology Highlights:

- › The Sterionizer™ generates naturally occurring oxygen ions that purify the air we breathe in production areas, homes, cars, and office environments
- › Deactivates airborne pollutants, such as viruses, bacteria, fungus, and mold spores
- › Neutralises odours
- › Reduces the allergic effects of dust mite feces
- › 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™ - RoHS, CE, CB & UL certified

What are the Benefits of Integrating the Sterionizer™?

- › Reducing micro organisms in sensitive production areas
- › Provide pure, healthy air for indoor environments
- › Be a 'green leader' by adding air purification features to your product line
- › Extending of shelf life
- › Position your unit as being specially designed for allergy sufferers
- › Enhance revenues, while you enhance the health of your customers

Applications:

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

- › Air conditioners - home, office, automotive, and aviation systems
- › Blowers and ventilation systems
- › Refrigeration systems
- › Air purifiers
- › Packing areas
- › Processing rooms
- › Humidifiers and dehumidifiers
- › Filling areas

Proven Technology Sterionizer™ Efficacy Tests:

Sterionizer™'s bi-polar ionisation technology was tested and proven effective in the elimination of a wide variety of harmful substances.

Testing was carried out in cooperation with world-renown research institutions.

| Harmful Substance | Substance Name | Removal Rate | Testing Organisation | Year |
|-------------------|------------------------------|--------------|---|------|
| Virus | Influenza H1N1 | 99% | Kitasato Research Center, Japan | 2011 |
| | Influenza H5N1 | 99% | Kasetsart University, Thailand | 2011 |
| Bacteria | Escherichia coli | 99.43% | EMSL Analytical, USA Istanbul University, Turkey | 2011 |
| | Staphylococcus aureus | 91.5% | EMSL Analytical, USA | 2011 |
| | Pseudomonas aeruginosa | 99.9% | Istanbul University, Turkey | 2011 |
| Mold | Cladosporium cladosporioides | 97.69% | EMSL Analytical, USA | 2011 |
| Fungus | Dichobotrys abundans | 90% | Prof. Joe F. Boatman, USA | 2006 |
| | Penicillium | 95% | Prof. Joe F. Boatman, USA | 2006 |
| | Aspergillus niger | 97.14% | EMSL Analytical, USA | 2011 |
| | Candida albicans | 36.27% | EMSL Analytical, USA | 2011 |
| Spore | Bacillus subtilis var niger | 89.3% | Istanbul University, Turkey | 2011 |

solidly built &
easy to operate



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Beth-El Machinery Product Lines Include

The AFRB and AFRC series High Clean Rotary Filler and Capper

These machines are designed for an extremely, high, hygienic standard, are able to provide products with a long shelf-life, and have an output speed, depending upon the product, between 1,000 to 12,000 containers per hour.

A servo driven CNC filling machine, is designed so that all functions are fully servo or pneumatic driven, operable from the controller panel, and have an output speed of up to 6000 containers per hour.

The High Clean Continuous Bottle Cleaner

From the AWC series, these machines have a highly flexible set-up and orientation which can accommodate containers with a variety of sizes and shapes, and incorporate a range of capabilities with an output speed of up to 15,000 containers per hour.

The AFR series High Clean Filling

These machines are designed for an extremely high hygienic standard, and are able to provide products with a long shelf-life.

The output speed of the inline filling lines are capable of up to 3600 containers per hour.

Custom Processing Line Engineering and Manufacturing

Beth-El Machinery produces turnkey projects in the engineering and manufacturing of custom processing lines, pasteurisation, deaeration, product recovery systems, and homogenisation systems.

Applications include fermentation, carbonation, control systems, and batch and continuous mixing and blending systems for various fields in the food, chemical, and pharmaceutical industries.

Beth-El Machinery's process units, systems, solutions, and complete processing plants are a direct result of engineering expertise within core disciplines. Our goal is to apply these varied technologies in the most efficient and reliable ways to produce the highest quality process systems and plants available. Beth-El Machinery designs and manufactures the systems that, in turn, do the work for you.



Core Expertise:

Liquid processing

Packaging machines

Mass & heat transfer

Sterilisation units

Controls & automation

Ozone water units

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