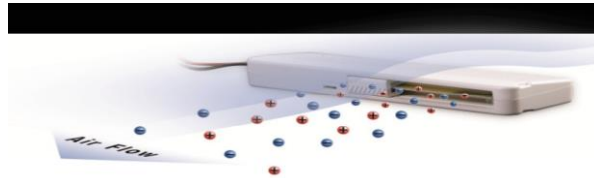
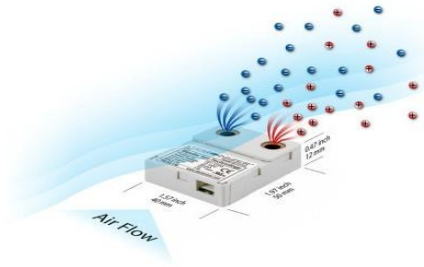




Healthy indoor air... the way nature intended

# PRESENTATION

## STERiONIZER™





STERI+ONIZER™

Healthy indoor air... the way nature intended

## How bad is indoor air ?

The US Environmental Protection Agency lists poor indoor air quality as the **fourth** largest environmental threat to the country!

65% of colds are contracted at home



Healthy indoor air... the way nature intended

**Indoor air pollution affects each and every one of us, regardless of where we live!**








**We spend over 90% of our time indoors !**

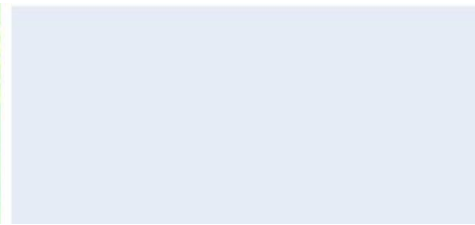




Healthy indoor air... the way nature intended

## Common Pollutants and their Risk

| Pollutant     |   | Risk      |
|---------------|---|-----------|
| Viruses       |    | Infection |
| Bacteria      |    | Allergies |
| Mold          |    | Asthma    |
| Pollen        |   | Flu       |
| Animal dander |  | Fever     |



Healthy indoor air... the way nature intended

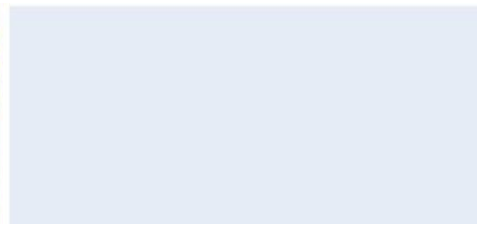
# The Sterionizer™ Technology



Healthy indoor air...  
the way nature intended



**Better Indoor Air Quality "for Fewer Sick Days"**



Healthy indoor air... the way nature intended

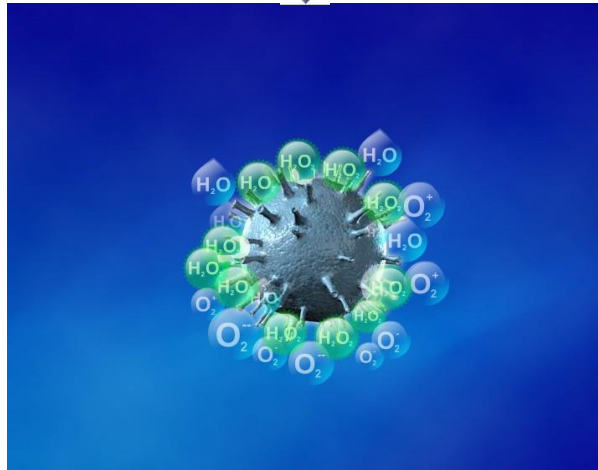
## The Sterionizer™ uses the *Nature Way* to clean the air we breathe

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

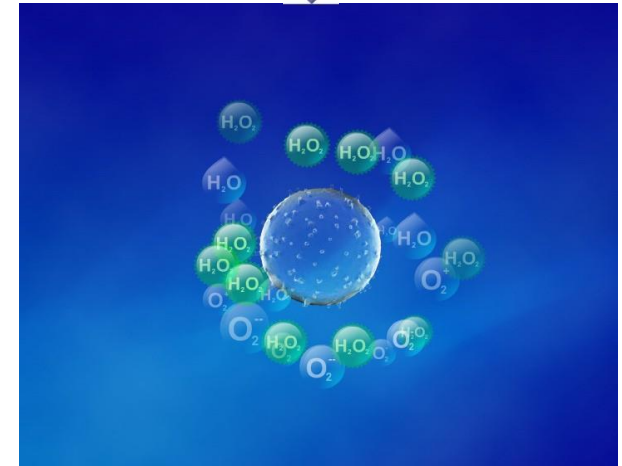


These molecules have very high chemical activity and when reacting with water molecules  $H_2O$  in the air Hydrogen Peroxide  $H_2O_2$

is formed.



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





STERIONIZER™

Healthy indoor air... the way nature intended

## **The Sterionizer™ Technology**

### **Our Application and Product Range**

- Air Condition Systems
- Heat Exchangers
- Ventilation Systems
- Air Duct Systems and Air Outlets
- Refrigerators
- Air Purifiers
- Static Control Devices
- Custom Systems



STERI+ONIZER™

Healthy indoor air... the way nature intended

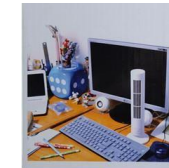
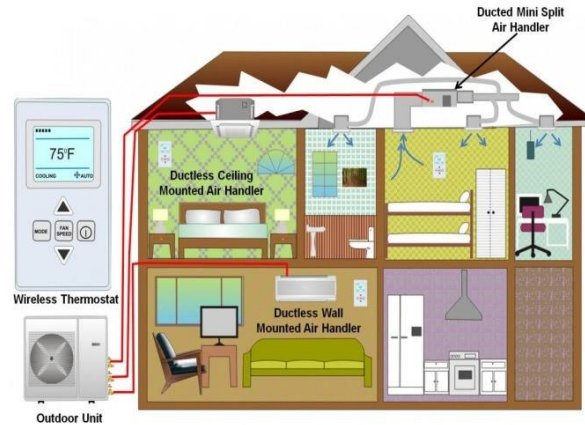
# Air-conditioner Applications

Sp It

Centra

Portab e

Tower



**Residential & Industrial**





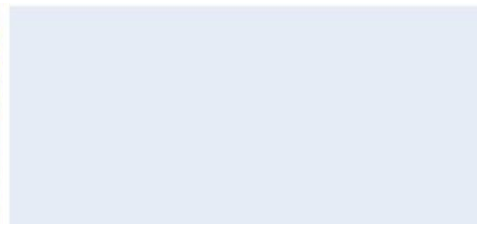
STERIONIZER™

Healthy indoor air... the way nature intended

# Purifiers, Refrigerators and More

The Sterionizer™ products can be fully integrated within existing systems





Healthy indoor air... the way nature intended

# Test Proven Technology

Bacteria

Fungus

Mold

Spores

Viruses

Odors





Healthy indoor air... the way nature intended

# Sterionizer™ Efficacy Tests

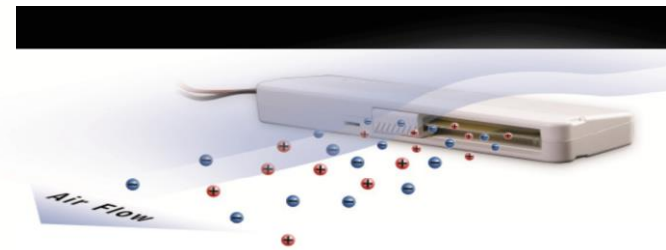
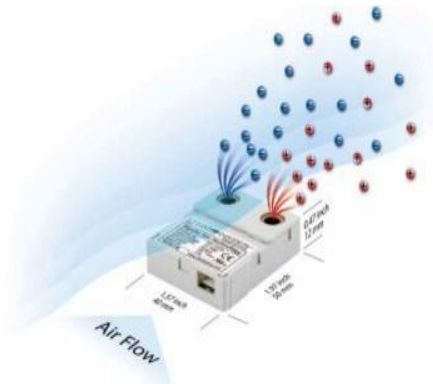
| Substance | Substance Name               | Testing Organization            | Removal | Year |
|-----------|------------------------------|---------------------------------|---------|------|
| Bacteria  | Escherichia Coli             | EMSL Analytical, USA            | 99%     | 2011 |
|           | Escherichia Coli ATCC        | Istanbul University, Turkey     | 91%     | 2011 |
|           | Staphylococcus aureus        | EMSL Analytical, USA            | 91%     | 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            | 36%     | 2011 |
|           | Dichobotrys abundans         | Prof. Joe F. Boatman, USA       | 90%     | 2006 |
|           | Penicillium                  | Prof. Joe F. Boatman, USA       | 95%     | 2006 |
| Mold      | Cladosporium cladosporioides | EMSL Analytical,                | 97%     | 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 |

Healthy indoor air... the way nature intended

**NEW**

## FOOD STORAGE. **BREAKTHROUGH!!!**

It has been shown that **the Sterionizer™ IMPROVES** storage conditions of food products through continuous sterilization of a cooling room without the use of chemical or radioactive substances



Healthy indoor air... the way nature intended

## Comparative Test **without** the Sterionizer™



After two  
weeks  
refrigeration



Healthy indoor air... the way nature intended



STERIONIZER™

Healthy indoor air... the way nature intended

## Comparative Test **with** the Sterionizer™



After two  
weeks  
refrigeration





Healthy indoor air... the way nature intended

## Comparative Test. Visual Findings

| Food item                      | Refrigerator <b>without</b><br>the Sterionizer™  | Refrigerator <b>with</b><br>the Sterionizer™                           |
|--------------------------------|--|--|
| Tomatoes without a plastic bag | Advanced fustiness                               | First signs of fustiness, item relatively fresh                        |
| Cucumbers in a plastic bag     | Advanced fustiness, molds                        | Fresh  |
| Yellow cheese                  | Clear signs of molds, dry                        | No signs of molds, dry   |
| Cup of milk                    | Yellow/Brown color, bad smell<br>"muddy" texture | Normal color, normal smell, pellicles<br>(natural)}                    |
| Cherries                       | Advanced fustiness in most items                 | Only first signs of fustiness in some items.<br>Most fruits are fresh. |

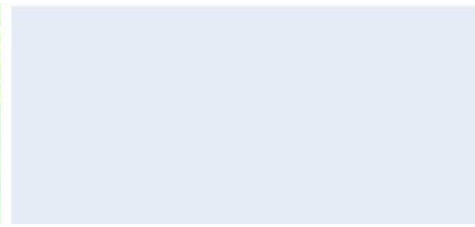




Healthy indoor air... the way nature intended

## Comparative Test Results

| Food Item | Total Count                              |   | Coliforms Count                          |   |
|-----------|--|---|--|---|
|           | Refrigerator<br>with the<br>Sterionizer™ | Refrigerator<br>without the<br>Sterionizer™ | Refrigerator<br>with the<br>Sterionizer™ | Refrigerator<br>without the<br>Sterionizer™ |
| Cherries  | 470                                      | 1450  | 550                                      | 1500  |
| Tomatoes  | 500                                      | 10000                                       | 10                                       | 2200  |
| Milk      | 10                                       | 30000                                       | 10                                       | 520   |



Healthy indoor air... the way nature intended

# The Most Frequently Asked Questions





|   | Question   | Answer  |
|---|--|---|
| 1 | <p>What is the lifespan of the ions?<br/>When are they combined with the ions of the opposite charge and what does it depend on?</p> | <p>At bipolar ionization positive and negative ions are combined both with each another (recombination) and also with molecules of water present in the air (humidity). Ions recombination depends both on humidity and air dustiness. Hence, ionic activity in the air happens constantly during The Sterionizer operation.</p>  |
| 2 | <p>How important is the flow direction and what happens if there is a flow from one electrode to another?</p>                        | <p>The air flow in the direction from one electrode to another is undesirable, because the dust contained in the air flow when passing the first electrode acquires an electric charge (e.g. negative).<br/>When the air flow stream passes the second electrode which has an opposite electric potential (positive), the negatively charged dust settles on this electrode, impeding ionization. As a result the need for more frequent cleaning of dusty electrodes is necessary.</p> |
| 3 | <p>How to calculate correctly the quantity of ionizers required per room or air duct?</p>  | <p>The quantity of The Sterionizer required in the room or air duct is determined by measuring the amount of ions in the room which should not exceed 50.000 ions of each sign per 1cm<sup>3</sup>, in accordance with the standards.</p>   |
| 4 | <p>How to define proper working conditions of the Sterionizer and what is a normal concentration of ions in the air?</p>             | <p>The Sterionizer is equipped with a diagnostic function, which confirms the operation of the ionizer and the ion concentration (refer to the installation instructions).</p>  |



|   | Question  | Answer  |
|---|---|---|
| 5 | What confirms the fact that air in a room equipped with the Sterionizer is cleaner?   | The Sterionizer kills bacteria and viruses in the air indoors. This is confirmed by the results of tests held in various bacteriological and virologic institutes in different countries (refer to certificates).   |
| 6 | What is the lifespan of the Sterionizer ?   | The lifespan of the Sterionizer is limited only by ionizing electrodes which become shortened due to the emission of metal from the edges of these electrodes. However, due to the insignificant emission flow the electrodes ensure a normal operation of the Sterionizer for 4-5 years. |
| 7 | What is the degree of ozone emission into the air in a room equipped with the Sterionizer ?<br>When do I have to take care of the ozone output? | Ozone output in the Sterionizer is 5ppb, while according to the standards the maximal allowed value is 50ppb. This allows the use of up to 10 ionizers in one room without fear of exceeding the ozone level.   |
| 8 | What happens to the ozone level in the air duct if the air flow fails and a strong ion bar is producing ions?                                   | When installing the Sterionizer in an air duct, simultaneous disabling of the ionizers should be provided when air flow fails, in order to avoid the accumulation of ozone. This will also increase the Sterionizer lifespan.   |



Healthy indoor air... the way nature intended

# Thank You!