

# THE iWAVE CAN HELP PROTECT THE AIR QUALITY IN COMMERCIAL SPACES

## **iWave** AIR PURIFIERS

### **Schools and Universities**

- Over 600 K-12 schools and universities currently use iWave
- Fresh air keeps students alert and healthy
- Removes odors from locker rooms, cafeterias, etc.
- Kills mold and bacteria in ice machines (iWave-M)
- Outside air can be reduced to average of 5 cfm per student according to ASHRAE 62.1

### **Healthcare and Dental Facilities**

- Numerous applications in the healthcare field
- Kills bacteria and viruses throughout facility
- Fresh, healthy air aids patient recovery
- Kills mold and bacteria in ice machines (iWave-M)

### **Office Buildings**

- Keeps employees healthy, increasing productivity
- Reduces odors, allergens, smoke and dust particles
- Reduces static electricity that can harm data systems
- Safely freshens air throughout the building

### **Other Businesses**

**iWave helps preserve the health and safety of employees and customers in a wide variety of businesses, including:**

- Restaurants
- Fitness facilities
- Manufacturing plants
- Theme parks, hotels and hospitality
- Government facilities
- Daycare and nursing homes
- Agriculture
- New construction



**iWave kills mold, bacteria and viruses... plus it reduces odors, allergens, smoke, static electricity and dust particles. iWave requires no maintenance and has no harmful byproducts, safely cleaning the air in your facility. With over 200,000 installations worldwide, iWave is the #1 air purifier for institutions.**

# HOW iWAVE® WORKS

iWave is an air purifying device that installs in any air conditioning or heating system. When air passes over the iWave, ions produced by the device reduce pathogens, allergens, particles, smoke and odors in the air, creating a healthy environment without producing any harmful byproducts.

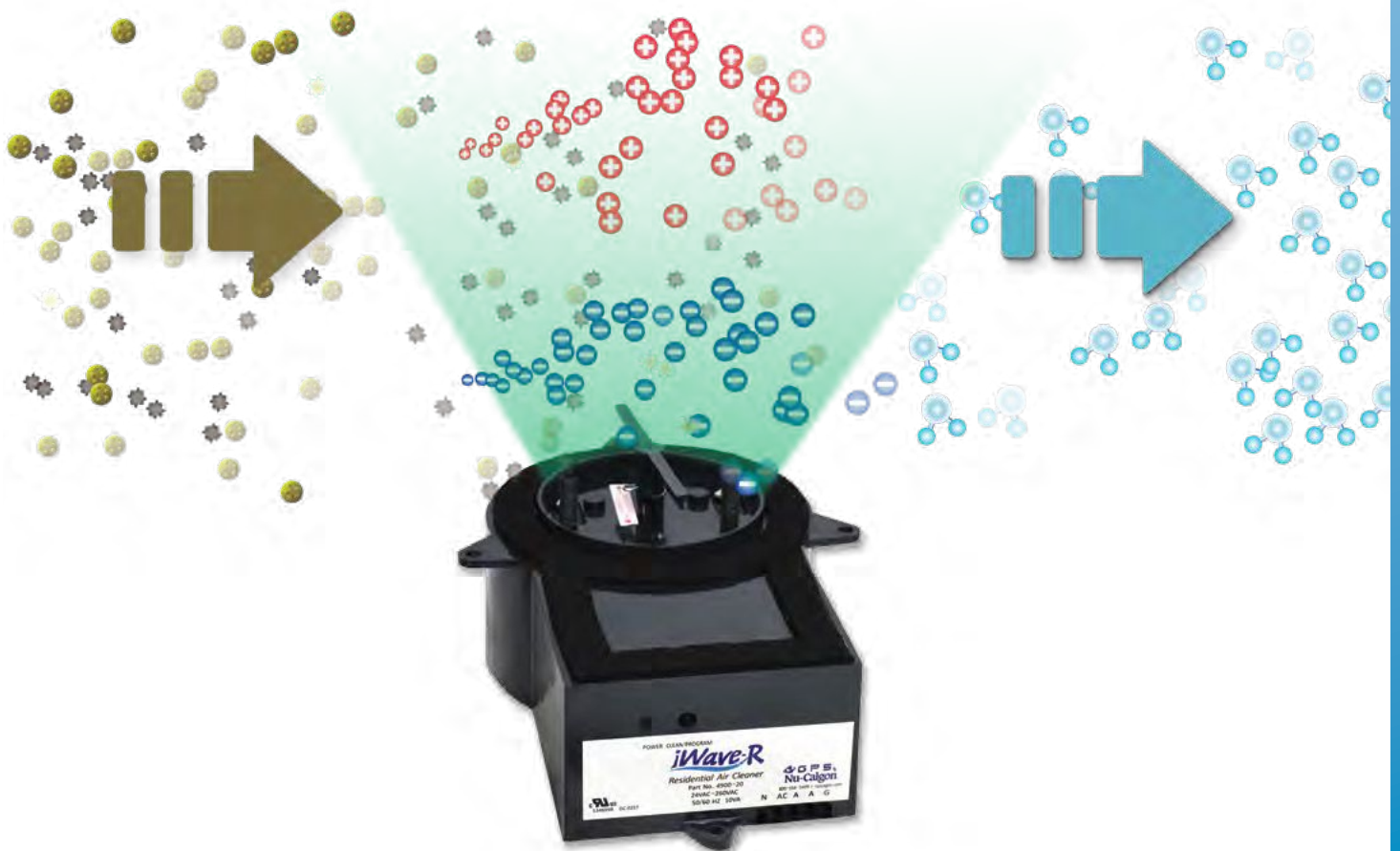
iWave uses needle-point bi-polar ionization with patented and patent pending features to create equal amounts of positive and negative ions. When these ions are injected into the air stream and the breathable air space, they break down passing pollutants and gases into harmless compounds like oxygen, carbon dioxide, nitrogen and water vapor (see illustration below).

When the ions come in contact with viruses, bacteria or mold, their reaction decomposes proteins on the surface of these pathogens, thereby inhibiting their activity. The ions also attach to allergens like pollen and other particles like dust and dander, causing them to band together until they are large enough to be caught by your ventilation system's air filter.

iWave's technology generates the same ions that nature creates with lightning, waterfalls, ocean waves, etc. Nature uses energy to break apart molecules, naturally cleaning the air and producing a healthy environment. The only difference between the iWave's technology and nature is that the iWave does it without developing harmful ozone.

***POLLUTED AIR***

***CLEAN AIR***






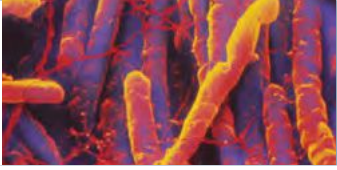

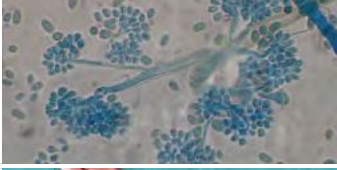


**IWAVE ION GENERATOR**

# iWAVE® REDUCES OR KILLS THESE PATHOGENS

EMSL Labs, a laboratory rated as “Elite” by the Center for Disease Control, and ATS Labs have tested the effectiveness of iWave products against the pathogens listed below. All testing was done in a large environmental chamber in an effort to simulate a home environment. The testing resulted in very high kill rates “in the space.”

You’ll find iWave’s advanced technology provides the most effective air purification method. Other common air purification technologies require ongoing maintenance with bulb/cell replacement every year or two, making the cost of ownership undesirable. iWave air purifiers have no harmful byproducts, and most models require no ongoing maintenance and have no replacement parts. In fact, with the iWave’s patent-pending self-cleaning design, you can enjoy years of maintenance-free performance.

## iWAVE AIR PURIFIERS REDUCE THESE DEADLY PATHOGENS

	<b>STAPH</b>	About 25% of people normally carry Staph in the nose, mouth or other areas of the body. The foot is also very prone to picking up bacteria from the floor.	<b>STAPH – Reduced 96.24% after 30 minutes of iWave purification</b>
	<b>MRSA</b>	MRSA is a Staph germ that does not get better with first-line antibiotics. Once the Staph germ enters the body, it can spread to bones, joints, blood or any organ.	<b>MRSA – Reduced 96.24% after 30 minutes of iWave purification</b>
	<b>E.COLI</b>	E. coli is commonly found in the lower intestine of warm-blooded organisms. Most E.coli strains are harmless, but some serotypes can cause serious food poisoning in humans.	<b>E.COLI – Reduced 99.68% after 15 minutes of iWave purification</b>
	<b>CLOSTRIDIUM DIFFICILE (C.DIFF)</b>	C.diff bacteria release toxins that can cause diarrhea, with abdominal pain that can become severe. In rare cases, this can progress to a life-threatening condition.	<b>C.DIFF – Reduced 86.87% after 30 minutes of iWave purification</b>
	<b>TUBERCULOSIS (TB)</b>	TB most commonly affects the lungs but also can involve almost any organ of the body. Tuberculosis can usually be treated successfully with antibiotics.	<b>TB – Reduced 69.01% after 60 minutes of iWave purification</b>
	<b>AIRBORNE MOLD SPORES</b>	Airborne mold spores are invisible to the eye, and they can easily flow through different areas of the home, especially through heating and cooling system ducts, causing allergic reactions, asthma episodes, eye irritations, sinus congestion and other respiratory problems.	<b>AIRBORNE MOLD SPORES – Reduced 99.5% by iWave purification as tested by Green Clean Air. </b>
	<b>LEGIONELLA PNEUMOPHILA</b>	Legionella outbreaks are associated with large or complex water systems like those found in hospitals, hotels and cruise ships. Symptoms include coughing, shortness of breath, muscle aches, headache and fever. Most make a full recovery, but the CDC reports 1 out of 10 people who get the disease will die from the infection.	<b>LEGIONELLA PNEUMOPHILA – Reduced by 99.71% from a solid surface after 30 minutes of iWave purification</b>

## iWave addresses these VOCs and more!

Xylene  
Styrene  
Methyl Ethyl Ketone  
Ammonia

Acetaldehyde  
Ethyl Alcohol  
Formaldehyde  
Butanal

# Advantages of iWave® Technology Over Two Common Market Approaches:

Feature	<i>iWave</i>	UVPCO Ionizers	UV Lights
Kills pathogens downstream	Yes	Yes	Only line-of-sight pathogens
Controls odors	Yes	Yes	No
Reduces airborne particles	Yes	Poor <sup>1</sup>	No
Replacement parts Required	No	UV cell replaced every 1-2 years	Bulb replaced every 1-2 years
Self-cleaning options	Yes	No	No
Performance	Self-cleaning provides continual peak performance	Fades with UV output	Fades with UV output
Harmful byproducts	No	Creates ozone & other byproducts <sup>2</sup>	Some bulbs emit ozone
Cleans entire depth of coil	Yes	Yes	Cleans only one side
Mercury in airstream	No	Yes	Yes
Energy required	< 10 watts	> 60 watts	> 60 watts
Universal voltage	Most models	Most models don't	No
Robust construction	Solid state design	UV bulbs can break	UV bulbs can break
UV material breakdown	No	UV lights hard on materials	UV lights hard on materials
Contains Titanium Dioxide	No	Some Models	No
Three Year Limited Warranty <sup>3</sup>	Yes	Replace parts in 1-2 years	Replace parts in 1-2 years

<sup>1</sup> Based on third party data comparing market technologies.

<sup>2</sup> ASHRAE position document on filtration and air cleaning, January 2015

<sup>3</sup> Nu-Calgon offers a three-year limited warranty on iWave products. For a valid warranty claim within three years, proof of purchase and proof of installation by a licensed HVAC or electrical contractor must be provided. See full warranty for complete details.



**iWave®-C**  
4900-10

Self-cleaning air purifier for commercial and institutional HVAC systems (up to 12 tons). Multiples can be used in larger systems.



**iWave®-R**  
4900-20

Self-cleaning air purifier for residential and commercial HVAC systems (up to 6 tons), including small rooftop units.



**iWave®-M**  
4900-35

Flexible air purifier for ice machines, ductless HVAC systems, VRF, Mini-Split and P-Tac units.

## SCHOOL TESTIMONIAL

Gwinnett County Schools in Suwanee, GA, have been using iWave products for over two years. They have been installed in new construction and renovated buildings. We have successfully used them in trouble areas that were experiencing odor issues. The advantages we have found using iWave air purifiers are 1) the units require no maintenance after installation, 2) we have reduced our outside air requirement by over half and still meet code, saving energy costs and 3) no units have failed. Overall, the air in the buildings with iWave units seems fresher. Personnel in schools with iWave equipment have reported to us that they notice a difference in the indoor air quality.

– Energy Management Technician at Gwinnett County Schools.