

3 Leading Ionization Technologies in the Market



EAGLE X PRO

Competitive Analysis

There are several solutions offered in the market today to help mitigate risks associated with airborne pathogens. EXP technology offers a superior patented bipolar ionization with significant competitive edge.

Bipolar Ionization Technology is set apart from other competitors and has obtained more beneficial results in a variety of aspects.

1

Corona Discharge based technology

Bipolar Ionization Technology is based on a corona discharge system. Corona discharge is an electrical discharge that is caused by the ionization of fluid. It represents a local region where the air has undergone electrical breakdown and become conductive, allowing charge to continuously spread ions into the air. This method of generating ions has been around for decades but no one has managed to use this method to generate large amounts of + and - oxygen ions without generating ozone. The greatest achievement of this method of BPI is the ability to generate the most dense amount of ions while emitting zero, undetectable ozone. (<0.005ppm)*

2

Needle Point Bipolar Ionization (NPBI)

Needle Point Bipolar Ionization has been in the market since 2007. NPBI keeps the electron voltage potential (eV) used for ionizing the air at high amounts which creates ozone. NPBI can create high amounts of ozone levels and will only offer low to moderate ion output. Most companies using NBPI technology are licensing white labeling the technology.

3

Cold Plasma Discharge

Cold plasma discharge is a partially ionized gas consisting of ions, electrons, ultraviolet photons and reactive neutrals such as radicals, excited and ground-state molecules.

Based on UL test*



Out of the 3 technologies listed, Corona Discharge BPI is by far the most superior making it the superior method in the market today.



- ✓ BPI powered by corona discharge generates 10 billion to 1 trillion ions per second.
- ✓ Competitors generate between 25M-400M ions per second only.
- ✓ The density of ions created indoors by BPI powered by corona discharge is extremely effective compared to other products in the market.
- ✓ The higher the density of ions, the better results.
- ✓ NPBI, Cold Plasma Air technology and other ionizers do not generate enough ions therefore are not effective - low ion count in the space means low density, providing little to no results.
- ✓ BPI powered by corona discharge generates between 10-25 times more ions per cm³ than our competitors, making our density significantly higher with better results.

Technology Comparison	Bipolar Ionization Technology	NPBI	Cold Plasma
Ions per/sec	10B-1T	25M-400M	160M-400M
Density	Up to 60,000	Up to 8,000	Up to 8,000
Density Average	4,000-25,000	1,000-1,500	1,000-1,500
Produces Ozone	Ozone Free (<0.005 ppm*)	0.02-0.03 ppm	0.02-0.03 ppm
Maintenance	None	Self Cleaning	Requires maintenance, including part replacement every 6-12 months, imposing additional costs on clients
Effective in large spaces	Yes	No	No



Major competitor: UV Technology

There are several products that are based on UV light technology. There also are products in the market that combine UV light technology and Ionization technology.

UV is a form of electromagnetic radiation with wavelength from 10 nm (with a corresponding frequency of approximately 30 PHz) to 400 nm (750 THz), shorter than that of visible light but longer than X-rays. UV technology is highly vetted and accepted in the USA. It is surprising that UV technology is highly accepted because research proves that they can have negative effects on humans and the environment.

1. UV lights produce a high level of Ozone and radiation, making it unsafe to people and damaging to the environment. UV Light and Ionization technology products produce 20 times more Ozone than our products.
2. UV lights are effective only in straight line places . Effects are diminished when there is no visual “eye contact” line, making this solution extremely less effective for the entire space it is installed in.
3. UV power reduction over time – maintenance is needed.
4. UV light is harmful to the human eye.
5. UV needs to be set inside the ducts in order to supply clean air and it’s not “actively” clearing the air once it leaves the A/C system.



Technology Comparison	Bipolar Ionization Technology	UV	Photocatalytic Oxidation	Media Filtration	Other Needle point Ionization	Carbon Filters	Electronic Air Cleaners	HEPA Filtration
Neutralizes Against Viruses*	Yes	Yes	Yes	No	Yes	No	Yes	No
Neutralizes Bacteria, Fungi and Mold Spores	Yes	Yes	Yes	No	Yes	No	Yes	Yes
Produces Ozone*	No	Yes	Yes	No	No	No	Yes	No
Maintenance	None	Annually	Annually	Quarterly	Bi-annually to 2 Years	Bi-annually	Monthly	Bi-annually
Re-engineering of HVAC System Needed	No	No	No	Yes	No	Yes	Yes	Yes
Appropriate for any indoor space	Yes	No	No	No	No	No	No	No
Creates "Forest- Effect"	Yes	No	No	No	No	No	No	No

In a lab setting*
Based on UL test*

Conclusion



Throughout our market research, it is concluded that there are no other products on the market that have the same advanced technological solutions that Eagle X Pro has to offer. BPI powered by corona discharge creates the highest density of ions while emitting zero, undetectable ozone.* The goal is to increase the ambient space by 5-50x more ions with Bipolar Ionization Technology in the space, and provide a better, safer and cleaner indoor air environment.