Bi-Polar$_{2400}$® Ionization Technology from Air Oasis, LLP

The Bi-Polar$_{2400}$® creates bi-polar ionization replicating the same positive and negative ions found abundantly in nature. Ions are found in the highest concentrations where the ocean meets the shore and high elevations in the mountains. The Bi-Polar plasma process will artificially create the ions found in nature and disperse them throughout the building, enhancing indoor air quality.

Here is the science behind bi-polar ionization.

- An ion is an atom or molecule in which the total number of electrons is not equal to the total number of protons giving the atom a net positive or negative electrical charge.
- An air ionizer (or ion generator) is a device that uses a voltage source to ionize (electrically charge) air molecules. When air or gas is ionized, plasma is formed.
- The Bi-Polar$_{2400}$® creates cold plasma discharge from water vapor in the air. This discharge consists of positive and negative ions.
- Plasma is one of four fundamental states of matter (the others being solid, liquid and gas).

When the ions land on the outer shell of a pathogen such as mold, bacteria or viruses, the hydrogen is removed, the DNA is damaged and the pathogen becomes impotent and cannot reproduce. This renders the pathogen harmless and it will not cause infection, even if it enters the body. These now harmless molecules, along with particles such as dust, smoke pollen and dander cluster together to create larger and larger particles. When they become heavier than air they will precipitate or drop out of the air and are then easily trapped in filters.

Cold plasma ions also attack odors and harmful VOC's on a molecular level converting them into harmless atmospheric gasses, such as oxygen, carbon dioxide and water vapor. Because of the abundance ions in the air, the balance of positive and negative ions neutralizes static electricity in the conditioned space.

The plasma process produced by the Bi-Polar$_{2400}$® consumes a very small amount of electricity, less than a standard light bulb. (10 watts)

The Air Oasis Bi-Polar$_{2400}$ will work in any conditioned space with up to 6 Tons of cooling capacity. Because the active life of the ions created is approximately 5 minutes, there is no danger of an over-abundance of ions.

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Independent testing confirms ionization from the plasma process controls the following contaminants:

- ✓ Up to 99% air borne mold reduction
- ✓ Up to 90% air borne particulate & allergen reduction
- ✓ Up to 86% (CDIFF) reduction
- ✓ Up to 99% E. coli reduction
- ✓ Up to 96% MRSA reduction
- ✓ Up to 69% TB reduction
- ✓ Up to 99% E. faecium reduction.
- ✓ Up to 99% Formaldehyde reduction
- ✓ Up to 99% TVOC reduction
- ✓ Up to 99% H5N1 & H1N1 reduction
- ✓ Up to 99% Feline Coronavirus reduction
- ✓ Up to 99% Coxsackie Virus reduction
- ✓ Up to 99% Polio Virus reduction
- ✓ Up to 73% SARS Virus reduction

  Just to name a few.

The Bi-Polar$_{2400}$® can be installed in any system, ducted or ductless. There are no replacement parts and is manufactured with a durable Polycarbonate UV stabilized VO fire rated housing. Available in three voltages (24 VAC, 115 VAC & 220 VAC) with dual mounting holes for positive positioning, the Bi-Polar$_{2400}$® is one of the most versatile ion generating units on the market today.

Here is a summary of benefits for the Bi-Polar$_{2400}$®

- Low up front cost
- Quick and easy installation
- Compact, attractive, aerodynamic design
- Filterless
- Ozone free
- Water resistant
- Easy maintenance
- Effective for up to 2400 CFM (6 tons)

The warranty on the Bi-Polar$_{2400}$® is one year. Without mechanical or moving parts to fail, and being fully potted to protect against moisture, the unit should last as long and the air handler.

If you have questions regarding the Bi-Polar$_{2400}$®, please contact your local distributor, myself, or Air Oasis, LLP.

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