AtmosAir air purification - all you need to know

HOW IS ATMOSAIR TECHNOLOGY DIFFERENT FROM OTHER AIR PURIFIERS ON THE MARKET?

Most HVAC air purification systems you see on the market today are “passive” technologies. Media filters catch particles in the return air stream are the most common. Ultraviolet (UV) and Photocatalytic Oxidation (PCO) filtration systems that purify air on the return side of the air system. AtmosAir is a “proactive” HVAC air purification system, and works to clean the air people are breathing in their occupied space.

DON’T FILTERS REMOVE MICROORGANISMS, VOCS AND PARTICLES?

Typical media filters do not perform particularly well in regard to removing microorganisms, VOCs and particles. High-efficiency media filters are best against particles, but do not filter up to 70% of the air that finds its way into “the space.” Some filters are capable of “catching” or eliminating particles and VOCs from the air stream, but they can’t effectively break down microorganisms, VOCs and particles at their source so that they do not reproduce.

HOW IS ATMOSAIR DIFFERENT FROM UV LIGHTS?

UV lights are only effective on a handful of Contaminants of Concern (COC), and these would have to pass through the UV light rays for a period of time long enough to be effective. UV lights do not treat any of the air in the occupied space, nor are they effective on VOCs and odors. UV lights require that the air be returned to the air handling system – we label this a “reactive” system. However, UV lights can help the performance of your AtmosAir systems and overall IAQ. Many hospitals have both AtmosAir BPI and UV lights in order to be proactive against bacteria and COC. UV lights have also traditionally been used to keep cooling coils clean.

HOW IS THE IAQ LEVEL SELECTION TABLE USED IN SIZING?

Based on experience, different environments call for different amounts of systems. AtmosAir’s HVAC air purification selection tool helps determine the appropriate equipment for the building.

WILL I STILL NEED TO CHANGE THE FILTERS IN MY HEATING AND AIR CONDITIONING SYSTEM?

Yes, the AtmosAir HVAC air purifier is not a catch and grab filter. It does not trap particles, but rather reduces airborne pollutants and particles in the occupied space – where you live, eat, sleep, etc. In fact, because the AtmosAir air purification method

causes airborne particles to stick together, your filters will become more efficient by trapping these larger particles.

DOES ATMOSAIR BI-POLAR IONIZATION REPLACE MEDIA FILTERS?

No, AtmosAir Bi-Polar Ionization is an commercial air purifier that works in conjunction with mechanical filtration and is not intended to replace components such as media filters.

HOW DO I SIZE MY ATMOSAIR BI-POLAR IONIZATION SYSTEM?

AtmosAir has developed a sizing spreadsheet that will quickly help generate an AtmosAir selection schedule. Consult AtmosAir application engineers for custom solutions and guidance for the best HVAC air purification system to meet your needs.

WHAT IS ATMOSAIR BI-POLAR IONIZATION?

AtmosAir Bi-Polar Ionization is an indoor air purification technology. It works by adding a controllable amount of both positive and negative oxygen ions to the supply air of an air handling system. Very simply, an ion is an atom or molecule that has gained or lost an electron. Both positive and negative ions exist in the air. By increasing the quantity of charged oxygen ions, air quality is improved to “fresh air” levels.

HOW DOES ATMOSAIR REDUCE VOLATILE ORGANIC COMPOUNDS (VOCS)?

AtmosAir bi-polar oxygen ions surround the VOCs and break down hydrocarbon chains that ultimately make these complex compounds into immeasurable levels of carbon dioxide and water vapor.

DOES ATMOSAIR REALLY WORK?

Yes, hundreds of references to BPI effectiveness can be found in published literature. AtmosAir has been third party tested by the likes of UL, ETL, ATL, MicroChem Laboratories and various other respected laboratories. AtmosAir Bi-Polar Ionization has been used worldwide.

DOES THE IONIZATION SYSTEM INCREASE THE OXYGEN CONTENT IN THE AIR?

No. The technology increases the number of oxygen ions, not the number of oxygen molecules. It revitalizes stable oxygen molecules into unstable oxygen ions – these ions want to react with pollutants by trading electrons to become stable again.

ARE ATMOSAIR HVAC AIR PURIFICATION SYSTEMS UL LISTED?

Yes. For complete safety, our commercial air purifiers have been tested and listed as UL under Category Code ABQK (Accessories, Air Duct Mounted) and UL Standards 1995 and 867, respectively, no exceptions. AtmosAir is also ENERGY STAR certified, EU standard certified and ANSI/AHAM third party tested.

HOW OFTEN SHOULD THE ATMOSAIR IONIZATION TUBES BE CHANGED?

AtmosAir composite tubes will degrade and become ineffective after approximately 24 months. In this case, the tubes should be changed once every 24 months.

IS IT DANGEROUS TO TOUCH THE IONIZATION TUBES?

Yes, if the ionization unit is powered and you touch the tube, you could be injured. Therefore, before touching the tube or removing it for replacement, make sure the power to the unit is off by unplugging it from the power source.

IS IT DANGEROUS TO LOOK AT THE IONIZATION TUBE WHILE IT IS OPERATING?

No. Unlike UV lamps, which can harm your eyes, there is no danger in looking at a powered ionization tube.

WHAT IS THE MAXIMUM TEMPERATURE THAT THE IONIZATION TUBE CAN BE SUBJECTED TO?

The tubes should not be subjected to temperatures exceeding 150 degrees

Fahrenheit.

MY ROOM SMELLS OF SMOKE; CAN AN ATMOSAIR SYSTEM HELP?

Yes, AtmosAir HVAC air purification systems are installed in various cigar bars, as well as casinos that have many smokers. Smoke mitigation via air purification is a strength of the AtmosAir purification system and can help a facility reduce the complex contaminants that make up smoke.

WHAT IS THE WARRANTY ON MY ATMOSAIR HVAC AIR PURIFICATION SYSTEM?

AtmosAir warranties the life of the commercial air purifiers for two calendar years. Many commercial projects are warrantied for the life of however long a client changes their tubes and maintains their system in a timely, efficient manner.

IS ATMOSAIR EFFECTIVE IN 100% OUTSIDE AIR UNITS?

AtmosAir air purification methods are equally effective whether the air system is 100% outside air and exhaust air, 100% recirculated air or something in between. AtmosAir commercial air purifiers generate bi-polar ions that are carried by the supply air and distributed through the supply diffusers into the indoor space. Our air cleaning technology is engineered to saturate the space with ions and have the ions react with contaminants within the space. Most ions are spent up in the space by these continual reactions, while some may exit through the return air but are spent up by media filters, so even in a recirculation air system, ions do survive the trip back. If the AtmosAir purification system is designed and engineered correctly, the indoor space will be enriched with bi-polar ions, resulting in cleaner indoor air.

HOW DOES ATMOSAIR REDUCE PARTICULATE MATTER (PM)?

Oppositely charged AtmosAir bi-polar oxygen ions cause particles to attract to other particles and become bigger and heavier by a process called “agglomeration”. These

bigger heavier particles can now be better trapped by HVAC system filters, allowing the filters to operate more efficiently. Many small particles generated within a space by people and their activities may never get to system filters and ordinarily stay suspended in air for long periods and can be breathed in, increasing the chance of illness and respiratory distress. The AtmosAir BPI process will drop these particles to the floor, quickly taking them away from the air we breathe.

HOW DOES ATMOSAIR WORK AGAINST VARIOUS BACTERIA, VIRUSES AND GERMS?

AtmosAir positive and negative ions surround the hemagglutinin (surface proteins that form on organisms and trigger infections) and change into highly reactive OH groups called hydroxyl radicals. These take a hydrogen molecule from the hemagglutinin and change it into water. The ions destroy the virus surface structure, for example its envelopes and spikes, on a molecular level. As a result, the virus cannot infect even if it enters the body.

DOES ATMOSAIR HAVE A DEVICE THAT MEASURES ION LEVELS?

Yes, AtmosAir has a specially designed meter that reads ion levels.

DOES ATMOSAIR PRODUCE OZONE?

No, AtmosAir does not produce Ozone and has been tested by UL-867 standards and is UL2998 certified. AtmosAir air purification systems will not produce any measurable amount of ozone in occupied spaces.

HOW DO I KNOW THAT MY ATMOSAIR HVAC AIR PURIFIER IS WORKING PROPERLY?

First, perform a local check and ensure that the green light on the front of your ionization unit is illuminated. If the green light is not on, call the contractor that installed your unit and have them service it. If the green light is on but you do not feel that the air is being cleaned sufficiently, you can turn the ionization control knob up until you are satisfied with the air quality. If your ionization tube has not been replaced within the last 24 months, you should contact your distributor or contractor and have them replace the tube.

WHAT IS SICK BUILDING SYNDROME (SBS)?

Sick Building Syndrome (SBS) occurs when occupants of a building experience acute health effects that seem to be linked to time spent in a building, but no specific illness or cause can be identified. The complaints may be localized in a particular room or zone or may be widespread throughout the building. Frequently, problems result when a building is operated or maintained in a manner that is inconsistent with its original design or prescribed operating procedures. Sometimes indoor air problems are a result of poor building design or occupant activities.