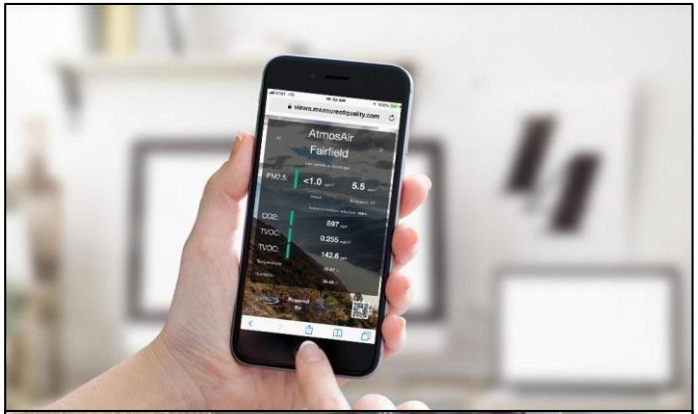
The Air is Better Here.

www.AtmosAir.com

About AtmosAir SOLUTIONS

AtmosAir is committed to improving energy efficiency and indoor air quality in buildings worldwide through its innovative AtmosAir Solutions air treatment and monitoring system.

- Headquartered in Fairfield, Connecticut
- Started as an air testing company in 2004
- Branded patented Bi-Polar Ionization (BPI) air treatment technology as ***AtmosAir*** in 2008
- JCI Custom and Solution Air Handler OEM Selection
- 100M+ Square Feet Installed
- 7,500+ buildings with AtmosAir systems
- Partnered with KeyTronicEMS manufacturing
- Granted 10+ technology patents and 20 pending patents
- Offices in Connecticut, Arizona, Dubai, London and Shanghai



AtmosAir 'How It Works' Video by Gensler

https://www.youtube.com/watch?v=A-b7vDnFv6k

AtmosAir BPI and Air Monitoring Experience

These companies have all incorporated AtmosAir BPI and air monitoring

Key Markets:

- Commercial Offices
- Healthcare
- Schools
- Hospitality
- Sports
- Airports
- Marine
- Convention Centers
- Grocery Stores
- Government
- Performing Arts

Seattle Children's Hospital

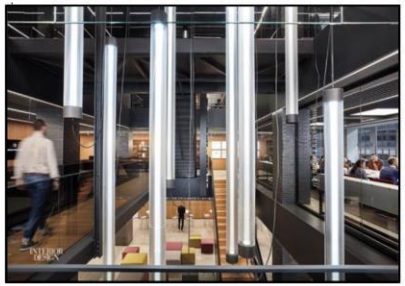
Extremely positive result with operating rooms being reopened and mold measuring consistently at 0 CFU following major issues.

Related Properties

Strong reductions against VOCs, particulate, and bacteria in offices at 60 Columbus Circle.

Rush University Medical Center

Bacteria sampling results showed significant bacteria reductions.



Gensler

Installed in eight offices. Air purification and real-time measurement of IAQ in pilot project in LA showed 90% reduction in VOCs.

Regal Princess

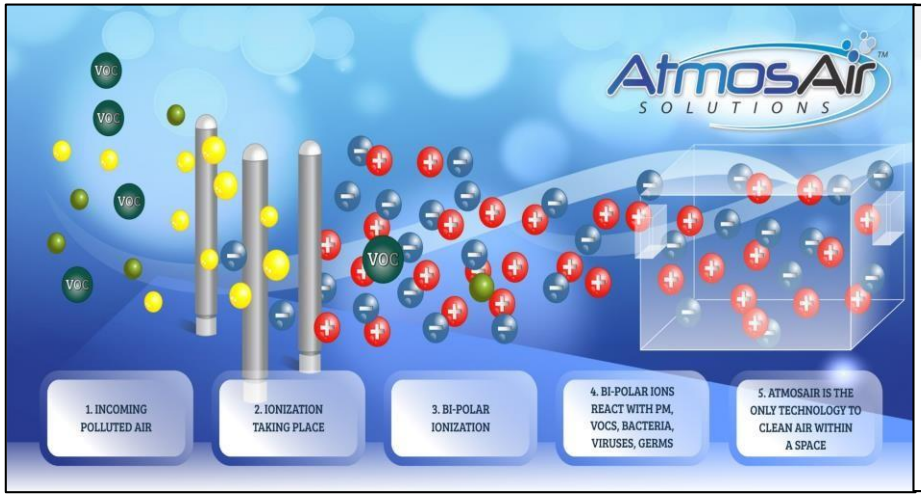
Bacteria, VOCs, and five ranges of particulate reduced in Carnival's Regal Princess.

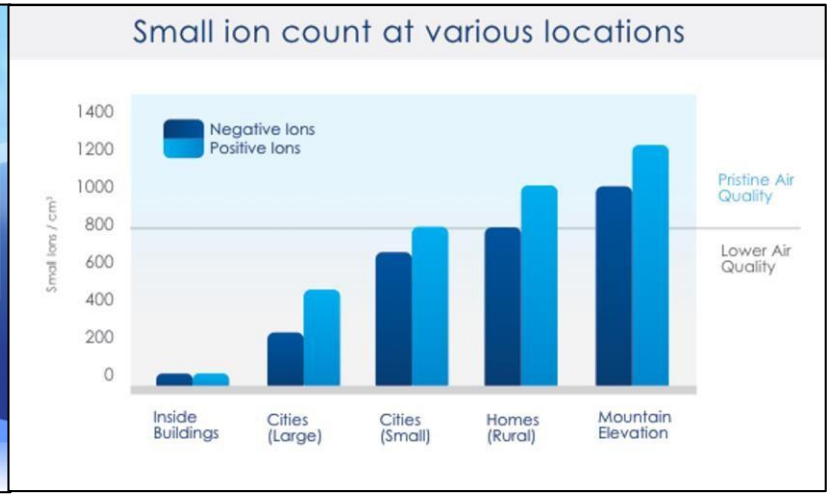
US Bank Stadium

AtmosAir installed in every handler throughout LEED Platinum stadium. (50) AtmosAware air quality sensors deployed throughout building.

AtmosAir measurably reduces viruses, bacteria, particulate matter, and VOCs.

AtmosAir Bi-Polar Ionization Air Treatment



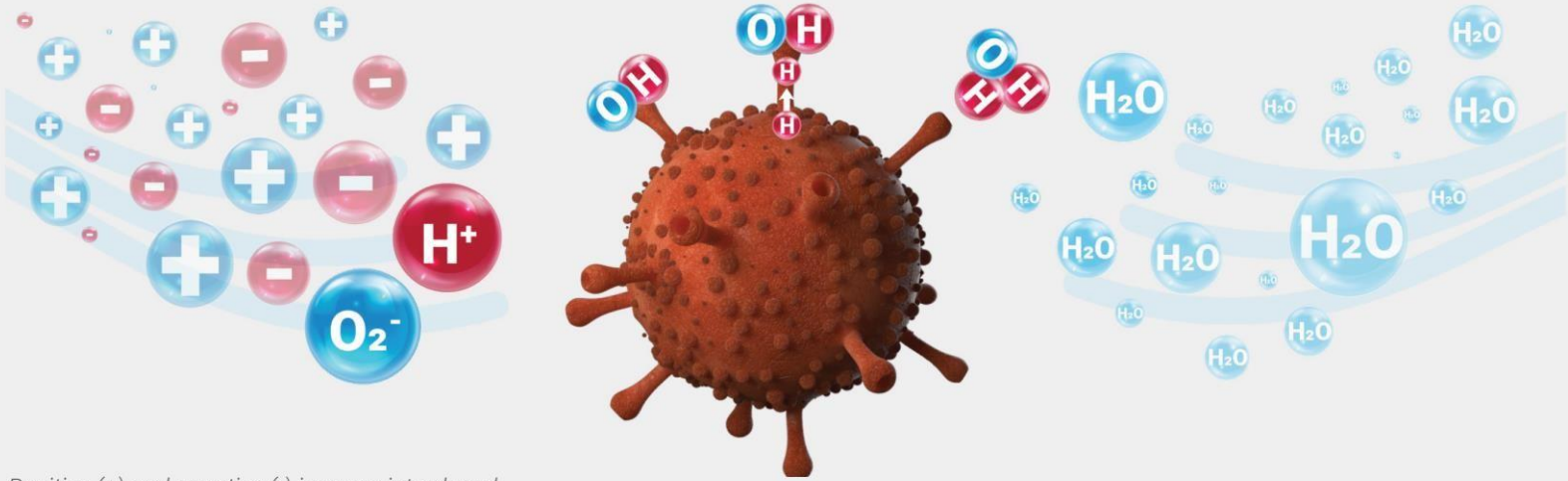


AtmosAir is the only SUPPLY SIDE indoor air treatment solution that continuously measures, monitors and *smartly* disinfects air in the occupied space.

AtmosAir goal is to increase indoor Bi-polar ion concentration by 3-4x ambient (500-1500 ions/cm3) replicating ion rates found in natural environments.

AtmosAir "Continuous Disinfection"

How AtmosAir Inactivates Viruses:



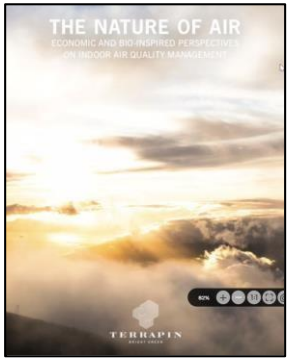
Positive (+) and negative (-) ions are introduced into the air via the AtmosAir system. OH radicals are formed when ions attach to the proteins that protrude from the membrane of a virus.

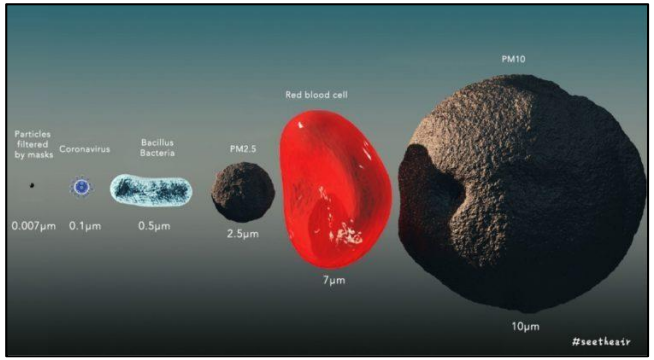
The OH radicals steal hydrogen from the virus, and return to the air as water, leaving holes in the membrane.

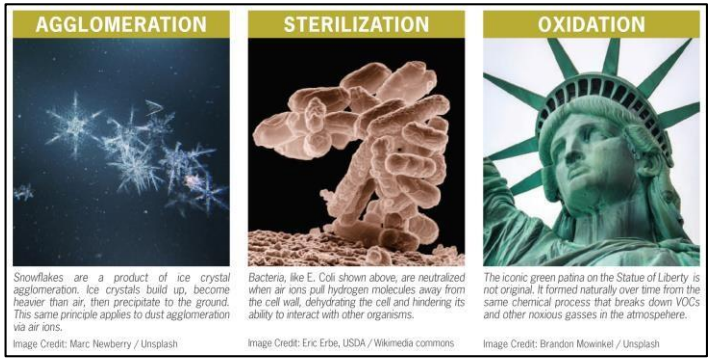
The destroyed proteins leave holes in the membrane, inactivating the virus.

AtmosAir is the only SUPPLY SIDE indoor air treatment solution that continuously measures, monitors and *smartly* disinfects viruses and air in the occupied space.

AtmosAir Bi-Polar Ionization Air Cleaning Process







AtmosAir is outlined in Whitepaper 'Nature of Air – Economic and Bio-Inspired Perspective for Indoor Air Quality Management.' (2019, Browning)

How does AtmosAir™ work against various bacteria, viruses and germs?

Positive and negative ions surround the surface proteins that form on organisms and trigger infections (hemagglutinin), changing them 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 on a molecular level, rendering it incapable of causing infection even if it enters the body.

How does AtmosAir™ reduce particulate matter?
Many small particles that are generated within a space never get to system filters, increasing the chance of illness and respiratory distress. The AtmosAir™ Bi-polar ionization process helps more of these particles be removed from the air we breathe. Oppositely charged AtmosAir™ Bi-polar air ions cause particles to attract to other particles and become bigger and heavier. These larger particles can be trapped by HVAC system filters more easily, so the filters operate more efficiently – and effectively.

How does AtmosAir™ reduce Volatile Organic Compounds (VOCs)?
Bi-polar ions generated by the AtmosAir™ system surround the VOCs and break down hydrocarbon chains, reducing these complex compounds into immeasurable levels of carbon dioxide and water.

People exhale droplets while sneezing, coughing, and talking.
Micro-droplets carrying viruses can remain airborne in a 'residual cloud'.

AtmosAir Bi-Polar Ionization vs. Viruses

"AtmosAir BPI causes production of clusters of hydroxyl radicals which are formed of the surface of microbes removing hydrogen from the microbes cell wall, thereby killing them. It can reduce 99.% of microbes in a matter of minutes. Ions work in a continuous fashion to disinfect the air." – Dr. Philip M. Tierno, Jr., NYU

https://vimeo.com/354770758

Cleaning Indoor Air using AtmosAir Bi-Polar Ionization Technology

Dr. Philip M. Tierno Jr., Professor of Microbiology and Pathology, New York University School of Medicine

April 2017

Clean air, both outdoors and indoors, is an essential determinant of a healthy life and a person's well being.

Outdoor Air Quality OAQ): The federal government has made great progress towards cleaning outdoor air since 1970 via the Clean Air Act (CAA) and its additional amendments signed into law in 1990. This Act resulted in a significant 70% reduction of aggregate emissions of six representative indicators of common pollutants between the years of 1970 to 2014! Thusly, the CAA laws define the EPA's responsibilities for protecting and improving the nation's outdoor air quality utilizing the advances in science and technology to accomplish this task (1). These outdoor air quality improvements have enabled many areas of the country to meet national air quality standards set to protect public health and the environment. To simply summarize: for more than 40 years the CAA has significantly cut outside air pollution even as the U.S. economy has grown. Because of the act, Americans breathe less outdoor air pollution and face lower premature death and other adverse health effects (1).

Indoor Air Quality (IAQ): Despite public health awareness and progress on outdoor air pollution, progress on indoor air pollution has significantly lagged behind. The quality of air inside homes, offices, schools, day care centers, hospitals and other health care facilities (where multi-drug resistant bacteria reside), as well as other private and public buildings where people spend a large part of their life, is also an essential determinant of health and well being. Interestingly, indoor air quality is profoundly important for two main reasons. First, most Americans spend about 90% of their time indoors! Second, the EPA has reported that indoor air pollution is 25 to 100 times worse than the outdoor air. However there are some standards for indoor air. For example, if you work with certain chemicals, sprayed substances, powders or known carcinogens or allergens, the Occupational Health and Safety Administration (OSHA), the EPA of the workplace, requires employers to reduce risk for workers (2). The EPA has also developed some additional IAQ tools for schools (3). Certainly also the WHO (World Health Organization) has a long tradition in synthesizing the evidence on the health aspects of air quality and in providing air quality guidelines defining conditions for healthy air (4). IAQ is a term, which refers to air quality within as well as around buildings and structures, especially as it relates to the health and comfort of the occupants (5). IAQ is affected by gases (such as carbon monoxide and carbon dioxide), volatile organic compounds (VOCs), particulates, microbes (including bacteria, viruses and mold fungi), allergens, odors of a variety of types, and anything else that might affect the quality of the air.

How We Make Each Other Sick: There are available techniques for cleaning indoor air, but in order to better understand these options it is imperative to first discuss the dynamics of how we make each other sick. The great majority of human infections, about 80%, are transmitted by direct and indirect contact, and the remaining 20% of infections are transmitted by 3 other modalities, namely, common source (contaminated food or drink), arthropod vectors (such as

AtmosAir Lab Data vs. Viruses

ANTIMICROBIAL TEST LABORATORIES

Results of the Study: Test Run

Microorganism	Test Device	Initial Numbers Control (CFU/m³)	Sampling Time Point	Recovery (CFU/m³)		Percent Reduction vs. Normalized Numbers Control	Log Reduction vs. Normalized Numbers Control
				Normalized Numbers Control	Test Data		
S. saprophyticus ATCC 35552	Matterhorn	4.14E+08	15 Minutes	3.39E+07	2.31E+05	99.32%	2.17
			45 Minutes	4.48E+06	<2.27E+01	99.9995%	5.29

Note: The Limit of Detection (LOD) for this germ is 22.7 CFU/m³. Values below the LOD are represented as <2.27E+01 in the chart above and 0 in the graph below.

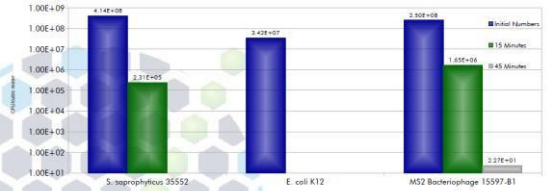
Microorganism	Test Device	Initial Numbers Control (CFU/m³)	Sampling Time Point	Recovery (CFU/m³)		Percent Reduction vs. Normalized Numbers Control	Log Reduction vs. Normalized Numbers Control
				Normalized Numbers Control	Test Data		
E. coli K12	Matterhorn	3.42E+07	15 Minutes	1.18E+06	<7.68E+02	>99.94%	3.19
			45 Minutes	1.61E+05	<2.27E+01	>99.986%	>3.85

Note: The Limit of Detection (LOD) for this germ are 768 CFU/m³ and 22.7 CFU/m³ for 15 and 45 minutes, respectively. Values below the LOD are represented as <7.68E+02 and <2.27E+01 in the chart above and 0 in the graph below.

Microorganism	Test Device	Initial Numbers Control (CFU/m³)	Sampling Time Point	Recovery (CFU/m³)		Percent Reduction vs. Normalized Numbers Control	Log Reduction vs. Normalized Numbers Control
				Normalized Numbers Control	Test Data		
MS2 Bacteriophage ATCC 15597-B1	Matterhorn	2.50E+08	15 Minutes	8.84E+07	1.65E+06	98.13%	1.73
			45 Minutes	3.32E+07	2.27E+01	99.99993%	6.17

Note: The Limit of Detection (LOD) for this germ is 22.7 CFU/m³. Values below the LOD are represented as <2.27E+01 in the chart above and 0 in the graph below.

Relative Performance of AtmosAir Matterhorn when Tested Against Bioaerosolized Microorganisms



The results of this study apply to the tested substances(s) only. Extrapolation of findings to related materials is the responsibility of the Sponsor.

www.AntimicrobialTestLabs.com - Info@AntimicrobialTestLabs.com - (512) 310-8378

Results

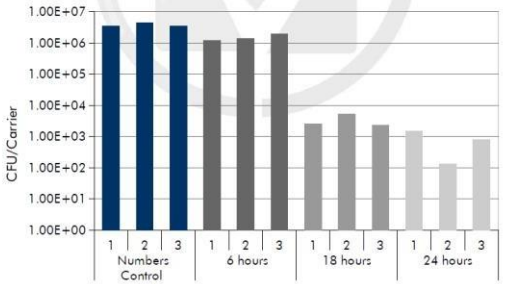
MICROCHEM LABORATORY

Results of the Study

The following graph and table are the calculated results for *C. difficile* 43598 (Endospores) when treated with Matterhorn in a closed chamber measuring 4' x 4'.

Test Device	Test Microorganism	Carrier Control/ Treatment	Replicate or Control Time Point	CFU/Carrier	Average CFU/Carrier	Percent Reduction Compared to Control at Contact Time	Log_{10} Reduction Compared to Control at Contact Time
Matterhorn	*C. difficile* 43598 (Endospores)	Numbers Control	6 hours	3.60E+06	N/A		
			18 hours	4.50E+06			
			24 hours	3.60E+06			
		6 hours	1	1.19E+06	1.53E+06	57.59%	0.37
			2	1.38E+06			
			3	2.01E+06			
		18 hours	1	2.50E+03	3.33E+03	99.93%	3.13
			2	5.20E+03			
			3	2.30E+03			
		24 hours	1	1.51E+03	8.17E+02	99.98%	3.64
			2	1.30E+02			
			3	8.10E+02			

The limit of detection for this assay is 1.00E+01 results below the limit of detection are reported as <1.00E+01.



RESULTS

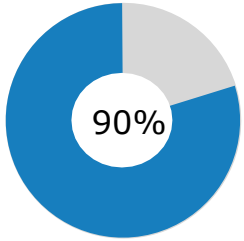
AtmosAir has lab data and testing vs. various viruses, fungi, bacteria, and allergens.

AtmosAir BPI Research & Testing

Systems have been tested and independently verified by multiple labs and institutions.

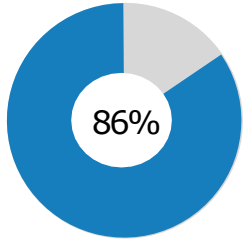
- Reduced VOC's up to 90%
  (University of Syracuse Testing, 2019)
- Reduced >86% of PM0.3 particulate
  (ETL CADR Testing)
- Reduced Staph and MRSA by 99% over 45 minutes.
  (ATL Labs, 2016)
- Reduced MS2 Bacteriophage (Norovirus Surrogate) by >95% over 45 minutes.
  (ATL Labs, 2016)
- Reduced C. difficile by >57% over 6 hrs.
  (Microchem Laboratory, 2017)

Additional lab and real world testing against bacteria, mold spores, Cladosporium, Penicillium/Aspergillus, Coliform Bacteria, Bacillus subtilis, H1N1 influenza virus, Corona Virus, H5N1 avian influenza virus, Airborne Allergens, Ultrafine particles.



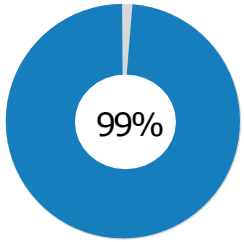
Reduction in
VOC's

Source: Univ. of Syracuse Testing 2019



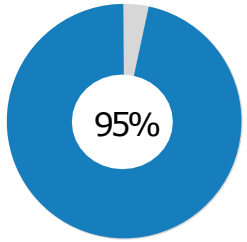
Reduction in
PMO.3

Source: ETL CADR Testing



Reduction in
Staph & MRSA

Source: ATL Labs, 2016

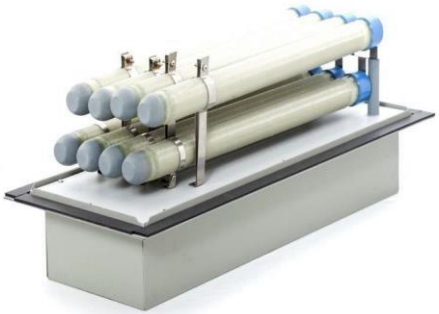


Reduction in
MS2 Bacteriophage

Source: ATL Labs, 2016

AtmosAir Benefits

- **Reduced dust and particulate matter.** Bi-polar ions that bond with contaminants gain size and mass and drop to the floor, or return to the filter, making them easily cleaned from the air we breathe.
- **Reduced odors.** Bi-polar ions break down odors at their source and eliminate them.
- **Reduced Mold:** Hydroxyl radical takes hydrogen molecule from cell wall of airborne fungi particle.
- **Reduced VOCs (Volatile Organic Compounds) and Odors**. Bi-polar ions break down odors at their source and eliminate them.
- **Reduced bacteria and viruses.** Bi-polar ions reduce viruses by removing hydrogen from the cell wall thereby killing them.
- **Improved energy conservation.** AtmosAir systems makes managing IAQ less expensive. Spend less on heating and cooling ventilated air - recycle conditioned, purified air instead.



90%

of our time is spent indoors

Source: EPA

Commercial In-duct/In-AHU AtmosAir Systems

508FC

500FC

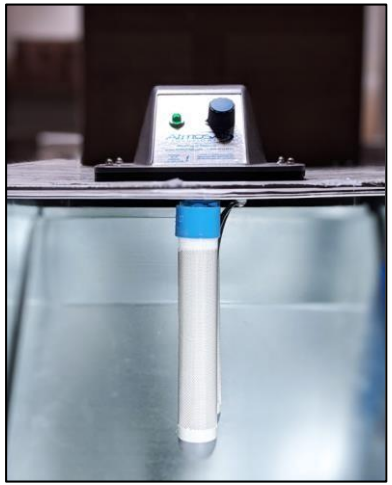
ELECTRICAL

Voltage	110/250 V
Frequency	50/60 hz 1 phase
Power Consumption	49 Watts
Current Draw	240 mA
Internal Fuse	500 mA
Field Electrical Connection	Junction Box

Large Induct Systems		
	508FC	500FC
Number of Tubes	8	5
CFM	16,000	10,000

ALL Products have been tested to UL 867 Ozone Standard (induct products): No measurable ozone

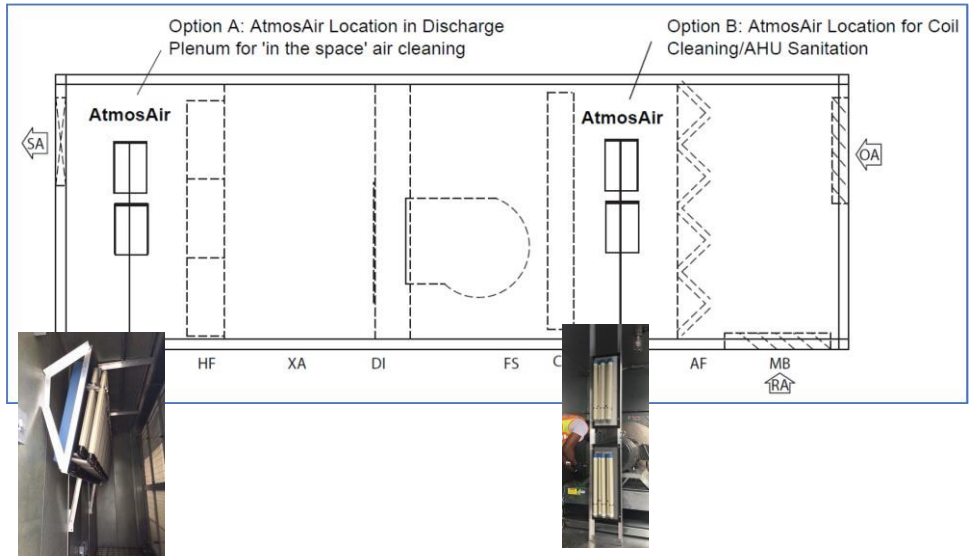
AtmosAir Installation Locations



AtmosAir can be easily installed in ANY HVAC air distribution configuration whether it be supply duct mounted or mounted in a supply plenum.

AtmosAir System Placement

- Can be mounted in different sections of the air distribution.
- Effective when airflow is present. Oxygen (airflow) =ions.
- Can be interlocked with fan operation or air pressureswitch.
- Customized systems:
  - Airflow
  - Size of space
  - Severity of contamination (pollutants/odors)
- Ionization systems have five settings.

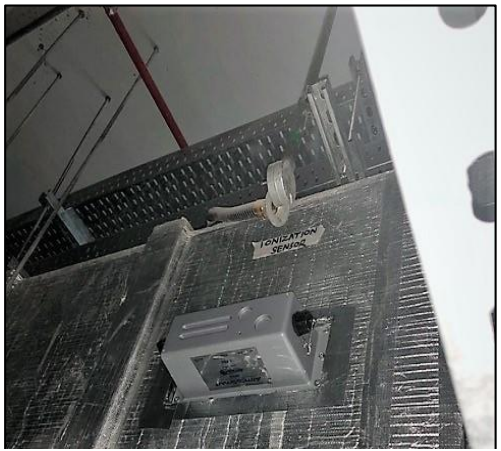


Atmos*Smart* In-Duct IAQ Monitoring

Induct IAQ monitoring simplifies and supports building operations and facility management by measuring and validating IAQ in real time.

- Real-time, accurate monitoring of PM2.5, CO2, TVOC, 03, CO, temperature, and RH.
- BACnet IPCommunication
- Continuous data collection.
- DCV Option
- End-to-end encryption for secure data transfer.
- Multiple data export methods over e-mail, micro-SD card, and USB, as well as support for both Ethernet and Wi-Fi

Early In-Duct Adopters: Arizona State University, Seattle Children's Hospital, JLL's NY offices, Los Angeles Airport (LAX), Minneapolis Airport (MSP), JB&B MEP Consulting Engineers, Levi's Stadium - San Francisco 49er's, Las Vegas Raiders, T. Rowe Price (Baltimore HQs and NYC offices), Tishman Speyer, JTC - Government of Singapore, Riyadh Metro Rapid Transit System.



Sensedge In-Room Air Quality Monitoring

24/7 accurate real time IAQ monitoring

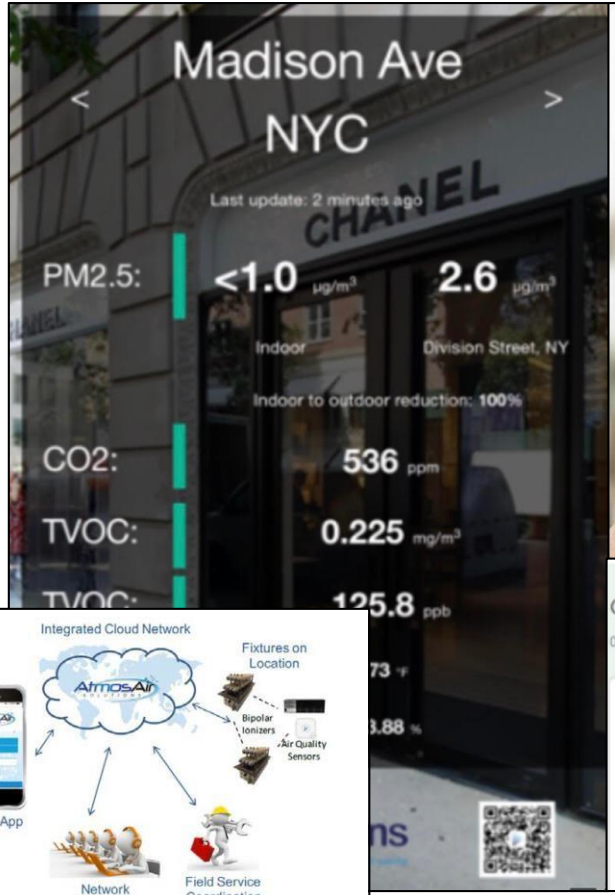
PM2.5 | AQI | TVOC | CO2

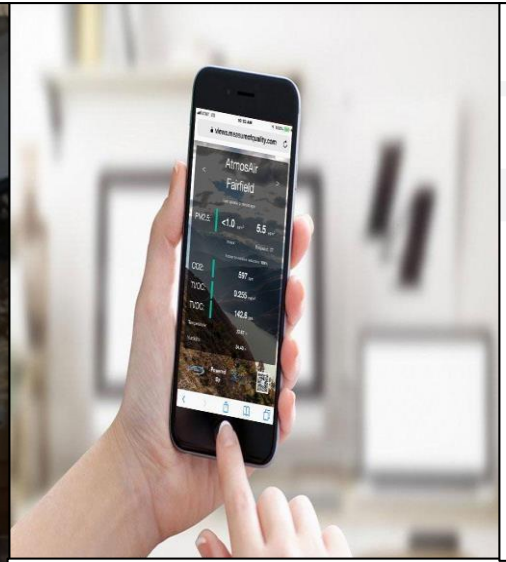
TEMPERATURE | HUMIDITY

Display

- Local Outdoor Air Quality
- Indoor Air Quality
- Phone App, BACnet, WiFi, Ethernet

Custom Indoor Air Quality Dashboards





CBRE Weekly Report
2020/03/16 - 2020/03/22

We hope you had a good weekend! Here's a summary of what happened in your environment last week.

Park Place
4 Nodes

PM2.5	1.5 µg/m³ Indoor avg.	Very Good Level	30.8 µg/m³ Outdoor avg.	95.1 % Reduction
PM10	2.3 µg/m³ Indoor avg.	Very Good Level	68.2 µg/m³ Outdoor avg.	96.6 % Reduction
TVOC	0.35 mg/m³ Indoor avg.			
CO2	627 ppm Indoor avg.			

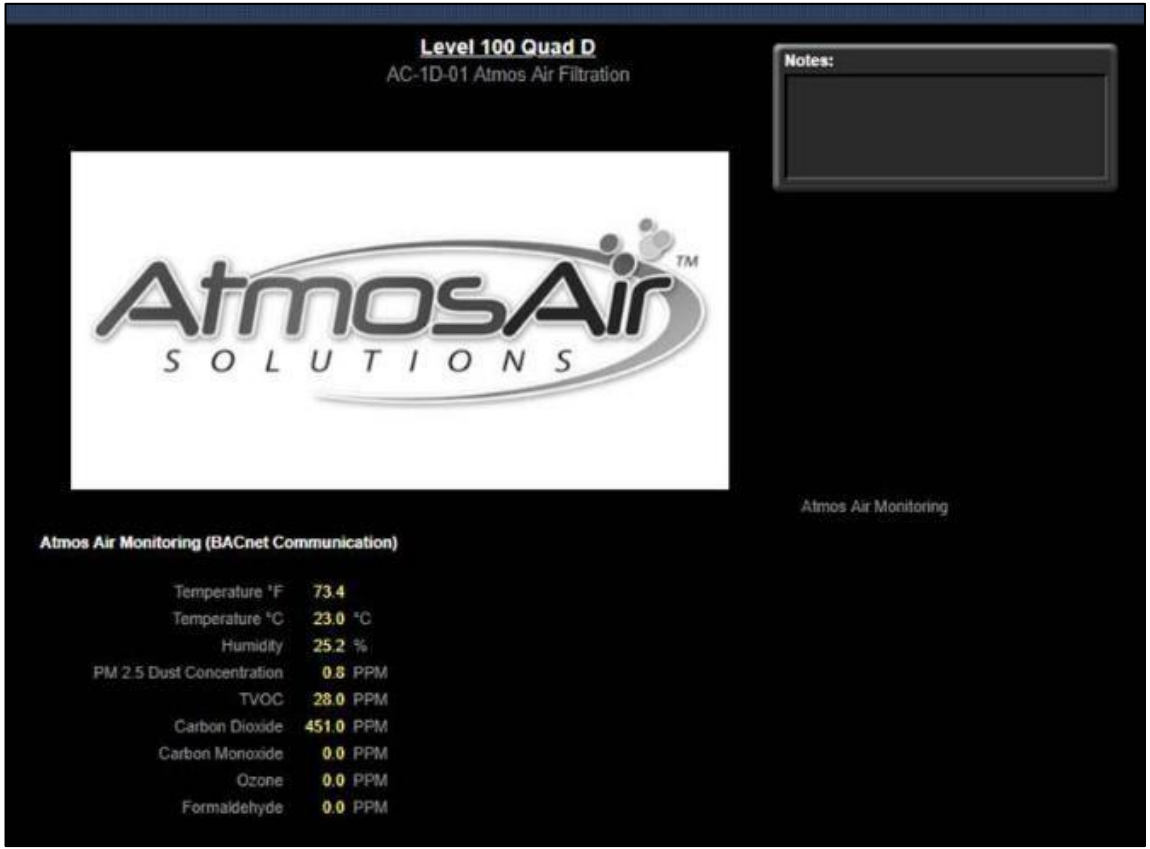
The outdoor station used as reference for this location is Jing'an Monitoring Station (静安监测站).
Data coverage is 99%. We have received 12576 out of 12600 data points possible.

Chanel Madison Ave Boutique
07458bc1-1540-4296-ac65-600992c4ee12

18

Charge	100%	PM 10	2	CO 2	611
Charging	yes	PM 2.5	2	Humidity	44
Last Updated	a few seconds ago	TVOC	125	Temperature	72

Building Automation System (BAS) IAQ Dashboards



Cost Saving/Energy/Sustainability Opportunity

Airside efficiency is typically the largest untapped opportunity for building owners.

AtmosAir is an ASHRAE 62.1 Compliant IAQ Technology

Bi-polar Ionization:

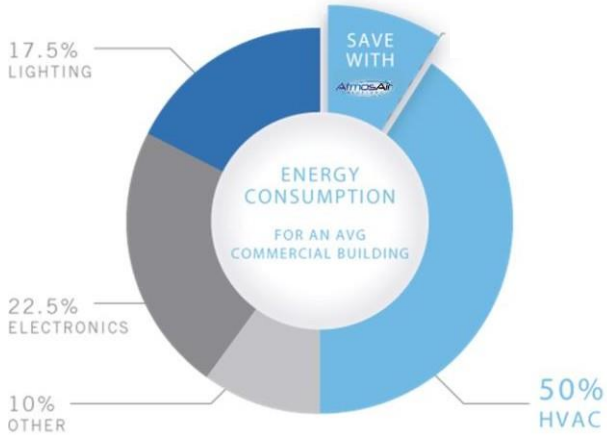
- Can Reduce OA Requirements up to 50% within ASHRAE 62.1/IMC code
- Takes up little space within duct a duct or air handler.
- Has little to no pressure drop.
- Requires negligible power to operate.

Capex Benefits:

- 15% Reduction in Equipment.
- Collateral Cost Savings in Installation, Piping, Electrical, Ductwork
- Potential 20-30% Reduction in HVAC Tonnage/Plant Sizes
- Less of an opportunity to bring in pollution from outside.

Opex Benefits:

- 20-40% Reduction in HVAC Energy Expenditures
- 4-8% Reduction on ENTIRE utility bill.
- Extend life of HVAC filters
- Extend life of HVAC equipment (sustainability)



AtmosAir BPI vs. UV Light

Technology Comparison	AtmosAir BPI	UV Light
Reduces contaminants “in the space” at their source	**Yes**	No
Reduces odors	**Yes**	No
Reduces VOCs	**Yes**	No
Reduces particles	**Yes**	No
Sterilizes AHUs, coils, etc.	**Yes**	Yes
Effective against bacteria, viruses, and germs	**Yes**	Yes
Maintenance schedule	**Every 2 Years**	Annually
Contaminants must travel through filtration system	**No**	Yes

AtmosAir is active air cleaning technology. UV is a *passive* technology where the contaminants must travel through the UV light to become sterilized.

With a UV installation, building air is not being cleaned in real time, it must first be recycled through the returns to be sanitized.

The amount of contact time the contaminants have with UV light is in the milli-second or even nano-second range. This does not allow a thorough reaction of all the contaminants in the unit, let alone in the space.

AtmosAir BPI vs. Alternative IAQ Methods

	AtmosAir DBD BPI	Media Filtration	UV	PCO	Needlepoint Ionization	Carbon Filters	Electronic Air Cleaners
Affects Contaminants "In the Space"	Yes	No	No	Yes	No	No	No
Reduces Odors	Yes	No	No	No	No	Yes	No
Reduces VOCs	Yes	No	No	No	Yes	Yes	No
Reduces Particles (PM)	Yes	Yes	No	No	No	Yes	Yes
Effective on Bacteria and Virus and Germs	Yes	No	Yes	Yes	Yes	No	No
Produce Ozone	No	No	Yes	Yes	No	No	Yes
Low Pressure Drop	Yes	No	Yes	Yes	Yes	No	Yes
Maintenance	Every 2 Years	Quarterly	Yearly	Yearly	6 months - 2 years	Bi-Annually	Monthly
Re-engineering of HVAC system needed	No	Yes	No	No	No	Yes	Yes
New Design and Retro-Fit Applications	Yes	No	Yes	Yes	Yes	No	No
Reduces Energy Costs	Yes	No	Yes	Yes	Yes	No	No
No Chemicals or By-Products	Yes	Yes	No	No	Yes	No	Yes
Tested Contaminant Reductions in Occupied Space	Yes	No	No	No	No	No	No
Published and Peer Reviewed Research	Yes	Yes	Yes	Yes	No	Yes	Yes
"Smart" System (Integrated with sensors and monitors)	Yes	No	No	No	No	No	No

WORKPLACE CASE STUDIES AND PROJECTS

"I have been working with AtmosAir for years in the US, where we have installed the system successfully on several projects. AtmosAir delivers indoor air quality without emitting ozone. Their system reduces viruses, VOCs, PM, bacteria, allergens and the impact on the health and wellness of occupants is quantifiable. We have tested AtmosAir in over 300 different spaces for results."

— Dana Schneider, SVP of Energy and Sustainability, Empire State Realty Trust

CBRE Offices - Shanghai

AtmosAir installed in CBRE Shanghai Park Office (2019)

Old Post Office Chicago

Two million square ft. installation in Chicago (2019)

Gensler

Installed in (8) offices. Air purification and real-time measurement of IAQ. Gensler pilot project in LA showed 90% reduction in VOCs.

Ford

VOCs and five ranges of particulate reduced in this pilot project.

HEALTHCARE PROJECTS

JOHNS HOPKINS HOSPITAL

AtmosAir helped reduce VOCs by over 45%, and reduced five particle size ranges.

LBJ Hospital (TX)

AtmosAir helped reduce VOCs by over 65%, and reduced five particle size ranges.

NYU LANGONE

Whitepaper written by NYU Langone Professor on AtmosAir Solutions

METHODIST HOSPITAL (TX)

AtmosAir helped reduced major sewer gas odors and improve perceptual air quality.

SCHOOL CASE STUDIES AND PROJECTS

Arizona State University

Energy Innovations project – 16 buildings; AtmosSmart for demand control ventilation and energy efficiency.

University of Colorado

ME Engineers; Reduction in HVAC by 15%; Real-time IAQ measurement.

University of Maryland

VOCs and PM reduced, ventilation reduced by 50%.

USC

Four buildings on campus with Atmos installed.

SPORTS CASE STUDIES AND PROJECTS

The Dallas Cowboys have been associated with AtmosAir for many years now and the transition from our old facilities in Irving to the state of the art facilities in Frisco certainly included AtmosAir. Our air quality is paramount for the continued good health of the players and staff as we go about the strenuous season of the NFL. Our successes are, in part, due to the effects of such a system as AtmosAir. I look forward to continued success as we tackle the seasons ahead.

-Jim Maurer ATC, LAT, Dallas Cowboys, VenuesNow (2019)

Staples Center

Case study: 20% HVAC cost savings and 90% reduction in VOCs led to full stadium install.

US Bank Stadium

Annual energy savings of >$200k. Installed throughout all air handlers.

New England Patriots

Case study: Less allergy medication given out to players over course of one-year study.

SoulCycle

More than 50 locations with AtmosAir installed.

AIRPORTS CASE STUDIES AND PROJECTS

Jet fumes, CO2, viruses, and bioeffluents all contribute to poor air quality in and around airports as well staggering HVAC-related costs.

AtmosAir purifies conditioned air, allowing it to be recycled and recirculated. Less of the heavily polluted outside air is required to be drawn inside, resulting in significant energy savings and a cleaner environment with up to 90% less harmful gases and particles.

"We had been getting a lot of air quality-related complaints from travelers and employees at Tom Bradley Terminal," acknowledges Rich Yakel, LAX's HVAC supervisor. "Bipolar ionization was just being introduced at the time, and Bradley Terminal was going through a major renovation."

Yakel experienced the positive impact ionization systems can have on air quality while visiting a wastewater treatment plant that used the technology. "I saw, and smelled, for myself what it could do," he recalls.

LAX Los Angeles World Airports

CDA Chicago Department of Aviation

LGA LaGuardia Airport

Fort Lauderdale-Hollywood International Airport Broward County, Florida

CLT Charlotte Douglas International Airport

Minneapolis Saint Paul International Airport msp

YVR Vancouver International Airport Beyond, Every Day.

Port of Huntsville Huntsville International Airport

Narita Airport Connecting Japan to the World

Beyond enjoying improved air quality, LAX is performing less maintenance. "AtmosAir takes a lot of the load off of the carbon filtration system and reduces the amount of maintenance effort we have to put into it," explains Christensen.

HOSPITALITY CASE STUDIES AND PROJECTS

More and more hotel brands are meeting the growing demand for healthier, cleaner accommodations that combat issues like mold, bacteria, and viruses.

AtmosAir creates a measurably cleaner environment while helping the hospitality industry decrease their energy consumption and carbon footprint.

GAMING CASE STUDIES AND PROJECTS

Smoke and odors are huge concerns in the gaming industry. AtmosAir has helped many casinos create a healthier and more welcoming environment for their patrons.

Select clients include:

- **Rivers Casino** (Pittsburgh and Philadelphia, Pennsylvania)
- **Stations Casinos** (California and Nevada – 6 Casinos)
- **Twin River Casino Hotel** (Rhode Island)
- **Seminole Hard Rock Hollywood** (Florida)
- **Seminole Hard Rock Tampa** (Florida)
- **Seminole Casino Coconut Creek** (Florida)
- **Seminole Brighton Casino** (Florida)
- **Ocean Resort Casino** (formerly Revel Casino - Atlantic City, NJ)
- **Osage Casino Sand Springs** (Tulsa, OK)
- **Graton Resort & Casino** (Operated by Stations in California)
- **Palace Station Hotel & Casino** (Las Vegas, NV)
- **Emerald Island Casino** (Nevada)
- **Green Valley Ranch Resort Spa & Casino** (Las Vegas, NV)
- **Live! Casino & Hotel** (Maryland)
- **MGM Grand Detroit** (Michigan)

Frequently Asked Questions

How does AtmosAir™ reduce particulate matter?
Many small particles that are generated within a space never get to system filters, increasing the chance of illness and respiratory distress. The AtmosAir™ bipolar ionization process helps more of these particles be removed from the air we breathe. Oppositely charged AtmosAir™ bipolar air ions cause particles to attract to other particles and become bigger and heavier. These larger particles can be trapped by HVAC system filters more easily, so the filters operate more efficiently – and effectively.

How does AtmosAir™ reduce Volatile Organic Compounds (VOCs)?
Bipolar ions generated by the AtmosAir™ system surround the VOCs and break down hydrocarbon chains, reducing these complex compounds into immeasurable levels of carbon dioxide and water.

How does AtmosAir™ work against various bacteria, viruses and germs?
Positive and negative ions surround the surface proteins that form on organisms and trigger infections (hemagglutinin), changing them 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 on a molecular level, rendering it incapable of causing infection even if it enters the body.

Does AtmosAir™ have a device that measures ion levels?
Yes. There is a specially designed ion meter that reports ion levels.

Does the ionization system increase the oxygen content in the air?
No. The ionization technology increases the number of oxygen ions, not the number of oxygen molecules.

How do I know my AtmosAir™ system 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, have the system serviced by Johnson Controls. If the green light is on, but you do not feel 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 tubes have not been replaced within the last 24 months, you should contact Johnson Controls to have the tubes replaced.

How often should the AtmosAir™ ionization tubes be changed?
AtmosAir™ composite tubes will degrade and become ineffective after approximately 17,600 hours (two years) of use.

Is it dangerous to look at the ionization tubes while they are operating?
No. Unlike UV lamps, which can harm your eyes, there is no danger in looking at a powered ionization tube.

Is touching the ionization tubes dangerous?
Yes. If the ionization unit is powered and you touch the tubes, you could be injured. Therefore, before touching the tubes or removing them for replacement, make sure the power to the system is off by unplugging it from the power source.

Can the AtmosAir™ unit be used in both indoor and outdoor air handling systems?
Yes. AtmosAir™ has tested their units in both indoor and outdoor applications.

What is the maximum temperature range to which the ionization tubes can be subjected?
The tubes should not be subjected to temperatures below 0° Fahrenheit or above 150° Fahrenheit.

What is the warranty of my system?
AtmosAir™ warranties the system for two calendar years from shipment date.

Are bipolar ionization units effective in 100% outside air units?
AtmosAir™ systems are equally effective whether the air system is 100% outside air and exhaust air, or 100% re-circulated air, or a combination.

Does AtmosAir™ bipolar ionization take the place of media filters?
No. AtmosAir™ bipolar ionization is an air conditioning component that works in conjunction with mechanical filtration and is not intended to replace components such as filters, etc.

GET IN TOUCH

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