



Breathing is Believing...SM

Air Purification Solutions



Spring 2008

AtmosAir is a **Clean Air Group** product line



Presentation Outline

- Indoor Air Quality in the News
- Consumer Awareness
- Effects of Air Quality
- Our History
- Ions and Air Quality
- How Clean Air's Technology Works
- The Beneficial Effects of Bi-Polar Ionization
- Head to Head Comparisons
- Laboratory Testing
- **AtmosAir Products**
- Applications
- Basic Design and Engineering
- Basic Installation
- Air Quality Testing
- Worldwide References

Air Quality in the News



(HealthDay News) - Poor air quality can be especially troublesome for asthmatics, making it difficult for them to breathe.

Here are suggestions for asthmatics during bouts with poor air quality, courtesy of the U.S. Environmental Protection Agency:

- Gauge your sensitivity to air quality by being aware of your symptoms, and how often you have attacks.
- Reduce any physical activity outdoors.
- Try exercising early in the morning, when air quality tends to be best.
- If outdoors, go inside as soon as you start to feel symptoms.

Keep your inhaler and other asthma medications on hand at all times.



Asthma: A threat to your child's education?

11:08 AM CDT on Saturday, October 20, 2007
By Dave Fehling / 11 News

Watch Dave Fehling's report
Two local schools have been at the center of controversy regarding indoor air pollution. Some say it is making children and teachers sick. But there may be much more to the story, specifically about asthma. And it is developing into a serious threat to getting a good education.



LA May Reclaim Title Of Smog Capital Of America

The Los Angeles area is probably going to reclaim its dubious title as the smog capital of America.

Although air quality has been relatively good so far this summer, the Southland has had 76 "smoggy days" under the nation's new and stronger ozone standards, compared to only 41 bad-air days in Houston and 61 in the San Joaquin Valley, the *Daily News* newspaper reported.

"Every day with bad air, we're concerned about asthma attacks, premature deaths, school absences and lung damage to children."

In recent years, the Southland, Houston and the San Joaquin Valley have had the worst air in the country, and last year, Houston earned the smog title with 22 bad air days.

Consumer Awareness



- ***In 2005 Consumers purchased 3.5 million air purification products.***
- ***Over 1.4 billion dollars was spent on Indoor air purification products in 2005.***
- ***Sales of air freshening products rose from 2.4 billion dollars in 1999 to 3.5 billion dollars in 2004.***
- ***1st year sales OTC Claritin allergy medication was over 275 million dollars.***
- ***Air purifiers account for over 40% of sales by Sharper Image.***
- ***The American Lung Assoc, National Home Builders Assoc, NY State and more, have all established green building standards.***

Effects of Air Quality



- **Indoor air is 2 to 5 times worse than outdoor air.**
- **The average home contains over 25 gallons of hazardous chemicals.**
- **30% of all buildings have indoor air quality problems.**
- **More than 50 million Americans suffer from allergies, asthma affects one in ten children.**
- **A recent BOMA survey states the number two reason tenants move is due to comfort and poor air quality.**

Our History

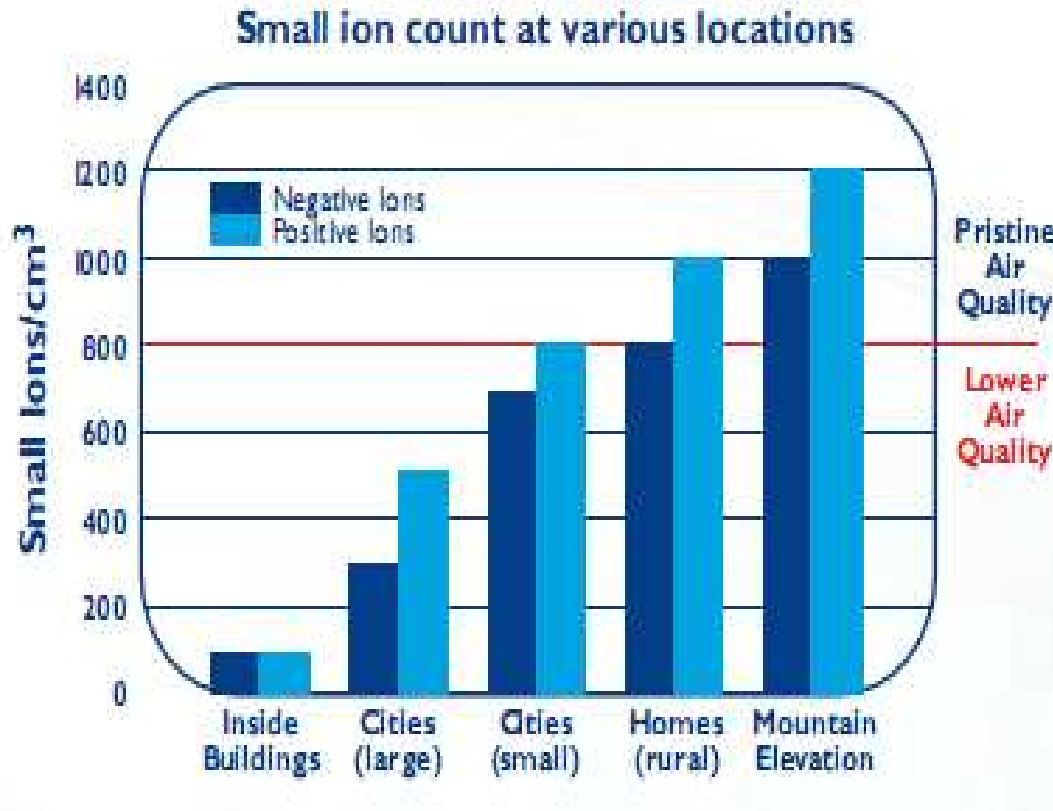
- Albert Einstein's sister contracted TB and was sent to a hospital in the Swiss Alps where doctors said the healing rate was higher
- **Einstein's Theory of Light Absorption** proved the presence of a higher conductivity in air
- He deduced that a higher degree of conductivity (**ionization**) was somehow related to a healthier climate.
- Einstein and his partner Conrad Habicht invented a technology that is able to produce this higher ion count indoors – this is the basis for technology that we use today.

"The Olympic Academy"



Conrad Habicht Maurice Slovine Albert Einstein

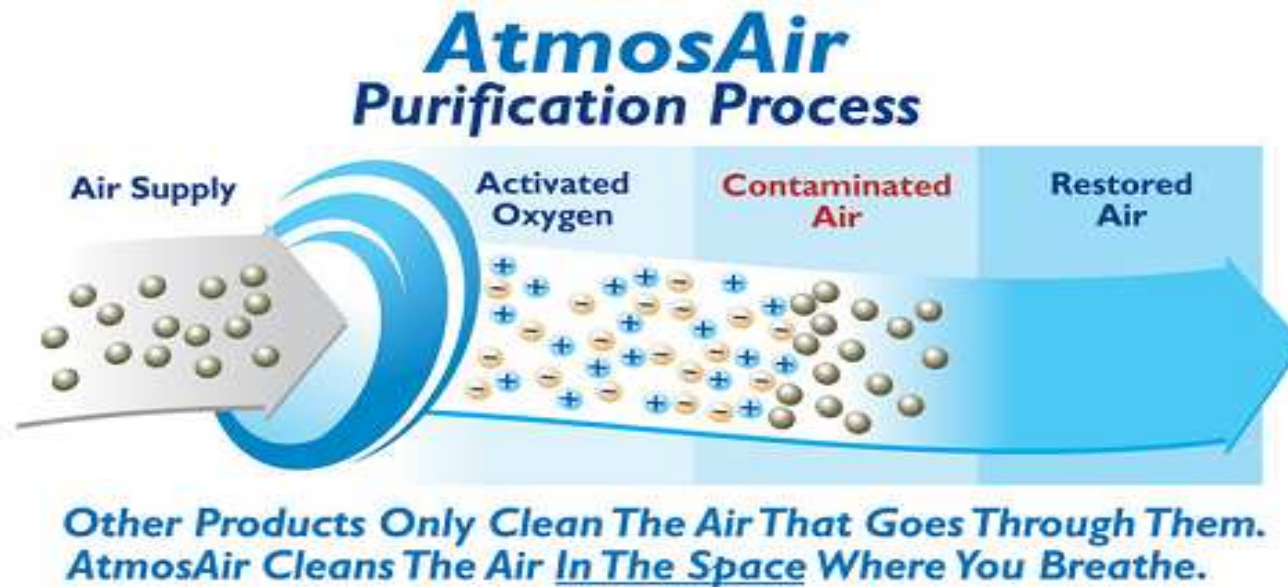
Ions and Air Quality



AtmosAir's goal is to restore the air inside your home or building to the quality found at mountain elevations, where high ion levels occur naturally

Increasing Ion levels Improves Air Quality Providing "Mountain Fresh Air"

How Bi-Polar Ionization Technology Works



Air carries oxygen molecules over AtmosAir's system

Oxygen Molecules are converted into Positively and Negatively charged Ions (Activated Oxygen)

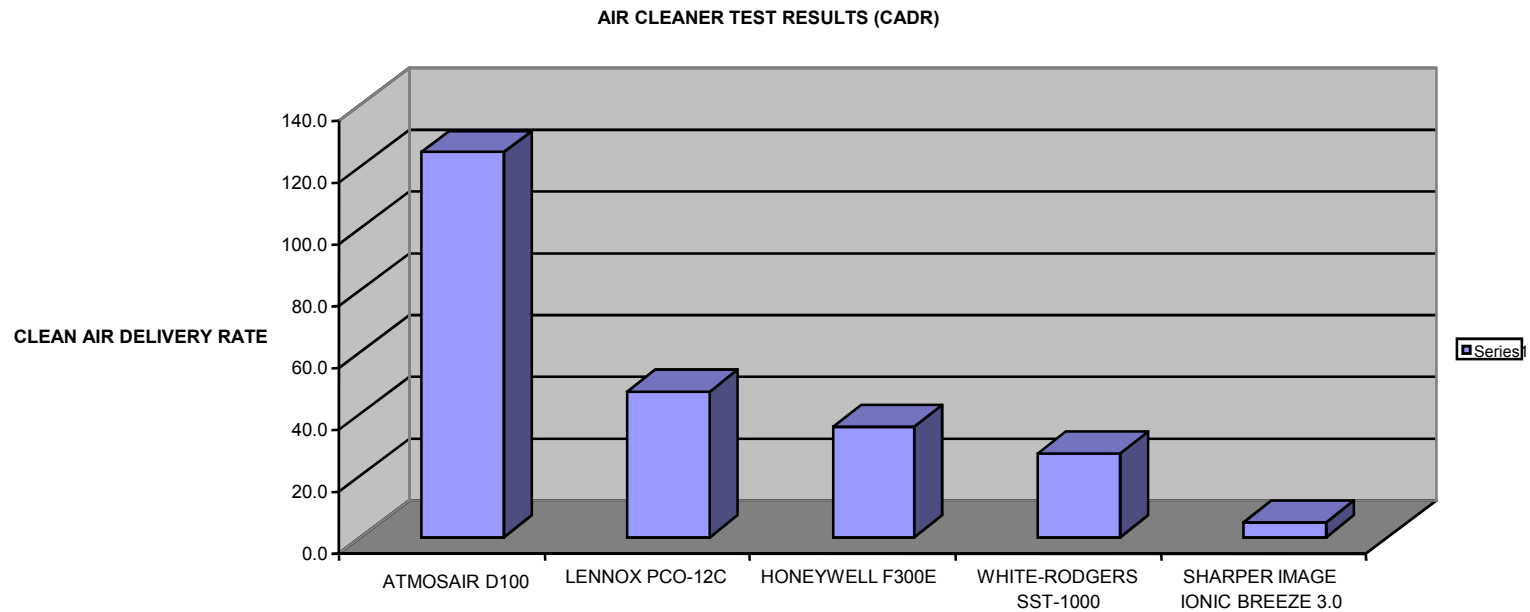
Activated Oxygen clusters are attracted to and bond with oppositely charged airborne pollutants. These particles fall out of the breathing range and drop to the floor, restoring the air to a clean, breathable quality



Beneficial Effects of Bi-Polar Ionization

- **Particle Reduction**
 - Particles are neutralized and fall out of the breathing range
- **Odors Control**
 - Unpleasant organic odors (trash, mildew, cooking, dirty laundry, fresh paint or varnish) are instantly eliminated
- **VOC (*Volatile Organic Compound*) Control**
 - Complex hydrocarbon chains are broken down into simpler harmless elements
- **Mold Bacteria, Viruses, Germs, Etc. (Microbials)**
 - Reproductive cycle is interrupted and colony forming units decrease
- **Energy Conservation**
 - In industrial applications, ionization provides a cost effective solution to control exhaust emissions. In commercial applications less introduction of outside air is needed to provide comfort and air quality, lowering heating and cooling costs.
- **Static Electricity Reduction**
 - Bi-Polar Ionization neutralizes all charges in the air and eliminates static electricity
- **All Natural Process**
 - No chemicals or harmful by-products.

Head-to-Head CADR Comparison



<u>Product</u>	<u>CADR Rating</u>	<u>Variance from Bi-Polar</u>
ATMOSAIR D100	125	N/A
Lennox Healthy Climate PCO-12C	47.4	264%
Honeywell Enviro-Care F300E	35.8	349%
White-Rodgers SST 1000	27.2	460%
Sharper Image Ionic Breeze 3.0	4.8	2604%

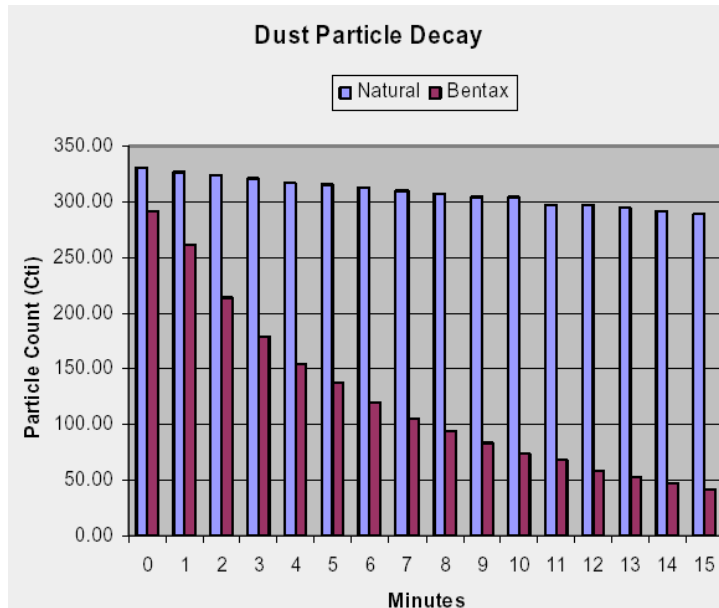
Laboratory Testing

Effectiveness on Dust, Mold Spores

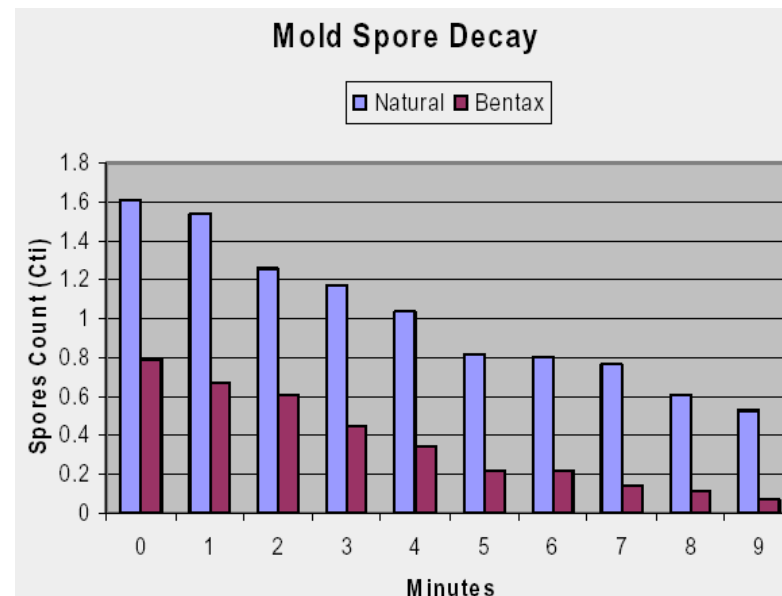


REPORT
INTERTEK, ETL SEMKO
 3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Note: Tested under original Bentax product name in 2005



Natural 12.8% Clean Air/Bentax 85.8%



Natural 67.1% Clean Air/Bentax 91.1%

A detailed copy of this report can be furnished upon request



AtmosAir Products

- **In Ductwork**
- **Portables (Standalones)**
- **Industrial**
- **Replacement Tubes**

In Ductwork

AtmosAir D100

- Available with a C, D or E tube
- For use in residential and light commercial applications
- Areas up to 2,000 cfm *

cfm = cubic feet of air per minute

* cfm capacities will vary due to contaminants

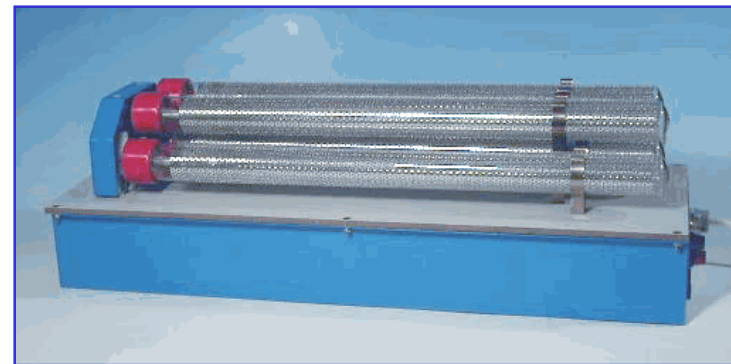


In Ductwork

- **AtmosAir 500E**
 - Equipped with five E tubes
 - For use in commercial applications up to 7,000 cfm*



- **AtmosAir 500F**
 - Equipped with five F tubes
 - For use in commercial applications up to 10,000 cfm*



* cfm capacities will vary due to contaminants

Portables

AtmosAir Mini Towers

- **T400**
 - 16” Height
 - Serves Areas up to 500 ft² including Bedrooms, Kitchens, Living Rooms, and Offices



Portables

➤ **AtmosAir P2000 (1 tube)**

- Serves areas +/- 1500 ft²
- Ideal for classrooms, conference rooms, restaurants, trash rooms, beauty salons, basements, demonstration units and many areas where central HVAC systems are not present.



➤ **AtmosAir P2002 (2 tubes)**

- For more Severe & Concentrated Problems



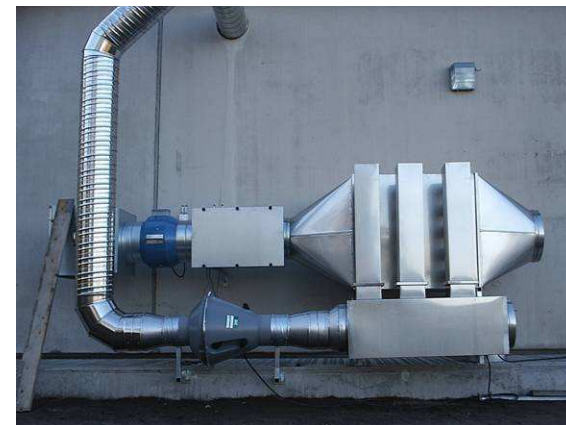
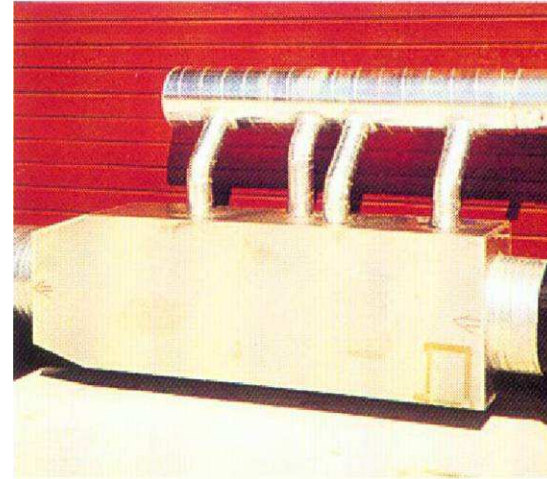
Industrial

- **Custom Scrubber A**

Custom designed, engineered, and built to meet the needs of a specific industrial facility such as a manufacturing plant

- **Custom Scrubber B**

Custom designed, engineered, and built to meet the needs of a specific industrial facility such as a manufacturing plant



Replacement Tubes

- The only maintenance
- Tubes require yearly replacement



Applications

Location	Effective Against						
	Mold	Bacteria	Viruses	Odors	VOCs	Smoke	Chemicals
Homes	X	X	X	X	X	X	X
Schools	X	X	X	X	X	X	X
Hospitals	X	X	X	X	X	X	X
Nursing Homes	X	X	X	X	X	X	X
Daycare Centers	X	X	X	X	X	X	X
Office Buildings	X	X	X	X	X	X	X
Food Processing Facilities	X	X	X	X	X	X	X
Restaurants	X	X	X	X	X	X	X
Hotels	X	X	X	X	X	X	X
Beauty Salons	X	X	X	X	X	X	X
Printing Facilities	X	X	X	X	X	X	X
Manufacturing Facilities	X	X	X	X	X	X	X
Sewage Treatment Plants	X	X	X	X	X	X	X
Water Treatment Facilities	X	X	X	X	X	X	X
Fire Houses	X	X	X	X	X	X	X





Basic Design and Engineering

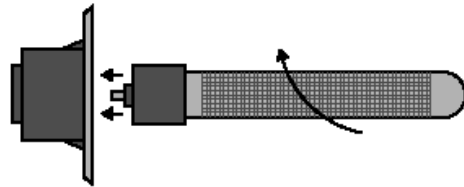
Pollutant Level	Treated Area Square Footage				
	1,000 ²	2,000	5,000	10,000	20,000
A	(1) 100C or (1) P2000	(1) 100E	(2) 100E	(1) 500F	(2) 500F
B	(1) 100D or (1) P2000	(1) 100E	(1) 500E	(2) 500E	(3) 500E
C	(1) 100E or (1) P2002	(2) 100E	(2) 500E	(3) 500F	(6) 500F
D	(2) 100E or (1) P2002	(1) 500F	(2) 500F	(4) 500E/F	(8) 500E/F

Pollutant Level Description	
A	Normal residential or office space - low pollutant levels
B	Existing school, day care center, or nursing home - medium pollutant levels
C	Animal hospital, light manufacturing, food processing, smoking areas, restaurants, nail/beauty salons.
D	Heavy pollution or odors typical of a waste water treatment facility, industrial facility, or garbage room.

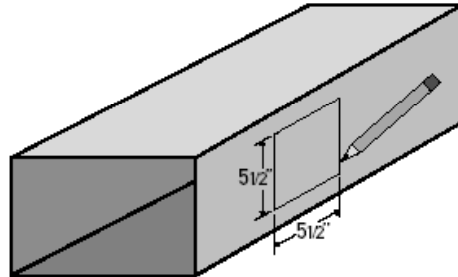
Basic Installation

MECHANICAL INSTALLATION

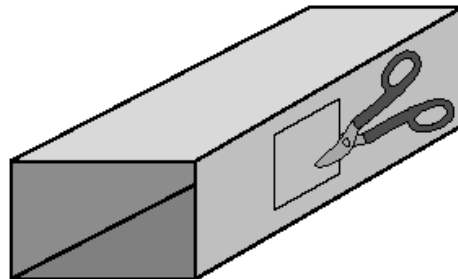
Step 3. Screw the ionization tube into the Bentax 100. Note – the ionization tube must be replaced after 8800 hours of use, or approximately one year



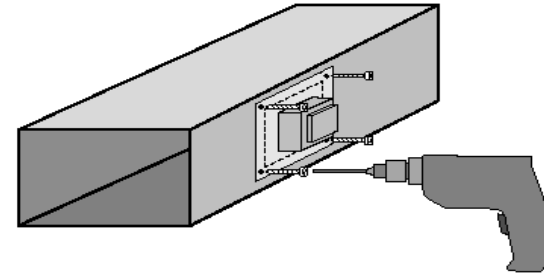
Step 4. Trace a 5 1/2" by 5 1/2" square on the surface of the duct onto which you are mounting the Bentax 100.



Step 5. Cut out the traced portion of the duct using snips or sheet metal cutters.



Step 6. Screw the Bentax 100 onto the duct using the supplied sheet metal screws.



ELECTRICAL INSTALLATION

WARNING - The secondary voltage to the ionization tube is 3000 volts.

DO NOT CONNECT THE BENTAX 100 TO POWER BEFORE THE MECHANICAL INSTALLATION IS COMPLETE.

ALWAYS DISCONNECT POWER TO THE BENTAX 100 BEFORE HANDLING ANY OF ITS COMPONENTS.

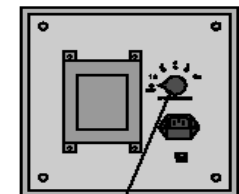
Step 8. Make sure that the Bentax 100 is interlocked with the supply fan or that a pressure switch has been installed since the Bentax 100 should only operate when there is airflow.

Step 9. Check with the local electrical authority to ensure that the enclosed 20 amp power rated cord is suitable for installation.

Step 10. Internal fuses protect the Bentax 100. Be sure that the maximum circuit amperage supplying the unit does not exceed 20 amps since the internal fuse protecting the Bentax 100 has maximum amperage of 20 amps.

IONIZATION SETTING

Step 11. Set the ionization at level three (3) using the knob on the front of the unit. Check the ionization level in the occupied zone with an ion meter. The ionization level should be between 500 and 1500 ions/cm³. Return to the installation in two or three days to confirm that the ion levels are within this range. If the ion level is not in the desired range, then adjust the ionization level control knob accordingly.



Ionization Level Control Knob

Indoor Air Quality Testing

The Aircuity System

- o Air quality testing program
- o Tests 11 elements of air quality
 - **Mold, Pollen, Temperature, RH, CO₂, Small and Large Particles, TVOC's, CO, Radon, Ozone**
- o Generates a web based report
- o Minimal training, no other equipment required
- o Validates effectiveness as well as provides an additional revenue opportunity
- o Report certification available





Bi-Polar Ionization Worldwide Reference Projects

- **Hospitality/Food Service**
 - Hyatt Hotel, NYC, NY
 - Hilton NY, NYC, NY (locker rooms & staff office)
 - Master Purveyors, Bronx, NY
 - Hilton Hotels – throughout Europe
- **Schools**
 - Darien BOE – Darien, CT
 - Staples High School - Westport, CT
 - Fairfield University, Fairfield, CT
 - University of Bridgeport – Bridgeport, CT
- **Offices**
 - UBS Childcare Center – Stamford, CT
 - Thomson Corp - Stamford, CT
 - Florida Power & Light (HQs) Ft Lauderdale, FL
 - Washington Gas & Electric, Washington, DC
 - Financial Times Building – London, UK
 - Siemens AG – Vienna, Austria
 - Rolex – Geneva, Switzerland
- **Hospitals**
 - Norwalk Hospital – Norwalk, CT
 - VA Hospital – West Haven, CT
 - South Oaks Hospital, Amityville, NY
 - Coral Springs Med. Ctr. – Coral Springs, FL
- **Sports Applications**
 - Dallas Cowboys Training Center
 - Dallas Stars
 - San Jose Sharks
 - Boston Redsox
 - Florida Marlins
 - Swedish National Hockey Team locker rooms and personal inhalers
- **Airports**
 - Sturup Airport – Malmo, Sweden
 - Frankfurt Airport – Germany
- **Manufacturing**
 - Combex – Robstown, Texas
 - Fagerdala – Sweden, Michigan
 - Bridgeport Insulated Wire – Stratford, CT
 - Scandiflex - Sweden
- **Wastewater/Sewage**
 - Fairfield DPW – Fairfield, CT
 - City of Three Rivers – Michigan
 - City of Lexington – Kentucky
- **Miscellaneous**
 - US Army
 - Walter Reed Army Medical Center, Wash., DC



Contact Information

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