



Magneto  
CleanTech

Only Clean Air



Healthy Air

# Air Pollution

Air pollution (or atmospheric pollution) means the pollution attributed to the presence of environmentally adverse substances in the air. These substances may be suspended in the form of solid, liquid or gas. Air pollution is not just present outdoors but also present indoors at much higher levels.

The factors majorly contributing to the deteriorating air quality are particulate matter (PM), chemicals and microbial colonies. In case of particulates, there is a general term called "PM 10," used to describe the particles with diameters smaller than or equal to 10 micrometer. When the particle size becomes even smaller, there is another term called "PM 2.5," which is attributed to the particles with diameters smaller than or equal to 2.5 micrometer.



Due to the long retention time of PM 2.5 in air, these particles are hard to remove and can easily travel deep into the human body through breathing and accumulate in lungs, severely impacting their functioning. Chemicals are released into the atmosphere from several activities like biomass burning, automobiles emissions, industrial activities, aerosols, etc., which degrade the quality of air. We've come to rely on chemicals so much that they pervade the whole planet, along with every aspect of our lives. Airborne microorganisms like fungi and bacteria can remain active in the environment for a long period since eliminating their presence is really difficult. They are a major cause of severe respiratory ailments like bronchitis, asthma, and even tuberculosis. Some of these are highly virulent and can cause an infection or disease and can have serious consequences on health.



## Magneto Cleantech

Only Clean Air

Magneto Group carries a legacy of introducing innovative products and providing reliable after-sales services since 1980 in the fields of **Heating, Cooling, Ventilation and Air Purification**. We are well recognized in these segments for our ability to successfully execute and service even the most aesthetically demanding and technically challenging health-comfort projects.

In account of the deteriorating Air Quality across the globe, Magneto Group has transitioned to Magneto Cleantech, and shifted its focus to purifying the air. Our technologically superior products are aesthetically appealing and are designed by a team of **scientists, artists and engineers**. Magneto has been working tirelessly on advanced technologies unique to our ecosystem with an objective of providing a safer environment to everyone, thereby enriching life experience.



Magneto Offers Innovative  
Technologies That Protect The  
Environment And Human Health

# Healthier Life

Magneto Cleantech invents and popularizes technologies to tackle the problem of poor indoor air quality in developing nations. We focus on making clean air accessible to everyone, whether in homes, offices or buildings. Magneto has taken this initiative to make people aware of the air quality around them by providing them actionable insights about their living environments. We have been doing our part in improving the quality of air, as a duty for **clean India**, with our **innovative air purification solutions**. Our global alliances and years of experience in the HVAC industry enable us to understand the core air delivery system like no other. We offer proven, energy efficient air purification solutions covering **residential, commercial, industrial & transportation** sectors.

# Indoor Air Pollution

Challenge For The Modern World

We are aware that our spaces are contaminated with airborne dust, dust mites, bacteria, viruses and gases, which are harmful to our health. We spend 90% of our time indoors, and the indoor air is 10 to 15 times more polluted than the air outdoors. The outdoor air, which is already contaminated, is constantly being brought inside. This incoming polluted air is further degenerated with chemical vapours emitted from furnishings, bonding agents & several other indoor human activities. A large part of our population is suffering from several diseases such as TB, Asthma, COPD, heart diseases, etc., as a result of being exposed to these invisible pollutants.



## Indoor Air Is 15-20 Times More Polluted

A big myth is that air conditioning cleans & purifies our air, but the reality is that the AHU rooms or filters, if not maintained properly, add to the pollution levels indoors thus increasing the risk of cross contamination. Poor indoor air quality leads to lower productivity, higher absenteeism and several health risks. Further, WHO has declared air pollution as the main cause for lung cancer. Extensive indoor air pollution leads to **"Sick building syndrome, which is a silent killer"**. This is the biggest concern for people living in urban areas since they keep inhaling a lot of commercial chemicals and micro particles through contaminated air. A majority of our population doesn't really care about the air pollution till the time they don't suffer from any ailments arising from breathing in polluted air.



**Dirty Air... Beware!!**

## Collaboration

With Dr Air

Dr. Air is social enterprise with the mission to empower people to live healthier lives by providing them actionable insights of their living environments and therefore making them aware about the quality of air they are breathing. Dr. Air helps in making living and working spaces smarter while reducing the energy footprints.

Magneto, which has been tirelessly working on advanced technologies to provide various air treatment solutions, has now collaborated with Dr. Air to bridge the gap in the air purification industry by providing a single window for Air Quality **testing**, **solution** and **monitoring**.



TESTING



SOLUTION



MONITORING

Dr. Air has developed professional-grade air **testing** and **monitoring** devices to perform either spot testing or real-time continuous air monitoring of living spaces. Employing such technologies deems the user as a proud contributor to smart cities, and adds credits towards LEED or WELL building standards. Together, we offer performance based air purification solutions.

The joint approach not only provides solutions in the most credible manner but also helps in saving energy for building owners, while enhancing the quality of life of the building occupants. Users can now become well informed in real time of the problem and take the appropriate corrective measures with the highest environmental alertness. Contact us to know more about our **"healthy air"** plan.

HEALTHY AIR

# Healthy Air

## A Certified Solution



HEALTH



SAFETY



SAVING

A unique foresighted approach to a healthy indoor environment consists of removing or drastically reducing the concentration of indoor pollutants in a complete, chemical-free manner. The solution offers several energy saving benefits while enhancing the life of cooling systems with lower maintenance costs. It reduces the chances of cross contamination, results in higher productivity and bolsters the goodwill of the company. At home, all children, elderly and pregnant women are assured of safer and healthier lives.



We care for the air you breathe

### *Healthy air – beyond simply clean air.*

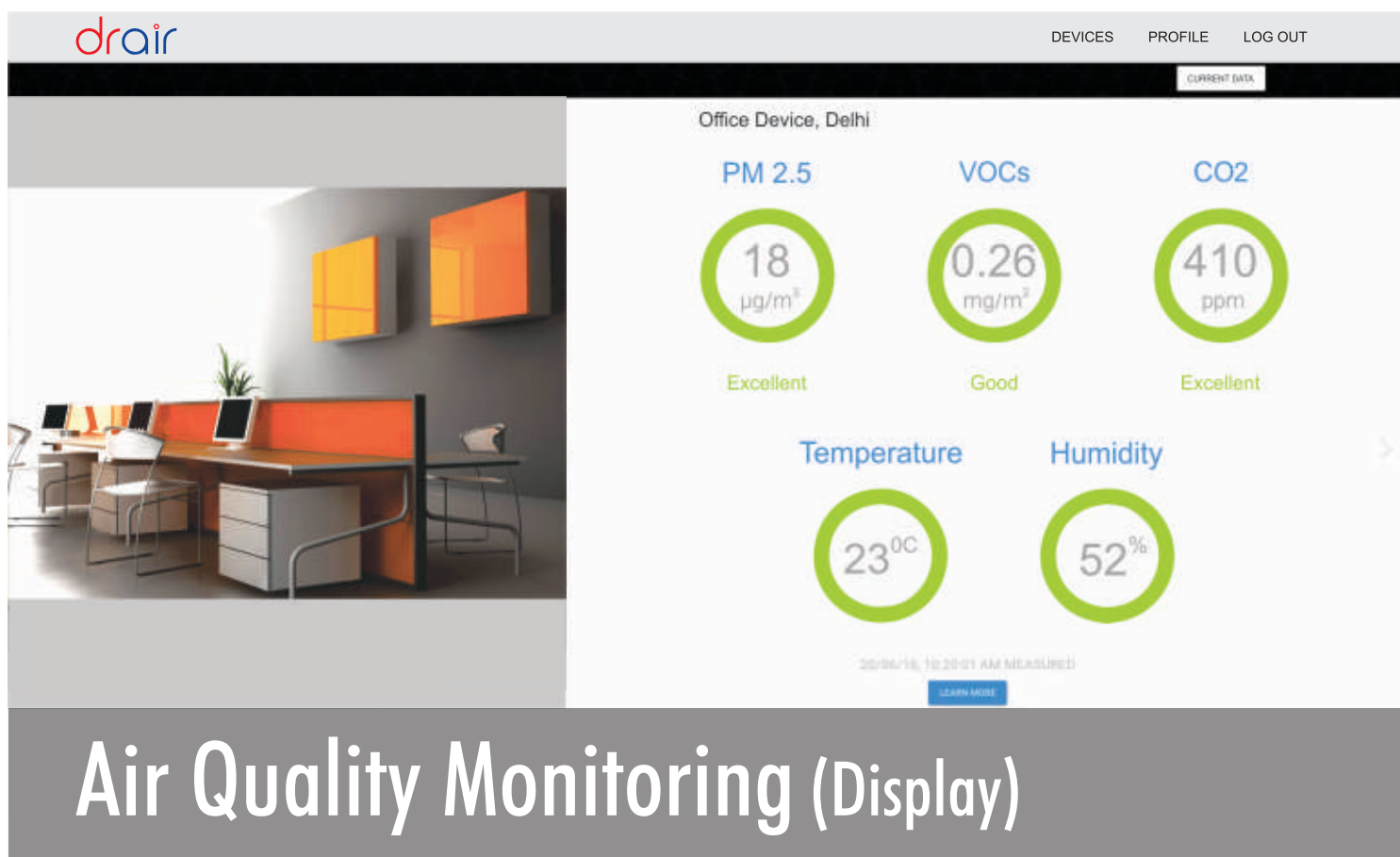
Indoor air is not only polluted, but also stale and loses its vital energy because of contamination. Beyond simply providing its users with clean air, Magneto aspires to provide them with “**healthy air**”. A platform achieving forest-like air indoors is combined with professional grade monitoring systems, to provide healthy air that goes beyond simply clean air. The conventional, Passive Air Purification technologies cannot overcome e-pollution or low magnetic air charge. Our systems remove PM2.5, kill harmful germs and viruses, neutralize harmful gases, reduce chances of cross contamination, remove modern era e-pollution, and revitalize & refresh the air, serving a function similar to our mother nature.

The users finally gain actionable insights while taking the appropriate measures with the healthy air plan.



## Air Quality Monitoring

Real time air quality monitoring is the most credible way to ensure that you breathe “healthy air” indoors. Since indoor air quality is a complex subject and is interlinked to temperature, humidity and several other air compounds, it is essential to monitor and address all the components together. Our collaborative approach ensures a comprehensive solution, along with monitoring of all factors simultaneously. This process provides a transparent and reliable performance for the occupants.



In our modern world, sustainability holds an obvious vital position, but what is even more important is achieving a “healthy living environment”.

Our technology generates information at regular intervals: every minute, hour, week or month. Hence, our users are well informed of both short term and long term, indoor and outdoor pollution exposure levels. The information is made available to authorized users on their mobile phones, through display on big screens on building management systems, or on any other smart device. The real time information can be looped with cooling, heating and ventilation systems to optimize comfort in the most energy efficient manner. Now, a certified healthy air is not only a need but also a profitable business proposition for building owners.

## AREAS OF APPLICATIONS



We have the largest range of Air Treatment solutions for homes, offices, schools, hotels, malls and production facilities. We have the cutting edge technologies & products for all types of applications. Every aspect of air-PM 2.5, odour, pathogens, static charge etc., is covered by our unique solutions.



Collaborative Solution





### Hotels

- Translates Into Premium Room Rates
- Customer Goodwill
- Energy Saving
- Protecting Assets



### Residential

- Allergies, Germs and Infection Free Homes
- Promotes Healthy Living
- Smarter Homes
- Art Decor Protection



### Schools

- Reduction of Allergies, Germs and Infection
- Enhances School Goodwill
- Healthier Children



### Hospitals

- Reduced Cross-infection
- Faster Patient Recovery
- Protects Assets
- Energy Saving

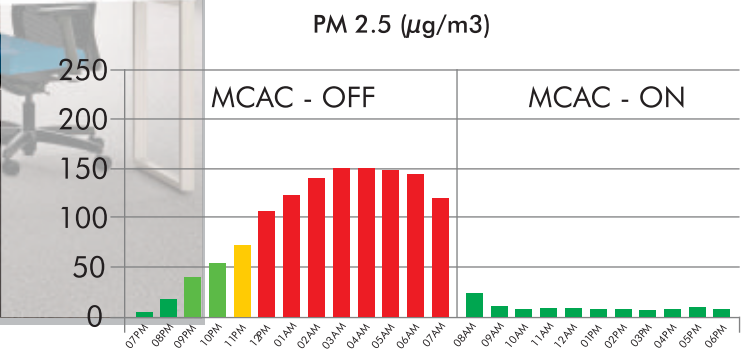


# Case Studies

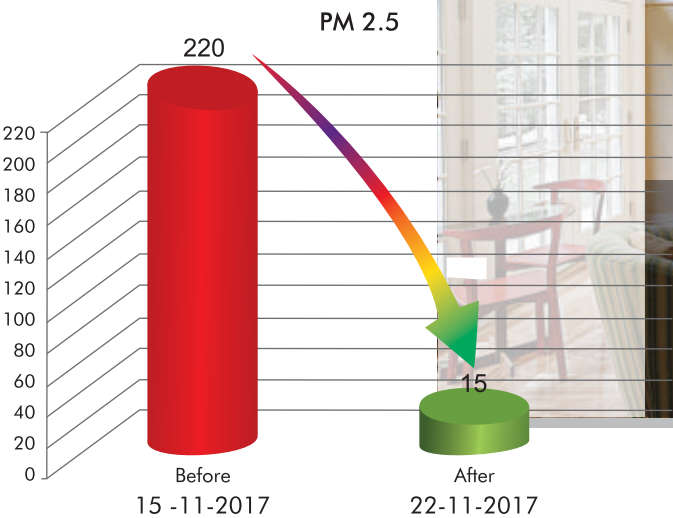
Our collaborative approach has set outstanding benchmarks. Be it an office, home, hotel, hospital or school, we have proven the efficiency and reliability of our systems in real time working and living environments.



- Project Name : Uber, Gurgaon
- Product Used : MCAC - 200A
- Date : November 15, 2017
- System : AHU
- Capacity : 23000 CFM
- Location : 23<sup>rd</sup> Floor



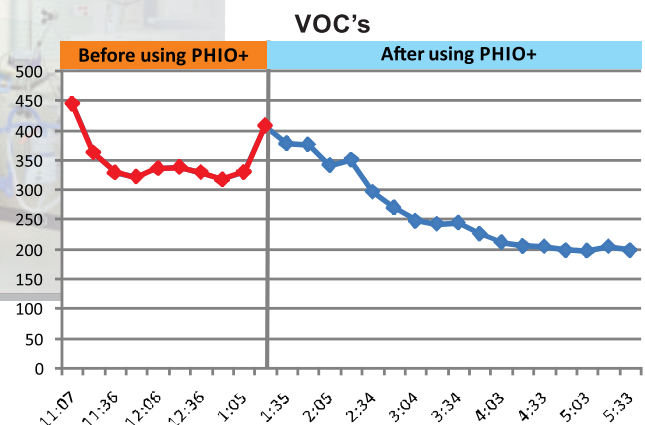
- Project Name : Bhartiya Residences, Delhi
- Product Used : MCAC - 200
- Date : September 21, 2017
- System : Ductable Unit
- Capacity : 1300 CFM



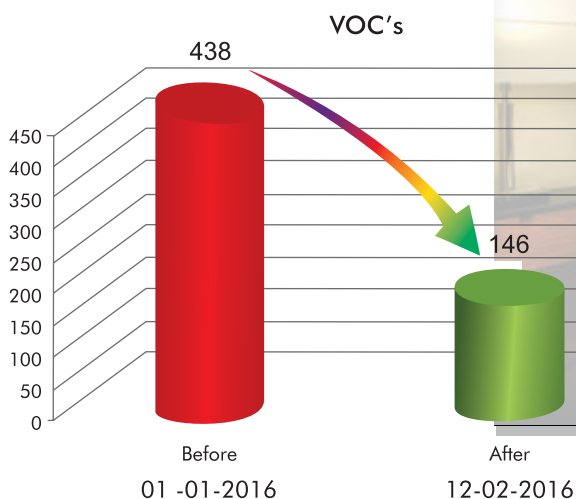
The "healthy air" also protects your assets like server rooms from break downs, de-coloring or degradation of your expensive interiors, damage to the art and even tackles dust mites, mold or bug infestation.



- Project Name : Army RR Hospital, Delhi
- Product Used : PHIO+
- Date : March 22, 2016
- System : 100% Fresh Air (Operation Theatre)
- Area : 7000 CFM

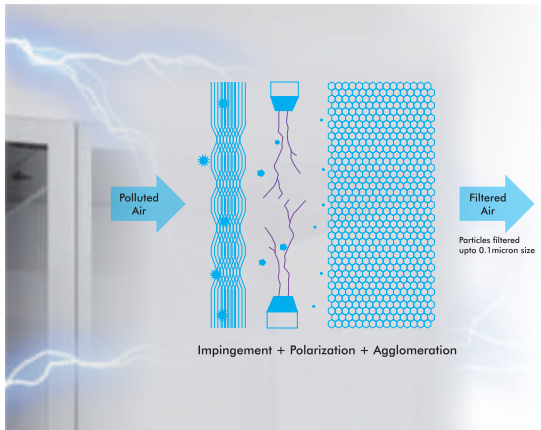


- Project Name : Le Meridien, Delhi
- Product Used : MCPT-2
- Date : January 01, 2016
- System : Fan Coil Unit
- Capacity : 1.5 TR



Protecting you & your assets from harmful pollutants!

## TECHNOLOGIES



### E filter

Magneto E-filter is based on an advanced air purification technology. The electro micro trapping process is based on 3 principles: **Impingement, Polarization & Agglomeration**. The dielectric process creates dual polarity on its surface trapping micro-particles and neutralising bio-aerosols from the air. The technology employs a trap & kill methodology that prevents secondary air-pathogen pollution, unlike conventional media-based air filters. The PM2.5, disease-causing germs and allergens in the recirculating systems are treated with a high, HEPA-class, efficiency process with no recurring costs. This core system is included in the Magneto Central Air Cleaner range of products. The unit is suitable for all types of HVAC applications like AHU, FCU, TRA, HRU, Cassette models, retrofit, or even new AC systems, all of which can use it because of its low-pressure drop design.

### CPT (Cold Plasma Technology)

Cold Plasma Technology is the new age Active Air Purification Technology that produces a family of high-strength, electronically charged plasma species, which are effective on air, as well as on the surface. It is remarkably effective on chemicals and is recommended for demanding and harsh environments.

**CPT offers Triple Benefits:** · Purifies the Air · Improves Health · Saves Energy

This is the most advanced air purification technology that can be installed in the supply air side of existing or even in new small capacity units like Hi-Wall, Cassette, Window AC, Ductables, FCU, ERV and many other HVAC Products, without any modifications.



### PHIO<sup>+</sup> (Photo Hydro Ionized Oxidation Plus)

PHIO+ is also a hybrid active air purification technology that produces a family of highly Reactive Oxygen Species, which are effective on air as well as surface. It is recommended for larger spaces. The technology provides an opportunity to reduce the bio-aerosol burden in the air, consequently, diminishing the cross-infection pathogen load significantly.

**PHIO+ offers Triple Benefits:** · Purifies the Air · Improves Health · Saves Energy

This is the most advanced air purification technology that can be installed in the supply air side of existing or new AHU, Ductables, HRV, FCU, and many other HVAC Products.

### UVGI (Ultra Violet Germicidal Irradiation)

UVGI is a popular passive technology that emits UV rays in the range of 254 NM (UV-C band). These rays disrupt the DNA of micro-organisms, preventing them from reproducing, and thereby effectively killing them. Several options are available for its implementation in projects, such as standalone units, on coil, in-duct or in-room.





### MAP-22

- 07 Stage Air Purification
- Hybrid Air Purifier
- Forest Like Fresh Air
- European Design & Engineering



# Residential



### MAP-66

- Hybrid HEPA Air Purifier
- 08 Stage Air Purification
- 3D Air Flow
- Efficiency of 99% on Particles Upto 0.1 Microns.

### MAP-100

- Efficiency of 99% on Particles Upto 0.3 Microns.
- PM 2.5 Display
- Low Noise Air Design
- Large Area Coverage
- Multi-Filter Assembly



## PRODUCTS

### Commercial

#### Max Care<sup>+</sup>

- Medical-grade Ceiling Mounted Air Purifier
- 07 Stage Air Purification
- Reduces Dust, Microbes, Chemical Gases
- Grid False Ceiling Installation



### Magneto Central Air Cleaner



#### MCAC - AHU

- PM 2.5 Control
- Trap & Kill Technology
- Low Pressure Drop
- Energy Saving
- BMS Ready

#### MCAC - FCU

- Complete IAQ Solution
- Trap & Kill Technology
- No Recurring Cost
- Intelligent Maintenance System with Auto Air Flow Sensing
- Retrofit Design





### Smoke Buster

- Industrial Grade, Ceiling Mounted Air Purifier
- Reduces Smoke & Odour (Cigar, Hookah, Smoking Areas)
- Reduces Viruses, Germs, etc.

### MFEAP -50

- PM 2.5 Control
- Trap & Kill Technology
- CO<sub>2</sub> Control
- Energy Saving
- Slim Design
- Large Coverage Area



### Air Treatment Unit

- Custom Built
- Multi Stage
- Designed For Specific Air Treatment Needs
- From 1000 To 20000 CFM

*& many more...*



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On account of the deteriorating Air Quality across the globe, Magneto Group has incubated a new startup, **Magneto Cleantech**, with prime focus on purifying the indoor air. Magneto Cleantech invents and popularizes technologies to tackle the problem of poor indoor air quality in developing nations. It focuses on making clean air accessible to everyone, whether in homes, offices or buildings.

Through the Healthy Air Plan, Magneto Cleantech takes a collaborative approach with Dr. Air team to provide effective and revolutionary solutions to improve the IAQ and validate the working results of these systems through professional-grade air quality monitors, thus, providing the end users with verified healthy air.

## Magneto CleanTech

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Magneto Products are designed to render optimal performance considering economic, environmental and energy constraints.