

FINE DUST AS A PATHOGEN

In today's day and age, a person spends, on an average, 90% of his time in closed spaces. 65% of this time is spent at home itself. Protecting health from PM2.5 fine dust is becoming more and more important since more than 70% of the population works indoors in offices. Here, the problem is that people are more susceptible to PM2.5 fine dust in indoor areas. Known main sources of fine dust in outdoor areas are smoke and exhaust fumes.



Another source for air pollution in indoor areas is the fine dust that enters closed spaces from open windows and settles inside.

Germany, UK, France, US, Japan and other countries started researching on the hazards of air pollution in indoor spaces and their effects on human health from the 1970s. These countries discovered more than 500 types of poisonous and hazardous materials in the ambient air and more than 20 types were classified as carcinogenic.

WHO reported that 70% of all human diseases are caused due to impure ambient air. 30% of the people living in apartments and new buildings may suffer from Sick Building Syndrome (SBS), i.e. headache, dizziness and fatigue.

Since people, on an average, spend 90% of their time indoors, indoor air pollution is a lot more than outer air pollution in modern cities. Quality of the ambient air is thus gaining increasing amount of importance from the point of view of human health.



WHAT IS FINE DUST PM2.5?

Atmospheric fine dust PM2.5 has a diameter of less than 2.5 micron particle. Its diameter is 1/20 times that of human hair. Although the fine dust PM2.5 levels contain only a few components from the atmosphere of the Earth, these particles have a considerable effect on the quality of air. If we compare the atmospheric particles with those of fine dust PM 2.5, we notice that the size of the PM2.5 particle is smaller, they have greater accumulation of poisonous and hazardous substances and the retention time in the atmosphere is more. Fine dust PM 2.5 thus has a greater influence on human health and on the quality of the atmospheric environment. In February 2012, a newly revised "Emission limit" was agreed upon to increase the PM2.5 monitoring.



HAZARDS OF PM 2.5

In its issue of "Air Quality Guidelines" in 2005, this is what WHO had to say: For an average annual PM2.5 concentration of 35 microgram per cubic meter, the risk of death for a person increases to about 15% as compared to a case with 10 microgram per cubic meter. A report of the United Nations Environment Program explains that an increase in the concentration of 20 mg PM 2.5 per cubic meter will cause about 34 million deaths every year in China and India.

IMPLEMENTATION OF A CLEAN AIR PLAN TO REDUCE THE HIGH POLLUTION OF FINE DUST IN BERLIN

From 2005 to 2010, a clean air plan and action program was decided upon in Berlin in order to be able to assess the requirement for additional measures to reduce the emissions of pollutants. The result of this assessment showed that till 2005, the measures implemented were not sufficient to enable adherence to the fine dust limit.

Additional measures such as introduction of the environment zone were necessary. This also led to a reduction in emissions with carbon black and nitrogen oxides between 2008 and 2010. Since however the air limits for fine dust and nitrogen oxides were still exceeded in Berlin, the previous clean air plan had to be revised.

The new clean air plan for the years 2011-2017 additionally contains measures to improve the air quality further and to reduce the extent to which limits are exceeded as far as possible.

AREAS OF APPLICATION FOR AIRJET 500

Good air quality can be ensured if filters are changed regularly. Else, the filters can get clogged and the air cannot be cleaned of pathogenic pollutants like fine dust, viruses and bacteria. Good filtration of the air can be achieved if objects which may block the inlet and outlet of air are not placed on or around AirJet 500 air filter.

The areas of application of AirJet 500 air filters are clear but work very effectively. You can install the air filter at home or at the office. Just do not install it in spaces with high temperatures variations, e.g. in the kitchen or bathroom, as this can lead to condensation inside the device.

Owing to excellent air filtration, the Airjet 500 air filters can be easily installed in the waiting rooms of clinics since they remove viruses and bacteria from the air effectively. This greatly reduces the risk of infection among the people present there.

Installation of the AirJet 500 air cleaners in offices is also recommended because majority of the pathogens are found in the air indoors. This makes working a lot easier because pure and clean air can be inhaled and used in a better manner by the body.



However, it must be noted that the AirJet 500 is not a replacement to regular ventilation and vacuum cleaning. It simply helps in improving the quality of indoor air significantly thanks to its technology.



INDOOR SPACES HAVE MANY TYPES OF POLLUTANTS

PATHOGENIC MICROORGANISMS

They are small but can spread a wide range of problems such as sneezing, eye irritation, cough, asthma and other allergic reactions at a high speed.

BACTERIA, VIRUSES

When in a large number and with a wide spread, they can cause a multitude of diseases.

FUNGAL SPORES

They can spread easily in the warm and humid air. Prolonged exposure to fungal spores can easily lead to allergies and asthma.

DUST AND HOUSE DUST MITES

Dust causes irritation to the respiratory system and is a breeding ground for mites and fungus. House dust mites are extremely small insects that often live in mattresses, bed sheets and furniture or move through the air. They increase the frequency of asthma.

POLLEN

A vase of flowers or plants and flowers outdoors produce pollen which many people have allergic reactions to. If inhaled, it can cause disorders related to the respiratory system, eyes and skin.

HARMFUL CHEMICAL GASES

Cigarette smoke, renovation and cleaning agents can cause irritation to the skin, can attack nerve passages and respiratory tracts and lead to health risks in case of prolonged contact.

PASSIVE SMOKING

The American environment authority EPA (Environmental Protecting Agency) and the International Agency for Research on Cancer have classified carbonic oxide gas, formaldehyde and other poisonous substances as carcinogenic in class A. Hundreds of carcinogenic substances in children's lungs do a lot of damage.

FORMALDEHYDE

Among the commonly used furniture, plywood and laminated fiber sheet are listed as hazardous and carcinogenic. High concentration of formaldehyde can lead to irritation of the eyes, nose and respiratory system and in serious cases, it can also cause asthma.

BTEX

In aromatic hydrocarbon substances like Benzol, Toluol, Ethylbenzol and Xylol, some of the compounds are identified to be carcinogenic by the WHO. Various materials, especially those from organic solvents e.g. color; paint work, additives, wallpapers, carpets and synthetic fibers can cause chronic poisoning in case of prolonged exposure. It can cause severe aplastic anemia, leukemia and in the worst case scenario, even death.

SIX REASONS WHY YOU SHOULD USE AIRJET 500

SEVERAL FILTERS

The AirJet 500 has an array of various effect filters such as the HEPA filter, an active carbon filter and a photo catalyst filter. More than 80 pollutants are filtered effectively from the air.

EFFICIENT STERILISATION

The 15W high power UV light can kill 95% of the bacteria and viruses in the indoor area of a 30 square meter room within 1 hour.

NEGATIVE ION GENERATOR

Negative oxygen ions and negative ions amount to up to 10 million ions/cm³. They make the air fresh and pleasant.

CLEANING SPEED

The AirJet 500 air filter produces up to 8,5 cubic meter of clean air every minute. In the "Ultra High Speed" mode, you can clean 42 square meters of ambient air of different smells, smoke, dust and VOC gases as well as of different types of bacteria and viruses and other air pollutants in 30 minutes.

QUIET OPERATION

If the system is running at a low speed, the maximum volume is 26 db, which is equivalent to the sound that is generated when someone whispers.

INTELLIGENT MONITORING OF AIR

The quality of air indoors can be seen on the LCD screen at a glance. The smart sensor automatically adjusts the speed to the quality of air.

FILTERS OF AIRJET 500

The first air filter removes large particles such as dust and hair.

HEPA (HIGHLY EFFICIENT PARTICLE FILTER)

Large, with excellent filtering capacity
The capacity and the area are proportional to the net filter. The HEPA filter of the AirJet 500 air cleaner is folded several times. This increases the area ratio up to 15 times, thus making the filter extremely effective.

The net filtration rate of a single HEPA filter of AirJet 500 is much higher than that of the common HAPA filters. The filtering efficiency of the filter is up to 99.97%.

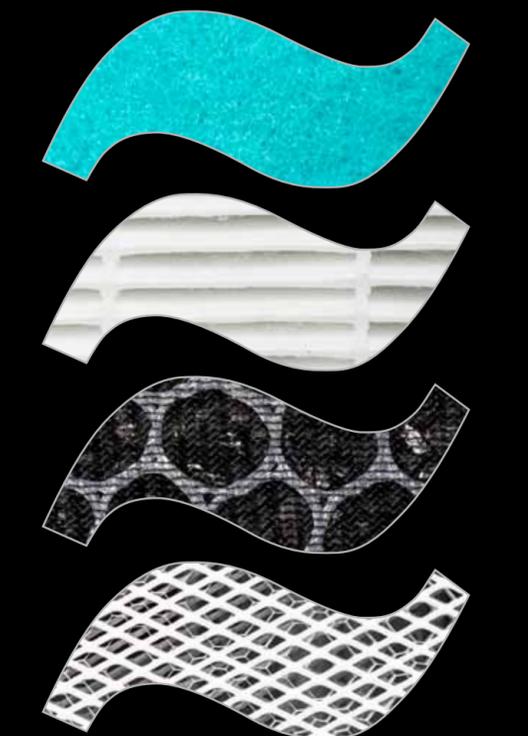
ACTIVE CARBON FILTER

Unique structure, efficient absorption of odors: divided into grainy activated carbon, activated carbon, activated carbon in powder form and activated carbon fiber.

The features of the molecular sieve material are its good adsorption properties and a large surface, mainly for small molecule particles like ammonia, formaldehyde etc. which have good adsorption capacity.

MODIFIED ADSORPTION MATERIAL

As opposed to industrial cleaning, civil air cleaners have a simple selection of activated carbon against pollution due to formaldehyde, TVOC, ammonia, benzol and gas. The activated carbon odor filter has a large adsorption surface.



According to research, the weight of one gram of active carbon adsorption has a width of 500 to 1500 meter. While the AirJet 500 has an activated carbon odor filter weighing 1900 g, the adsorption surface is about 1.6 million square meters, which is equal to the surface of 224 football fields.

UV LIGHT

By using the UV lamp with a wave length of 254 nm, bacteria can be killed directly while at the same time attaining excellent effect with the PCO. Organic pollutants (Formaldehyde, Benzol, Xylol etc.) in the air can be degraded in carbon dioxide and water and it can lead to the destruction of bacterial cell membrane and healing of viral proteins with strong sterilisation, over-absorption and removal of odors.



rate the device comfortably and enjoy the clean air.

GET HIGH QUALITY LEVEL OF AIR

Thanks to the installed dual air quality sensors for measuring and checking the air quality (gas and aerosol), you can determine the quality of air accurately. In the automatic mode, the system automatically selects the suitable speed to ensure high quality of air in indoor areas.

ANION GENERATOR

Anions are negatively charged ions (1) Producing reactive oxygen species: In case of negative oxygen ions, the oxygen molecules are activated effectively in the air such that they can be actively and easily absorbed by the body. This is an effective method to prevent "Air-conditioner sickness".



(2) Bacteria: The anion generator produces a large volume of negative ions and small quantities of ozone. The content is equivalent to less than 50 ppm of the target value of the device. If the easily adsorbed viruses and bacteria are combined to make changes in the structure or energy transfer, it leads to their death.

Enjoy the fresh air after quick cleaning. With high acceleration of speed output of the AirJet 500, you can improve the quality of air and experience the true quality of life.

"ULTRA FAST" MODE

With its high capacity, the AirJet 500 air cleaner produces about 500 cubic meters of clean air every hour. In the "Ultra High Speed" mode, the AirJet 500 can manage to clean large halls of up to 50 square meters by means of its quick processing of odors, smoke and other air pollutants in about 30 minutes.

CADR (CLEAN AIR DELIVERY RATE)

CADR is the international reference value of the most important indicators of air cleaning efficiency. The higher the CADR value, the higher the efficiency of air cleaning of an air cleaning system as compared to the air filtering of a breathing mask.

BRUSHLESS DC MOTOR

The AirJet 500 has an international advanced technology - a brushless DC inverter motor. It proves to be advantageous due to its small size, high efficiency, long life, low noise, low vibrations, low energy consumption and high conservation of energy.

INTELLIGENT, EASY TO OPERATE SYSTEM

The intelligent system of AirJet 500 automatically adjusts the quality of air to the speed of the machine so that you can operate the device comfortably and enjoy the clean air.

ADVANTAGES OF AIRJET 500 AT A GLANCE:

- Kills bacteria and viruses
- Removes pollutants from the air
- Easy operation
- Simple filter change
- Space-saving and elegant design
- Clean air



SPECIFICATIONS:

Nominal voltage	240 V / 50 Hz
Motor specifications	Brushless DC motor: DC 310 V
Effective output	75 W
CADR	440 m ³ /h
Dimensions	698 x 493 x 221 mm
Weight	10 kg



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RESPONSIBILITY FOR THE FUTURE - WE ARE MAINTAINING JOBS IN GERMANY

Our workers are irreplaceable. As a company with location in Germany, we profit from the local high quality of education. However education is not the only factor for success. Personal engagement of an individual accounts for the success of a company. Therefore we focus on jobs in Germany.



WE ARE INVESTING IN GERMANY

Since Germany is located right at the heart of Europe, the entire market of the European Union as well as the Central and Eastern European markets open up for anybody investing in Germany, with a total potential of 853 million people. But these are just numbers. We are happy to invest in Germany also because it is our home.

WE PAY TAX IN GERMANY

Who likes to pay taxes? However with our duties, we support our education system and invest in the future. Kindergartens, modern schools and new roads are built from the money of our tax payers. We are on the fast track. Race ahead with us and we will keep our tax payers' money in Germany!

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