

Pros & Cons of the Most Common Air Purification Systems

There are a wide variety of air purifying systems available on the market, which grow in number every day amidst the COVID19 Pandemic. Below is a short summary of these systems to help make an informed decision.

Filter Based Systems

Hepa Filters, Charcoal Filters, 4 stage Filters, Medical Filters (Such as Dyson)

- Filters of any type are passive systems, which means air is only treated once it has passed through the filter. If someone were to enter the space and cough or sneeze, the pathogens would be free to travel around the space, infecting people and surfaces before eventually passing through the filter to be cleaned.
- The air comes out clean but it may take many hours for all the air in a space to be treated. In reality, with people coming and going the likelihood of all the air getting treated is very slim.
- These technologies do nothing to sterilise surfaces.
- All the pathogens are still living in the filter, which means changing and cleaning filters carries its own risks.
- Provides little protection against person to person transference.
- These are usually the least expensive purification method (you get what you pay for).



HVAC UV Treatment

- Much like filter based systems, installing UV lights in ducted HVAC systems does not treat the air until it has travelled past the light. Once it passes the light there is no further treatment. This means that if someone were to enter the space and cough or sneeze, the pathogens would be free to travel around the space, infecting people and surfaces.
- These are much more effective than filter based systems as they kill the pathogens instead of capturing them.
- These systems do not clean surfaces.
- Provides little protection against person to person transference.
- When people from outside enter the space, they instantly contaminate the environment.



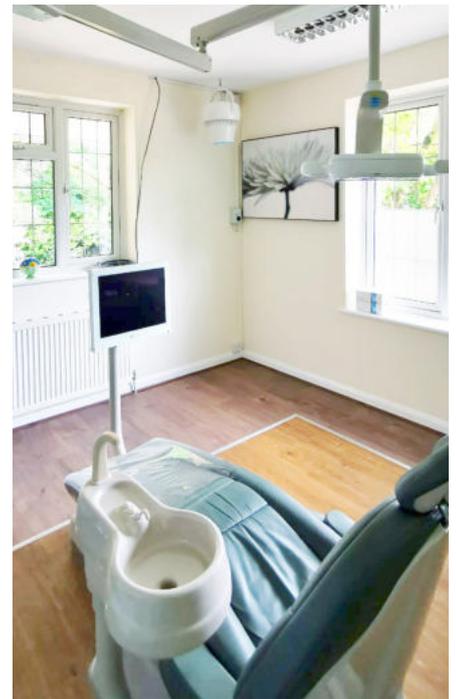
Fogging or direct UV

- Fogging or direct UV are both effective methods for cleansing both the air and surfaces within a space.
- Neither of these are very convenient as the space cannot be used during the process, due to either the intrusive nature of fogging, or the dangerous levels of UV required to have a germicidal effect on its own.
- Provides little protection against person to person transference.
- Also, once people return to the space, they instantly contaminate the environment. If someone were to cough or sneeze following treatment, the pathogens would be free to travel around the space, infecting people and surfaces.



PureAir Advanced Active Purification

- The PHI purification technology used in the Airius PureAir Series, manufactured by RGF Environmental, one of the worlds leading specialists in air, water and food purification does include a tiny amount of UV but not in its usual form. It is a specific non ozone producing UV frequency, specially designed to create a catalytic process with the quad metallic target surrounding it. This completely safe and natural process creates Ionised Hydro-Peroxides, also known as mother nature's cleaning agents. Ionised Hydro-Peroxides are what naturally cleans and gives the air a fresh smell after a thunderstorm. These cleaning agents are flooded into spaces to provide continuous 24/7 protection.
- Using safe, natural Ionised Hydro-Peroxides to clean spaces means that the PureAir System causes no disruption to normal operational or business. activities.
- As well as air purification, the Airius PureAir system also cleans all surfaces within the space, continuously coating them with an invisible shield.
- Airius PureAir technology reduces the risks vastly more than any of the others listed, not only because it also cleans surfaces, but because any pathogen entering the space is instantly attacked at a molecular level.



PureAir
Standard Series



PureAir
Designer Series



PureAir
Suspended Series



PureAir Technology Explained

How does the PureAir Series PHI Cell kill bacteria and viruses in the air and on surfaces?

The PureAir Photohydroionisation (PHI) Cell, manufactured by RGF Environmental, one of the worlds leading specialists in air, water and food purification, is a kind of UV light that emits advanced oxidation plasma. Included as part of a fan system, the PHI cell distributes hydro-peroxides, superoxide ions and hydroxide ions throughout the space, neutralising 99% of micro-organisms in the air and on surfaces.

PHI cells produce a group of oxidants known as hydroperoxides. Far from new to our world, hydroperoxides have been around for 3.5 billion years – and today they are commonly used in food processing environments, where they offer an anti-microbial treatment without leaving chemical residues.

Benefits of PureAir Technology

Choosing an Airius PureAir Series destratification fan with its integrated PHI Cell is a simple way to reduce bacteria, viruses and odours in your environment.

- Continuous air purification benefiting air and surfaces
- Easy to install in any environment
- Kills more than 99% of bacteria and viruses
- Reduces odours by over 99%
- Reduces gases, vapours and VOCs by over 80%



Airius PureAir

Air Purification System Comparisons



Tested and Approved by Leading Agencies



Multiple studies have been conducted on RGF PHI Cell technology and they are widely approved for use to control airborne and surface-based bacteria, viruses, smoke and odours.

- Approved by the USDA, FSIS and FDA for use in food processing plants
- US military approved for use in field hospitals
- Chinese government approved for use in controlling the SARS virus
- Testing carried out by:

- Kansas State University
- Midwest Research Institute
- NELAP Accredited Independent Labs - The NELAC Institute
- California Microbiology Center
- IBR Laboratories
- University of Florida
- United States Air Force
- R&D Labs
- University of Cincinnati
- Kane Regional Hospital
- FEMA
- NEI-Chinese Government

Contact Airius

Airius fans are commonly used to purify air and balance temperatures for both heating and cooling applications in a wide variety of environments – from homes to warehouses.

Adding an Airius PureAir Home Series air purification, infection and odour control ventilation fan is a simple way to continually clean the air, creating a safer and healthier environment for you, your family and your home.

Contact Airius to learn more >>