

Proven Indoor Air Hygiene Solutions for Airports

SAFER | HEALTHIER | MORE PRODUCTIVE

Limiting The Spread of Infection Is More Important Now Than Ever

The COVID-19 Pandemic has spread around the world and will change forever the way we clean and disinfect our environment.

In this new reality, while practicing social distancing and cleaning surfaces, we have begun to ask ourselves what are the next steps in taking precautions to prevent the spread of airborne pathogens?

According to a study done by the CDC, aerosolized viral droplets introduced to the air stream by sneezing and coughing can stay suspended in the air for hours.

These viral respiratory particles are of particular concern to airport staff and passengers who are confined to crowded indoor environments.

Trusted to Protect Airport Environments Around The World

Filtration Group and its sister companies and partners are trusted to protect airports and major airlines globally against high level of pollution from jet fumes, vehicle exhaust, chemical odors and the impact it can have on employees, critical equipment, and passengers. We provide critical filtration to the FAA control tower for the busiest airports in the world. As the needs to protect these spaces has evolved, so have our filtration solutions.

Air Hygiene plays a role in protecting passengers and staff

Air filters capture a range of particle sizes and each time recirculated air passes through a filter, more particles are trapped. When the optimal filter type and efficiency is chosen, HVAC systems and in-room air scrubbers can dramatically reduce the quantity of airborne pathogens. Some filtration technologies can even destroy target viruses and bacteria.



How Filters Help Stop The Spread of Infectious Diseases



Pathogens such as the coronavirus are transmitted through the air on carriers such as water droplets or dust particles. When someone who is infected coughs, sneezes, or even breaths, there are moisture droplets which become airborne and become the carrier of the virus. Small 0.3-1.0 micron particles are light enough to remain airborne for significant amounts of time and can contribute to the spread of the disease to others at a much greater distance.

Particulate filtration removes a range of particles and different filters have different ratings for this purpose. This is referred to as the MERV rating which stands for Minimum Efficiency Reporting Value. Going beyond standard MERV filters, HEPA filtration removes at least 99.97% of particulates as small as 0.3 microns.

Filtration Group offers replacements for standard particulate filters that integrate patented antimicrobial PuraWard fibers while offering the same MERV rating. These PuraWard fibers have proven effective against viruses similar to the novel coronavirus, including SARS and H1N1. Choosing the correct filtration can have a dramatic impact on reducing the number of viral particles in the air, and therefore the chances of spreading airborne infectious diseases within your facility.

Steps to Optimize your Indoor Air Hygiene

STEP 1: Flush your system

ASHRAE recommends you review HVAC programming to provide flushing two hours before and post occupancies. This includes operating the exhaust fans as well as opening the outside air dampers. For buildings without the capacity to treat large quantities of outside air and when outside air conditions are moderate, open all windows for a minimum of two hours before reoccupation.

STEP 2: Inspect your current HVAC Filtration System

- □ Have my filters been maintained? Do I need to change them more regularly?
- Do my filters seal into their holding frames or tracks? A filter only works when it is sealed properly eliminating bypass.
- Determine your current filter efficiency. This is typically listed as a MERV rating.

Examples of Common Upgrade Solutions:



STEP 3: Upgrade to the optimal filter

- Upgrade efficiency to MERV 13 or higher which will capture more pathogens.
- Adding chemical filtration to your filter system can remove jet exhaust contaminants along with enhanced antimicrobial properties.

STEP 4: Add localized air purifiers and dehumidifiers

Consider adding localized, stand-alone air purifiers and dehumidifiers in high-traffic and commonly occupied areas to help prevent the spread of bacteria and virus.

Filtration Group and Partners Offer Stand Alone Solutions in Addition to HVAC

PHOENIX GUARDIAN HEPA SYSTEM

- True 1400 CFM Scrubber
- 99.97% HEPA Filtration
- Odor Control filters optional



PURASHIELD 1000

- Patented PuraWard technology
- Removes particles via HEPA Filtration
- 50 lbs of patented antimicrobial media



STEP 5: Implement best practices for changing out your filters

- Change out your filters every 3 months for optimal filtration.
- □ Ensure maintenance staff are wearing the appropriate PPE when changing filters.
- Dispose of dirty filters in sealed bags and avoid compacting if possible.

STEP 6: Consider upgrading your HVAC system to bring in conditioned fresh, outside air

- Avoid airborne contaminant recirculation.
- □ Maintain proper humidity levels to prohibit virus, bacteria and mold reproduction and function.

Filtration Media and Drop-in Filters that Help Prevent Virus Spread



Antimicrobial Chemical Filtration:

Developed and manufactured in the USA, Purafil's patented SP dry chemical filtration media destroys target viruses and bacteria on contact through oxidation. SP Media is avilable in disposable modules and canisters that can be easily integrated into existing HVAC systems with simple tracking and frames. Purafil antimicrobial chemical filtration has been tested to remove the following microbials:

Pathogen	Killing Rate	
H1N1	99.49%	
Staphylococcus Albus	93.78%	

PuraWard Antimicrobial Fibers:

The PuraWard Fiber is a high efficiency fiber embedded with copper and silver ions that jointly attack bacteria and viruses. PuraWard fiber has been successfully applied to air filters and respiratory masks approved by the FDA for their antibacterial and antiviral properties in surgical environments. PuraWard fibers are available in replacement particulate filters (MER8, 11, 13). Puraward fiber has been tested to remove the following microbials:

Virus	Reduction Rate	Bacteria / Fungus	Reduction Rate
H1N1	99.91%	S. aureus	99.95%
H7N9	99.98%	E. Coli	99.96%
SARS	99.58%	C. albicans	98.90%



16X Magnified



32X Magnified





The Purafilter[®]:

Combination chemical and particulate filter designed to replace existing particulate filters in retrofit or rework applications. The Purafilter contains antimicrobial Purafil SP media and is useful in applications where space limitations exist. Purafil engineers are the first to successfully suspend sodium permanganate media in a bicomponent fiber matrix, which does not require the use of adhesives.

PLEASE CONTACT ONE OF OUR SPECIALISTS TO HELP YOU IMPROVE YOUR INDOOR AIR HYGIENE

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