

WHY UV LIGHT?

DISINFECTION WITHOUT CHEMICALS



A WELL-ESTABLISHED TECHNOLOGY

For over a century scientists have known that UVC light (254 NM) disrupts the DNA of microorganisms which prevents them from reproducing, effectively killing them.

Germicidal UVC disinfection for HVAC is now recommended by the CDC and ASHRAE for use in hospitals, schools, and hotels, and is an obvious choice for any environment where indoor air quality is critical. The technology is also commonly used by the food industry and water treatment systems as a chemical-free means of purification.



Fresh-Aire UV residential system in air handler

INACTIVATES SARS-COV-2 IN 0-3 SECONDS

Fresh-Aire UV commercial disinfection systems for HVAC achieved 99.99% neutralization of the SARS-CoV-2 virus in 1 second on test surfaces in a laboratory setting at a distance of 9”.

In scientific studies UVC light has been proven to inactivate all types of airborne biological contaminants.

A CLEANER AIR SYSTEM

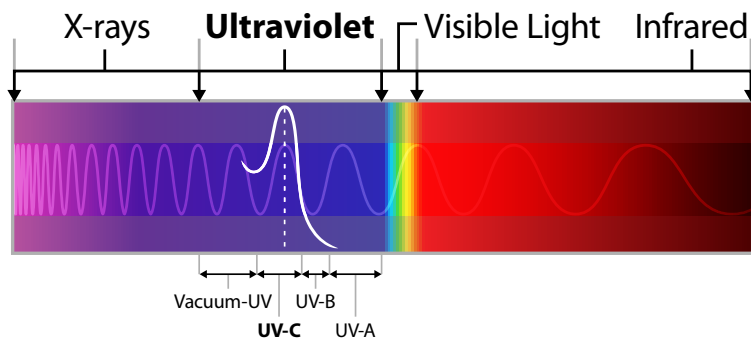
Installation of a germicidal UV light inside the air system inhibits the growth of mold which saves energy by allowing the system to operate more efficiently. A cleaner system also requires less maintenance.



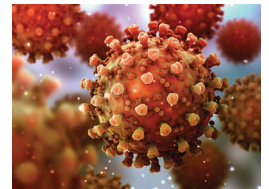
HOW UVC WORKS

Germicidal UVC light penetrates the cell walls of microorganisms causing cellular damage, which kills them by preventing them from reproducing.

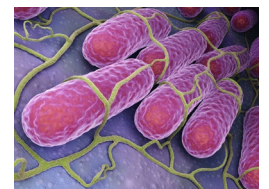
SPECTRUM



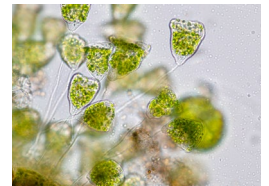
The germicidal UVC light spectrum is approximately 200 – 300 nm, with a peak germicidal effectiveness at 254 nm.



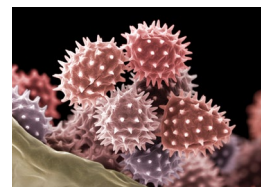
VIRUSES



BACTERIA



MOLD



ALLERGENS

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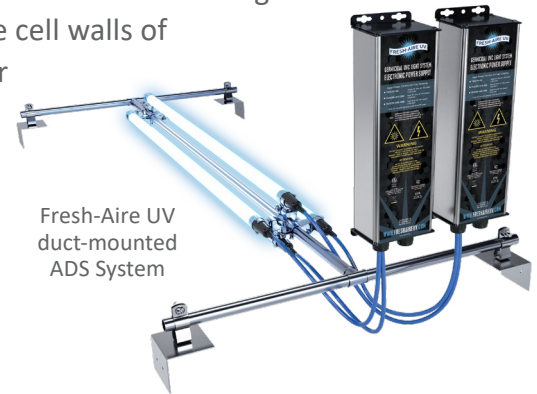


Fresh-Aire UV coil-mount Blue-Tube XL

COMMERCIAL APPLICATIONS

Now, more than ever, indoor air quality is critically important for commercial and public facilities of all types. Fresh-Aire UV germicidal UVC light systems reduce the risk of airborne infectious diseases.

Viruses, bacteria, and mold (like all microbes) have no defense against UVC light, which is present in sunlight but is filtered out by the Earth's atmosphere. The very short 254 nm wavelength of UVC light is able to penetrate the cell walls of microorganisms and disrupt their DNA which inactivates them.



Fresh-Aire UV duct-mounted ADS System

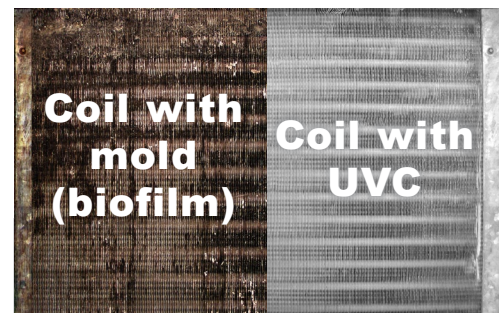
BENEFITS OF COMMERCIAL UVC

- Improves indoor air quality
- Saves energy by reducing biofilm on coils
- Significant savings on coil, drain pan, and plenum cleaning
- Pays for itself - quick return on investment
- 24/7 operation
- Reduces exposure of workers to cleaning chemicals
- Extends the life of the HVAC system

COMMERCIAL SERIES FEATURES

- Coil, surface, duct, and airborne applications
- Water-resistant 120-277 VAC power supply for air handler use
- High-output UVC lamps suitable for moist HVAC environments
- 18", 24", 32", 46", 60" lamp lengths
- Convenient mounting kits
- Odor control with APCO® Rack Kit
- Optional control panels, interlock switches, viewports, etc.
- Lifetime warranty for all parts except lamps

Biofilm on Coils



A coil-mounted system saves energy and maintenance costs associated with commercial HVAC. A biofilm of only 0.002" can reduce efficiency by 37%! UVC germicidal disinfection is the most cost-effective and practical solution.



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