Fighting Infectious Diseases with UVGI Disinfection of HVAC Systems

Airborne Infectious Diseases
Infectious diseases such as Ebola, SARS, and MRSA, are a growing concern for medical facilities. According to the CDC, UVGI (Ultraviolet Germicidal Irradiation) is an effective tool in reducing the transmission of airborne bacterial and viral infections in hospitals, military housing, and classrooms as a supplemental air cleaning measure along with HEPA filters.

Sterilize Airborne Pathogens with UVGI
An Ultraviolet Germicidal Irradiation or UVGI system (UV-C lights installed inside a building’s air handler and/or ducts) offers a proven and cost-effective method of sterilizing airborne pathogens. UVGI systems can also often pay for themselves by improving air system efficiency and reducing the costs of maintenance. They also generally improve indoor air quality for building occupants.

Microbes Have No Defense
These lights are effective because microbes have no defense against C-band ultraviolet light (UV-C) which is not present in daylight (it’s filtered out by the atmosphere). UV-C light sterilizes germs by penetrating their cell walls and scrambling the DNA inside leaving them incapable of reproduction.

UV-C Germicidal Applications
The germicidal properties of UV-C light have been known for over a century. UVGI has been used for photo-therapy, in the food industry, and in water purification. In recent years there has been a tremendous growth in the number of UV-C lights installed in HVAC systems of all sizes as a means of mold disinfection and to provide healthier indoor air quality for occupants.
Ashrae Recommendations

Ashrae now recommends the use of UV-C lights within HVAC systems as a supplemental technology to reduce airborne infectious diseases. A single pass through the air system can sterilize a substantial fraction of airborne contaminants and a typical air handler will change the air four to five times an hour significantly reducing the risk of airborne microbial infection. For more information refer to www.ashrae.org ASHRAE Position Document on Airborne Infectious Diseases and www.epa.gov Swine H1NI Influenza A: Transmission of Viruses in Indoor Air: HVAC System Protection Options.

The Fresh-Aire UV Commercial Series of UV-C light disinfection products includes a variety of devices that will reduce the risk of airborne transmission of infectious diseases through a medical facility’s HVAC system.

Airborne Duct System (ADS)
An array of high-output UVC lamps kills airborne pathogens as they pass through the duct. 32” or 46” lamps, axial or grid configuration.

Standard “L” System,
Tubular Rack System,
APCO Rack System
For surface disinfection at the coils. 32”, 46”, 60” lamps and a variety of mounting hardware options.

APCO Cells
Activated carbon photocatalytic (PCO) cells remove odor-causing and potentially toxic VOC contaminants from the air.

800-741-1195

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