



March 13, 2020

**RE: Coronavirus: Fresh-Aire UV efficiency against viruses, bacteria & mold**

*Fresh-Aire UV has been receiving inquiries regarding the effectiveness of UV disinfection systems against COVID-19 (coronavirus). We believe the best approach is to be as transparent as possible and to explain the fundamentals and variables that play a factor in inactivating coronavirus and other pathogens with UVC germicidal technologies.*

Fresh-Aire UV systems are tested and validated against bacteria, viruses, mold & fungus. Fresh-Aire UV systems have been tested and achieve up to a \*99.999996% reduction on microorganisms. There are a number of factors that need to be addressed in order to determine efficiency, these include but not limited to, the application, such as surface or air disinfection, air velocity and temperature, recirculation rates, and dwell time, as well as the specific biological target. Fresh-Aire UV systems are installed in the HVAC unit and/or ductwork and are designed to disinfect the air as it circulates through the ventilation system. UV dosage for log reduction is measured in several ways including microwatts per second/centimetres<sup>2</sup> ( $\mu\text{Ws}/\text{cm}^2$ ).

Every microorganism, including coronavirus, requires a specific UVC dosage for inactivation. UV disinfection has been employed for decades in water treatment; these microwatt values have been used for reference to gauge UVC efficiency against a large cross-section of microorganisms. While Fresh-Aire UV systems have not been specifically tested against coronavirus, they have been tested and proven effective against similar pathogens, some that require an even greater dosage for inactivation than coronavirus.

UV disinfection systems for HVAC are an ideal proactive measure to complement filtration. Microorganisms, particularly viruses, are so small that filters are mostly ineffective. The UV systems have also been shown to reduce problematic molds and pathogens that are found within the HVAC system and drain pan that would otherwise be introduced and distributed throughout the envelope of the building.



Fresh-Aire UV APCO-X whole-house air purifier

*For additional information visit:*

[www.ashrae.org/technical-resources/resources](http://www.ashrae.org/technical-resources/resources)

[www.cdc.gov/coronavirus/2019-ncov/index.html](http://www.cdc.gov/coronavirus/2019-ncov/index.html)

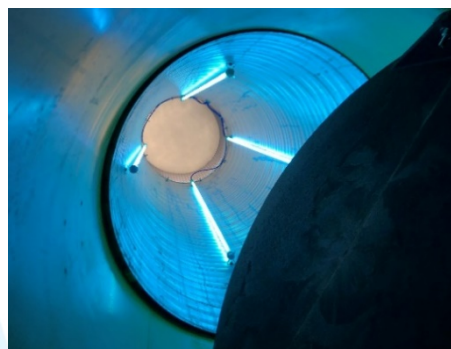
*Please contact Fresh-Aire UV to discuss your specific application: 1-800-741-1195 or email [sales@FreshAirUV.com](mailto:sales@FreshAirUV.com).*



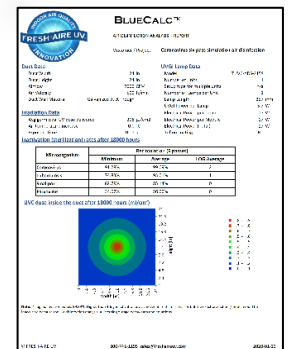
Air Handler Disinfection



Air Handler & Airstream Disinfection



Make-Up Air & Exhaust Disinfection



Blue-Calc Report / Analysis

*Fresh-Aire UV systems are installed within the HVAC system and are not intended to diagnose, treat, prevent or cure any disease. The systems have not been tested on Coronavirus and is not a medical device.*

\*Tested by Antimicrobial Test Laboratories (ATL) 99.999996% reduction of MS2 bacteriophage. Laboratory test results available upon request.