



## COVID-19 FILTRATION INFO

Below you will find some answers to the questions you may have on our Aura HEPA+UV units. The information below is what we have learned from the latest available research on the COVID-19 virus.

*Aura HEPA + 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.*

### **Virus size**

The latest studies show the COVID-19 Virus to be 0.10- 1.0 micron in size.\*

### **ULPA or HEPA Filters**

ULPA filters can filter down 0.10 microns, however, they are not being recommended by most regulatory authorities due to the following:

- Most small viruses will attach themselves to a "surrogate virus carrier" such as a small dust particle or vapor of a larger size. In the case of COVID-19, the virus is carried by the Bioaerosol of the infected person from coughing, sneezing etc. These Respiratory Droplets vary in size from 0.3-1.0 microns, hence the wide acceptance of HEPA filters that can capture 99.99% of 0.3 microns for this application.
- Bag in and bag out filters are not required, the latest studies show that the COVID-19 can live on Cardboard for approximately 24 hours, on metal or plastic for 3-4 days, the worst case assumption for the filter is that within a week of capture on the media of the HEPA filter the virus would have died. In a Healthcare environment the air is very clean therefore the HEPA filters do not have to be changed for a long time, our units also have a pre filter to further protect the high efficiency, long life V-Shape HEPA filter. We would therefore recommend that the unit is wheeled out of the room into a maintenance area and the filters to be changed a few days after the unit is tuned off. Otherwise the filters can be changed the same day with proper protective gear as one would to change or clean any presumed contaminated space.

### **UV Filtration**

UV lamps effectiveness against COVID-19 has not yet been studied, the previous studies done on similar SARS Virus show UV to be effective around 90%. Furthermore, the UV lamp does not offer enough "residence or contact time" of the virus to deactivate while the air is moving across it. We offer the UV option as a "comfort" in addition to the proven HEPA capture mechanism. We have both a PRE-HEPA option that could possibly deactivate the virus that is deposited on the surface of the Filter or the POST-HEPA option that could possibly deactivate any virus that passes through the HEPA.

### **Bipolar Ionization (PCO)**

Bipolar Ionization, or PCO, is not recommended for COVID-19, as PCO is a possible Ozone Generator. Ozone is a strong lung irritant that is definitely being avoided by regulatory bodies in this situation.

### **Air Flow**

The airflow arrangement of an Airborne Infection filter system is very important. In order to be efficient the unit air inlet has to be within proximity of the potential source of the contaminant, which is the breathing zone of the occupants, this is why we have designed our unit to be high air inlet and floor or ducted discharge of filtered air. We also offer the additional option of (4) 6-inch round or (8) 4-inch round source capture duct collar connections of field ducting in order to get as close as possible to the contaminant source.

### **High Capacity**

The minimum number of Air Changes required for recirculating non-ducted filtration units for infectious disease area is 12 ACH. This is another reason as to why we are offering up to 2000 CFM in our standard unit.

### **Enclosure Sealing Integrity**

Our all-aluminum, double wall, fully injected foam enclosure is rated at ZERO leakage, with the emphasis on the first pass capture by the 99.99% HEPA filter performing as intended, instead of possibly leaking around or through the unit .

### **Larger AHUs for Healthcare Applications**

Please note that besides this stand-alone portable product, we also offer "custom" HVAC AHU products ranging from 2000 to 120,000 CFM with various filtration, energy recovery, temperature, and humidity control options. Over the last 3 years, we have installed our Multistack AHUs to various healthcare project-specific applications. It would be our pleasure to offer these same products and services to you in the near future.

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