

## ***Satellite HEPA: The New One-Two Punch that could Help Building Owners Tackle Covid-19 this Winter***

Throughout much of 2020, the CDC, EPA, ASHRAE, and other leading organizations focused on the pandemic have been promoting outdoor air as a critical element to clean indoor air of unwanted pathogens. However, it will no longer be feasible for much of the country to keep windows open as the temperatures will be too cold for it to be practical. Simultaneously, more people will prefer to be indoors for meals, socializing, and entertainment, which will likely increase the possibility of higher viral loads indoors. THE RESULT: While viral loads increase, outside airflow will decrease, resulting in increased risks for indoor facilities.

It's this scenario that leading researchers, such as Dr. Mark Hernandez of the University of Colorado, recommend **"Satellite HEPA"** air filtration.

### **Why Satellite HEPA?**

Along with Dr. Mark Hernandez, many top scientists recommend installing mobile, localized air-cleaning devices to reduce the suspension virus clusters and unwanted particulate matter. In their eyes, satellite HEPA is the most practical, economical, and straightforward method to reduce viral load in the commercial, industrial, and institutional settings. Why?

- *Existing HVAC systems do not provide adequate air circulation.* Commercial grade satellite HEPA units can create the necessary circulation of 3-4 air turns an hour.
- *Existing HVAC system H13-level filtration retrofitting is difficult and expensive.* Satellite HEPA units are straightforward to install and economical.

Also, adding the latest technologies to a satellite HEPA unit only increase its effectiveness. For example, Needlepoint Bipolar Ionization (NBPI) has proven to reduce viral loads and help satellite HEPA systems capture virus clusters through the HEPA filtration and air circulation each machine provides. The result offers additional protection from the aerosolization of viruses.

## Our Commercial Building Strategy

### Commercial Offices

Building owners managing thousands of square feet of office space are utilizing HVAC connected NBPI technology for greater leverage across the large spaces which need to be cleaned. The need to attract companies, workers, and customers back to their properties is critical to the very existence for many of the companies owning and operating class A and B office space.

When it comes to upgrading HVAC systems, the costs to protect tenants and visitors are daunting. Typically, HVAC investment is estimated at \$15~\$28/sqft depending on local factors. This equates to six-figure capital investment and is a critical part of building infrastructure. Now consider the current need to upgrade that critical investment, which is not geared for Deep HEPA air handling. Even at \$10~\$12/sqft, it is a hefty additional investment in which most existing buildings don't have reserves available. An illustration considers an average size commercial building, three stories tall and has a total of 15,000sqft of usable space. A recently constructed building may have spent \$21/sqft or \$315,000 for the HVAC equipment and infrastructure. This capital investment would be depreciated over the life of the building as plant and equipment. To retain tenants and attract more foot traffic, you would invest \$10/sqft (\$150,000) of additional capital into the building, which could be enough to sink the current business model for the profitable operation of the building. Consequently, most operators will see this as infeasible.

However, some operators have found a better way just by following the recommendations from the science community. In one instance, a three-story building, utilizing HVAC installed Needlepoint Bipolar Ionization, in conjunction with localized air filtration with portable units, saved more than \$100,000 in capital outlay and achieved the goal of a systematically ridding the air of unwanted pathogens for less than \$25,000.