Saddle River Day School
Air Filtration and Ventilation

Air filtering and other indoor air quality measures for coronavirus are intended as a complement to the guidelines provided by health authorities: social distancing, hand washing, personal protective equipment (PPE), etc. These measures cannot be overlooked, even if your building has the best air filtering and disinfection systems in the market. Consider that a filter is only effective when air is moving through. For this reason, the CDC recommends increasing the operating schedules of ventilation systems, up to 24/7 if possible. More pollutants and germs can be captured simply because more air is moving through the filter.

At SRDS we have many types of HVAC systems and each building-system is unique. To improve indoor air quality and help prevent coronavirus infections, we started with a complete assessment of our current HVAC systems in place. We used Delta Mechanical Systems Inc., to assess and recommend changes to our current air filtration and ventilation systems, as well as to make recommendations for added protection. We also consulted with Environmental Health and Engineering, Inc., for expert guidance and further recommendations regarding our (IEQ) Indoor Environmental Quality. We used both companies' recommendations for portable air purification systems, which have been added to every single room on campus.

Improvements and Additions
#1. We have replaced all of the various a/c systems in place with **HEPA (High Efficiency Particulate Air)** filters. HEPA filters capture 99.97% of particles with a size of 0.3 microns. The filtering efficiency is even higher for particles larger or smaller than 0.3 microns. HEPA filters can capture many airborne germs, and also nonliving pollutants such as fine particulate matter. All of our HVAC Systems now have MERV 13 air filters in place (MERV-Minimum Efficiency Reporting Value).

Mini-Split Ductless A/C Heat Systems
Many of our classrooms have Fujitsu and Mitsubishi new wall a/c units in place. These are called mini-split room systems. These are very efficient systems with built-in filter screens that are rated at the very top of the ductless systems in the market.

Built-In Filtration: Long-life + Ion Particle and Deodorization Filter
The filter deodorizes and filters the air by powerfully decomposing absorbed particles and odors using the oxidizing and reducing effects of ions generated by the ultra-fine particle ceramic. The filter can be used for approximately 3 years if it is washed with water when dirty to restore it's surface action. Dust, mold spores and micro-organisms are absorbed onto the filter by static electricity and growth is inhibited and deactivated. Filters last 9-12 months. All of these systems have been thoroughly cleaned and disinfected and are ready to go.

#2: We have installed Portable Air Purifier Systems (PAPS) in **all** of the various classrooms, offices and work areas on campus.
- **BlueAir Model #411 Air Purifier**: Offers unique technology for superior results *Highly Recommended
- **Winix #5500-2 Air Purifier** with True HEPA, PlasmaWave and Odor Reducing Washable AOC Carbon Filter.
- **NuWave OxyPure Smart Air Purifier**: The Most Advanced Air Purifier on the Market Today!

Conclusion

Filtering is a mechanical air purification method, which means it works with living and non-living particles. HEPA filters are the most efficient for residential or commercial use, followed by MERV 13-17 filters.

SRDS has many types of HVAC systems and each is unique. We have doubled down to improve our indoor air quality and help prevent coronavirus infections. Where a HEPA Filter could not be added to the ventilation system we added the highest quality portable air purifier in the market. Areas that have a MERV filtration filter system in place were complemented with a (PAPS) Portable Air Purifier System that will upgrade each room to a MERV setting of 13 or better.

(HEPA) High Efficiency Particulate Air
(MERV) Minimum Efficiency Reporting Values
(IEQ) Indoor Environmental Quality