



Air Ionization Pilot Project

October 8, 2020



- Each year, in school districts across the country, many staff and student absences are driven by exposure to airborne allergens, bacteria, and viruses.
 - What we know:
 - Exposure can occur in almost any setting (home, grocery store, mall, etc.)
 - Staff and students can transmit to others while at school
 - Transmission can occur from shared surfaces
 - Transmission can also be airborne

The American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE) has stated, "Transmission of SARS-CoV-2 through the air is sufficiently likely that airborne exposure to the virus should be controlled."

- General Educational Impact:
 - Students are absent from class and lose valuable instructional time
- General Fiscal Impact:
 - Higher substitute teacher costs
 - Lower state revenue as associated with Average Daily Attendance (ADA) from the Foundation School Program (FSP)

CISD Mitigation Strategies



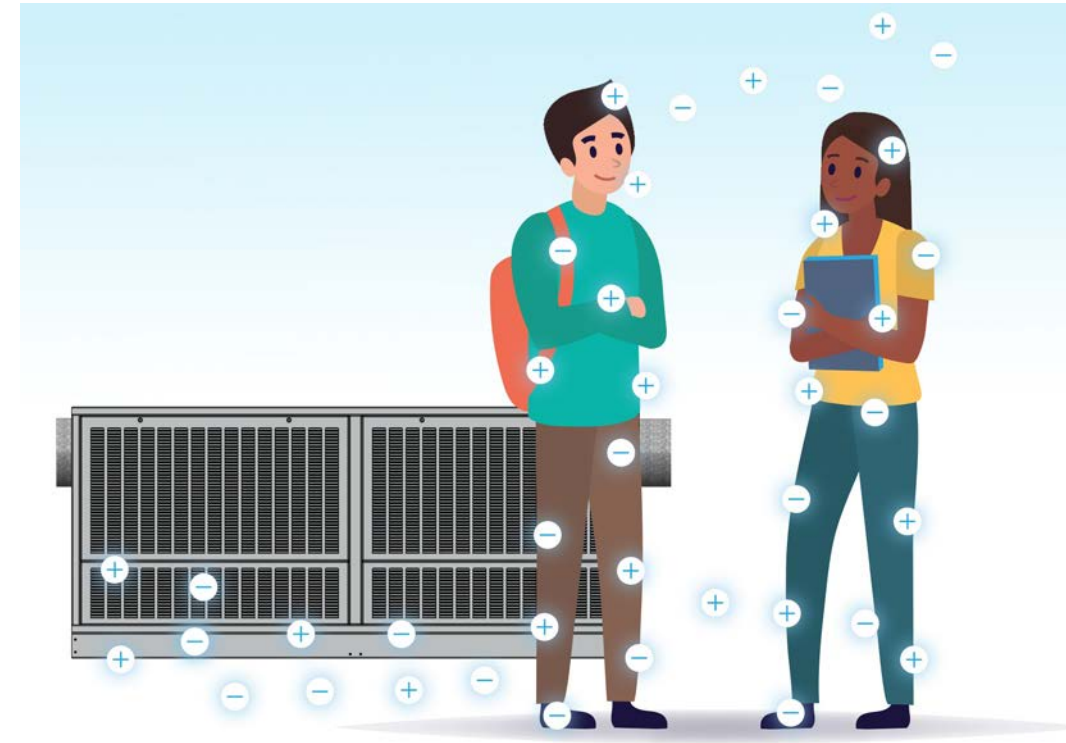
- Control access by monitoring students and staff for symptoms
- Enforce distancing and mask wearing
- Investment in PPE (Personal Protective Equipment)
 - Hand hygiene
 - Face coverings
 - Disinfectants, EMIST Machines
 - Sneeze guards
 - Water refill stations
 - Thermometers
 - Training
- Improve Indoor Air Quality
 - (Air filtration) Bi-Polar ionization
 - Cleaning/upgrading air filters to capture smaller particles (increase MERV Rating)
 - Boosting outdoor airflow into buildings
 - Improving ventilation in bathrooms and cafeterias



What is it and how does it work?

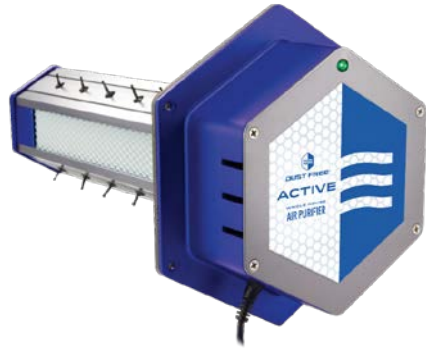


- The Dust Free Active Air Purification System uses a unique carbon fiber ionization system providing ion technology that encourages particles in the air to gather together, making any air filter system more efficient.
- In addition to the Ionization feature, MX4 technology consisting of UV light energy combined with a quad-metallic core, purifies the air with pro-active air scrubbers.
- Dual technologies combine to make the Dust Free Active Air Purifier unit highly effective at reducing odors, air pollutants, VOC's (chemical odors), particulate, smoke, bacteria and viruses.



http://dustfree.com/pdf/df_testing_statement.pdf

Why Dust Free IAQ3?



- Carbon Fiber brushes increase ionization output
- 10 sets of carbon fiber brushes = 5x's the output of the nearest competitor
- Targets sub-micron particles at a higher rate than just a high efficiency filter alone
- Increased VOC and Biological reduction more than just Photo Ionic Oxidation (MX4) alone
- 8x's more photo catalyst surface area than other designs
- Aircraft grade aluminum substrate
- Dual frequency UV lamp for increased performance with less ozone production
- Manufacturer located in Royse City, Texas

- University of Texas at Austin
 - Athletic Facilities
- Livingston ISD
 - Campus Buildings
- Alamo Heights ISD
 - Campus Buildings



- Our objective is to identify a system that can be utilized to create a standard at all CISD campuses.

Considerations:

1. Effectiveness
2. Cost and sustainability
3. Scalability

Oldest Elementary Campuses

- Deer Creek Elementary School
- Sycamore Elementary School

Early Head Start / Child Development Center

- J.A. Hargrave Elementary School
- Jackie Carden Elementary School

Athletic Facilities

- NCHS Fieldhouse
- CHS Fieldhouse

Works Reviewed



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