



# Working Together to Keep Our Buildings Open Safely

*April 2021*



**KEM-SHIELD**  
Customer Focused. Community Driven.



# Purpose – Educate & Inform



Current Situation / Challenges



CDC Guidelines (People, Surfaces, Air)



Investing to Improve Safety Now, Tomorrow, and In the Future



Q&A

# Current Situation

**(CNN)** The US Centers for Disease Control and Prevention on Friday (Feb. 12, 2021) released guidelines for reopening schools that focus on five key COVID-19 mitigation strategies: the universal and correct **wearing of masks; physical distancing; washing hands; cleaning facilities and improving ventilation**; and contact tracing, isolation and quarantine.

## The Challenge:

Ensuring Safety of all Stakeholders

Addressing COVID-19 Exposure Areas

Improving Community Perception

Preparing for Future Air-Borne Pathogens

Protecting People While in Buildings

# CDC Guidelines

The CDC is now saying the principal mode by which people are infected with SARS-CoV-2 is through exposure to respiratory droplets.

**People** – As the respiratory droplets travel further from the person with COVID-19, the concentration of these droplets decreases. Larger droplets fall out of the air due to gravity. Smaller droplets and particles spread apart in the air.

**Air** – Scientists believe that the amount of infectious smaller droplet and particles produced by the people with COVID-19 became concentrated enough to spread the virus to other people. The people who were infected were in the same space during the same time or shortly after the person with COVID-19 had left.

**Surfaces** – Respiratory droplets can also land on **surfaces and objects**. It is possible that a person could get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or eyes. \*not just respiratory drops, other cross contaminants.

Common Question: **Why should I be concerned once everyone is vaccinated?**

- No vaccine claiming 100% effectiveness, plus new strains & variants. It is beyond COVID-19 (cold, flu, mold, allergens)
- Part of the ongoing annual boosters

Source: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-COVID-19-spreads.html#edn1>

# CDC Guidelines – Air Quality

To successfully address room air quality, you must engage in a layered risk mitigation approach

**Ventilation** – Increased outdoor air ventilation

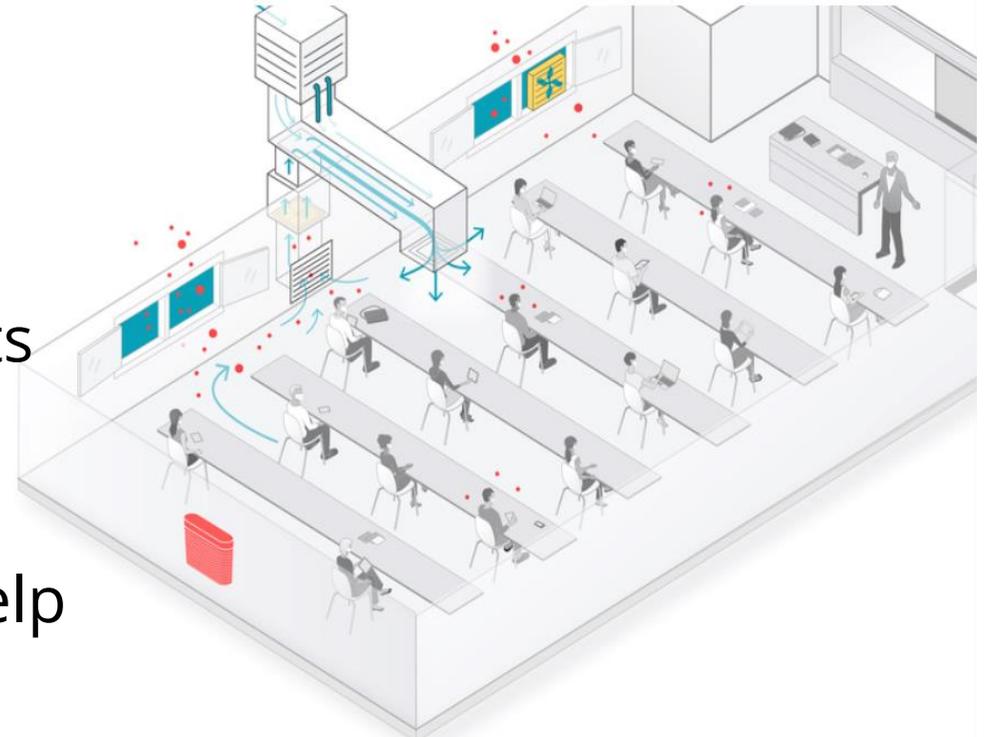
- Greater HVAC air exchange
- Opening windows if weather permits

**Filtration** -

- Move to MERV 13 filters, if HVAC permits

**Irradiation** –

- Consider using ultraviolet germicidal irradiation (UVGI) as a supplement to help inactivate COVID-19



# Air Solution - UVC Active Airflow Technology

CDC's only recommended technology to inactivate airborne pathogens is ultraviolet germicidal irradiation (UVGI) / UVC



99.99%+ of Pathogens Eradicated in 1 Second



Safely Works while People are Present



Precision Dosage for Maximum Effectiveness



Backed by Research and Industry Certifications



Harvard Whitepaper – Also mentions UVC as the only advanced air quality technology to use  
(see: Risk Reduction Strategies for Reopening Schools)

# Proven Success

## Major organizations are using UVC Active Airflow today



*"... to calm fears along with appropriate PPE and cleaning procedures we implemented the Energy Harness UVC Active Airflow technology in every one of our school buildings... I would recommend that this technology be seriously considered."*

**Fred McWhorter II**  
Chief Operating Officer  
Franklin Township  
Community School Corp.

**Darrell Thompson**  
Director of Facilities  
Center Grove Community  
School Corp.

*"We were so impressed (with the Active Airflow UVC Fixture) with the way that they worked everything out for us that we expanded our scope to include the Cafeterias and Nurses Stations and believe this will have a huge positive impact on the health and well-being of our students and staff!"*



### Proven Results

3K+

Units Installed  
Since August 2020

30+

Indiana Clients  
including 5+  
Healthcare Facilities

65%

Of Clients Purchase  
More Units After  
Initial Pilot Projects

## Tribune-Star

**Union Hospital Installs Pathogen-Fighting Ventilation** - Lisa Trigg, October 19, 2020

*"A new air filtration system is being installed at Union Hospital to eliminate airborne pathogens such as COVID-19... The new filtration system adds protection to the public, Students and staff at the hospital who could be exposed to airborne viruses and bacteria, he (Mike Mullens – Director of Facilities) said."*



# Q&A

**Please enter your questions in the chat box.**



# Research

<b>ENERGY HARNESS CORPORATION</b>			
<b>Active Airflow UV-C Fixture</b>			
EHF-UVC-AA2x4-277			
<u>Certification/Test</u>	<u>Testing Lab</u>	<u>Testing performed</u>	<u>Purpose and outcome of testing</u>
IEC 62471	INTERTEK - Cortland, New York	Photobiological Safety (UVC)	Test shows that people can be next to the fixture when it is operating. Verifies that no UV-C light is escaping the fixture.
IESNA LM 58	INTERTEK - Cortland, New York	Spectro Radiometric Measurement Methods	Test shows the entire nanometer range. Verifies that the fixture does not generate ozone.
IESNA LM 79	INTERTEK - Cortland, New York	LED performance testing	Validates fixture is producing UV-C light at stated intensity and across the stated nanometer range (260 - 280nm)
UL 507	INTERTEK - Atlanta, Georgia	UL Electric and UL Fan Safety Testing (US)	US commercial electrical safety certification for sub component and wiring
CSA 113	INTERTEK - Atlanta, Georgia	CSA Fan/Ventilator Safety Testing (Canada)	Canadian commercial electrical safety certification for sub component and wiring
FCC 47 CFR	INTERTEK - Atlanta, Georgia	Title 47 Electromagnetic Compatibility Testing	Class A (Commercial/Industrial) certified for both 120VAC and 277VAC
ICES-005	INTERTEK - Atlanta, Georgia	Radio Frequency RMC Testing	Class A (Commercial/Industrial) certified for both 120VAC and 277VAC
CARB	California Air Resources Board	CARB ozone	Certification of non-ozone production
Title 40 CFR CH1	US Environmental Protection Agency	FIFRA- Section 25(c) Device Registration	Active Airflow fixture registered with EPA as a pesticide device
Title 40 CFR CH1	US Environmental Protection Agency	FIFRA- Section 7 Establishment Registration	Cape Coral FL location certified to manufacture and distribute pesticide devices
ASTM E2180	INTERTEK - Columbus, Ohio	Aerosol bacterial (e. Coli) and viral (Phi-X 174)	Lab testing against airborne based pathogens for fixture efficacy- <b>99.9% effectiveness</b>
FGCU Biolab	Florida University	Surface bacterial (e. Coli)	Lab testing against surface based pathogens for fixture efficacy
Seoul Viosys	Korea University	Sterilization of Coronavirus (COVID-19) Sterilizing 99.9% of other harmful bacteria	Achieved 99.9% sterilization of coronavirus (COVID-19) in 30 seconds using 275nm LED chips Tested against Escherichia coli, Staphylococcus Aureus, Pseudomonas Aeruginosa, Klebsiella Pneumonlae, and Salmonella Typhimurium
Signify	Boston University	Eradicate 99% of the coronavirus	Testing verified that UVC light is able to eradicate 96% of the coronavirus with three seconds of exposure. This effectiveness went up to 99% for six seconds of exposure The study concluded that UV light particles disrupt virus DNA chains, rendering them ineffective and unable to