They rely on you to keep them safe.

Students and teachers need to be in-person, the test scores showed that.

Indoor Air Quality (IAQ) enables safe in-person learning and directly impacts student absenteeism, test scores and teacher retention rates.

Every school benefits from improved indoor air quality and federal funding is available.

REDUCE ABSENTEEISM

Poor indoor air quality is responsible for up to 22% of school absenteeism of students & teachers [JSN]

INCREASE TEST SCORES

Indoor air quality consistently improves student's standardized test scores [EPA]

IMPROVE TEACHER RETENTION

Air Quality was the most cited problem leading teachers to consider leaving their school [NY SB]

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INDOOR AIR QUALITY IN SCHOOLS

Creating a safe back to school environment

The average age of main school buildings in the country is over 55 years old NCES. These schools were not designed to meet the new air quality guidelines.

Published guidelines by the EPA, CDC, and ASHRAE recommend schools implement the following:

1. Maximize ventilation – Install MERV 13 filters into HVAC and ventilate with outdoor air
2. **Use portable air purifiers in every classroom – with HEPA and UVGI**

Every school benefits from improved indoor air quality and federal funding is available.

WHAT THIS MEANS FOR YOUR SCHOOL

$2.2 Trillion of federal funding is allocated for schools under the CARES Act: $190B for K-12 (ESSER) and $75B for Higher Ed. (HEERF), equating to $2.6k/student. 90% of funds are for improving school safety, including indoor air quality. Funding is still available (Funding Portal).

The EPA, CDC, and ASHRAE guidelines recommend HEPA portable air purifiers and UVC technology in every classroom. School districts and universities from Seattle, Washington to New Jersey have selected Field Controls because of the purification technology, whisper quiet, Energy Star efficiency, and independently tested performance.

QUESTIONS TO CONSIDER

- Do you have an indoor air quality plan with the available federal funding?
- Do you know the air changes per hour (ACH) for each classroom? Does it meet the guidelines?
- Have you considered portable air purifiers to supplement your HVAC system?

FIELD CONTROLS INDOOR AIR QUALITY SOLUTIONS

Making indoor spaces safer and cleaner is core to our mission since 1927. We are experts in air purification technologies for particles, germs, and gases. Field Controls utilizes 3-stage proprietary design technology that meets EPA, CDC, and ASHRAE guidelines. We have solutions for anything from large multi-room facilities to small spaces.

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POOR AIR QUALITY AFFECTS OUR HEALTH

Brain Lungs Throat Eyes Nose Heart Kidneys Liver

Immediate Effects

- Cognitive decline IOP Science
- Lung, throat, eyes, and nose irritation
- Headaches, dizziness, and fatigue
- Respiratory flareups

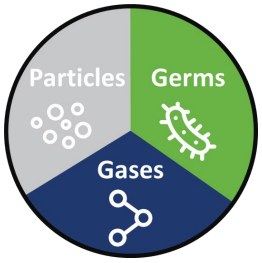
Long-Term Effects

- Decreased test scores, increased student dropout rate, higher teacher turnover EPA
- 50% of all illnesses are caused or exacerbated by polluted indoor air, increasing asthma, cancer, strokes, heart attacks, and early death

WHAT IS IN POOR AIR?

Particulate Matter (PM)

- PM_1 <1µm: Dust, Combustion Particles
- $Pm_{2.5}$ <2.5µm: Smoke, Pollen, Spores
- PM_{10} <10µm: Pet Dander



Germs

- Viruses: COVID-19, Influenza
- Bacteria: Tuberculosis
- Fungus: Mold

Gases, Odors, & Chemicals - Volatile Organic Compounds (VOCs)

- VOCs can be gases that come from carpets, paint chemicals, and cleaning solutions
- These gases and chemicals often off-gas from indoor products and materials
- Formaldehyde and Benzene, common VOCs, are known carcinogens NIEHS

WHAT DO THE GUIDELINES RECOMMEND?

EPA

Healthy Indoor Environments

1. Eliminate the source
2. Ventilate
3. **Add air cleaning devices**

CDC
Centers for Disease Control and Prevention

Ventilation in Schools

1. Maximize ventilation
2. **Use HEPA**
3. **Supplement with UVGI**

ASHRAE

Schools & Universities

1. Maximize ventilation
2. MERV 13 in HVAC
3. **HEPA/UV machines in each classroom**

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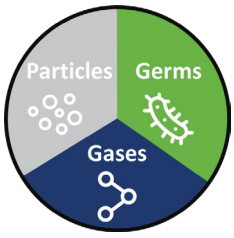
AIR PURIFICATION TECHNOLOGIES FOR PARTICLES, GERMS, AND GASES

Purifying all three different aspects of poor air requires multiple purification technologies. Field Controls' air purifiers are unique in that they all utilize three key technologies to address particles, germs, and gases:



HEPA FILTRATION

Captures Particulate Matter (PM)

- Typically measured in PM_1, $PM_{2.5}$, PM_{10}
- HEPA filters are tested and certified to capture 99.97% of 0.3microns, ~$PM_{2.5}$
- **Not** certified to particles less than 0.3microns, COVID-19 is ~0.1microns
- **Not** capable of filtering chemicals or gases

ULTRAVIOLET GERMICIDAL IRRADIATION (UGVI)

Neutralizes Germs: Viruses, Bacteria, Fungi

- Germs can pass through filters due to their size (viruses are 0.004-0.3microns)
- UV-C inactivates microorganisms by disrupting the DNA, rendering them harmless
- *"UVC radiation has been shown to destroy the outer protein coating of the SARS-Coronavirus"* FDA

PHOTOCATALYTIC OXIDATION (PCO) & CARBON FILTERS

Breakdown and Capture Chemicals & Gases

- PCO technology, energized by UVC, breaks down contaminants (chemicals, gases, and biologicals) into H_2O and CO_2
- Carbon filters can only capture odors and VOCs, not destroy, and reach a saturation point, at which point re-release VOCs into the environment – not a long-term solution

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POWERFUL, EFFICIENT, QUIET, AND PROVEN

TRIO purifies beyond just the HEPA filtration, utilizing three state-of-the-art technologies:

1. **H13 HEPA** filtration, captures greater than 99.97% 0.3µm particles down to 0.1µm
2. **UVGI/UVC** germicidal lamps neutralize bacteria, viruses, and fungi
3. **PRO-Cell™** technology breaks down odors and VOCs into harmless chemicals

TRIO actively *purifies* all three aspects of poor air – particulates, germs, and gases – where competitors only capture particles. That's the TRIO difference.

	TRIO Plus	SKYE	TRIO Pro	Commercial UV
Applications	Classrooms, Offices	Classrooms, Business, Fleet Management	Cafeteria, Auditoriums, Gyms, Conference Rooms, Lobbies	Whole Building HVAC Purification
Coverage (ft^2) (8ft ceilings) 1 ACH 3 ACH 5 ACH	3300 (57 x 57) 1100 (33 x 33) 660 (26 x 26)	3250 (57 x 57) 1080 (33 x 33) 645 (25 x 25)	4943 (70 x70) 1648 (40 x 41) 989 (32 x 31)	HVAC Coil irradiation Air Disinfection
Noise (dba)	24 - 52	21 – 60	20 - 58	-
CFM | CADR	440 | 305	431 | 293	659 | 518	-
Filter	H13 HEPA	**H13 HEPA**	H13 HEPA	-
UVC + PCO	**Yes**	**Yes**	**Yes**	**YES**
Air Sensor	**Yes**	**Yes**	**Yes**	-
Wi-Fi & App	No	**Yes**	No	-
Certifications: Safety Performance Energy Biological	ETL Certified Prop. 65 Compliant AHAM Verified Energy Star Certified 99.99% virus, bacteria	UL Certified Prop. 65 Compliant AHAM Verified Energy Star Certified 99.99% virus, bacteria	ETL Certified Prop. 65 Compliant AHAM Verified Energy Star Certified 99% fungi	ETL & CARB Certified Prop. 65 Compliant
Weight	26.2 lbs. Wheels & Wall Mount Optional	20 lbs.	44.51 lbs. Wheels standard	N/A
Filter | Lamp Life 24/7: Office/School Hours:	6 Mon. | 1 Yr. 1 Yr. | 1 Yr.	6 Mon. | 1 Yr. 1 Yr. | 1 Yr.	6 Mon. | 1 Yr. 1 Yr. | 1 Yr.	2 Years

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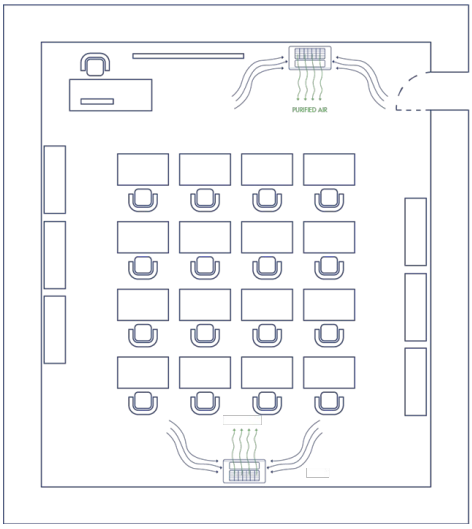
OFFERING A SOLUTION

The EPA, CDC, and ASHRAE guidelines recommend a layered approach to reduce particulate matter (PM) and airborne transmission risk.

- Maximize outdoor air ventilation [1]
- MERV 13 HVAC system filtration
- Air cleaning using portable HEPA/UVC air cleaners

Ventilation dilutes the concentration of contaminants while purification eliminates it, which is why both are needed.



Multiple air cleaners offer better room coverage and circulation [1]

Guidelines recommend 4 – 6 room Air Changes per Hour (ACH), which is the number of times the volume of air in the room is replaced with clean air in an hour.

The amount of clean air delivered by ventilation and portable air cleaners combine to reach the required ACH. The clean air rate is measured in cubic feet per minute (CFM).

$$ACH = \frac{Clean\ Air\ Rate\ (CFM)}{Classroom\ Volume\ (ft^3)} = \frac{(CFM_{Ventilation} + CFM_{Portable}) * 60min}{Room\ Volume\ (ft^3)}$$

ROOM COVERAGE

Based on independent testing, modeling, and calculations, Field Controls expects the products to meet the following air cycles per hour:

Air Changes /Hr.	8’ Ceilings		10’ Ceilings	
	Room Size (sq. ft.)		Room Size (sq. ft.)	
	TRIO Plus	TRIO Pro	TRIO Plus	TRIO Pro
10	330 (18x18)	485 (22x22)	264 (16x16)	385 (20x20)
6	550 (23x23)	810 (28x28)	440 (21x21)	645 (25x25)
5	660 (26x26)	970 (31x31)	528 (23x23)	775 (28x28)
4	825 (29x29)	1210 (35x35)	660 (26x26)	970 (31x31)
2	1650 (41x41)	2425 (49x49)	1320 (36x36)	1940 (44x44)

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WHOLE BUILDING PURIFICATION

Musty odors and “dirty sock syndrome” can be a problem in air handlers and rooftops. Component of the HVAC can become a breeding ground for mold and fungi which will create a toxic biofilm reducing operational efficiency and cause poor indoor air. Field Controls Commercial UV systems are designed to prevent toxic biofilm build up on AC-Coils and significantly reduce airborne germs, viruses, and bacteria.

Commercial UV™

Ultimate in Coil Irradiation

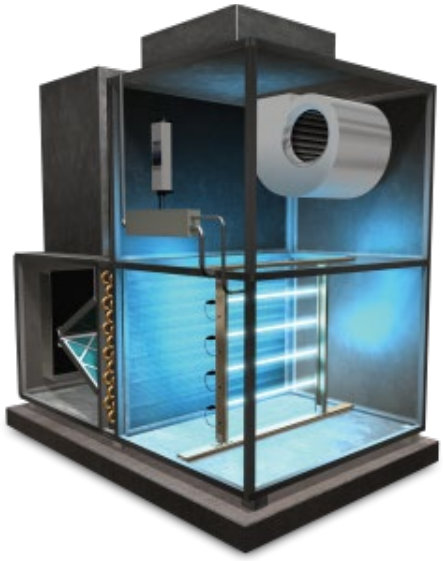
- Significantly reduces biofilms
- Reduces system operating costs

Reliable Air Treatment

- High output for top performance
- Zero ozone means pure air delivery

Powerful High Output Lamps

- Multiple lengths and outputs for your applications
- 18,000 hr. lamp life for durability you can trust



Installer Friendly Design

- Magnetic mount for ease of installation

Easy Maintenance

- Protective, water-resistant design
- UV-C Shut-off for service and maintenance

Remote Monitor Option

- Liquid Crystal Displays provide lamp and ballast status
- Ideal for Facility Managers to maintain service logs

LIMITED 5 YEAR WARRANTY

INTERTEK SUSTAINABILITY VERIFIED ZERO OZONE

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