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CASE STUDY

The Ark Learning Center

Early Childhood Education

Equipment Requirements

(38) HALO HEPA Air Purification Systems

Products Expectations

Air purifcation through ceiling mounted Erlab HALO HEPA filtration to Remove:
Indoor Air Pollution
Flue/Viruses
Particulate Matter
Mold
Bacteria

Project Background

Dedicated to protecting the health of those under their roof, the Ark Center determined that they would honor their promise to 'maintain a clean and safe environment where parents can have confidence in the quality of nurture and care their child receives each day.' Even as the pandemic remains a menace, they continue to look for ways to prevent the spread of germs, pollution, and contaminants. This commitment led them to research new products that would aid in their stated mission.

Their search started by reviewing products that could safely kill 99.99% of contamination, not only on surfaces but everywhere viruses and bacteria hide in a daycare setting, like books, clothes, pillows, blankets, and toys.

To this end they purchased a Zono machine that uses ozone to safely eradicate common viruses and bacteria on everyday objects within the school. Following this purchase they reasoned that not only surface disinfection was needed, but as it is common knowledge that viruses and contaminates are airborne, they needed to address their air as well. IHS, LLC recommended they research the HALO air filtration system by Erlab.

The Challenge

As some of the Ark Centers are located in older buildings, the owner was appreciative that each unit was independent and not tied into any existing infrastructure or HVAC system. Going beyond expectations, the Erlab air filtration expert visited the different schools to determine the most effective placement where HALOs could be installed. They also made recommendations for improving the effectiveness of the schools current HVAC system and explained how dirty, inefficient filters in their current system should be addressed to enhance the total, overall clean air benefits provided by the HALOs. The school shared that many other air filtration manufacturers were discounted due to their need for intense maintenance as well as their placement within a structure. Floor based models were not considered due to the difficulty of keeping young, curious hands from exploring them - leading to potential accidental shutoffs and posing a danger to the children.

The Solution

The owner of the Ark Learning Center, Danielle Higuera, commented, “We hoped that the HALO air filtration systems would help minimize the amount of illness in our buildings, reduce air pollution/ contamination, and provide a cleaner environment.” Erlab tested the air quality pre-installation and one week after installation (see data reports page 3). Danielle was on-site and reviewed the ‘one week after’ air quality testing in real-time with our air filtration experts and she was estactic: “The HALO systems have completely blown us away in their effectiveness. The delivery and installation were flawless and parents and teachers could tell an immediate difference in air quality.”

When a client expresses that ‘If and when we expand to future locations, HALO installations will be a must-have,’ we are gratified that the many years spent in perfecting our air filtration products have culminated in moments like these - enhancing and protecting the lives and livelihoods of our community.

Feedback from our customer’s community

Erlab could speak to the proficiency and success of our HALO air filtration system as well as the fact that we are setting the standard for IAQ (Indoor Air Quality) nationally and beyond, but we would prefer to let the testimonials from the Ark parents and teachers speak for us:

“As a parent of a preschooler, I love that The Ark is putting such focus on keeping our kids safe and healthy.”

“Everyone warns you that the first year in childcare, your kid will get sick a lot. I’m so happy to say that hasn’t been my experience! My baby is happy and healthy!”

Teacher testimonials -

“Not only does my room not have the dreaded lingering diaper smell, but the HALOs also provide a soft back-light and white noise that helps my children nap better!”

“I didn’t know that you could literally smell clean air. I love to come into my classroom and just breathe better.”

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Solution Process

Before installation of the 38 HALO systems, Erlab performed testing at all three Ark locations. The goal is to get an understanding of the pollution concentration present in each room and understand the overall health of the facilities, which also provides us the necessary data to provide a recommendation of how many units will be needed, along with placement based on the collected results. The collected data seen in the chart below, represent the cumulative particles present in each location ranging from 10 microns down to 0.3 microns, which pose the biggest risk to our overall health as due to their size are not adequately filtered by our bodies and by-pass our protective mucus membranes.

Approximately one week after the installation of the HALOs we duplicated the air samples taken pre-installation in order to obtain comparable data with the goal being a dramatic reduction of present particles. The results show a very successful installation with an average reduction exceedingly well over 80%.

All testing performed during pre and post installation was during occupied hours as to avoid false readings in a static condition.

Pre & Post installation Particle count data at the ARK Learning Centers

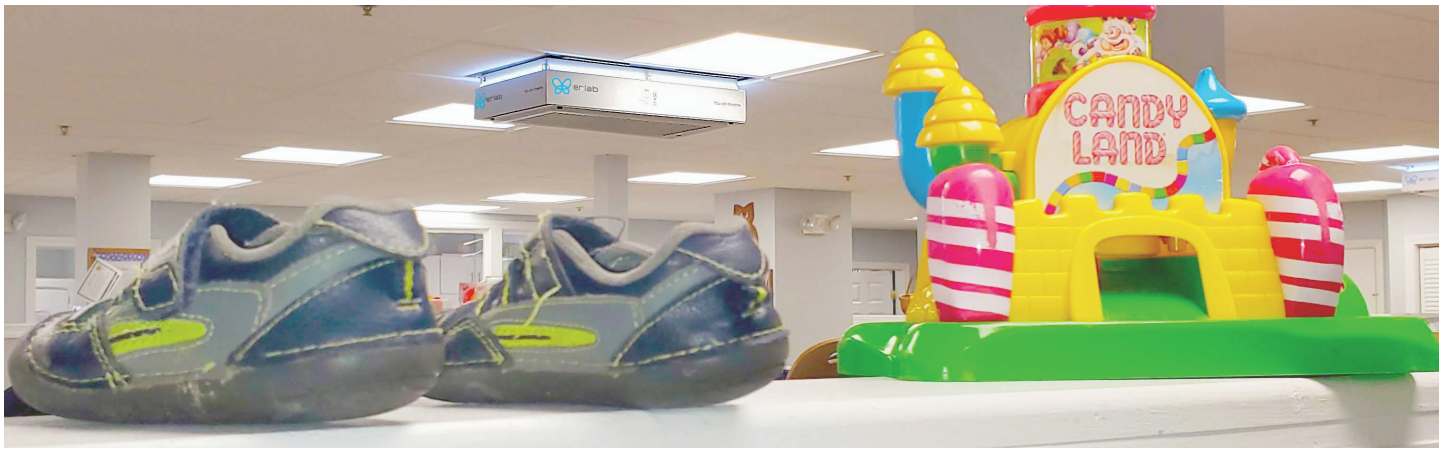
Location	Room	Pre-installation particle counts	Post installation particle counts	Total % reduction
Londonderry	GRM	61,358,668	10,153,262	83%
Londonderry	Toddler	34,017,752	4,974,043	85%
Londonderry	Infant 1	68,024,600	2,860,904	96%
Londonderry	Infant 2	121,654,728	1,997,672	98%
Londonderry	Kinder	56,728,508	2,358,347	96%
Londonderry	Pre K 1	51,897,160	3,095,825	94%
Londonderry	Pre K 2	49,188,032	2,460,350	95%
Londonderry	Pre-School 1	36,509,512	1,481,785	96%
Londonderry	Pre-School 2	32,251,136	3,622,768	89%
Londonderry	TSU	38,777,976	3,540,701	91%

Pre & Post installation Particle count data at the ARK Learning Centers

Location	Room	Pre-installation particle counts	Post installation particle counts	Total % reduction
Hooksett	Infant	16,806,924	4,624,658	72%
Hooksett	Toddler	26,610,360	4,974,043	81%
Hooksett	Twos	25,746,238	10,299,178	60%
Hooksett	Threes	24,115,040	9,429,689	53%
Hooksett	School age	22,122,468	17,754,144	20%
Hooksett	Pre K	20,161,214	7,831,797	68%

Pre & Post installation Particle count data at the ARK Learning Centers

Location	Room	Pre-installation particle counts	Post installation particle counts	Total % reduction
Tilton	Early Pre	26,146,820	5,143,935	80%
Tilton	Kinder	23,273,138	8,489,532	64%
Tilton	Twos	18,911,092	6,869,934	64%
Tilton	Ones	17,558,712	5,189,344	70%
Tilton	Infant	15,262,702	4,186,738	73%



United States
+1 800 964 4434 | sales@erlab.com
Germany
0800 330 47 31 | export@erlab.net
China
+88 (0) 512 5781 4085 | sales.china@erlab.com.cn
Spain
+34 936 732 474 | export.south@erlab.net
France
+33 (0) 2 32 09 55 80 | ventos@erlab.net
United Kingdome
+44 (0) 1722 341 940 | export.north@erlab.net
Italy
+33 (0) 2 89 00 771 | export.south@erlab.net
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