

Equipment Requirements

(6) HALO HEPA Air Purification Systems

Products Expectations

This much revered gathering place is in the basement of the church where there are no fresh air sources available. In order to make the center safe for all, they needed a solution that fit their specific needs.

CASE STUDY

Community Chapel Church of the Nazarene Nashua, NH



Project Background

Community Chapel has existed for the last seven+ decades as a church seeking to bring God's hope and grace to the city of Nashua and surrounding regions. They continue to seek to fulfill that mission in these challenging days we live in. In 2020, due to the COVID pandemic and out of an abundance of caution for the health of their community, they were obliged to close the doors on their Youth Center. This much revered gathering place is in the basement of the church where there are no fresh air sources available. In order to make the center safe for all, they needed a solution that fit their specific needs.

As the area where the students meet for entertainment, leisure time, and meetings has no fresh air circulation the space remained vacant for 18 months. The church Pastor and congregation felt the loss of this space was unacceptable. They believed it was essential to find a solution that would allow their youth to gather in a safe environment in order for the church to fulfill their mission to provide opportunities for growth of both a spiritual and social nature.

The idea to review the HALO air purification system by Erlab, as a credible solution, came from a parishioner who was familiar with the capabilities and scientifically tested, proven effectiveness of installed units



elsewhere. The suggestion led the Church Board, Pastoral Staff, and Youth Leadership to investigate and research HALO's success in filtering contaminated air and viruses from the breathing zone, providing clean fresh air, without the need for any renovations or HVAC additions. Upon finding all claims to be true and accurate, they concluded that it made total sense to install the units in the Youth Center. Upon installation in the Youth Center, the Pastor noted that the system installed fast and was easy to run.

The Challenge

When asked what benefits the congregation hoped to derive from installing the HALO air purification system in their youth center, the pastor replied: "We believe the HALO system will allow us to gather in this space safely and effectively permit us to minister to the needs of the teenagers in our care both from within and from outside our congregation. In light "On day 2, after the system was installed, a group of us walked into the area and someone remarked:

'The air seems so fresh!'... It is clear that the HALO system created a better, healthier, safer environment."

Pastor Geoff DeFranca Community Chapel Church of the Nazarene Nashua, NH

of the new mandate of socially distancing, imposed by the COVID pandemic, we feel we have found a safer way to provide the socialization component of the spiritual life of our youth, that along with CDC recommendations will allow them to breathe, clean, fresh air while under our roof."

The Solution

Pre- and post-installation testing was done at the Community Chapel Church of the Nazarene, in Nashua, NH to obtain quantifiable results of the true reduction of the overall particle load. The results on page 3 were collected by taking three different sets of particle readings. On November 4th particles readings were taken pre-installation followed by post-installation testing on November 8th and December 2nd. All samples were collected in the youth center which is 75,000 cu' with another static 55,000 cu' separated by a hallway and a half wall, which increases the total volume of air to 130,000 cu'. Within the active youth center (75,000 cu') there are eight Halo's installed providing 1 total Air Change Rate per Hour (ACH) in an area that does not receive any current fresh air exchanges. All air change rates are achieved ONLY with the HALO's.

The testing was done with a Particles Plus 8301-AQM air quality monitor https://particlesplus.

com/8301-8302-air-quality-monitor/ calibrated to test for particles in the range of 0.5 – 10 microns which represent the most harmful particles for the human body to breathe in. These particles could either be viable (contains more than one living microorganism) or non-viable (does not contain a living organism but can be transporters for viable particles).

The higher the concentration loads of these present particles contribute to many short and long-term health effects, including the risk of airborne infections. An example of a viable particle would be mold, bacteria, and aerosolized viruses.



t is also known that higher infection and mortality rates are linked to the cumulative exposure to pollution and specifically PM2.5 (microns 2.5 and smaller). <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7308784/</u>

Case Study Nazarene Community Chapel Church



The chart results below show the effectiveness of the HALO units, delivering an average concentration reduction of particles in the range of 0.5 micron - 10 microns in size by 75% with the highest recorded reduction coming from 2.5 micron – 10 microns mitigating the risk of carrier respiratory droplets.





In the words of our client

In the words of Pastor DeFranca: "Erlab has been nothing short of exceptional at delivering on their promises... Erlab's air filtration expert, Jesse Coiro, was the lead on our project. His representation on behalf of Erlab was very professional, his compassionate concern for our students safety was exceptional. I would highly recommend this system for any similar, enclosed environment."



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