

CASE STUDY

University of Ottawa's Heart Institute

Duct Sealing Helps Ensure Proper Ventilation in Healthcare Facility

University of Ottawa's Heart Institute Stops Airborne Contaminants, Decreases Energy Use

Hospitals and medical facilities are typically "on-call" 24 hours a day, 7 days a week. Between hours of operation and their size, hospitals consume more energy than facilities of similar size. The significant quantities of outside air necessary for proper ventilation requires an increased amount of energy to condition the air properly.

So, ventilation in these critical care facilities is of prime importance. A recent article in HPAC Engineering outlines several ventilation strategies for healthcare facilities that could help decrease energy use while still maintaining indoor air quality and patient safety.

Some of the effective energy-saving ventilation strategies mentioned in the article include:

- Use of high-quality air filters
- Bipolar ionization
- Air-side heat recovery devices

- Digital controls for night-time setback
- Supply air temperature reset
- Duct sealing

Sealing air ducts supports better ventilation, decreased energy use and containment of airborne contaminants. One example of this in a healthcare environment is the AeroSeal duct sealing project at the University of Ottawa's Heart Institute.

Proper Ventilation Helps Prevent the Spread of Airborne Pathogens

It is also important to note that healthcare facilities that are not properly ventilated, designed or controlled can lead to the spread of airborne pathogens throughout the facility. Hospital patients who have compromised immune systems could be infected and/or pathogens could be spread to the rest of the hospital.

The University of Ottawa Heart Institute (UOHI) detected that an isotope created in one of its laboratories had somehow migrated to an adjacent wing of the building. By using AeroSeal duct sealing technology to seal leaks in one of the ventilation shafts, the hospital ensured the isotope wasn't spreading from one shaft to the other. In addition, once the shaft's leaks were sealed, the hospital immediately noticed another significant benefit – dramatically improved ventilation efficiency and lower energy costs.

To Learn More About Improving The Comfort, Indoor Air Quality, And Energy Efficiency Of Your Building

CALL: 937-428-9300 or EMAIL: info@aeroseal.com



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PROJECT OVERVIEW

BUILDING

University of Ottawa Heart Institute

LOCATION

Ottawa, Ontario

ENGINEER

GENIVAR | Constructive People

DUCT SPECIALISTS

AWS Technologies

GOAL

Eliminate duct leakage as

cause of building-to-building air contamination

BEFORE AEROSEAL

Up to 800 CFM* of leakage

AFTER AEROSEAL

10 CFM of leakage

RESULTS

Virtually eliminated ventilation leakage; Improved system efficiency; Reduced utility costs



If duct leakage was the problem, we were facing the possibility of having to actually replace the hospital's entire duct system – then we heard about AeroSeal. After conducting extensive research on the technology, our health and safety officer approved its use. It then took AeroSeal less than a day to effectively seal one of the hospital's ventilation shafts. The positive impact that aeroSealing the shaft had on system performance was clear and immediate. We are now looking at using AeroSeal elsewhere throughout the hospital to improve the efficiency of our ventilation system.

Michele Emond
Project Manager
University of Ottawa Heart Institute



A lot of us were surprised to see that even arc-welded stainless steel ductwork is susceptible to significant leakage. Luckily, AeroSeal offered a safe and unobtrusive way to seal the entire ventilation shaft – without disrupting regular hospital operations.

Cory MacDonald
Duct Specialist
AWS Remediation Technologies



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