



Case Study

Nemours Childrens' Clinic



Florida Hospital Halts Spread Of Airborne Infections Using AeroSeal

Nemours Childrens' Clinic in Jacksonville, Florida sealed its air duct system using AeroSeal duct sealing to improve HVAC airflow and ensure germs are removed through the building's exhaust and not recirculated through air leaks in ductwork.

There were so many retrofits and extensions added to the ventilation system at Nemours Children's Clinic in Jacksonville, Florida engineers couldn't pinpoint their airflow problems. What they did know was negative pressure and inadequate ventilation throughout the more than 30-year-old building could contribute to the spread of nosocomial infections. Their first steps in taking control of the situation was to seal the duct leakage in the exhaust shafts located on each floor and in the main shaft running down the length of the 11-story building.

Sealing the air duct system of the hospital building using AeroSeal took less than 30 days to complete. The difference it made to the efficiency of the exhaust system was immediate and obvious. With the ductwork's leaks effectively sealed from the inside, engineers were able to accurately analyze the system and upgrade it with regulating dampers and other flow-adjusting technologies.

Now the building's exhaust system is optimized at all times. The bottom floors are as well ventilated as those on the top. Most importantly, the air being exhausted is coming from the rooms and common areas that need it; contaminated air is being removed from the building. As an added bonus, the clinic is able to run its exhaust fan at a fraction of the power that was previously needed, saving the clinic substantially on its energy costs.



In order for a hospital to be clean, you have to manage the building's airflow. By sealing the exhaust shafts using AeroSeal, we ensured that the right amount of stale and potentially infectious air is being adequately and continually removed from the building.

Derrick Rhodes - President
AeroSeal Southeast

PROJECT OVERVIEW

11-Story Outpatient Medical Facilities On Nemours Jacksonville Campus

LOCATION

Jacksonville, Florida

BEFORE AEROSEAL

4,912 CFM of leakage

AEROSEAL CONTRACTORS

AeroSeal Southeast

AFTER AEROSEAL

723 CFM of leakage

CONTRACT ENGINEER

Carrier Corporation

RESULTS

85% leakage reduction; Stopped spread of germs through ductwork; Improve HVAC airflow throughout facility

GOAL

Improve HVAC airflow; reduce the risk of germs being distributed through leaks in HVAC ductwork.



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Case Study

Nemours Childrens' Clinic

Verifiable,
Guaranteed Results



Exhausting air from a leaky ventilation shaft is like using a straw with holes in it. No amount of force is adequate to effectively ventilate the bottom floors of the building. Now, after sealing the leaks with Aeroseal, all floors are getting the ventilation they need. As a side benefit, we were able to dramatically reduce the speed of the exhaust fan, which has resulted in substantial energy savings for the clinic. With the ductwork effectively sealed, we are now able to take additional steps to optimize the entire exhaust system.

Chuck Boynton - Project Manager
Carrier Corporation

Aeroseal has four different models to calculate duct leakage and inform energy savings models on your project.



Reduce Energy and Consumption Cost

Duct sealing addresses multiple sources of energy waste. For example, by reducing leaks 15%, fan requirements drop by 40% or more. This saves thousands of dollars every month.

Aeroseal increases HVAC fan efficiency and eliminates excess ventilation load to reduce energy costs. It is a verifiable and guaranteed way to offer energy savings with typical payback in three to five years.



Improve Indoor Air Quality

Leaks in the return duct allow dust and other contaminants to be sucked into the duct system and spread throughout the facility. And exhaust fans can't remove contaminated air from the building if there are leaks in the ventilation shaft.



Improve Building Ventilation

Leaky ductwork is the primary cause of ineffective building exhaust. In addition to causing problems with uneven and uncomfortable temperatures, this can lead to higher energy costs, and added maintenance costs.



Meet Code and Spec

As duct leakage specifications get tighter and tighter, Aeroseal is specified as a routine component of commercial projects. Our consistent results will take you from hoping to knowing that you'll meet code requirements – the first time.



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