



Case Study

Global Dwight D. Eisenhower Army Medical Center

Military Hospital Adopts Innovative Duct Sealing Process To Ensure HVAC Efficiency To Save Time And Money

Administrators at Dwight D. Eisenhower Army Medical Center (EAMC) were already familiar with Aeroseal technology.

They had used it during a previous project involving the renovation of the facility's operating roomsuite where it proved to be a simple way to dramatically improve HVAC efficiency while eliminating much of the disruption and other impacts to daily operating procedures throughout the duration of the project.

It also cut construction costs by allowing the use of existing duct rather than replacing. So, this time around, Aeroseal technology was specified from the start for a project that replaced a 200-ton air handing unit servicing the medical center's west side.

By using Aeroseal, the project contractor, Kirlin Builders, knew it could rehabilitate and reuse much of the original ductwork and, in doing so, reduce projects costs, eliminate disruptions to the facility and still meet tight SMACNA standards that called for leakage rates below 5%.

Kirlin called in the duct experts from Aeroseal Southeast, who, after extensive prep and planning, began cleaning and sealing the long riser that extended down the length of the 14-story building.

Serving as the system's return duct, the riser also housed separate supply and exhaust ducts that were also cleaned and aerosealed tight. To accomplish this project, scaffolding was built inside the approx. 10' x 25' -wide riser to allow workers access for cleaning the main trunk.

For sealing, foam blocks were used to temporarily divide the entire duct system into more than 30 individual sections. Temporary entryways were cut into each section, allowing the computerized Aeroseal system to disperse microscopic particles of sealant into the duct interior of that section.

Under pressure, the sealant was driven to the multitude of leaks where it automatically found and sealed the holes. Completed in early 2019, the entire cleaning and sealing project represents about 20 weeks of work spread out over a two-year period.

When finished, TAB experts were brought in to confirm what the reports generated by the Aeroseal equipment already documented; overall system leakage was reduced by more than 90%, industry standards are now being met, and by reconditioning the existing duct system, hospital administrators eliminated a large percentage of the costs and disruption associated with traditional duct sealing methods.



PROJECT OVERVIEW

Building Dwight D. Eisenhower Army Medical Center

LOCATION

Fort Gordon, Augusta, Georgia

FACILITY MANAGEMENT

Kirlin Builders

DUCT EXPERTS

Aeroseal LLC

GOAL

Effectively seal existing ductwork; meet tight standards

BEFORE AEROSEAL

100,903 CFM* of total leakage

AFTER AEROSEAL

9,912.4 CFM (90.2% reduction)

RESULTS

The majority of existing ductwork was left intact and refurbished to meet today's tighter standards for leakage.

BONUS

Using Aeroseal reduced project costs and eliminated disruption.

*Cubic feet per minute



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Verifiable,
Guaranteed Results



We are proud of our commitment to quality and our resulting past performance record. As a certified Veteran Owned Business, we stand uniquely ready to deploy for DOD, VA or any other substantial government project.

Jill Rhodes - President
Aeroseal Southeast



We've found our Aeroseal expertise to be a perfect complement to our duct cleaning skills. Proving that we can successfully implement both services, even in such a sensitive environment, has been critical in helping us rise above competing businesses.

Cary Aiken - LEED Green Associate
Aeroseal Southeast



The built-in verification aspect of Aeroseal is a real time and cost saver. Ductwork testing after sealing is all part of the normal Aeroseal process so we didn't need to hire an additional contractor to ensure the sealing was effective. It was pretty clear that there was going to be substantial savings with Aeroseal.

Chad Randolph - Senior Project Manager
Kirlin Builders



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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