



# Case Study

## Global Chemical Company

### Fortune 500 Company Finds Aerosol Duct Sealing Leads To Major Cost Savings Reduced Energy Use

Ameresco, a leading energy service company (ESCO), always recognized the potential savings that duct sealing represents. For ESCOS, where guaranteed savings is part of their business model, measuring and verifying results was difficult to do manual duct sealing.

#### Global Chemical Company Turns To AeroSeal For HVAC Fix And Reaps \$20,000 In Annual Energy Savings

For one of the largest chemical companies in the world, reducing energy waste is not only key to its ongoing mission of being a responsible corporate citizen, it has proven to be particularly impactful at reducing overall operating costs as well. With facilities located around the globe, its corporate headquarters alone spans 4,000 acres of land, includes 550+ individual buildings and employs more than 7,000 workers.

Running the large facility requires approximately 160,000 kilowatts of electricity – enough to power around 170,000 homes. And this requires a team of energy specialists to monitoring and maximizing the efficiency of the various building systems on site. For more than a year and a half, a specialist on the team noted that a fan serving one of the building’s air handlers was operating at 100%, even when the system was on minimal use.

HVAC contractors were brought in to investigate but were never able to solve the problem. So, when the specialist read about AeroSeal, an innovative approach to duct sealing, she thought it might hold the key to solving this initial problem. She further reasoned that if duct leakage was behind this one fan issue, duct leakage could be prevalent for other campus buildings as well.

If so, aroesealing could possibly offer an easy-to-implement strategy for significant energy savings across the facility. After contacting AeroSeal LLC and learning more about the technology, a crew from the company arrived to conduct a visual inspection of the building. The sealing team followed up with an estimate of how much energy cost savings the corporate campus would realize by having two of its building’s aroesealed.

It took four days to complete the sealing project. During the process, the AeroSeal team found and fixed numerous sections of flex duct that were in disrepair. In the end, the AeroSeal team was able to reduce overall leakage by more than 1300 CFM and reduce average fan speed by 25%. The return on investment for this project was estimated to be two years. Between the duct sealing success provided by the AeroSeal technology and finding/repairing flex duct issues, the company is saving more than \$20,000 annually.



### PROJECT OVERVIEW

#### Corporate HQ for Fortune 500 Company

<b>LOCATION</b> Southern United States	<b>AFTER AEROSEAL</b> 422.4 CFM of leakage
<b>DUCT EXPERTS</b> AeroSeal, LLC	<b>RESULTS</b> 95% reduction in duct leakage; \$20k+/year savings
<b>GOAL</b> Reduce fan use, energy savings	<b>ESTIMATED PAYBACK</b> 2 years
<b>BEFORE AEROSEAL</b> 9,280.5 CFM of total leakage	

\*Cubic feet per minute



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Verifiable,  
Guaranteed Results



*The Aeroseal technology was very impressive. I really don't know how we would have solved our leakage issues without it. We estimate thousands of dollars in annual savings from being able to reduce the fan speed alone – and then there is additional savings we can expect as a result of reduced heating requirements.*

*Aside from the leaks that the aerosealing process was able to seal up, it turned out that we also had substantial issues with broken or disconnected flex ducts – something we wouldn't have discovered if not for the Aeroseal team's thorough procedures. This pilot project proved the value of Aeroseal technology and I know there are plenty of other opportunities on site that would benefit from its use..*

*Principal Mechanical Engineer*  
Fortune 500 Chemical Company

*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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