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≡ CASE STUDY ≡

MIAMI VALLEY HOSPITAL SOUTH USES AEROSEAL TO REDUCE ENERGY COSTS / ENSURE PROPER VENTILATION

Sealing Ducts With Aeroseal Allowed Administrators To Reduce Exhaust Fan Speed While Increasing Air Exchange Rate - Savings Result In Three Year Payback

Among its buildings, Miami Valley Hospital South in Centerville, Ohio includes a 60,000 sq ft medical office building, a state-of-the-art cancer center and a main hospital unit. During routine HVAC maintenance, the facility's test and balancing experts found that leaks, common throughout many of the duct systems employed on campus, were leading to significant HVAC performance inefficiencies. With an ongoing mandate to reduce energy use, hospital administrators knew that by fixing the leaks, they could potentially save a substantial amount of energy.

The duct system serving the hospital's six-story medical office building (MOB) presented the ideal opportunity for hospital administrators to try a new approach to duct sealing that eliminated the lengthy processes involved in manually locating and sealing each individual leak.

In Brief

Building: Miami Valley Hospital South MOB
Location: Centerville, Ohio
Service Technician: Siemens Industry Inc.
Aeroseal Contractors: Service-Tech
TAB: Kahoe Air Balance Company
Goal: Reduce energy use / save on utility costs
Before Aeroseal: 1,673 CFM of leakage
After Aeroseal: 576 CFM of leakage
Results: kWh savings of 57,000 = \$5,278/annually



Aeroseal technicians took one day to aeroseal the MOB duct system. The facility's TAB expert and its facility operations manager were on hand to watch the process and to view a graph depicting the leakage rate as the sealant did its job.

The final aeroseal printout report for this single duct system showed the leakage drop from the initial 1,673 CFM down to 576 CFM. As a result, engineers were able to reduce the fan speed, saving 57,000 kWh. The hospital estimates annual savings of more than \$5,000 with an ROI attainment in a little more than two years.

After receiving similar results on a second trial project, hospital administrators are looking at several other HVAC systems within the facilities that could benefit from Aeroseal duct sealing.

“This approach offers a way to get to sections of the ductwork that you wouldn’t otherwise be able to reach. It can also find and seal a lot of smaller leaks – leaks you wouldn’t otherwise find. A lot of small leaks multiply out to equal a BIG leak – and potentially big energy savings.”

Larry Berna, Facility Operations Manager
Miami Valley Hospital South

“Once the walls are up, it’s very difficult to get to a majority of leaks. So if you have a lot of ductwork that is hard to access, using this technology could make a lot of sense.”

Jason Heppe, Test & Balancing Engineer
Kehoe Air Balancing Company

“I focus exclusively on healthcare facilities, and I think that any one of my clients would have an application for this technology. If this (sealing project) was done manually, it would have potentially taken weeks rather than a couple of days to complete.”

David Smith, Account Executive
Siemens Industry Inc.



Aeroseal – The Technology

- Developed at Lawrence Berkeley National Laboratory in 1994.
- Research for aeroseal technology was partially funded by the U.S. Department of Energy.
- Aeroseal is the only duct sealant technology that is applied from the inside of the duct system. It is delivered as a non-toxic aerosol mist that seeks out and plugs leaks.
- Aeroseal has proven to be 95% effective at sealing air duct leaks.

For more information on this sealing project or about Aeroseal in general, contact Aeroseal at (937) 428-9300. You can also visit the Aeroseal website at www.aeroseal.com.