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VENTILATION MATTERS

Taitem Engineering, PC, is a consulting engineering firm focused on energy efficiency, green design, and renewable energy. Our team of engineers, analysts and specialized technicians helps buildings perform better. Research and professional experience has demonstrated that duct leakage is the most common and significant problem impairing building ventilation.

Aeroseal Duct Sealing is a patented technology that seals leaks from the inside out. It helps to reduce energy usage, improve indoor air quality and achieve required air flow rates. The process is effective at sealing holes up to 5/8" in diameter in both new and existing ductwork of all types, including sheet-metal, masonry, drywall, flex duct, and duct board.

As an Aeroseal service provider, Taitem evaluates new and existing ventilation systems and develops effective solutions, including duct cleaning and sealing. With our expertise in energy efficiency and engineering, we take a whole building approach to ensure that ventilation systems operate as designed.

duct assessment services

- video scoping
- evaluation of existing duct construction and sealing techniques
- static pressure and air flow measurements
- duct leakage testing
- review of TAB reports
- review of issues associated with ventilation systems
- energy savings projections
- utility rebate estimates

FEATURED PROJECTS

Baker Laboratory, Cornell University



Constructed in 1921, the majority of the supply and exhaust shafts at Baker Lab are masonry and encased within the walls of the building. When the University discovered the shafts were riddled with holes, Taitem assessed the problem and implemented Aeroseal services to repair these otherwise inaccessible shafts. Our team effectively sealed 129 exhaust shafts and 12 supply shafts, **reducing overall duct leakage by 89%**. The project is estimated to have a less than two year payback, by **reducing building energy usage by over \$200,000 per year**.

Abington House – New York, NY

The Related Companies

Taitem sealed the ventilation ductwork in a new 34-story multifamily building using the Aeroseal duct sealing process. After duct sealing, total leakage in the systems was reduced to below 1% of design air flow.

As a result, the high performance ventilation systems will now be **able to operate as designed and the building owner will save money** by not over ventilating the building to compensate for duct leakage.



Arnot Ogden Medical Center — Elmira, NY

Taitem used the Aeroseal duct sealing process to resolve leakage issues for five large air handler systems serving **an active hospital**. Sealing from the inside-out eliminated the need to tear down walls, expose ceilings, or tear off insulation in order to access the leaky ductwork. In an operating hospital minimizing the disruption was key. The project was carefully planned and coordinated with facility staff, unit directors, doctors and nurses. After only fourteen days of sealing, **duct leakage was reduced by 97%**, from a leakage rate of 16,261 CFM (at 1" w.c.) to 471 CFM (at 1" w.c.).



485 Lexington Ave – New York, NY

Memorial Sloan-Kettering Cancer Center

As part of the renovation associated with a new office space, Memorial Sloan-Kettering Cancer Center hired Taitem to Aeroseal existing and new ventilation ductwork. The project focused on sealing the high-pressure ductwork between the air handlers and VAV boxes to **ensure that the proper air flows were delivered to each zone**.

After Aerosealing was completed, total duct leakage was reduced to less than 1% of design air flow.



CONTACT Evan Hallas at 607.277.1118x103 or ehallas@taitem.com to learn more about our duct assessment, duct cleaning and Aeroseal services.