

CASE STUDY

John Muir Medical Center

John Muir Hospital Improves Airflow, Meets Ductwork Specification Using AeroSeal

Aerosol-based duct sealing proves highly effective at sealing hidden ductwork and safe for use in highly sensitive unit of one of the nation's top medical centers.

Ranked as one of the top hospitals in the country, John Muir Medical Center is a showcase for excellence in everything they do from medical care to building design and construction best practices. When they decided to turn existing space of the building's second floor into a new endoscopy surgery unit, they decided to re-purpose the existing mechanical system serving the space. Pretesting indicated inadequate airflow resulting in unacceptable levels of exhaust throughout the facility.

Further investigation indicated duct leakage was contributing to limited/poor airflow. The mechanical contractor on the project suggested they use AeroSeal duct sealing to seal the leaks with minimal disruption, and the common hospital concern that the aerosol-based duct sealant could damage sensitive medical equipment was alleviated by the AeroSeal contractor using their clean-room mitigation expertise to monitor the indoor air quality (IAQ) of the space during the duct sealing process.

It's important to highlight that both hand sealing and AeroSeal methods were used to seal the ductwork. A mechanical team taped the leaks around the easy-to-access portions of the ductwork (e.g. where the ducts

connected to the registers/diffusers). AeroSeal proved to be the most viable option for sealing the majority of leakage. It worked especially well for sealing tiny cracks and holes in hard-to-reach sections of ductwork (e.g. exhaust risers, lateral connections).

It took Bay Area Balancing and Cleanrooms, Inc. just a single weekend to seal the two designated sections of highly inaccessible ductwork using AeroSeal. In the end, an 86% leakage reduction was achieved. Bonus, during the entire process, testing showed airborne particles of sealant remained well below ISO 9001 levels.



The [AeroSeal] technology worked. If you have an existing mechanical [HVAC] system that is ten or twenty years old, you can make it like new again – give it new life – by using AeroSeal technology...We are planning to convert a number of buildings into doctor suites and I can see AeroSeal technology being a viable solution when it comes time to rehabilitate the existing ductwork. In new construction, it can be used to seal the entire air duct system once it's been installed.

Peter Spadia
Project Manager
John Muir Medical Center



AeroSeal Corporate Office
225 Byers Road, Suite 1 | Miamisburg, OH 45342
877-FIX-DUCT | info@aeroSeal.com

To Learn More About Improving The Comfort, Indoor Air Quality, And Energy Efficiency Of Your Building
CALL: 937-428-9300 or EMAIL: info@aeroSeal.com



PROJECT OVERVIEW

BUILDING John Muir Medical Center	in building; Meet ductwork specification for an acceptable exhaust level
LOCATION Walnut Creek, California	BEFORE AEROSEAL 1,583.4 CFM of leakage
CONTRACT ENGINEER Swinerton Builders	AFTER AEROSEAL 222.1 CFM of leakage
AEROSEAL CONTRACTORS Bay Area Balancing and Cleanrooms, Inc. (a.k.a. Air Seal Solutions)	RESULTS Sealed air duct system to 86% reduction in leakage; Eliminated 1,361.3 CFM of air leaks to help improve airflow and meet mechanical specification
GOAL Improve HVAC/airflow system	



AeroSeal duct sealing allows us to easily seal leaks in existing ductwork. It is particularly valuable when leaks are otherwise hard to reach – behind walls or other obstructions. I recommended that it be used on this project and would recommend its use for most retrofit projects where existing ductwork is being repurposed.

Patrick Grubb
General Contractor
Swinerton Builders

AEROSEAL.COM