

The Art of Renovation – Sullivant Hall at The Ohio State University renovates with the Kingspan KoolDuct® System

Sullivant Hall – future home to performing arts, cartoon museum, classrooms, and more. The Ohio State University campus, 100,000+ sq. ft. beloved 100 year-old building in need of complete renovation including all systems. The Kingspan KoolDuct® System provides higher R value, low air leakage, and faster and tighter installation than sheet metal and fiber wrap.



Issues

Stately Sullivant Hall needed a complete renovation. Originally built in 1912 and expanded many times thereafter, it was acquired by The Ohio State University in the 70s and been home to the Archaeological Department, the Undergraduate Library, the Fine Arts Gallery, the Zoology Museum and more. In time, it became clear that this beloved structure was not compatible with the programmatic needs of today's student body. Additionally, administrators knew the Department of Dance needed a more suitable space as well as an auditorium for performances and lectures, an expanded museum, more classrooms and architectural transparency so students and the public alike could better appreciate this historical structure. In 2012, a \$33 Million renovation began on Sullivant Hall.

Many complex changes ensued including enclosing the courtyard in the middle of the building to create an auditorium, removal of a mega staircase, relocation of its WWI memorial, ADA accessibility, larger windows inside and out, dance studios, digitally updated and enlarged classrooms, and more. When complete, this renovation would provide The Ohio State University with an open, inviting space and far more campus flexibility for faculty and students.

Key to this renovation was installing an efficient air-handling system. The problem was that lots of open space, enlarged classrooms, tight drop-downs, high ceilings, and the need for energy efficiency called for a unique, powerful, alternative HVAC solution.

Solution

Adding to the complexity was the need to retro-fit a 100 year-old building and be done quickly. The drop-down space also had to include the customary wiring, piping, lighting, sprinklers – all of which gets in the way not to mention the craftsmen required to install it. The quicker the air duct system could be installed, while leaving as much room as possible for all the other systems, the better.

Delta Air Systems (distributor) and Speer Mechanical (fabricator and members of Columbus, Ohio Local 24) provided a smart and efficient option to traditional sheet metal and fiber wrap. The Kingspan KoolDuct® System is a two-in-one insulated duct system that uses phenolic panels, rather than traditional sheet metal with fiber wrap, while delivering far better performance. Plus, Kingspan KoolDuct® System is pre-insulated and ideal for large-scale, commercial renovations because once the duct work is installed, there is no need for follow-on fiber wrap. KoolDuct also provides benefits that traditional sheet metal and fiber wrap cannot including:

- Longer sections (up to 13')
- Lightweight (72% lighter than sheet metal)
- Easier to install (fewer hangers, longer sections, fewer joints)
- Faster to install (15% - 35% faster than sheet metal, project depending)
- Installs flush to ceiling (insulation is 50% thinner than fiber wrap)
- Energy efficient (low ductwork air leakage can significantly reduce electrical consumption)



Outcome

Sullivant re-opened on September 20, 2014 to great fanfare and extremely positive reviews. “Speer Mechanical stepped out of a traditional sheet metal and fiber mindset and hit it out of the park,” according to Fran Lanciaux (President – Delta Air Systems). “With Delta providing technical support, Speer was able to provide The Ohio State University with a complete air handling system with low air leakage and easy to install. Speer enjoyed complete ownership of the project, exceeded all R-value requirements, and was able to move on to new opportunities faster.”



Manufacturer of pre-insulated ductwork panels, ductwork insulation, ancillary components to allow ductwork manufacture.

Source: <https://www.smacna.org/information/products-services/2015/09/17/the-art-of-renovation-sullivant-hall-at-the-ohio-state-university-renovates-with-the-kingspan-koolduct-system>