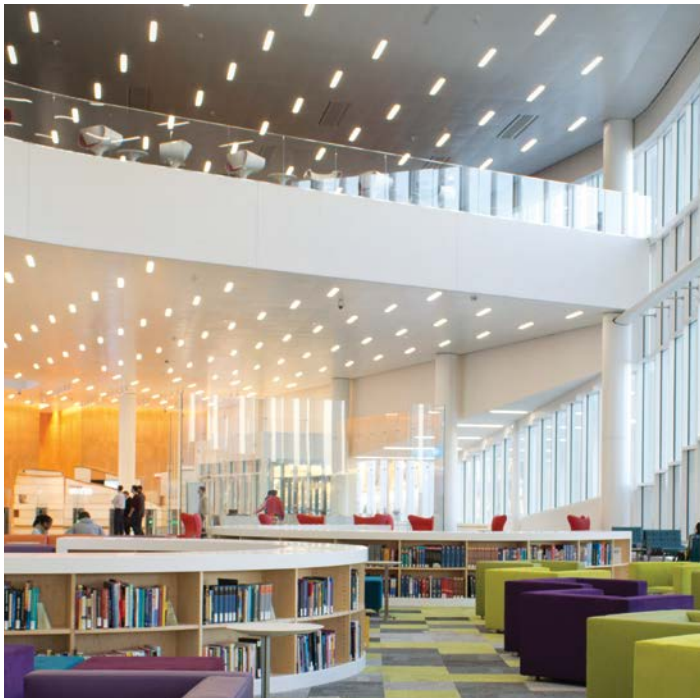


CASE STUDY



Project | *James B. Hunt Jr. Library, North Carolina State University – Raleigh, North Carolina*
 Architect | *Clark Nexsen/Snohetta*
 General Contractor | *Skanska*
 Engineer | *Affiliated Engineers, Inc. (AEI)*
 Mechanical Contractor | *JJ Kirlin Carolinas, LLC*
 Product | *MetalWorks™ Airtite™ Radiant Ceiling Systems*



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BPCS-6120-719

the challenge:

Considered one of the most spectacular libraries in the world, the award-winning Hunt Library unifies architecture and technology creating a vibrant research destination for students, faculty, and partners. The four-floor, 230,000-square-foot facility with its large 40-foot windows required an efficient heating and cooling solution.

the solution:

A MetalWorks™ Airtite™ radiant ceiling system was installed offering a sustainable heating and cooling solution with minimal air ventilation by using direct energy transfer from room surfaces using extruded and modular-type panels. Hot or cold water circulates through concealed copper tubing on the back of the panels – in this case a total of 32,000 linear feet of panel tubing.

The 2,851 linear feet of perimeter radiant panels and 1,660 radiant torsion spring cooling panels, working in conjunction with chilled beams, dramatically minimized heat and cold loss. The system contributed to saving more than 31 percent of the energy of an all-air system and also helped the facility earn LEED® Silver certification.

The 80,000-square-foot torsion spring system makes up a monolithic ceiling, including 13,280 square feet of active radiant panels, with no aesthetic difference between the active and non-active panels. Custom micro-perforations on the torsion spring panels and custom perimeter extrusion profiles helped achieve the needed acoustical rating and still maintain a consistent visual.

Sustainability in this project was key. 100% recycled cotton denim was used for insulation and >90% recycled aluminum content for all ceiling panels.

“The University is very pleased with the HVAC performance on the project, especially having gone through a cold, wet winter and a hot, humid summer,” said JJ Kirlin Carolinas Vice President, Ralph Stingo.

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