



Great Performances at Chautauqua Institution with Multistack Air-Cooled Chillers

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There's more to a soul-stirring Beethoven piano concerto and an intriguing Picasso painting than meets the ear and eye. Much goes on behind the scenes to enhance our enjoyment of the performing and visual arts. Such is the case at the Chautauqua Institution's Fletcher Music Hall and the Strohl Visual Arts Center.

Quiet Comfort

Fletcher Music Hall at Chautauqua Institution is a modern, acoustically-sound recital hall seating up to 250 persons. Since opening Fletcher Hall has hosted numerous recitals and concerts by Chautauqua Institution students and world-famous musicians.

Concert-goers want to hear music without being distracted by a noisy air conditioning system. When planning the Fletcher Music Hall, the Chautauqua Institution retained Architect Michael J. Conroe, AIA, to do the design work. Conroe's specifications to the HVAC contractors and suppliers competing for the project included strict noise requirements. Multistack LLC of Sparta, Wisconsin, met those requirements. Multistack, the world leader in the design and manufacture of modular heating and cooling systems, provided two packaged air-cooled chillers for Fletcher Music Hall. Although the chillers are installed directly outside the music hall, little, if any, compressor or fan noise is transmitted inside the hall. Chilled water generated by the Multistack chillers is piped to air handlers serving the music hall.

QUIET OPERATION AND EFFECTIVE TEMPERATURE AND HUMIDITY CONTROL AT ARTS, MUSIC CENTER. Chautauqua Lake, New York.

FEATURES & BENEFITS.

Multistack Packaged Air-Cooled Chillers

- Multiple independent refrigerant circuits
- Quick interconnect modular design
- Electronic chilled water temperature and capacity control
- BACnet interoperability
- Stainless steel evaporators; aluminum fins with copper tube condensers
- Ideal for renovation, retrofit projects. Modular design eases installation in limited-space mechanical rooms. Modules fit through standard-width doors and into passenger elevators
- N+1 redundancy, ideal for critical cooling applications
- Low maintenance requirements
- Fast delivery
- Dual condenser fans per module with VFDs for quiet, efficient operation



"The Multistack chiller at Fletcher Music Hall is performing as expected and is meeting the strict temperature and humidity requirements."

— **Doug Conroe**
Director of Operations, Chautauqua Institution





Chautauqua Institution plays a unique educational role, offering studies on a vacation level, a more serious level and a professional level. In addition, there are enhanced learning opportunities within Chautauqua's other programming. Music, the arts, religion, recreation and the pursuit of knowledge are all available.
Photo courtesy of Chautauqua Institution.

Michael Conroe states that among the reasons for the super-quiet chiller operation were "the strict limits on the flow rate of air into the music hall. "We had to limit the amount of HVAC unit and duct noise. We also didn't want to shock the musical instruments with rapid changes in temperature and humidity."

Underscoring the performance of the HVAC system is the fact that the Chautauqua Institution's summer music festival is one of only four official Steinway summer programs. The Chautauqua Summer Festival maintains a first-rate fleet of Steinway grand pianos for practice, lessons, and performance. These pianos require careful, constant temperature and humidity control.

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Pretty As A Picture

While the Fletcher Music Hall was a new-construction building with its own strict HVAC requirements, the renovation of the Strohl Visual Arts Center—including installation of air conditioning—was an even bigger challenge. Michael Conroe says, "Some of the exterior walls of this 100-year-old building had a five-degree lean. We essentially lifted the building off the foundation, straightened the walls and then reset the building."

The Strohl Visual Arts Center is also served by Multistack air-cooled chillers. Art

galleries require careful temperature and humidity control not only for visitor comfort, but very importantly to protect and preserve paintings and sculptures. These requirements are essential for venues like the Strohl Visual Arts Center to be able to attract major traveling art exhibits. As the architect on the project, Michael Conroe specified that the Strohl galleries be able to maintain close temperature control with no more than a plus or minus five degree temperature change from setpoint within a 24-hour period. The humidity control specification allows no more than a three percent relative humidity change within 24 hours.

Doug Conroe, Director of Operations at Chautauqua Institution, says the Multistack chiller at Fletcher Music Hall is performing as expected and is meeting the strict temperature and humidity requirements. "The Steinway pianos require constant, consistent temperature and humidity control. Low noise was also an important requirement at Fletcher Hall."

Conroe adds, "The Multistack units at Fletcher Hall and at the Strohl Center are operating just fine. The units are also meeting efficiency expectations. We're satisfied with the Multistack chillers and would certainly consider these units for future projects at Chautauqua Institution."

About Chautauqua Institution

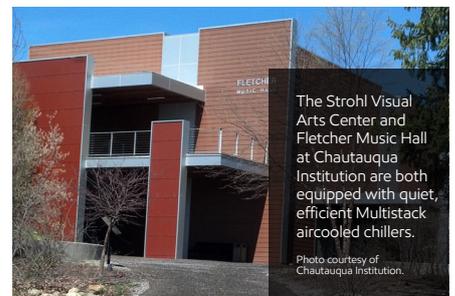
The Chautauqua Institution was founded in 1874 as an educational experiment in out-of-school, vacation learning. It was successful and broadened almost immediately to include academic subjects, music, art and physical education. Today it is a not-for-profit, 750-acre educational center beside Chautauqua Lake in southwestern New York State, where

approximately 6,000 students enroll in the annual nine-week Chautauqua Summer Schools to study art, music, dance, theater, writing skills and numerous special interests. More than 142,000 persons attend scheduled public events each year.

Chautauqua Institution plays a unique educational role, offering studies on a vacation level, a more serious level and a professional level. In addition, there are enhanced learning opportunities within Chautauqua's other programming. Music, the arts, religion, recreation and the pursuit of knowledge are all available. Younger and older students share learning experiences in an open, congenial atmosphere. Children and young people enjoy their own special programs.

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– **Michael Conroe, Architect**



The Strohl Visual Arts Center and Fletcher Music Hall at Chautauqua Institution are both equipped with quiet, efficient Multistack aircooled chillers.
Photo courtesy of Chautauqua Institution.

Music has always been a very important part of Chautauqua. In 1920 a symphony orchestra season became part of the regular program resulting in founding of the Chautauqua Symphony Orchestra in 1929. The Symphony now performs three times weekly with leading soloists in the 5,000-seat amphitheater. Popular entertainers perform other evenings. The Chautauqua Ballet Company also appears in the Amphitheater, sometimes with guest artists, while the Chautauqua Conservatory Theater presents its season in Bratton Theater. The Chautauqua Opera Company, also founded in 1929, performs in English in Norton Hall.

