



Condair Takes Center Stage in the Rock and Roll Hall of Fame's Humidity Control Overhaul

RS Series - Resistive Humidifier
ML Series - Direct Room Humidifier

- Precise and accurate humidity control
- Lower operating costs resulting in energy savings
- Protects museum artifacts





With the help of Northrich Company and Evans Energy, Condair delivers a unique indoor climate control solution for one of Cleveland's most iconic landmarks.

Project Overview



Customer: The Rock and Roll Hall of Fame

Condair Agent: Northrich Company

Location: Cleveland, OH

Application: 150,000 sq/ft Museum

Product: ML with Flex, Solo, and RS Series

Benefits:

- Precise relative humidity control
- Lower operating costs
- Substantial energy savings
- Minimal maintenance
- Multi-zone climate control
- Comfortable environment for visitors and employees

Overview

Michael Goetz, Principal of Northrich Company, worked closely with the Rock and Roll Hall of Fame team to help identify and implement a highly energy-efficient alternative to their current, less-than-reliable humidification system. That solution was Condair. Director of Engineering and Facilities, Mark Uhl and Suvad Karabegovic, the latter who replaced Uhl upon his retirement, were both instrumental in ensuring the newly installed system was a success. In addition, there were considerable contributions from Engineer Jeff Evans from Evans Energy, who assisted in selecting the ideal system while simultaneously calculating load capacity and energy returns in comparison to the old humidification system.

Challenge

With a one-of-a-kind building design and a massive total square footage it made certain products impossible to install. This group of experts needed to narrow the list and focus on solutions that would deliver the humidity control performance deserving of this beloved and iconic museum. The current system at the Rock and Roll Hall of Fame was plagued with maintenance issues that were time-consuming and costly, including components such as square steel inserts that easily developed scale and were difficult to keep clean. It was



also proving to be next-to-impossible to maintain the standard of 45 percent RH that the client wished to achieve.

“What was primarily driving the project was the potential for energy savings,” says Michael Goetz, Principal of Northrich Company. “They wanted to justify the upgrade to a high-efficiency Condair installation with projected energy savings rather than rely on reduced expenses from drastically less maintenance.”

This is a concrete testament to how environmentally and budget-friendly such systems can be in the long run, even for a facility with such a unique design.

The Rock and Roll Hall of Fame was the brainchild of internationally renowned architect I.M. Pei. It’s one of Cleveland’s most celebrated and easily identifiable landmarks. Comprising of over 150,000 square feet of office, storage, event, retail, and exhibition space, the museum’s standout feature is a glass-enclosed, double pyramid that sits adjacent to a connected 162-foot tower along the shores of Lake Erie. Needless to say, this design was proving to be a serious challenge to humidify while maintaining energy efficiency.

“They had six humidifiers attempting to handle that load, which was made more difficult by the glass-covered design of the main building,” says Goetz. “Typically, with those maintenance issues, there were one or two units down. That meant they were consistently short on load. Also, the events and developments in the facility change, so the load size that needs to be treated with sufficient relative humidity control changes along with them.”

Solution

Condair offers nearly every type of humidification solution one can imagine, from adiabatic cooling to steam humidifiers. This enabled Northrich Company to come in with a wide range of options for the project in question.

“Initially I had six in mind that I felt would work. Since much of the building is clad in glass and features a one-of-a-kind design, however, we narrowed that list over time. For example, Condair’s GS system would have been a wonderful choice for their operations, but since the mostly glass construction didn’t allow for a flue to be run outside, we moved on to other options.” In the end, a direct room system in the form of the ML Series was chosen. With that particular type of system, Northrich Company was able to essentially hide the tubing and other components discreetly, ensuring an architecturally pleasing installation that also delivers consistent relative humidity control to boost energy savings.

“It’s pretty low-maintenance and low-cost to operate, which is why many clients choose the ML Series,” says Goetz. “In this instance, it operates on a skid system; from there, the Rock and Roll Hall of Fame team can route humidification through multiple areas of the building. We’ve also recalculated the load with the help of Jeff Evans at Evans Energy to ensure that the new system can meet their needs with ease.”



The humidifier installation at the Rock and Roll Hall of Fame has an architecturally pleasing installation that also delivers consistent relative humidity control to boost energy savings.



Results

“The size of the property is incredible. It’s basically a massive glass cocoon housing networks of exhibition spaces, offices, storage, and much more. That said, we managed to pull this off thanks to everyone’s involvement and results have been positive so far,” says Goetz. “We had to completely start from scratch the moment we walked in those doors for the first time, as it was something unlike anything we had worked with before.”

The Rock and Roll Hall of Fame now experiences proper, consistent relative humidity control that can be adjusted according to multiple zones. For each of the six zones in the building, a control valve responsible for it is connected to its integrated, pre-existing Building Management System (BMS). So, if a certain area of the building needs an uptick in relative humidity control – such as during an event or on a hot day where the glass is heated from the sun – signals can be sent between components of the new system and will automatically adjust to suit.

“We’re really proud of the work done here – it was a great team effort,” says Goetz. “We’re also confident that such a high-efficiency, cost-effective solution will benefit not only the owner but also those who take the time to discover the many iconic artifacts of the museum itself.”



NORTHRICH
COMPANY

“What was primarily driving the project was the potential for energy savings and Condair humidifiers are the perfect solution to achieve this”, said Mike Goetz, Principal at Northrich Company.

About Condair

Condair specializes in the manufacturing of industry-leading commercial and industrial humidification and evaporative cooling systems. Having spent decades re-establishing global standards for energy-efficient solutions, Condair is represented in 16 countries by its own sales and service organizations, and is also supported by distribution partners in a further 50 countries, including Northrich Company.

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