

NEWS



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CARRIER RECOGNIZES TWO CHICAGO BUILDINGS AS HVAC “ENVIRONMENTAL LEADERS”

CHICAGO, June 24 – As part of its continuing celebration of the 100th anniversary of modern air conditioning by its founder, Dr. Willis H. Carrier, Carrier Corporation today recognized recent energy-efficient heating, ventilation, and air conditioning (HVAC) investments, in two prominent Chicago buildings, with *Carrier Environmental Leadership Awards*, at the Building Owners & Managers Association (BOMA) International 95th Annual Convention & The Office Building Show, in Chicago, Illinois.

“The *Carrier Environmental Leadership Awards* recognize companies that have invested in energy-efficient projects, which provide innovative, environmentally sound design solutions for their commercial buildings,” Carrier Vice President of Commercial Marketing, Mary Milmoie explained.

The awards were presented to **The Chicago Institute for the Art** and the **One East Wacker Drive Building**, at Carrier’s booth on the trade show floor of the Lakeside Center at McCormick Place.

Art Institute of Chicago: Keeping Treasures Cool

World famous for its many artistic treasures – including painter Grant Wood’s *American Gothic* and 33 paintings by Claude Monet – the Art Institute of Chicago recently required a master’s touch when it came to replacing a nearly three-decade-old 500-ton chiller unit. According

to William Caddick, the executive director of facilities for the Institute's physical plant department, this 800,000 sq. ft.-plus cooling project involved much more than just swapping in a new chiller.

“To properly maintain so many valuable works of art requires that humidity and temperature be kept at precise levels,” Caddick explained. “Adding to the challenge is a varied building design that includes multiple layers and high ceilings, as well as many skylights and revolving glass doors which add to the heat load.”

Besides providing increased cooling capacity for a sensitive environment, the project requirements included ease of operation, long-term cost savings and the ability to meet very tight space and time constraints.

With the help of Carrier Commercial Services, the Art Institute of Chicago replaced its aging chiller, one of a series of four 500-ton chillers, with a 750-ton 19XR Evergreen[®] unit. Fitting into the existing footprint of the old unit, the new 19XR Evergreen[®] expanded the Institute's cooling capacity up to 25%, minimized mechanical room space usage and minimized the mechanical room sound disruption issues the Institute faced – all while using environmentally-sound, non-ozone depleting HFC-134a refrigerant.

Under the right conditions and proper operation, Caddick explained, a chiller with increased capacity accomplishes the same cooling using fewer chillers, thereby conserving significant energy.

“Carrier installed a 750-ton chiller that fit the existing footprint of our nearly 28-year-old, 500-ton unit, while providing much higher efficiency and energy savings over the long run,” Caddick says.

Since space for displays is critical to museums, the Institute's mechanical room was small – however, the Carrier 19XR Evergreen's relatively compact size maximized the limited workspace available. The equipment room is located directly adjacent to one of the art galleries, and the new

Evergreen® chiller’s smooth, quiet performance ensures that museum visitors won’t be distracted by either noise or vibrations.

“Despite restrictions on available space and a narrow window of time available for installation, we were able to get the new equipment in place without a problem,” Caddick says. “We are very pleased with its quiet and smooth operation.”

To simplify indoor climate management for the entire Institute – including the museum, classrooms, studios, auditoriums, food services, and administration offices – a Carrier Comfort Network® (CCN) was installed. By utilizing easy-to-use Windows-based ComfortWORKS® software, the temperature and humidity throughout the Institute can be controlled precisely from one personal computer.

“In the end, our decision was based on more than just cost, we considered all the factors,” Caddick explained. “Carrier delivered.”

The Art Institute of Chicago received the *Carrier Environmental Leadership Award* for its foresight for investing in energy efficient and environmentally sound technology.

“The Art Institute of Chicago project was a ‘win’ for both Carrier and our customer,” Mike Bordes, Regional General Manager, Carrier Commercial Services, said. “The project was a perfect example of Carrier Commercial Service’s teamwork approach to providing customers with complete HVAC solutions.”

One East Wacker Drive: How To Keep a 41-Story Office Complex Cool

How do you keep a 41-story, 650,000 sq. ft. multi-purpose, office complex, housing major corporations, an atrium, a conferencing facility and several food service venues cool and comfortable? A perfect example can be found in the building at One East Wacker Drive, Chicago.

However, building management firm Jones Lang LaSalle had more requirements than just a pleasant indoor climate. Vice President Fred Wickham explained that the firm needed a complete system that was not only reliable, but also more energy efficient.

“Our previous system required a significant amount of energy – we were looking to achieve significant operating cost savings with the new system,” Wickham explained.

With the help of Temperature Equipment Corporation (TEC), a Chicago-based independent distributor of Carrier Corporation, the building management firm recently replaced two old 1,200-ton chiller units, with three 700-ton 19XR Evergreen centrifugal chillers with unit mounted Variable Frequency Drives (VFDs), at the One East Wacker Drive location. With this Carrier-patented design, both the chillers and the VFDs are cooled by environmentally sound, non-ozone depleting HFC-134a refrigerant.

The unit mounted VFDs add a whole new dimension to chiller efficiency. By using Chicago-based McGuire Engineers’ innovative design of multiple chillers with VFDs, One East Wacker Drive can now stage chiller usage, gradually starting one up at a time, as cooling loads increase during the day. Energy consumption can also be decreased during the building’s off-peak periods. Anytime the building is not running all three chillers at full load (which is most of the time), they’re conserving energy.

McGuire's design will allow One East Wacker Drive to achieve additional savings through the use of a Carrier chiller plant control system and a plate frame heat exchanger. During the winter, the chillers and the VFDs – and ultimately the building – will receive “free cooling” by utilizing cold water from the Chicago River to cool the entire system. Chicago river water is colder year-round than cooling tower water.

“In the end, we were impressed by the estimated lifecycle cost of the equipment, which was shown to us by TEC using Carrier’s Chiller System Optimizer software,” Wickham said.

Other decision drivers for Jones Lang LaSalle included ease of operation and the ability to meet an installation deadline.

Additionally, to simplify indoor climate management for the entire building, a Carrier Comfort Network[®] (CCN) was installed. Now, by utilizing easy-to-use Windows-based ComfortWORKS[®] software, the temperature and humidity throughout the building can be controlled from one personal computer.

The three 700-ton chillers fit into the same approximate area occupied by the two previous chillers. With no additional alterations required of the building's mechanical room, installation was a snap.

The One East Wacker Drive building received the *Carrier Environmental Leadership Award* for overall HVAC system performance.

“We are pleased that Carrier chose to recognize these building owners as environmental leaders,” Gary Stern, TEC’s Vice President, Applied Systems, said. “We hope the recognition will encourage other building owners to challenge their consulting engineers to design systems using equipment and technologies that provides both a sound financial and environmental return.”

For more information on Carrier, visit the company’s web site: www.carrier.com; e-mail contact.carrier@carrier.utc.com; or call 1-800-CARRIER.

Celebrating 100 years of innovation and the invention of scientific air conditioning by its founder, Willis Haviland Carrier, Carrier Corporation is the world’s largest manufacturer of heating, air conditioning and refrigeration systems and equipment. It is a subsidiary of United Technologies Corporation (NYSE:UTX), provider of a broad range of high-technology products and support services to the aerospace and building systems industries.