



Meeting the Challenge – More than 80 Stories High!

Modular air cooled chillers provide added HVAC capacity, easy installation

Since 1931, the Empire State Building has been a New York City landmark visited each year by millions of people from around the world. In 2011, the 102-story, 2.7 million square-foot skyscraper needed an additional 360 tons of cooling capacity to serve the 80th floor Observatory transition and queue floor and the 86th floor Observatory. Unfortunately, the Empire State Building had no more space in the equipment room for additional HVAC equipment.

Even with space available, installing new chillers in a typical existing building can be a challenge. New chillers must be either lifted or lowered to the equipment room, necessitating heavy cranes and often requiring access through a building's exterior walls. In a crowded city like New York City and especially in Manhattan, blocking off a busy city street to set up a crane, even during non-business hours, can be a very expensive proposition. It is often necessary to disassemble large chillers into smaller components, move the parts via freight elevator, and then reassemble the chillers. All this work requires considerable expertise, time and labor expense.

Airstack Chillers: A Better Option

SRS Enterprises, a major HVAC supplier to the New York and New Jersey region, recommended a better option for the Empire State Building. By installing Airstack air-cooled modular chillers from Multistack LLC in Sparta, Wisconsin, there was no need to block the street to bring in a heavy crane. And they avoided the expense and risk of renting a helicopter. The Airstack chiller modules were offloaded from a truck at the Empire State Building, wheeled in on carts and transported to the 81st floor via ordinary freight elevators. The units were delivered, installed and operating right on schedule.

Among the outstanding features of Multistack and Airstack modular chillers is installation versatility. At the Empire State Building one of the Airstack chillers is installed such that its modules, though interconnected, extend around the southwest corner of the building. There is a 30 ton chiller on the south face connected to a 30-ton module and associated pump module around the corner on the west face of the 81st floor building setback. Also on the west face setback is a six-module, 180 ton chiller and pump module. Between the fifth and sixth 30 ton chiller modules, although interconnected, is a gap to avoid blocking the view from the windows. Only Multistack and Airstack modular chillers can provide such extensive design and installation flexibility.



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The modular design of the Airstack units permitted installation at the building's 81st floor exterior setback, thus solving the issue of where to install the units. With air-cooled condensers, there's no need to connect the units to a cooling tower system water circuit. Each Airstack unit at the Empire State Building features six 30 ton cooling capacity modules. The compact, modular design of Airstack units saved significant dollars in rigging and labor expense and avoided potential delivery and installation delays.

There is also a Multistack unit installed on the Empire State Building's second floor where the Observatory Visitors Center is located. This unit serves the second floor during winter months and as backup cooling the rest of the year.

Airstack Packaged Air-Cooled Chiller Features & Benefits

Design Flexibility

The modular concept allows building owners to install only the cooling capacity needed, when needed—and easily add more cooling capacity later. Multistack chillers are available with a wide variety of module options:

- Free-cooling modules
- Heat recovery modules
- Pumping packages
- Glycol feeders

Other options available include expansion tanks and air separators, copper coils, baked phenolic and specialty coatings, stainless steel construction, special valving and controls interfaces.

Easy Installation

- Compact modules fit through standard doorways and elevators
- Modules connect quickly, easily to create 10 to 300 ton chillers
- All refrigeration systems are factory-charged and run-tested

Highly Dependable

- Quick connect modular construction with multiple independent refrigeration systems
- Comprehensive Computer Monitoring with automatic diagnostic and fault recording
- Automatic lead/lag compressor rotation

Easy, Efficient Operation

- Digital controls precisely match chiller capacity and best efficiency to actual cooling load
- LCD Screen with plain English display
- Simple keypad operation

Simple to Service

- Modules can be isolated and serviced with chiller in operation
- Can be serviced on convenient, non-emergency basis
- Proprietary service training not required
- Multistack chillers use mostly standard, off-the-shelf components

About SRS Enterprises

SRS Enterprises Inc. is a recognized leader as a manufacturer's representative of HVAC Products in the greater New York/New Jersey marketplace. Since 1994 SRS Enterprises Inc. has represented high quality manufacturers of industrial and commercial products for system solutions to both small and large facilities, in the existing and new building construction markets. Products offered are of the highest technology and quality. SRS sales associates have the extensive technical background and years of expertise to apply the right products to HVAC systems.

