DAIKIN

Self-Contained Air Conditioning Systems

20 to 130 tons

Proven Applications Testimonials

Daikin is an industry leading manufacturer of self-contained air conditioning products. Ideal for jobs where energy efficiency, flexibility, indoor air quality, and acoustics are top priorities, Daikin self-continued units are used in prominent building projects all over the country, such as One World Trade Center in New York City.

At 1,776 feet tall, One World Trade Center crowns the Manhattan skyline. Opened in November of 2014, its construction set a new standard for skyscraper design, and it is currently the tallest building in the Western Hemisphere.

For the project, Daikin provided 166 packaged self-contained cooling systems to accommodate more than 50 floors of the 104-story building. The equipment was highly customized for efficiency and indoor air quality, as well as sound performance as they reside on occupied office floors. They also featured high water pressure shell and tube condensers, variable frequency fan drives, a BAS control system, customized energy efficient scroll compressors, and waterside economizers that all contribute to increased energy savings and occupant comfort.

"This is a project of a lifetime...to match the customer's unique need with this level of customization...we are very proud to have contributed."
Robert Lisse - Project Manager

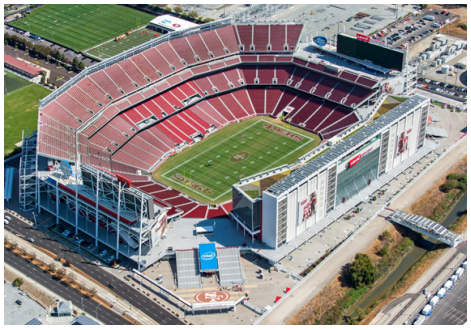
School District of Philadelphia

The new School District of Philadelphia Education Center, located in a revamped 1948 printing facility, has become a cornerstone of its community, creating inviting spaces for all.

Seventeen Daikin self-contained air conditioning systems were installed during renovation.

A primary reason for choosing Daikin self-contained systems was their ability to handle high static pressures applications.

"I was confident that the Daikin units could provide adequate air supply for each space,"
Mike Rush - Lead Engineer.



Levi's Stadium

Daikin supplied 21 self-contained air conditioning units to the $1.2 billion Levi's Stadium, home of the San Francisco 49ers. Because of limitations of the area available for equipment, the engineers specified 100-ton Daikin units, which allowed them to make better use of the available space.

Thanks to the Daikin equipment and other energy-saving measures, Levi's Stadium achieved LEED Gold Certification, becoming the first stadium to host a professional NFL team with that distinction.

Arizona Department of Administration

To comply with the State of Arizona's LEED energy conservation goals while building the Arizona Department of Administration, a number of energy conservation methods were used, including the installation of Daikin self-contained air conditioning units on every floor.

The flexibility of the self-contained units' design resulted in an energy use rating below 0.7 KW per ton, helping the building achieve LEED certification.

Features and Benefits

1 SWSI Air Foil Plenum Fan

- Excellent acoustics
- Improves efficiency
- Reduces turbulence and rumble associated with elbows and transitions

2 Coils

- High efficiency enhanced corrugated fin design
- High performance and reduced static pressure losses
- Interlaced and/or row split circuiting to keep full face of the coil active and to eliminate air temperature stratification and optimum part load performance

3 Durable Construction

- Pre-painted or G90 galvanized steel exterior cabinet panels
- Standard foam injected panels with R-13 insulation provide superior rigid double wall construction and minimizes air leakage
- For better acoustics, an additional 2", 1.5# density R-8 fiberglass insulation is an available option for fan and plenum sections
- Double-sloped drain pans help eliminates standing stagnant water

4 Blank Sections

- Available to mount air blenders, carbon or charcoal filters, sound attenuators or other specialty equipment
- Allow customization for maximum system performance and efficiency
- Can reduce design and installation costs
- Refer to Sales and Engineering Data Sheet, ED 19061

5 Scroll Compressors

- Up to eight for quiet and efficient operation
- Custom selections tailored to specific customer needs
- High EERs for low operating costs

6 Access Panels and Doors

- All panels and access doors shall be sealed with permanently applied bulb-type gasket
- Access doors are flush mounted to cabinetry, with hinges, latch and handle assembly

7 Refrigerant Circuits

- Suction and discharge service valves, an available option, to isolate each compressor
- Hot gas bypass, an available option

8 Factory-Mounted Variable Frequency Drives

- Controlling fan motor speed can lower fan operating costs and sound levels
- All VFD selections are plenum rated
- Manually activated bypass contactor is available to allow system operation in the event of drive service

9 Shell and Tube Condensers

- Carbon steel Shell and Tube Condenser , nonferrous water channels and enhanced tubing for high performance
- Integral sub-cooling circuit is provided as standard to maximize efficiency
- Mechanically cleanable condenser and water piping is rated for standard 300 psig waterside working pressure & 450 psig is an available option
- Two-way valve for head pressure control is available for low condenser water temperatures

10 Multiple Filter Options

- 2" 30% (MERV7) and 75% (MERV13) filters
- 4" 30% (MERV8), 65% (MERV11), 75% (MERV13) and 85% (MERV14) longer lasting filters available
- 4" primary filters also available with 2" or 4" with pre-filter

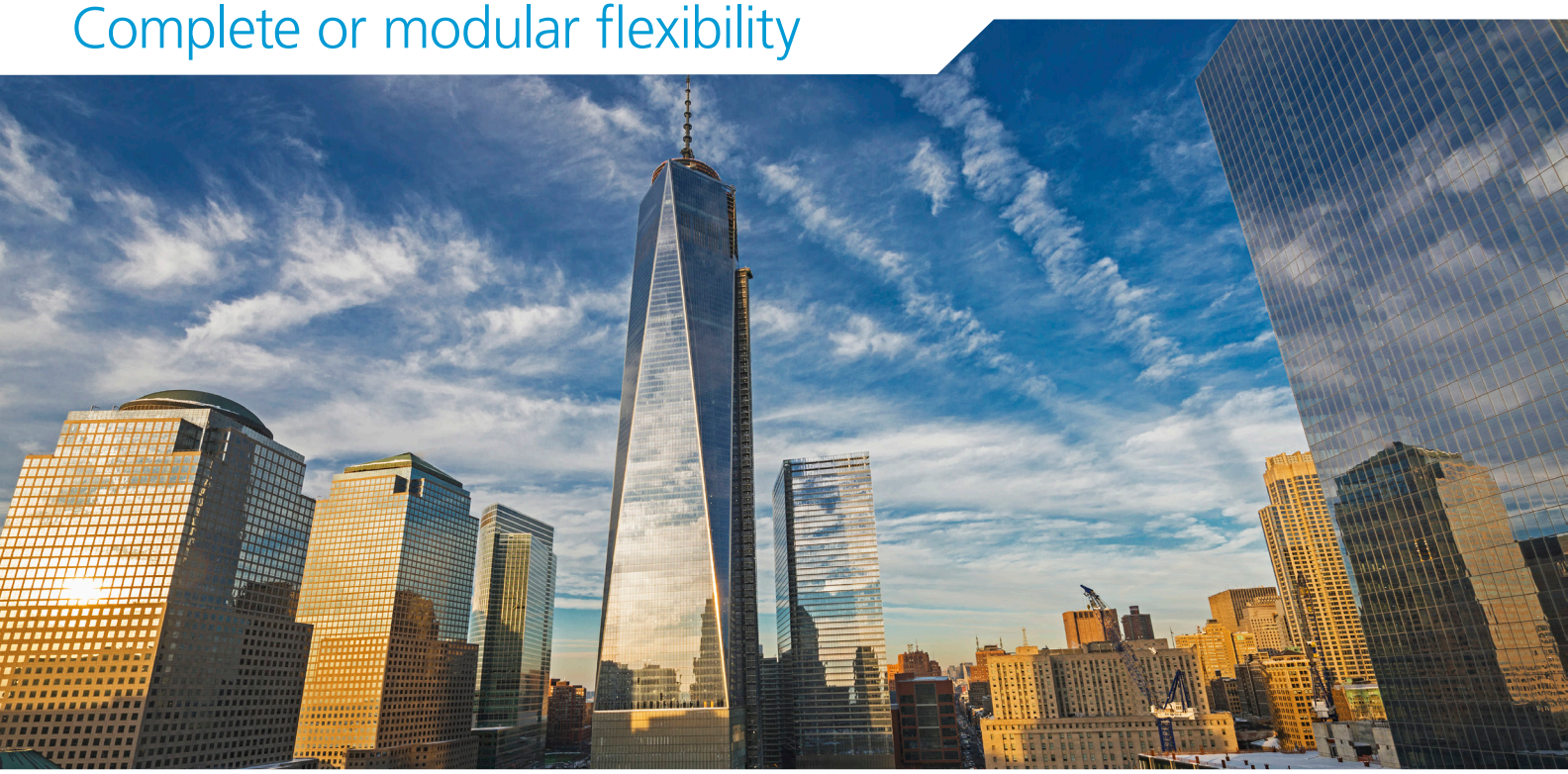
11 Economizer Options

- Waterside economizer effectively uses low cooling tower water temperatures to offload compressor operation
- An airside economizer control package is available for controlling field installed mixing dampers capable of 100% outside airflow

12 MicroTech® III Control System

- Factory-installed and tested to help minimize costly field commissioning
- Open Choices™ feature for easy integration into the BAS of your choice using open, standard protocols such as BACnet® or LONTALK®
- Easily accessed for system diagnostics and adjustments via a keypad/display on unit
- Optionally add a remote keypad and display that is identical to the unit mounted user interface

Complete or modular flexibility



Design flexibility, quiet operation, easy installation, and low operating costs make Daikin Self-Contained Air Conditioning Systems the preferred solution for multi-story projects such as large office buildings, high-rise apartments, and prominent big city skylines like New York City.

Self-contained's unique design makes it one of the most flexible and feature comprehensive units available that provide significant cost savings compared to chilled water systems. By combining high-efficiency scroll compressors, direct-expansion cooling, water-cooled condensers, water economizers, and VAV control technologies, you'll benefit from efficiencies that greatly exceed ASHRAE's 90.1 standards, and add to your building's energy savings year-after-year.

For fast pick-and-place installation in new construction projects, choose fully assembled SWP models. Or, for retro-fit projects with challenging space restrictions, select an SWT model that allows for deilvery of individual unit modules that easily navigate through existing doorways, hallways, and elevators to get to your maintenance room for quick assembly.

Once in place, self-contained's MicroTech® III controls easily integrate with the existing or new Building Automation System (BAS) of your choice.

Get Connected

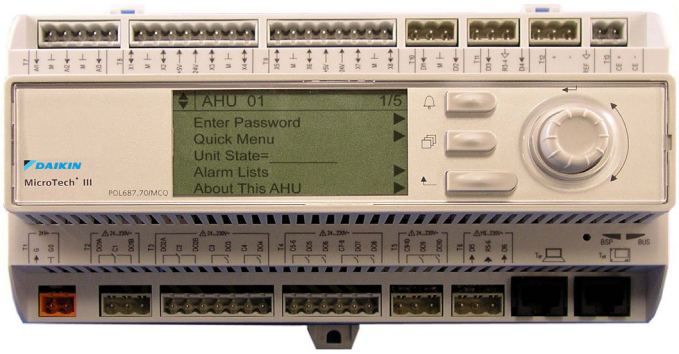
Gain new insight with Daikin's control solutions

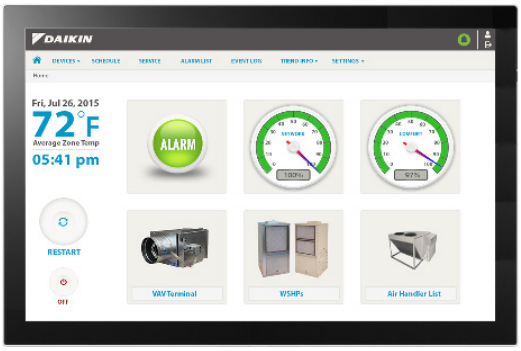
MicroTech® III Controls

Experience Efficiency and Absolute Comfort

MicroTech III controllers are factory installed and tested to reduce commissioning time and installation expense. The controllers automatically operate the entire unit including the economizer, the compressors, the temperature and humidity sensors, and the supply fan to provide stable and efficient temperature and static pressure control. MicroTech III also provides diagnostics, alarm monitoring, and alarm-specific component shutdown if critical equipment conditions occur.

MicroTech III controls also proviide easy integration with the BAS of your choice. The Open Choices™ feature provides interoperability with BACnet® or LonMark® certified communications for easy integration into your BAS of choice.





Intelligent Systems™

Bringing building automation to your fingertips

When a building's HVAC system calls for flexibility and responsiveness, Daikin's Intelligent Systems delivers smart controls that are as approachable as a smart phone. It's a plug-and-play system that comes preprogrammed for each specific application to ensure fast commissioning and startup.

The system is pre-engineered to seamlessly blend the power of Daikin HVAC equipment with user-friendly controls to help building managers and owners achieve higher performance and efficiency. Intelligent Systems is the right choice to control small-to mid-sized variable air volume (VAV) and variable refrigerant volume (VRF) applications associated with Self-contained units. It manages the flow of air and refrigerant to match the needs of individual rooms and spaces.

The intuitive, browser-based interface allows users to set up schedules, monitor and control equipment, and gauge operating tendencies. It utilizes hundreds of discreet data points to give users proactive control over the entire system from any computer, smartphone, or tablet.

To learn more about Self-contained Air Conditioning Systems or Intelligent Systems, contact your local Daikin Applied sales office or visit DaikinApplied.com.

DAIKIN

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