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Case Study – AFLAC

EDUCATION / HEALTH CARE / LODGING / MANUFACTURING / OFFICE BUILDING / RETAIL / SPECIAL



20-Year Service Relationship Leads to High Efficiency 134a System Installation

Project Objectives

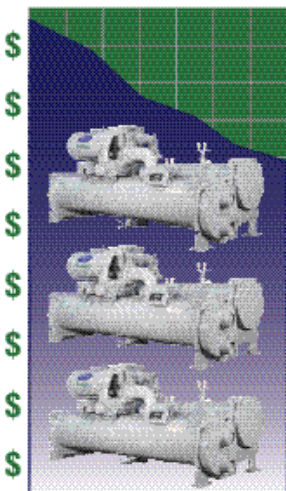
American Family Life Assurance Company (AFLAC) needed to ensure continuous, reliable HVAC operation for their worldwide headquarters campus in Columbus, GA – especially the critical customer service organization housed in a new 133,000 sq. ft. office building. They needed a new chilled water system that would respond to the comfort needs of varied interior spaces, optimize efficiency and tie into AFLAC’s central building automation system. And they were looking to Carrier, their long-term HVAC expert, to develop an expanded service strategy to support the six-building campus.

Solution

Carrier combined a high efficiency HVAC system with full-time service to address AFLAC’s needs. A unique maintenance agreement places a service technician on-site full-time, providing continuous preventive maintenance for more than 300 components, ensuring optimal performance and uninterrupted delivery of conditioned air. Three efficient and environmentally-responsible non-ozone depleting, chlorine-free Evergreen® chillers plus an air distribution system using variable air volume (VAV) technology and economizers comprise a system that reduces energy costs by as much as 13%, while addressing AFLAC’s refrigerant concerns. Product integrated controls (PICs) communicate with AFLAC’s building automation center for centralized system management.

Part-load efficiencies gained from staging the operation of the three chillers and the pumping systems saves as much as 13% in operating costs.

Operating Cost Reductions



Saves 13% Operating Costs



Case Study – AFLAC continued

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“Carrier has always been there when we needed them, and it’s easy to do repeat business with a company when you have that kind of relationship.”

William W. Miles,
second vice president,
Facilities Support Division

Project Synopsis

When American Family Life Assurance Company (AFLAC) was planning a new customer service center on the campus of its worldwide headquarters, they turned to an HVAC manufacturer they knew they could trust. A 20-year service relationship had proven Carrier’s technical expertise and responsiveness.

“Customer service is a mission-critical operation and we need our employees to be comfortable to do their jobs well,” said William W. Miles, AFLAC second vice president, Facilities Support Division. “We can’t afford to have the HVAC system ever go down in that facility or in any of our operations centers.” Providing employee comfort and a peace-of-mind service strategy for the six-building campus was essential.

The five-story building has an open-space design to accommodate rapidly growing occupancy levels and facilitate periodic space reconfigurations. The same flexibility was required of the HVAC system. It would need to respond immediately to the changing needs of various interior spaces, such as open office areas, a call center, training and conference rooms and a cafeteria. In addition, AFLAC is committed to the environmental benefits and security of using a non-ozone depleting refrigerant not scheduled for phase-out. Finally, all of the new HVAC components had to be able to communicate with AFLAC’s central building automation control center.

To meet these requirements, Carrier provided a system comprised of three 276-ton Evergreen® centrifugal chillers using chlorine-free HFC-134a refrigerant, with system part-load efficiency levels (SPLV) approaching .37 kW/ton. With three chillers, operation is staged under part-load conditions, so cooling is tailored to meet exact requirements, lowering energy consumption by as much as 13% and prolonging chiller life.

Six air handlers provide cooling and ventilation to 67 variable air volume (VAV) mixing boxes located strategically throughout the building. With an outside air economizer cycle, the air handlers use fresh air for ventilation – and when outside temperatures are below 60°F, cooler outside air can be brought in to supplement the chillers. When temperatures fall below 55°F, 100% outside air is used to provide “free cooling” for the perimeter office space. Carrier product integrated controls (PICs) communicate with all HVAC components.

Carrier designed a customized service agreement placing a full-time expert technician on-site to provide inspection, filter changes and preventive maintenance. This continuous support for their more than 300 pieces of HVAC equipment means AFLAC doesn’t have to worry about employee comfort, a key factor in their commitment to create a high quality work environment.

Project Summary

Location: Columbus, GA

Project Type: New construction

Building Type/Size: Steel and pre-cast façade/Five-story, 133,000 sq. ft.

Building Usage: Offices, call center, training rooms, conference rooms, cafeteria

Objectives: Install efficient, flexible system for new building; provide campus-wide service and maintenance

Major Decision Drivers: Reliable performance; uninterrupted employee comfort; environmentally-responsible equipment

Design Considerations: Periodic space reconfigurations

Total Cooling (tons): 828

HVAC Equipment: Three model 19XR Evergreen chillers w/HFC-134a refrigerant; six model 39T air handlers; 67 model 35DN VAV mixing boxes; PICs; service agreement

Unique Features: Part-load staging of chillers; chlorine-free refrigerant; air handler economizers; full-time technician maintenance support

Project Cost Range: \$500,000 to \$1 million

Installation Date: November, 1998

For more information, contact your nearest Carrier Representative, call 1.800.CARRIER or visit our web site at www.carrier.com