



Southern New Hampshire Medical Center has a medical staff of over 400 specialty care providers.

Daikin Chillers Achieve Superior Energy Savings and Reliability

ISSUE:

Medical issues are stressful enough without adding overheating to the mix. Keeping patients, staff, and visitors as comfortable as possible is a top priority for any medical center. It's no surprise then, that when Southern New Hampshire Medical Center in Nashua, NH started having problems with its antiquated chiller system, the facility was eager to make an upgrade.

"They serve the entire building, including operating rooms and patient rooms and general use in the building," said Alex Finlayson, Field Supervisor of Daikin Applied's Boston Service office, explaining the glaring need for new equipment. "They had three non-Daikin centrifugal chillers that were 25 years old, that had leaks and control platform issues. The platform wouldn't support it anymore, so the customer started to look at options to replace the machine."

SOLUTION:

Finlayson gives credit to a diligent administrator for making the right call. "The facility director did his homework. He compared the competitor's machines they already had and similar replacements with what Daikin had to offer. The energy efficiency of the Daikin chiller he selected was significantly better."

"It was mainly energy-based," Finlayson explained. "That was the reason for investing in these chillers. That and a magnetic bearing chiller is certainly a cutting-edge piece of equipment. We got involved and introduced to them our WME magnetic bearing compressor, which improved efficiency and decreased costs."

Daikin's Magnitude® chillers can, in fact, save building owners up to \$4 million over the life of the chiller. A proven design with installations all over the world, the oil-free design may reap up to 40% efficiency gains and reduced maintenance costs by eliminating the oil, mechanical seals, wear surfaces, and gears.



NAME:

Southern New Hampshire Medical Center

LOCATION:

Nashua, NH, USA



AREA SERVED:

188-bed facility



ISSUE:

Three aging centrifugal chillers needed replacement



SOLUTION:

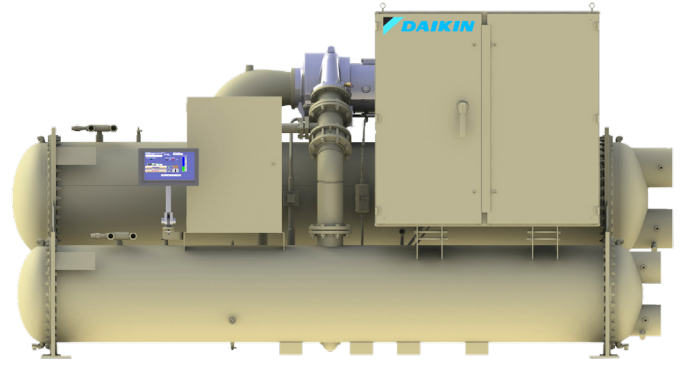
Three Magnitude® WME magnetic bearing compressor chillers were installed over the course of a year

SOLUTION (CONTINUED):

Despite the clear decision, the team faced obstacles in the path to installation. Removing three aging chillers from a hospital basement wasn't a simple task. Fortunately, the chiller project was scheduled alongside several other renovations, including new lighting and a new pump system, which helped make the Daikin project less obtrusive.

Even so, Finlayson said it was still a major undertaking. "It was a very complicated rig to get the old chillers out and the new chillers in." To fit into the basement space, the chillers had to be disassembled, dropped through a pit to the mechanical room level, reassembled and installed.

"It was very time-consuming," said Finlayson. "Long days, 12-hour days to get the new machines down into the basement and the old ones out. It was a year-long project, one chiller at a time." Still, the project came in on time and under budget. In the end, SNHMC had three new Daikin Magnitude magnetic bearing chillers to offer a lifetime of efficiency.



A single Daikin Magnitude WME chiller can save building owners up to \$4 million over the life of the chiller.

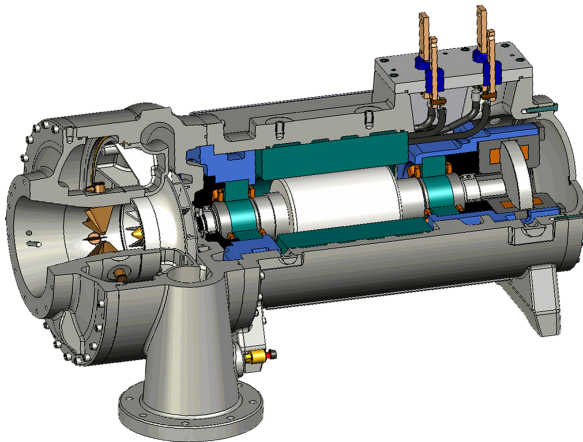
OUTCOME:

The long-running labor effort paid off. In the two years since the project was completed, the facility has seen improved energy efficiency and a significant drop in mechanical issues. Finlayson said the facility director has been pleased. "The maintenance costs were substantially less as well because the chiller uses a magnetic bearing compressor and he didn't have to deal with changing oil every year."

It may have been a long process getting the chiller system upgraded, but now the staff at Southern New Hampshire Medical Center can be assured that they are delivering superior indoor air quality (IAQ) for the best patient outcomes. That's an upgrade that every hospital visitor should be able to appreciate.

Chiller One Replacement Savings (1 of 3)

- \$300,000 installed cost
- \$110,965 rebate
- Magnetic levitation technology (no oil)
- 50% lower annual maintenance
- 50% energy reduction
- \$55,500 annual savings
- Net payback - 3.6 years



Daikin's magnetic bearing technology eliminates oil, bearing wear surfaces, and gears for longer machine life and increased reliability. The design eliminates the risk of contamination from efficiency-robbing oil buildup onto heat-transfer surfaces.

"Southern New Hampshire Medical Center is very happy with the products, services, and advice received from Daikin Applied to date."

– Scott Lever, Mechanical and Utility Systems Manager
Facilities Engineering Department - Southern New Hampshire Medical Center