

Englewood Hospital and Medical Center



- ▶ **New 850-ton steam absorption chiller**
- ▶ **Total 2,400 tons of cooling**
- ▶ **New 90,000-sq.-ft. ambulatory care center**
- ▶ **Englewood, New Jersey**

Hospital Reaps Savings, Flexibility with Absorption Chiller

Englewood Hospital and Medical Center, located in Englewood, New Jersey, is an acute-care community teaching hospital. Founded in 1890 as a 12-bed non-profit, non-sectarian health care facility, it has grown to 547 patient beds and is now the third largest voluntary acute-care hospital in New Jersey. It is affiliated with the Mount Sinai School of Medicine and is a member of the Mount Sinai Health System.

Like health care facilities everywhere, Englewood Hospital has to make wise choices about the best way to utilize its energy dollars. The construction of a new 90,000-sq.-ft. ambulatory care center that opened in 2004 made it necessary to expand the hospital's cooling capacity. The decision was made to replace an aging 600-ton steam absorber with an efficient new 850-ton Trane double-effect absorption chiller, increasing the Medical Center's cooling capacity by 250 tons.

Performance ratings cites

John DiGirolomo, the hospital's Director of Facilities, Plant Operations and Construction, says the Trane absorption chiller was selected because "it had very good performance ratings."

By installing an absorption chiller that uses steam to produce chilled water for a portion of its cooling, the Medical Center was able to avoid a prohibitively costly electric upgrade that would have been necessary if it had installed a third electric chiller. It also allows the Medical Center to produce chilled water economically, by taking advantage of the lowest cost fuel.





“The Trane absorber is a wonderful machine,” he adds.

The Trane unit runs on high-pressure steam created by a pair of 1,300 hp boilers capable of operating on natural gas or fuel oil. Steam created by the boilers is used for sterilization and other hospital needs. The hospital’s two older chillers run on electricity, producing cold water that circulates through the entire medical complex to provide air conditioning. The battery of chillers provides cooling for a total 1 million square feet of space.

Electric upgrade costs avoided

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“It was the best solution,” says DiGirolomo.

Having an absorption chiller that runs on steam created by natural gas-fired boilers makes it possible for the hospital to reap additional energy savings, according to DiGirolomo.

“It gives us added flexibility – when the cooling load is light in spring and fall,” DiGirolomo says. “If gas or oil costs less than electric, we run the steam chiller because we’re making the steam anyway.”



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