

# Tecogen

Advanced Modular CHP Systems



## CH-200x - STx Series Water-Cooled Chiller



# Case Study

**Hartford YMCA** - Originally opened in 1938, the downtown branch of the Greater Hartford YMCA features a pool, a fitness facility, a licensed preschool, a child-care center, a 128-room residence facility and, as of 2001, a 200-ton TECOCHILL® natural gas engine-driven chiller to provide all the air conditioning for the building's first three floors.

Cooling equipment was first installed in 1974 when an eleven-story tower was added to the original building. After almost thirty years, however, that cooling equipment needed to be replaced. And,

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as a nonprofit organization, the budget was an overriding concern. "We need to be cost-effective in everything we do," explained Andre Kennard, executive director of the Downtown Branch.

Ten years earlier, the YMCA had become one of the first facilities in the greater Hartford area to install natural gas powered cogeneration equipment. "The two TECOGEN® CM-60 cogeneration modules had certainly helped reduce the building's energy costs," said Kennard. Tecogen's local representative, Harry Cullinane of the Clover Corporation, contacted the YMCA to suggest they add

Tecogen's natural gas engine-driven chiller as a complementary system.

"We had a number of successful TECOCHILL installations in the Hartford area," recalls Harry. "We estimated savings of approximately \$14,000 per year for the YMCA, and a payback of less than three years."

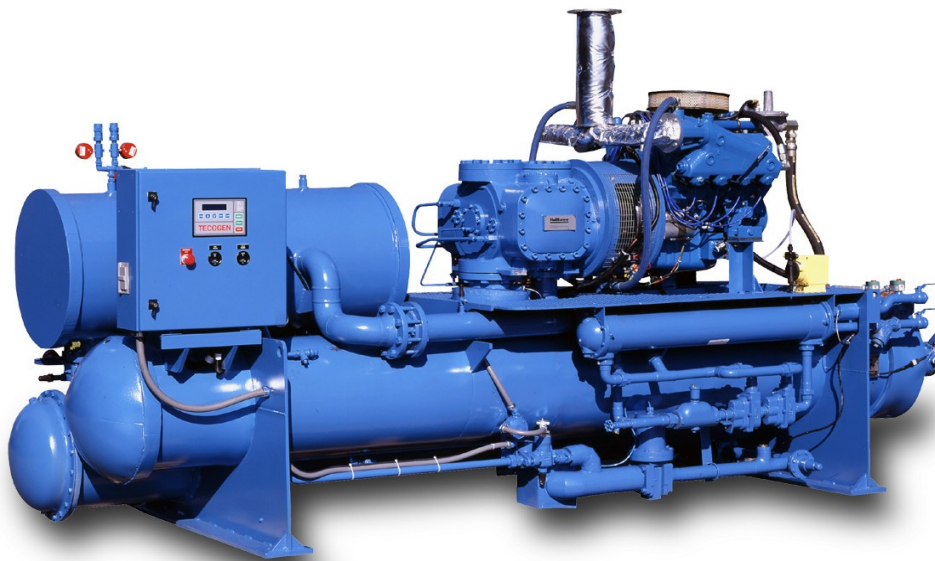
"They were concerned about noise because the [existing] electric chiller was on an upper floor next to a conference room," Harry continues. But after a site visit to a nearby TECOCHILL installation, "they liked what they saw and what they heard – or what they *didn't* hear," and Tecogen's 200-ton chilling capacity system was specified by Quinlan, Giannoni & Livingston, consulting engineers for the project.

Installation was completed in the spring of 2001 with very little disruption to the YMCA's daily operations because the TECOCHILL system has

the same basic footprint as a comparable electric chiller. Tecogen's automated remote monitoring capability ensured a smooth and uneventful startup. The microprocessor-based control system provides fully automatic operation of the chiller and real-time fault monitoring.

Thanks to the TECOCHILL system and a rebate from Connecticut Natural Gas Corporation, the YMCA has been able to significantly reduce energy costs by using natural gas instead of electricity. Natural gas is readily available during the summer months when demand for heating is low, but demand for air conditioning is high.

The system is clean and non-polluting, and has successfully met the most stringent air-quality standards in the United States. It uses R-134a refrigerant, which is widely accepted throughout the industry and is one of the most environmentally friendly refrigerants available.



For more information about Tecogen's  
**CH200 - STx Series Water-Cooled Chiller**  
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