

# Tecogen

Advanced Modular CHP Systems



## CH-350 - DT Series Water-Cooled Chiller



# Case Study

**Bulova Corporate Center** - A typical corporate office park might not necessarily be an ideal candidate for Tecogen's natural gas-driven chillers. But a center like the Bulova Corporate Center – which includes a health spa, fitness facility, swimming pool, art museum, conference center, and a retail section with upscale dining, hair salon, and dry cleaners – that becomes a different story.

*"Tecogen systems are clearly the most efficient Chillers on the market today."*

"Normally, an office building doesn't have significant hot water applications," explains Sidney W. Barbanel, P.E. "And without hot water applications, you just can't take advantage of all the free hot water that these chillers provide." Sidney should know – he's the consulting engineer who helped the Bulova Corporate Center in Queens add 700 tons of cool-

ing capacity through the installation of two TECOCHILL® chillers last year, an addition that will substantially reduce the center's peak electric power demand. The two 350-ton chillers joined five other TECOCHILL units that had been installed almost ten years earlier. Collectively, these five chillers have amassed over 85,000 hours of operation.

Originally built in 1952 as headquarters for the Bulova Watch Company, the 500,000 square foot Art Deco building has become a well-known and easily recognized icon for anyone traveling to or from LaGuardia Airport in New York. When two of the building's old absorption chillers had to be replaced, engineers for the project turned to Tecogen.

“The consulting engineers evaluated several different technologies for this landmark facility,” recalls John Tager of D&B Engineering in New Jersey. “They concluded that the Tecogen units provide numerous benefits beyond those offered by either absorption or electric chillers. Those benefits include the reliability of a dual engine/compressor design; lower operating and maintenance costs; the production of ‘free’ domestic hot water; and the ten years of positive experience that Bulova had with their previous five TECOCHILL units. The fact is, Tecogen systems are clearly the most efficient chillers on the market today.”

At the request of the building’s owners, the existing mechanical room was being reduced by 20 percent in order for the facility to recapture leasable space. These additional engineering constraints made Tecogen an even stronger candidate, since the TECOCHILL units are smaller and more flexible than other comparable systems. And the TECOCHILL systems could be easily integrated into the building’s existing energy-management system. In addition, Tecogen provides all of its customers with a remote monitoring program that transmits operating data back to factory engineers on a regular basis for on-going monitoring and diagnostics.

Thanks to the TECOCHILL systems and a considerable rebate from the New York State

Energy Research and Development Authority (NYSERDA) for improving energy efficiency, the Bulova Center will significantly reduce their energy costs. The TECOCHILL systems run on natural gas, which is readily available during the summer months when demand for natural gas is low, but demand for air conditioning is high and electric rates surge. In addition, the waste heat from the engines will be used to produce hot water for use throughout the facility, basically eliminating the need for their boilers when the chillers are running.

“These new units will allow the building owners to avoid the high demand surcharges that are typically charged by an electric utility during the summer months,” explains Mr. Barbanel. “By eliminating the demand charges and getting hot water virtually for free, we’re looking at reducing their annual energy costs by a significant amount.” This should produce millions of dollars worth of energy savings over the expected life of the systems.

The TECOCHILL systems are clean and non-polluting, and have successfully met the most stringent air-quality standards in the United States. Tecogen is the industry leader in natural gas-powered chillers with more units installed and serviced than all other brands combined.



For more information about Tecogen's  
**CH-350 - DT Series Water-Cooled Chiller**  
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