

# TECOCHILL®

- Gas engine-driven screw chiller
- 150 refrigeration tons
- College campus
- Rockville, Maryland



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**A TECOCHILL® CH-150 natural gas cooling unit works day and night to cool a Rockville, Maryland, campus. At night it operates as part of an ice production system. By day it helps save money by shaving peak demand charges.**

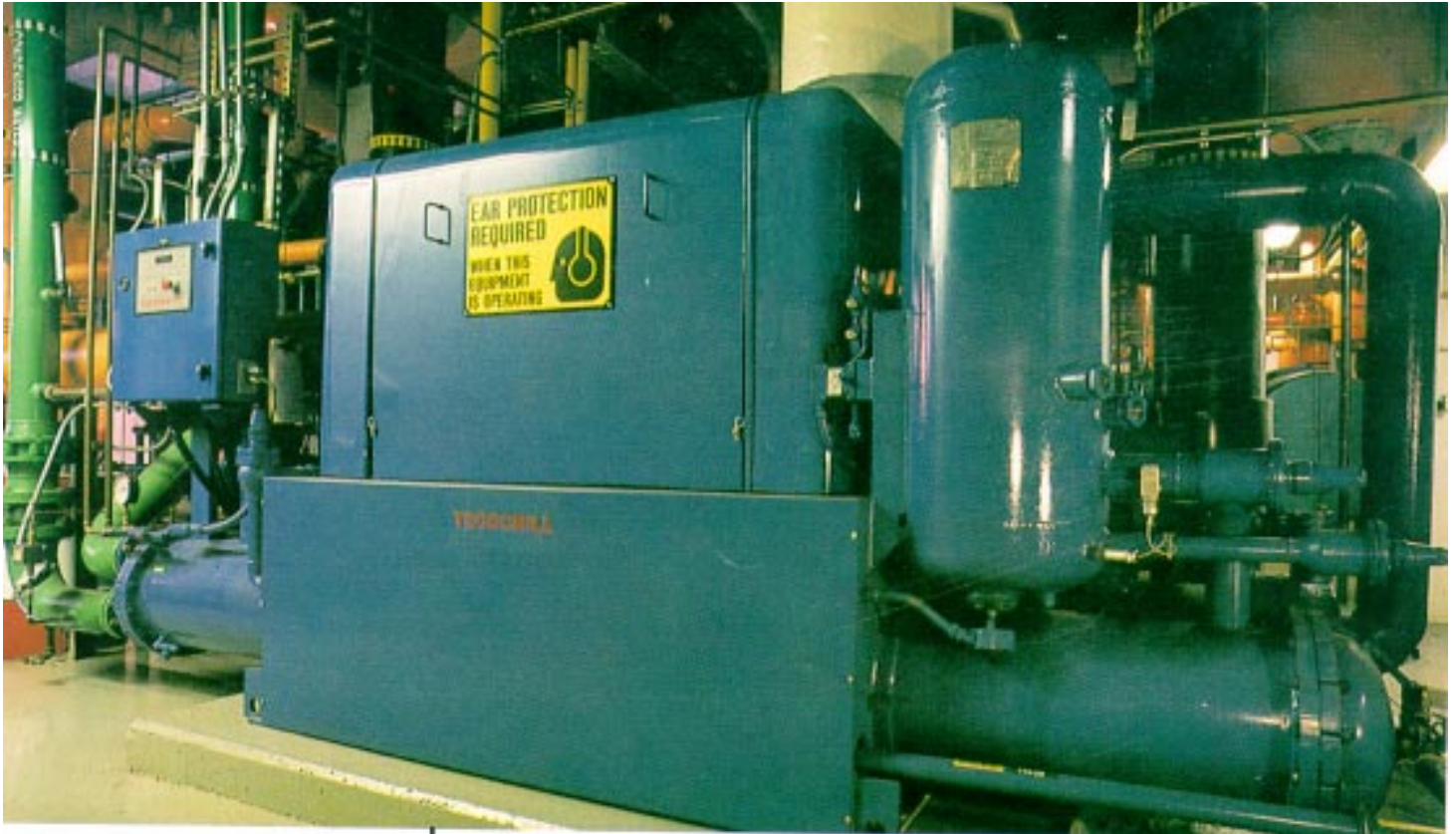
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After considering available technology, fuel sources and the results of a life-cycle analysis, Montgomery College chose a TECOCHILL® CH-150 to cool the newly constructed Gudelsky Institute for Technology Education building. Although the original plans were to use the TECOCHILL® as a dedicated system for the building, the college learned that by installing the unit in the central heating/cooling facility, it would gain additional benefits from the chiller. "By incorporating the chiller into the campus's central plant, its operation could be expanded from an estimated 1,500 to 3,000 hours annually," explains Energy Engineer Mike Whitcomb. "The

increase in operating hours made the natural gas chiller an even smarter choice because life-cycle costs were improved by another 10 percent. Since the chiller is part of the central system, it can also be used to manage swing loads, providing cooling when necessary on unseasonably warm winter days."

Installed in May 1992, the TECOCHILL®, along with several electric chillers, make up an ice production system. Ice is produced during low demand hours. Then during peak hours, instead of operating the electric chillers at full load, the college is able to shave peak demand charges by using the stored ice and its economical natural





**Tecogen**  
**45 First Avenue**  
**Waltham, MA 02451**

**781.466.6400**  
**[www.tecogen.com](http://www.tecogen.com)**

gas chiller to cool the campus buildings.

In addition to flexibility, the TECOCHILL® offers several other advantages. First, it is powered by natural gas, which has no demand charge, so there is no penalty for operating the unit when it's needed most. Second, the college also gets a break on its gas rates since they use interruptible gas service. A final benefit is the ability to recover rejected engine heat and use it to

produce "free" domestic hot water.

The chiller is powered with an automotive-derivative marine engine that's directly coupled to a twin screw compressor. Output can be modulated from zero to 100 percent of load with high efficiency. The TECOCHILL® also has one of the highest coefficients of performance (COP) among current gas-fired chillers.

