



**Volume Two / Issue 12 CASE Study: Crowne Plaza**  
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*In This Issue...*

**23XRV Evergreen® Chillers Keep Hotel Guests Comfortable**

**PRODUCT**  
23XRV Evergreen®  
Chiller



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The seventeen-story Crowne Plaza hotel contains 408 guest rooms and suites, and more than 43,000 square feet of meeting space, including many conference rooms and two ballrooms. Like many hospitality facilities built in the 1970s and 1980s, the building faced rising energy costs exacerbated by the use of aging, inefficient chillers. The hotel's conference rooms are used during all seasons, so cooling is required even in the coldest months. Because the chiller plant had to handle peak cooling loads during the summer and substantial but greatly reduced loads in the winter, the chillers needed to be efficient under a broad range of operating conditions. The existing chillers were simply not up to the task. In addition, the hotel's mechanical equipment room was located directly above guest rooms on the seventeenth floor so low sound levels were a requirement for any replacement system.

As a member of the Crowne Plaza family, the hotel maintains a high standard of hospitality, and Sharon Hyland, Account Manager at Fluidics, was determined to find the best solution for her customer. Hyland researched several alternatives and selected the 23XRV, noting that "After evaluating the equipment on the market, we chose the Carrier 23XRV Evergreen chiller. Not only was it the most efficient machine available but also one of the quietest. Our positive relationship with Carrier in the past gave us confidence we would achieve our objectives and serve our client well."

The 23XRV Evergreen chiller utilizes variable-speed screw compressor technology, making it



23XRV  
Water-Cooled Chiller

*"We've been tracking data since the chillers were installed, and already we have seen significant savings."*

Salvatore Tamberella,  
Director of Engineering  
at Crowne Plaza  
Philadelphia—Cherry Hill

ideal for the Crowne Plaza installation. Using this technology, the unit exceeds other chillers' ability to run efficiently under the low load conditions found at Crowne Plaza during winter months. The variable speed drive used by the 23XRV is IEEE-519 compliant, eliminating the need for field-installed harmonic filters or a harmonic study of the building's electrical system.

The 23XRV's energy efficiency qualified Crowne Plaza for a \$100/ton rebate from the New Jersey [SmartStart](#) program. The SmartStart program is designed to provide incentives for purchasing equipment that offers significant long-term energy savings. Joseph Griffin, Senior Sales Engineer with Carrier Building Systems and Services said, "We were pleased to assist Crowne Plaza with the SmartStart application process. The 23XRV Evergreen chillers saved the client \$90,000 in initial costs, and will continue to deliver energy savings for decades."

Salvatore Tamberella, Director of Engineering at [Crowne Plaza Philadelphia-Cherry Hill](#), concurred with Mr. Griffin. Mr. Tamberella added, "We've been tracking data since the chillers were installed, and already we have seen significant savings. Due to hotel-wide renovations, our occupancy was down slightly from the same month last year, but we have already seen a \$7,000 savings in electrical costs."

Finally, the 23XRV uses chlorine-free R-134a, a refrigerant that is unaffected by refrigerant phase-out, providing a safe and environmentally sound choice without compromising efficiency.

For more information on the 23XRV, please visit Carrier's [Commercial](#) web site.



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