## HPAC Engineering

**HUMIDITY CONTROL** 



## Still Rebounding, Detroit Welcomes New Pistons Sports Complex

In yet another sign of its resurgence, the Motor City this summer will open the Henry Ford-Detroit Pistons Performance Center, a \$50-million, state-of-the-art facility with energy-efficient HVAC design.

June 14, 2019 By Ralph Kittler, P.E., Dehumidified Air Solutions, Montreal QC

Five years after emerging from the largest municipal bankruptcy in U.S. history, Detroit is on the rise.

Property values are up, new corporate headquarters are coming in and the downtown is thriving. Motor City is earning a new reputation as "the hottest city in America," says business columnist **Daniel Howes** of the *Detroit News*.

Opening this summer, the \$50-million Henry Ford-Detroit Pistons Performance Center is another example of the city's revitalization. With world-class training and sports medicine facilities, it is sure to give an edge to Pistons basketball players, as well as athletes from the general public.

Also offering an advantage is the Seresco NE pool dehumidifier, which provides environment control for the hydrotherapy room. Thanks to a triple threat of pool water heating, heat recovery and robust construction, this unit will save thousands of dollars per year in operating costs.

Based on advice from Seresco's Detroit-area representative, **Paul Mancini** of ThermalNetics, an NE-008 dehumidifier was selected for the project. The unit will keep the hydrotherapy room at 85°F and 59% relative humidity, a balance chosen to satisfy the diverse water conditions found in the room's three pools — a hot tub, a cold pool and a lap pool.

The hydrotherapy room is part of the Pistons' partnership with local healthcare provider Henry Ford, which is running the sports medicine wing of the complex. The hot tub and cold pool are used for hot-and-cold therapy, a popular rehabilitation tool believed to help athletes recover from muscle injuries while also improving circulation. The lap pool allows athletes to exercise and train by swimming.

But pools can lose up to 95% of their heat through evaporation and maintaining their required temperatures can be expensive. Seresco's energy-efficient technology reduces these costs and provides a quick payback by recycling that lost heat. The unit is equipped with pool water heating, which recycles heat from the compressor and returns it to the water, keeping the three pools at their required operating conditions for the lowest possible cost.

The unit also recycles heat from the exhaust air and uses it to pre-heat the outdoor air supply through a glycol runaround loop heat recovery system. These two latent heat-recycling features are optional on Seresco equipment and are highly efficient — the pool water heating feature delivers a coefficient of performance around '8'.

"Because of the high efficiency of these two features, the facility will not need to run auxiliary heating for pool water and outdoor air as often," notes Mancini. "We expect these two features to pay for themselves in energy savings within a year."

## **Battling the Elements**

Since the dehumidifier is roof-mounted, in a cold climate, there needed to be assurance that condensation wouldn't be able to form inside the unit where it could pool and promote corrosion, or drip down into the ducting. Its two-inch-thick, double-wall insulated cabinet with thermal break design, protects the unit from this danger.



Photo by Paul Mancini, ThermalNetics

To ensure maximum equipment life span and efficiency, corrosion protection is also built in. Some of the protective features include fully-dipped coated coils, high-quality pre-painted cabinet steel and a mechanical vestibule outside the airstream to protect all major refrigeration and electrical components.

High-quality construction like this is what allows Seresco to confidently offer the industry's best warranty. The unit can also be connected to WebSentry<sup>®</sup>, Seresco's free and exclusive internet monitoring technology, which allows operators and service technicians to monitor the dehumidifier's performance in real time anywhere they have an internet connection and troubleshoot remotely in the unlikely event of any issues.

The Henry Ford-Detroit Pistons Performance Center is set for many years of service as a community hub and, much like the story of the city it calls home, will surely be recognized as an example of how partnership and collaboration can make great things happen.

The author is vice president of sales at Dehumidified Air Solutions (DAS) and is the co-founder of Seresco Technologies, an Ottawa-based mechanical dehumidifier manufacturer brand of DAS. Mr. Kittler, is an ASHRAE Distinguished Lecturer and the reviser responsible for Chapter 25 ("Mechanical Dehumidifiers and Related Equipment") for ASHRAE's 2012 Systems and Equipment Handbook. He can be reached at ralphkittler@ dehumidifiedairsolutions.com.