



Hockey's New  
Power Play:  
Innovative,  
Safer, High-  
Performance  
Ice Solutions



Opteon™

There are more than 4,800 indoor ice rinks of all shapes, sizes, and purposes in North America—each one considered invaluable to the athletes who play there, the fans who gather there, and the community that surrounds it. More than just buildings, these are places of irreplaceable life experiences: A father coaching his daughter, an aspiring goalie making his

first save, a mom proudly watching her son in game one of the Stanley Cup® Final. Collectively these rinks create the fabric of the North American ice sports community, serving as the foundation on which a history of athleticism and opportunity has been built and will continue to thrive.



*The content of this story is the sole responsibility of The Chemours Company.*

The Chemours Company is committed to ensuring that the legacy of ice sports continues. As the inventors of synthetic refrigerants used in refrigeration and air conditioning for nearly a century, we're in a unique position to help ice rink facilities overcome several challenges, many of which are rooted in the fact that they were built decades ago—and in one case, over a century ago. Equipment and refrigerant technologies have evolved substantially since these facilities first opened. New technologies can deliver benefits in terms of cost and energy savings, facility comfort, ice performance, safety, and environmental impact—all important factors for rink managers.

As an official partner of the National Hockey League (NHL®), Chemours provides education on customized approaches and continual support to help arenas find balanced and innovative solutions that can evolve with them and the surrounding world. We work with each facility manager to understand their challenges, needs, budgets, businesses goals, and visions. Chemours and its partners assess the facility, its purpose, and the people it serves. We provide education about everything from current requirements and upcoming regulatory changes to the immediate and long-term benefits of retrofits or new equipment. From there, we can recommend the best equipment/refrigerant solution based on the needs we have identified.

Chemours' **Opteon™ XP10 (R-513A)** refrigerant has been one of the most popular solutions for ice arenas in recent years. This hydrofluoroolefin (HFO) blend has environmental advantages over

legacy HCFC refrigerants such as R-22 and R-507, including zero ozone depletion potential (ODP) and lower global warming potential (GWP), as well as equivalent performance. In new systems, Opteon™ XP10 offers the optimal balance of properties—decreased overall system energy consumption, potentially lower total cost of ownership, and improved safety for workers, players, and fans. Through our continued partnership with the NHL®, Chemours is proud



to advance and promote rink innovations that to date have resulted in more than one hundred ice rink facilities in North America adopting Opteon™ products in their refrigeration systems. This has been made possible through collaborations with key players in the HVACR industry to provide education, technical support, innovation, and more sustainable solutions compared to legacy refrigerants. As the following examples illustrate, Chemours is helping to ensure that *all* levels of hockey thrive for future generations.



Tyne Valley Ice Rink

### **Cavendish Farms Community Centre** Tyne Valley, Prince Edward Island

After the Centre was devastated by a fire in 2019, the hockey teams that called it home found themselves scattered among six separate rinks. Eager to rebuild the facility—and the community it embodied—as quickly as possible, a fundraising campaign was organized. Key stakeholders in the project had several non-negotiable criteria. Compared to the old facility, the new one had to be larger, consume



less energy, and offer improved safety for athletes, staff, patrons, and the surrounding community. The resulting ice and HVAC systems met all requirements, plus offered significant improvement on the facility's carbon footprint.

The new facility's ice-building refrigeration system featured a Thermal Care TCFW375 ice rink chiller charged with Opteon™ XP10. The system offered improved safety with a nontoxic, nonflammable refrigerant rating, ease of maintenance, annual heat recovery of approximately 1 million ekWh, purchased energy reduction of 41%, and greenhouse gas reduction of 290 TCO<sub>2</sub>e\*. In December 2021, a minor league hockey game christened the new Cavendish Farms Community Events Centre, a high-performance, innovative rink that allowed all six teams to return "home."

\*Reports from the Cavendish Farms Community Centre staff indicated "ease of maintenance." This project was not related to the NHL®/Chemours partnership.



was outdated and fell short in performance and supporting the college's sustainability initiatives. Imperatives for the replacement included improved performance, reduced energy usage, and considerations related to environmental impact. The solution also needed to fit into the same chiller room and maintain the safety of players, patrons, and the campus community. The new ice rink chiller packages included innovative, Opteon™ XP10-charged Trane Technologies™ chillers. Moreover, the chiller replacement and renovations, which included infrastructure updates to enlarge the snow melt pit and more, were accomplished in the college's designated six-month shutdown period. From players and students to spectators and facility-management staff, the Providence College community is thrilled with the system's performance and the ways it supports their model of energy efficiency and sustainability.

*"It's equipped with top-of-the-line ice-making equipment and it's very environmentally friendly compared to our old system, which is fantastic. Everybody's really excited, the kids are pumped. It's everything. It's the heartbeat of the community, definitely, in the wintertime."*

**Jeff Noye**  
Mayor, Tyne Valley, P.E.I.

## Schneider Arena

Providence College, Rhode Island

With the system in its Schneider Arena chiller room approaching the 20-year mark, Providence College knew it was time for a replacement. After decades serving as the arena's main ice-making refrigeration technology, the system

*"Our ice quality and the performance of our system has been great. It's rewarding to know you can have energy-efficient, ecofriendly products that do not sacrifice performance."*

**Eric R. Dursin**  
CIRM, Schneider Arena Manager

## SAP Center

San Jose, California

California's SAP Center, home of the San Jose Sharks®, was upgraded with new ice-making refrigeration systems and building air conditioning chillers. The facility's engineering team consulted with experts from Chemours and Trane Technologies™ to select a system that featured the latest innovations in the marketplace. With factors such as environmental sustainability, equipment reliability, system performance and safety top of mind, the San Jose Sharks® quickly converged on Opteon™ XP10, a solution in step with ownership's drive toward more sustainable technologies. Moreover, as a low-toxicity, nonflammable refrigerant, Opteon™ XP10 allowed for all chillers to be in the same machine room.

The ice-making system (Trane® Optimus™ Helical Rotary Chiller) and building HVAC system (Trane® Agility™ Centrifugal Chiller) have met or exceeded player's expectations for performance and management's requirements for a facility that operates efficiently, reliably, and safely.

With thousands of ice facilities in need of viable solutions to remain active, compliant, and poised for growth, North America is just getting started with initiatives like these. Through the power of chemistry and purposeful partnerships, we will continue to support the facilities that are centers of athleticism and thriving communities.

*"Ice is our business, so to start off we researched everything. We were really looking for something that was very reliable and truly innovative, so Opteon™ became the obvious choice for replacing our current refrigerant."*

**Jon Gustafson**  
Senior Vice President, SAP Center



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