

Listening First: A Custom Solution for Diamond Valley Alberta



A custom Trane solution ensures Diamond Valley's rink stays ready for hockey, skating, and the thriving community it serves.

Quick Facts

Location: Diamond Valley, Alberta Canada
Industry: Municipalities | Recreation
Products: Trane ACS Air Cooled Scroll Chiller
Topics: Custom, Engineered Ice Plant System Design
Services: Kinetic GPO

Results

30% Energy Savings

Achieved through the new free cooling capability and optimized chiller operation.

2X System Redundancy

Dual chiller configuration improves reliability and protects rink uptime.

24/7 Operational Stability

The upgraded plant provides consistent ice quality for nonstop community use.



Highlights

- Custom Trane ice plant solution designed specifically for Diamond Valley's needs
- New ACS air-cooled scroll chiller paired with free cooling fluid cooler for efficiency
- Integration with existing Trane chiller to expand capacity and add redundancy
- Improved ice quality and more consistent rink performance for the community
- Faster, simplified procurement through Kinetic GPO

The Challenge

Ice skating is more than just a pastime in Canada. Recreational skating and hockey represent the very heart of Canadian culture and identity. When infrastructure systems for rinks in Diamond Valley, Alberta, needed attention, town leaders recognized the critical importance of these community gathering spots and activity hubs.

The town's indoor Oilfields Regional Arena hosts local ice sports and recreational events, as well as the local high country hockey league and figure skating club. The Scott Seaman Outdoor Sports Rink features winter leagues and tournaments.

The rinks faced rising energy costs and equipment nearing end of life, leading town leaders to obtain a proposal to upgrade the rinks' ice plant infrastructure. Unfortunately, when strategic priorities shifted in Diamond Valley, the proposed plan proved more costly than expected and failed to meet timing demands. Diamond Valley leaders needed a more affordable solution tailored to their unique needs.

The Solution

Based on a long-term relationship, they reached out to Trane. In response, Trane proposed a budget-conscious solution that addressed Diamond Valley leaders' needs and sustainability goals while providing an efficient procurement process.

After reviewing the proposed Trane solution, which was customized to Diamond Valley's timing, funding and infrastructure location requirements, the town enthusiastically gave its approval. "We were so pleased to see that Trane listened to our needs and addressed each one of them in their proposal," said Craig Beaton, Diamond Valley civic operations manager.

The initial plan the town considered involved an indoor ice plant solution that ultimately would not have met the town's scheduling requirements. Trane, however, was able to provide an outdoor ice plant solution that worked around the existing rink's needs to meet Diamond Valley's needs.

New chiller + free cooling

Based on the approved plan, Trane installed an ACS Air-Cooled Scroll Chiller and "free-cooling" fluid cooler outside the arena, freeing up significant mechanical room space and saving substantial cost over the previously proposed indoor system.

Free cooling is a method where cooler outside air is used to cool down fluid instead of using the chiller. When the outside air is colder than the fluid that requires cooling, the air absorbs the heat from the fluid. This reduces, or even eliminates, the need to use the chiller, saving energy. Incorporating free cooling can reduce seasonal energy consumption by 30 to 50 percent and extend a chiller's lifetime.

The ACS chiller features state-of-the-art compressor technology that provides significant energy savings in the coldest times of the year. The chiller uses intermediate discharge valves to change the compressor discharge pressure, reducing the amount of work the compressor needs to do at cool/cold ambient conditions.

Leveraging redundancy and capacity

In addition to the new chiller, Trane leveraged the existing outdoor air-cooled chiller, making use of its remaining lifecycle. "Because the new chiller was located outdoors, the upgrade team was able to integrate the existing outdoor air-cooled chiller quite easily, providing the town with additional capacity and redundancy in a cost-effective fashion" said Joe Wiltshire, Trane account manager. "This option gives them a lot of flexibility for future expansion," said Troy Sawyer, Trane Services account manager.

Location, location, location

Trane selected an ideal outdoor site for the new ice plant between the existing outdoor chiller and the indoor ice plant. This approach significantly reduced the amount of piping required compared to the indoor system proposal the town originally received.



They gave us a 'Diamond Valley solution' rather than an off-the-shelf solution and that made all the difference for us

Craig Beaton
Diamond Valley Civic Operations Manager



Simplifying procurement

The Trane team helped Diamond Valley leaders save money, streamline their HVAC system purchase, and avoid a time-consuming request-for-proposal process. They did so by working with a group purchasing organization (GPO) that eliminated the need for a lengthy bidding process for the equipment.

Town leaders worked with Kinetic GPO, a Canadian-based organization that helps public sector entities reduce costs. Kinetic GPO offers a compliant, transparent group purchasing framework. By leveraging competitively solicited contracts, Canadian public sector owners can secure top-quality Trane products and services quickly — without launching complex and time-consuming tenders.

The Results

Diamond Valley leaders were pleased that the project was completed on time and within budget, while meeting their town's needs. Trane's ice plant systems, such as their new air cooled-scroll chiller solution, typically save up to 50 percent on annual ice plant electrical costs, addressing the town's energy-cost concerns. Working with the GPO saved them additional money and streamlined the process, addressing timing constraints.

"Trane listened first, then proposed, acted and delivered as promised," said Beaton. "They gave us a 'Diamond Valley solution' rather than an off-the-shelf solution and that made all the difference for us,"

"We were so pleased to meet their needs," said Sawyer. "Our goal is to give our customers their solution, in other words, we provide a solution that ticks their boxes, not ours."



**Trane listened first,
then proposed, acted
and delivered as
promised**

Craig Beaton
Diamond Valley Civic Operations Manager



All trademarks referenced in this document are the trademarks of their respective owners.

Trane, a brand of Trane Technologies (NYSE: TT), is a global leader in climate solutions for buildings, homes, and industry. Learn more at trane.com or tranetechnologies.com.