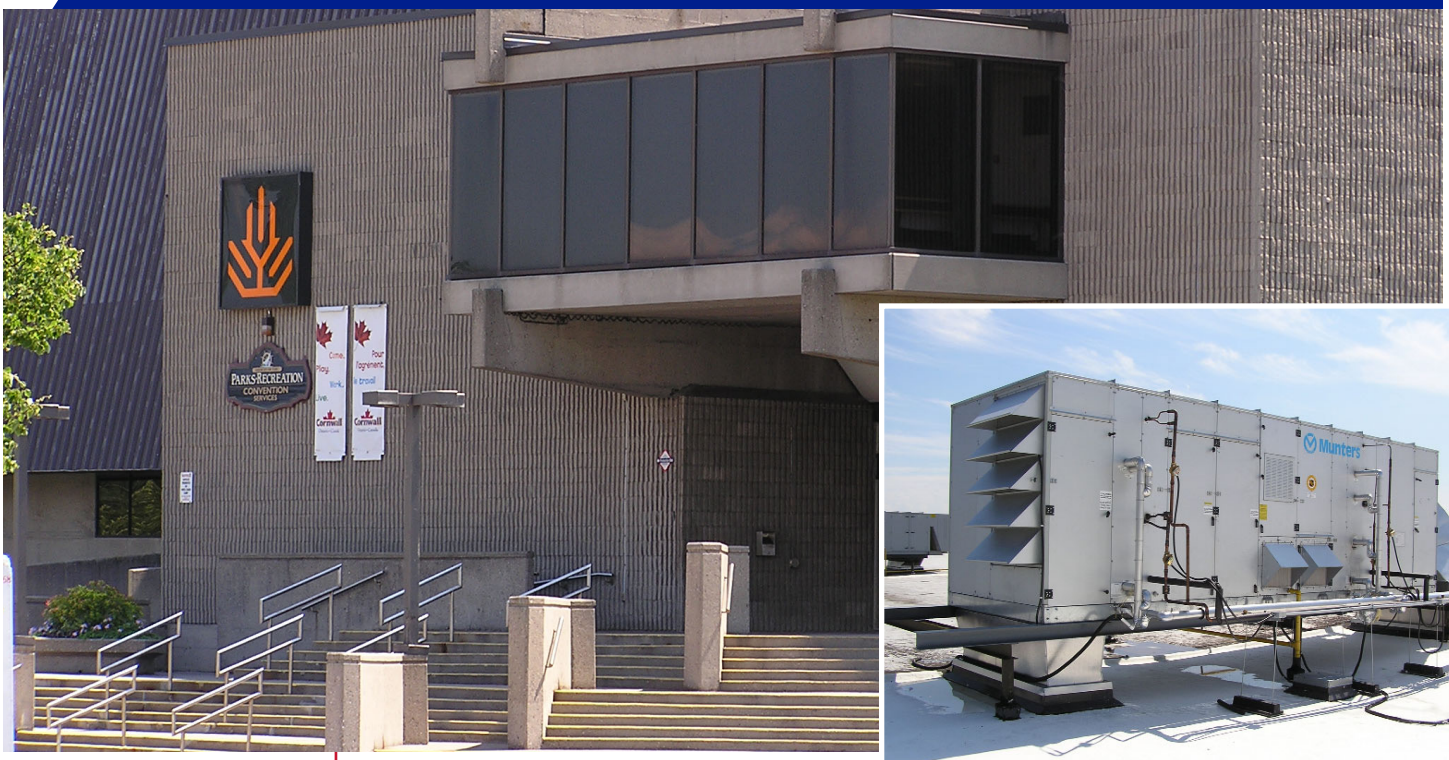
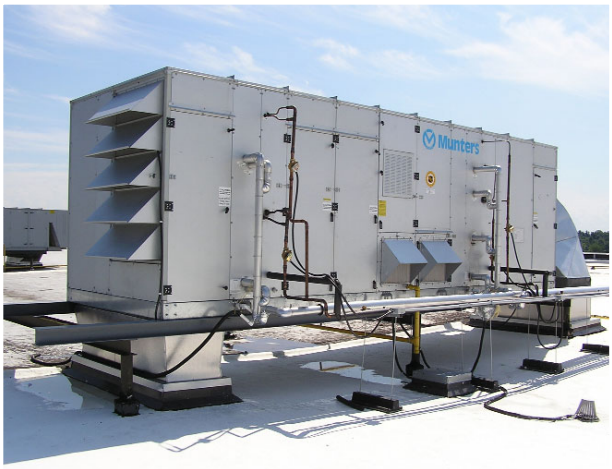
Ed Lumley Arena





- **Natural gas-fired desiccant dehumidification**
- **90,000-sq.-ft. ice arena**
- **Cornwall, Ontario, Canada**

Skaters Enjoy Better Ice Surface Thanks to Munters Moisture Control System

The hockey players and ice skaters of Cornwall, Ontario – and there are many in this city of 46,000 on the Canadian shore of the St. Lawrence River – are happier these days. Ice conditions at the city's Ed Lumley Arena have never been better, thanks to the installation of two natural gas-fired Munters desiccant dehumidifiers that keep the skating surface hard, incoming air dry, and the rink area free from fog.

"Ice surface conditions this summer have improved significantly," one pleased arena patron informs Cornwall city officials. "In the past (last summer in particular) the ice surface remained wet and soft for much of the 1-1.5 hour session the kids were on. The air was damp and on several occasions there was enough fog that we had to stop play and have the players skate around the rink to lift it. This summer, none of those conditions existed... despite the very hot/humid days we've had. The ice surface remained hard and the air dry."

Another writes: "The ice at the CCC [Cornwall Civic Center] has never been better! And it is nice that it is fog-free and to be able to see through the glass."

Natural gas-fired desiccant dehumidification in ice arenas has been proven to deliver better dehumidification at low temperatures, provide better ice and air quality, cut down on building maintenance, reduce the load on ice-making equipment, and improve occupant comfort.

No more fog

"As can be read from the testimonials, ice conditions have greatly improved; fog and condensation issues have virtually disappeared," says Richard Bourdeau, Supervisor of Facilities/Operations Recreation Services for Cornwall. "For the first time in my 17 years

being involved with the Complex, complaints regarding the ice are no longer a problem. In my estimation, the project has surpassed my expectations and is a complete success."

In response to years of complaints about poor ice quality, and concerns about possible building maintenance problems and structural degradation, city officials decided in 2004 to invest more than $1.2 million to replace old, mostly non-functional HVAC equipment at the skating arena. The arena occupies 90,000 sq. ft. of the 150,000-sq.-ft. Cornwall Civic Complex, which was constructed and commissioned in 1976 as a multipurpose convention center. The Ed Lumley Arena has an NHL-size 85-ft. by 200-ft. removable ice surface and 4,000 permanent seats.

Through a competitive bid process, the city hired NORR Consultants to design the mechanical retrofit project. One of the key elements of the bid requirements was to identify the most cost-effective and efficient means of dehumidifying the arena interior. NORR worked closely with EI Solutions Inc., of Saint-Laurent, Quebec on the design and specification development of a new HVAC system to address the humidity problems. EI Solutions Inc. is the Canadian representative for Munters, which manufactures desiccant dehumidification units for many applications. Natural gas is key to optimal dehumidification Natural gas-fired desiccant dehumidification in ice arenas has been proven to provide better ice and air quality, cut down on building maintenance, reduce the load on ice-making equipment, improve occupant comfort, and deliver better dehumidification at low temperatures, according to Union Gas Limited, the natural gas utility supplying the arena.

John Gowing, Director of Sales and Marketing for EI Solutions Inc., says the National Hockey League recommends maintaining a space dew point between 35° and 38° F for good quality ice. The two Munters AM30 Ice Aire™ dehumidification units chosen for this job are capable of delivering extremely dry air, which includes the introduction of conditioned fresh air for 5,000 spectators, while maintaining air quality and humidity levels that were not previously possible.

"Desiccant wheels act like sponges to remove moisture from the air. Natural gas burners then dry the moisture-laden desiccant wheels to prepare them for re-use.

"We chose gas-regenerated technology because it offers the greatest reduction of moisture per unit of energy consumed," says Bourdeau.

All agree that the renovations at the Ed Lumley Arena have been a complete success, and the city is looking to replace its two other ice arenas with a new three- or four-pad facility. Natural gas-regenerated desiccant dehumidification technology will be specified as the preferred solution to providing better ice and drier air in the new facility.

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