



Bell Sensplex Project Overview

The Bell Sensplex 180,000 square-foot sports and recreation facility was built by a local not-for-profit group called Ottawa Community Ice Partners (OCIP) that includes the Ottawa Senators Hockey Club, the Ottawa Senators Alumni, commercial realtor CB Richard Ellis Limited and construction project management firm Morley-Hoppner Group. As Ottawa Mayor Bob Chiarelli said, "public-private partnerships allow Ottawa residents to incur little or no debt while enjoying the benefit of outstanding facilities".

Located near the Corel Centre in Kanata, the Bell Sensplex features Ottawa's first four-pad ice rink and an indoor soccer field. Three of the rinks are NHL size and the fourth, Olympic-sized.

Energy efficiency and Canada's commitment to the Kyoto protocol mandated that an energy-efficient, natural refrigerant system be used. This facility utilizes an ammonia-based system for the refrigeration of the ice rinks with all of the rejected heat recycled back into the building environment.

All the compressor heat is rejected through a plate and frame condenser into a glycol loop incorporating a thermal storage tank from which warm glycol is circulated to heat pump systems, make-up air units, domestic hot water pre-heaters, under-pad frost protection system and snow-melt pit heating system.

At the Bell Sensplex, the annual reduction of 1400 metric tons of greenhouse gas emissions is equivalent to taking 300 cars driving 20,000 km each per year off the road.

Bell Sensplex

Kanata, Ontario

GENERAL INFORMATION

- Owner: Ottawa Community Ice Partners (OCIP)
- Project Type: New building
- Year of Construction: 2004
- Rink Area: Hockey - 3 x 17,000 sq. ft.; 1 x 20,000 sq. ft.
- No. of Pads: 4
- Building Area: 180,000 sq. ft. + inside soccer field
- Number of Seats: 2,000
- Months of Operation (per year): 12 months

REFRIGERATION SYSTEM INFORMATION

- Compressors: Frick
- Horsepower: 237 each
- Plant Style: CIMCO Factory Skid
- Total System Tonnage: 290 TR
- Refrigerant: R-717
- Evaporator Style: Flooded Plate/Frame
- Condenser: Fluid cooled with Plate/Frame
- Secondary Fluid: Ethylene Glycol @ 40% mixture

MECHANICAL HEATING SYSTEM INFORMATION

- Space Heating: Yes
- Makeup Air Preheating: Yes
- Service Water Heating: Yes
- Underpad Frost Protection: Yes
- Snow-melt Pit Heating System: Yes

INTEGRATED CONTROLS SYSTEM DESIGN

- Cimco 4000E connected to BAS system

HEAT RECOVERY INTEGRATION

- Glycol source heat pumps

THERMAL STORAGE

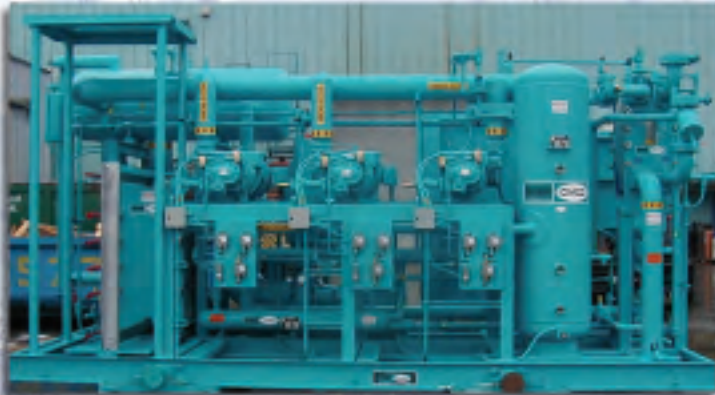
- Yes

OPERATING MEASURES

- Floating Head Pressure: Yes - summer/winter
- Floating Ice Temperature Control: Yes
- Setback Temperature Control: Yes - days/nights
- Occupied/Unoccupied Settings: Yes
- INFRA Red Camera Control: Yes

SERVICE PROVIDERS

- Refrigeration Contractor: CIMCO Refrigeration
- Refrigeration Design: CIMCO Refrigeration
- Architect: EDMUNDSON, MATTHEWS
- Mechanical Designer: GENIVAR
- Controls Designer: GENIVAR / Integrated Control Solutions
- Building Management System Provider: Capital Sports Management



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