



# Nordic Heat Pump Project Snapshots





## Commercial W Series

The Nordic Commercial W Series is designed for use with large scale in-floor heating systems, swimming pool heating, process heat recovery or any other application where industrial quantities of hot or chilled water are required. Capacities range up to 1,000,000 Btu/hr and output temperatures up to 120°F (49°C) with a coefficient of performance (COP) of 4.1.

Standard equipment on all models includes electronic expansion valves, suction line accumulators, 316SS brazed plate heat exchangers, sight glasses, core filter dryers, and phase protection. Options include a reversing valve for chilled water applications.

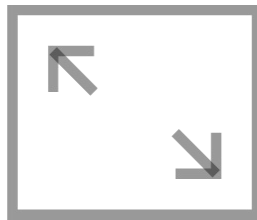


## The Nordic Difference



### Run Tested

Our machines are thoroughly run tested before shipment, ensuring a top performing machine every time.



### Variety of Sizes

Available in sizes from 9 to 80 nominal tons, our heat pumps can meet the needs of any building.



### Customer Service

We work with system designers to create a system that maintains comfort and low operating costs.



### Canadian Quality

Designed and built in Canada means we use the best components and take care in the assembly plant.

## Want more information?

Visit our website at [nordicghp.com](http://nordicghp.com) for information on our manufacturing process, take a video plant tour, or download product information. You can also contact us at **506-756-8135**.



## Edmundston Police Station

The units in this system are stacked two high via racking, side by side. There are both hot and cold water buffer tanks in this system with motorized valves to ensure proper tank selection.

Each of the four heat pumps are connected to an individual ground loop on the outdoor loop side. Flow is provided by individual circulators.



### Quick Facts

- **Unit Type** - W150
- **System Type** - Liquid to water heat/cooling with domestic hot water.
- **Unit Refrigerant** - R407c
- **Unit Capacity** - 12 tons
- **Number of Units** - 4
- **System Capacity** - 48 tons
- **Designed By** - DFS Inc. Architecture and Design
- **Certifications** - LEED Silver Certified

## Halifax Seaport Farmers' Market

The Halifax Seaport Market is LEED Platinum Certified, the first of its kind in Atlantic Canada. The building uses a total of seventeen 650 foot drilled wells, located underneath the recycled concrete sidewalk.

The system was designed by Lydon Lynch Architects, a Halifax, Nova Scotia based firm.



### Quick Facts

- **Unit Type** - W400
- **Location** - Halifax, NS
- **System Type** - Water to water heating or cooling units with domestic hot water.
- **Refrigerant** - R407c
- **System Capacity** - 140 tons
- **Building Size** - 55,000 square feet
- **Project Value** - \$12 Million
- **Certifications** - LEED Platinum Certified



## Villa Beausejour

This new 80 bed nursing facility is built on one level with four separate wings. This facility will receive an annual energy savings of 38%, and cost savings of \$90,893 per year.

The system was designed by Steven Tweedie, principal of Tweedie & Associates Consulting Engineers Ltd.



### Quick Facts

- **Unit Type** - W400
- **Location** - Caraquet, NB
- **System Type** - Water to water heating only units with domestic hot water. Tandem compressors with staging ability. Simultaneous heating and cooling.
- **Refrigerant** - R407c
- **Nominal Unit Capacity** - 35 tons
- **Number of Units** - 4
- **System Capacity** - 140 tons
- **Project Value** - \$21 Million

## La Villa Sormany

This nursing home has 60 beds, 20 more than the former facility. The building is one floor divided into four wings, with 48 private rooms and six double rooms. The building also incorporates state of the art energy efficient features including natural light, water conservation and the geothermal simultaneous heating and cooling system.



### Quick Facts

- **Unit Type** - W400
- **Location** - Robertville, NB
- **System Type** - Water to water heating or cooling (reversible) units with domestic hot water. Tandem compressors with domestic hot water. Simultaneous heating and cooling.
- **Refrigerant** - R407c
- **Nominal Unit Capacity** - 35 tons
- **Number of Units** - 4
- **System Capacity** - 140 tons
- **Project Value** - \$17.4 Million



## St. Benedict Church

To accommodate the amalgamation of three local parishes, this 33,000 square foot tilt-up concrete building comfortably seats 750 parishioners. The church is kept comfortable with geothermal heating. The building was built by Lindsay Construction. “We’re really excited that this project was completed on schedule and on budget”

- Jack Flemming, President, Ocean Contractors



### Quick Facts

- **Unit Type** - W400
- **Location** - Halifax, NS
- **System Type** - Water to water heating and cooling (reversible) units. Tandem compressors with staging ability.
- **Refrigerant** - R407c
- **Nominal Unit Capacity** - 35 tons
- **Number of Units** - 2
- **System Capacity** - 70 tons
- **Building Size** - 33,000 square feet

## Ummah Com Mosque

This 25,000 square foot mosque features separate heating and cooling systems, selected by three way valves. This system used 10 500 foot deep boreholes.

To be even more environmentally conscious, there is also a bypass valve in the outdoor loop that allows passive cooling when the ground temperature is cool enough to permit it.



### Quick Facts

- **Unit Type** - W400
- **Location** - Halifax, NS
- **System Type** - Water to water heating and cooling (reversible) units. Tandem compressors with staging ability.
- **Refrigerant** - R407c
- **Nominal Unit Capacity** - 35 tons
- **Number of Units** - 1
- **Building Size** - 25,000 square feet
- **Project Value** - \$6.6 Million



## Dalhousie Correctional Facility

This correctional center is located in Dalhousie, NB and is designed to house 100 inmates. It will employ 80 local staff, and will have state of the art medical and visitation areas. This building is LEED Silver Certified and will be registered with the Canada Green Building Council. The building was designed by JDA Architects with the assistance of Jacques Boucher Architects.



### Quick Facts

- **Unit Type** - W400
- **System Type** - Water to water heating only units with domestic hot water. Tandem compressors with staging ability.
- **Refrigerant** - R407c
- **Nominal Unit Capacity** - 35 tons
- **Number of Units** - 4
- **System Capacity** - 140 tons
- **Building Size** - 41,500 square feet
- **Project Value** - \$20.2 Million



## La Mosaïque Du Nord

The units in this school are tied in parallel on the indoor side to a buffer tank. The units are also tied in parallel to a ground loop. This system is an active heating and passive cooling system, which means the ground loop is used to provide cooling, the heat pumps do not operate in cooling mode.

The system was designed by David Foule Architects Inc.



### Quick Facts

- **Unit Type** - W400
- **System Type** - Water to water heating only units with domestic hot water.
- **Refrigerant** - R407c
- **Nominal Unit Capacity** - 35 tons
- **Number of Units** - 4
- **System Capacity** - 140 tons
- **Building Size** - 70,000 square feet
- **Project Value** - \$14 Million





## New Brunswick Community College

This new, multipurpose trade shop is part of a vision for the future of renewable energy in New Brunswick. The building provides demonstration equipment for geothermal heating, solar hot water and electricity, along with wind turbines and lighting technology.

This system uses simultaneous heating and cooling.



### Quick Facts

- **Location** - Bathurst, New Brunswick
- **Unit Type** - W400
- **System Type** - Water to water heating and cooling (reversible) units. Tandem compressors with staging ability.
- **Refrigerant** - R407c
- **Nominal Unit Capacity** - 35 tons
- **Number of Units** - 2
- **System Capacity** - 70 tons
- **Project Value** - \$4.7 Million



## Villa Grand Falls

The Falls Villa in Grand Falls, New Brunswick is a new 69 bed nursing home. The building includes spacious resident rooms with washrooms, wide hallways, storage space, modern dining rooms, a palliative-care family room, and private rooms.

This system uses simultaneous heating and cooling.



### Quick Facts

- **Unit Type** - W400
- **System Type** - Water to water heating or cooling (reversible) with domestic hot water. Tandem compressors with staging ability.
- **Refrigerant** - R407c
- **Nominal Unit Capacity** - 35 tons
- **Number of Units** - 3
- **System Capacity** - 105 tons
- **Project Value** - \$13.8 Million





## Cap Pele Public Library

This building in Cap Pele, New Brunswick was built in 2009 as part of the town's plan to have a modern and spacious area for residents. The library includes meeting space, and a community gathering area.

Using geothermal heat pumps has precipitated a 40% decrease in energy usage compared to a similar building with conventional equipment. This year alone, the Cap Pele Public Library is on track to save \$6,500 in energy costs.



### Quick Facts

- **Unit Type** - W150
- **Location** - Cap Pele, NB
- **Nominal Unit Capacity** - 35 tons
- **Number of Units** - 4
- **System Capacity** - 64 tons
- **Building Size** - 15,000 square feet



## James K Irving Arena

This multi-functional center features an NHL sized ice surface with standard seating of 1,100 with expandable seating up to 2,000. There is a walking track used by the local schools and a community gym and health facilities, a community meeting space and work space for the municipality and other local agencies. There is also a canteen and available leased space.

The source side of the units is used to chill antifreeze mixture in the ice rink piping down to 2°F (-16°C) in order to create and maintain a solid ice surface.



### Quick Facts

- **Unit Type** - W400
- **Location** - Bouctouche, NB
- **System Type** - Water to water units for ice making application.
- **Nominal Unit Capacity** - 35 tons
- **Number of Units** - 6
- **System Capacity** - 210 tons







## Halifax Independent School

The Halifax Independent School includes ten classrooms, six co-operative workrooms, a double height music room, a library, a teaching kitchen and a lunchroom.

The school has several energy efficient features: the walls are super insulated to R20, there are large energy efficient windows, and two water to water heat pumps with domestic hot water.



### Quick Facts

- **Location** - Halifax, NS
- **Unit Type** - W300
- **System Type** - Water to water heating only units with domestic hot water.
- **Nominal Unit Capacity** - 24 tons
- **Number of Units** - 2
- **System Capacity** - 48 tons
- **Project Size** - 16,300 square feet
- **Designed By** - Lydon Lynch Architects

## Sackville Town Hall

This large municipal building houses a town hall, emergency services, and two RCMP detachments. It includes interrogation rooms, jail cells, council chambers, drive thru fire truck bays, offices and kitchens. This system uses simultaneous heating and cooling, allowing heating only heat pumps to double efficiencies compared to conventional reversing heat pump systems. This building is also LEED Silver certified.



### Quick Facts

- **Unit Type** - W350
- **Location** - Sackville, NB
- **System Type** - Water to water heating only units with domestic hot water. Tandem compressors with staging ability.
- **Nominal Unit Capacity** - 28 tons
- **Number of Units** - 3
- **System Capacity** - 84 tons
- **Project Value** - \$17.4 Million
- **Certification** - LEED Silver Certified



## Perth Andover Border Crossing

Built to accommodate the increased traffic at the United States/ Canadian border in Perth Andover, NB, this facility includes a new warehouse, exam area, X-ray machine and holding cell area. Natural wood and stone construction were used, with many products having high recycled content.

This facility is home to three water to water geothermal heat pumps. These units are heating only and configured as a simultaneous heating and cooling system.



### Quick Facts

- **Unit Type** - W100
- **System Type** - Water to water heating only units with domestic hot water.
- **Nominal Unit Capacity** - 9 tons
- **Number of Units** - 4
- **System Capacity** - 36 tons
- **Certification** - LEED Gold Certified



## Rexton Health Complex

The Rexton Health Complex consists of the Rexton Health Centre and the Rexton Lions Nursing Home. The Health Centre is 10,600 square feet and the Lions Nursing Home has a 30 resident capacity.

The building is LEED Silver Certified and was built by RCS Construction.



### Quick Facts

- **Unit Type** - W150
- **Location** - Rexton, NB
- **System Type** - Water to water heating and cooling (reversible) units with domestic hot water making capability.
- **Nominal Unit Capacity** - 16 tons
- **Number of Units** - 6
- **System Capacity** - 95 tons
- **Project Value** - \$10.5 Million





## Shediac Correctional Facility

This correctional center houses 180 adult offenders. The building includes three sections with 30 cells in each section. This installation uses reversible heating and cooling units with domestic hot water making capability.

This is a water to water installation with separate heating and cooling systems.



### Quick Facts

- **Location** - Shediac, NB
- **Unit Type** - W185
- **System Type** - Water to water heating or cooling (reversing) units. Tandem compressors with staging ability.
- **Nominal Unit Capacity** - 16 tons
- **Number of Units** - 6
- **System Capacity** - 96 tons
- **Project Size** - 87,800 square feet
- **Project Value** - \$40 Million

## St. Stephen Border Crossing

This new facility and bridge in St. Stephen consists of four buildings, 2.5km of new road construction and a 95,000 square foot parking area. Efficient construction achieved LEED Silver certification for this facility.

This border crossing makes use of three commercial water to water units for simultaneous heating and cooling.



### Quick Facts

- **Unit Type** - W300
- **Location** - St. Stephen, NB
- **System Type** - Water to water heating only units with domestic hot water. Tandem compressors with staging ability.
- **Nominal Unit Capacity** - 24 tons
- **Number of Units** - 3
- **System Capacity** - 72 tons
- **Project Size** - 37,000 square feet
- **Project Value** - \$93 Million




## Find Out More Information

Visit our website for complete product documentation at [nordicghp.com](http://nordicghp.com) or give us a call with your technical questions at **506-756-8135**.

## Connect With Us

Join us on social media for product updates, news and more.

 @nordicghp

 [facebook.com/nordicghp](https://facebook.com/nordicghp)