Geothermal Comfort Systems

All the Comforts of Home

RESIDENTIAL PRODUCT LINE
Smarter from the Ground Up™

Heat & cool your home the smart way

WaterFurnace geothermal systems use the solar energy stored just below the earth’s surface to provide exceptional comfort and reduced operating costs—without burning fossil fuels. Unlike other renewable technologies, geothermal doesn’t rely on external conditions. It provides renewable benefits 24 hours a day, day or night, rain or shine. That’s why more and more people are switching to geothermal—the “Reliable Renewable.” Take a closer look to find out how WaterFurnace geothermal systems are “Smarter from the Ground Up.”

Our purpose is to transform the way we use energy, protect resources for future generations and give people the freedom to focus on life.
Geothermal heat pumps are not only the most comfortable way to heat and cool, they’re also the most cost effective. They’re versatile enough to excel in almost any home or any environment, and you’ll find geothermal in more than 1 million households across Canada and all 50 U.S. states. They can be used for single-family homes to entire college campuses. In fact, we heat and cool our entire 110,000 square-foot headquarters with WaterFurnace equipment. Here are a few reasons why geothermal is one of the fastest growing technologies available for your home.

### Comfort that gives back

**Geothermal’s benefits**

- **Cost Effective**
  - Because of the extraordinary efficiency of a WaterFurnace geothermal system, homeowners save more than right from the day they install the equipment to the day when installation costs are added to the mortgage. Any added investment over traditional equipment is usually recovered in just a few years, and many homeowners see a return on investment of 10-20% over the life of the system.

- **Reliable**
  - Geothermal systems are recognized by the United States Environmental Protection Agency as the most environmentally friendly, cost effective and energy efficient heating and cooling technology available. These systems also minimize the threats of acid rain, air pollution, the greenhouse effect and global warming problems directly. (Trees) the burning of fossil fuels. In fact, installing a single geothermal unit is the environmental equivalent of planting 750 trees or removing two cars from the road.

- **Quiet**
  - Since it runs at lower speeds more consistently, the amount of noise coming from the unit is minimal.

- **Environmentally Friendly**
  - Geothermal systems are recognized by the American Society of Heating, Refrigerating, and Air Conditioning Engineers, geothermal units have an average equipment life of 20 years while the underground loop system has a rated material life of more than 150 years. Ordinary air conditioners, furnaces and heat pumps are rated for only 10-20 years. Ordinary air conditioners, furnaces and heat pumps are rated for only 10-20 years.

- **Flexible**
  - Package systems are available that provide heating, cooling, and supplemental hot water for your entire home in a single unit. All WaterFurnace units are designed to run at a comfort you need to experience to believe. To achieve precise control over temperatures in up to 6 areas, add our IntelliZone2 zoning system.

- **Clean Air**
  - WaterFurnace systems don’t require noisy outdoor units that create unsightly wall-mounted equipment or outdoor units that create unsightly wall-mounted equipment. WaterFurnace systems don’t require noisy outdoor units that create unsightly wall-mounted equipment or outdoor units that create unsightly wall-mounted equipment. WaterFurnace units circulate air consistently, the amount of noise coming from the unit is minimal.

- **Safe**
  - Because natural gas, propane, or oil isn’t required to operate a WaterFurnace system, there’s no combustion flames or fumes, and no chance of carbon monoxide poisoning.

- **Extra savings for geothermal**
  - A 26% tax credit on equipment and installation costs is currently available to U.S. homeowners who install an ENERGY STAR rated geothermal system. The credit can be used to offset both AMT and regular income taxes and can be carried forward into future years. The 26% tax credit will be until the end of 2020 where it is scheduled to decrease to 22% in 2021. Hurry and act now for the most savings!

- **Energy Efficient**
  - The best ordinary systems deliver less than one unit of energy for every unit they consume. But many WaterFurnace systems can deliver five or more units of energy for every one unit of electrical energy used. That translates into an efficiency rating exceeding 150%. Since it now a few reasons why geothermal is one of the fastest growing technologies available for your home.

- **Comfortable**
  - Waterfurnace units are designed to run more often at low speeds to provide indoor comfort and still deliver the energy you need to experience to believe. To achieve precise control over temperatures in up to 6 areas, add our IntelliZone2 zoning system.

- **GEO TAX CREDIT QUALIFIES**
  - A 26% tax credit on equipment and installation costs is currently available to U.S. homeowners who install an ENERGY STAR rated geothermal system. The credit can be used to offset both AMT and regular income taxes and can be carried forward into future years. The 26% tax credit will be until the end of 2020 where it is scheduled to decrease to 22% in 2021. Hurry and act now for the most savings!

- **Safe**
  - Because natural gas, propane, or oil isn’t required to operate a WaterFurnace system, there’s no combustion flames or fumes, and no chance of carbon monoxide poisoning.

- **Less Obtrusive**
  - WaterFurnace systems don’t require noisy outdoor units that create unsightly wall-mounted equipment or outdoor units that create unsightly wall-mounted equipment. WaterFurnace systems don’t require noisy outdoor units that create unsightly wall-mounted equipment or outdoor units that create unsightly wall-mounted equipment.
A system for every home

Product selection

Your home’s comfort is important to you and your family. You want a comfort system that will provide you with peace of mind and low operating costs for many years.

This brochure highlights our extensive residential product line. We’ve included descriptions of the products, features and applications along with a side by side comparison.

Although all WaterFurnace products are designed and built to the highest standards, each group of products is unique in its own way. Therefore, we’ve included a 5-star rating system for each group to clearly demonstrate a “Best, Better, Good” rating based on overall efficiency, performance, features and application flexibility.

5 Series units deliver an astounding five dollars of energy for every dollar of electrical energy used while 7 Series units deliver even more.

Forced Air Units

The 700A11 represents the best of the best. It delivers premium comfort and performance using variable-speed technology. In fact, the 700A11 was the first to offer variable capacity in a residential geothermal unit. Because our system is limited to just one or two speeds like ordinary units, it can adjust to your exact comfort needs whether you’re heating or cooling you want. That means not only greater efficiency, but also greater comfort.

The 5 Series 500A11 provides forced air heating, air conditioning, and even generates a portion of your home’s hot water—all from a single unit. You’ll experience a level of comfort and savings that’s far greater than any ordinary system without the risks of utilizing fossil fuels. The 5 Series represents some of our highest efficiencies and is designed to allow convenient installation in any home. No matter what climate you live in, your WaterFurnace system will deliver.

Performance meets value with the 300A11. This system represents the culmination of 30 years of research, engineering, and manufacturing experience to give you sustainable comfort at a great price point. From its variable air handling and air conditioning, as well as a portion of your home’s hot water, this unit is designed to keep your home at the comfort level you desire. And you won’t have to worry about durability—The 300A11 features an all-aluminum air coil providing years of durability. The optional internal electric heat is available.

Most WaterFurnace products proudly meet the standards for these certifications. They demonstrate our commitment to conservation, performance and safety.

<table>
<thead>
<tr>
<th>Rating</th>
<th>7 SERIES 700A11</th>
<th>5 SERIES 500A11</th>
<th>5 SERIES 506A11</th>
<th>3 SERIES 300A11</th>
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<tr>
<td>Efficiency</td>
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<td>HHHHH</td>
<td>41.0 EER / 5.3 COP</td>
<td>28.0 EER / 4.8 COP</td>
<td>27.6 EER / 4.6 COP</td>
<td>22.3 EER / 4.1 COP</td>
</tr>
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</table>

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Hydraulic Units

5 SERIES 504W11
OptiHeat Water-to-Water Hydronic Unit
Overall efficiency, performance & features:

30.1 EER / 3.3 COP

The 504W11 is a single-stage hydronic geothermal heat pump that’s used for large volume and high temperature hot water applications. The unit is ideal for slab or radiant floor replacement, especially with basements or zones from falling heat-air radiant floor applications. Optimum vapor compression technology utilizes an additional heat exchanger to divert excess heat and return it to the system, making incredibly efficient. For those who have large hot water demands using a 504W11 can save four times more energy than an ordinary water heater.

5 Series 500W11
Single Stage Water to Water Hydronic Unit
Overall efficiency, performance & features:

16.1 EER / 3.3 COP

The 500W11 single-stage hydronic heat pump is a perfect solution for homeowners needing high volume, high temperature hot water for radiant floors, spas/pools or snow melt. With this performance solution your hot water bills can go down by about 60% per year.

500R11
Single Stage Water to Water Hydronic Unit
Overall efficiency, performance & features:

22.0 EER / 3.5 COP

With the 500R11, you get the best of both worlds. The convenience of forced air heating and cooling plus the comfort of radiant floor heat in one unit. The system will provide efficient heating and cooling, and radiant panel, floor, or wall heat to the desired area. The unit will automatically determine when there is excess heat available to use in the hot water heater. This allows you to utilize heat in the most efficient way possible. The system will direct excess heat to the hot water heater when there is no need for heat, and direct excess heat to the radiant floor heat whenever it is needed. The system will automatically select the most efficient heat source for your home regardless of outdoor temperatures. Because there is no auxiliary fuel like electricity or hot water when combined with a fossil fuel furnace, the system automatically selects the most efficient fuel source for your home regardless of outdoor temperatures. Because there is no auxiliary fuel like electricity or hot water when combined with a fossil fuel furnace, the system automatically selects the most efficient fuel source for your home regardless of outdoor temperatures. Because there is no auxiliary fuel like electricity or hot water when combined with a fossil fuel furnace, the system automatically selects the most efficient fuel source for your home regardless of outdoor temperatures. Because there is no auxiliary fuel like electricity or hot water when combined with a fossil fuel furnace, the system automatically selects the most efficient fuel source for your home regardless of outdoor temperatures. Because there is no auxiliary fuel like electricity or hot water when combined with a fossil fuel furnace, the system automatically selects the most efficient fuel source for your home regardless of outdoor temperatures. Because there is no auxiliary fuel like electricity or hot water when combined with a fossil fuel furnace, the system automatically selects the most efficient fuel source for your home regardless of outdoor temperatures.
A geothermal system uses a series of underground pipes called a “loop.” The earth loop eliminates the need for fossil fuels. It’s the heart of a geothermal system and its biggest advantage over ordinary heating and cooling technologies. The type of loop used is based on available land space and installation costs for specific areas.

**Horizontal Loop**
Used where adequate land is available, horizontal loops involve one or more trenches that are dug using a backhoe or chain trencher. High density polyethylene pipes are inserted, and the trenches are backfilled. A typical home requires ¼ to ¾ of an acre for the trenches.

**Vertical Loop**
Vertical loops are used when space is limited. Holes are bored using a drilling rig, and a pair of pipes with special u-bend fittings is inserted into the holes. A typical home requires three to five bores with about a 15-foot separation between the holes.

**Pond Loop**
If an adequately sized body of water is close to your home, a pond loop can be installed. A series of coiled, closed loops are sunk to the bottom of the body of water. A ½ acre, minimum 8-foot deep pond is usually sufficient for the average home.

**Open Loop**
An open loop is used where there is an abundant supply of quality well water. The well must have enough capacity to provide adequate flow for both domestic use and the WaterFurnace unit. 7 Series units require as low as 3-10 GPM, depending on size.

**Directional Bore**
Perfect for homeowners who need minimal landscape disruption, these loop types take advantage of the space available below ground. A directional bore loop can be installed either vertically or horizontally depending on yard space.
Imagine a platform that can provide detailed feedback of your comfort system in real-time and the tools to control it all from any web-enabled smart phone, tablet, or computer. That’s Symphony. Symphony connects over Wi-Fi and is a cloud-based platform so there’s no software to install. It provides control over the entire geothermal system—not just the temperature as in other ‘smart thermostat’ systems. Symphony can also provide peace-of-mind thanks to its ability to send equipment alerts, service reminders, and notifications to you and your contractor. This means a service tech can log into your system to view faults, operating conditions remotely—reducing the need to schedule an in-person service call.

Choosing the right accessories can greatly improve the comfort levels in your home and can even allow you to expand the functions of your existing WaterFurnace system. Each item has been designed to work hand-in-hand with your unit for flawless and convenient operation. Here are some of our most popular accessories. Visit waterfurnace.com for more.

Symphony Web-Enabled Home Comfort Platform

- Aurora WebLink
- Symphony Thermostat
- Invisible Thermostat Capability
- Water/Sump Alarm
- Advanced Zoning System

GeoTank™

WaterFurnace’s GeoTank is simply the best way to capture and store preheated water from your unit. Engineered specifically for your WaterFurnace geothermal system, the GeoTank includes urban features that make installation and operation easy.

GeoTank is to be used in series with existing hot water heater.

Air Handlers

Our air handlers were engineered specifically for use with a WaterFurnace geothermal system and will provide unmatched compatibility. When combined, our air handlers bring you the added benefits of our packaged units with the flexibility of separate components.

Finishings touches

Accessories

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<tr>
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<th>7 Series 700AII</th>
<th>5 Series 500AII</th>
<th>3 Series 300AII</th>
<th>Outdoor 500AII</th>
<th>Synergy2D</th>
<th>5 Series 504WII</th>
<th>5 Series 500WII</th>
<th>Envision 500WII</th>
<th>5 Series 501RCHD</th>
<th>5 Series 501RCHG</th>
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<tr>
<td>Applications</td>
<td>The ultimate in luxury HVAC System.</td>
<td>Squirrel cage blower (not found on heating and cooling with hot water coil).</td>
<td>A smart choice for those who want the highest efficiency.</td>
<td>Outdoor unit (not found on heating and cooling with hot water coil).</td>
<td>Precooled Forced Air + radiant Hot Water.</td>
<td>High performance (h) application.</td>
<td>High performance (h) application.</td>
<td>Variable capacity (h) application.</td>
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*Note: All ECM models and most PSC in single speed units.*
The WaterFurnace name has been synonymous with geothermal since we were founded in 1983. Over the years we’ve worked to innovate new technologies, integrate key trends and grow our core business to represent clean and sustainable solutions. Our units combine sound engineering with the highest levels of quality control to provide you with some of the most efficient heating and cooling systems on the planet.

WaterFurnace—*Smarter from the Ground Up.*

ISO Accreditations and Certifications: