



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.

Comfort that gives back

Geothermal's benefits

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 scaled 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.

GEO TAX CREDIT

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 last until the end of 2022 where it is scheduled to decrease to 22% in 2023. Hurry and act now for the most savings!

26% THROUGH 2022

22°
THROUGH
2023





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 530%, while the most efficient gas furnace which rates only 98%.



Comfortable

WaterFurnace units are designed to run more often at low speeds to provide stable temperatures throughout the home and help eliminate hot or cold spots. This is especially true with variable capacity units. They provide a comfort you need to experience to believe. To achieve precise control over temperatures in up to 6 areas, add our IntelliZone2 zoning system.



Cost Effective

Because of the extraordinary efficiency of a WaterFurnace system, most homeowners save more on monthly bills than they pay for the system 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.



Quiet

WaterFurnace systems don't require noisy outdoor units that can disturb your peaceful surroundings. And, we've engineered the indoor system to be as quiet as possible. 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 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 linked to 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.



Reliable

Geothermal units aren't subjected to the punishing effects of outdoor weather or fuel combustion, so they last longer than nearly any other heating and cooling system. According to the American Society of Heating, Refrigerating, and Air Conditioning Engineers, geothermal units have an average equipment life of 25 years while the underground loop system has a rated material life of more than 100 years. Ordinary air conditioners, furnaces and heat pumps are rated for only 12-18 years.



Clean Air

WaterFurnace units circulate air more often, which naturally filters the air. Many units also come standard with large, high efficiency MERV 11 filters to provide exceptional indoor air quality and protect your family from dust and pollen.



Flexible

Package systems are available that provide heating, central air conditioning, and supplemental domestic hot water for your entire home in an all-in-one unit. For homeowners with less utility space, WaterFurnace also offers split units. Horizontal, vertical and bottomflow configurations are available for a wide range of residential applications, including newly constructed as well as existing homes.



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 conspicuous wall-mounted equipment or outdoor units that create unsightly additions to your home's appearance.

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.

> 1 unit of elecricity 4 units of "free" energy from the earth





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









Forced Air Units



7 SERIES 700A11

Variable Speed All-In-One Unit Overall efficiency, performance & features: ****

43.5 EER / **5.1** COP

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 and utilizes our all-aluminum PinnaCoil™. Because our system is not limited to just one or two speeds like ordinary units, it can adjust to exactly the level needed for the heating or cooling you want. That means not only greater efficiency, but also greater comfort. Plus, it boasts unmatched humidity control.





5 SERIES 500A11

Single or Dual Capacity All-in-One Unit Overall efficiency, performance & features: ***

28.0 EER / 4.8 COP

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 available in a range of sizes and configurations to allow convenient installation in any home. No matter what climate you live in, your WaterFurnace system will deliver.





5 SERIES 506A11

Outdoor Packaged All-in-One Unit Overall efficiency, performance & features: ***

27.6 EER / **4.6** COP

The 506A11 offers the benefits and convenience of an all-in-one unit but was designed to be installed outdoors, making it perfect for homes with limited interior space. Since it can be installed where a traditional a/c unit once sat, the 506A11 is ideal for retrofit and replacement applications. It can also be installed on the roof to save ground space. The 506A11's outdoor cabinet is outdoorrated and fabricated from heavy-gauge steel with a corrosion-resistant coating for years of durability. Dual capacity compressors offer high efficiency, while aluminum air coils provide extra-long durability and system life. Optional internal electric heat is available.



3 SERIES 300A11

Dual Capacity All-in-One Unit Overall efficiency, performance & features: ***

22.3 EER / **4.1** COP

Performance meets value with the 300A11. This system represent the culmination of 30 years of research, engineering, and manufacturing experience to give you incredible comfort at a great price point. From this one interior unit, you'll get forced air heating and air conditioning, as well as a portion of your home's hot water. Plus, you'll save energy with the dual capacity design that adjusts depending on your home's needs. And you won't have to worry about durability—the 300A11 features an all-aluminum air coil, providing peace of mind for years to come.







5 SERIES 504W11

OptiHeat Water-to-Water Hydronic Unit

Overall efficiency, performance & features: ****

16.1 EER / **3.3** COP

The 504W11 is a single-stage hydronic geothermal heat pump that's used for high temperature water-to-water applications. It's ideal for boiler replacement, especially with baseboard or cast iron radiation heating—or radiant floor applications. OptiHeat vapor injection technology utilizes an additional heat exchanger to divert excess heat and reinject it into the system, making it incredibly efficient. For those who have large hot water demands, using a 504W11 is up to four times more efficient than an ordinary water heater.



5 Series 500W11

Water-to-Water Hydronic Unit

Overall efficiency, performance & features: ★★★½

17.5 EER / **3.1** COP

a single-stage hydronic

at pump that's used for high
vater-to-water applications. It's

replacement, especially with
cast iron radiation heating—or
pplications. OptiHeat vapor
nology utilizes an additional
or to divert excess heat
into the system, making it



ENVISION NDW

Large Water-to-Water Hydronic Unit

Overall efficiency, performance & features: ★★★★

22.0 EER / 3.5 COP

The Envision NDW is designed to meet the high-volume water demands of today's larger luxury homes. NDW units provide high-capacity heating and cooling performance but still deliver the features homeowners have come to expect from our Envision line. Two high-efficiency single speed scroll compressors keep operating costs low for pool/spa heating, radiant floor, snow melt, aquaculture and process water installations.

Note: A secondary heat exchanger is needed for domestic hot water and pool/spa heating.





SYNERGY3D

Q Dual Capacity Combo Unit
Overall efficiency, performance & features: ★★★

25.7 EER / 4.2 COP

With the Synergy3D, you get the best of both worlds: the convenience of forced air heating and cooling with the comfort of radiant floor heat—all in a single unit. The system will provide radiant heat to basement and bathroom floors and cool and heat the rest of your home with forced air using dual-capacity scroll compressors for unmatched efficiency. With hot water assist, the Synergy3D can determine when there is excess heat available to route to the hot water heater. This allows you to utilize heat in the most efficient way possible. In fact, in cooling mode, waste heat is recovered and hot water is free.



Split Units



7 SERIES 700R11 Indoor Split

Variable Capacity Indoor Split Unit

Overall efficiency, performance & features: *****

40.8 EER / 5.2 COP

The 700R11 takes everything you love from the 700A11 and gives it more flexibility with its split design. WaterFurnace's variable speed innovations are put on display in this top-of-the-line unit, which gives you power, comfort and efficiency. The 700R11 combines with the SVH Air Handler to provide heating, cooling and hot water to the whole house. And because the system is constantly adjusting based on your home's needs, energy won't be wasted and it will always feel just right.



5 SERIES 500R11 Indoor Split

Indoor Split Unit

Overall efficiency, performance & features: ****

25.3 EER / 4.4 COP

The 500R11 is an indoor split unit that helps accommodate spaces where all-in-one systems would be difficult to install, like attics or crawl spaces. When connected to our SAH Air Handler the unit can efficiently heat and cool your entire home and even provide some of its hot water. When combined with a fossil fuel furnace, the system automatically selects the most efficient fuel source for your home regardless of outside temperatures. Because there is no outdoor fan like ordinary air conditioners or heat pumps, the unit is extremely quiet.



5 SERIES 500RO11 Outdoor Split

Outdoor Split Unit
Overall efficiency, performance & features: ****

25.3 EER / 4.4 COP

Free up space in your home while still reaping all of geothermal's benefits with the 500R011 outdoor split. In most homes, the unit is paired with WaterFurnace's SAH Air Handler for all-geothermal operation. In extremely cold climates, the unit can also be paired with a fossil fuel furnace for "dual fuel" operation. The 500R011 will use geothermal in most situations but can boost heat output during stretches of particularly cold temperatures using your existing furnace.



Geothermal systems have been recognized by the EPA as the most environmentally-friendly heating and cooling systems available.



The heart of a geothermal system

Geothermal earth loops

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 1/4 to 3/4 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 1/2 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

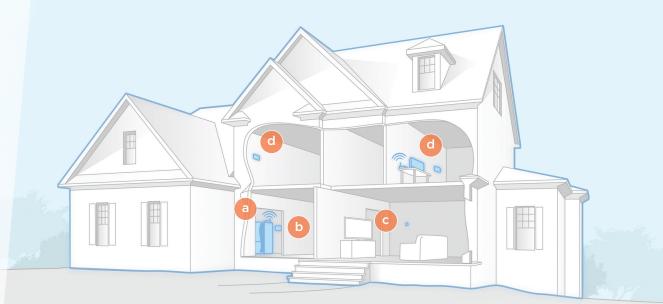
Perfect for homeowners who need minimal landscape disruption, these loop types take advantage of the space available below ground. A directional bore loop can be installed either vertically or horizontally depending on yard space.



Finishing touches

Accessories

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-inhand 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

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.



- a. Aurora WebLink
- b. Symphony Thermostat
- c. Invisible Thermostat Capability
- d. Advanced Zoning System





Indoor Air Quality

WaterFurnace units use high efficiency MERV filters. For enhanced filtration, our optional AlpinePure Ionization System can increase MERV filter performance by four rating points, which is up to eight times¹ better than a typical MERV 11 filter to better protect your family from dust and pollen. 1. 2009 EPA Tech Paper



WaterFurnace offers a wide range of programmable thermostat options. All support three heating stages, two cooling stages, as well as auto-changeover, and have an alert system for faults. Touch-screen display, system communication, on-screen energy monitoring, and many other features are available on some models.



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 enable nearly all the benefits of our packaged units with the flexibility of separate components.



IntelliZone2[®]

The IntelliZone2 allows you to precisely control temperatures in up to four different areas with our dual capacity systems and up to six different areas with our variable capacity equipment. The result is the ultimate in comfort and cost savings. You've already chosen the finest heating and cooling system available; now choose the most advanced zoning system available to control it.

The IntelliZone2 24V option is also available for any WaterFurnace system not equipped with Aurora Advanced (AXB) Controls.



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 unique features that make installation and operation easy.1

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

FORCED AIR UNITS











FORCED AIR/HYDRONIC COMBO



HYDRONIC UNITS







SPLIT UNITS







Model	7 Series 700A11	5 Series 500A11	3 Series 300A11	5 Series 506A11	Synergy3D	5 Series 504W11	5 Series 500W11	Envision NDW	7 Series 700R11 Indoor Split	5 Series 500R11 Indoor Split	5 Series 500RO11 Outdoor Split
Applications	The ultimate in luxury Variable capacity forced air heating and cooling with hot water assist.	Upscale comfort Dual or single capacity forced air heating and cooling with hot water assist.	A smart choice Dual capacity forced air heating and cooling with hot water assist.	Outdoor unit, indoor comfort Dual capacity forced air heating and cooling in an outdoor packaged unit.	Premium Forced Air + Radiant Hot Water 3-in-1 system. Forced air heating & cooling with capability of radiant floor heat.	High temperature hydronic For boiler replacement and hot water applications.	Hydronic Add-on unit for hot water applications like radiant floor, spas, pools, fan coils.	Hydronic Add-on unit for high volume water demands of today's larger luxury homes. Dual compressor operation.	Versatility Used with remote air handler (shown above).	Versatility Used with remote air handler (shown above) or gas furnace.	Outdoor unit Used with remote air handler or gas furnace.
Sizes	3 to 5 ton variable capacity (3 sizes)	1 to 6 ton single speed (9 sizes) 2 to 6 ton dual capacity (5 sizes)	2 thru 6 ton dual capacity (5 sizes)	2 to 6 ton dual capacity (5 sizes)	3 to 6 ton dual capacity (4 sizes)	3 to 6 ton single speed (3 sizes)	1½ to 6 ton single speed (6 sizes)	8 to 15 ton dual compressor (4 sizes)	3 to 4½ ton variable speed (3 sizes)	2 to 6 ton single speed (7 sizes) 2 to 6 ton dual capacity (5 sizes)	2 to 6 ton dual capacity (5 sizes)
Efficiency AHRI 13256-1 Part Load (GLHP) Full Load	5.1 COP / 39.0 - 43.5 EER 3.4 - 3.5 COP / 19.1 - 21.6 EER	3.9 - 4.8 COP / 24.9 - 28.0 EER 3.7 - 4.2 COP / 17.6 - 22.0 EER	3.7 - 4.1 COP / 20.6 - 22.3 EER 3.4 - 3.8 COP / 15.5 - 16.5 EER	3.9 - 4.6 COP / 21.8 - 27.6 EER 3.7 - 4.1 COP / 16.6 - 19.7 EER	4.0 - 4.2 COP / 21.0 - 25.7 EER 3.7 - 3.9 COP / 16.1 - 18.7 EER	N/A - Single speed/full load units only 3.2 - 3.3 COP / 16.1 EER	N/A - Single speed/full load units only 2.9 - 3.1 COP / 14.0 - 17.5 EER	3.3 - 3.5 COP / 18.4 - 22.0 EER 2.7 - 3.1 COP / 15.8 - 16.8 EER	5.0 - 5.2 COP / 35.5 - 40.8 EER 3.2 - 3.4 COP / 17.1 - 20.3 EER	3.8 - 4.4 COP / 20.0 - 25.3 EER 3.3 - 4.0 COP / 15.0 - 19.9 EER	3.8 - 4.4 COP / 20.0 - 25.3 EER 3.4 - 3.9 COP / 15.0 - 17.1 EER
Closed loop Refrigerant	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
Compressor	High-efficiency scroll (variable capacity)	High-efficiency scroll (single speed & dual capacity)	High-efficiency scroll (dual capacity)	High-efficiency scroll (dual capacity)	High-efficiency scroll (dual capacity)	Vapor injection scroll (single speed)	High-efficiency scroll (single speed)	Dual high-efficiency scroll (single speed)	High-efficiency (variable capacity)	High-efficiency scroll (single speed & dual capacity)	High-efficiency scroll
Blower	Premium Variable speed ECM Oversized ECM (036 model only)	Variable speed ECM or 5-Speed ECM, Optional PSC in single speed units	5-speed ECM	Variable speed ECM	Variable speed ECM	None	None	None	Variable speed ECM with SVH air handler	Variable speed ECM with SAH Air Handler.	Variable speed ECM with SAH Air Handler.
Cabinet Configurations	Vertical top, bottom, or rear flow Horizontal end or side discharge All left or right return	Vertical top, bottom, or rear flow Horizontal end or side discharge All left or right return	Vertical top flow Horizontal side or end discharge All left or right return	Vertical bottom flow, Horizontal side flow	Vertical top and rear discharge All left or right return	Compact unit with front water connections Controls are field convertible from front to back	Compact unit with front water connections Controls are field convertible from front to back	Compact unit with rear or top mounted water connections Controls are factory installed front or back	Compact unit	Compact unit	Compact outdoor unit
Stages * with auxiliary heat	Variable	3 heat*, 2 cool	3 heat*, 2 cool	3 heat*, 2 cool	3 heat*, 2 cool	1 heat, 1 cool	1 heat, 1 cool	2 heat, 2 cool	Variable	3 heat*, 2 cool	3 heat*, 2 cool
Controls	Aurora Variable Speed Controller with energy and refrigeration monitoring standard Optional performance monitoring Onboard diagnostics Symphony compatible	Aurora Base Controller Optional Aurora Advanced Controller with energy monitoring Optional performance monitoring Optional refrigeration monitoring Onboard diagnostics Symphony compatible	Aurora Base Controller Symphony compatible	Aurora Base Controller Optional Aurora Advanced Controller with energy monitoring Optional performance monitoring Optional refrigeration monitoring Onboard diagnostics Symphony compatible	Microprocessor Fault & status lights Onboard diagnostics Fault retry	Aurora Advanced Controller with energy monitoring Optional performance monitoring Optional refrigeration monitoring Onboard diagnostics HydroZone & HydroStat compatible Symphony compatible	Aurora Base Controller Optional Aurora Advanced Controller with energy monitoring Optional performance monitoring Optional refrigeration monitoring Onboard diagnostics HydroZone and HydroStat compatible Symphony compatible	Aurora Advanced Controller with energy and refrigeration monitoring Optional performance monitoring Mode, status & fault lights HyrdoZone compatible	Aurora Variable Speed Controller with energy, performance and refrigeration are standard Onboard diagnostics Symphony compatible	Aurora Base Controller Optional Aurora Advanced Controller with energy monitoring Optional performance monitoring Optional refrigeration monitoring Onboard diagnostics Symphony compatible	Aurora Base Controller Optional Aurora Advanced Controller with energy monitoring Optional performance monitoring Optional refrigeration monitoring Onboard diagnostics Symphony compatible
Air Coil	All-Aluminum PinnaCoil™	All-Aluminum PinnaCoil™	All-Aluminum PinnaCoil™	All-Aluminum PinnaCoil™	All-Aluminum PinnaCoil™	N/A	N/A	N/A	All-Aluminum PinnaCoil™ with SVH air handler	All-Aluminum PinnaCoil™ with SAH Air Handler	All-Aluminum PinnaCoil™ with SAH Air Handler
Desuperheater	Optional Internal mount pump	Optional Internal mount pump	Optional Internal mount pump	N/A	Optional External mount pump	N/A	Optional 040 to 075 models	N/A	Optional Internal mount pump	Optional Internal mount pump	N/A
Auxiliary Heat	Optional Internal mount on vertical	Optional Internal mount on vertical	Optional Internal mount on vertical	Optional Internal mount on vertical	Optional Internal mount on vertical	N/A	N/A	N/A	Yes, with SVH Air Handler	Yes, with SAH Air Handler Dual fuel option	Yes, with SAH Air Handler Dual fuel option
Zone Control Option	IntelliZone2 (up to 6 zones)	IntelliZone2 (up to 4 zones)	IntelliZone2 24V (up to 4 zones)	IntelliZone2 (up to 4 zones)	IntelliZone2 24V (up to 4 zones)	N/A	N/A	N/A	IntelliZone2 (up to 6 zones)	IntelliZone2 24V (up to 4 zones)	IntelliZone2 24V (up to 4 zones)
ENERGY STAR Rated Closed earth loop rating points	Yes All sizes	Yes All ECM models and most PSC models	Yes All sizes CHEROYSTAR	All sizes	All sizes	Yes ENERGY STAR	Yes 018, 025, 040, 050 and 060 models	Yes 100 and 120 models	Yes—All sizes *With SVH Air Handler	Yes—Most sizes *With SAH Air Handler or WaterFurnace A-Coil	Yes—All sizes *With SAH Air Handler or WaterFurnace A-Coil



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:

















