The WaterFurnace 7 Series™ is quite possibly the most advanced heating and cooling system on the planet. It provides homeowners the ultimate in comfort and performance and represents our finest products. This line is for those who accept only the best and is built using the latest technologies and highest standards.

The 700A11 signifies groundbreaking innovations on multiple fronts—most notably as the geothermal industry’s first launched variable capacity residential unit and the only unit to surpass both the 41 EER and 5.3 COP efficiency barriers. These ratings are vastly greater than ordinary conditioning systems and 30% higher than current two-stage geothermal heat pumps. The 700A11 is ENERGY STAR rated and was engineered in the HVAC industry’s only in-house EPA/ENERGY STAR Recognized Laboratory.

Our Aurora communicating controls work in unison with the variable capacity compressor, variable speed loop pump and variable speed blower motor to offer a level of comfort you have to experience to believe. Best of all 7 Series units use the stored energy in your yard to provide savings up to 70% on heating, cooling and hot water. We’re extremely excited to share it with you.

Why Geothermal?
Geothermal is perfect for those who want to dramatically reduce their energy usage, save money on bills, and enjoy a more even, consistent comfort in their homes. Over the next few pages we’ll tell you a little more about geothermal and show you how you can benefit from a technology that’s Smarter from the Ground Up™.
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 homes 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.

Clean Air
Large, high-efficiency HEPA filters come standard with our units to provide exceptional indoor air quality and protect your family from dust and pollen. WaterFurnace units also clean the air more often, further filtering the air.

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.

Comfortable
WaterFurnace units are designed to run more often at lower 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 that fit your lifestyle, add our IntelliZone2 zoning system.

Convenient
WaterFurnace units require no noisy additions to your home’s appearance. There are no conspicuous wall-mounted equipment units, no outdoor units that create unsightly additions to your home’s appearance.

Energy Efficient
WaterFurnace systems are rated number one in energy efficiency because they can deliver more than five units of energy for every one unit of electrical energy used. Compare that to even the best ordinary system that delivers less than one unit of energy for every unit of energy it consumes. WaterFurnace units receive an energy efficiency rating exceeding 200%, compared to the most efficient gas furnace which rates only 98%.

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 produce the equivalent emissions of about one tree a year, per household, the greenhouse effect and global warming—problems directly linked to the burning of fossil fuels. In fact, installing a single geothermal system is the environmental equivalent of planting 750 trees or removing two cars from the road.

Flexibility
One compact WaterFurnace unit can heat, cool, ventilate, dehumidify, and provide domestic hot water for your entire home. They are available in vertical, horizontal, and bottom-flow configurations. WaterFurnace units are generally the quietest products we offer, we’ve taken a number of steps to make them even more so.

Geothermal’s benefits

Hurry and act now for the most savings!

A 30% 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 AHT and regular income taxes and can be carried forward into future years. The 30% tax credit will last until the end of 2019 where it is scheduled to decrease in amount each year through 2021. Hurry and act now for the most savings!
A geothermal heat pump (GHP) taps into the renewable solar energy stored in the ground to provide savings up to 70% on bills. Using a series of underground pipes, it exchanges heat with the earth instead of outdoor air. While air temperatures can vary greatly from day to night or winter to summer, the temperature just a few feet below the earth’s surface stays an average 55°-70°F year-round.

Summer cooling
As outdoor temperatures rise, a GHP collects the unwanted heat in your home and moves it to the cooler 55° earth. Meanwhile, ordinary heat pumps and air conditioners are forced to dump that heat outside. Unfortunately, hot summer air is already saturated with heat and is less willing to accept more. That makes ordinary cooling systems least efficient when you need them to be the most efficient.

Winter heating
As outdoor temperatures fall, a GHP draws from an underground reservoir of heat, concentrates it, and moves it to your home. Meanwhile, an ordinary heat pump is forced to collect heat from frigid winter air as making it least efficient when you need it to be the most efficient. And unlike a furnace, our units don’t create heat through combustion. They simply collect and move it.

Fossil Fuel Furnace
Ordinary furnaces return less than 98¢ of heat for each dollar spent burning polluting fossil fuels, while a geothermal system returns up to five dollars of heat for each dollar spent on electricity. That’s because our units don’t create heat through combustion. They simply collect and move it.

Traditional Air Conditioner
Summer air is already saturated with heat and is less willing to accept more. Thanks to the constant temperature of the earth, geothermal is more than twice as efficient as cooling than any ordinary heat pump or air conditioner.

Note: Illustration represents how geothermal works and is not to scale. Loops are generally 4-6 feet below the earth’s surface and between 150-400 feet long.
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 0.12 acre, 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 3-10 GPM, depending on size.

HyperLoop - Pond
Perfect for pond and lake geothermal applications, this prefabricated and compact loop greatly reduces loop build and installation time.

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.
The only HVAC system you’ll actually love

The 7 Series Technology

In addition to being the world’s most efficient heat pump, the 700A11 uses our exclusive variable capacity technology to provide comfort unlike any system you’ve ever experienced. While other conditioning systems run at one or possibly two capacities (high and low), the 700A11 scales compressor output and airflow to exactly the level needed for any heating or cooling situation.

The 7 Series can ramp down to 20% of normal operation for the ultimate efficiency and comfort or scale up to 130% output using SuperBoost™ cooling. Our exclusive SuperBoost mode is for those brief periods when extra conditioning is needed and ensures guests stay cool and comfortable during summer get-togethers. And because the 700A11 operates over the industry’s largest range of capacities (from 20-130%), it provides unmatched humidity control and can even eliminate the need for auxiliary heat in cold-weather climates.

Every 7 Series unit is computer run-tested to ensure flawless performance at start-up and in the unlikely event it needs to be serviced, your unit is backed by one of the best warranties in the industry. This groundbreaking unit is a testament to our internal resources and the culture we’ve built here at WaterFurnace.
Design Components:
1. Cabinet: The cabinet comes with a professional-grade finish for long-lasting beauty and protection. The system is fully insulated for quiet operation with cleanable foil-backed insulation.
2. Advanced Hot Water Generation: With an optional hot water assist, the 7 Series preheats your water and delivers it to your water heater. A sophisticated microprocessor controls and monitors heat pump conditions and determines 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.
3. Coated Air Coil: Our exclusive FormiShield™ Plus coating resists corrosion and increases lifespan. Its patented “11 element” fin technology and large size improves efficiency and dehumidification during cooling.
4. Aurora Interface Diagnostic Port: WaterFurnace is the first to offer an external communication port, which allows service and diagnosis of our units without ever having to open them.
5. ThermaShield™: Our exclusive coiled heat exchanger coating protects against condensation for temperatures below 50°F, extending its life.
6. Aurora UPC Controls (not shown): The Aurora UPC controls communicate directly with the Aurora Base Controller in the 7 Series, allowing for operation and control of the system—along with other home components for streamlined whole-house operation.
7. Variable Capacity Compressor: WaterFurnace was the first geothermal brand to offer two-stage units. Now, we are the first to launch residential variable capacity units. Variable capacity compressors offer soft start, quiet operation, and gently ramp up to speed for quiet operation while also increasing system efficiency.
8. Aurora Controls: Aurora Controls offer full two-way communication between components, advanced operating logic, and flexible troubleshooting capabilities. It carries support for true energy monitoring, extended hot water generation control and integration with our IntelliZone2 zoning system. Incorporating the Aurora Web Link (AWL) module also extends communication capabilities to include the integration of your home automation networks and more.
9. Blower Motor: WaterFurnace was the first to offer variable speed blowers for geothermal applications, and now we are taking this even further by adding two-way communication capabilities. A variable-speed ECM motor runs at only the speed needed for maximum efficiency and savings. When Active Dehumidification is enabled, our Aurora Controls optimize the blower to maximize moisture removal.
10. Filter and Filter Rack: Pleated MERV 11 filter is standard while an optional pleated MERV 13 filter is available for improved air quality. Filter rack holds 1” or 2” filters and is field convertible.

ISO/AHRI 13256-1

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14. Filter and Filter Rack: Pleated MERV 11 filter is standard while an optional pleated MERV 13 filter is available for improved air quality. Filter rack holds 1” or 2” filters and is field convertible.
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 system to allow 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 from any web-enabled smart phone, tablet, or computer. That’s Symphony. Symphony is a WiFi-based comfort platform that’s unsurpassed in its ease of use, feature set and the level of information it provides. Symphony marries the Aurora controls of a WaterFurnace geothermal system with our WebLink router, giving you access to the comfort system from practically anywhere. Symphony is cloud-based so there’s no software to install and provides control over the entire geothermal system—not just the temperature as in other ‘smart thermostat’ systems.

- a. Aurora WebLink
- b. Symphony Web-Enabled Home Comfort Platform
- c. Invisible Thermostat Capability
- d. Water/Sump Alarm
- e. Advanced Zoning System

**TP32W03 Thermostat**
This thermostat is made for use with single or dual stage units that feature an ECM blower motor. It features 3 heat stages and 2 cool stages and dual fuel capabilities. With a sleek touch screen display this programmable thermostat will look great in any home.

**TP32U03/04 Elite Programmable**
This powerful thermostat is great for any system. It allows dual fuel capability, winter humidity control, text-based output and Comfort Talk error communication. It’s the perfect way to capture free preheated water from your unit.

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**IntelliZone2®**
The IntelliZone2 gives you the power to precisely control temperatures in up to 4 different areas with our dual capacity systems or up to 6 different areas with our variable capacity systems. The result is tremendous 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.

**GeoTank®**
The GeoTank is simply the best way to capture free preheated water from your unit.

* Energy monitoring requires our AXB advanced controls.
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: