WaterFurnace
Smarter from the Ground Up™

Geothermal Comfort System

5 Series® 3D

508C11

The 5 Series® 3D

Smarter from the Ground Up™

The WaterFurnace 5 Series® 3D is named appropriately for the three crucial things it delivers to improve your family's comfort, Forced air heating, forced air cooling, and Hydronic radiant heating for floors and domestic hot water usage.

The 508C11 is the ideal heating and cooling solution if you desire heated floors in your living spaces, garage, basement, workshop or office. The brawn of the 5 Series 3D is readily apparent in the way it perfectly conditions your home. But it's the brains that set the system apart from anything else in the marketplace: We call them Aurora and Symphony. And when combined with compressor envelope control, your system will provide years of reliable and trouble-free operation.

Aurora Advanced Controls continually monitor energy usage and overall system performance, and then send that data to the Symphony Home Comfort Platform to be analyzed and included in a selection of easy-to-understand reports. The compressor envelope control works with your GeoTank to ensure the hydronic system is always at optimum temperature to prevent any abnormal compressor operating conditions. At the click of a button, you gain instant, real-time access to performance information along with the ability to make system adjustments on the fly – either on your thermostat or anywhere in the world from any internet-connected device. And now, our new single control thermostat/hydrostat allows you to view both your forced air and hydronic system temperatures and operating modes through one device.

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 home. 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 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.

QUALIFIES✓ GEO TAX CREDIT **30%**

Extra savings for geothermal

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 AMT and regular income taxes and can be carried forward into future years. The 30% tax credit will last until the end of 2032 when it is scheduled to decrease to 26% in 2033 and 22% in 2034. Hurry and act now for the most savings!

Energy Efficient

WaterFurnace systems are rated number one in energy efficiency because they can deliver almost 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 it consumes. That translates into an efficiency rating approaching 500%, compared to the most efficient gas furnace which rates only 98%.

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.

Clean

Large, high efficiency MERV 11 filters come standard with our units to provide exceptional indoor air quality and protect your family from dust and pollen. WaterFurnace units also circulate air more often, further filtering the air.

The Latest Low GWP Refrigerant

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. And now our systems utilize a low GWP (global warming potential) refrigerant R-454B. 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.

Flexible

One compact WaterFurnace unit provides hydronic floor heating, heating, central air conditioning, and supplemental domestic hot water for your entire home. No matter what climate you live in, your WaterFurnace system will deliver.

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.

Quiet

WaterFurnace systems don't require noisy outdoor units that can disturb your peaceful surroundings or create unsightly additions to your home's appearance. We've taken great steps in keeping your unit as quiet as possible.

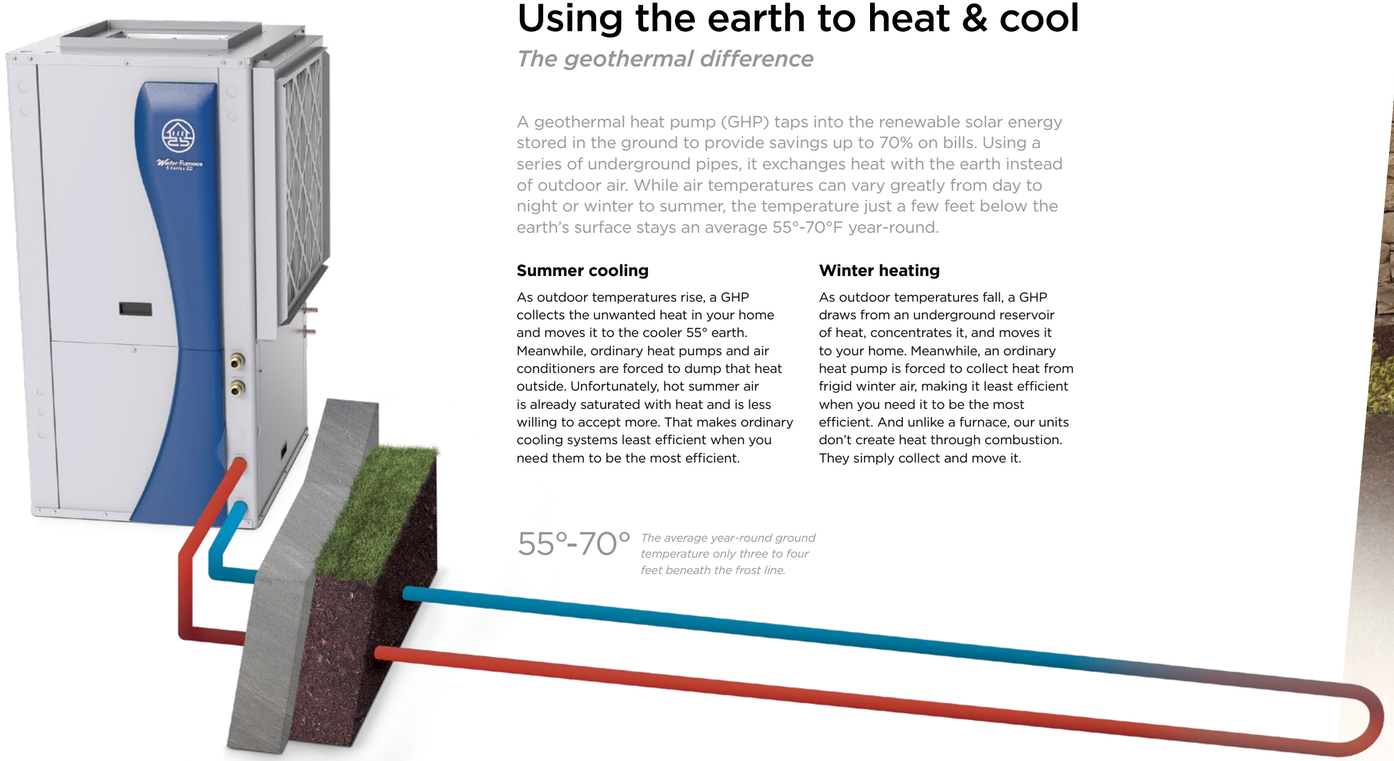
Reliable

Because geothermal units aren't subjected to the punishing effects of outdoor weather or fuel combustion, 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.

Comfortable

WaterFurnace units are designed to run more often to provide stable temperatures throughout the home and help eliminate hot or cold spots. To achieve even more precise control over temperatures, add our IntelliZone zoning system.*

*not available till 2025



Using the earth to heat & cool

The geothermal difference

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, 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.

55°-70° *The average year-round ground temperature only three to four feet beneath the frost line.*

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.

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 at cooling than any ordinary heat pump or air conditioner.

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.

The heart of a geothermal system

Geothermal earth loops

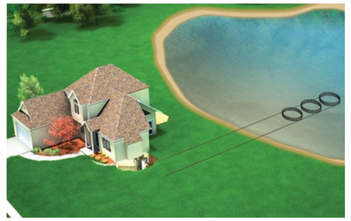
A geothermal system uses a series of underground pipes called a “loop.” The earth loop eliminates the need for fossil fuels. It’s the heart of a geothermal system and its biggest advantage over ordinary heating and cooling technologies. The type of loop used is based on available land space and installation 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 34 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. The 5 Series 3D units require 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.

360-Degree Comfort

That's Great For Your Budget & The Environment

From the floor to the ceiling, the WaterFurnace 5 Series 3D truly provides complete 360-degree home comfort. Radiant heat is widely regarded as the most comfortable way to heat your home, and forced air is typically the most cost effective. The 5 Series 3D combines the best of both worlds, providing the luxurious comfort of radiant heat for floors while providing traditional forced air heating and cooling for the rest of your home. All of this while utilizing the most environmentally friendly technology to heat and cool your home – geothermal.

Compared to traditional furnaces and air conditioners, the 5 Series 3D can provide energy savings up to 70%. Additionally, its hot water assist feature can save you up to $500 a year simply by taking the excess heat it produces and funneling it into your traditional hot water heater.

Radiant Floor Heating

In a home with a radiant floor heating system, the entire floor acts as a heat source for the room. Many people consider this method of heating the most comfortable available. The 5 Series 3D is the perfect solution for homeowners that want forced air heating and cooling along with radiant floor heat.

Domestic Hot Water

The 5 Series 3D preheats your water and delivers it to your water heater or storage tank. 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.

Engineered for efficiency

Components of the 5 Series 3D

Design Components:

1. Cabinet: The cabinet comes standard 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. Hot Water Generation: With an optional hot water assist, plus EEV expansion valves in all models, the 5 Series 3D preheats your water and delivers it to your water heater. The longer the unit operates, the greater the amount of hot water generated. In heating mode, the hot water is generated at the efficiency of the unit; while in cooling, waste heat is recovered and hot water is free.

3. All-Aluminum PinnaCoil® Air Coil: 5 Series 3D units feature aluminum air coils for durability and extended system life.

4. IntelliStart®: This optional soft starter reduces start-up amperage by up to 60% of normal draw to reduce noise, eliminate light flicker, and increase compressor life.

5. ThermaShield™: Our exclusive coaxial heat exchanger coating protects against condensation for temperatures below 50°F, extending its life.

6. Compressor Envelope Protection: Compressor envelope control protects the compressor for operating out of it's temperature limits, increasing performance.

AHRI/ASHREA/ISO Ratings (13256-1)

Model & Size			Closed Loop		Open Loop	
			Cooling EER	Heating COP	Cooling EER	Heating COP
Dual Capacity	036	Full	20.10	4.30	26.90	5.10
		Part	27.80	4.70	33.60	5.20
	048	Full	18.50	4.10	24.50	4.70
		Part	26.40	4.60	32.60	5.20
	060	Full	17.90	4.00	23.90	4.60
		Part	25.60	4.30	31.00	4.80
	072	Full	17.80	3.90	23.00	4.50
		Part	25.00	4.10	29.50	4.50

Most Efficient 2025 ENERGY STAR www.energystar.gov

AHRI CERTIFIED www.ahrinet.org Water Source HP ANSI/AHRI/ASHRAE/ISO13256-1

7. Compressor: For superb efficiency and reliability dual capacity units utilize Scroll UltraTech™ compressors. All compressors are double isolation mounted for extra quiet operation.

8. Aurora® Controls: Comes standard with Aurora Premium Controls, which offers two way communication between components, true Energy, Performance and Refrigeration monitoring. Also enables optional hot water generation control and advanced troubleshooting capabilities. The Aurora WebLink Router (AWL) is also standard, which enables communication with the internet/smart grid. This is the most advanced diagnostics system in the industry.

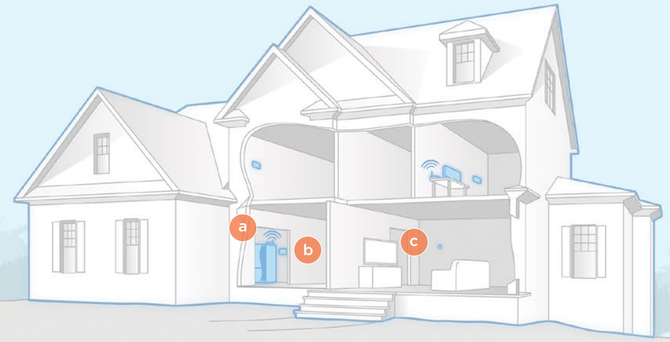
9. Blower Motor: A variable speed ECM motor runs at only the speed needed for maximum efficiency and savings.

10. Filter and Filter Rack: Pleated MERV 11 filter is standard. Filter rack holds 1" or 2" filters and is field convertible.

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 in hand with your system to allow flawless and convenient operation. Here are some of our most popular accessories. Visit ***waterfurnace.com*** for more.



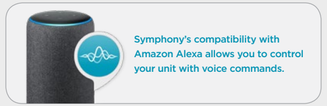
TPCC32U03 Deluxe Touch-Screen *(Required)*

A beautiful communicating color touchscreen thermostat that provides intuitive comfort control. This programmable thermostat can also provide instantaneous energy monitoring. The TPCC32U03 features 3 heat and 2 cool stages, GeoTank temperature monitoring and dual fuel capabilities, Comfort Talk error communication, humidity control, outdoor sensors and 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 is a Wi-Fi 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 (standard)
b. Symphony Thermostat (standard)
c. Invisible Thermostat Capability



Symphony's compatibility with Amazon Alexa allows you to control your unit with voice commands.

GeoTank®

The WaterFurnace GeoTank is a required and essential component of the compressor envelope control. Its' specially designed temperature sensor talks to the Aurora Control and automatically adjusts the tank temperature for best compressor performance and reliability.

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 Accreditation and Certifications:

Registered ISO 9001:2015 Company

Accredited ISO 17025:2017 Laboratory

Certified ISO 14001:2015 Company

WaterFurnace® *Smarter from the Ground Up™*

visit us at ***waterfurnace.com***

MADE IN THE MIDWEST

GEO PROUD MEMBER

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BCW5-0017W 05/25