

E SERIES

GEOTHERMAL HYDRONIC SYSTEM
EW SERIES HYDRONIC UNITS



WaterFurnace
Smarter from the Ground Up™



SMARTER FROM THE GROUND UP

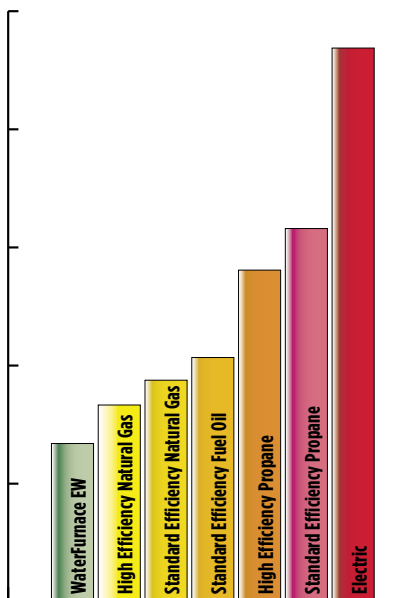
The EW Series units from WaterFurnace are a smart choice for radiant floor heating, domestic water heating, pool or spa heating, and even snow melt applications. Whether the unit is used to provide hot water for a hydronic system or hot water for potable water purposes, the EW unit heats water at a fraction of the cost of ordinary boilers and water heaters.

WaterFurnace EW units use the Earth's ability to store heat energy as a perfect source for high efficiency heating or water heating. Using advanced technology, heat energy from the ground is collected and transferred through an earth loop—an underground piping system. With a WaterFurnace system, you'll not only save money, but you'll experience exceptional performance and safe, quiet operation with a system that's environmentally friendly. That's why it's "Smarter from the Ground Up".

COMPARE THE PERFORMANCE

WaterFurnace geothermal systems can dramatically reduce your water heating costs by as much as 60% per year. Smart homeowners who purchase EW Series units will experience the benefits of high efficiency water heating. In fact, ordinary boilers and water heaters operate at a fraction of the efficiency of the EW unit. And with skyrocketing costs of natural gas, propane and fuel oil, future savings could be even greater. The graph below illustrates comparisons of various water heating systems.

Cost per million BTUs of hot water



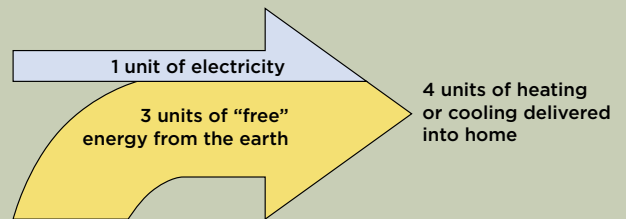
Based on fuel rates of:
 \$0.08/kWh Electric
 \$0.75/cf Natural Gas
 \$1.15/gallon Propane & Fuel Oil

GEOTHERMAL BENEFITS

ENERGY EFFICIENT:

WaterFurnace systems are rated number one in energy efficiency because they can deliver an astounding four units of energy for every 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 of 400 percent, compared to the most efficient gas boiler or water heater, which rates around 90 percent.



COST EFFECTIVE:

Because of the extraordinary efficiency of a WaterFurnace system, any added investment related to installing a geothermal unit is usually more than offset by your energy savings.

COMFORTABLE:

Capturing the relatively stable temperature of the Earth to heat and cool your home, WaterFurnace EW units provide consistent, comfortable heating when used in radiant floor applications. You can even regulate temperatures in different areas of your home.

RELIABLE:

The WaterFurnace reputation for reliability has been earned by using only the highest quality components, design, and workmanship. Computer run-testing after assembly ensures that your unit performs flawlessly at start-up. And in the unlikely event of a malfunction, WaterFurnace units are backed by the best warranties in the industry. Like your refrigerator, your geothermal unit will provide many years of worry free operation.

SAFE AND CLEAN:

Because natural gas, propane or oil is not required to operate the WaterFurnace EW unit, there's no combustion, flames or fumes and no chance of carbon-monoxide poisoning.

FLEXIBLE:

One compact WaterFurnace unit provides heating for radiant floor, domestic/potable purposes, pool/spa heating or snow/ice melt applications. In addition, most models are capable of providing chilled water for cooling applications. With several sizes available, EW units can be installed in a wide range of home applications, including newly constructed and existing homes. No matter what climate you live in, your WaterFurnace system will deliver.

ENVIRONMENTALLY FRIENDLY:

The ground absorbs about 47 percent of the sun's energy that reaches the Earth. WaterFurnace EW systems harness that free, renewable energy and provide an environmentally friendly way to heat water. Installing a WaterFurnace system is the environmental equivalent of planting 750 trees or removing two cars from the road. And the WaterFurnace system doesn't burn fossil fuels, which means no emissions or harmful greenhouse gases are released into the air.

RADIANT FLOOR HEATING—EW Series units can provide hot water for radiant floor applications, utilizing tubing encased in the floor. By circulating warm water through the tubing, the room is comfortably conditioned. Since the entire floor acts as a giant radiator, you'll experience consistent comfort throughout the room from head to toe. Floors covered in tile, wood, linoleum or stone are kept toasty warm, even on the coldest days.

DOMESTIC HOT WATER— Homes with large demands for domestic or potable water heating will benefit from the exceptional efficiency of EW units. When used in conjunction with another WaterFurnace geothermal unit to condition the air inside the home, the complete system provides the ultimate in savings, comfort and safe, reliable, quiet performance.

POOL HEATING— EW units can also be utilized to heat water for pools and spas. You'll find the EW unit will heat your pool or spa for much less than an ordinary pool heater. And compared to fossil fuel burning water heaters or boilers, it's much safer too, without the concerns associated with carbon monoxide poisoning.

SNOW & ICE MELT— Using a WaterFurnace EW unit, you can keep your sidewalks or driveway free of ice and snow during the cold winter months. Eliminate the hazards of walking on ice-covered sidewalks, and forget the back-breaking effort of shoveling snow.



THE EW SERIES DESIGN:

WaterFurnace EW Series products are designed to provide you with ultimate performance. EW units can be selected as heating only or heating/cooling models (except the EW020 which is heating only). The modularized design and controls enable optimum capacity matching and staging.

HOT WATER ASSIST: Larger sizes of EW units can include a desuperheater (hot water assist function) to provide supplemental heating of potable water while simultaneously providing space heating (depending on the application).

CABINET: The EW unit cabinet is fabricated from heavy gauge steel and finished with a corrosion-resistant polyester coating to provide years of durability and beauty. Because the control panel can be placed on either end of the unit, the piping can be located either on the front or at the back.

CONTROLS: A sophisticated microprocessor controls the load loop pump, source loop pump and compressor by sampling the entering water temperature. The controller enables the user to view all modes of operation and easily adjust temperatures. All fault conditions are monitored by the controller to ensure safe, reliable operation. Although sophisticated in its operation of the unit, the control is quite easy to adjust using a single mode button, up/down arrows for temperature setting, and LEDs which display current temperature and settings.

COMPRESSOR: High efficiency scroll compressors are used to reduce operating costs and provide years of reliable operation. Sound attenuating compressor blankets are used in every unit for "whisper-quiet" operation.

FACTORY QUALITY: Stringent standards ensure EW units include only the finest components, and are assembled according to detailed quality control procedures by skilled technicians. Each unit is computer run-tested to ensure proper performance.

R-410A: Environmentally-friendly R-410A refrigerant is used in all EW units.

ARI CERTIFIED/ETL LISTED/ENERGY STAR RATED: EW units are Energy Star rated and are safety listed with ETL.



RADIANT FLOOR HEAT



Although the technology behind the WaterFurnace EW Series is a breakthrough, radiant floor heating systems aren't new. In fact, ancient Romans heated their stone floors from beneath using wood fires. Today, thousands of years later, people are still enjoying the benefits of radiant floor heating and warm floors. These systems offer exceptional comfort without moving air. Not only is the floor kept toasty warm, but the entire floor radiates heat to the occupants, furnishings and the air.

Homeowners with radiant floor heating systems enjoy the benefit of warm bathroom floors even with bare feet. Basement floors or other concrete slab floors are also a perfect application for radiant heating. Regardless of the application, you'll find temperature control is very flexible. With an individual thermostat in every room, you can simultaneously keep the bathroom floors at a higher temperature, your bedrooms and main living spaces warm and cozy, and take the chill off a basement floor.

GEOHERMAL LOOP TYPES

WaterFurnace dealers are trained to determine the best type of earth loop to use in any situation. The type of loop used is based on available land space and installation costs for specific areas.



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.



HORIZONTAL LOOP

Used where adequate land is available, horizontal loops involve one or more trenches that are dug using a backhoe or chain trencher. Polyethylene pipes are inserted, and the trenches are backfilled. A typical home requires 1/4 to 3/4 of an acre for the trenches.



POND LOOP

If an adequately sized body of water is close to your home, a pond loop can be installed. A series of closed loops can be coiled and sunk to the bottom. A 1/2-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. EW units require 3-10 GPM, depending on size.

WATERFURNACE— THE SMART DECISION

WaterFurnace is dedicated to providing you with safe, reliable and energy-efficient heating and cooling systems that save you money while helping protect our environment. Our engineers and technicians work to create and build quality geothermal products that are extensively tested to ensure the highest quality. An industry leader and an innovator in geothermal technology—WaterFurnace. **Smarter from the Ground Up.**



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