

# SYNERGY3D

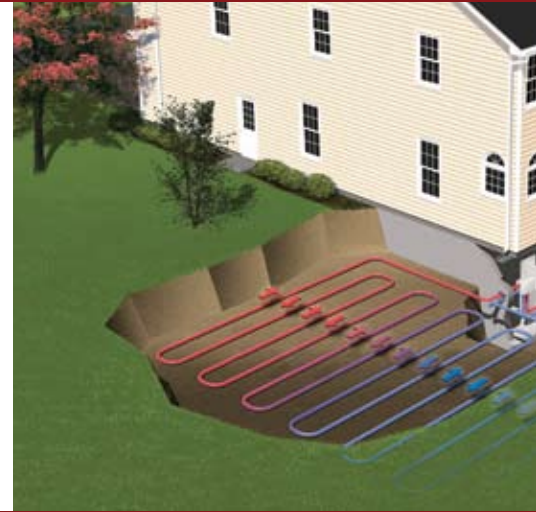


**Water-Furnace.**  
Smarter from the Ground Up™



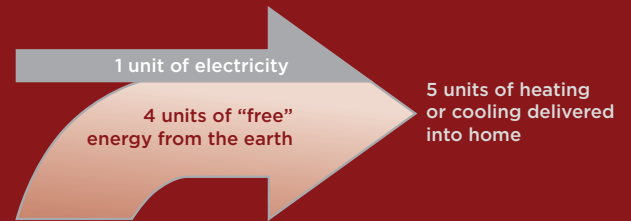
FORCED AIR + HYDRONIC

The WaterFurnace Synergy3D series provides forced air heating & cooling and hydronic heat for radiant floors in one convenient package. It was engineered with leading edge components, and takes efficiency to new levels. Compared to ordinary furnaces and air conditioners, Synergy3D can provide energy savings up to 60%. When coupled with today's best thermostats and an integrated monitoring system, the Synergy3D will provide the finest in comfort and reliability. Best of all, this smart technology uses the earth as a free energy source.



**ENERGY EFFICIENT:** WaterFurnace Synergy3D systems are rated number one in energy efficiency because they can deliver almost five dollars of energy for every dollar of electrical energy used. That translates into an efficiency rating of 500 percent, compared to the best ordinary furnace that delivers less than 97 cents of energy for every dollar spent on expensive fossil fuels.

**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. In new homes, most homeowners will experience an immediate positive return on their investment when the system cost is added to the mortgage. In replacement installations, homeowners find that any added investment over the cost of an ordinary system is generally recovered through energy savings within a few years.



**COMFORTABLE:** By using the stable solar energy stored in the Earth, WaterFurnace systems provide consistent, comfortable heating and cooling. You can even regulate temperatures in different areas of your home with an optional zone control system.

**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. Your geothermal unit will provide many years of dependable operation.

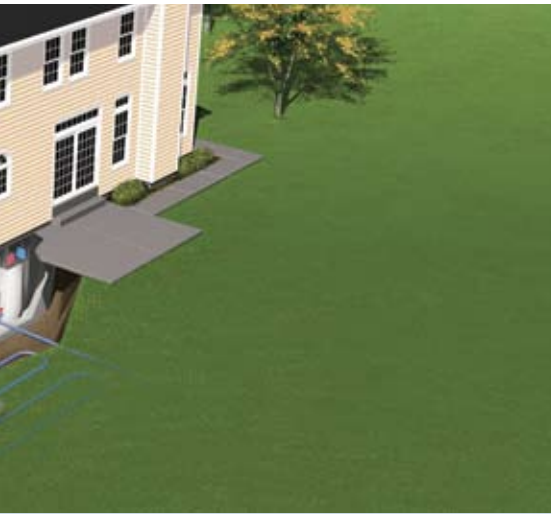
**QUIET:** WaterFurnace systems don't require noisy outdoor units that can disturb your peaceful surroundings or create unsightly additions to your home's appearance.

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

**FLEXIBLE:** One compact WaterFurnace unit provides heating, central air conditioning and hot water for radiant floors. Vertical left and right return configurations are available for a wide range of home applications, including newly constructed and existing homes. No matter what climate you live in, your WaterFurnace system will deliver.

**CLEAN:** High-efficiency air cleaners found in WaterFurnace systems keep your indoor air quality clean, removing dust and pollen so you and your family can breathe easier.

**ENVIRONMENTALLY FRIENDLY:** The ground absorbs about 47 percent of the solar energy that reaches the Earth. WaterFurnace systems harness that free, renewable energy and provide an environmentally friendly way to heat and cool your home. 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.



WaterFurnace systems use the Earth's ability to store heat energy as the source for high efficiency heating and cooling. Using an underground piping system (called a loop), WaterFurnace systems tap into that stored energy to provide comfort for your home year round. With a WaterFurnace system, you'll not only save money, but you'll experience enhanced comfort and safe, quiet operation with a system that's environmentally friendly. That's why we call it **"Smarter from the Ground Up"**.





### GREAT FOR YOUR BUDGET

The WaterFurnace Synergy3D series can *dramatically* reduce your annual costs for heating, cooling and hot water - often as much as 70%! No other gas furnace, air conditioner or heat pump comes close to Synergy3D's efficiency. And with continuous increases in fossil fuel costs, your future savings will only increase.

Only WaterFurnace dealers utilize GeoLink Design Studios, a sophisticated software package designed to ensure proper design and sizing of your WaterFurnace geothermal system. And only WaterFurnace dealers have access to our exclusive audit software designed to estimate the heating and cooling costs for your home based on square footage, construction style and climate. Rest assured knowing your WaterFurnace system is specifically tailored to your home and its climate.

### GREAT FOR THE ENVIRONMENT

The Synergy3D also sets new standards for environmental responsibility. Because the system doesn't burn any fossil fuels, there are no harmful emissions. It helps to conserve rapidly depleting natural resources while it helps reduce our dependence on foreign oil products. In fact, geothermal systems have been recognized by the EPA and the Dept. of Energy as the most environmentally friendly heating and cooling technology available. So you can take comfort in knowing that your Synergy3D works in harmony with nature while saving you money.



## THE SYNERGY3D SERIES TECHNOLOGY

Radiant heat (hydronic) is widely regarded as the most comfortable way of heating the home while forced air is typically the most cost effective. The Synergy3D series combines the best of both worlds, providing the luxurious comfort of radiant heat for basement and bathroom floors while providing traditional forced air heating & cooling for the rest of the home. You no longer have to purchase a dedicated hot-water unit for radiant heat, a furnace for the rest of the house, and an air conditioner to cool in the summer. The Synergy3D does it all in one convenient package, using environmentally friendly R410A refrigerant, dual capacity scroll compressors, and the unmatched energy efficiency of geothermal technology.



## THE SYNERGY3D SERIES DESIGN:

- 1 BLOWER MOTOR:** A variable-speed ECM blower motor with up to 12 airflow selections allows the unit to provide enhanced comfort, quiet operation and energy savings.
- 2 CABINET:** The cabinet is finished with a durable silver metallic finish for long lasting beauty and protection. Fully insulated for quiet operation with cleanable, foil backed insulation. New exterior design elements put the unit in the same class as today's stylish high-end appliances.
- 3 COATED AIR COIL:** Our exclusive FormiShield™ coating on the air coil resists corrosion and increases equipment life. Its large size improves efficiency and dehumidification during cooling.
- 4 DRAIN PAN:** Electronic overflow protection is included to eliminate the possibility of condensate flooding. Constructed of plastic, the drain pan is also corrosion-proof and resists bacterial growth.
- 5 HOT WATER ASSIST:** The Synergy3D preheats your water and delivers it to your water heater. The longer the unit operates, the greater the amount of hot water generated. In the heating mode the hot water is generated at the efficiency of the unit. In cooling, waste heat is recovered and hot water is free!
- 6 COMPRESSOR:** Copeland Scroll™ compressors are featured in all Synergy3D products. Superb efficiency and reliability. Dual capacity units include Scroll UltraTech™ compressors. Mounted on double-isolation plates for extra quiet operation.
- 7 CONTROLS:** Sophisticated microprocessor control sequences components to provide ultimate performance. Onboard diagnostics allow for easy service. Controls communicate with thermostat to display service messages. ComfortAlert module monitors compressor operation for added reliability and easy troubleshooting.
- 8 LED STATUS LIGHTS:** Externally mounted status lights indicate normal operation or display faults and assist the technician in troubleshooting.
- 9 HYDRONIC/RADIANT HEAT:** Hot water for in-floor radiant heat is generated at a fraction of the cost of ordinary boilers. Typically, the WaterFurnace GeoTank is connected to the Synergy3D to store and distribute the heated water.

**FACTORY QUALITY:** WaterFurnace systems are the result of state-of-the-art research and development. Dozens of quality checks are performed throughout the assembly process, and computer-run testing is done on every unit, ensuring flawless start-up and long-term reliability.

**R-410A:** R-410A is an environmentally friendly, non-ozone-depleting refrigerant that enhances efficiency and savings.

### ARI CERTIFIED/ETL LISTED/ENERGY STAR RATED:

WaterFurnace Synergy3D Series Units are performance-certified by the Air Conditioning and Refrigeration Institute, safety listed by ETL and exceed performance standards for the ENERGY STAR rating.

### ARI / ISO Ratings (13256-1)

| Model & Size  |     |      | Closed Loop |             | Open Loop   |             |
|---------------|-----|------|-------------|-------------|-------------|-------------|
|               |     |      | Cooling EER | Heating COP | Cooling EER | Heating COP |
| Dual Capacity | 038 | High | 18.5        | 4.0         | 19.6        | 4.6         |
|               |     | Low  | 23.7        | 4.5         | 27.8        | 5.0         |
|               | 049 | High | 16.6        | 3.7         | 22.1        | 4.5         |
|               |     | Low  | 21.7        | 4.2         | 25.3        | 4.7         |
|               | 064 | High | 15.4        | 3.5         | 18.8        | 4.1         |
|               |     | Low  | 20.8        | 3.9         | 24.3        | 4.3         |
|               | 072 | High | 15.0        | 3.6         | 17.7        | 4.1         |
|               |     | Low  | 20.2        | 3.9         | 22.6        | 4.2         |



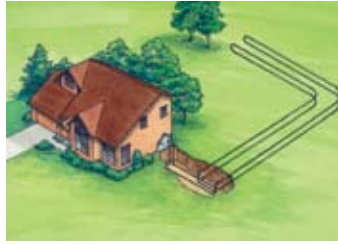
## GEOTHERMAL LOOP TYPES

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. Synergy3D units require 3-10 GPM, depending on size.

## RADIANT FLOOR HEAT



The Synergy3D was designed to combine the comfort of radiant heat and the efficiencies of forced air. Whether you choose to use radiant heat in small zones like bathrooms and the kitchen, or in larger zones like the basement floor, the Synergy3D delivers. Use in combination with our WaterFurnace GeoTank. The GeoTank is simply the best way to capture preheated water from your unit. Engineered specifically for your WaterFurnace geothermal system, the GeoTank includes unique features that make installation and operation easy.

## 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.**



waterfurnace.com | (800) GEO-SAVE