



## PRODUCT LINE

HEATING | COOLING | HOT WATER

[www.geostar-geo.com](http://www.geostar-geo.com)



AFFORDABLE RENEWABLE CLEAN

GEO THERMAL HEAT PUMPS

# WHAT IS GEOTHERMAL?

Geothermal units are similar to ordinary heat pumps but use the solar energy stored just below our feet to provide heating, air conditioning and hot water. The earth acts as a giant solar panel, absorbing roughly half of the sun's heat energy. A series of pipes called a "loop" (see next page for more) is buried just below the frost line to tap into that stored energy. In the winter,

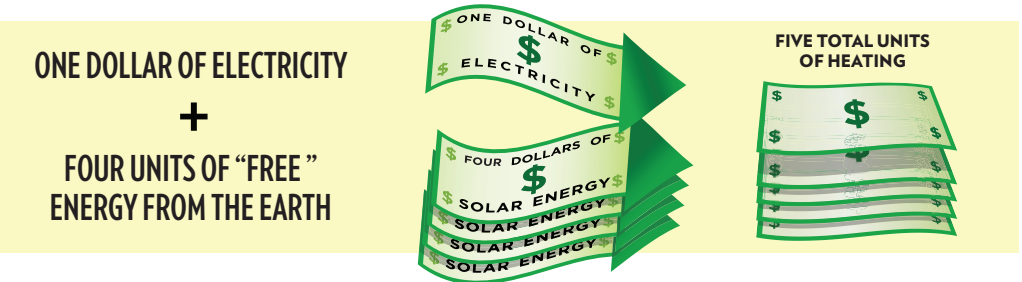
heat is brought in through the loop, concentrated, and delivered throughout your home. During summer, the excess heat in your home is removed and delivered back to the earth, completing the cycle. Because geothermal units use the earth's natural heat, they are among the most efficient and comfortable heating and cooling technologies currently available.



## GEOSTAR® BENEFITS

Thanks to the unique way geothermal units operate, they provide a host of exciting benefits to you and our environment.

**AMAZING ENERGY EFFICIENCY:** Geothermal heat pumps don't create energy, they simply move it. Only a small amount of electricity is used to circulate heat to and from your home. This allows GeoStar® units to provide \$5 of heating for every \$1 of electricity used, while current "high-efficiency" fossil fuel furnaces provide only 98¢. Our units are far more efficient than any conventional furnace!



**COST EFFECTIVENESS:** Though geothermal systems can be more expensive to purchase up front, the cost difference will be returned through drastically lower energy bills. Most GeoStar owners see savings up to 70% on their utility bills!

**GREATER COMFORT:** GeoStar units run only at the level needed by using variable speed motors. They slowly ramp up to speed rather than "roaring" to life like traditional units—resulting in even, consistent comfort. You won't experience the large temperature fluctuations associated with other heating and cooling solutions.

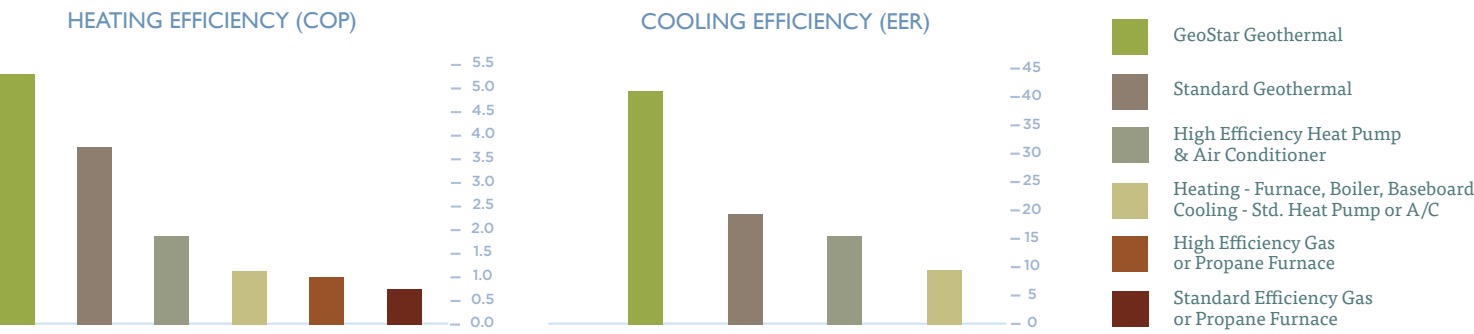
**QUIET:** With our units, there's no noisy outdoor equipment to disturb the peace or clutter your yard. Some homeowners have reported checking the unit to see if it's running.

**LONGER LIFE AND RELIABILITY:** Because GeoStar units don't require any outdoor equipment, they are protected from the rain, snow, environmental contaminants and abuse that hinders the efficiency of traditional air conditioners and heat pumps.

**ENVIRONMENTALLY FRIENDLY:** Geothermal units don't burn any fossil fuels or create carbon monoxide. This reduces our dependence on foreign oil while it works to reduce greenhouse gas emissions. One GeoStar geothermal unit is the environmental equivalent of taking two cars off the road forever. In fact, the Environmental Protection Agency (EPA) says geothermal heat pumps are the most environmentally friendly and cost effective way to condition our homes. Sycamore and select Aston and Magnolia Plus models are available with environmentally safe R-454B refrigerant that sets a new standard in protecting the planet.

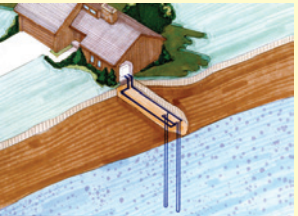
# COMPARE THE PERFORMANCE

A GeoStar unit can reduce your annual costs for heating, cooling and hot water by as much as 70% per year. No other gas furnace, air conditioner or heat pump comes close to GeoStar's efficiency. With continuous and dramatic increases in the cost of fossil fuels like natural gas, propane and fuel oil, the savings possibilities are even greater in the future. Your GeoStar dealer can use software modeling tools to estimate the heating and cooling costs for your home based on square footage, construction style, and climate.



## GEOTHERMAL LOOP TYPES:

There are four main loop types used in the geothermal industry today. Your GeoStar dealer can provide you with guidance and advice for your specific situation.



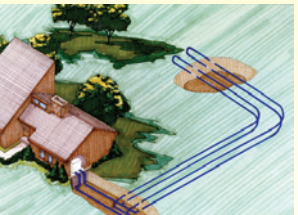
### VERTICAL LOOP

Used when space is limited. Holes are bored approximately 125 to 250 ft. deep using a drilling rig. A pair of polyethylene pipes with a u-bend fitting is inserted into the holes. A typical home requires three to five bores with roughly a 15-foot separation between the holes.



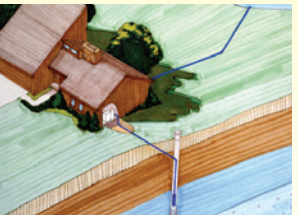
### POND LOOP

If an adequately sized body of water is close to your home, a pond loop can be installed. A series of closed loops are coiled and sunk to the bottom of the pond or lake. A 1/2 acre, 8-foot-deep pond is usually sufficient for the average home.



### HORIZONTAL LOOP

Used where adequate land is available. Horizontal loops involve one or more trenches 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.



### 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 GeoStar unit. GeoStar units require 3 - 10 GPM, depending on size.



Homeowners who install an ENERGY STAR® rated geothermal system in the U.S. are eligible for a 30% federal tax credit. The 30% credit will last through 2032 and can be claimed on equipment and installation costs with no upper limit. The credit is scheduled to decrease to 26% in 2033 then to 22% in 2034, so act now for the most savings!



## FORCED AIR ALL-IN-ONE UNIT



**47.0 EER | 5.2 COP**



### SYCAMORE® SERIES



The Sycamore Series is a premium variable capacity system that's offered only by our elite GeoStar distributors. It's one of our most impressive systems yet. A variable capacity compressor works in concert with a variable speed blower motor and variable speed loop pump to provide the utmost in comfort. The entire system can ramp itself up or down to provide exactly the output your home needs at any given time. Add in the Aurora family of advanced controls for two-way communication and energy monitoring, low GWP refrigerant, and you'll get one of the most advanced heating and cooling systems on the planet.



Sycamore is a premium system that's offered only by our elite GeoStar distributors.



**30.0 EER | 5.0 COP**



### ASTON® SERIES WITH LOW GWP



The Aston Series with Low GWP utilizes environmentally safe R-454B refrigerant that sets a new standard in protecting the planet. Low GWP models feature dual capacity scroll compressors, Aurora two-way communicating controls, full performance monitoring and diagnostics.



**22.4 EER | 4.3 COP**



### MAGNOLIA PLUS® SERIES WITH LOW GWP



GeoStar Magnolia Plus Series with low GWP units are the perfect balance between performance and price. They benefit from more than 30 years of advancements in research, engineering, and manufacturing. That innovation continues with the addition of R-454B refrigerant that sets a new standard in protecting the planet.

## FORCED AIR / HYDRONIC COMBO



**27.8 EER | 4.7 COP**



### ASTON® SERIES 3D WITH LOW GWP



The Aston Series 3D is a geothermal boiler, furnace and air conditioner—all in one unit. It provides ultra efficient heating and cooling along with hot water for radiant floor heat (domestic hot water option also available). It shares many of the features from our Aston Series line such as environmentally safe R-454B refrigerant, computer controlled components, advanced troubleshooting features, scroll compressors, and corrosion resistant air coils.

## INDOOR SPLIT UNITS



**27.8 EER | 4.6 COP**



### ASTON® SERIES INDOOR SPLIT



Indoor Splits are for installations where space is at a premium. When combined with a GeoStar air handler, the unit can provide complete home heating & cooling. When added to a furnace, the system will automatically switch to the most economical heating source for energy in a conveniently small footprint. The Aston Series is available in either single or dual capacity models.

## OUTDOOR SPLIT UNITS



**27.8 EER | 4.6 COP**



### ASTON® SERIES OUTDOOR SPLIT



Outdoor Splits are designed for use outside when indoor systems would be difficult to install. The Aston Series Outdoor Splits are covered by a high-quality sealed cabinet for protection and are engineered to be connected to an air handler or a fossil fuel furnace and automatically switch to the most economical heating source for improved energy conservation. Again, all Aston units utilize ozone-safe R-454B refrigerant.

## SINGLE HYDRONIC UNITS



16.1 EER | 3.1 COP



### ASTON® SERIES SINGLE HYDRONIC



Aston Single Hydronic units are engineered for hot water needs such as pool/spa heating, radiant floor, snow melt, aquaculture, and process water installations. Units can be selected as heating only or heating/cooling models (020 heating only). Scroll compressors, R-454B refrigerant, and oversized heat exchangers combine to provide users with exceptional energy savings while straightforward controls make operation easy.



16.1 EER | 3.3 COP



### ASTON® SERIES WITH OPTIHEAT



The Aston with OptiHeat high temperature hydronic heat pump is the geothermal solution for boiler replacement. It utilizes an additional heat exchanger to divert excess heat and reinjects it into the system, creating higher exiting water temperatures and optimum compressor operating conditions. Smaller loads can be accommodated and result in the ultimate in efficiency. It comes with our industry leading Aurora Advanced Controls, enabling two-way communication and energy, performance, and refrigeration monitoring.

## DUAL HYDRONIC UNITS



18.1 EER | 3.3 COP



### ASTON® SERIES DUAL HYDRONIC









Aston Advanced Dual Hydronic products are engineered for the high-volume water demands of larger luxury homes. Two high efficiency, single speed scroll compressors provide water for pool/spa heating, radiant floor, snow melt, aquaculture and process water installations. It comes with our industry leading Aurora Advanced Controls, enabling two-way communication and energy, performance, and refrigeration monitoring. Brazen plate heat exchangers allow efficiency in a compact unit. This Aston Series unit uses R-454B refrigerant.



SINGLE HYDRONIC UNITS

DUAL HYDRONIC UNITS

ACCESSORIES

						
★★★★★		★★★★★		★★★★★		
ASTON SERIES SINGLE HYDRONIC Single hydronic add-on		ASTON SERIES WITH OPTIHEAT Single high temperature hydronic		ASTON SERIES DUAL HYDRONIC Dual hydronic add-on		
SIZES	2, 4, and 5 ton sizes		4 & 5 ton single speed (2 sizes)		8 thru 15 tons (4 sizes)	
EFFICIENCY: PART LOAD AHRI 13256-1 (GLHP) Closed loop	N/A - Single speed units only		N/A - Single speed units only		3.2 - 3.3 COP 16.0 - 18.1 EER	
EFFICIENCY: FULL LOAD AHRI 13256-1 (GLHP) Closed loop	3.1 COP 16.1 EER		3.2 - 3.3 COP 16.1 EER		2.7 - 2.9 COP 14.2 - 15.4 EER	
REFRIGERANT	R-454B		R-454B		R-454B	
COMPRESSOR	Scroll (single speed)		Vapor injected scroll (single speed)		Scroll (single speed)	
BLOWER	None		None		None	
CABINET CONFIGURATIONS	Compact unit		Compact unit		Compact unit	
STAGES (* with aux.)	1 heat, 1 cool		1 heat, 1 cool		1 heat, 1 cool	
CONTROL	Aurora Advanced Controls		Aurora Advanced Controls		Microprocessor Mode, status & fault lights	
AIR COIL	N/A		N/A		N/A	
HOT WATER GENERATION	Optional. External mount pump Not available on 1½ & 2½ ton		N/A		N/A	
AUXILIARY HEAT	N/A		N/A		N/A	
ZONE CONTROL						
ENERGY STAR MOST EFFICIENT 2023	 Yes—Most Models	 Yes—All sizes	 Yes—Select Models			

GEO THERMAL STORAGE TANK

GeoStar geothermal storage take is simply the best way to capture and store preheated water from your unit. Engineered specifically for your GeoStar geothermal system, the storage tank includes unique features that make installation and operation easy. The storage tank is to be used in series with another hot water heater.

ASTON SERIES SAH AIR HANDLER

Our air handlers were engineered specifically for use with a GeoStar 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 works in unison with our Aurora controls and allows for control of up to six different zones on one GeoStar system. It gives you the power to condition where and when you choose—providing precise control over your indoor environment.

SYMPHONY WEB-ENABLED  
HOME COMFORT PLATFORM

Imagine a platform that lets you control your home’s comfort from any web-enabled smart phone, tablet, or computer and can also provide detailed feedback of your comfort system in real-time. That’s Symphony! Symphony is a cloud-based platform that connects via Wi-Fi, so there’s no software to install. It provides control over the entire geothermal system—not just the temperature as with 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 (through Symphony Contractor Portal) can remotely log into your system to view faults and operating conditions—reducing the need to schedule an in-person service call.



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