



ASTON ADVANCED SERIES
SINGLE HYDRONIC

with OptiHeat Vapor Injection Technology

HEATING | COOLING | HOT WATER

www.geostar-geo.com



AFFORDABLE RENEWABLE CLEAN

GEOTHERMAL HEAT PUMPS

WHAT IS GEOTHERMAL?

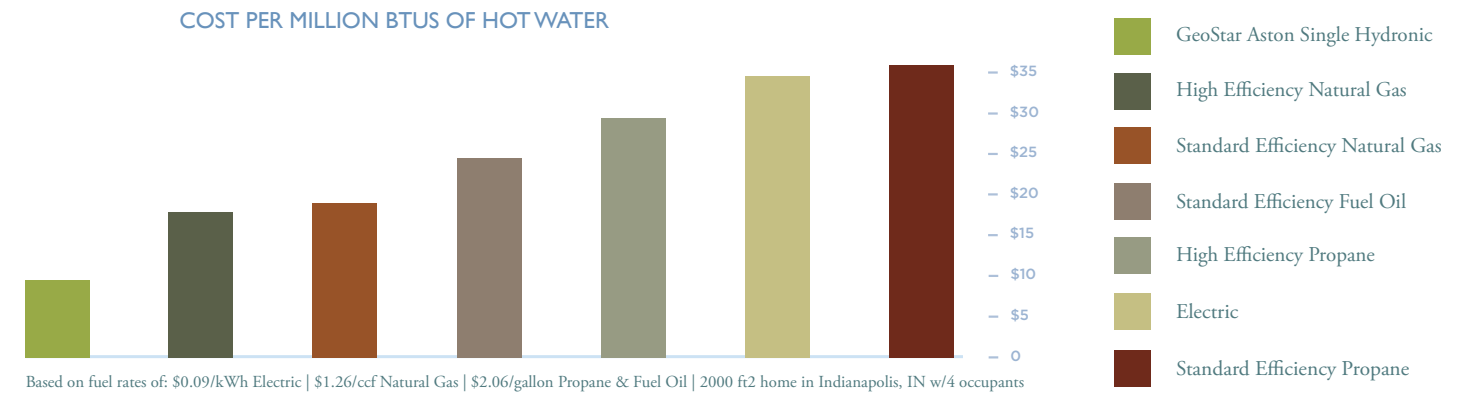
Geothermal units are similar to ordinary heat pumps but use the solar energy stored just below our feet to provide heating, air conditioning and hot water. The earth acts as a giant solar panel, absorbing roughly half of the sun's heat energy. A series of pipes called a "loop" (see next page for more)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



COMPARE THE PERFORMANCE

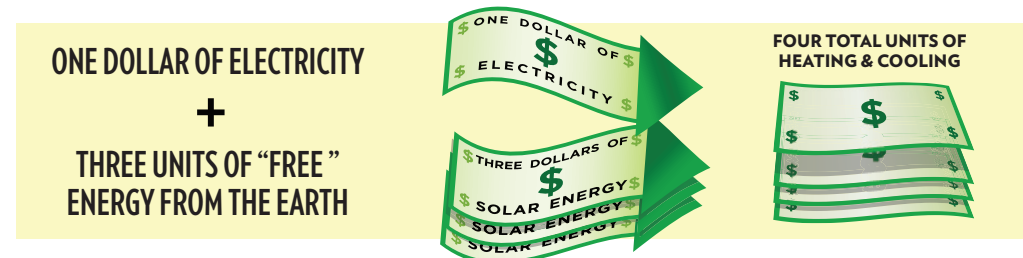
A GeoStar unit can reduce your annual costs for heating, cooling and hot water by as much as 70% per year. No other gas furnace, air conditioner or heat pump comes close to the GeoStar's efficiency. With continuous and dramatic increases in the cost of fossil fuels like natural gas, propane and fuel 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.



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 worth of electricity used, while current "high-efficiency" fossil fuel furnaces provide only 98c. 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 packaged units and air handlers 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.

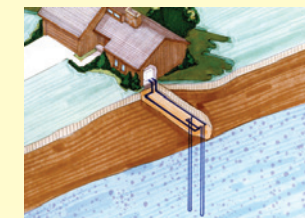
QUIET: With our units, there's no noisy outdoor equipment to disturb the peace or clutter your yard. Some homeowners have reported checking the unit to see if it's running.

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.

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.



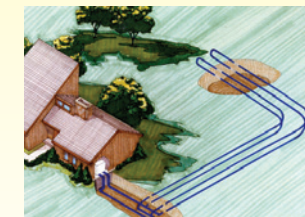
VERTICAL LOOP

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.



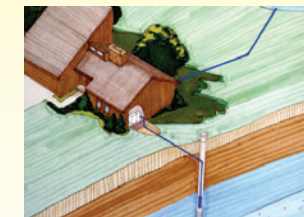
POND LOOP

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 26% federal tax credit. The 26% credit will last through 2022 and can be claimed on equipment and installation costs with no upper limit. The credit is scheduled to decrease to 22% in 2023, so act now for the most savings!



THE ASTON ADVANCED SINGLE HYDRONIC

with OptiHeat Vapor Injection Technology

The Aston Advanced with OptiHeat Vapor Injection technology provides higher efficiency, increased heating capacities, and higher water temperature output making it a versatile choice for a variety of water heating needs. This hydronic system is perfect for baseboard radiator systems, pool/spa* heating, radiant floor applications, snow/ice melt, and more due to its up to 150 degree leaving hot water capabilities.



ASTON ADVANCED SINGLE HYDRONIC FEATURES

AURORA CONTROLS: Aurora Advanced Controls provide two-way communication between components and easy-to-use diagnostic capabilities. It also provides energy, refrigeration and performance monitoring, and enables Symphony remote diagnostics

COMPRESSOR: High efficiency scroll compressors are used with vapor injection technology. All compressors are double isolation mounted for extra quiet operation.

FIELD SWITCHABLE CONTROL BOX: The Aston Advanced Hydronic with OptiHeat can be oriented in two different ways so your dealer can move the control box if needed for your home. This increased versatility makes the system more accessible and easier to install and service.

OPTIHEAT VAPOR INJECTION: This technology incorporates an additional heat exchanger that diverts excess heat and reinjects it into the system. This creates higher exiting water temperatures and optimum compressor operating conditions. Smaller loads are required and result in the ultimate in efficiency.

INSULATED COAXIAL HEAT EXCHANGER: Aston Advanced Single Hydronic units use a premium foam insulation around their heat exchangers. This gives each GeoStar unit superior efficiency and a smaller footprint in the environment.

FACTORY QUALITY: Aston Advanced Single Hydronic units are upheld to the strictest standards. Only the best components are used and assembled by our skilled technicians. Before leaving the factory, each unit is computer run-tested to make sure it's running at peak efficiency.

R-410A: Environmentally friendly R-410A is a non-ozone-depleting refrigerant that enhances efficiency and savings.

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.

ENERGY STAR/AHRI/ETL LISTED: Aston Advanced Single Hydronic units are certified by the AHRI and safety listed by ETL. Models 040, 050 and 066 are ENERGY STAR rated.

*Note: Not suitable for direct use with chlorinated water.



Brought to you by:

AHRI / ISO / ASHRAE PERFORMANCE RATINGS (13256-2)

Model & Size	Closed Loop		Open Loop		
	Cooling (EER)	Heating (COP)	Cooling (EER)	Heating (COP)	
Single Capacity	040 Single	16.1	3.3	20.1	4.0
	050 Single	16.1	3.3	20.1	3.9
	066 Single	16.1	3.2	20.1	3.7