GEOSTAR

GEOTHERMAL HEAT PUMPS

HEATING | COOLING

www.geostar-geo.com

ASTON SERIES CONSOLE

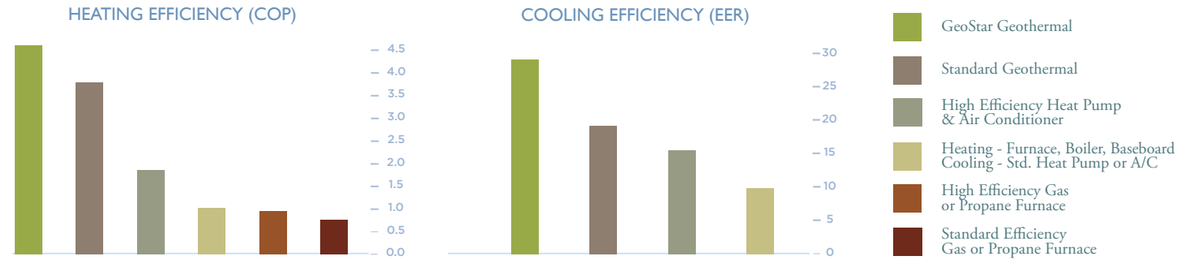
WHAT IS GEOTHERMAL?

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.

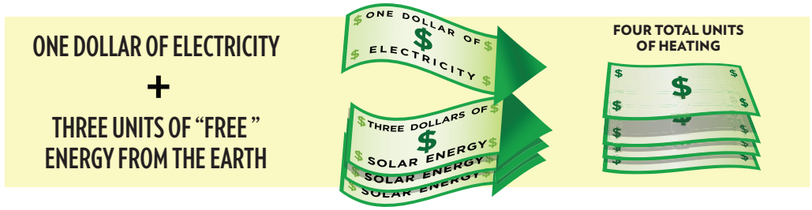
The Aston Series Console is perfect for those small areas such as your basement, garage, workshop, bonus room or sunroom.



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 $4 of heating for every $1 worth of electricity used, while current "high-efficiency" fossil fuel furnaces provide only 96¢. 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 are more efficient and run more often - resulting in even, consistent comfort. You won't experience the large temperature fluctuations associated with other heating and cooling solutions.

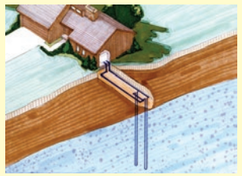
QUIET: With our units, there's no noisy outdoor equipment to disturb the peace or clutter your yard. Some homeowners have reported checking the unit to see if it's running.

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 working 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.

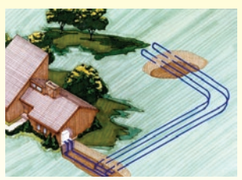


VERTICAL LOOP

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 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!

ASTON SERIES CONSOLE TECHNOLOGY

GeoStar geothermal consoles provide the efficiency of geothermal heating and cooling without the need for a duct system or the space required by most units. They provide quiet, cost-effective conditioning and are perfect for areas like workshops, garages and basements where ductwork is unavailable. Attractive, durable cabinets are finished with a textured powder coating and are available in flat-top or sloped-top models. A unit-mounted thermostat provides reliable and simple-to-use comfort adjustments.

Optional flat top cabinet available.

ASTON SERIES CONSOLE FEATURES

COAXIAL HEAT EXCHANGER: Coaxial exchangers provide the greatest heat transfer, providing higher efficiency and lower operating costs.

CONTROLS: Aurora communicating microprocessor control is standard.

FAN BLOWER: The console features a high efficiency, dual shaft, 2-speed PSC blower motor or an optional 3-speed ECM motor for efficient and quiet operation.

MOTORIZED OUTSIDE AIR DAMPER: Many ductless areas suffer from poor air quality. An optional motorized outside air damper is available. This addition allows for an introduction of 25% fresh air into the selected space.

ALUMINUM AIR COIL: An aluminum air coil is featured in all Aston Console units to provide exceptional durability and high efficiencies. Added protection is also available with an optional AlumiSeal™ coating.

CABINET: The Aston Series Console is made of heavy gauge galvanized steel providing the best corrosion resistance possible. All cabinets are finished with a textured epoxy powder coating on both sides for added protection against the elements.

ELECTRIC HEAT: Electric resistance emergency heat is provided as a safe-guard in the unlikely event of equipment problems.

AHRI / ISO / ASHRAE PERFORMANCE RATINGS (13256-1)

Model & Size			Closed Loop		Open Loop	
			Cooling (EER)	Heating (COP)	Cooling (EER)	Heating (COP)
Single Speed	09	Single	16.0	3.1	22.5	3.8
	12	Single	14.2	3.5	19.5	3.7
	15	Single	15.9	3.4	22.0	4.1
	18	Single	15.1	3.1	19.6	3.7

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