

THE GEOSMART ENERGY WAY

In these times of fluctuating energy costs and earnest efforts to preserve the environment, the smartest way to heat and cool your home is the GeoSmart Energy way.



Shown with Argosy Hydronic Buffer Tank Accessory.

GeoSmart Energy's line of premium geothermal systems is the most cost-effective, energy efficient and environmentally friendly way to bring you worry-free, year-round indoor comfort. Using advanced geothermal technology, we tap into the earth's natural heating and cooling properties through an underground loop system to consistently and evenly distribute warm or cool air throughout your home every season of the year.

The GeoSmart Energy brand is your guarantee of adherence to the highest standards in quality, functionality and workmanship. Every system is backed by superior customer service and the best warranties in the business.

Installing Geothermal Loops

When it comes to geothermal installation, no one knows more about how to do it right than GeoSmart's Geothermal Specialists. Backed by extensive training, our Geothermal Specialists are skilled in selecting and installing the geothermal loop system best suited for your home or business regardless of the weather and soil conditions in your area.

Each loop system uses GeoSmart's high density PE100 geothermal pipe, the most resilient geothermal pipe available on the market today. Once inserted in the ground, the pipe leads into the foundation of your building through either a sleeve cemented into the wall or under the footings and connects directly to your heat pump, bringing you years of worry-free, high performance renewable heating and cooling using the earth as a natural energy source.



HORIZONTAL LOOPS

Horizontal loops are the most common type of loop system, and are commonly used in rural areas due to the land space needed for installation. An excavator will dig several trenches about six feet deep in the ground, each one up to 300 feet long. Our green geothermal pipe is placed in the trenches which are then backfilled with soil.



VERTICAL LOOPS

Vertical loops are primarily used in urban areas because they require little land space for installation. A specially designed geothermal drilling rig bores vertical holes into the ground each ranging from 180 to 540 feet deep. Our green geothermal pipe is inserted into each vertical bore and then the holes are filled with bentonite grout.



POND OR LAKE LOOPS

On properties that have a nearby lake or pond that is appropriate in size and eight feet deep, a loop system can be submerged at the bottom of the body of water. A single trench is excavated from the home to the water and typically two pipes are inserted into it. These two pipes connect to several green geothermal pipes that are submerged at the bottom of the lake or pond.



OPEN LOOPS

Open loops are most commonly used on rural properties that have existing high capacity water wells. Ground water is withdrawn from an aquifer through a supply well and pumped into the heat pump, while discharged water from the heat pump is redirected into a second well and back into the same aquifer.

For more information about the **GeoSmart Energy Premium Q®** system, please visit our website at www.geosmartenergy.com



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MKG-BRO-ENQ_032611



Quad Function
Geothermal System

The Smartest Way
to Heat and Cool
Your Home.

EFFECTIVE



Why choose geothermal?

GeoSmart Energy's Premium Q® systems offer the latest in efficient, eco-friendly geothermal technology, bringing you the best in heating and cooling functionality, reliability and indoor comfort. Geothermal offers unprecedented benefits that conventional heating and air conditioning systems simply can't match.

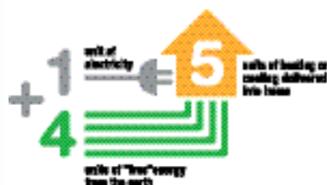
EXCEPTIONAL COMFORT: Say goodbye to hot and cold spots. Our high efficiency systems provide quiet, consistent and comfortable heating and cooling throughout every room in your home and offer superior humidity control. Using an optional zone control system, you can even regulate temperatures in different areas of your home.

ENERGY EFFICIENT: The Premium Q® is the most energy efficient quad function geothermal system available on the market today. When every dollar counts, the Premium Q® delivers. For every dollar of electrical energy it uses to run the heat pump, it generates almost five dollars worth of energy output to heat and cool your home, representing an efficiency rating of nearly 500%! Compare that with conventional furnaces that deliver less than 97 cents worth of energy for the same dollar.

COST-EFFECTIVE: The Premium Q® can dramatically reduce your annual costs for heating, cooling and hot water by as much as 75%! It is so efficient that you can usually expect your initial investment for installation to be offset by your energy savings. Installed in a new home, you will experience an immediate positive return on your investment when the system cost is added to your mortgage. In homes where geothermal is replacing a conventional system, you should more than recover your investment through energy savings within a few years.

SAFE, CLEAN AND ECO-FRIENDLY: Installing the Premium Q® is the environmental equivalent of planting 750 trees or removing two cars from the road. Unlike conventional furnace and air conditioning systems, it doesn't require combustion to generate heat. Therefore, it doesn't release harmful greenhouse gases or expose your family to risks for carbon monoxide poisoning. It also cleans the air in your home using a high efficiency air cleaner that filters out irritants like dust and pollen.

RELIABLE: The Premium Q® will meet all your needs for heating, central air conditioning and on demand hot water production for radiant floors, offering you years of worry-free comfort from the moment the system is installed. Designed to meet a wide range of home applications, it can easily be installed in both newly constructed and existing homes, regardless of what climate you live in.



The Premium Q® can provide energy savings up to 75% compared with ordinary furnaces and air conditioners. Coupled with GeoSmart Energy's intelligent thermostats and an integrated monitoring system, it will provide the finest in home comfort and reliability.

The Premium Q®

The Premium Q® is the industry leader for energy efficiency, comfort and reliability. Hidden behind its sleek blue and stainless steel exterior, the Premium Q® is a compact, all-in-one quad function geothermal system that provides forced air heating and cooling, hydronic heat (in-floor hydronic and radiant applications) and domestic hot water production all in one convenient package. Hydronic heat is widely

considered to be the most efficient and comfortable way to heat your home, while forced air is typically the most cost-effective.

Our leading edge system uses environmentally friendly R454B refrigerant, dual capacity ultra-tech scroll compressors and the unmatched energy efficiency of geothermal technology.

Savings and Performance

The GeoSmart Premium Q® series can dramatically reduce your annual costs for heating, cooling and hot water – often as much as 75%! No other gas furnace, air conditioner or heat pump comes close to Premium Q®'s efficiency. With continuous fluctuation in fossil fuel costs, your future savings will only increase.



Our GeoSmart dealers utilize GeoSmart Design Studio, a sophisticated software package designed to ensure proper design and sizing of your new Premium Q® system. And only GeoSmart 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. You can be confident knowing your Premium Q® system is specifically matched to your home and its climate.

Premium Q® Features

1 CABINET The compact outer cabinet features a durable blue and stainless steel finish for long lasting beauty and protection. Reflective of today's stylish high-end appliances, the unit is fully insulated with cleanable, foil backed insulation for quiet operation.

2 CONTROLS Standard with Aurora Premium Controls, offering two way communication between components, energy/performance and refrigeration monitoring, desuperheater control, IntelliZone2 compatibility, and advanced troubleshooting capabilities. When paired with the WebLink, remote connectivity is made available through the homes internet connection.

3 COMPRESSOR Premium Q® dual capacity systems feature Copeland Scroll™ UltraTech™ compressors mounted on double-isolation plates for extra quiet operation, superb efficiency and reliability.

4 BLOWER MOTOR Our variable speed ECM blower motor offers you up to 12 airflow selections, providing enhanced comfort, quiet operation and energy savings compared with standard PSC motors used in conventional HVAC systems.

5 ALUMINUM AIR COIL Our All-Aluminum PinnaCoil™ Air Coil features aluminum tubes and fins to increase equipment life. Its large size maximizes efficiency and dehumidification during cooling.

6 DRAIN PAN The plastic, corrosion-proof drain pan resists bacterial growth and eliminates the possibility of condensate flooding using microprocessor based electronic overflow protection.

7 COATED WATER COIL Our exclusive next generation ThermoShield™ coating on the coaxial water coil is an industry first! ThermoShield™ is a closed cell polyurethane foam insulation that is energy efficient and protects the heat exchanger for the life of the GeoSmart system. It produces an even and airtight seal to prevent condensation and rusting. And not only is it green in colour, it is also environmentally safe.

Environmentally Friendly

The Premium Q® sets new standards for environmental responsibility. Engineered using R-454B refrigerant and multi-stage technology, our system doesn't burn any fossil fuels, meaning there are no harmful emissions. It helps to conserve rapidly depleting natural resources while helping to reduce our dependence on foreign oil products. You can take comfort in knowing that your Premium Q® works in harmony with nature while saving you money.

A Mark of Excellence

The GeoSmart Energy Premium Q® is AHRI Performance Certified® by the Air-Conditioning, Heating and Refrigeration Institute, is safety listed by ETL (Electrical Testing Labs) and exceeds performance standards for the ENERGY STAR® rating.



MODEL & SIZE	COMP. MODE	CLOSED LOOP		OPEN LOOP		
		COOLING EER	HEATING COP	COOLING EER	HEATING COP	
DUAL CAPACITY	036	High	20.1	4.3	26.9	5.1
		Part	27.8	4.7	33.6	5.2
	048	High	18.5	4.1	24.5	4.7
		Part	26.4	4.6	32.6	5.2
	060	High	17.9	4.0	23.9	4.6
		Part	25.6	4.3	31.0	4.8
072	High	17.8	3.9	23.0	4.5	
	Part	25.0	4.1	29.5	4.5	

8 HOT WATER ASSIST (Optional Feature) With an optional hot water assist, plus EEV expansion valves in all models, the PremiumQ preheats your water and delivers it to your water heater. The longer the unit operates, the greater the amount of hot water generated. In heating mode, the hot water is generated at the efficiency of the unit; while in cooling, waste heat is recovered and hot water is free.

9 ON DEMAND HYDRONIC/RADIANT HEAT Hot water for in-floor radiant heat can be generated on demand at a fraction of the cost of ordinary boilers. Typically a GeoSmart hydronic tank is connected to the Premium Q® to store and distribute the heated water.

