

TRANQUILITY® 22 DIGITAL SERIES



CLIMATEMASTER® GEOTHERMAL HEAT PUMP SYSTEMS
SMART | RESPONSIBLE | COMFORTABLE



NATURALLY CONTROL CLIMATE AND COST

Wherever you live, the temperature beneath your home remains constant regardless of the season. ClimateMaster Geothermal Heat Pump Systems harness the stable under-



ground temperature to provide heating, cooling, and hot water at remarkably high efficiencies. So high, in

fact, that energy use can be cut by up to 80%. As the world's largest and most progressive leader in clean, renewable geothermal technology, ClimateMaster leads the way with its award-winning Tranquility[®] Series geothermal heat pumps.

HARNESS CLEAN, RENEWABLE ENERGY STORED IN THE EARTH

Nearly half the solar energy our planet receives is absorbed by the ground.

As a result, below the surface the earth remains a constant moderate temperature year-round. This provides an ideal source for heating and cooling your home. Geothermal systems use a sealed underground loop piping filled with circulating water and an ultra high-efficiency Tranquility® heat pump to exchange heat between your home and the earth.

In the winter, the earth is your source of heat.

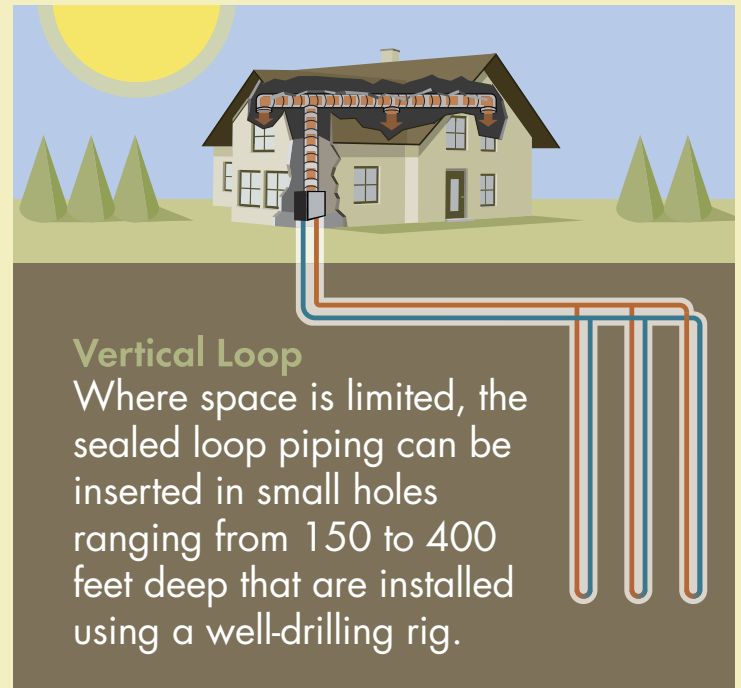
Water circulating in the loop piping absorbs heat from the earth and carries it to the heat pump, where it is concentrated and sent as warm, comfortable air throughout your home.

In the summer, the earth is your source of cooling.

The heat pump absorbs heat from the air in your home and transfers it to water circulating in the loop piping where it is absorbed by the earth. This provides cool, dehumidified and comfortable air throughout your home.

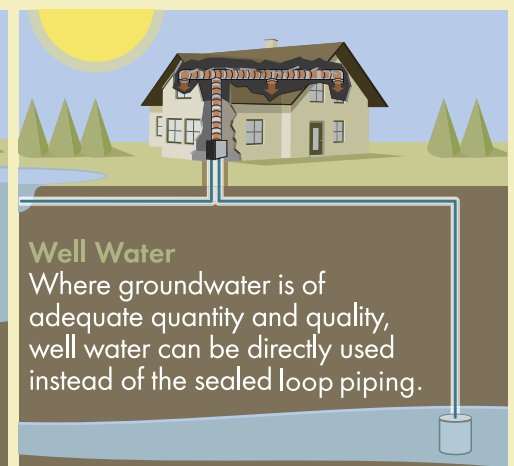
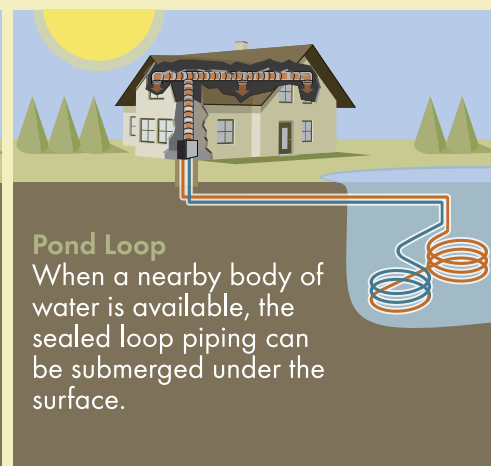
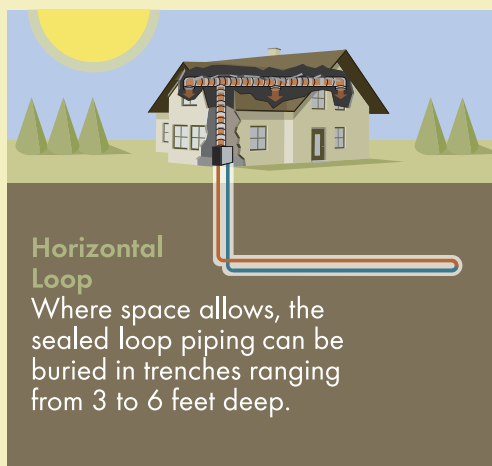
In all seasons, the system may provide nearly free hot water whenever it is in use.

ClimateMaster systems work year-round, in all climates, providing heating, cooling and hot water.



Flexible to install.

Your geothermal loop is custom designed to fit your exact needs and available space.





The Tranquility® 22 Digital

The unit can fit in a utility closet (as shown), garage, basement, or attic.

COST SAVINGS

Natural Savings.

Over 70% of the total energy used in a typical home is for heating, cooling and water heating. With a geothermal heat pump system, up to 80% of this energy comes free directly from the earth.

Geothermal technology uses the stability of underground temperatures to maximize efficiency.

Low Utility Bills.

The Tranquility® 22 Digital's vFlow™ variable water flow technology provides you high energy efficiency. Energy efficiency equals savings, which means you will see substantially lower utility costs compared to even the most efficient traditional systems.

More Ways to Save.

A federal tax credit saves you 30% on the total cost when you install a Tranquility® 22 system. Check with your state and local utilities to find out if additional incentives are available.

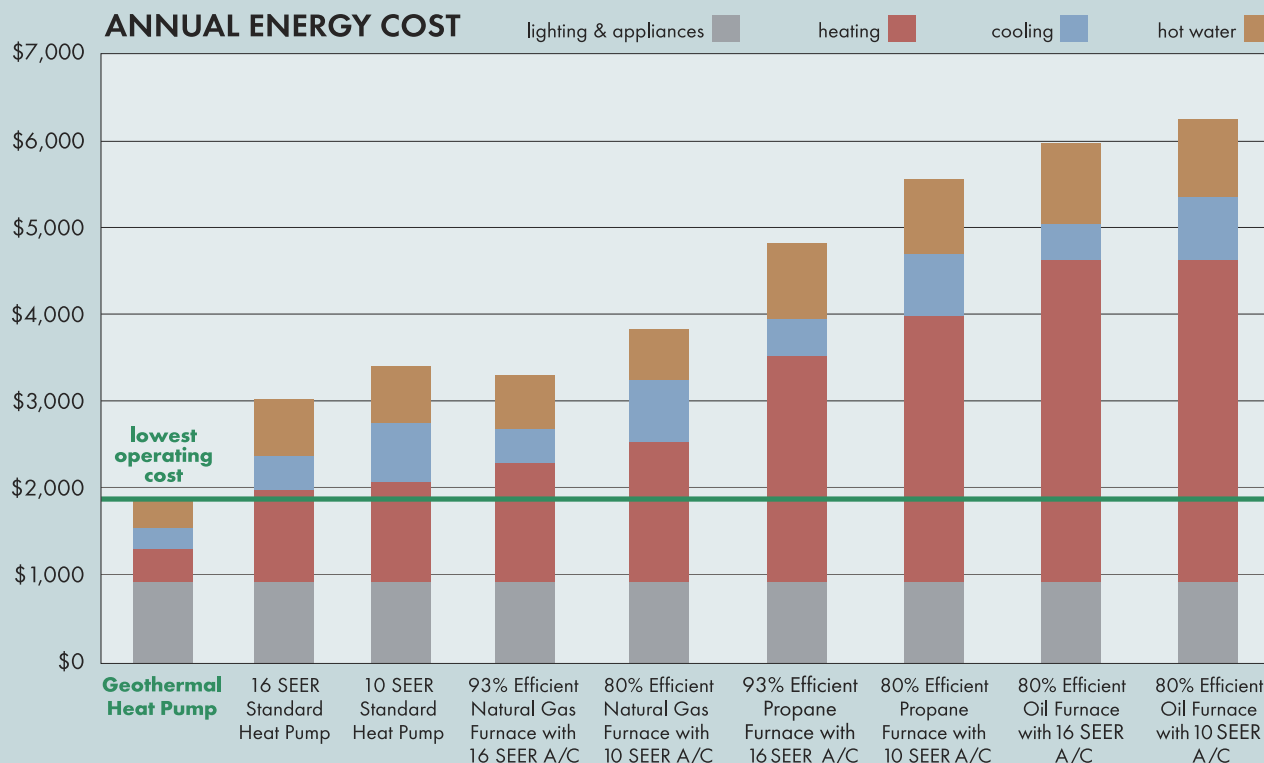
Leading Technology.

Get the latest in geothermal heat pump technology. The Tranquility® Digital Series advanced design includes two-stage operation, variable-speed fan, vFlow™ variable water flow and iGate™ communicating controls. This provides higher efficiency, quiet operation and automatically adapts to provide the optimum comfort and reliability no matter what the weather is outside. The variable-speed blower motor helps even out hot or cold spots in your home and eliminates the air blasts you feel with traditional systems. The Tranquility® 22 Digital assures you of blissful comfort, maximum efficiency and low utility bills.

vFlow™ varies the water flow through the unit to enhance reliability and reduce the cost to run water pumps by 60-80% compared to traditional single-speed external pumps.



iGate™ uses the power of 2-way communication to monitor, control and diagnose your system. The result is maximum efficiency, superb comfort and improved reliability.



Calculations are based upon current utility costs for a typical home in the U.S. Midwest. Visit climatemaster.com to use our online energy calculator or contact a dealer for your detailed savings estimate.

Ultra-Quiet Operation.

To reduce noise, the Tranquility® Digital Series was designed and tested in our own certified sound lab, an industry exclusive. This series uses a double compressor isolation system that eliminates vibration and an acoustically lined cabinet. Also, unlike traditional systems, geothermal heat pumps have no noisy outdoor fans to disturb you or your neighbors.

Long System Life.

The Tranquility® Digital Series is designed for a long service life, assuring you of savings for many years to come. Exclusive iGate™ technology ensures worry-free operation. Each unit is backed by a 10-year limited warranty. Underground pipe provided by ClimateMaster carries a 50-year limited warranty.

Safety and Cleanliness.

Geothermal systems use no flames to heat your home, so dangerous carbon monoxide and gas leaks are eliminated. The Tranquility® Digital Series uses foil-faced insulation and a stainless steel drain pan for easy cleaning.

Star Among Energy Stars.

The Tranquility® Digital Series has been recognized as the Most Efficient of ENERGY STAR 2012 for both exceeding stringent efficiency requirements and for incorporating smart iGate™ controls.



This ensures you are getting both an EFFICIENT system and an INTELLIGENT system.

Track Record.

Geothermal heat pumps are a reliable and proven technology that has been widely used for more than 50 years. Millions of geothermal heat pumps are in operation worldwide, keeping people comfortable in homes, schools, hospitals, military facilities and many other buildings.

Rest comfortably — knowing you are saving up to 80% on energy costs while reducing your impact on the environment.

Breathe Easier.

The Tranquility® 22 Digital delivers superior air filtration for improved indoor air quality using MERV 8 filters. The optional EarthPure® Air Cleaner not only removes dust and pollen with high efficiency, it also removes odors which traditional filters are unable to.



TRANQUILITY® 22 DIGITAL SERIES ADVANCED FEATURES

High-efficiency filter system provides superior indoor air quality.

Tin-plated air coil protects against corrosive environments.

Variable-speed blower motor helps reduce noise, increases comfort and adapts to zoning systems.

Next generation high-efficiency scroll compressor operates at lower pressures, extending service life. Two-stage operation provides higher efficiency and comfort.

iGate™ constantly monitors and controls operation for reliability and long life.



Acoustically engineered for ultra-quiet operation.

Easy to clean, foil-backed insulation and stainless steel drain pans.

Optional hot water generator reduces water heating costs.

vFlow™ eliminates bulky external pump modules and costs 60-80% less to operate.



- Optional Warranty - Extend labor allowance from the standard 5 years to 10 years.



- iGate™ Thermostat - Gateway into your system - Program, monitor, control and diagnose from the thermostat.



ClimateMaster has applied decades of experience and invested years of research to create two innovative technologies that maximize energy savings, reliability and comfort... and they can only be found in the new Tranquility® Digital systems.

iGate™ Communicating Controls

iGate™ technology represents the next generation in intelligent controls by using 2-way communication to provide a gateway into your system. The iGate™ control system allows you and your dealer to monitor the performance of your unit, custom tailor its operation, and diagnose any issues, all from your thermostat.

The iGate™ communications hub is the new DXM2 intelligent controller, which analyzes the status of sensors and smart components (also 2-way communicating) to determine how best to operate your system for optimal comfort, efficiency and long-term reliability. All of this information is passed to the iGate™ thermostat (or dealer diagnostic tool), where it can be displayed in plain English. And since communication is both ways, the iGate™ thermostat can also be used to configure and tailor your system without touching your unit.

Future accessories will enable iGate™ communication over the internet, allowing you (and your dealer if you so choose) to access your system from a PC or smart phone.

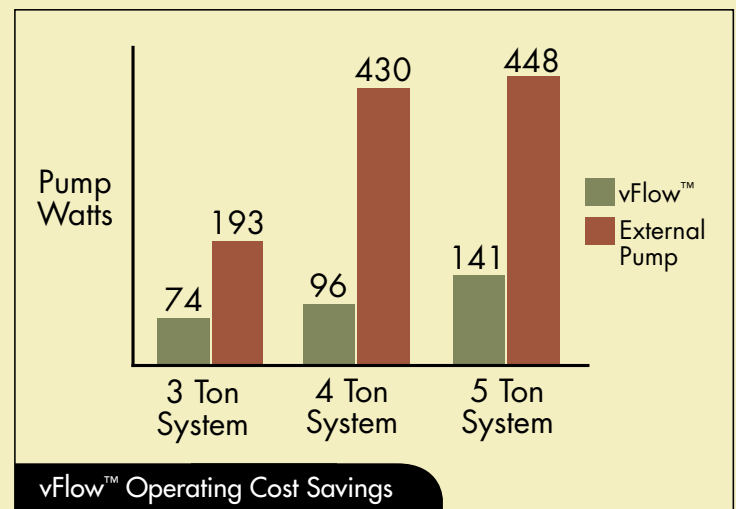
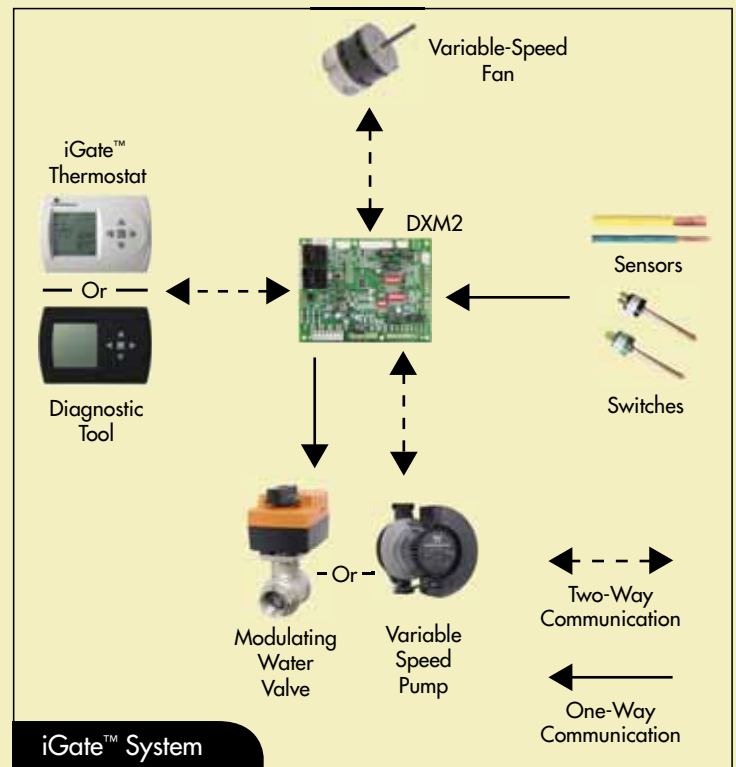
vFlow™ Variable Water Flow

vFlow™ variable water flow technology is a major advance in geothermal system performance made possible through the iGate™ system. vFlow™ not only builds the major water circulation components into the unit for a clean installation, it also intelligently varies the water flow to minimize pump energy consumption and improve the reliability of your system.

The heart of vFlow™ is either a variable-speed pump (for ground loops) or modulating water valve (for ground water) directly linked into the iGate™ system. Water flow is automatically varied based on changes in unit capacity level (stage) and source water temperature to maintain optimum system performance.

vFlow™ systems reduce water pumping power by 60-80% compared to traditional external pumping modules, which can save over \$100 per year in an average 2,000 square foot home. In addition, vFlow™ protects the unit against extreme operating conditions, extending the life of the compressor and air coil. Since vFlow™ is built inside the unit, it also saves on installation time and makes for a very clean and compact installation.

There's no need for bulky external pumping modules any more.



TRANQUILITY® 22 DIGITAL SERIES Ground Water and Loop Heat Pump Operation



Unit	First Stage Operation*				Second Stage Operation			
	Cooling		Heating		Cooling		Heating	
	Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	COP	Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	COP
TZ-024	18,000	20.2	14,300	3.8	22,900	15.2	18,400	3.6
TZ-030	24,200	20.9	19,400	3.9	29,900	15.7	23,800	3.6
TZ-036	27,100	20.6	22,300	4.0	34,700	14.8	27,900	3.6
TZ-042	34,000	22.0	26,900	3.8	43,100	16.1	33,300	3.4
TZ-048	37,600	21.2	29,200	4.1	48,150	15.5	35,600	3.7
TZ-060	47,200	22.0	37,200	3.9	59,800	16.1	45,900	3.5

ASHRAE/AHRI/ISO 13256-1 Certified

* Approximately 80% of your heating and cooling needs are met using first stage operation.

TRANQUILITY® SYSTEM COMPARISONS

- Standard
- Optional

		Tranquility® 30 Digital (TE) Series	Tranquility® 22 Digital (TZ) Series	Tranquility® 27 (TT) Series	Tranquility® 20 (TS) Series
Efficiency	Cooling	29.6 EER	22.0 EER	27.0 EER	20.2 EER
	Heating	4.8 COP	4.1 COP	4.6 COP	4.2 COP
ENERGY STAR Designation		Most Efficient		Tier 3	
30% Federal Tax Credit Eligible		Yes	Yes	Yes	Yes
Compressor		Two Stage	Two Stage	Two Stage	One Stage
Front Panels		Stainless Steel	Painted	Stainless Steel	Stainless Steel
Air Filter		2" MERV 11	1" MERV 8	2" MERV 11	2" MERV 11
vFlow™ Internal Variable Water Flow		●	●		
External Fixed-Speed Flow Controller				○	○
iGate™ Communicating System		●	●		
Non-Communicating Electronic Controls				○	○
Indoor Fan	Variable Speed	●	●	●	○
	Single Speed				●
Configuration	Vertical Upflow	○	○	○	○
	Horizontal	○	○	○	○
	Vertical Downflow	○		○	○
Hot Water Generator		○	○	○	○
Tin-Plated Air Coil		●*	●	●	●
ClimaDry™ Whole House Dehumidification				○	○
Warranty - 10-Year Parts; 5-Year Labor Allowance		●	●	●	●
Warranty - 10-Year Parts; 10-Year Labor Allowance		○	○	○	○

*TE038 uses microchannel aluminum coil

The Right Choice.

ClimateMaster is the world's largest and most progressive manufacturer of geothermal heat pumps. We are committed to innovation and dedicated to environmentally clean, economically sound and superbly comfortable home and business environments. Each ClimateMaster product is produced in our state-of-the-art facility utilizing quality management systems that are ISO 9001:2000 certified. We strive for the highest product quality and service after the sale to give you peace of mind.

An LSB Industries, Inc. company (NYSE: LXU), ClimateMaster has been designing and building equipment that enhances environments we live and work in every day for more than 50 years. In addition to geothermal heat pumps, ClimateMaster offers the most extensive product line of water source heat pumps for use in a wide variety of applications.

ClimateMaster products are built in the U.S.A.





24-hour information:
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climatemaster.com

7300 S.W. 44th Street
Oklahoma City, OK 73179
405-745-6000

An LSB Industries, Inc. Company (NYSE: LXU)



ClimateMaster works continually to improve its products. As a result, the design and specifications of each product at the time for order may be changed without notice and may not be as described herein. Please contact ClimateMaster's Customer Service Department at 405-745-6000 for specific information on the current design and specifications. Savings vary due to weather conditions, local conditions, user preferences, and utility rates. Statements and other information contained herein are not warranties and do not form the basis of any bargain between the parties, but are merely ClimateMaster's opinion or commendation of its products.

The quality management systems used in the manufacture of ClimateMaster's products are ISO 9001:2000 certified.

