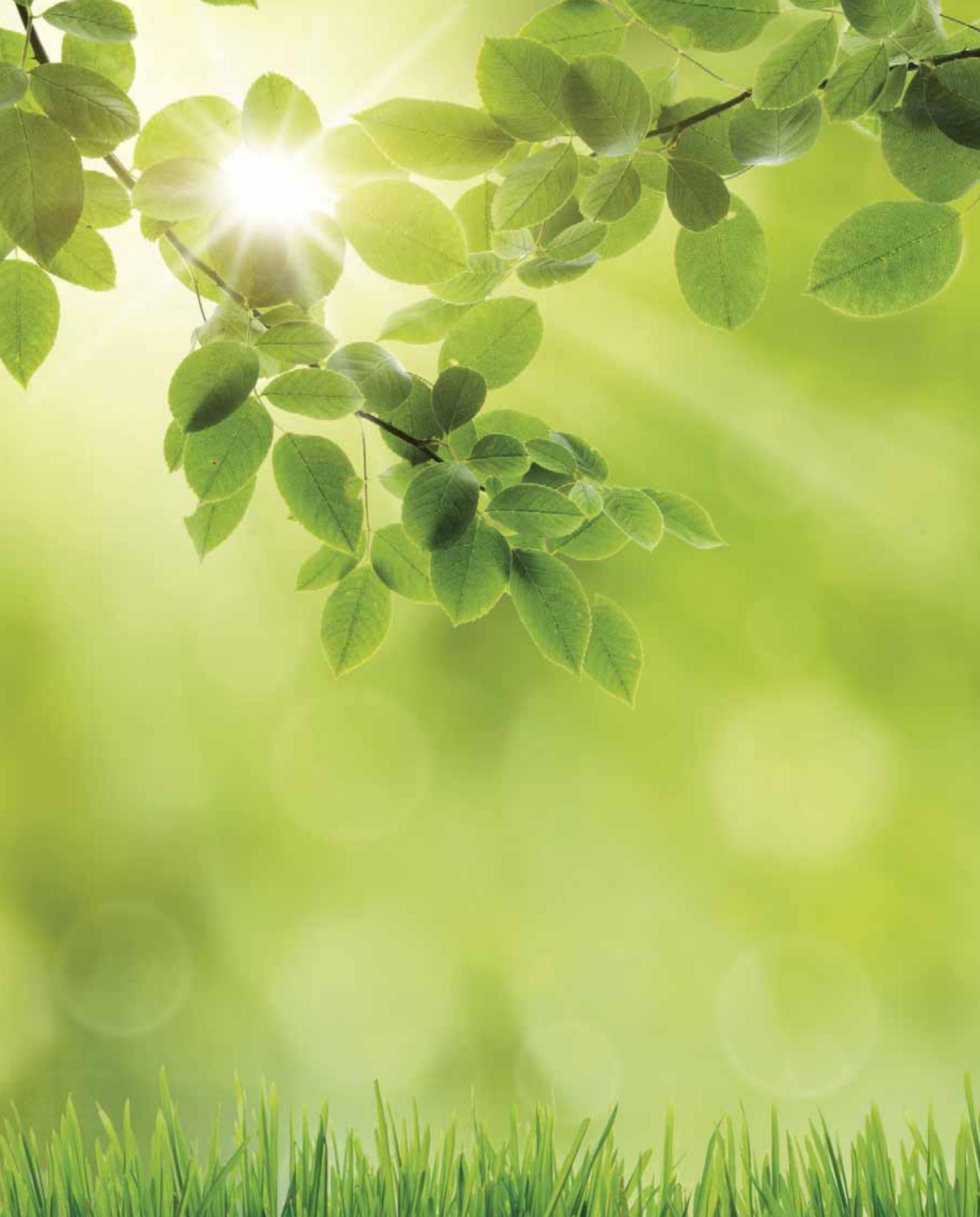


TRILOGY™ 45 Q-MODE SYSTEM

The World's Most Advanced Heating and Cooling System



CLIMATEMASTER® GEOTHERMAL HEATING AND COOLING
DECLARE YOUR PERSONAL ENERGY INDEPENDENCE



THE NEXT GENERATION OF GEOTHERMAL TECHNOLOGY

The innovation leader in geothermal technology, ClimateMaster introduces the future of sustainable



comfort. The Trilogy[®] 45 Q-Mode[®] System takes the promise of geothermal to a new

level of comfort, convenience and energy savings.

Enjoy the highest efficiency rating in the industry, remote access over the internet and full-time hot water generation to save even more.

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 Trilogy® 45 heat pump to exchange heat between your home and the earth.

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

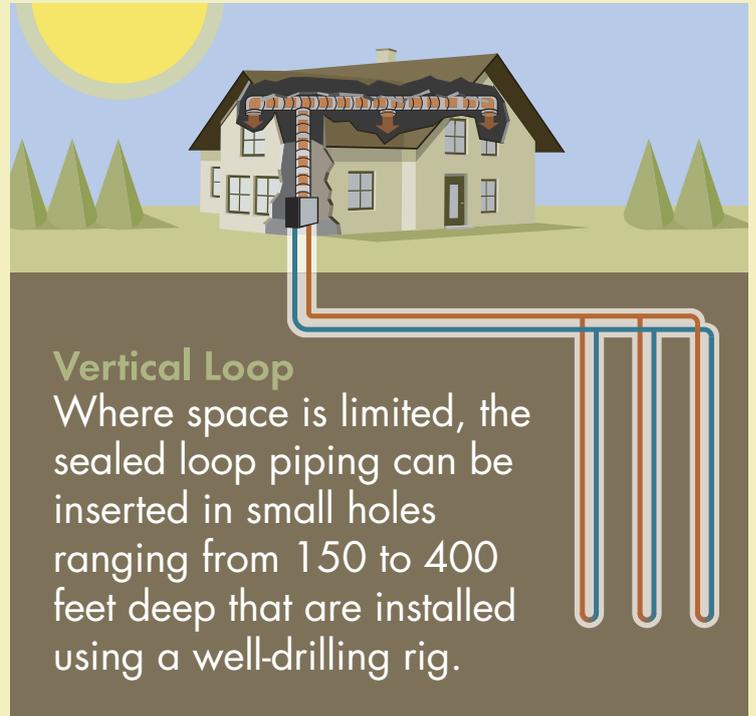
Water circulating in the loop piping absorbs heat from the earth and carries it to the heat pump, where it is concentrated and sent as warm, comfortable air throughout your home.

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.

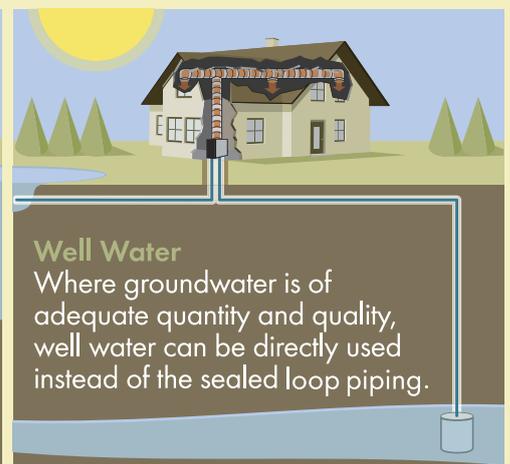
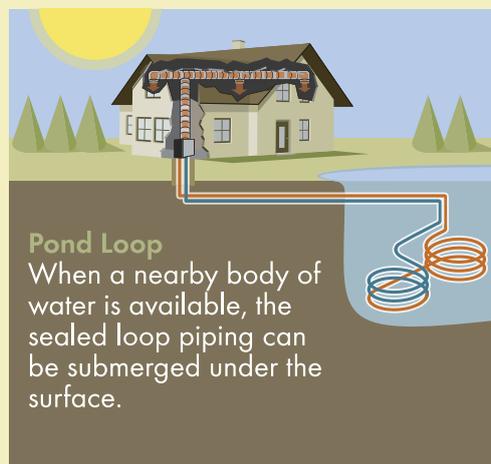
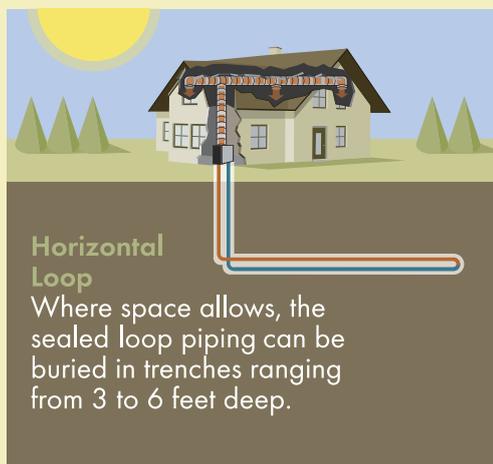
In all seasons, the system may provide nearly free hot water whenever it is in use.

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 Trilogy® 45 Q-Mode®

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

GREATER COMFORT, GREATER CONTROL, GREATER SAVINGS

Best of Both Worlds.

With fully variable Trilogy® 45 Q-Mode, you don't have to choose between being comfortable and saving money on your energy bill. Get the best of both worlds – comfort and lower energy bills. ClimateMaster, with more than 50 years of knowledge and experience in the geothermal comfort control industry, has done what some would say is impossible by delivering the highest overall efficiencies ever recorded!

Trilogy® 45 is the next generation of geothermal – more efficient, more connected and more complete than ever before. Sustainable comfort for today and tomorrow.

Star Among Energy Stars.

The Trilogy® 45 Series is ENERGY STAR® qualified for exceeding stringent efficiency requirements. This ensures you are getting both an EFFICIENT and INTELLIGENT system.



More Ways to Save.

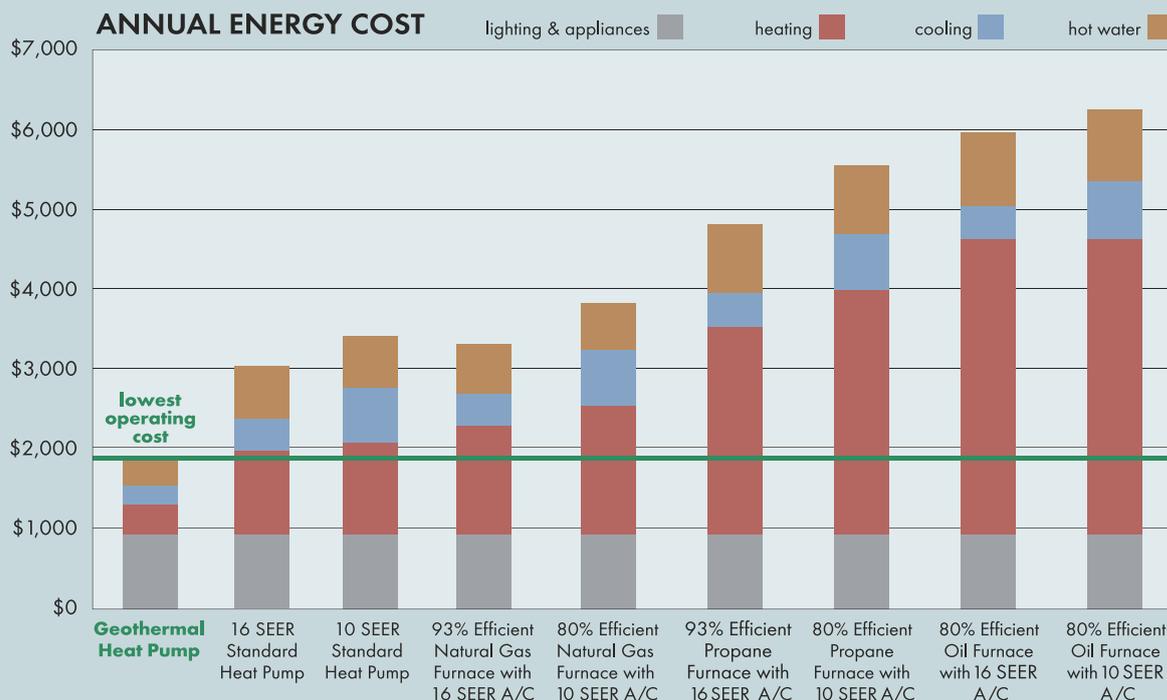
A federal tax credit saves you 30% on the total installed cost when you install a Trilogy® 45 Q-Mode® system. Check with your state and local utilities to find out if additional incentives are available.

Leading Technology.

The revolutionary Trilogy® 45 Q-Mode® represents a major breakthrough in comfort and efficiency, continuing ClimateMaster's legacy of innovation. Trilogy® 45 Q-Mode® is 50% more efficient than our other geothermal systems, and is the only system with Q-Mode, a patent pending technology offering hot water generation for additional savings. Traditional heating and cooling systems start and stop. Trilogy® 45 Q-Mode® is an ultra-quiet system that runs longer to maintain a constant level of comfort and humidity control. As a fully variable system, the Trilogy® 45 Q-Mode® delivers the precise amount of heating and cooling you need with minimal noise inside or outside of your home. The system is designed to operate slowly and consistently for peak efficiency and peak savings. On an extremely hot or cold day, the Trilogy® 45 speeds up and delivers full comfort (capacity) regardless of the outdoor or entering water temperature.

Domestic hot water is now the second largest user of energy in US homes today¹. With full-time hot water generation offered by Trilogy® 45 Q-Mode, you will see incredible energy savings of over 80% in water heating, due to efficiency of over 500% compared to traditional water heaters, which have efficiencies below 100%. While delivering ultra-high efficiencies, you don't have compromise on comfort. Q-Mode® recovers quicker than traditional water heaters when using hot water in the tank faster than you would like, delivering more hot water, without needing a larger tank.

¹ Source: U.S. Energy Information Administration, Residential Energy Consumption Survey.



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.

In addition to hot water savings, Trilogy® 45 Q-Mode® delivers FREE cooling while simultaneously heating water.

Innovation and Leadership Recognition

Trilogy® Q-Mode® was recognized as one of the top 100 most technically significant products introduced in the marketplace.

Co-developed with the Oak Ridge National Laboratory, Trilogy® Q-Mode® won a prestigious R&D 100 Award for 2013, recognizing Trilogy® Q-Mode's groundbreaking improvement in heat pump technology and energy efficiency.



iGate™ Connect

ClimateMaster's iGate™ Connect is another industry first. iGate™

Connect is an internet-connected, two-way communication system giving you access to your thermostat from anywhere. You can turn the system on or off or set it for vacations from any internet-accessible device.



Intelligence Built In

The iGate™ system communicates with 21 sensors and smart components to monitor 47 pieces of information to constantly monitor and adjust operation to ensure your system runs optimally for years of comfort and savings. It also sends you and your dealer (if you allow) alerts if the system is not running optimally.

Ultra-Quiet Operation.

Trilogy® 45 Q-Mode® is so quiet that you will hardly know it is running. The system is designed to operate slowly and consistently, and unlike traditional air source systems, there are no noisy outdoor fans to disturb you or your neighbors.

Safety and Cleanliness.

Geothermal systems use no flames to heat your home, so dangerous carbon monoxide and gas leaks are eliminated. The Trilogy® 45 Q-Mode® Series uses foil-faced insulation and a stainless steel drain pan for easy cleaning.

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

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.

Breathe Easier.

The Trilogy® 45 Q-Mode® delivers superior air filtration for improved indoor air quality using MERV 11 filters and improved air exchange due to extended run times. The optional EarthPure® Air Cleaner not only removes dust and pollen with high efficiency, it also removes odors that traditional filters are unable to remove.



TRILOGY® 45 Q-MODE® SERIES ADVANCED FEATURES



TRILOGY® 45 Q-MODE® SERIES ADVANCED FEATURES

1 Mitsubishi Inverter Variable-Speed Compressor: By modulating the compressor from 100% to 30% of capacity, the inverter variable-speed compressor delivers the precise amount of heating and cooling you need for high comfort and efficiency. The system also runs longer to maintain a constant level of comfort and humidity control. On extremely hot/cold days, the compressor speeds up to full capacity to deliver full comfort without the need for inefficient back-up heat.



2 Emerson UltraTech Variable-Speed Communicating Fan Motor: Perfectly complements the inverter variable-speed compressor to deliver high efficiency AND high comfort. The fan speeds up or slows down to deliver the perfect airflow for perfect comfort, adjusting to various types of ducts. The fan uses the minimum energy (watts) to deliver maximum comfort, further saving energy and lowering your energy bills.



3 vFlow™ Grundfos Variable-Speed Pump: vFlow™ delivers further energy cost savings by delivering the precise amount of water flow required to keep your Trilogy® 45 unit at peak performance for years to come. The internal pump also reduces complexity and time required for installation.



4 Patent-Pending Q-Mode: Heating domestic hot water consumes the second highest amount of energy in your home (even more than air conditioning in most markets). ClimateMaster developed patent-pending Q-Mode® to achieve over 80% savings by generating full-time hot water year-round at 500%+ efficiency. Additionally, Q-Mode® provides additional energy savings from free cooling when simultaneously heating water using patent-pending technology. Trilogy® 45 Q-Mode® is the only system of its type on the market to deliver MAXIMUM energy savings compared to ANY home heating and cooling system available.



5 iGate™ Communicating System: iGate™ technology represents the next generation in intelligent controls by using two-way communication and internet connectivity to provide a gateway into your system from anywhere in the world. With the EXM board at the its core, the iGate™



system monitors 47 pieces of information from 21 sensors and smart devices to control the system for precise comfort at the highest efficiency. In addition to precise operation, the iGate™ Connect thermostat provides a gateway to the internet, allowing you or your dealer to monitor, configure and diagnose the system from any internet-connected mobile device or at your iGate™ Connect communicating thermostat. The iGate™ internet-connected system is the MOST INTELLIGENT home heating and cooling system on the market today, providing precise control, long life and access anywhere.



6 Microchannel Air Coil: All-aluminum air coils, the same technology as used in the automobile industry, resist harmful corrosion to maintain thermal performance.



7 Braze Plate Refrigerant-To-Water Heat Exchanger: Trilogy® 45 Q-Mode® uses proven technology of braze plates, which allows a compact unit to deliver unprecedented efficiencies.



8 High-Efficiency Filter: Breath easier with the standard MERV 11 high efficiency filter that minimizes allergens and harmful particles to deliver high indoor air quality for you and your family. The optional EarthPure™ air cleaner installs in the same area as the standard MERV 11 filter but provides additional protection against odors and smaller harmful particles in the air.

9 Dealer-Friendly Swing-Out Controls: Unique swing-out controls allow your dealer easy access to internal components in the system.

10 Ultra-Quiet Operation: The Trilogy® 45 Q-Mode® is designed to be noticeably quiet. From the inverter compressor to the acoustically engineered cabinet, it delivers the industry's lowest sound ratings.

The optional warranty extends the labor allowance from the standard 5 years to 10 years.



IGATE™ CONNECT ADVANCED FEATURES

iGate CONNECT features a variety of ways to access and control your Trilogy® 45 Q-Mode® Geothermal Heating and Cooling System.



Internet-Connected Home Thermostat

- Communicates personal settings and reminders through the iGate™ communication system
- Easy-to-use, full-color, high-resolution interface
- Receives notification for routine maintenance
- Sleek, intuitive button control
- Secure internet connection keeps your information private
- Contains Trilogy® 45 Q-Mode® unit model, serial number and dealer contact information
- Service and system performance information is stored in the thermostat, increasing the accuracy of diagnosis

Internet Portal Accessible Anytime, Anywhere

- Remote login from anywhere, anytime from any device to adjust settings
- Set personal schedule by day, week or month including those times when you will be away from home for vacation or business
- Information is available remotely to your dealer (if you wish) through a dealer portal for remote troubleshooting and diagnosis
- Secure internet connection keeps your information private
- Access your thermostat through Android and iPhone mobile apps

IGATE™ SMART TANK ADVANCED FEATURES

The iGate™ Smart Tank is the geothermal heating and cooling industry's first communicating storage tank.



Brass temperature and pressure relief valve.

iGate™ Smart Tank controller communicates with the Trilogy® 45 Q-Mode® heat pump through the iGate™ Gateway. It also minimizes the use of backup elements to ensure peak efficiency.

Water temperature sensors continuously monitor water temperature and communicate this information to the Trilogy® 45 Q-Mode® heat pump. When water temperature falls below preference settings, the Trilogy® 45 Q-Mode® generates hot water, or in rare cases, turns on the backup elements to heat water.

Polyethylene outer jacket is "car bumper tough".

Seamless polybutene tank is impervious to corrosion.

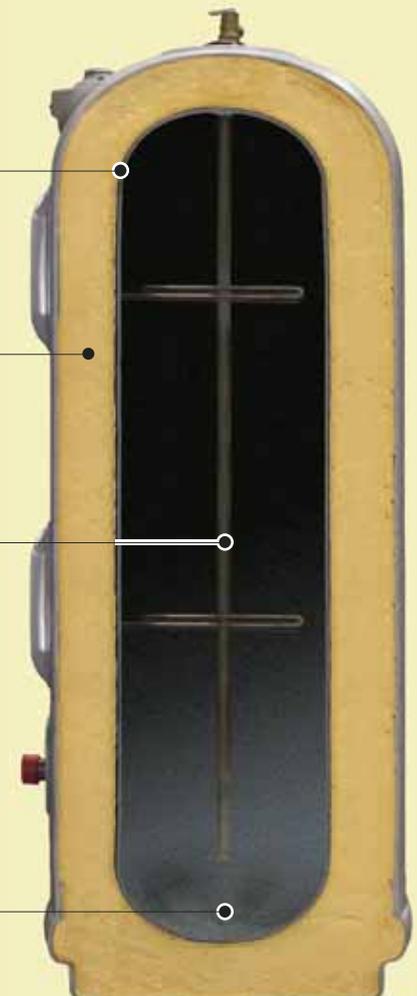
Two-and-a-half inch foam insulation for reduced stand-by heat loss.

Titanium heating elements for long life and superior corrosion resistance.

Special inlet port minimizes the mixing of incoming water from heat pump.

Bowl-shaped bottom for more complete sediment draining.

Full port ball valve for fast water drainage.



Side cut-away view of the iGate™ Smart Tank

INDUSTRY LEADING TECHNOLOGY

Trilogy® 45 Q-Mode® delivers the industry's lowest operating costs, with the highest level of comfort and reliability.

The technologies behind this phenomenal performance are:

1. Trilogy of variable-speed components—compressor, fan and pump
2. Patent-pending Q-Mode®
3. iGate™ internet-connected communicating system

Trilogy® 45 Q-Mode

Trilogy® 45 Q-Mode® delivers unprecedented comfort and energy efficiency through a "Trilogy" of precision components: variable-speed compressor, variable-speed fan and variable-speed loop pump. And you are always connected to this next-generation technology through the internet-connected iGate™ system.

The variable-speed compressor and fan set new standards for controlling temperature and humidity by running at lower speeds for longer periods. The compressor also powers the Q-Mode® hot water generator, which can further reduce your energy bills for years to come.

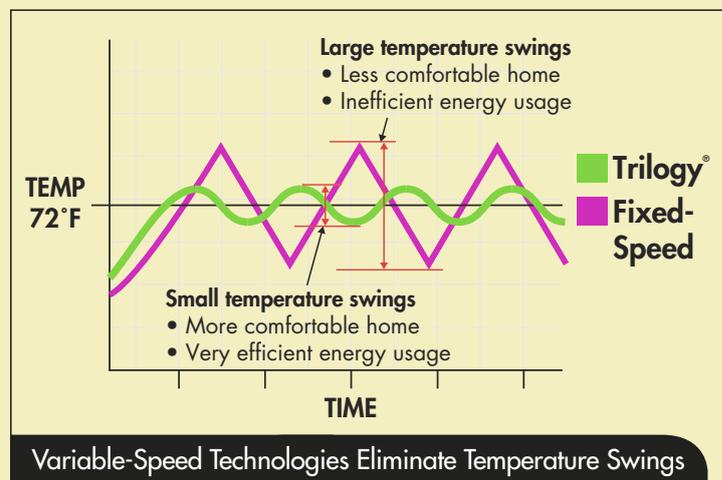
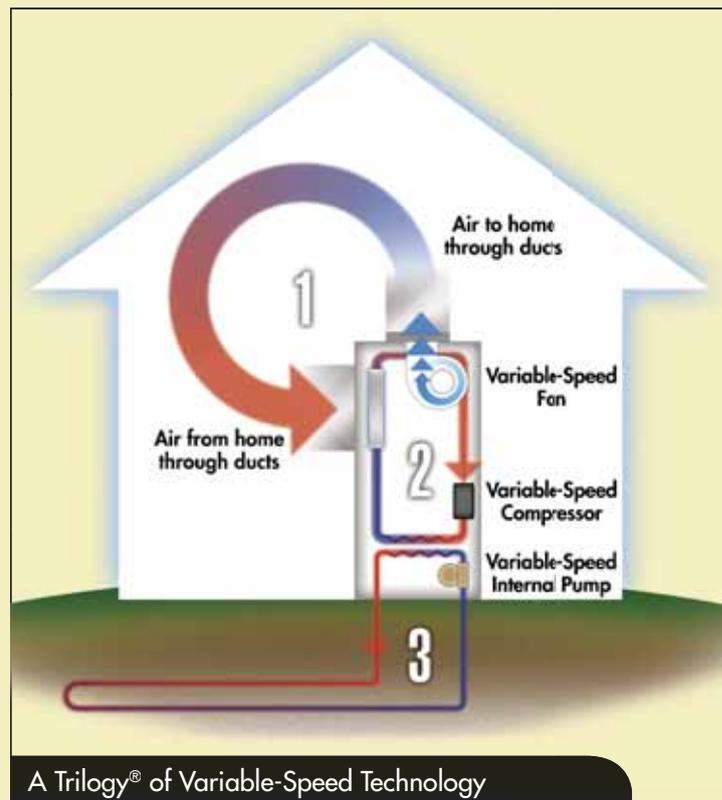
With vFlow™ technology, major water circulation components are built-in to the unit for clean, quick installation. The variable-speed loop pump automatically adapts to changes in unit capacity level and source water temperature to maintain optimum-system performance, with no need for bulky external pumping modules.

The future is here. Declare your personal energy independence AND get the highest comfort money can buy.

Q-Mode®

Hot water is a significant portion of the energy use of a residence. Beyond the 45 EER space cooling efficiency, Trilogy® 45 Q-Mode further delivers on lower operating costs by providing year-round, full-time water heating (at 500% efficiency) along with space heating and cooling. It's the only system on the market that delivers all four modes (Q-Mode) - space cooling, space heating, hot water generation while space cooling and dedicated hot water even when not space cooling.

Bottom line: It's even more operating cost savings for homeowners.



- 1 Space Cooling
- 2 Space Heating
- 3 Hot Water While Space Cooling
- 4 Dedicated Hot Water Even When Not Space Cooling

The Four Modes of Q-Mode®

iGate™ Internet-Connected Communicating system

iGate™ technology represents the next generation in intelligent controls by using two-way communication and internet connectivity to provide a gateway into your system from anywhere in the world. 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 or from the internet.

The iGate™ communications hub is the new EXM intelligent controller, which analyzes the status of sensors and smart components (also two-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, where it is displayed in plain English on your iGate™ Connect thermostat, PC service tool or the internet through a smart phone, PC or tablet. And since communication is two way, the iGate™ thermostat can also be used to configure and tailor your system without touching your unit. Your privacy is of utmost importance to us, so the dealer will only have access to your system if you authorize access.

iGate™ Smart Tank

Geothermal will now even power your home water heater. The iGate™ Smart Tank can save up to 80% on your hot water bills. iGate™ communicates with the Trilogy® 45 Q-Mode® heat pump to deliver all of your home's hot water needs with five times the efficiency of a traditional electric water heater.

The iGate™ Smart Tank is built to last. Our award-winning seamless tank is designed for a lifetime of highly efficient

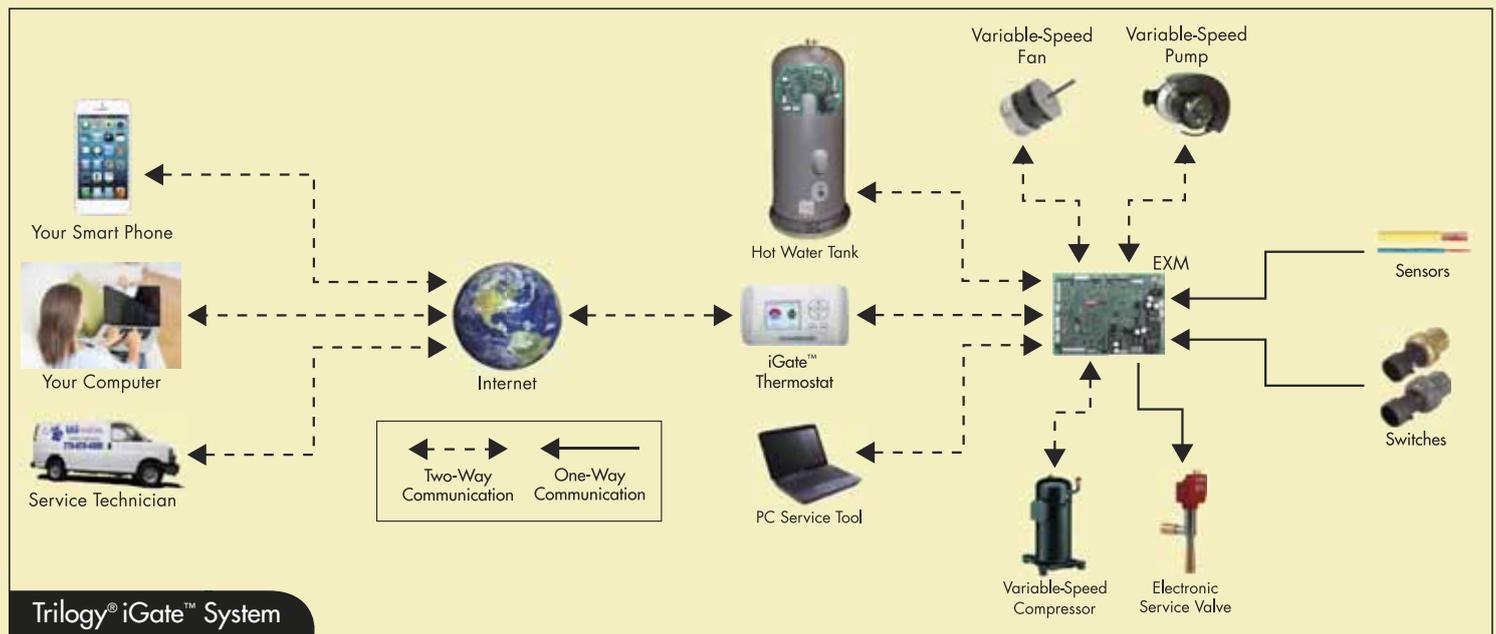
use. The thick polyurethane foam offers superior insulation compared to other storage tanks, and the seamless design is impervious to rust and corrosion. The titanium elements inside operate more efficiently and resist lime buildup, providing years of hot water for you and your family. The tough, molded polyethylene exterior resists dents, scratches, and salt air, while the polyurethane insulation helps to further reduce energy consumption.

iGate™ Connect—Internet-Connected Thermostat

Control your system from anywhere. The iGate™ Connect smart thermostat makes it easy for you to be comfortable when you are home and save money when you are not. Manage your complete comfort, set programs, vacation schedules and maintenance reminders from our thermostat or from your secure, personal internet portal or mobile device.

iGate™ Connect features a high-resolution color display and an intuitive interface, making it easy to quickly personalize your program, adjust settings, and create new events. It's all about you being in control of your comfort.

Manage, monitor, and diagnose your Trilogy® 45 Q-Mode® unit from anywhere, anytime. iGate™ Connect can also help your dealer monitor and optimize your equipment remotely. They can diagnose issues and make adjustments—even set alerts and reminders notifying you and a service technician about routine maintenance (like changing filters) or at the first sign of a problem. No other heating and cooling system allows this level of control and access from anywhere.



TRILOGY® 45 Q-MODE® SERIES Ground Loop Heat Pump Efficiency Ratings



Operation	QE-0930				QE-1860			
	Cooling		Heating		Cooling		Heating	
	Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	COP	Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	COP
Part load - 1	9,000	43.2	12,000	5.1	18,000	45.1	24,000	5.1
Part load - 2	12,000	44.3	18,000	4.9	24,000	43.0	36,000	4.7
Part load - 3	18,000	37.2	24,000	4.6	36,000	35.2	48,000	4.2
Full load	24,000	24.3	30,000	3.6	48,000	21.6	60,000	3.3

ASHRAE/AHRI/ISO 13256-1 Certified

TRILOGY® AND TRANQUILITY® SYSTEM COMPARISON

Packaged Series ● Standard ○ Optional		Trilogy® 45 Q-Mode® (QE)	Tranquility® 30 Digital (TE)	Tranquility® 22 Digital (TZ)	Tranquility® 30 (TT)	Tranquility® 20 (TS)
		Efficiency	Cooling	45 EER	29.6 EER	22.0 EER
	Heating	5.1 COP	5.0 COP	4.1 COP	4.8 COP	4.3 COP
ENERGY STAR® Designation		Most Efficient			Tier 3	
30% Federal Tax Credit Eligible		Yes	Yes	Yes	Yes	Yes
Compressor		Variable	Two Stage	Two Stage	Two Stage	One Stage
Q-Mode®-Free Cooling		●				
Communicating System						
Advanced Monitoring and Diagnostics		●				
Wi-Fi Communicating Thermostat		●				
Non-Communicating Electronic Controls					○	○
Hot Water Generation		Dedicated Full Time	Part Time	Part Time	Part Time	Part Time
Front Panels		Stainless Steel	Stainless Steel	Painted	Stainless Steel	Stainless Steel
Air Filter		2" MERV 11	2" MERV 11	1" MERV 8	2" MERV 11	2" MERV 11
vFLOW Internal Variable Water Flow		●	●	●		
External Fixed-Speed Flow Controller					○	○
Indoor Fan	Variable Speed	●	●	●	●	○
	Single Speed					●
Configuration	Vertical Upflow	○	○	○	○	○
	Horizontal	○	○	○	○	○
	Vertical Downflow	○	○		○	○
Air Coil		Micro-channel	Tin Plated*	Tin Plated	Tin Plated*	Tin Plated
Whole House Dehumidification		Trilogy® Variable Speed	Fan Controlled	Fan Controlled	ClimaDry™	ClimaDry™
Warranty—10-Year Parts; 5-Year Labor Allowance		●	●	●	●	●
Warranty—10-Year Parts; 10-Year Labor Allowance		○	○	○	○	○

*TE026-049 uses Micro-channel 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 9001:2008 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:
877-436-6263
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 9001:2008 certified.

