

TRANQUILITY 20/27 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.

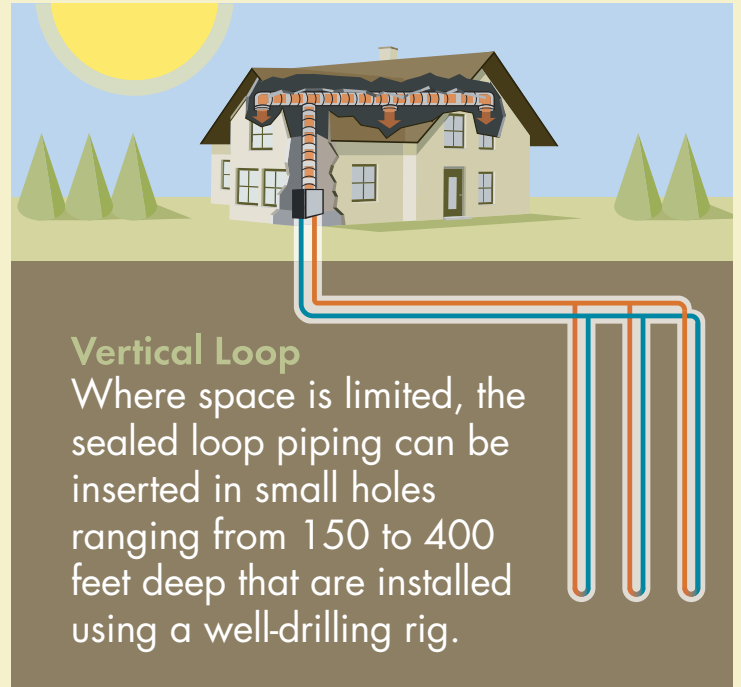
Water circulating in the loop piping absorbs heat from the earth and carries it to the heat pump, where it is concentrated and sent as warm, comfortable air throughout your home.

## 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.

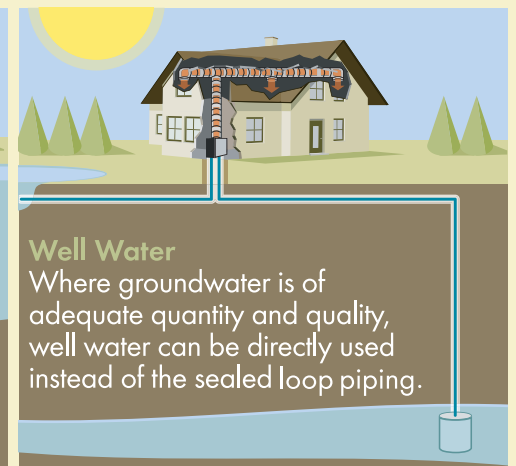
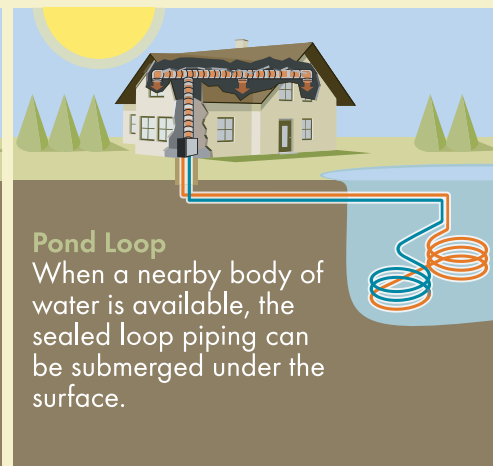
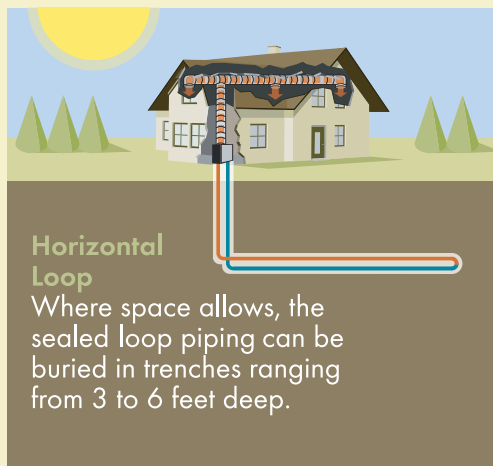
*ClimateMaster systems work year-round, in all climates, providing heating, cooling and hot water.*

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



## Flexible to install.

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





**The award-winning Tranquility 27®**  
The unit can fit in a utility closet (as shown), garage, basement, or attic.

# COST SAVINGS

## Low Utility Bills.

The Tranquility Series provides you the highest energy efficiency of any space conditioning system available. Efficiency equals savings, and geothermal heat pump systems substantially reduce operating costs over even the most efficient traditional systems.

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

## 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.

## More Ways to Save.

A federal tax credit saves you 30% on the total cost when you install your geothermal heat pump system. Check with your state and local utilities to find out if other incentives are available in addition to the federal tax credit.

# HOMEOWNER SATISFACTION

## Leading Technology.

Get the latest in geothermal heat pump technology. The Tranquility's advanced design includes two-stage operation and variable-speed fan. This provides higher efficiency, quiet operation and automatically adapts to provide the optimum comfort 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 assures you of blissful comfort, maximum efficiency and low utility bills.

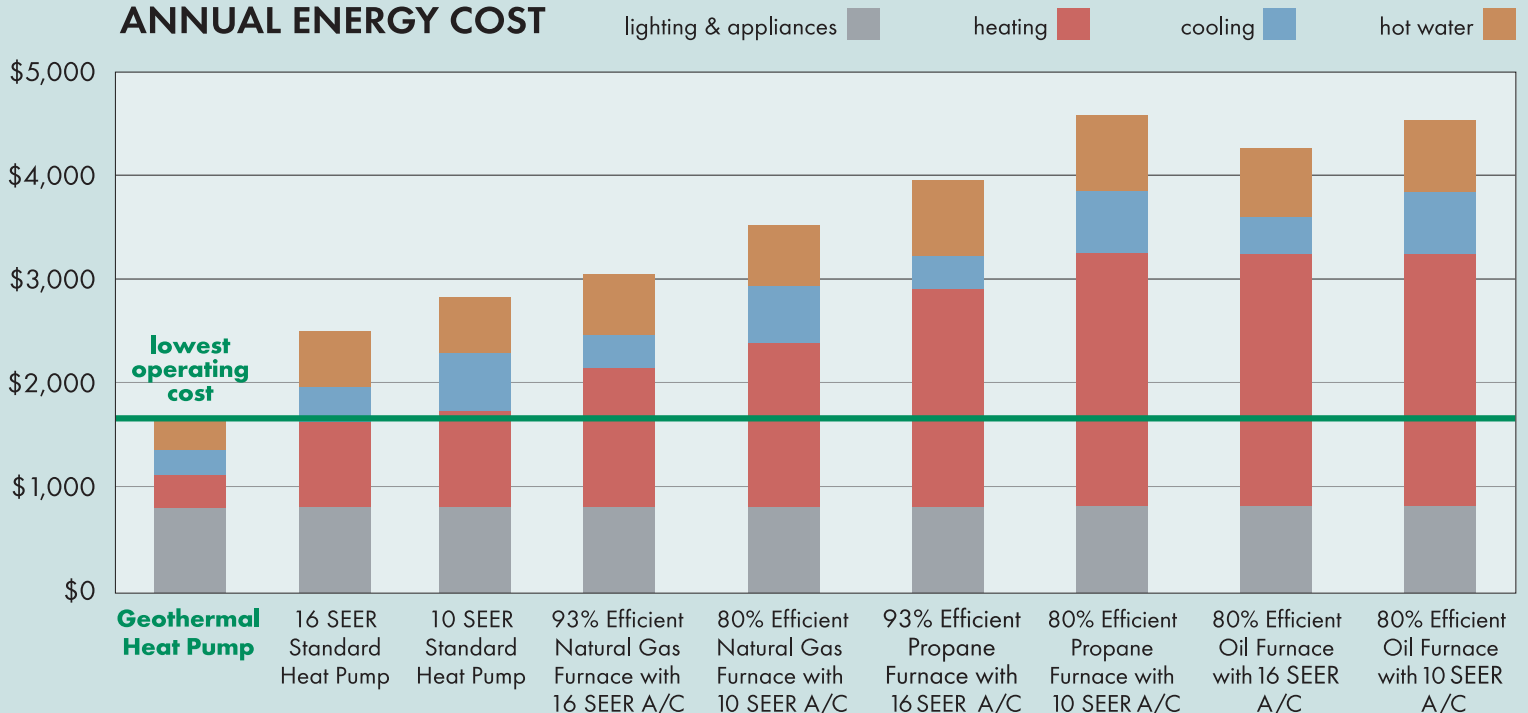
## Noise-Free Operation.

To reduce noise, the Tranquility 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 Series is designed for a long service life, assuring you of savings for many years to come. Exclusive electronic controls provide worry-free operation. Each unit is backed by a 10-year limited warranty. Underground pipe provided by ClimateMaster carries a 50-year limited warranty.

## ANNUAL ENERGY COST



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

## **Safety and Cleanliness.**

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

## **Track Record.**

Geothermal heat pumps are a reliable and proven technology that has been widely used for more than 30 years. Millions of geothermal heat pumps are in operation worldwide, keeping people comfortable in homes, schools, hospitals, military facilities and many other buildings.

## **ClimaDry™ Whole House Dehumidification.**

The ClimaDry option uses a patented technology to dehumidify your entire house, automatically adjusting the air temperature to avoid overcooling or overheating, providing your family maximum comfort.

## **Star Among Energy Stars.**

The environmental advantages of Energy Star qualified Tranquility heat pumps are clear. Up to 80% of energy supplied comes directly from the Earth and is clean, free and renewable. This means geothermal heat pumps offer the lowest carbon footprint of any space conditioning technology. According to the U.S.



Environmental Protection Agency (EPA), geothermal systems are "the most energy-efficient, environmentally clean and cost-effective space conditioning systems available today."

## **Earth-Friendly.**

For an Earth-friendly system, the Tranquility Series uses EarthPure® Ozone Safe refrigerant. EarthPure® refrigerant is non-chlorine based and has zero ozone depletion potential.

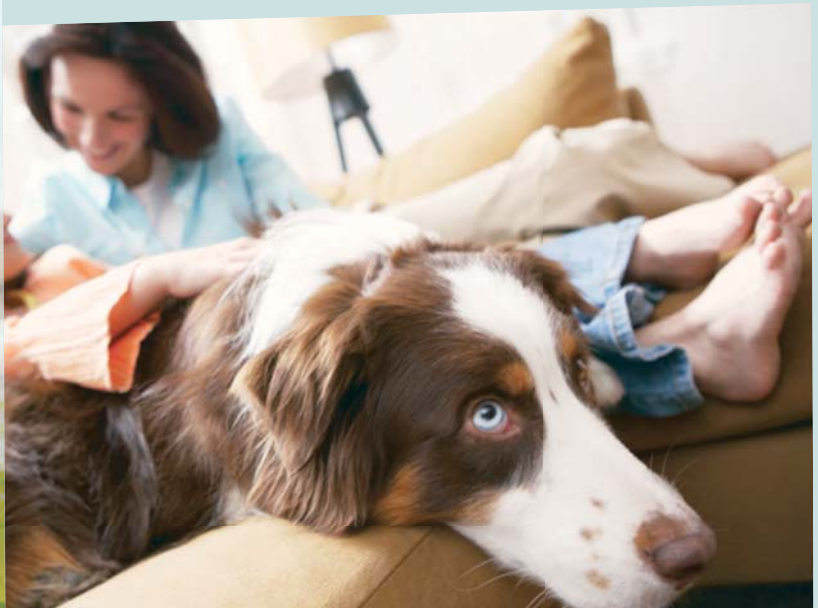
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*Rest comfortably — knowing you are saving up to 80% on energy costs while reducing your impact on the environment.*

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## **Breathe Easier.**

The Tranquility Series delivers superior air filtration for improved indoor air quality. Compared to traditional fiberglass air filters, our filter removes up to nine times more dust, lasts three times longer and captures nearly 100% of pollen and spores.



# TRANQUILITY SERIES ADVANCED FEATURES

High-efficiency filter system provides superior indoor air quality.

Coated air coil protects against corrosive environments.

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

Optional hot water generator.

Electronic controls constantly monitor operation for reliability and long life.



Acoustically engineered for noise-free operation.

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

High-efficiency scroll compressor operates at lower pressures, extending service life. Tranquility 27® two-stage operation provides higher efficiency.

Stylish, modern design.



# SYSTEM COMPARISONS

	Tranquility 20 (TS) Series			Tranquility 27® (TT) Series		
	Standard	Factory Option	Dealer Option	Standard	Factory Option	Dealer Option
EarthPure® HFC-410A Refrigerant	○			○		
Single-Stage Compressor	○					
Two-Stage Compressor				○		
Copper Water Coil	○			○		
Cupro-Nickel Water Coil		○			○	
Variable-Speed Fan Motor		○	○	○		
Coated Air Coil	○			○		
MERV 11 2" Air Filter	○			○		
Hot Water Generator		○			○	
Bi-Directional Thermal Expansion Valve	○			○		
Dual-Level Compressor Isolation	○			○		
Downflow Configuration		○			○	
3 Compressor Section Access Panels	○			○		
2 Airflow Section Panels	○			○		
Polyester Powder Coat Paint	○			○		
Fault Identification & Reset at Thermostat	○			○		
Microprocessor Controls	○			○		
Unit Performance Sentinel™ Performance Monitor	○			○		
ClimaDry™ Whole House Dehumidification		○			○	
Extended Labor Allowance and Service Warranty		○	○		○	○
Digital Multi-Stage Thermostat			○			○
Flow Controller Loop Pumping Module			○			○
Internal Auxiliary Electric Heat			○			○

## TRANQUILITY 20 Ground Loop Heat Pump Operation

Unit	Variable-Speed Motor Operation				PSC Motor Operation			
	Cooling		Heating		Cooling		Heating	
	Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	COP	Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	COP
TS-018	20,200	19.4	14,500	3.9	19,500	18.4	14,500	3.6
TS-024	26,000	20.0	19,400	3.8	26,300	19.1	19,000	3.7
TS-030	29,800	18.0	23,700	3.9	29,400	17.6	23,600	3.8
TS-036	34,600	20.2	25,800	4.2	34,500	19.2	25,700	3.9
TS-042	40,000	20.0	30,400	4.0	39,300	18.4	31,600	3.8
TS-048	50,100	18.5	38,400	3.8	49,900	17.6	39,000	3.7
TS-060	64,000	19.0	46,700	3.8	63,300	18.2	46,500	3.7
TS-070	70,000	17.8	53,900	3.6	70,800	16.6	54,000	3.6

Tested in accordance with ASHRAE/AHRI/ISO 13256-1

## TRANQUILITY 27<sup>®</sup> Ground 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
TT-026	21,300	26.0	16,500	4.6	26,000	18.5	19,800	4.0
TT-038	28,900	27.0	22,100	4.5	38,200	18.2	29,000	4.0
TT-049	39,600	24.9	31,200	4.6	50,600	17.9	37,500	4.0
TT-064	49,800	25.3	37,500	4.3	64,800	17.5	48,000	3.9
TT-072	57,700	21.4	45,400	3.9	71,600	16.2	54,100	3.6

Tested in accordance with ASHRAE/AHRI/ISO 13256-1

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

## 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.



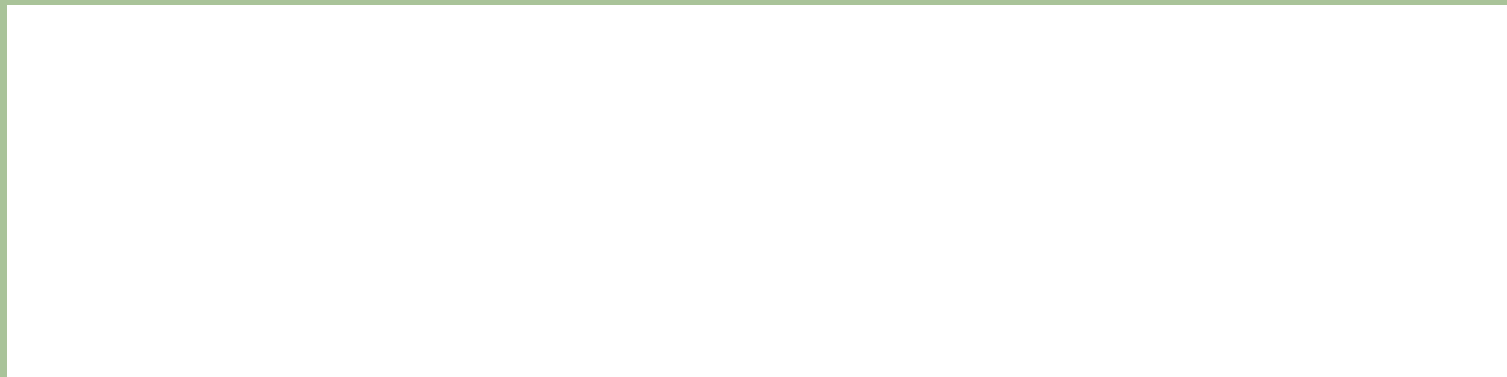
24-hour information:

877-436-6263

**climatemaster.com**

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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.

