



## 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.

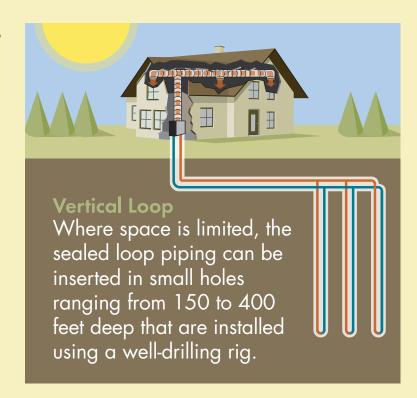
Water circulating in the loop piping absorbs heat from the earth and carries it to the heat pump, where it is concentrated and sent as warm, comfortable air throughout your home.

# 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.

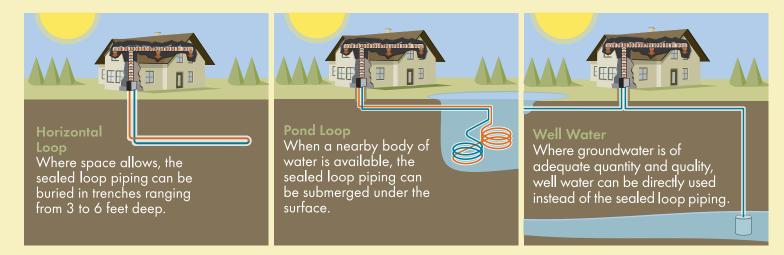
In all seasons, the system may provide nearly free hot water whenever it is in use.

ClimateMaster systems work yearround, 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.





### HOMEOWNER SATISFACTION

#### 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.

#### Leading Technology.

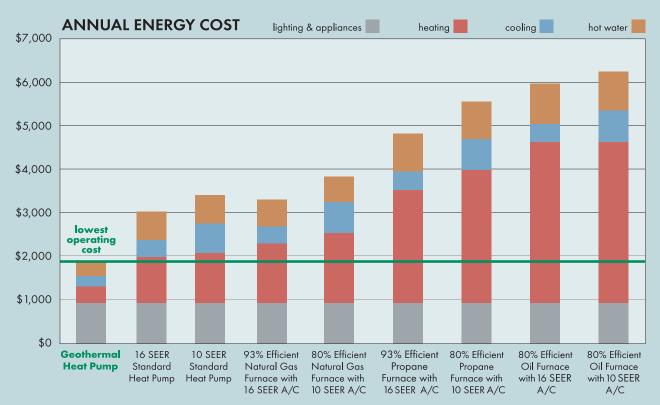
Get the latest in geothermal heat pump technology. The Tranquility's advanced design includes two-stage operation and variable-speed fan. This provides higher efficiency, quiet operation and automatically adapts to provide the optimum comfort no matter what the weather is outside. The variable-speed 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.

#### **Ultra-Quiet 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.



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.

#### 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 energyefficient, 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.

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

#### **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



## SYSTEM COMPARISONS

Packo	ged Series	Trilogy <sup>®</sup>	Tranquility®	Tranquility®	Tranquility®	Tranquility®
<ul><li>Standard</li><li>Optional</li></ul>		45 Q-Mode® (QE)	30 Digital (TE)	22 Digital (TZ)	30 (TT)	20 (TS)
Eff. day	Cooling	45 EER	29.6 EER	23.7 EER	29.6 EER	21.9 EER
Efficiency	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 Cred	30% Federal Tax Credit Eligible		Yes	Yes	Yes	Yes
Compressor		Variable	Two Stage	Two Stage	Two Stage	One Stage
Q-Mode®-Free Cooling		•				
Communicating System		<b>i</b> Gate connect	<b>⊡</b> iGate	<b>⊡</b> iGate		
Advanced Monitoring and Diagnostics		•				
Wi-Fi Communicating Thermostat		•				
Non-Communicating Electronic Controls					0	0
Hot Water Generation	Hot Water Generation		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
VFICW Internal Variable Water Flow		•	•	•		
External Fixed-Speed Flow Controller					0	0
La de ca Fac	Variable Speed	•	•	•	•	0
Configuration	Single Speed					
	Vertical Upflow	0	0	0	0	0
	Horizontal	0	0	0	0	0
	Vertical Downflow	0	0		0	0
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		0	0	0	0	0

<sup>\*</sup>TE026-049 uses Micro-channel aluminum coil

## $TRANQUILITY^{\circledR}~20~{\it Ground~Loop~Heat~Pump~Operation}$

	ECM Motor Operation				PSC Motor Operation			
	Cool	Cooling He		ng	Cooling		Heating	
Unit	Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	СОР	Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	СОР
TS-018	20,200	19.4	14,500	3.9	19,500	18.4	14,500	3.6
TS-024	25,500	20.9	19,100	4.2	25,300	18.9	19,200	4.0
TS-030	29,200	19.4	22,000	4.1	29,200	18.5	22,200	3.9
TS-036	34,600	20.4	25,600	4.3	34,300	19.2	25,900	4.1
TS-042	40,700	21.9	27,400	4.1	40,100	19.4	28,700	3.8
TS-048	50,600	18.8	36,100	3.7	49,600	16.8	36,600	3.4
TS-060	64,400	18.4	46,400	3.9	63,900	17.2	46,900	3.7
TS-070	72,900	16.2	53,800	3.4				

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

# TRANQUILITY® 30 Ground Loop Heat Pump Operation

	First Stage Operation*			Second Stage Operation				
	Cooling		Heating		Cooling		Heating	
Unit	Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	СОР	Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	СОР
TT-026	20,900	28	15,300	4.6	26,300	19.9	18,900	4.0
TT-038	30,400	29.6	23,200	4.8	39,900	20.3	29,200	4.4
TT-049	40,300	27.9	30,100	4.4	50,800	19.3	37,200	4.0
TT-064	51,200	26.7	38,100	4.4	66,200	18.8	48,700	3.9
TT-072	58,100	23.2	46,000	3.9	<i>7</i> 1, <i>7</i> 00	16.9	55,800	3.7

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

<sup>\*</sup>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 9001:2008 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.

