



THE SMART SOLUTION FOR ENERGY EFFICIENCY

## TRANQUILITY 27™ TWO-STAGE (TT) SERIES 2 TO 5.5 TON HORIZONTAL AND VERTICAL EARTH PURE® UNITS



# ClimateMaster Water-Source Heat Pumps Tranquility 27™ Two-Stage (TT) Series Horizontal and Vertical EarthPure® Units

## THE TRANQUILITY 27™ TWO-STAGE (TT) SERIES

As the highest efficiency water-source heat pump on the planet, the Tranquility 27™ series raises the bar for water-source heat pump efficiencies, features and application flexibility. Not only does the Tranquility 27™ far exceed ASHRAE 90.1 efficiencies, but it also uses EarthPure® HFC-410A zero ozone depletion refrigerant, making it an extremely environmentally-friendly option. Tranquility 27™ is eligible for additional LEED™ (Leadership in Energy and Environmental Design) points because of its “green” technology design.

Available in sizes 2 tons (7.0 kW) through 5-1/2 tons (19.3 kW) with multiple cabinet options (vertical upflow, vertical downflow and horizontal) the Tranquility 27™ offers a wide range of units for most any installation. The Tranquility 27™ has an extended range refrigerant circuit, capable of ground loop (geothermal) applications as well as water loop (boiler-tower) applications. Standard features are many. Copeland UltraTech™ two-stage unloading scroll compressor, GE ECM variable fan motor, microprocessor controls, galvanized steel cabinet, epoxy powder coat paint, stainless steel drain pan and foil-backed air handler insulation are just some of the features of the innovative Tranquility 27™ series.

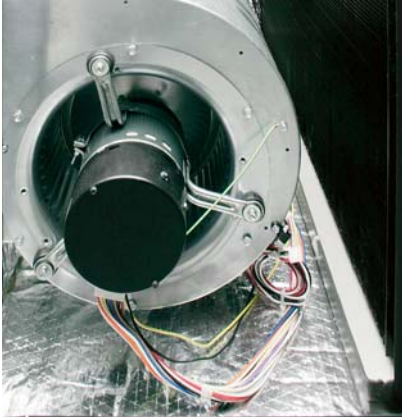
ClimateMaster’s exclusive double isolation compressor mounting system makes the Tranquility 27™ the quietest unit on the market. Compressors are mounted on vibration isolation springs to a heavy gauge mounting plate, which is then isolated from the cabinet base with rubber grommets for maximized vibration/sound attenuation. The unique low profile slanted control box makes installing and maintaining the unit easier than any other water-source heat pump currently in production. Options such as e-coated air coil, DDC controls, internal pump and high efficiency MERV 11 two-inch (51mm) air filters allow customized design solutions.

The Tranquility 27™ (TT) Series water-source heat pumps are designed to meet the challenges of today’s HVAC demands with one of the most innovative products available on the market.

## UNIT FEATURES

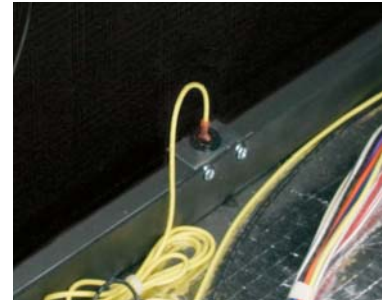
- Sizes 026 (2 ton, 7.0 kW) through 064 (5.5 tons, 19.3 kW)
- EarthPure® HFC-410A refrigerant
- Copeland UltraTech™ two-stage unloading scroll compressors
- GE ECM variable speed fan motor with soft start
- Exceeds ASHRAE 90.1 efficiencies
- Part load operation significantly lowers annual operating costs
- Galvanized steel construction with attractive black mat epoxy powder coat paint and silver accents
- Stainless steel drain pan
- Foil-backed insulation in air handler section
- Unique double isolation compressor mounting with vibration isolation springs for quiet operation
- Insulated divider and separate compressor/air handler compartments
- TXV metering device
- Extended range (20 to 120°F, -6.7 to 48.9°C) operation
- Microprocessor controls standard (optional DXM and/or DDC controls)
- LonWorks, BACnet, Modbus and Johnson N2 compatibility options for DDC controls
- Field convertible discharge air arrangement for horizontal units
- Low profile slanted control box for easy access
- Internally trapped condensate drain line (vertical units only)
- Flush securely-mounted corner post water connections (no backup wrench required)
- Unit Performance Sentinel performance monitoring system
- Eight Safeties Standard
- Wide variety of options including e-coated air coils and internal pumps

# The Smart Choice for Energy Efficiency



Easy to remove blower housing for quick service and General Electric ECM variable speed motor

Standard stainless steel insulated drain pan with condensate overflow protection



Foil faced insulation in the blower section and fiberglass insulation in the compressor section

Easy Service Access from multiple sides



Factory installed hanger brackets

Copeland UltraTech™ two-stage compressor with double spring and grommet isolation



Easy access control box contains advanced digital controls with Remote Service Sentinel Optional Enhanced controls (DXM) & DDC Controllers



## PERFORMANCE AND SPECIFICATIONS

### Full Load ARI/ISO/ASHRAE 13256-1 Data (English (IP) Units & Metric (SI) Units)

Model	Voltage & Refrigerant	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
		Cooling 86°F [30°C]		Heating 68°F [20°C]		Cooling 59°F [15°C]		Heating 50°F [10°C]		Cooling 77°F [25°]		Heating 32°F [0°C]	
		Capacity	EER	Capacity	COP	Capacity	EER	Capacity	COP	Capacity	EER	Capacity	COP
		Btuh [kW]	Btuh/W [W/W]	Btuh [kW]		Btuh [kW]	Btuh/W [W/W]	Btuh [kW]		Btuh [kW]	Btuh/W [W/W]	Btuh [kW]	
60Hz - R410a	50Hz - R410a												
TTH/V026	60Hz - R410a	25,000 [7.42]	15.9 [4.7]	30,800 [9.03]	5.3	28,900 [8.47]	24.5 [7.2]	25,700 [7.53]	4.8	28,600 [7.80]	18.5 [5.4]	19,800 [5.80]	4.0
	50Hz - R410a	Data Available 2nd Quarter 2005											
TTH/V038	60Hz - R410a	36,200 [10.61]	15.6 [4.6]	44,800 [13.13]	5.3	41,200 [12.08]	23.0 [6.7]	36,700 [10.76]	4.7	38,200 [11.20]	18.2 [5.3]	29,000 [8.50]	4.0
	50Hz - R410a	Data Available 2nd Quarter 2005											
TTH/V049	60Hz - R410a	48,400 [14.19]	15.7 [4.6]	59,900 [17.49]	5.2	54,600 [16.00]	22.5 [6.6]	48,300 [14.16]	4.7	50,600 [14.83]	17.9 [5.2]	37,500 [10.99]	4.0
	50Hz - R410a	Data Available 2nd Quarter 2005											
TTH/V064	60Hz - R410a	61,500 [18.03]	15.0 [4.4]	72,300 [21.19]	5.0	68,600 [20.11]	22.0 [6.4]	59,600 [17.47]	4.4	64,800 [18.99]	17.5 [5.1]	48,000 [14.07]	3.9
	50Hz - R410a	Data Available 2nd Quarter 2005											

### Part Load ARI/ISO/ASHRAE 13256-1 Data (English (IP) Units & Metric (SI) Units)

Model	Voltage & Refrigerant	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
		Cooling 86°F [30°C]		Heating 68°F [20°C]		Cooling 59°F [15°C]		Heating 50°F [10°C]		Cooling 77°F [25°]		Heating 32°F [0°C]	
		Capacity	EER	Capacity	COP	Capacity	EER	Capacity	COP	Capacity	EER	Capacity	COP
		Btuh [kW]	Btuh/W [W/W]	Btuh [kW]		Btuh [kW]	Btuh/W [W/W]	Btuh [kW]		Btuh [kW]	Btuh/W [W/W]	Btuh [kW]	
60Hz - R410a	50Hz - R410a												
TTH/V026	60Hz - R410a	19,400 [5.69]	18.3 [5.4]	22,400 [6.57]	6.1	22,200 [6.51]	30.8 [9.0]	18,600 [5.45]	5.1	21,300 [6.24]	26.0 [7.6]	16,500 [4.83]	4.6
	50Hz - R410a	Data Available 2nd Quarter 2005											
TTH/V038	60Hz - R410a	26,200 [7.68]	18.5 [5.4]	30,800 [9.03]	6.3	30,200 [8.85]	31.5 [9.2]	24,800 [7.27]	5.1	28,900 [8.47]	27.0 [7.9]	22,100 [6.48]	4.5
	50Hz - R410a	Data Available 2nd Quarter 2005											
TTH/V049	60Hz - R410a	36,100 [10.58]	18.0 [5.3]	44,300 [12.98]	6.2	40,700 [11.93]	28.7 [8.4]	35,400 [10.38]	5.1	39,600 [11.61]	24.9 [7.3]	31,200 [9.14]	4.6
	50Hz - R410a	Data Available 2nd Quarter 2005											
TTH/V064	60Hz - R410a	44,900 [13.16]	17.6 [5.2]	51,100 [14.98]	5.7	51,900 [15.21]	29.7 [8.7]	41,800 [12.25]	4.7	41,800 [14.60]	25.3 [7.4]	37,500 [10.99]	4.3
	50Hz - R410a	Data Available 2nd Quarter 2005											

Cooling capacities based upon 80.6°F [27°C] DB, 66.2°F [19°C] WB entering air temperature.

Heating capacities based upon 68°F [20°C] DB, 59°F [15°C] WB entering air temperature.

All ratings based upon operation at the lower voltage of dual voltage rated models.

### Dimensional Data

Vertical Upflow Model		Overall Cabinet			Horizontal Model		Overall Cabinet		
		W	D	H			W	D	H
026	in.	22.4	25.6	48.5	026	in.	22.4	62.2	19.3
	cm.	56.8	65.1	123.2		cm.	56.8	158.0	48.9
038	in.	25.4	30.6	50.5	038	in.	25.4	71.2	21.3
	cm.	64.5	77.8	128.3		cm.	64.5	180.8	54.0
049	in.	25.4	30.6	54.5	049	in.	25.4	76.2	21.3
	cm.	64.5	77.8	138.4		cm.	64.5	193.5	54.0
064	in.	25.4	30.6	58.5	064	in.	25.4	81.2	21.3
	cm.	64.5	77.8	148.6		cm.	64.5	206.2	54.0

Note: Add 4" [10.16cm] to height for vertical downflow models

### Voltage Options

Model	Volts	Hz	Phase
026	208/230	60	1
038 - 064	208/230	60	1
	208/230	60	3
	460	60	3

  
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