



TRANQUILITY® 27 SERIES

  
**CLIMATEMASTER®**  
Water-Source Heat Pump Systems

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



The Tranquility® 27 Two-Stage (TT) Series blends the most advanced technology with the most advanced design to create some of the highest efficiency water-source heat pumps available today.

The Tranquility® 27 Two-Stage Series utilizes EarthPure® (HFC-410A) refrigerant along with the Copeland UltraTech™ two-stage compressor and ECM variable speed motor to bring unmatched performance and comfort.

## UNIT FEATURES

- Sizes 026 (2 ton, 7.0 kW) through 072 (6 ton, 21.1 kW)
- Environmentally-friendly EarthPure® HFC-410A refrigerant
- Unsurpassed efficiencies (far exceeds ASHRAE 90.1)
- Copeland UltraTech two-stage compressor and variable speed ECM fan motor
- Galvanized steel construction and powder coat paint on all units
- Unique double isolation compressor mounting for quiet operation
- Discharge muffler standard on all sizes for superior sound attenuation
- Microprocessor controls standard (optional DXM and/or DDC controls)
- Field convertible discharge air arrangement for horizontal units
- Bi-directional, balanced port expansion valve refrigerant metering device standard
- Standard range or extended range operation
- Water connections securely mounted flush to the cabinet corner post (no backup wrench required)
- Eight safeties standard

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

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



Copeland UltraTech™ two-stage compressor with dual compressor vibration isolation

Easy service access from multiple sides



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



Factory installed hanger brackets on horizontal units



Standard stainless steel insulated drain pan with condensate overflow protection



## PERFORMANCE AND SPECIFICATIONS

### Full Load AHRI/ISO/ASHRAE 13256-1 Data (English (I-P) Units & Metric (S-I) Units)

Model	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°C]		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]	
TT-026	HFC-410A	25,300 [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	26,600 [7.80]	18.5 [5.4]	19,800 [5.80]	4.0
TT-038	HFC-410A	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
TT-049	HFC-410A	48,400 [14.19]	15.7 [4.6]	59,900 [14.19]	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
TT-064	HFC-410A	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
TT-072	HFC-410A	68,700 [20.14]	14.2 [4.2]	88,600 [25.97]	4.9	77,100 [22.60]	19.9 [5.8]	70,200 [20.57]	4.3	71,600 [20.99]	16.2 [4.7]	54,100 [15.86]	3.6

### Part Load AHRI/ISO/ASHRAE 13256-1 Data (English (I-P) Units & Metric (S-I) Units)

Model	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°C]		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]	
TT-026	HFC-410A	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
TT-038	HFC-410A	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
TT-049	HFC-410A	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
TT-064	HFC-410A	44,900 [13.16]	17.6 [5.2]	51,100 [14.98]	5.7	51,900 [15.21]	29.7 [8.7]	49,800 [12.25]	4.7	49,800 [14.60]	25.3 [7.4]	37,500 [10.99]	4.3
TT-072	HFC-410A	52,800 [15.48]	16.0 [4.7]	65,200 [19.11]	5.1	59,800 [17.53]	24.5 [7.2]	51,700 [15.15]	4.3	57,700 [16.91]	21.4 [6.3]	45,400 [13.31]	3.9

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		
		W	D	H
026	in. cm	22.4 56.8	25.6 65.1	48.5 123.2
038	in. cm	25.4 64.5	30.6 77.8	50.5 128.3
049	in. cm	25.4 64.5	30.6 77.8	54.5 138.4
064	in. cm	25.4 64.5	30.6 77.8	58.5 148.6
072	in. cm	25.4 64.5	30.6 77.8	58.5 148.6

Horizontal Model		Overall Cabinet		
		W	D	H
026	in. cm	22.4 56.8	62.2 158.0	19.3 48.9
038	in. cm	25.4 64.5	71.2 180.8	21.3 54.0
049	in. cm	25.4 64.5	76.2 193.5	21.3 54.0
064	in. cm	25.4 64.5	81.2 206.2	21.3 54.0
072	in. cm	25.4 64.5	81.2 206.2	21.3 54.0

### Voltage Options

Model	Volts	Hz	Phase
026	208/230	60	1
038 - 064	208/230	60	1
	208/230	60	3
	460	60	3
072	208/230	60	1

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



## UNIT FEATURES

Product Series	Standard Features										Factory Installed Options																	
	EarthPure® (HFC-410A) Refrigerant	Microprocessor CXM Controls*	Standard Entering Water Temperature Range (60 to 95°F)	Copper Water Coil**	TXV	Dual Level Compressor Vibration Isolation	Field Convertible Discharge (Horizontal Units)	Multiple Access Panels for Installation and Service Ease	Scroll Compressors	Factory Installed Hanger Brackets (Horizontal Units)	Remote Reset at Thermostat	Condensate Overflow Protection	Cupro-Nickel Coil**	High Static Blower	UltraQuiet (Mute) Package	Extended Entering Water Temperature †	Auto-Flow Water Regulation	Two-Way Control Valve	Downflow Configuration	Desuperheater Coil	DDC Controller	Deluxe DXM Controller*	Coated Air Coil	Internal Secondary Pump	ECM Fan Motor***	ClimateDry Reheat	Internal Service Disconnect	
Tranquility 27® Two-Stage (TT)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tranquility 20 Single-Stage (TS)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tranquility High Efficiency (TR)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tranquility 16 Compact (TC)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tranquility Vertical Stack (TRM)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tranquility Vertical Stack (TRW)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tranquility Console (TRC)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tranquility Compact (TC)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tranquility Large (TL)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tranquility Water-to-Water (TMW)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Rooftop (TRE)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Rx Energy Recovery Ventilator (ERV)			•						•																			
Vertical Dedicated Outdoor Air (TOV)	•	•	•	•	•				•	•				•	†					•			•					
Horizontal Dedicated Outdoor Air (TOH)	•	•	•	•	•				•	•				•	†			•		•			•					

Some exceptions may apply to standard features and options, consult product submittal materials to determine availability.

\* Control for TO Series is DDC with modulating HGR. Control for TMW 360-600 is DDC.

\*\* Water coil construction for TO Series and TMW 360-600 is stainless steel.

\*\*\* Standard on TT Series

† Standard on TMW Series

† Extended Range = 35°F-95°F EWT



Quality: First & Always



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The management system governing the manufacture of ClimateMaster's products is ISO 9001:2000 certified.

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