



THE SMART SOLUTION FOR ENERGY EFFICIENCY

**TRANQUILITY LARGE (TL) SERIES
7 TO 25 TON LARGE
VERTICAL EARTH PURE® UNITS**



ClimateMaster Water-Source Heat Pumps Tranquility Large (TL) Series 7 to 25 Ton Vertical EarthPure® Units

THE TRANQUILITY LARGE (TL) SERIES

The award winning Tranquility series raises the bar for Water-Source Heat Pump efficiencies, features and application flexibility. Not only does the Tranquility Large Series exceed ASHRAE 90.1 efficiencies, but it also uses EarthPure® HFC-410A zero ozone depletion refrigerant, making it an extremely environmentally-friendly option. Tranquility Large Series is eligible for additional LEED™ (Leadership in Energy and Environmental Design) points because of the “green” technology design. Designed to be field convertible to front or back return and top, front or back discharge, the Tranquility Large Series heat pump is packed full of the innovation you have come to expect from the experts at ClimateMaster.

Available in sizes 7 tons (24.6 kW) through 25 tons (87.9 kW) with multiple cabinet configurations, the TL series offers a wide range of units for most any installation. The TL has an extended range refrigerant circuit, capable of ground loop (geothermal) applications, ground water (geothermal) applications, as well as water loop (boiler-tower) applications. Standard features are many. Microprocessor controls, galvanized steel cabinet, epoxy powder coat paint and TXV refrigerant metering device are just some of the features of the flexible TL series.

ClimateMaster’s use of scroll compressors and belt-drive blowers help minimize vibration/sound attenuation. Options such as e-coated air coil, DDC controls, internal motorized water valves, secondary pumps and stainless steel drain pans allow customized design solutions.

The Tranquility Large 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

- Vertical sizes 084 (7 tons, 24.6 kW), 096 (8 tons, 28.1 kW), 120 (10 tons, 35.2 kW), 150 (12.5 tons, 44 kW), 168 (14 tons, 49.2 kW), 192 (16 tons, 56.3 kW), 240 (20 tons, 70.3 kW), 300 (25 tons, 87.9 kW)
- Unit configuration can be ordered with, or converted to front or back return and top, front, or back discharge. Field conversion uses all existing parts including panels and belts
- Electrical box can be field converted to be on front or back of unit
- Electric power can enter from any side of unit
- Water and drain can be connected to either side
- Copeland scroll compressors
- Dual refrigeration circuits (TL168, 192, 240, 300)
- Exceeds ASHRAE 90.1 efficiencies
- Galvanized steel construction with attractive matte black epoxy powder coat painted panels
- 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
- Unit Performance Sentinel performance monitoring system
- Eight Safeties Standard
- Flush securely-mounted side water connections (no backup wrench required)
- Full filter rack 1”, 2” or 4” factory option
- Filters - 1” and 2” thick fiberglass, 4” thick pleated Merv 8 factory standard
- Optional filters - 2” or 4” thick Merv 13, 1” or 2” thick Merv 8
- Stainless steel drain pan optional
- Cupro-Nickel water coil optional
- UltraQuiet sound absorbing mute package optional
- Internal motorized water valve optional
- Internal secondary pump optional
- E-coated air coil optional
- Extended range insulation optional
- Dual point power optional

The Smart Choice for Energy Efficiency



Condensate overflow is one of the 8 standard safeties provided by the microprocessor controls in all TL series units



Dual compressor refrigeration circuit in TL 168-300 equipment single compressor refrigeration circuit in TL 084-150



Wide variety of vertical configurations

Large capacity (up to 25 tons)

Galvanized steel cabinet with baked-on epoxy powder finish on all access panels



Belt drive blowers with high efficiency motors and multiple pulley adjustments

Optional insulated water/refrigerant circuits allow extended range operation (ground loop applications)



PERFORMANCE AND SPECIFICATIONS

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 | | Heating 68°F | | Cooling 59°F | | Heating 50°F | | Cooling 77°F | | Heating 32°F | |
| | | Capacity | EER | Capacity | COP | Capacity | EER | Capacity | COP | Capacity | EER | Capacity | COP |
| | | Btuh | Btuh/W | Btuh | | Btuh | Btuh/W | Btuh | | Btuh | Btuh/W | Btuh | |
| TLV084 | 60Hz - R410A | 82,000 | 15.2 | 101,000 | 4.8 | 87,500 | 21.0 | 83,500 | 4.3 | 83,000 | 16.5 | 65,500 | 3.6 |
| TLV096 | 60Hz - R410A | 94,000 | 15.0 | 118,000 | 4.7 | 102,500 | 20.5 | 96,500 | 4.2 | 97,500 | 16.5 | 76,500 | 3.6 |
| TLV120 | 60Hz - R410A | 118,000 | 15.0 | 144,000 | 5.0 | 133,000 | 21.0 | 118,000 | 4.2 | 120,000 | 16.5 | 93,000 | 3.7 |
| TLV150 | 60Hz - R410A | 150,000 | 14.0 | 186,000 | 4.7 | 170,000 | 20.0 | 155,000 | 4.2 | 156,000 | 15.8 | 122,000 | 3.6 |
| TLV168 | 60Hz - R410A | 166,000 | 15.5 | 204,020 | 4.9 | 177,000 | 21.4 | 169,000 | 4.4 | 168,000 | 16.8 | 132,500 | 3.7 |
| TLV192 | 60Hz - R410A | 190,000 | 15.3 | 238,360 | 4.8 | 207,000 | 20.9 | 195,000 | 4.3 | 197,000 | 16.8 | 155,000 | 3.7 |
| TLV240 | 60Hz - R410A | 238,500 | 15.3 | 291,000 | 5.1 | 269,000 | 21.4 | 238,000 | 4.3 | 242,500 | 16.8 | 188,000 | 3.8 |
| TLV300 | 60Hz - R410A | 300,000 | 14.0 | 372,000 | 4.7 | 340,000 | 20.0 | 310,000 | 4.2 | 312,000 | 15.8 | 244,000 | 3.6 |

| Model | Water Loop Heat Pump | | | | Ground Water Heat Pump | | | | Ground Loop Heat Pump | | | |
|--------|----------------------|---------|----------------|---------|------------------------|---------|----------------|---------|-----------------------|---------|----------------|---------|
| | Cooling 30°C | | Heating 20°C | | Cooling 15°C | | Heating 10°C | | Cooling 25°C | | Heating 0°C | |
| | Capacity Watts | EER W/W | Capacity Watts | EER W/W | Capacity Watts | EER W/W | Capacity Watts | EER W/W | Capacity Watts | EER W/W | Capacity Watts | EER W/W |
| TLV084 | 24,033 | 4.5 | 29,601 | 4.8 | 25,645 | 6.2 | 24,472 | 4.3 | 24,326 | 4.8 | 19,197 | 3.6 |
| TLV096 | 27,550 | 4.4 | 34,584 | 4.7 | 30,041 | 6.0 | 28,283 | 4.2 | 28,576 | 4.8 | 22,421 | 3.6 |
| TLV120 | 34,584 | 4.4 | 42,204 | 5.0 | 38,980 | 6.2 | 34,584 | 4.2 | 35,170 | 4.8 | 27,257 | 3.7 |
| TLV150 | 43,962 | 4.1 | 54,513 | 4.7 | 49,824 | 5.9 | 45,428 | 4.2 | 45,721 | 4.6 | 35,756 | 3.6 |
| TLV168 | 48,652 | 4.5 | 59,795 | 4.9 | 51,876 | 6.3 | 49,531 | 4.4 | 49,238 | 4.9 | 38,834 | 3.7 |
| TLV192 | 55,686 | 4.5 | 69,859 | 4.8 | 60,668 | 6.1 | 57,151 | 4.3 | 57,737 | 4.9 | 45,428 | 3.7 |
| TLV240 | 69,900 | 4.5 | 85,287 | 5.1 | 78,839 | 6.3 | 69,900 | 4.3 | 71,073 | 4.9 | 55,100 | 3.8 |
| TLV300 | 87,925 | 4.1 | 109,027 | 4.7 | 99,648 | 5.9 | 90,856 | 4.2 | 91,442 | 4.6 | 71,512 | 3.6 |

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 Model | Overall Cabinet | | |
|----------------|---------------------------|--------------|---------------|
| | W | D | H |
| 084 -150 | in. 53.1 cm. 134.9 | 34.0 86.4 | 79.0 200.7 |
| 168 -300 | in. 106.7 cm. 270.9 | 34.0 86.4 | 79.0 200.7 |

Voltage Options

| Vertical Model | Volts | Hz | Phase |
|----------------|---------|----|-------|
| 084 - 300 | 208/230 | 60 | 3 |
| | 460 | 60 | 3 |
| | 575 | 60 | 3 |
| | 380/420 | 60 | 3 |



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