

C·L·I·M·A·T·E·M·A·S·T·E·R

# TRANQUILITY 20™ SINGLE-STAGE

(TS) Series

Ultra-High Efficiency EarthPure®

Water-Source Heat Pumps

Models 006 - 070



## THE TRANQUILITY 20™ SINGLE-STAGE (TS) SERIES

The award winning Tranquility series raises the bar for Water-Source Heat Pump (WSHP) efficiencies, features and application flexibility. Not only does the Tranquility 20™ far exceed typical WSHP efficiencies, but it also uses EarthPure® HFC-410A zero ozone depletion refrigerant, making it an extremely environmentally-friendly option. Tranquility 20 is eligible for additional LEED® (Leadership in Energy and Environmental Design) points because of the “green” technology design.

Available in models 006 through 070 with multiple cabinet options (vertical upflow, vertical downflow and horizontal) the Tranquility 20 offers a wide range of units for most any installation. The Tranquility 20 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 scroll compressors (rotary on models 006 - 012), microprocessor controls, galvanized steel cabinet, polyester powder coat paint, stainless steel drain pan and foil-backed air handler insulation are just some of the features of the Tranquility 20 series.

ClimateMaster’s exclusive double isolation compressor mounting system makes the Tranquility 20 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.

The Tranquility 20 (TS) 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

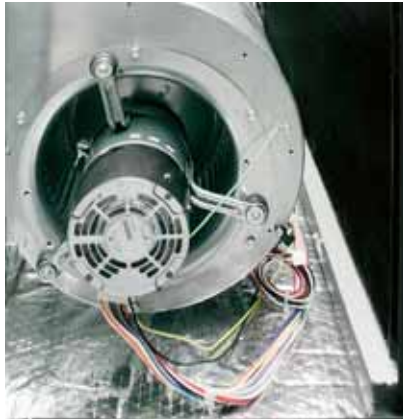
- Models 006 through 070
- EarthPure® HFC-410A zero ozone depletion refrigerant
- Exceeds ASHRAE 90.1 efficiencies
- Galvanized steel construction with attractive black mat powder coat paint and silver accents
- Stainless steel drain pan
- Foil-backed insulation in air handler section
- Unique double isolation compressor mounting with vibration isolation springs for quiet operation
- Insulated divider and separate compressor/air handler compartments
- Copeland scroll compressors (rotary for models 006 - 012)
- TXV metering device
- Extended range (-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
- Factory installed disconnect
- Wide variety of options including e-coated air coils



Vertical  
Tranquility 20  
Unit

Factory  
Installed  
Disconnect

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Easy to remove blower housing for quick service

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



Features EarthPure® HFC-410A zero ozone depletion refrigerant



Double spring and grommet compressor isolation

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



# PERFORMANCE AND SPECIFICATIONS

## ARI/ISO/ASHRAE 13256-1 Data

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	COP W/W	Capacity Watts	EER W/W	Capacity Watts	COP W/W	Capacity Watts	EER W/W	Capacity Watts	COP W/W
TSH/V006	1551	4.6	1946	5.4	1822	7.5	1533	4.4	1649	5.4	1168	3.4
TSH/V009	2290	4.5	2700	4.8	2733	7.4	2287	4.3	2462	5.3	1727	3.4
TSH/V012	2880	4.5	3357	4.5	3274	7.2	2870	4.0	3028	5.3	2311	3.5
TSH/V/D018	4579	4.5	5460	5.2	5244	7.5	4463	4.5	4801	5.6	3442	3.6
TSH/V/D024	6179	4.9	7027	4.9	7041	7.8	5935	4.3	6475	5.8	4511	3.7
TSH/V/D030	6943	4.6	8285	5.0	7804	6.9	6979	4.4	7238	5.3	5603	3.8
TSH/V/D036	8124	5.0	9448	5.5	9183	7.6	7810	4.8	8494	5.8	6101	3.9
TSH/V/D042	9208	4.8	11727	5.4	10562	7.3	9520	4.6	9675	5.9	7502	3.8
TSH/V/D048	11571	4.6	14244	5.0	13270	7.0	11632	4.4	12285	5.3	9258	3.7
TSH/V/D060	15018	4.8	16713	5.0	16495	7.0	13935	4.5	15584	5.5	11039	3.7
TSH/V/D070	16618	4.3	20369	5.0	18981	6.5	16475	4.3	17430	5.0	12819	3.6

Cooling capacities based upon 27°C DB, 19°C WB entering air temperature  
 Heating capacities based upon 20°C DB, 15°C WB entering air temperature  
 All air flow is rated on high speed  
 All ratings based upon operation at lower voltage of dual voltage rated units

### Dimensional Data

Vertical Upflow Model		Overall Cabinet			Horizontal Model		Overall Cabinet		
		W	D	H			W	D	H
006 - 012	in. cm.	22.4 56.8	21.6 54.9	34.5 87.6	006 - 012	in. cm.	22.4 56.8	43.1 107.8	17.3 43.1
018	in. cm.	22.4 56.8	25.6 65.1	44.6 113.3	018	in. cm.	22.4 56.8	62.2 158.0	19.3 49.0
024 - 030	in. cm.	22.4 56.8	25.6 65.1	48.6 123.4	024 - 030	in. cm.	22.4 56.8	62.2 158.0	19.3 49.0
036	in. cm.	25.4 64.5	30.6 77.8	50.6 128.5	036	in. cm.	25.4 64.5	71.2 180.8	21.3 54.1
042 - 048	in. cm.	25.4 64.5	30.6 77.8	54.6 138.7	042 - 048	in. cm.	25.4 64.5	76.2 193.5	21.3 54.1
060 - 070	in. cm.	25.4 64.5	30.6 77.8	58.6 148.8	060 - 070	in. cm.	25.4 64.5	81.2 206.2	21.3 54.1

Note: Add 4" [10.16cm] to height for vertical downflow models  
 (Not available on Sizes 006 - 012)

### Voltage Options

Model	Volts	Hz	Phase
006 - 018	220/240	50	1
024 - 036	220/240 380/420	50 50	1 3
042 - 070	380/420	50	3



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