



50 HZ WATER-SOURCE HEAT PUMPS



TRANQUILITY® 20 SERIES

THE TRANQUILITY® 20 (TS) SERIES



The award winning Tranquility® 20 (TS) Series raises the bar for Water-Source Heat Pump (WSHP) efficiencies, features and application flexibility. The Tranquility® 20 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 is capable of ground loop (geothermal) applications as well as water loop (boiler-tower) applications. Standard features are many. 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 unique double isolation compressor mounting system provides quiet operation. Compressor is installed onto a heavy gauge mounting plate via vibration isolators, which is then isolated from the cabinet base pan by another set of rubber grommets for maximum vibration and sound attenuations. The unique low profile slanted control box makes installing and maintaining the unit easier than any other water-source heat pump currently in production.

Easy to remove blower housing for quick service

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



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



Unique double isolation compressor mounting for quiet operation



Easy service access from multiple sides



Standard stainless steel insulated drain pan with condensate overflow protection

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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
- Double isolation compressor mounting 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 capable
- 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 coated air coils

PERFORMANCE AND SPECIFICATIONS

AHRI/ISO/ASHRAE 13256-1 Data

Model	Refrigerant	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 kW	EER W/W	Capacity kW	COP W/W	Capacity kW	EER W/W	Capacity kW	COP W/W	Capacity kW	EER W/W	Capacity kW	COP W/W
TS-009	HFC-410A	2.29	4.5	2.70	4.8	2.73	7.4	2.29	4.3	2.46	5.3	1.73	3.4
TS-012	HFC-410A	2.88	4.5	3.36	4.5	3.27	7.2	2.87	4.0	3.03	5.3	2.31	3.5
TS-018	HFC-410A	4.58	4.5	5.46	5.2	5.24	7.5	4.46	4.5	4.80	5.6	3.44	3.6
TS-024	HFC-410A	6.18	4.9	7.03	4.9	7.04	7.8	5.94	4.3	6.48	5.8	4.51	3.7
TS-030	HFC-410A	6.94	4.6	8.29	5.0	7.80	6.9	6.98	4.4	7.24	5.3	5.60	3.8
TS-036	HFC-410A	8.12	5.0	9.45	5.5	9.18	7.6	7.81	4.8	8.49	5.8	6.10	3.9
TS-042	HFC-410A	9.21	4.8	11.73	5.4	10.56	7.3	9.52	4.6	9.68	5.9	7.50	3.8
TS-048	HFC-410A	11.57	4.6	14.24	5.0	13.27	7.0	11.63	4.4	12.29	5.3	9.26	3.7
TS-060	HFC-410A	15.02	4.8	16.71	5.0	16.50	7.0	13.94	4.5	15.58	5.5	11.04	3.7
TS-070	HFC-410A	16.62	4.3	20.37	5.0	18.98	6.5	16.48	4.3	17.43	5.0	12.82	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	cm	56.8	54.9	87.6	006 - 012	cm	56.8	107.8	43.9
018	cm	56.8	65.1	113.3	018 - 030	cm	56.8	158.0	49.0
024 - 030	cm	56.8	65.1	123.4	036	cm	64.5	180.8	54.1
036	cm	64.5	77.8	128.5	042 - 048	cm	64.5	193.5	54.1
042 - 048	cm	64.5	77.8	138.7	060 - 070	cm	64.5	206.2	54.1
060 - 070	cm	64.5	77.8	148.8					

Note: Add 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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