



THE SMART SOLUTION FOR ENERGY EFFICIENCY

**TRANQUILITY 16™ (60HZ) COMPACT (TC) SERIES
1/2 TO 5 TON HORIZONTAL AND VERTICAL
EARTH PURE® UNITS**



ClimateMaster Water-Source Heat Pumps Tranquility 16™ Compact (TC) Series Horizontal and Vertical EarthPure® Units

THE TRANQUILITY 16™ COMPACT (TC) SERIES

The award winning Tranquility series raises the bar for Water-Source Heat Pump efficiencies, features and application flexibility. Not only does the Tranquility 16™ exceed ASHRAE 90.1 efficiencies, but it also uses EarthPure® HFC-410A zero ozone depletion refrigerant, making it an extremely environmentally-friendly option. Tranquility 16™ is eligible for additional LEED™ (Leadership in Energy and Environmental Design) points because of the "green" technology design. With one of the smallest cabinets in the industry, the Tranquility 16™ will easily fit into tight spaces. Designed to be backward compatible with thousands of older water-source heat pumps, the Tranquility 16™ Compact Series heat pump is packed full of the innovation you have come to expect from the experts at ClimateMaster.

Available in sizes from 1 1/4 tons (4.4 kW) through 5 tons (17.6 kW) with multiple cabinet options (vertical upflow and horizontal) the Tranquility 16™ offers a wide range of units for most any installation. The Tranquility 16™ has an extended range refrigerant circuit, capable of geothermal ground loop applications (with optional extended range insulation) as well as boiler-tower water loop applications. Standard features include: Copeland scroll compressors (rotary for size 018 and below), microprocessor controls, galvanized steel cabinet, epoxy powder painted front access panel, galvanized steel with epoxy powder painted drain pan and sound absorbing air handler insulation are just some of the features of the Tranquility 16™ series.

ClimateMaster's exclusive double isolation compressor mounting system makes the Tranquility 16™ the quietest unit on the market. Compressors are mounted via rubber vibration isolators to a heavy gauge mounting plate, which is further isolated from the cabinet base with rubber grommets for maximized vibration/sound attenuation. The easy access control box and large access panels make installing and maintaining the unit easier than other water-source heat pumps currently in production, proving that a small unit can be easy to service.

Options such as e-coated air coil, DDC controls, high efficiency pleated MERV 11 two-inch (51mm) air filter or one-inch (25mm) pleated MERV 7 air filters allow customized design solutions. Optional high static fan

motor expands the operating range and helps overcome some of the challenges associated with ductwork for retrofit installations. A Cupro-Nickel water-coil and sound absorbing mute package are options that make a great unit even better.

The Tranquility 16™ (TC) 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 006 (1/2 ton, 4.4 kW) through 060 (5 tons, 17.6 kW)
- EarthPure® HFC-410A refrigerant
- Exceeds ASHRAE 90.1 efficiencies
- Galvanized steel construction with attractive matte black epoxy powder coat paint front access panel
- Epoxy powder painted galvanized steel drain pan
- Sound absorbing glass fiber insulation
- Unique double isolation compressor mounting via vibration isolating rubber grommets for quiet operation
- Insulated divider and separate compressor/air handler compartments
- Copeland scroll compressors (rotary for size 018 and below)
- TXV metering device
- Microprocessor controls standard (optional DXM and/or DDC controls)
- Field convertible discharge air arrangement for horizontal units
- PSC three-speed fan motor
- Internally trapped condensate drain line (vertical units only)
- Unit Performance Sentinel performance monitoring system
- Eight Safeties Standard
- Extended range (20 to 120°F, -6.7 to 48.9°C) capable
- High static blowers available
- LonWorks, BACnet, Modbus and Johnson N2 compatibility options for DDC controls
- Cupro-Nickel water-coil
- Sound absorbing mute package

The Smart Choice for Energy Efficiency



Easy to remove blower housing for quick service and PSC three-speed fan motor

Epoxy powder painted drain pan with condensate overflow protection



Easy Service Access



Factory installed hanger brackets

Copeland scroll compressors (rotary for size 018 and below)



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



PERFORMANCE AND SPECIFICATIONS

Performance Data ARI/ASHRAE/ISO 13256-1

ASHRAE/ARI/ISO 13256-1. English (IP) Units

Model	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 Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
TC-006	5,800	13.2	7,500	4.7	6,900	21.1	6,200	4.0	6,200	15.4	4,900	3.4
TC-009	8,800	13.4	11,600	4.2	10,100	21.0	9,800	3.9	9,300	15.7	7,900	3.4
TC-012	11,700	13.5	15,200	4.3	13,700	20.8	12,500	3.8	12,000	14.9	9,900	3.2
TC-015	14,500	15.4	17,300	5.0	16,800	24.5	14,400	4.4	15,000	17.2	11,100	3.6
TC-018	17,300	14.3	21,500	5.0	20,600	24.2	17,200	4.4	18,400	16.3	13,900	3.4
TC-024	23,700	13.4	28,500	4.7	26,700	20.9	24,000	4.1	24,900	15.4	18,500	3.3
TC-030	28,100	13.4	35,100	4.6	31,700	20.1	29,600	4.1	28,900	15.1	23,400	3.4
TC-036	34,500	13.5	45,200	4.4	38,700	20.7	37,500	4.0	35,300	14.9	29,600	3.3
TC-042	40,100	13.1	52,700	4.3	45,900	19.6	44,000	3.8	40,500	14.4	34,300	3.2
TC-048	47,700	13.3	55,900	4.7	54,300	20.5	46,500	4.1	49,000	14.7	36,400	3.4
TC-060	59,400	13.4	77,000	4.3	66,600	19.9	64,000	3.8	60,100	14.8	50,500	3.1

Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature
 Heating capacities based upon 68°F DB, 59°F WB entering air temperature
 All ratings based upon operation at lower voltage of dual voltage rated models

ASHRAE/ARI/ISO 13256-1. Metric (SI) Units

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	Cooling COP W/W	Capacity Watts	COP	Capacity Watts	Cooling COP W/W	Capacity Watts	COP	Capacity Watts	Cooling COP W/W	Capacity Watts	COP
TC-006	1.70	3.9	2.20	4.7	2.02	6.2	1.82	4.0	1.82	4.5	1.44	3.4
TC-009	2.58	3.9	3.40	4.2	2.96	6.2	2.87	3.9	2.72	4.6	2.31	3.4
TC-012	3.43	4.0	4.45	4.3	4.01	6.1	3.66	3.8	3.52	4.4	2.90	3.2
TC-015	4.25	4.5	5.07	5.0	4.92	7.2	4.22	4.4	4.39	5.0	3.25	3.6
TC-018	5.07	4.2	6.30	5.0	6.04	7.1	5.04	4.4	5.39	4.8	4.07	3.4
TC-024	6.94	3.9	8.35	4.7	7.82	6.1	7.03	4.1	7.30	4.5	5.42	3.3
TC-030	8.23	3.9	10.28	4.6	9.29	5.9	8.67	4.1	8.47	4.4	6.86	3.4
TC-036	10.11	4.0	13.24	4.4	11.34	6.1	10.99	4.0	10.34	4.4	8.67	3.3
TC-042	11.75	3.8	15.44	4.3	13.45	5.7	12.89	3.8	11.87	4.2	10.05	3.2
TC-048	13.98	3.9	16.38	4.7	15.91	6.0	13.62	4.1	14.36	4.3	10.67	3.4
TC-060	17.40	3.9	22.56	4.3	19.51	5.8	18.75	3.8	17.61	4.3	14.80	3.1

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 ratings based upon operation at lower voltage of dual voltage rated models

Dimensional Data

Vertical Upflow Model		Overall Cabinet		
		A Width	B Depth	C Height
006 - 012	in	19.1	19.1	22.0
	cm	48.5	48.5	55.9
018	in	21.5	21.5	39.0
	cm	54.6	54.6	99.1
024 - 030	in	21.5	21.5	39.0
	cm	54.6	54.6	99.1
036 - 042	in	21.5	26.0	44.0
	cm	54.6	66.0	111.8
048 - 060	in	24.0	32.5	46.0
	cm	61.0	82.6	116.8

Horizontal Model		Overall Cabinet (+/- 0.10 in, +/- 2.5mm)		
		A Width	B Length	C Height
006 - 012	in	19.1	34.1	11.1
	cm	48.5	86.6	28.2
018	in	20.1	43.1	17.1
	cm	51.1	109.5	43.4
024 - 030	in	20.1	43.1	17.1
	cm	51.1	109.5	43.4
036 - 042	in	20.1	47.1	21.1
	cm	51.1	119.6	53.6
048	in	24.1	54.1	21.1
	cm	61.2	137.4	53.6
060	in	24.1	54.1	21.1
	cm	61.2	137.4	53.6



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