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TRANQUILITY 16™ COMPACT SERIES

(TC) Series
1.4 kW to 15 kW Horizontal
and Vertical EarthPure® Units
Models 006 - 060



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 1.4 kW through 15 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 (1.4 kW) through 060 (15 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 (-5 to 45°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

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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

AHRI/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 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
TCH/V-006	TBD				TBD				TBD			
TCH/V-009	2.11	3.8	2.75	4.1	2.43	6.0	2.33	3.8	2.23	4.5	1.87	3.3
TCH/V-012	TBD				TBD				TBD			
TCH/V-015	3.48	4.4	4.11	4.9	4.04	7.0	3.42	4.3	3.60	4.9	2.63	3.5
TCH/V-018	4.16	4.1	5.10	4.9	4.95	6.9	4.08	4.3	4.42	4.6	3.30	3.3
TCH/V-024	5.97	4.1	6.93	5.0	6.73	6.4	5.84	4.3	6.27	4.7	4.50	3.5
TCH/V-030	7.08	4.1	8.54	4.9	7.99	6.2	7.20	4.3	7.28	4.6	5.69	3.6
TCH/V-036	8.69	4.2	10.99	4.7	9.75	6.4	9.12	4.2	8.89	4.6	7.20	3.5
TCH/V-042	10.10	4.0	12.82	4.6	11.57	6.0	10.70	4.0	10.21	4.4	8.34	3.4
TCH/V-048	12.02	4.1	13.59	5.0	13.68	6.3	11.31	4.3	12.35	4.5	8.85	3.6
TCH/V-060	14.97	4.1	18.73	4.6	16.78	6.1	15.56	4.0	15.14	4.6	12.28	3.3

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

Horizontal Model		Overall Cabinet		
		W	D	H
006-012	cm in	48.5 19.1	86.6 34.1	27.9 11.0
015	cm in	51.1 20.1	109.5 43.1	43.2 17.0
018	cm in	51.1 20.1	109.5 43.1	43.2 17.0
024 - 030	cm in	51.1 20.1	109.5 43.1	46.5 18.3
036 - 042	cm in	51.1 20.1	119.6 47.1	53.3 21.0
048	cm in	61.2 24.1	137.4 54.1	53.3 21.0
060	cm in	61.2 24.1	137.4 54.1	53.3 21.0

Vertical Upflow Model		Overall Cabinet		
		W	D	H
006 - 012	cm in	48.5 19.1	48.5 19.1	55.9 22.0
015	cm in	54.6 21.5	54.6 21.5	99.1 39.0
018	cm in	54.6 21.5	54.6 21.5	99.1 39.0
024 - 030	cm in	54.6 21.5	54.6 21.5	101.6 40.0
036 - 042	cm in	54.6 21.5	66.0 26.0	114.3 45.0
048 - 060	cm in	61.0 24.0	82.6 32.5	116.8 46.0

Voltage Options

Model	Volts	Hz	Phase
006 - 024	220/240	50	1
030 - 042	220/240 380/420	50 50	1 3
048 - 060	380/420	50	3



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