



50 Hz Water-Source Heat Pumps



TRANQUILITY® 16 COMPACT (TC) SERIES



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The award winning Tranquility® 16 Compact (TC) Series raises the bar for Water-Source Heat Pump (WSHP) 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 is packed full of the innovation you have come to expect from the experts at ClimateMaster.

Available in sizes from 1.8 kW through 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. Scroll compressors (rotary for size 018 and below), microprocessor controls, galvanized steel cabinet, 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.

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



Unique double isolation compressor mounting



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



Epoxy powder painted drain pan with condensate overflow protection



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ClimateMaster's unique double isolation compressor mounting system provides quiet operation. Compressor is installed on to 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 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 coated air coil, DDC controls, high efficiency pleated MERV 11 51mm air filter or 25mm pleated MERV 8 air filters allow customized design solutions. Optional high static fan motor (size 015 and above) 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 UltraQuiet package are options that make a great unit even better.

UNIT FEATURES

- Models 006 (1.8 kW) through 060 (17.6 kW)
- EarthPure® [HFC-410A] refrigerant
- Galvanized steel construction
- Epoxy powder painted galvanized steel drain pan
- Sound absorbing glass fiber insulation
- Double isolation compressor mounting for quiet operation
- Insulated divider and separate compressor/air handler compartments
- 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 (-6.7 to 48.9°C) capable

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	Capacity kW	EER W/W	Capacity kW	COP W/W
TC-006	HFC-410A	1.39	3.8	1.78	4.6	1.66	6.0	1.47	3.9	1.49	4.4	1.17	3.3
TC-009	HFC-410A	2.11	3.8	2.75	4.1	2.43	6.0	2.33	3.8	2.23	4.5	1.87	3.3
TC-012	HFC-410A	2.81	3.9	3.60	4.2	3.29	5.9	2.96	3.7	2.89	4.3	2.35	3.1
TC-015	HFC-410A	3.48	4.4	4.11	4.9	4.04	7.0	3.42	4.3	3.60	4.9	2.63	3.5
TC-018	HFC-410A	4.16	4.1	5.10	4.9	4.95	6.9	4.08	4.3	4.42	4.6	3.30	3.3
TC-024	HFC-410A	5.97	4.1	6.93	5.0	6.73	6.4	5.84	4.3	6.27	4.7	4.50	3.5
TC-030	HFC-410A	7.08	4.1	8.54	4.9	7.99	6.2	7.20	4.3	7.28	4.6	5.69	3.6
TC-036	HFC-410A	8.69	4.2	10.99	4.7	9.75	6.4	9.12	4.2	8.89	4.6	7.20	3.5
TC-042	HFC-410A	10.10	4.0	12.82	4.6	11.57	6.0	10.70	4.0	10.21	4.4	8.34	3.4
TC-048	HFC-410A	12.02	4.1	13.59	5.0	13.68	6.3	11.31	4.3	12.35	4.5	8.85	3.6
TC-060	HFC-410A	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			Vertical Upflow Model		Overall Cabinet		
		W	D	H			W	D	H
006 - 012	cm	48.5	86.6	27.9	006 - 012	cm	48.5	48.5	55.9
015 - 018	cm	51.1	109.5	43.2	015 - 018	cm	54.6	54.6	99.1
024 - 030	cm	51.1	109.5	46.5	024 - 030	cm	54.6	54.6	101.6
036 - 042	cm	51.1	119.6	53.3	036 - 042	cm	54.6	66.0	114.3
048 - 060	cm	61.2	137.4	53.3	048 - 060	cm	61.0	82.6	116.8

Voltage Options

Model	Volts	Hz	Phase
006 - 024	220/240	50	1
030 - 036	220/240	50	1
	380/420	50	3
042 - 060	380/420	50	3



ClimateMaster's manufacturing facility in Oklahoma City, Oklahoma, U.S.A.



7300 S.W. 44th Street
Oklahoma City, OK 73179
Phone: +1-405-745-6000
Fax: +1-405-745-6058
climatemaster.com

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