



TRANQUILITY 20 SERIES


CLIMATEMASTER[®]
Water-Source Heat Pump Systems

THE TRANQUILITY 20 SINGLE-STAGE (TS) SERIES



The Tranquility 20 Single-Stage (TS) Series builds on ClimateMaster's commitment to utilizing the most advanced technology and design to create one of the most efficient single-stage water-source heat pump available today. The Tranquility 20 Single-Stage Series combines EarthPure® (HFC-410A) refrigerant with the Copeland Scroll compressor (size 018 and above) and either an ECM variable speed or PSC multi-speed fan motor to create unmatched performance and flexibility.

UNIT FEATURES

- Sizes 006 (1/2 ton, 1.8 kW) through 070 (6 ton, 21.1 kW)
- Environmentally-friendly EarthPure® (HFC-410A) refrigerant
- Unsurpassed efficiencies (far exceeds ASHRAE 90.1)
- Copeland Scroll compressor (size 018 and above)
- Multi-speed PSC fan motor (optional variable speed ECM motor on size 018 and above)
- Galvanized steel construction and powder coat paint on all units
- Unique double isolation compressor mounting for quiet operation
- Discharge muffler standard (except rotary compressors) for superior sound attenuation
- Microprocessor controls standard (optional DXM and/or DDC controls)
- Field convertible discharge air arrangement for horizontal units
- Bi-directional, balanced port expansion valve refrigerant metering device standard
- Standard range or extended range operation
- Water connections securely mounted flush to the cabinet corner post (no backup wrench required)
- Eight safeties standard

Easy to remove blower housing for quick service and optional ECM variable speed motor

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



Dual compressor vibration isolation for quiet operation

Easy service access from multiple sides



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



Standard stainless steel insulated drain pan with condensate overflow protection



PERFORMANCE AND SPECIFICATIONS

AHRI/ISO/ASHRAE 13256-1 Data (English (IP) Units & Metric (SI) Units)

Model*	Refrigerant	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
		Cooling 86°F [30°C]		Heating 68°F [20°C]		Cooling 59°F [15°C]		Heating 50°F [10°C]		Cooling 77°F [25°C]		Heating 32°F [0°C]	
		Capacity	EER	Capacity	COP	Capacity	EER	Capacity	COP	Capacity	EER	Capacity	COP
		Btuh [kW]	Btuh/W [W/W]	Btuh [kW]		Btuh [kW]	Btuh/W [W/W]	Btuh [kW]		Btuh [kW]	Btuh [kW]	Btuh/W [W/W]	
TS-006 PSC	HFC-410A	6,300 [1.85]	15.7 [4.6]	8,000 [2.34]	5.4	7,400 [2.17]	25.5 [7.5]	6,300 [1.85]	4.4	6,700 [1.96]	18.5 [5.4]	4,800 [1.41]	3.4
TS-009 PSC	HFC-410A	9,300 [2.74]	15.3 [4.5]	11,100 [3.26]	4.8	11,100 [3.26]	25.2 [7.4]	9,400 [2.76]	4.3	10,000 [2.94]	18.1 [5.3]	7100 [2.09]	3.4
TS-012 PSC	HFC-410A	11,700 [3.43]	15.4 [4.5]	13,800 [4.05]	4.5	13,300 [3.90]	24.6 [7.2]	11,800 [3.46]	4.0	12,300 [3.60]	18.1 [5.3]	9,500 [2.78]	3.5
TS-018 PSC TS-018 ECM	HFC-410A	18,600 [5.47] 19,200 [5.65]	15.0 [4.4] 16.5 [4.8]	23,000 [6.76] 23,300 [6.85]	5.2 5.9	21,300 [6.26] 22,100 [6.50]	24.8 [7.3] 26.3 [7.7]	18,800 [5.53] 18,900 [5.56]	4.5 4.9	19,500 [5.74] 20,200 [5.94]	18.4 [5.4] 19.4 [5.5]	14,500 [4.27] 14,500 [4.43]	3.6 3.9
TS-024 PSC TS-024 ECM	HFC-410A	25,100 [7.36] 25,000 [7.33]	16.2 [4.8] 17.0 [5.0]	29,600 [8.68] 30,000 [8.79]	4.9 5.3	28,600 [8.38] 28,100 [8.24]	25.7 [7.5] 27.4 [8.0]	25,000 [7.33] 25,100 [7.36]	4.3 4.6	26,300 [7.71] 26,000 [7.62]	19.1 [5.6] 20.0 [5.0]	19,000 [5.57] 19,400 [5.69]	3.7 3.8
TS-030 PSC TS-030 ECM	HFC-410A	28,200 [8.26] 28,600 [8.38]	15.3 [4.5] 15.6 [4.6]	34,900 [10.23] 35,200 [10.32]	5.0 5.3	31,700 [9.29] 32,200 [9.44]	22.9 [6.7] 23.9 [7.0]	29,400 [8.62] 29,400 [8.62]	4.4 4.6	29,400 [8.62] 29,800 [8.73]	17.6 [5.2] 18.0 [5.3]	23,600 [6.92] 23,700 [6.95]	3.8 3.9
TS-036 PSC TS-036 ECM	HFC-410A	33,000 [9.67] 33,100 [9.70]	16.6 [4.9] 17.6 [5.2]	39,800 [11.66] 39,500 [11.58]	5.5 5.8	37,300 [10.93] 37,300 [10.93]	25.1 [7.4] 26.5 [7.8]	32,900 [9.64] 32,900 [9.64]	4.8 5.1	34,500 [10.11] 34,600 [10.14]	19.2 [5.6] 20.2 [5.9]	25,700 [7.53] 25,800 [7.56]	3.9 4.2
TS-042 PSC TS-042 ECM	HFC-410A	37,400 [10.96] 37,800 [11.08]	16.0 [4.7] 17.1 [5.0]	49,400 [14.48] 48,600 [14.24]	5.4 5.7	42,900 [12.57] 44,200 [12.95]	24.3 [7.1] 27.1 [7.9]	40,100 [11.75] 39,300 [11.52]	4.6 4.9	39,300 [11.52] 40,000 [11.72]	18.4 [5.4] 20.0 [5.9]	31,600 [9.26] 30,400 [8.91]	3.8 4.0
TS-048 PSC TS-048 ECM	HFC-410A	47,000 [13.77] 47,600 [13.95]	15.3 [4.5] 15.9 [4.7]	60,000 [17.58] 59,700 [17.50]	5.0 5.2	53,900 [15.80] 54,100 [15.86]	23.3 [6.8] 24.6 [7.2]	49,000 [14.36] 48,700 [14.27]	4.4 4.5	49,900 [14.62] 50,100 [14.68]	17.6 [5.2] 18.5 [5.4]	39,000 [11.43] 38,400 [11.25]	3.7 3.8
TS-060 PSC TS-060 ECM	HFC-410A	61,000 [17.88] 62,000 [17.88]	15.9 [4.7] 16.4 [4.8]	70,400 [20.63] 70,800 [20.75]	5.0 5.2	67,000 [19.64] 67,200 [19.70]	23.2 [6.8] 24.3 [7.1]	58,700 [17.20] 59,100 [17.32]	4.5 4.6	63,300 [18.55] 64,000 [18.76]	18.2 [5.3] 19.0 [5.6]	46,500 [13.63] 46,700 [13.69]	3.7 3.8
TS-070 PSC TS-070 ECM	HFC-410A	67,500 [19.78] 67,000 [19.64]	14.4 [4.2] 15.2 [4.5]	85,800 [25.15] 84,900 [24.88]	5.0 5.0	77,100 [22.60] 77,000 [22.57]	21.6 [6.3] 23.5 [6.9]	69,400 [20.34] 69,000 [20.22]	4.3 4.4	70,800 [20.75] 70,000 [20.52]	16.6 [4.9] 17.8 [5.2]	54,000 [15.83] 53,900 [15.80]	3.6 3.6

Cooling capacities based upon 80.6°F [27°C] DB, 66.2°F [19°C] WB entering air temperature.

Note: Add 4" [10.16cm] to height for vertical downflow models.

Heating capacities based upon 68°F [20°C] DB, 59°F [15°C] WB entering air temperature.

All ratings based upon operation at the lower voltage of dual voltage rated models.

* ECM motor available on sizes 018 and larger.

Dimensional Data

Vertical Upflow Model	Overall Cabinet			Horizontal Model	Overall Cabinet		
	W	D	H		W	D	H
006 - 012	in. 22.4	in. 21.6	in. 34.5	006 - 012	in. 22.4	in. 43.1	in. 17.3
	cm 56.8	cm 54.9	cm 87.6		cm 56.8	cm 109.5	cm 43.9
018	in. 22.4	in. 25.6	in. 44.5	018 - 030	in. 22.4	in. 62.2	in. 19.3
	cm 56.8	cm 65.1	cm 113.0		cm 56.8	cm 158.0	cm 49.0
024 - 030	in. 22.4	in. 25.6	in. 48.5	036	in. 25.4	in. 71.2	in. 21.3
	cm 56.8	cm 65.1	cm 123.2		cm 64.5	cm 180.8	cm 54.1
036	in. 25.4	in. 30.6	in. 50.5	042 - 048	in. 25.4	in. 76.2	in. 21.3
	cm 64.5	cm 77.8	cm 128.3		cm 64.5	cm 193.5	cm 54.1
042 - 048	in. 25.4	in. 30.6	in. 54.5	060 - 070	in. 25.4	in. 81.2	in. 21.3
	cm 64.5	cm 77.8	cm 138.4		cm 64.5	cm 206.2	cm 54.1
060 - 070	in. 25.4	in. 30.6	in. 58.5				
	cm 64.5	cm 77.8	cm 148.6				

Voltage Options

Model	Volts	Hz	Phase
06 - 018	208/230	60	1
	265	60	1
024 - 036	208/230	60	1
	265	60	1
	208/230	60	3
	460	60	3
042 - 070	208/230	60	1
	208/230	60	3
	460	60	3
	575	60	3

