Tranquility® 30 Digital (TE) Series

TWO-STAGE
HORIZONTAL VERTICAL AND DOWNFLOW
EARTHPURE® SYSTEMS SIZES 026-072

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What's New with ClimateMaster's Tranquility® 30?

ClimateMaster has invested years of experience, research and development into new technologies that set the Tranquility 30 Digital systems apart from the rest by delivering higher cost savings, more reliability and unparalleled comfort.

High Efficiency = Low Operating Cost

The Tranquility® 30 Digital with vFlow™ variable water flow technology breaks new ground in efficiency by approaching 30 EER part load cooling and 4.8 COP part load heating for ground loop applications. Leveraging the next generation Copeland scroll compressor, variable speed ECM motor, low-pressure-drop water-to-refrigerant heat exchanger and vFlow variable water flow technology, the Tranquility® 30 has been optimized for maximum operating efficiency and the industry's lowest operating cost. The Hot-Water Generator further increases operating cost savings by pre-heating hot water for domestic use. Bottom-line, the Tranquility® 30 delivers the industry's lowest operating cost.

iGate™ - Communicating Controls

iGate™ technology represents the next generation in intelligent controls by using 2-way communication to provide a gateway into the system. The iGate™ control system allows the homeowner and dealers to monitor the performance of the unit, custom tailor its operation, and diagnose any issues, all from the communicating thermostat.

The iGate™ communications hub is the new DXM2 intelligent controller, which analyzes the status of sensors and smart components (also 2-way communicating) to determine how best to operate your system for optimal comfort, efficiency and long-term reliability. All of this information is passed to the iGate™ thermostat (or dealer diagnostic tool), where it can be displayed in plain English. And since communication is both ways, the iGate™ thermostat can also be used to configure and tailor the system without touching your unit.

Future accessories will enable iGate™ communication over the internet, allowing the homeowner (and dealer if the homeowner chooses) to access the system from a PC or smart phone.

vFlow™ Variable Water Flow

vFlow™ variable water flow technology is a major advance in geothermal system performance made possible through the iGate™ system. vFlow™ not only builds the major water circulation components right into the unit for a faster and cleaner installation, it also intelligently varies the water flow to minimize pump energy consumption and improve the reliability of the system.

The heart of vFlow™ is either a variable-speed pump (for ground loops) or modulating water valve (for groundwater) directly linked into the iGate™ system. Water flow is automatically varied based on changes in unit capacity level (stage) and source water temperature to maintain optimum system performance.

vFlow™ systems reduce water pumping power consumption by 60-80% compared to traditional external pumping modules, which can save over $100 per year in an average 2,000 square foot home. In addition, vFlow™ protects the unit against extreme operating conditions, extending the life of the compressor and air coil. Since vFlow™ is built right inside the unit, it also saves on installation time and makes for a very clean and compact installation.

Microchannel Air Heat Exchanger – The Next Generation in Air Coils

ClimateMaster is also introducing the Microchannel air heat exchanger on the 038 size in the Tranquility® 30 Digital family. Microchannel aluminum heat exchangers offer higher heating efficiency and have been used for years in automotive applications. ClimateMaster is the first geothermal company to field test and use Microchannel Air Heat Exchangers.

ENERGY STAR® Most Efficient – Communicating AND Efficient

Tranquility® 30 Digital has been recognized as Most Efficient by ENERGY STAR for exceeding stringent efficiency requirements AND for meeting smart communication requirements. With these systems the customer is getting an EFFICIENT system and an INTELLIGENT system – buying a system can't get SMARTER than that!

Easy to Install, Easy to Service – A Technician's Dream Machine

Installations are easier and quicker with Tranquility 30 Digital units with (1) vFlow™ built-in water flow vs. bulky external flow controllers / water flow components (2) iGate™ system configuration (airflow, water ΔT, accessories) on the thermostat and (3) iGate™ Manual Operation from thermostat at start up to verify proper operation.

Service is even easier with (1) iGate™ Service Warning on the thermostat for homeowners to call the dealer with fault information (2) iGate™ Service Mode for dealers to see conditions (temperature, flow, input/output, configuration) at the time of fault, for better, quicker diagnosis (3) Easy Access to components with swing-out control board, easy-access panels, refrigerant/ water pressure Schrader ports at the front of the unit.

ClimateMaster has designed and built the EASIEST geothermal unit to install and service, period.

iGate™ Communicating Controls

iGate™ Information gateway to monitor, control and diagnose your system
The Tranquility® 30 is equipped with industry-first, iGate™ – Information Gateway – a 2-way communicating system that allows users to interact with their geothermal system in plain English AND delivers improved reliability and efficiency by precisely controlling smart variable speed components. iGate™ makes the Tranquility Digital series the easiest geothermal products to install and service.

Monitor/Configure – Installers can configure Tranquility® 30 units from the thermostat, including: Air flow, loop ΔT, water-flow option configuration, unit configuration, accessory configuration, and demand reduction (optional, to limit unit operation during peak times). Users can look up the current system status: temperature sensor readings and operational status of the blower and pump.

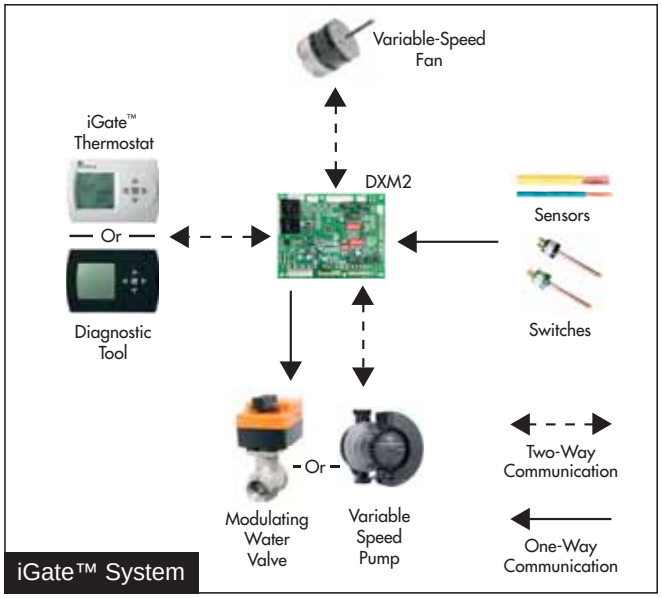
Precise Control - The new DXM2 board enables intelligent, 2-way communication between the DXM2 board and smart components like the communicating thermostat, fan motor, and water pump. The DXM2 control can also directly control the modulating valve and accepts various feedback/input. The Intelligent DXM2 board uses information received from the smart components and sensors to precisely control operation of the variable-speed fan and variable-speed water pump (or modulating valve) to deliver higher efficiency, reliability and increased comfort.

Diagnostics – iGate™ takes diagnosing geothermal units to the next level of simplicity, by providing a dashboard of system and fault information, in plain English, on the iGate thermostat/ service tool.

iGate™ Service Warning warns the homeowner of a fault and displays dealer information (if programmed), fault descriptions, possible causes and current system status (temperature readings, fan RPM and water flow status) to provide to a dealer on the phone.

In iGate™ Service Mode, the service personnel can access fault descriptions, possible causes and most importantly, the conditions (temp, flow, i/o conditions, configuration) at the time of the fault and at the time of the call. Manual Operation mode allows the service personnel to manually command operation for any of the thermostat outputs, blower speed, as well as pump speed or valve position from the thermostat, to help troubleshoot specific components.

With the iGate™ communicating system, consumers and contractors have a gateway to system information never before available.



iGate™ System

AIRFLOW SELECTION	CFM
HEAT STAGE 1	600
HEAT STAGE 2	750
AUXILIARY HEAT	850
EMERGENCY HEAT	850
COOL STAGE 1	525
COOL STAGE 2	700
COOL DEHUMID 1	425
COOL DEHUMID 2	550
CONTINUOUS FAN	350
HEAT OFF DELAY	60
COOL OFF DELAY	30

◀ PREVIOUS NEXT ▶

POSSIBLE FAULT CAUSES
LOW WATER COIL TEMP

LOW WATER TEMP - HTG

LOW WATER FLOW - HTG

LOW REFRIG CHARGE - HTG

INCORRECT LT1 SETTING

BAD LT1 THERMISTOR

◀ PREVIOUS

FAULT TEMPERATURE CONDITIONS
LT1 LOW WATER TEMP
HEAT 1 11:11 AM 11/14

LT1 TEMP	28.1
LT2 TEMP	97.3
HOT WATER EWT	121.5
COMP DISCHARGE	157.7
LEAVING AIR	92.7
LEAVING WATER	34.9
ENTERING WATER	42.1
CONTROL VOLTAGE	26.4

◀ PREVIOUS

vFlow™ Internal Variable Water Flow Control

vFlow™ Internal Variable Water Flow
Industry-first, built-in vFlow™ replaces a traditionally inefficient, external component of the geothermal system (water circulation) with an ultra-high-efficient, variable speed, internal water flow system. This saves homeowners 70-80% on operating water circulator vs traditional single speed pump systems. It saves installers time and labor by avoiding installing bulky external flow centers or flow regulators. Multi-unit installations are also much simpler with vFlow™ systems, as the units automatically adjust water flow across the system.

vFlow™ is enabled by iGate™, which facilitates intelligent communication between the thermostat, DXM2 control, sensors and internal water pump/valve to make true variable water flow a reality.

vFlow™ is available for three applications:

1) Closed loop – individual unit pumping: vFlow™ Internal Flow Controller model ("2" in Position 11 of the unit model number) would be used. This includes variable speed pump, flushing ports, 3 way flushing valves and expansion tank. Copper water coil is standard with this option.
2) Closed loop – multi unit / central pumping: vFlow™ Internal Low Pressure Drop (high Cv) Motorized Modulating Valve ("5" in Position 11 of the unit model number) would be used. Copper water coil is standard with this option.
3) Open loop: vFlow™ Internal Motorized Modulating Valve ("6" in Position 11 of the unit model number) would be used. Cupro-Nickel water coil is standard with this option. Valves in open loop models have higher pressure drop than the valves in the closed loop (modulating valve) models for better flow control when used in systems with higher pressure water supply pumps, and are not recommended for closed loop applications.

vFlow™ delivers three main benefits:

1) Easier and quicker unit installation as the flow control is built in to the unit.
2) Superior reliability by varying the water flow to deliver more stable operation.
3) Higher cost savings by varying the flow (and pump watt consumption) to match the unit's mode of operation.

Internal components
Tranquility® 30 can be installed more easily and compactly than its predecessors because water-flow components are internal to the unit. It also saves installing contractors labor and time by eliminating the need for an external flow regulator or a bulky external pumping module.

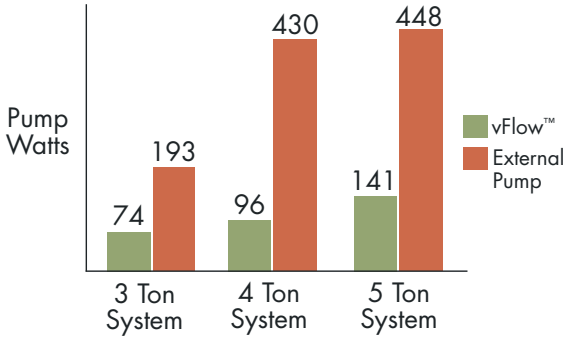
Variable flow
vFlow™ technology enables variable water flow through the unit, with the DXM2 control adjusting the pump speed to maintain an installer-set loop ΔT. By controlling the water flow, the system is able to operate at its optimal capacity and efficiency. vFlow™ provides a lower flow rate for part load where units typically operate 80% of the time and a higher, more normal flow rate for full load operation.

Variable speed pump or motorized modulating valve delivers variable water-flow, controlled by DXM2 control, based on loop water ΔT.

Energy Savings with water circulation control
Units with vFlow™ deliver higher operating cost savings by varying the water flow to match the unit's operation (ex: lower water flow when unit is in part load operation). Lowering the flow results in lower energy consumption by the water pump (=higher cost savings) in vFlow™ units (whether internal or external pump).

In closed loop applications, using vFlow™ with an internal variable-speed (ECM) flow controller, the ECM pump uses fewer watts than a fixed speed (PSC) pump, even at full load (see chart). The ECM pump excels in energy savings in part load, saving 70-80% watts compared to fixed speed pumps (see chart). The ECM pump can operate with independent flow rates for heating and cooling, further saving even more energy.

In open loop applications, when the motorized modulating valve slows down the water flow during part load operation, the external pump consumes fewer watts, thus saving more energy.



How to Use this Catalog

As with any unit selection the first step is to perform a proper load calculation. Once the design cooling and heating loads are known the predominant load can be used to select the appropriate unit. In northern climates the heating load may be used to select the unit, whereas in southern climates the cooling load may be used. Likewise, the anticipated maximum EWT should be used for the cooling mode and the minimum anticipated EWT should be used when selecting for the heating mode. These EWTs may be the same temperature in the case of a ground water application.

Use the Full Load performance pages to select the unit size. Once the unit size is determined read the associated flow rate (gpm) for the needed capacity. Typically this is 1.5 – 2 gpm/nominal ton for ground water applications and 2.25 – 3 gpm/ton for ground loop applications.

For Closed Loop Applications

For closed loop systems where an internal circulating pump is desired, the TE30 units can be ordered with an internal, variable speed loop circulator. This would typically be for a ground loop or secondary pumping application. This internal loop circulator is the variable speed Grundfos Magna 25-140 for all TE30 units. The maximum possible pump curve for the 25-140 is shown in the table below. The 25-140 can also operate at any point below the curve as a "partial load" pumping condition. The designer/installer should use the information presented in this catalog to determine the available pump head for any external piping/accessories and ground loop (if applicable). This can be done in the following manner.

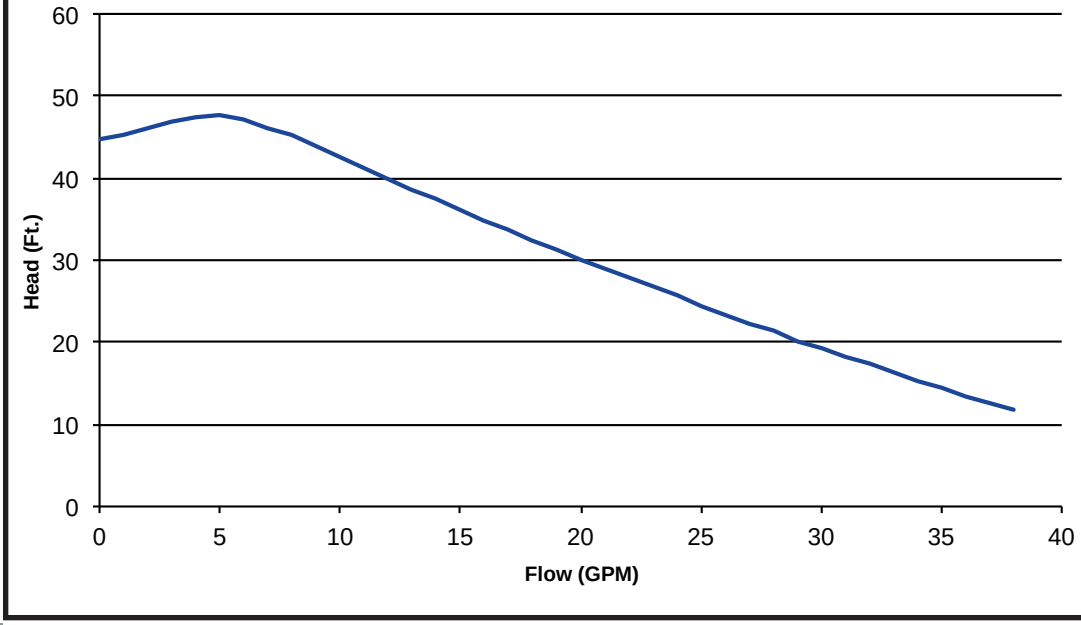
1. Determine the desired flow rate through the TE30 from the performance pages (as described above). Read the associated pressure drop in feet of head for the worst case condition (lowest anticipated entering water temperature) at the required flow rate.
2. Determine the maximum pump head from the pump curve associated with the required flow rate from step 1.
3. Subtract the unit pressure drop (from step 1) from the maximum available pump head (from step 2).
4. The remainder is the available pump head to overcome any external piping/accessories and the ground loop.

If the available pump head is equal to or greater than the calculated external piping and loop pressure drop, no other steps are required. If the available pump head is less than the calculated pressure drop of all external piping and the loop, then changes to the loop design should be considered.

Typically residential loops consist of ¾" circuit piping and 1 ¼" supply and return piping. If the available pump head is less than the calculated pressure drop of all external piping and the loop, it is recommended that larger pipe sizes be investigated such as 1" circuit piping and/or 1 ½" or 2" supply and return piping. This will significantly reduce system pressure drop with little change in Reynolds number. If this causes the Reynolds number to fall to an unacceptable level, try reducing the overall number of circuits. This will increase the flow rate through each circuit, increasing the Reynolds number.

Another solution might be to allow the system flow rate to be reduced. Typical geothermal flow rates are between 2.25 and 3 gpm/ton. As long as the system flow rate using the internal variable speed circulator is at or above 2.25 gpm/ton it is safe to operate the system. A quick review of the unit performance tables will show that this causes very little change in unit performance.

Magna Geo 25-140 Pump Performance



GPM	Head (ft)
0.0	44.7
1.0	45.4
2.0	46.1
3.0	46.8
4.0	47.5
5.0	47.7
6.0	47.1
7.0	46.1
8.0	45.3
9.0	43.9
10.0	42.6
11.0	41.2
12.0	39.9
13.0	38.7
14.0	37.4
15.0	36.1
16.0	34.9
17.0	33.7
18.0	32.5
19.0	31.3
20.0	30.1
21.0	28.9
22.0	27.8
23.0	26.7
24.0	25.6
25.0	24.5

How to Use this Catalog

ClimateMaster's Pressure Drop Software can be used in conjunction with the pump performance information presented here to determine actual flow rate when the internal circulator is not able to provide the desired design flow rate.

For secondary pumping applications follow the above steps except do not consider the pressure drop of the loop. The internal 25-140 circulator will only need to overcome the pressure drop of the unit and any piping connecting the unit to the primary loop.

The TE30 can also be ordered with an internal modulating water control valve for closed loop systems with multiple units and a central pump. In this case the modulating water valve will stop water flow through the unit when the unit is not operating and control the flow rate through the unit during operation, saving pumping energy in both cases.

When using an internal modulating water valve the central pump must be able to overcome the pressure drop of the valve in addition to the pressure drop of the unit. Because of this, internal modulating valves for closed loop systems are designed with a low pressure drop in mind. The minimum pressure drop for the internal closed loop valve is shown in the 'Modulating Valves for Closed Loop Applications' table below. This pressure drop should be added to the unit pressure drop when determining system pressure drop for central pump selection.

For Open Loop Applications

The TE30 can also be ordered with the internal modulating water control valve for open loop systems with an external well pump. In this case the modulating water valve will stop water flow through the unit when the unit is not operating and act as a flow control device to control the flow rate through the unit during operation.

When using an internal modulating water valve the external pump must be able to overcome the minimum pressure drop of the valve in addition to the pressure drop of the unit. The minimum pressure drop for the open loop internal valve is shown in the 'Modulating Valves for Open Loop Applications' table below. This pressure drop should be added to the unit pressure drop when determining overall equipment pressure drop.

Modulating Valves for Closed Loop Applications

TE026		
Valve Cv = 4.7		
	60°F Water	
GPM	Valve ΔP @ GPM (psi)	Valve ΔP @ GPM (ft hd)
2.0	0.181	0.4
3.0	0.407	0.9
4.0	0.724	1.7
5.0	1.132	2.6
6.0	1.630	3.8

TE038		
Valve Cv = 7.4		
	60°F Water	
GPM	Valve ΔP @ GPM (psi)	Valve ΔP @ GPM (ft hd)
3.0	0.2	0.4
4.0	0.3	0.7
5.0	0.5	1.1
6.0	0.7	1.5
7.0	0.9	2.1
8.0	1.2	2.7
9.0	1.5	3.4

TE049		
Valve Cv = 10		
	60°F Water	
GPM	Valve ΔP @ GPM (psi)	Valve ΔP @ GPM (ft hd)
4.0	0.2	0.4
5.0	0.3	0.6
6.0	0.4	0.8
7.0	0.5	1.1
8.0	0.6	1.5
9.0	0.8	1.9
10.0	1.0	2.3
11.0	1.2	2.8
12.0	1.4	3.3

TE064 & 072		
Valve Cv = 19		
	60°F Water	
GPM	Valve ΔP @ GPM (psi)	Valve ΔP @ GPM (ft hd)
6.0	0.1	0.2
7.0	0.1	0.3
8.0	0.2	0.4
9.0	0.2	0.5
10.0	0.3	0.6
11.0	0.3	0.8
12.0	0.4	0.9
13.0	0.5	1.1
14.0	0.5	1.3
15.0	0.6	1.4
16.0	0.7	1.6
17.0	0.8	1.8

Modulating Valves for Open Loop Applications

TE026, 038 & 049		
Valve Cv = 4.7		
	60°F Water	
GPM	Valve ΔP @ GPM (psi)	Valve ΔP @ GPM (ft hd)
2.0	0.2	0.4
3.0	0.4	0.9
4.0	0.7	1.7
5.0	1.1	2.6
6.0	1.6	3.8
7.0	2.2	5.1
8.0	2.9	6.7
9.0	3.7	8.5
10.0	4.5	10.5
11.0	5.5	12.7
12.0	6.5	15.1

TE064 & 072		
Valve Cv = 7.4		
	60°F Water	
GPM	Valve ΔP @ GPM (psi)	Valve ΔP @ GPM (ft hd)
6.0	0.7	1.5
7.0	0.9	2.1
8.0	1.2	2.7
9.0	1.5	3.4
10.0	1.8	4.2
11.0	2.2	5.1
12.0	2.6	6.1
13.0	3.1	7.1
14.0	3.6	8.3
15.0	4.1	9.5
16.0	4.7	10.8
17.0	5.3	12.2

Tranquility® 30 Design Features

The Tranquility® 30 Digital Series has abundant features and ultra-high efficiency.

Application Flexibility

- Five Capacities 026, 038, 048, 064, and 072
- Entering water temperature operation range (20-120°F EWT) and flow rates as low as 1.5 gpm per ton
- Two-stage upflow, downflow, and horizontal right or left return
- Internal (upflow and downflow only) electric heat unit (optional) designed for easy field installation.
- Optional external (horizontal units) electric heat unit designed for easy field installation
- Exceeds the federal requirements for 30% tax credit on installation costs
- Field selectable low-temperature protection settings for GWHP or GLHP installations
- Standard pre-installed 2" filter frame with 2" high performance MERV 11 pleated air filter
- Integrated vFlow™ functionality for most geothermal applications

Operating Efficiencies

- Exceeds ASHRAE 90.1 and Energy Star Tier 3 efficiency levels
- Energy Star® Most Efficient
- EarthPure® HFC-410A zero ozone depletion refrigerant.
- Rugged and highly efficient next generation Copeland UltraTech™ 2-stage scroll compressors provide ultra-high efficiencies and unsurpassed comfort.
- Optional hot water generator with advanced control logic and internally mounted pump.
- Oversized coaxial tube water-to-refrigerant heat exchangers operate at low liquid pressure drop. Convoluted copper (and optional cupro-nickel) water tube functions efficiently at low-flow rates and provides low-temperature-damage resistance.
- Oversized tin plated, rifled tube/lanced aluminum fin, air to refrigerant heat exchangers provide high efficiency at low face velocity (026, 049, 064, and 072)
- Next generation all aluminum microchannel air coil (038) for high efficiency
- Large low RPM blowers with variable speed ECM fan motors provide quiet, efficient air movement with high static capability. Installer selectable ECM air flow provides the ultimate in comfort optimization.

Service & Installation Advantages

ClimateMaster's Tranquility® 30 Digital series incorporates features that are industry firsts, which make it extremely easy to install:

- Ease of installation:
  1) vFlow™ - with the industry exclusive features, these units are ready to install out of the box with no requirement for external pumps, expansion tanks, or valves for the ground loop removing a lot of the complexity of installation.
  2) Full digital controls that communicate with the thermostat which allows all unit configuration from the thermostat… the easiest installation setup for any level of installer. Far simpler than the use of dip-switches on the unit control board.
- Tranquility® 30 only requires 4 wires between the communicating thermostat and the unit. Others require up to 9 or 14 wires for full functionality. This is achieved by leveraging the full power of the microprocessor on the control.
- Internal variable speed circulator includes an internal check valve for multiple unit/ shared loop installations.
- Standard cornerpost schreader ports provide access to source pressure drop across unit coaxial heat exchanger.
- The communicating DXM2 control board diagnostic and communicating thermostat features allow the home owner to tell the service technician what is wrong with the unit before the technician leaves the shop.
- The two-section swing-out and removable control box design provides wide-open service access to the compressor section. Multiple unit access panels allow technicians to access any side of the cabinet. Service friendly highly accessible high/low refrigerant pressure ports are located on a service bracket at the front of the unit. No other product / manufacturer in the geothermal segment offer this convenience.
- An innovative two-section electrical control box design that tucks the stationary line voltage components safely behind a swing-out low voltage control panel to provide clear service access through the front of the unit. The low voltage panel can even be quickly pulled off the hinges and removed. Harness connections make controller replacement a snap.
- ¾" MPT condensate connection directly from condensate drain pan eliminates internal plastic drain tubing that is subject to clogging and avoids the need for a fitting that reduces the drain opening size.
- Diagnostic display of system inputs, outputs, and configuration settings at thermostat or Configuration/Diagnostic tool.
- Diagnostic display of system temperatures at thermostat (ATC32U**):
  - Geo source in and out
  - Compressor discharge line
  - LT1 and LT2 Refrigerant Line Temperature Sensors
  - Leaving air
  - Entering potable hot water to HWG
- Immediate manual control of all DXM2 outputs is available at the thermostat (ATC32U**) or Configuration/Diagnostic tool (ACDU**) for rapid troubleshooting.
- Expansion tank eliminates "flat loop" callbacks by working to maintain steady loop pressure.
- Brass swivel geo and hot water connections for quick connection and elimination of wrenches or sealants during installation.
- Intelligent fault retry with history retention.
- Two configurable auxiliary relays for low voltage control of accessories.
- UPS (Unit Performance Sentinel) provides early warning of inefficient operation.

Factory Quality & Industry Certifications

All units are built and factory run tested on our Integrated Process Control Assembly System (IPCS). The IPCS is a unique state of the art manufacturing system that is designed to assure quality of the highest standards of any manufacturer in the water-source industry. Our IPCS system:

- Verifies that the correct components are being assembled.
- Automatically performs special leak tests on all joints
- Conducts pressure tests
- Performs highly detailed run test unparalleled in the HVAC industry
- Automatically disables packaging for a "failed" unit
- Creates computer database for future service analysis and diagnostics from run test results
- All refrigerant brazing is done in a nitrogen atmosphere
- All units are deep evacuated to less than 100 microns prior to refrigerant charging
- All joints are both helium and halogen leak tested to insure annual leak rate of less than ¼ ounce

Tranquility® 30 Design Features

- All units are run-tested to insure efficiency and reliability.
- AHRI/ASHRAE/ANSI/ISO 13256-1 certified.
- ETL listed.
- US EPA "Energy Star" Tier 3 compliant.
- ISO 9001:2000 certified manufacturing facility.

Advanced Controls

iGate™ communicating control provides advanced unit functionality and comprehensive configuration, monitoring and diagnostic capabilities through digital communication links with the variable-speed fan motor, variable-speed source pump (or modulating valve) and communicating thermostat or Configuration/Diagnostic tool.

- 7 temperature sensor inputs for system protection and control
- Anti-short cycle and over/under voltage protection
- High pressure, loss of charge, and condensate overflow protection
- LED fault and status indication at controller
- Service tool port for optional setup and diagnostics at unit

Factory Options and Accessories

- Hot water generator with internally mounted pump and advanced logic control

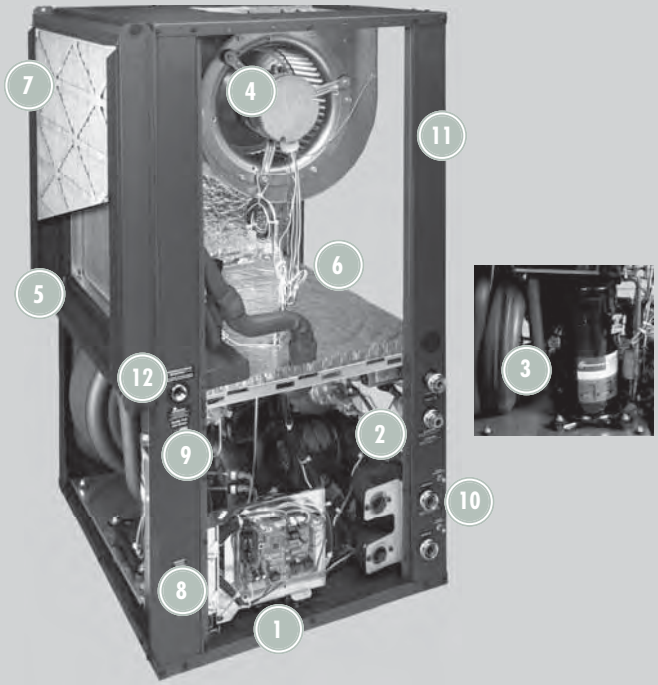
Field Installed Accessories

- iGate™ Communicating, Programmable Thermostat (ATC32U**)
- Auxiliary Electric Heater
- Earthpure® Polarized Media Electric Air Cleaner
- Configuration / Diagnostic Tool (ACDU**)
- Outdoor/Remote Temperature Sensor (AST008)
- Anti Scald Valve (AVAS4)
- Secure Start Compressor Soft Start Kit (13B0045N01)
- Unit Vibration Isolation Pad
- Unit Stand
- Secondary Drain Pan (Horizontal Units)

Warranty

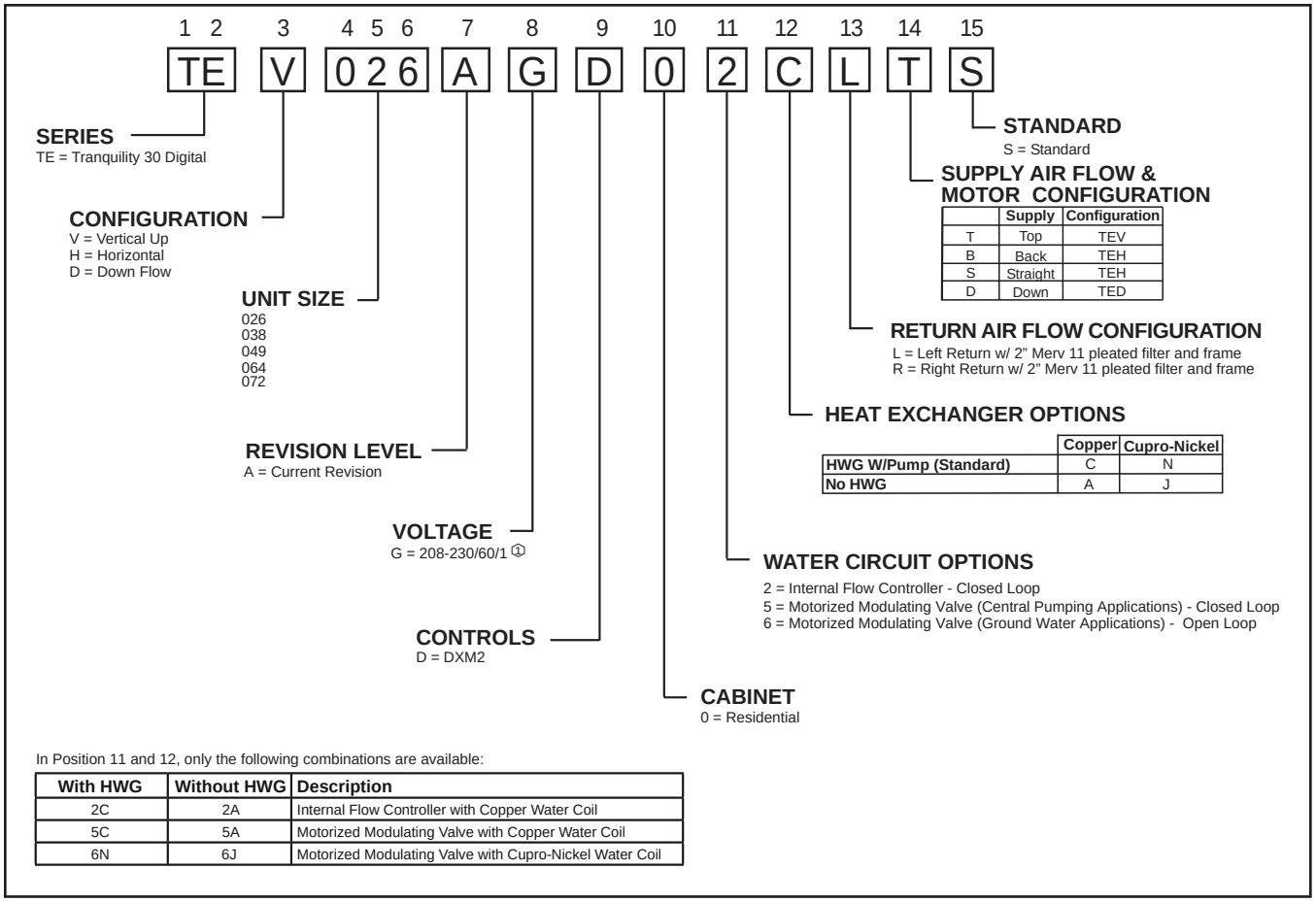
- ClimateMaster residential class heat pumps are backed by a ten-year limited warranty on all unit parts, including the following accessories when installed with ClimateMaster units: Flow Controllers, Thermostats & Electric Heaters.
- ClimateMaster goes even further to back up its commitment to quality by including a service labor allowance for the first five years on unit parts and thermostats, auxiliary electric heaters and geothermal pumping modules.
- The Optional Extended Factory Service Labor Allowance Warranty offers additional length of term protection to the consumer by offsetting service labor costs for 10 years.

1. Exclusive iGate™ Two-Way Communicating Control to configure, monitor and diagnose AT THERMOSTAT
2. vFlow™ Internal Variable Water Flow System with Internal Flow Center or Internal Motorized Modulating Valve for optimized efficiency and reliability
3. Next generation Copeland™ Ultra-Tech™ Two-Stage Scroll Compressor with dual-level isolation for ultra-quiet and high-efficiency operation
4. Emerson UltraTech® Variable-Speed Communicating Fan Motor with soft start and constant CFM control
5. Tin-Plated Copper Air Coils to resist formicary corrosion
6. Foil-Faced Insulation in the blower section and fully insulated compressor section conform to ASHRAE 62 specifications
7. Two-inch high-efficiency MERV 11 Filter (standard) or EarthPure® Air Cleaner for high quality indoor air
8. Two-Section Swing-out Control Box design provides wide-open service access
9. Refrigerant Schrader Ports Located on bracket at the front access panel for easy service access
10. Water Schrader Ports located on corner post to easily read pressure drop across water heat exchanger for easy troubleshooting



11. Heavy Gauge Galvanized Steel Cabinet is epoxy powder-coated in a durable and attractive black matte finish with stainless steel front access panels
12. Designed for External P-trap to eliminate internal drain-line cleanouts

Unit Model Key



	Supply	Configuration
T	Top	TEV
B	Back	TEH
S	Straight	TEH
D	Down	TED

	Copper	Cupro-Nickel
HWG W/Pump (Standard)	C	N
No HWG	A	J

In Position 11 and 12, only the following combinations are available:

With HWG	Without HWG	Description
2C	2A	Internal Flow Controller with Copper Water Coil
5C	5A	Motorized Modulating Valve with Copper Water Coil
6N	6J	Motorized Modulating Valve with Cupro-Nickel Water Coil

AHRI/ISO/ASHRAE 13256-1

ASHRAE/AHRI/ISO 13256-1

Model	Capacity Modulation	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 Full Load 77°F Part Load 68°F		Heating Full Load 32°F Part Load 41°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
TE026	Part	19,100	19.6	22,100	6.5	22,000	35.3	17,700	5.3	20,900	28.0	15,300	4.6
	Full	25,300	17.7	30,400	5.7	28,700	27.3	24,800	5.0	26,300	19.9	18,900	4.0
TE038	Part	27,000	19.5	31,800	6.4	31,300	34.4	26,100	5.4	30,400	29.6	23,200	4.8
	Full	38,000	17.8	45,100	5.8	43,300	27.1	37,200	5.2	39,900	20.3	29,200	4.4
TE049	Part	36,500	19.4	43,600	6.3	42,000	34.3	35,000	5.1	40,300	27.9	30,100	4.4
	Full	48,700	17.3	59,700	5.5	55,800	26.1	48,400	4.8	50,800	19.3	37,200	4.0
TE064	Part	46,300	18.7	54,700	6.0	53,100	32.4	44,000	5.0	51,200	26.7	38,100	4.4
	Full	61,500	16.2	77,400	5.4	71,500	24.4	63,200	4.8	66,200	18.8	48,700	3.9
TE072	Part	53,000	16.8	64,600	5.2	60,800	28.6	53,200	4.5	58,100	23.2	46,000	3.9
	Full	68,300	15.1	85,300	4.8	77,700	22.5	71,400	4.4	71,700	16.9	55,800	3.7

Ground Loop Heat Pump ratings based on 15% methanol antifreeze solution
All ratings based upon operation at lower voltage of dual voltage rated models

About AHRI/ISO/ASHRAE 13256-1

AHRI/ASHRAE/ISO 13256-1 (Air-Conditioning and Refrigeration Institute/American Society of Heating, Refrigerating and Air Conditioning Engineers/International Standards Organization) is a certification standard for water-source heat pumps used in the following applications:

- WLHP (Water Loop Heat Pump – Boiler/Tower)
- GWHP (Ground Water Heat Pump – Open Loop)
- GLHP (Ground Loop Heat Pump – Geothermal)

The directory at http://www.ahrinet.org/ is constantly being updated and immediately available on the Internet.

Water and air temperatures used in AHRI certification standards are shown below.

Test Condition Comparison Table

	WLHP	GWHP	GLHP
Cooling			
Entering Air Temperature - DB/WB °F [°C]	80.6/66.2 [27/19]	80.6/66.2 [27/19]	80.6/66.2 [27/19]
Entering Water Temperature - °F [°C]	86 [30]	59 [15]	77 [25]
Fluid Flow Rate	*	*	*
Heating			
Entering Air Temperature - DB/WB °F [°C]	68 [20]	68 [20]	68 [20]
Entering Water Temperature - °F [°C]	68 [20]	50 [10]	32 [0]
Fluid Flow Rate	*	*	*

*Flow rate is specified by the manufacturer

Data certified by AHRI include heating/cooling capacities, EER (Energy Efficiency Ratio – Btuh per Watt) and COP (Btuh per Btuh) at the various conditions shown above. Pump power correction is calculated to adjust efficiencies for pumping Watts. Fan power is corrected to zero external static pressure using the equation below.The nominal airflow is rated at a specific external static pressure.

- Fan Power Correction = (cfm x 0.472) x (esp x 249)/300

Capacities and efficiencies are calculated using the following equations:

- ISO Cooling Capacity = Cooling Capacity (Btuh) + [Fan Power Correction (Watts) x 3.412]
- ISO EER Efficiency (Btuh/W) =
  ISO Cooling Capacity (Btuh)/[Power Input (Watts) – Fan Power Correction (Watts) + Pump Power Correction (Watts)]
- ISO Heating Capacity = Heating Capacity (Btuh) – [Fan Power Correction (Watts) x 3.412]
- ISO COP Efficiency (Btuh/Btuh) =
  ISO Heating Capacity (Btuh) x 3.412/[Power Input (Watts) - Fan Power Correction (Watts) + Pump Power Correction (Watts)]

Reference Calculations & Legend

Heating

$$LWT = EWT - \frac{HE}{GPM \times 500}$$

$$LAT = EAT + \frac{HC}{CFM \times 1.08}$$

Cooling

$$LWT = EWT + \frac{HR}{GPM \times 500}$$

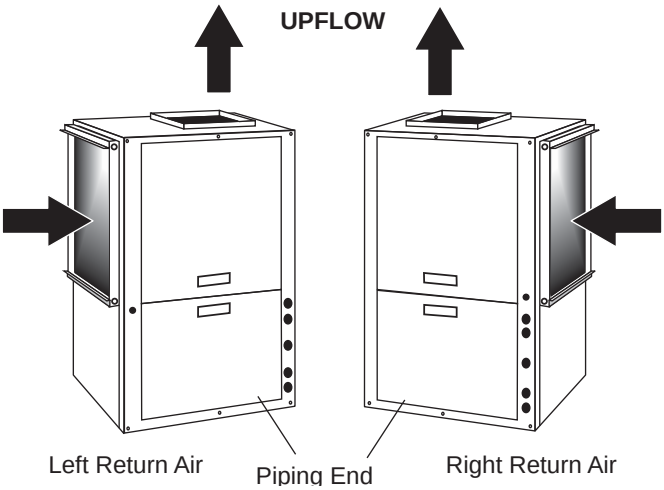
$$LAT\ (DB) = EAT\ (DB) - \frac{SC}{CFM \times 1.08}$$

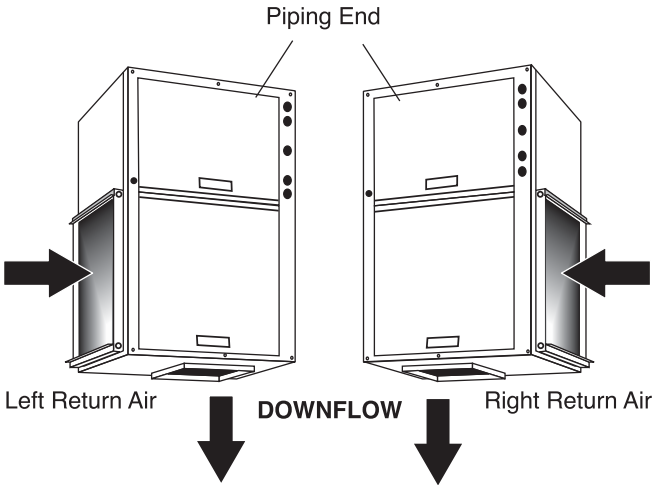
$$LC = TC - SC$$

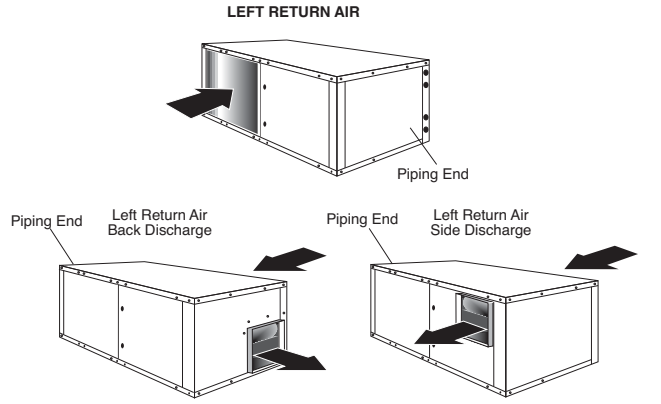
$$S/T = \frac{SC}{TC}$$

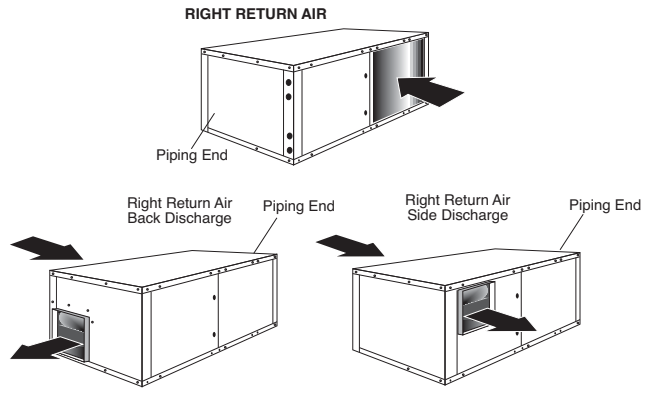
Hot Water Generator capacities (HWC) are based on potable water flow rate of 0.4 gpm per nominal equipment ton and 90°F entering potable water temperature.

CFM	=	airflow, cubic feet/minute	HE	=	total heat of extraction, Mbtuh
EWT	=	entering water temperature, °F	HWC	=	Hot Water Generator (desuperheater) capacity, Mbtuh
GPM	=	water flow in US gallons/minute	WPD	=	Water coil pressure drop (psi & ft hd)
EAT	=	entering air temperature, Fahrenheit (dry bulb/wet bulb)	EER	=	Energy Efficiency Ratio = BTU output/Watt input
HC	=	air heating capacity, Mbtuh	COP	=	Coefficient of Performance = BTU output/BTU input
TC	=	total cooling capacity, Mbtuh	LWT	=	leaving water temperature, °F
SC	=	sensible cooling capacity, Mbtuh	LAT	=	leaving air temperature, °F
KW	=	total power unit input, KiloWatts	LC	=	latent cooling capacity, Mbtuh
HR	=	total heat of rejection, Mbtuh	S/T	=	sensible to total cooling ratio









Full Load Correction Factors

Air Flow Correction Table

Airflow	Cooling				Heating		
% of Rated	Total Capacity	Sensible Capacity	Power	Heat of Rejection	Heating Capacity	Power	Heat of Extraction
60%	0.925	0.788	0.913	0.922	0.946	1.153	0.896
69%	0.946	0.829	0.926	0.942	0.959	1.107	0.924
75%	0.960	0.861	0.937	0.955	0.969	1.078	0.942
81%	0.972	0.895	0.950	0.968	0.977	1.053	0.959
88%	0.983	0.930	0.965	0.979	0.985	1.032	0.974
94%	0.992	0.965	0.982	0.990	0.993	1.014	0.988
100%	1.000	1.000	1.000	1.000	1.000	1.000	1.000
106%	1.007	1.033	1.020	1.009	1.006	0.989	1.011
113%	1.012	1.064	1.042	1.018	1.012	0.982	1.019
119%	1.016	1.092	1.066	1.025	1.018	0.979	1.027
125%	1.018	1.116	1.091	1.032	1.022	0.977	1.033
130%	1.019	1.132	1.112	1.037	1.026	0.975	1.038

Entering Air Correction Table

Heating			
Entering Air DB°F	Heating Capacity	Power	Heat of Extraction
40	1.052	0.779	1.120
45	1.043	0.808	1.102
50	1.035	0.841	1.084
55	1.027	0.877	1.065
60	1.019	0.915	1.045
65	1.010	0.957	1.023
68	1.004	0.982	1.010
70	1.000	1.000	1.000
75	0.989	1.045	0.974
80	0.976	1.093	0.946

* = Sensible capacity equals total capacity
AHRI/ISO/ASHRAE 13256-1 uses entering air conditions of Cooling - 80.6°F DB/66.2°F WB, and Heating - 68°F DB/59°F WB entering air temperature

Cooling													
Entering Air WB°F	Total Capacity	Sensible Cooling Capacity Multiplier - Entering DB °F										Power	Heat of Rejection
		60	65	70	75	80	80.6	85	90	95	100		
45	0.832	1.346	1.461	1.603	*	*	*	*	*	*	*	0.946	0.853
50	0.850	1.004	1.174	1.357	*	*	*	*	*	*	*	0.953	0.870
55	0.880	0.694	0.902	1.115	1.331	*	*	*	*	*	*	0.964	0.896
60	0.922		0.646	0.875	1.103	1.329	1.356	*	*	*	*	0.977	0.932
65	0.975			0.639	0.869	1.096	1.123	1.320	*	*	*	0.993	0.979
66.2	0.990			0.582	0.812	1.039	1.066	1.262	1.482	*	*	0.997	0.991
67	1.000			0.545	0.774	1.000	1.027	1.223	1.444	*	*	1.000	1.000
70	1.040				0.630	0.853	0.880	1.075	1.297	1.517	*	1.011	1.035
75	1.117					0.601	0.627	0.821	1.046	1.275	1.510	1.033	1.101

Part Load Correction Factors

Air Flow Correction Table

Airflow	Cooling				Heating		
% of Rated	Total Capacity	Sensible Capacity	Power	Heat of Rejection	Heating Capacity	Power	Heat of Extraction
60%	0.920	0.781	0.959	0.927	0.946	1.241	0.881
69%	0.942	0.832	0.964	0.946	0.960	1.163	0.915
75%	0.956	0.867	0.696	0.959	0.969	1.115	0.937
81%	0.969	0.901	0.975	0.970	0.978	1.076	0.956
88%	0.981	0.934	0.982	0.981	0.986	1.043	0.973
94%	0.991	0.967	0.990	0.991	0.993	1.018	0.988
100%	1.000	1.000	1.000	1.000	1.000	1.000	1.000
106%	1.007	1.033	1.011	1.008	1.006	0.990	1.010
113%	1.013	1.065	1.023	1.015	1.012	0.986	1.017
119%	1.018	1.098	1.036	1.021	1.017	0.983	1.024
125%	1.021	1.131	1.051	1.026	1.021	0.981	1.030
130%	1.023	1.159	1.063	1.030	1.024	0.979	1.034

Entering Air Correction Table

Heating			
Entering Air DB°F	Heating Capacity	Power	Heat of Extraction
40	1.084	0.732	1.161
45	1.073	0.764	1.140
50	1.060	0.802	1.117
55	1.046	0.846	1.090
60	1.031	0.893	1.061
65	1.016	0.945	1.031
68	1.006	0.978	1.013
70	1.000	1.000	1.000
75	0.984	1.058	0.968
80	0.968	1.117	0.936

* = Sensible capacity equals total capacity
AHRI/ISO/ASHRAE 13256-1 uses entering air conditions of Cooling - 80.6°F DB/66.2°F WB, and Heating - 68°F DB/59°F WB entering air temperature

Cooling													
Entering Air WB°F	Total Capacity	Sensible Cooling Capacity Multiplier - Entering DB °F										Power	Heat of Rejection
		60	65	70	75	80	80.6	85	90	95	100		
45	0.876	1.286	1.302	1.389	*	*	*	*	*	*	*	0.981	0.895
50	0.883	1.002	1.099	1.241	*	*	*	*	*	*	*	0.985	0.901
55	0.903	0.706	0.871	1.060	1.271	*	*	*	*	*	*	0.989	0.918
60	0.935		0.617	0.844	1.079	1.319	1.349	*	*	*	*	0.993	0.945
65	0.979			0.595	0.849	1.096	1.128	1.342	*	*	*	0.998	0.982
66.2	0.991			0.531	0.789	1.040	1.070	1.284	1.522	*	*	0.999	0.993
67	1.000			0.486	0.747	1.000	1.030	1.245	1.481	*	*	1.000	1.000
70	1.035				0.583	0.842	0.873	1.090	1.327	1.552	*	1.003	1.030
75	1.105					0.552	0.584	0.811	1.057	1.290	1.510	1.008	1.088

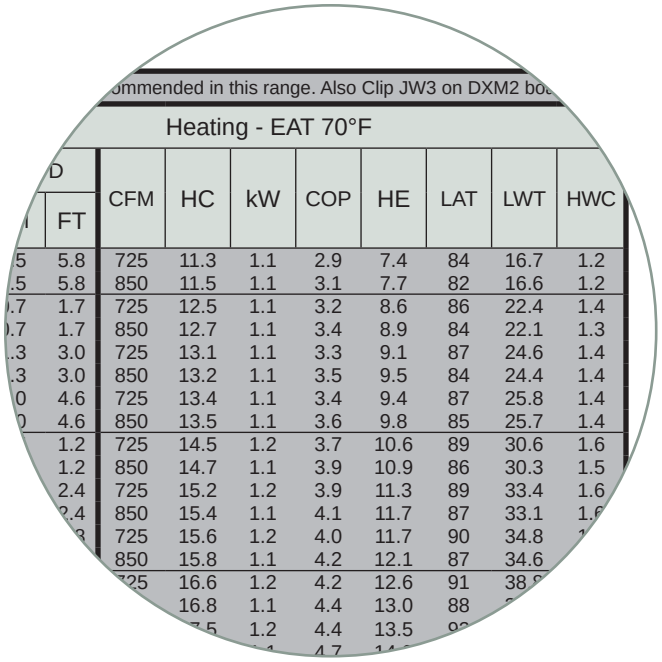
Performance Data Selection Notes - vFlow™ Models

Operation in Shaded Area: Closed Loop Application

For operation in the shaded area, appropriate levels of a proper anti-freeze should be used in systems with leaving water temperatures of 40°F or below and the JW3 jumper should be clipped. This is due to the potential of the refrigerant temperature being as low as 32°F [0°C] with 40°F [4.4°C] LWT, which may lead to a nuisance cutout due to the activation of the Low Temperature Protection. JW3 should never be clipped for systems without antifreeze.

Open Loop Application:

For operation in shaded area (below 40°F LWT) in open loop applications, ΔT (on DXM2) should be set such that the LWT (=EWT - ΔT) doesn't drop below 40°F. JW3 should NEVER be clipped for systems without antifreeze.



ommended in this range. Also Clip JW3 on DXM2 bo

Heating - EAT 70°F

D		CFM	HC	kW	COP	HE	LAT	LWT	HWC
FT									
.5	5.8	725	11.3	1.1	2.9	7.4	84	16.7	1.2
.5	5.8	850	11.5	1.1	3.1	7.7	82	16.6	1.2
.7	1.7	725	12.5	1.1	3.2	8.6	86	22.4	1.4
.7	1.7	850	12.7	1.1	3.4	8.9	84	22.1	1.3
.3	3.0	725	13.1	1.1	3.3	9.1	87	24.6	1.4
.3	3.0	850	13.2	1.1	3.5	9.5	84	24.4	1.4
0	4.6	725	13.4	1.1	3.4	9.4	87	25.8	1.4
0	4.6	850	13.5	1.1	3.6	9.8	85	25.7	1.4
	1.2	725	14.5	1.2	3.7	10.6	89	30.6	1.6
	1.2	850	14.7	1.1	3.9	10.9	86	30.3	1.5
	2.4	725	15.2	1.2	3.9	11.3	89	33.4	1.6
	2.4	850	15.4	1.1	4.1	11.7	87	33.1	1.6
	3	725	15.6	1.2	4.0	11.7	90	34.8	1
		850	15.8	1.1	4.2	12.1	87	34.6	
		725	16.6	1.2	4.2	12.6	91	38	
			16.8	1.1	4.4	13.0	88		
			7.5	1.2	4.4	13.5	92		
				1	4.7	14			

Performance Data — Tranquility® 30 Model 026 - Part Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	1.0	0.3	0.7	640	21.9	16.3	0.73	30.1	24.4	70.0	0.9	4.5	2.5	5.8	725	11.3	1.14	2.9	7.4	84.4	16.7	1.2
	1.0	0.3	0.7	750	22.4	17.5	0.74	30.2	24.9	70.0	0.9	4.5	2.5	5.8	850	11.5	1.10	3.1	7.7	82.5	16.6	1.2
30	1.2	0.3	0.7	640	21.9	16.3	0.73	30.1	24.4	70.0	0.9	2.3	0.7	1.7	725	12.5	1.15	3.2	8.6	86.0	22.4	1.4
	1.2	0.3	0.7	750	22.4	17.5	0.74	30.2	24.9	70.0	0.9	2.3	0.7	1.7	850	12.7	1.10	3.4	8.9	83.8	22.1	1.3
	1.2	0.3	0.7	640	21.9	16.3	0.73	30.1	24.4	70.0	0.9	3.4	1.3	3.0	725	13.1	1.15	3.3	9.1	86.7	24.6	1.4
	1.2	0.3	0.7	750	22.4	17.5	0.74	30.2	24.9	70.0	0.9	3.4	1.3	3.0	850	13.2	1.10	3.5	9.5	84.4	24.4	1.4
	1.2	0.3	0.7	640	21.9	16.3	0.73	30.1	24.4	70.0	0.9	4.5	2.0	4.6	725	13.4	1.15	3.4	9.4	87.1	25.8	1.4
	1.2	0.3	0.7	750	22.4	17.5	0.74	30.2	24.9	70.0	0.9	4.5	2.0	4.6	850	13.5	1.10	3.6	9.8	84.8	25.7	1.4
40	1.7	0.3	0.7	640	21.9	16.3	0.73	30.1	24.4	70.0	0.9	2.3	0.5	1.2	725	14.5	1.15	3.7	10.6	88.5	30.6	1.6
	1.7	0.3	0.7	750	22.4	17.5	0.74	30.2	24.9	70.0	0.9	2.3	0.5	1.2	850	14.7	1.11	3.9	10.9	86.0	30.3	1.5
	1.7	0.3	0.7	640	21.9	16.3	0.73	30.1	24.4	70.0	0.9	3.4	1.0	2.4	725	15.2	1.15	3.9	11.3	89.4	33.4	1.6
	1.7	0.3	0.7	750	22.4	17.5	0.74	30.2	24.9	70.0	0.9	3.4	1.0	2.4	850	15.4	1.11	4.1	11.7	86.8	33.1	1.6
	1.7	0.3	0.7	640	21.9	16.3	0.73	30.1	24.4	70.0	0.9	4.5	1.6	3.8	725	15.6	1.16	4.0	11.7	89.9	34.8	1.7
	1.7	0.3	0.7	750	22.4	17.5	0.74	30.2	24.9	70.0	0.9	4.5	1.6	3.8	850	15.8	1.11	4.2	12.1	87.2	34.6	1.6
50	2.3	0.4	1.0	640	21.7	16.3	0.75	29.0	24.3	71.6	1.1	2.3	0.4	1.0	725	16.6	1.16	4.2	12.6	91.2	38.8	1.8
	2.3	0.4	1.0	750	22.2	17.4	0.76	29.0	24.8	72.0	1.1	2.3	0.4	1.0	850	16.8	1.11	4.4	13.0	88.3	38.4	1.7
	2.5	0.5	1.2	640	21.9	16.3	0.73	30.1	24.4	70.0	0.9	3.4	0.9	2.0	725	17.5	1.16	4.4	13.5	92.4	42.0	1.8
	2.5	0.5	1.2	750	22.4	17.5	0.74	30.2	24.9	70.0	0.9	3.4	0.9	2.0	850	17.8	1.11	4.7	14.0	89.3	41.8	1.8
	2.5	0.5	1.2	640	21.9	16.3	0.73	30.1	24.4	70.0	0.9	4.5	1.4	3.2	725	18.0	1.16	4.5	14.0	93.0	43.8	1.9
	2.5	0.5	1.2	750	22.4	17.5	0.74	30.2	24.9	70.0	0.9	4.5	1.4	3.2	850	18.2	1.11	4.8	14.4	89.9	43.6	1.8
60	2.3	0.4	1.0	640	20.7	15.9	0.86	24.0	23.7	81.0	1.4	2.3	0.4	1.0	725	18.8	1.16	4.7	14.8	94.0	46.9	1.9
	2.3	0.4	1.0	750	21.1	17.0	0.88	24.1	24.1	81.5	1.5	2.3	0.4	1.0	850	19.0	1.12	5.0	15.2	90.7	46.5	1.9
	3.4	0.8	1.8	640	21.5	16.2	0.78	27.7	24.1	74.2	1.1	3.4	0.8	1.8	725	19.8	1.17	5.0	15.8	95.3	50.7	2.0
	3.4	0.8	1.8	750	21.9	17.3	0.79	27.7	24.6	74.5	1.2	3.4	0.8	1.8	850	20.1	1.12	5.3	16.3	91.9	50.4	2.0
	4.5	1.3	2.9	640	21.8	16.3	0.74	29.6	24.4	70.8	1.0	4.5	1.3	2.9	725	20.4	1.17	5.1	16.4	96.0	52.7	2.1
	4.5	1.3	2.9	750	22.3	17.4	0.75	29.6	24.8	71.0	1.0	4.5	1.3	2.9	850	20.7	1.12	5.4	16.8	92.5	52.5	2.0
70	2.3	0.4	1.0	640	19.5	15.5	0.99	19.7	22.9	90.3	2.0	2.3	0.4	1.0	725	20.9	1.17	5.2	16.9	96.7	55.0	2.1
	2.3	0.4	1.0	750	19.9	16.6	1.01	19.7	23.3	90.8	2.0	2.3	0.4	1.0	850	21.2	1.12	5.5	17.4	93.1	54.6	2.0
	3.4	0.8	1.8	640	20.4	15.8	0.90	22.7	23.4	83.8	1.6	3.4	0.8	1.8	725	22.1	1.17	5.5	18.1	98.2	59.4	2.2
	3.4	0.8	1.8	750	20.8	16.9	0.91	22.8	23.9	84.1	1.6	3.4	0.8	1.8	850	22.4	1.13	5.8	18.5	94.4	59.1	2.1
	4.5	1.2	2.7	640	20.8	15.9	0.85	24.4	23.7	80.5	1.4	4.5	1.2	2.7	725	22.7	1.18	5.6	18.6	98.9	61.7	2.2
	4.5	1.2	2.7	750	21.2	17.1	0.87	24.4	24.2	80.7	1.4	4.5	1.2	2.7	850	23.0	1.13	6.0	19.1	95.0	61.5	2.2
80	2.3	0.5	1.1	640	18.2	15.0	1.14	16.0	22.1	99.6	2.6	2.3	0.5	1.1	725	23.0	1.18	5.7	18.9	99.3	63.2	2.3
	2.3	0.5	1.1	750	18.6	16.0	1.16	16.0	22.5	100.0	2.6	2.3	0.5	1.1	850	23.3	1.13	6.0	19.4	95.4	62.7	2.2
	3.4	0.8	1.8	640	19.1	15.3	1.03	18.5	22.6	93.3	2.1	2.7	0.6	1.3	725	23.5	1.18	5.8	19.5	100.0	65.0	2.4
	3.4	0.8	1.8	750	19.5	16.4	1.05	18.5	23.1	93.6	2.2	2.7	0.6	1.3	850	23.8	1.13	6.2	20.0	96.0	65.0	2.3
	4.5	1.2	2.7	640	19.6	15.5	0.99	19.8	22.9	90.2	1.9	2.7	0.6	1.3	725	23.5	1.18	5.8	19.5	100.0	65.0	2.4
	4.5	1.2	2.7	750	20.0	16.6	1.00	19.9	23.4	90.4	2.0	2.7	0.6	1.3	850	23.8	1.13	6.2	20.0	96.0	65.0	2.3
90	2.3	0.5	1.2	640	16.9	14.4	1.30	13.0	21.3	109.0	3.4	1.6	0.4	1.0	725	23.5	1.18	5.8	19.5	100.0	65.0	2.4
	2.3	0.5	1.2	750	18.1	15.8	1.21	15.0	22.3	109.3	2.9	1.6	0.4	1.0	850	23.8	1.13	6.2	20.0	96.0	65.0	2.3
	3.4	0.8	1.9	640	17.8	14.8	1.19	14.9	21.8	102.8	2.8	1.6	0.4	1.0	725	23.5	1.18	5.8	19.5	100.0	65.0	2.4
	3.4	0.8	1.9	750	18.1	15.8	1.21	15.0	22.3	103.1	2.9	1.6	0.4	1.0	850	23.8	1.13	6.2	20.0	96.0	65.0	2.3
	4.5	1.2	2.7	640	18.2	15.0	1.14	16.0	22.1	99.8	2.6	1.6	0.4	1.0	725	23.5	1.18	5.8	19.5	100.0	65.0	2.4
	4.5	1.2	2.7	750	18.6	16.0	1.16	16.0	22.5	100.0	2.6	1.6	0.4	1.0	850	23.8	1.13	6.2	20.0	96.0	65.0	2.3
100	2.3	0.5	1.2	640	15.7	13.8	1.47	10.6	20.7	118.4	4.3	1.1	0.4	0.8	725	23.5	1.18	5.8	19.5	100.0	65.0	2.4
	2.3	0.5	1.2	750	16.0	14.8	1.50	10.7	21.1	118.8	4.4	1.1	0.4	0.8	850	23.8	1.13	6.2	20.0	96.0	65.0	2.3
	3.4	0.8	1.9	640	16.5	14.2	1.36	12.1	21.1	112.4	3.7	1.1	0.4	0.8	725	23.5	1.18	5.8	19.5	100.0	65.0	2.4
	3.4	0.8	1.9	750	16.8	15.2	1.38	12.1	21.5	112.6	3.7	1.1	0.4	0.8	850	23.8	1.13	6.2	20.0	96.0	65.0	2.3
	4.5	1.2	2.7	640	16.9	14.4	1.30	12.9	21.3	109.5	3.4	1.1	0.4	0.8	725	23.5	1.18	5.8	19.5	100.0	65.0	2.4
	4.5	1.2	2.7	750	17.2	15.4	1.33	13.0	21.7	109.7	3.5	1.1	0.4	0.8	850	23.8	1.13	6.2	20.0	96.0	65.0	2.3
110	2.3	0.5	1.1	640	14.6	13.2	1.66	8.8	20.3	128.0	5.3	0.9	0.3	0.6	725	23.5	1.18	5.8	19.5	100.0	65.0	2.4
	2.3	0.5	1.1	750	14.9	14.1	1.69	8.8	20.7	128.4	5.5	0.9	0.3	0.6	850	23.8	1.13	6.2	20.0	96.0	65.0	2.3
	3.4	0.8	1.8	640	15.3	13.6	1.54	9.9	20.5	122.1	4.7	0.9	0.3	0.6	725	23.5	1.18	5.8	19.5	100.0	65.0	2.4
	3.4	0.8	1.8	750	15.6	14.5	1.57	9.9	20.9	122.3	4.7	0.9	0.3	0.6	850	23.8	1.13	6.2	20.0	96.0	65.0	2.3
	4.5	1.1	2.6	640	15.6	13.7	1.48	10.5	20.7	119.2	4.3	0.9	0.3	0.6	725	23.5	1.18	5.8	19.5	100.0	65.0	2.4
	4.5	1.1	2.6	750	15.9	14.7	1.51	10.5	21.1	119.4	4.4	0.9	0.3	0.6	850	23.8	1.13	6.2	20.0	96.0	65.0	2.3
120	2.3	0.3	0.8	640	13.9	12.8	1.87	7.4	20.2	138.0	6.6	0.7	0.1	0.2	725	23.5	1.18	5.8	19.5	100.0	65.0	2.4
	2.3	0.3	0.8	750	14.2	13.7	1.90	7.4	20.6	138.4	6.7	0.7	0.1	0.2	850	23.8	1.13	6.2	20.0	96.0	65.0	2.3
	3.4	0.6	1.5	640	14.3	13.0	1.74	8.2	20.2	131.9	5.8	0.7	0.1	0.2	725	23.5	1.18	5.8	19.5	100.0	65.0	2.4
	3.4	0.6	1.5	750	14.6	13.9	1.77	8.2	20.6	132.1	5.9	0.7	0.1	0.2	850	23.8	1.13	6.2	20.0	96.0	65.0	2.3
	4.5	1.0	2.4	640	14.6	13.2	1.68	8.7	20.3	129.0	5.4	0.7	0.1	0.2	725	23.5	1.18	5.8	19.5	100.0	65.0	2.4
	4.5	1.0	2.4	750	14.9	14.1	1.71	8.7	20.7	129.2	5.5	0.7	0.1	0.2	850	23.8	1.13	6.2	20.0	96.0	65.0	2.3

Interpolation is permissible; extrapolation is not.
Flow is controlled to maintain minimum LWT 70° F in cooling and maximum LWT 65° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
For operation in the shaded areas, please see the Performance Data Selection Notes.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 30 Model 026 - Full Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	1.3	0.5	1.1	730	29.0	19.8	1.13	25.7	32.8	70.0	1.4	6.0	3.7	8.6	820	16.4	1.49	3.2	11.3	88.5	16.2	1.6
	1.3	0.5	1.1	850	29.5	21.3	1.17	25.2	33.4	70.0	1.4	6.0	3.7	8.6	950	16.6	1.44	3.4	11.7	86.2	16.1	1.5
30	1.7	0.5	1.1	730	29.0	19.8	1.13	25.7	32.8	70.0	1.4	3.0	1.1	2.5	820	17.8	1.51	3.5	12.7	90.1	21.6	1.8
	1.7	0.5	1.1	850	29.5	21.3	1.17	25.2	33.4	70.0	1.4	3.0	1.1	2.5	950	18.1	1.47	3.6	13.1	87.6	21.3	1.8
	1.7	0.5	1.1	730	29.0	19.8	1.13	25.7	32.8	70.0	1.4	4.5	2.0	4.6	820	18.6	1.53	3.6	13.4	91.0	24.1	1.9
	1.7	0.5	1.1	850	29.5	21.3	1.17	25.2	33.4	70.0	1.4	4.5	2.0	4.6	950	18.9	1.48	3.7	13.8	88.4	23.9	1.9
	1.7	0.5	1.1	730	29.0	19.8	1.13	25.7	32.8	70.0	1.4	6.0	3.1	7.1	820	19.0	1.53	3.6	13.8	91.5	25.4	2.0
	1.7	0.5	1.1	850	29.5	21.3	1.17	25.2	33.4	70.0	1.4	6.0	3.1	7.1	950	19.3	1.49	3.8	14.2	88.8	25.3	1.9
40	2.2	0.5	1.2	730	29.0	19.8	1.13	25.7	32.8	70.0	1.4	3.0	0.9	2.0	820	20.4	1.56	3.8	15.0	93.0	30.0	2.2
	2.2	0.5	1.2	850	29.5	21.3	1.17	25.2	33.4	70.0	1.4	3.0	0.9	2.0	950	20.7	1.51	4.0	15.5	90.1	29.7	2.1
	2.2	0.5	1.2	730	29.0	19.8	1.13	25.7	32.8	70.0	1.4	4.5	1.6	3.8	820	21.3	1.57	4.0	16.0	94.1	32.9	2.3
	2.2	0.5	1.2	850	29.5	21.3	1.17	25.2	33.4	70.0	1.4	4.5	1.6	3.8	950	21.7	1.53	4.2	16.5	91.1	32.7	2.3
	2.2	0.5	1.2	730	29.0	19.8	1.13	25.7	32.8	70.0	1.4	6.0	2.6	6.0	820	21.9	1.58	4.0	16.5	94.7	34.5	2.4
	2.2	0.5	1.2	850	29.5	21.3	1.17	25.2	33.4	70.0	1.4	6.0	2.6	6.0	950	22.2	1.53	4.2	17.0	91.6	34.3	2.3
50	3.0	0.7	1.6	730	28.7	19.7	1.15	24.9	32.7	71.8	1.4	3.0	0.7	1.6	820	23.1	1.60	4.2	17.6	96.0	38.3	2.6
	3.0	0.7	1.6	850	29.2	21.2	1.20	24.4	33.3	72.2	1.5	3.0	0.7	1.6	950	23.4	1.55	4.4	18.1	92.8	37.9	2.5
	3.3	0.8	1.9	730	29.0	19.8	1.13	25.7	32.8	70.0	1.4	4.5	1.4	3.2	820	24.3	1.62	4.4	18.7	97.4	41.7	2.7
	3.3	0.8	1.9	850	29.5	21.3	1.17	25.2	33.4	70.0	1.4	4.5	1.4	3.2	950	24.6	1.57	4.6	19.3	94.0	41.4	2.6
	3.3	0.8	1.9	730	29.0	19.8	1.13	25.7	32.8	70.0	1.4	6.0	2.3	5.2	820	24.9	1.64	4.5	19.3	98.1	43.6	2.8
	3.3	0.8	1.9	850	29.5	21.3	1.17	25.2	33.4	70.0	1.4	6.0	2.3	5.2	950	25.3	1.59	4.7	19.9	94.7	43.4	2.7
60	3.0	0.7	1.5	730	27.5	19.2	1.28	21.5	31.9	81.3	1.9	3.0	0.7	1.5	820	25.9	1.65	4.6	20.2	99.2	46.5	2.9
	3.0	0.7	1.5	850	28.0	20.7	1.33	21.1	32.5	81.7	1.9	3.0	0.7	1.5	950	26.3	1.60	4.8	20.8	95.6	46.1	2.8
	4.5	1.3	2.9	730	28.4	19.6	1.19	24.0	32.5	74.4	1.5	4.5	1.3	2.9	820	27.3	1.68	4.8	21.6	100.8	50.4	3.1
	4.5	1.3	2.9	850	28.9	21.1	1.23	23.5	33.1	74.7	1.6	4.5	1.3	2.9	950	27.7	1.63	5.0	22.2	97.0	50.1	3.0
	6.0	2.0	4.7	730	28.8	19.8	1.14	25.3	32.7	70.9	1.4	6.0	2.0	4.7	820	28.1	1.69	4.9	22.3	101.7	52.6	3.2
	6.0	2.0	4.7	850	29.3	21.3	1.18	24.8	33.4	71.1	1.4	6.0	2.0	4.7	950	28.5	1.64	5.1	22.9	97.8	52.4	3.1
70	3.0	0.6	1.5	730	26.1	18.7	1.42	18.4	31.0	90.7	2.4	3.0	0.6	1.5	820	28.8	1.70	4.9	22.9	102.5	54.7	3.3
	3.0	0.6	1.5	850	26.6	20.1	1.47	18.0	31.6	91.1	2.4	3.0	0.6	1.5	950	29.2	1.65	5.2	23.6	98.5	54.3	3.2
	4.5	1.2	2.7	730	27.1	19.1	1.32	20.6	31.6	84.1	2.0	4.5	1.2	2.7	820	30.4	1.73	5.1	24.4	104.3	59.1	3.5
	4.5	1.2	2.7	850	27.6	20.5	1.37	20.2	32.3	84.3	2.0	4.5	1.2	2.7	950	30.8	1.68	5.4	25.1	100.0	58.8	3.4
	6.0	1.9	4.4	730	27.6	19.3	1.27	21.8	32.0	80.7	1.8	6.0	1.9	4.4	820	31.2	1.75	5.2	25.3	105.3	61.6	3.6
	6.0	1.9	4.4	850	28.1	20.7	1.31	21.4	32.6	80.9	1.9	6.0	1.9	4.4	950	31.7	1.70	5.5	25.9	100.9	61.4	3.5
80	3.0	0.7	1.5	730	24.6	18.0	1.58	15.6	30.0	100.0	3.0	3.0	0.7	1.5	820	31.6	1.76	5.3	25.6	105.7	62.9	3.6
	3.0	0.7	1.5	850	25.0	19.4	1.64	15.3	30.6	100.4	3.0	3.0	0.7	1.5	950	32.1	1.70	5.5	26.3	101.3	62.5	3.5
	4.5	1.2	2.7	730	25.7	18.5	1.47	17.5	30.7	93.6	2.5	3.6	0.9	2.0	820	32.5	1.77	5.4	26.4	106.7	65.0	3.7
	4.5	1.2	2.7	850	26.1	19.9	1.52	17.2	31.3	93.9	2.6	3.6	0.9	2.0	950	33.0	1.72	5.6	27.1	102.1	65.0	3.6
	6.0	1.8	4.2	730	26.2	18.7	1.41	18.5	31.0	90.3	2.3	3.6	0.9	2.0	820	32.5	1.77	5.4	26.4	106.7	65.0	3.7
	6.0	1.8	4.2	850	26.7	20.1	1.46	18.2	31.7	90.6	2.4	3.6	0.9	2.0	950	33.0	1.72	5.6	27.1	102.1	65.0	3.6
90	3.0	0.7	1.6	730	23.0	17.4	1.76	13.1	29.0	109.4	3.6	2.2	0.5	1.2	820	32.5	1.77	5.4	26.4	106.7	65.0	3.7
	3.0	0.7	1.6	850	24.5	19.2	1.70	14.5	30.3	109.8	3.3	2.2	0.5	1.2	950	33.0	1.72	5.6	27.1	102.1	65.0	3.6
	4.5	1.2	2.7	730	24.1	17.8	1.64	14.7	29.7	103.2	3.2	2.2	0.5	1.2	820	32.5	1.77	5.4	26.4	106.7	65.0	3.7
	4.5	1.2	2.7	850	24.5	19.2	1.70	14.5	30.3	103.5	3.3	2.2	0.5	1.2	950	33.0	1.72	5.6	27.1	102.1	65.0	3.6
	6.0	1.8	4.1	730	24.6	18.0	1.58	15.6	30.0	100.0	3.0	2.2	0.5	1.2	820	32.5	1.77	5.4	26.4	106.7	65.0	3.7
	6.0	1.8	4.1	850	25.1	19.4	1.63	15.3	30.6	100.2	3.0	2.2	0.5	1.2	950	33.0	1.72	5.6	27.1	102.1	65.0	3.6
100	3.0	0.7	1.6	730	21.5	16.9	1.95	11.0	28.1	118.8	4.4	1.5	0.4	1.0	820	32.5	1.77	5.4	26.4	106.7	65.0	3.7
	3.0	0.7	1.6	850	21.8	18.1	2.02	10.8	28.7	119.2	4.5	1.5	0.4	1.0	950	33.0	1.72	5.6	27.1	102.1	65.0	3.6
	4.5	1.2	2.7	730	22.5	17.2	1.82	12.3	28.7	112.8	3.9	1.5	0.4	1.0	820	32.5	1.77	5.4	26.4	106.7	65.0	3.7
	4.5	1.2	2.7	850	22.9	18.5	1.89	12.1	29.3	113.0	4.0	1.5	0.4	1.0	950	33.0	1.72	5.6	27.1	102.1	65.0	3.6
	6.0	1.8	4.1	730	23.0	17.4	1.76	13.1	29.0	109.7	3.7	1.5	0.4	1.0	820	32.5	1.77	5.4	26.4	106.7	65.0	3.7
	6.0	1.8	4.1	850	23.4	18.7	1.82	12.8	29.6	109.9	3.7	1.5	0.4	1.0	950	33.0	1.72	5.6	27.1	102.1	65.0	3.6
110	3.0	0.7	1.5	730	20.0	16.4	2.17	9.2	27.4	128.3	5.3	1.2	0.3	0.7	820	32.5	1.77	5.4	26.4	106.7	65.0	3.7
	3.0	0.7	1.5	850	20.3	17.7	2.25	9.0	28.0	128.7	5.4	1.2	0.3	0.7	950	33.0	1.72	5.6	27.1	102.1	65.0	3.6
	4.5	1.1	2.6	730	20.9	16.7	2.03	10.3	27.8	122.4	4.7	1.2	0.3	0.7	820	32.5	1.77	5.4	26.4	106.7	65.0	3.7
	4.5	1.1	2.6	850	21.3	17.9	2.10	10.1	28.5	122.6	4.8	1.2	0.3	0.7	950	33.0	1.72	5.6	27.1	102.1	65.0	3.6
	6.0	1.7	4.0	730	21.4	16.8	1.96	10.9	28.1	119.4	4.5	1.2	0.3	0.7	820	32.5	1.77	5.4	26.4	106.7	65.0	3.7
	6.0	1.7	4.0	850	21.8	18.1	2.03	10.7	28.7	119.6	4.5	1.2	0.3	0.7	950	33.0	1.72	5.6	27.1	102.1	65.0	3.6
120	3.0	0.5	1.2	730	18.7	16.2	2.41	7.7	26.9	137.9	6.3	1.0	0.1	0.3	820	32.5	1.77	5.4	26.4	106.7	65.0	3.7
	3.0	0.5	1.2	850	19.0	17.4	2.50	7.6	27.5	138.3	6.4	1.0	0.1	0.3	950	33.0	1.72	5.6	27.1	102.1	65.0	3.6
	4.5	1.0	2.4	730	19.5	16.3	2.26	8.6	27.2	132.1	5.6	1.0	0.1	0.3	820	32.5	1.77	5.4	26.4	106.7	65.0	3.7
	4.5	1.0	2.4	850	19.8	17.5	2.34	8.5	27.8	132.3	5.8	1.0	0.1	0.3	950	33.0	1.72	5.6	27.1	102.1	65.0	3.6
	6.0	1.7	3.9	730	19.9	16.4	2.18	9.1	27.3	129.1	5.3	1.0	0.1	0.3	820	32.5	1.77	5.4	26.4	106.7	65.0	3.7
	6.0	1.7	3.9	850	20.2	17.6	2.26	8.9	28.0	129.3	5.5	1.0	0.1	0.3	950	33.0	1.72	5.6	27.1	102.1	65.0	3.6

Interpolation is permissible; extrapolation is not.
Flow is controlled to maintain minimum LWT 70° F in cooling and maximum LWT 65° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
For operation in the shaded areas, please see the Performance Data Selection Notes.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 30 Model 038 - Part Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	1.4	0.7	1.7	860	32.0	21.1	0.99	32.4	35.4	70.0	1.2	6.0	4.9	11.2	860	17.2	1.56	3.2	11.8	88.5	16.1	1.7
	1.4	0.7	1.7	1000	32.7	22.6	1.01	32.5	36.1	70.0	1.2	6.0	4.9	11.2	1000	17.4	1.49	3.4	12.3	86.1	15.9	1.7
30	1.8	0.7	1.7	860	32.0	21.1	0.99	32.4	35.4	70.0	1.2	3.0	1.5	3.4	860	18.8	1.57	3.5	13.5	90.3	21.0	1.9
	1.8	0.7	1.7	1000	32.7	22.6	1.01	32.5	36.1	70.0	1.2	3.0	1.5	3.4	1000	19.1	1.50	3.7	14.0	87.7	20.7	1.8
	1.8	0.7	1.7	860	32.0	21.1	0.99	32.4	35.4	70.0	1.2	4.5	2.6	6.0	860	19.8	1.57	3.7	14.4	91.3	23.6	2.0
	1.8	0.7	1.7	1000	32.7	22.6	1.01	32.5	36.1	70.0	1.2	4.5	2.6	6.0	1000	20.1	1.51	3.9	14.9	88.6	23.4	1.9
	1.8	0.7	1.7	860	32.0	21.1	0.99	32.4	35.4	70.0	1.2	6.0	3.8	8.9	860	20.3	1.57	3.8	14.9	91.9	25.0	2.0
	1.8	0.7	1.7	1000	32.7	22.6	1.01	32.5	36.1	70.0	1.2	6.0	3.8	8.9	1000	20.6	1.51	4.0	15.4	89.1	24.9	2.0
40	2.4	0.7	1.7	860	32.0	21.1	0.99	32.4	35.4	70.0	1.2	3.0	1.1	2.5	860	21.7	1.58	4.0	16.3	93.4	29.1	2.2
	2.4	0.7	1.7	1000	32.7	22.6	1.01	32.5	36.1	70.0	1.2	3.0	1.1	2.5	1000	22.0	1.52	4.3	16.8	90.4	28.8	2.1
	2.4	0.7	1.7	860	32.0	21.1	0.99	32.4	35.4	70.0	1.2	4.5	2.0	4.7	860	22.9	1.59	4.2	17.4	94.6	32.2	2.3
	2.4	0.7	1.7	1000	32.7	22.6	1.01	32.5	36.1	70.0	1.2	4.5	2.0	4.7	1000	23.2	1.52	4.5	18.0	91.5	32.0	2.2
	2.4	0.7	1.7	860	32.0	21.1	0.99	32.4	35.4	70.0	1.2	6.0	3.1	7.2	860	23.5	1.59	4.3	18.1	95.3	34.0	2.4
	2.4	0.7	1.7	1000	32.7	22.6	1.01	32.5	36.1	70.0	1.2	6.0	3.1	7.2	1000	23.8	1.53	4.6	18.6	92.1	33.8	2.3
50	3.0	0.9	2.0	860	31.6	21.0	1.05	30.2	35.2	73.5	1.4	3.0	0.9	2.0	860	24.6	1.60	4.5	19.1	96.5	37.2	2.5
	3.0	0.9	2.0	1000	32.3	22.5	1.07	30.3	35.9	73.9	1.4	3.0	0.9	2.0	1000	24.9	1.53	4.8	19.7	93.1	36.9	2.4
	3.6	1.2	2.7	860	32.0	21.1	0.99	32.4	35.4	70.0	1.2	4.5	1.7	3.9	860	26.0	1.61	4.7	20.5	98.0	40.9	2.6
	3.6	1.2	2.7	1000	32.7	22.6	1.01	32.5	36.1	70.0	1.2	4.5	1.7	3.9	1000	26.3	1.54	5.0	21.1	94.4	40.6	2.5
	3.6	1.2	2.7	860	32.0	21.1	0.99	32.4	35.4	70.0	1.2	6.0	2.7	6.2	860	26.7	1.61	4.9	21.2	98.8	42.9	2.7
	3.6	1.2	2.7	1000	32.7	22.6	1.01	32.5	36.1	70.0	1.2	6.0	2.7	6.2	1000	27.1	1.55	5.1	21.8	95.1	42.7	2.6
60	3.0	0.8	1.8	860	30.3	20.7	1.21	25.0	34.4	82.9	1.9	3.0	0.8	1.8	860	27.5	1.62	5.0	22.0	99.6	45.3	2.7
	3.0	0.8	1.8	1000	30.9	22.1	1.23	25.0	35.1	83.4	2.0	3.0	0.8	1.8	1000	27.9	1.55	5.3	22.6	95.9	44.9	2.7
	4.5	1.5	3.5	860	31.4	21.0	1.08	29.1	35.1	75.6	1.5	4.5	1.5	3.5	860	29.1	1.63	5.2	23.6	101.4	49.5	2.9
	4.5	1.5	3.5	1000	32.0	22.4	1.10	29.2	35.8	75.9	1.5	4.5	1.5	3.5	1000	29.5	1.56	5.5	24.2	97.4	49.2	2.8
	6.0	2.4	5.5	860	31.8	21.1	1.02	31.3	35.3	71.8	1.3	6.0	2.4	5.5	860	30.0	1.63	5.4	24.4	102.3	51.9	2.9
	6.0	2.4	5.5	1000	32.5	22.6	1.04	31.4	36.0	72.0	1.3	6.0	2.4	5.5	1000	30.4	1.57	5.7	25.1	98.2	51.6	2.9
70	3.0	0.8	1.9	860	28.6	20.1	1.40	20.4	33.4	92.3	2.7	3.0	0.8	1.9	860	30.5	1.64	5.5	24.9	102.8	53.4	3.0
	3.0	0.8	1.9	1000	29.2	21.5	1.43	20.5	34.1	92.7	2.7	3.0	0.8	1.9	1000	30.9	1.57	5.8	25.6	98.6	53.0	2.9
	4.5	1.5	3.4	860	29.9	20.6	1.25	23.9	34.2	85.2	2.1	4.5	1.5	3.4	860	32.3	1.65	5.7	26.7	104.8	58.1	3.1
	4.5	1.5	3.4	1000	30.5	22.0	1.28	24.0	34.9	85.5	2.1	4.5	1.5	3.4	1000	32.8	1.58	6.1	27.4	100.4	57.8	3.0
	6.0	2.3	5.3	860	30.5	20.7	1.18	25.9	34.6	81.5	1.8	6.0	2.3	5.3	860	33.3	1.66	5.9	27.7	105.9	60.8	3.2
	6.0	2.3	5.3	1000	31.2	22.2	1.20	25.9	35.3	81.8	1.8	6.0	2.3	5.3	1000	33.8	1.59	6.2	28.4	101.3	60.5	3.1
80	3.0	0.9	2.0	860	26.7	19.4	1.61	16.6	32.2	101.5	3.6	3.0	0.9	2.0	860	33.5	1.66	5.9	27.8	106.1	61.4	3.2
	3.0	0.9	2.0	1000	27.3	20.8	1.64	16.6	32.9	101.9	3.7	3.0	0.9	2.0	1000	34.0	1.59	6.3	28.5	101.5	61.0	3.1
	4.5	1.5	3.4	860	28.1	20.0	1.45	19.4	33.1	94.7	2.9	4.0	1.3	2.9	860	35.0	1.67	6.1	29.3	107.7	65.0	3.3
	4.5	1.5	3.4	1000	28.7	21.4	1.48	19.4	33.8	95.0	3.0	4.0	1.3	2.9	1000	35.5	1.60	6.5	30.1	102.9	65.0	3.2
	6.0	2.2	5.2	860	28.9	20.2	1.37	21.0	33.5	91.2	2.6	4.0	1.3	2.9	860	35.0	1.67	6.1	29.3	107.7	65.0	3.3
	6.0	2.2	5.2	1000	29.4	21.6	1.40	21.1	34.2	91.4	2.6	4.0	1.3	2.9	1000	35.5	1.60	6.5	30.1	102.9	65.0	3.2
90	3.0	0.9	2.1	860	24.7	18.6	1.84	13.5	31.0	110.7	4.7	2.4	0.7	1.7	860	35.0	1.67	6.1	29.3	107.7	65.0	3.3
	3.0	0.9	2.1	1000	26.7	20.6	1.70	15.7	32.5	111.1	4.0	2.4	0.7	1.7	1000	35.5	1.60	6.5	30.1	102.9	65.0	3.2
	4.5	1.5	3.5	860	26.2	19.2	1.67	15.7	31.9	104.2	3.9	2.4	0.7	1.7	860	35.0	1.67	6.1	29.3	107.7	65.0	3.3
	4.5	1.5	3.5	1000	26.7	20.6	1.70	15.7	32.5	104.4	4.0	2.4	0.7	1.7	1000	35.5	1.60	6.5	30.1	102.9	65.0	3.2
	6.0	2.2	5.2	860	26.9	19.5	1.59	16.9	32.3	100.8	3.5	2.4	0.7	1.7	860	35.0	1.67	6.1	29.3	107.7	65.0	3.3
	6.0	2.2	5.2	1000	27.5	20.9	1.62	17.0	33.0	101.0	3.6	2.4	0.7	1.7	1000	35.5	1.60	6.5	30.1	102.9	65.0	3.2
100	3.0	0.9	2.1	860	22.7	17.7	2.07	11.0	29.8	119.9	6.1	1.7	0.5	1.2	860	35.0	1.67	6.1	29.3	107.7	65.0	3.3
	3.0	0.9	2.1	1000	23.2	19.0	2.11	11.0	30.4	120.3	6.2	1.7	0.5	1.2	1000	35.5	1.60	6.5	30.1	102.9	65.0	3.2
	4.5	1.5	3.5	860	24.1	18.3	1.91	12.6	30.6	113.6	5.1	1.7	0.5	1.2	860	35.0	1.67	6.1	29.3	107.7	65.0	3.3
	4.5	1.5	3.5	1000	24.6	19.6	1.94	12.7	31.2	113.9	5.2	1.7	0.5	1.2	1000	35.5	1.60	6.5	30.1	102.9	65.0	3.2
	6.0	2.2	5.1	860	24.8	18.7	1.82	13.6	31.0	110.3	4.7	1.7	0.5	1.2	860	35.0	1.67	6.1	29.3	107.7	65.0	3.3
	6.0	2.2	5.1	1000	25.3	20.0	1.86	13.6	31.7	110.6	4.8	1.7	0.5	1.2	1000	35.5	1.60	6.5	30.1	102.9	65.0	3.2
110	3.0	0.8	1.8	860	20.8	16.9	2.32	9.0	28.8	129.2	7.6	1.3	0.3	0.6	860	35.0	1.67	6.1	29.3	107.7	65.0	3.3
	3.0	0.8	1.8	1000	21.3	18.0	2.36	9.0	29.3	129.6	7.7	1.3	0.3	0.6	1000	35.5	1.60	6.5	30.1	102.9	65.0	3.2
	4.5	1.4	3.2	860	22.1	17.4	2.15	10.2	29.4	123.1	6.5	1.3	0.3	0.6	860	35.0	1.67	6.1	29.3	107.7	65.0	3.3
	4.5	1.4	3.2	1000	22.5	18.7	2.19	10.3	30.0	123.3	6.7	1.3	0.3	0.6	1000	35.5	1.60	6.5	30.1	102.9	65.0	3.2
	6.0	2.1	4.9	860	22.8	17.7	2.07	11.0	29.8	119.9	6.0	1.3	0.3	0.6	860	35.0	1.67	6.1	29.3	107.7	65.0	3.3
	6.0	2.1	4.9	1000	23.2	19.0	2.11	11.0	30.4	120.1	6.2	1.3	0.3	0.6	1000	35.5	1.60	6.5	30.1	102.9	65.0	3.2
120	3.0	0.5	1.1	860	19.2	16.1	2.57	7.5	28.0	138.7	9.4	1.1	0.1	0.2	860	35.0	1.67	6.1	29.3	107.7	65.0	3.3
	3.0	0.5	1.1	1000	19.6	17.2	2.62	7.5	28.5	139.0	9.5	1.1	0.1	0.2	1000	35.5	1.60	6.5	30.1	102.9	65.0	3.2
	4.5	1.1	2.6	860	20.2	16.6	2.41	8.4	28.5	132.6	8.2	1.1	0.1	0.2	860	35.0	1.67	6.1	29.3	107.7	65.0	3.3
	4.5	1.1	2.6	1000	20.6	17.7	2.45	8.4	29.0	132.9	8.4	1.1	0.1	0.2	1000	35.5	1.60	6.5	30.1	102.9	65.0	3.2
	6.0	1.9	4.4	860	20.8	16.8	2.33	8.9	28.7	129.6	7.6	1.1	0.1	0.2	860	35.0	1.67	6.1	29.3	107.7	65.0	3.3
	6.0	1.9	4.4	1000	21.2	18.0	2.37	9.0	29.3	129.8	7.8	1.1	0.1	0.2	1000	35.5	1.60	6.5	30.1	102.9	65.0	3.2

Interpolation is permissible; extrapolation is not.
Flow is controlled to maintain minimum LWT 70° F in cooling and maximum LWT 65° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
For operation in the shaded areas, please see the Performance Data Selection Notes.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 30 Model 038 - Full Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	2.0	1.2	2.7	1080	44.0	27.4	1.65	26.7	49.6	70.0	1.9	9.0	8.3	19.1	1080	25.6	2.09	3.6	18.5	91.9	15.9	2.1
	2.0	1.2	2.7	1250	44.8	29.4	1.71	26.3	50.6	70.0	1.9	9.0	8.3	19.1	1250	26.0	2.02	3.8	19.1	89.2	15.8	2.1
30	2.5	1.2	2.7	1080	44.0	27.4	1.65	26.7	49.6	70.0	1.9	4.5	2.6	6.0	1080	27.9	2.12	3.9	20.7	93.9	20.8	2.4
	2.5	1.2	2.7	1250	44.8	29.4	1.71	26.3	50.6	70.0	1.9	4.5	2.6	6.0	1250	28.3	2.05	4.0	21.3	91.0	20.5	2.4
	2.5	1.2	2.7	1080	44.0	27.4	1.65	26.7	49.6	70.0	1.9	6.8	4.5	10.5	1080	29.2	2.14	4.0	21.9	95.1	23.5	2.6
	2.5	1.2	2.7	1250	44.8	29.4	1.71	26.3	50.6	70.0	1.9	6.8	4.5	10.5	1250	29.7	2.07	4.2	22.6	92.0	23.3	2.5
	2.5	1.2	2.7	1080	44.0	27.4	1.65	26.7	49.6	70.0	1.9	9.0	6.9	16.0	1080	30.0	2.15	4.1	22.6	95.7	25.0	2.7
	2.5	1.2	2.7	1250	44.8	29.4	1.71	26.3	50.6	70.0	1.9	9.0	6.9	16.0	1250	30.4	2.08	4.3	23.3	92.5	24.8	2.6
40	3.4	1.3	3.0	1080	44.0	27.4	1.65	26.7	49.6	70.0	1.9	4.5	2.0	4.7	1080	31.9	2.18	4.3	24.4	97.3	29.1	2.9
	3.4	1.3	3.0	1250	44.8	29.4	1.71	26.3	50.6	70.0	1.9	4.5	2.0	4.7	1250	32.4	2.12	4.5	25.2	94.0	28.8	2.9
	3.4	1.3	3.0	1080	44.0	27.4	1.65	26.7	49.6	70.0	1.9	6.8	3.8	8.7	1080	33.5	2.22	4.4	25.9	98.7	32.3	3.1
	3.4	1.3	3.0	1250	44.8	29.4	1.71	26.3	50.6	70.0	1.9	6.8	3.8	8.7	1250	34.0	2.15	4.6	26.7	95.2	32.1	3.0
	3.4	1.3	3.0	1080	44.0	27.4	1.65	26.7	49.6	70.0	1.9	9.0	5.9	13.6	1080	34.4	2.23	4.5	26.7	99.5	34.1	3.2
	3.4	1.3	3.0	1250	44.8	29.4	1.71	26.3	50.6	70.0	1.9	9.0	5.9	13.6	1250	34.9	2.16	4.7	27.5	95.8	33.9	3.2
50	4.5	1.7	3.9	1080	43.7	27.3	1.68	26.0	49.5	72.0	1.9	4.5	1.7	3.9	1080	35.9	2.27	4.6	28.2	100.8	37.5	3.4
	4.5	1.7	3.9	1250	44.5	29.3	1.75	25.5	50.4	72.4	2.0	4.5	1.7	3.9	1250	36.5	2.20	4.9	29.0	97.0	37.1	3.3
	5.1	2.0	4.7	1080	44.0	27.4	1.65	26.7	49.6	70.0	1.9	6.8	3.2	7.5	1080	37.8	2.31	4.8	29.9	102.4	41.1	3.7
	5.1	2.0	4.7	1250	44.8	29.4	1.71	26.3	50.6	70.0	1.9	6.8	3.2	7.5	1250	38.4	2.24	5.0	30.7	98.4	40.9	3.6
	5.1	2.0	4.7	1080	44.0	27.4	1.65	26.7	49.6	70.0	1.9	9.0	5.2	11.9	1080	38.8	2.33	4.9	30.8	103.3	43.1	3.8
	5.1	2.0	4.7	1250	44.8	29.4	1.71	26.3	50.6	70.0	1.9	9.0	5.2	11.9	1250	39.4	2.26	5.1	31.7	99.2	43.0	3.7
60	4.5	1.5	3.5	1080	42.2	26.8	1.86	22.7	48.5	81.6	2.6	4.5	1.5	3.5	1080	40.0	2.36	5.0	31.9	104.3	45.8	3.9
	4.5	1.5	3.5	1250	42.9	28.8	1.93	22.3	49.5	82.0	2.7	4.5	1.5	3.5	1250	40.6	2.29	5.2	32.8	100.1	45.4	3.8
	6.8	2.9	6.7	1080	43.4	27.2	1.73	25.1	49.3	74.6	2.1	6.8	2.9	6.7	1080	42.1	2.42	5.1	33.9	106.1	50.0	4.2
	6.8	2.9	6.7	1250	44.1	29.2	1.79	24.7	50.2	74.9	2.1	6.8	2.9	6.7	1250	42.8	2.34	5.4	34.8	101.7	49.7	4.1
	9.0	4.7	10.8	1080	43.9	27.3	1.67	26.3	49.6	71.0	1.9	9.0	4.7	10.8	1080	43.3	2.44	5.2	34.9	107.1	52.2	4.3
	9.0	4.7	10.8	1250	44.6	29.4	1.73	25.9	50.5	71.2	1.9	9.0	4.7	10.8	1250	43.9	2.37	5.4	35.8	102.5	52.0	4.2
70	4.5	1.5	3.4	1080	40.2	26.0	2.06	19.5	47.3	91.0	3.4	4.5	1.5	3.4	1080	44.1	2.47	5.2	35.7	107.8	54.1	4.4
	4.5	1.5	3.4	1250	40.9	28.0	2.14	19.2	48.2	91.4	3.5	4.5	1.5	3.4	1250	44.8	2.39	5.5	36.6	103.2	53.7	4.3
	6.8	2.7	6.3	1080	41.7	26.6	1.91	21.8	48.2	84.3	2.8	6.8	2.7	6.3	1080	46.5	2.53	5.4	37.8	109.8	58.8	4.7
	6.8	2.7	6.3	1250	42.4	28.6	1.98	21.4	49.2	84.6	2.9	6.8	2.7	6.3	1250	47.2	2.45	5.6	38.8	104.9	58.5	4.5
	9.0	4.4	10.1	1080	42.4	26.8	1.84	23.0	48.6	80.8	2.5	9.0	4.4	10.1	1080	47.8	2.56	5.5	39.0	111.0	61.3	4.8
	9.0	4.4	10.1	1250	43.1	28.8	1.91	22.6	49.6	81.0	2.6	9.0	4.4	10.1	1250	48.5	2.48	5.7	40.0	105.9	61.1	4.7
80	4.5	1.5	3.4	1080	38.0	25.2	2.29	16.6	45.8	100.4	4.3	4.5	1.5	3.4	1080	48.2	2.58	5.5	39.4	111.3	62.5	4.9
	4.5	1.5	3.4	1250	38.6	27.1	2.37	16.3	46.7	100.8	4.4	4.5	1.5	3.4	1250	49.0	2.50	5.7	40.4	106.3	62.0	4.7
	6.8	2.7	6.2	1080	39.6	25.8	2.13	18.6	46.8	93.9	3.6	5.6	2.0	4.6	1080	49.7	2.62	5.6	40.8	112.6	65.0	5.0
	6.8	2.7	6.2	1250	40.3	27.7	2.20	18.3	47.8	94.2	3.7	5.6	2.0	4.6	1250	50.5	2.54	5.8	41.8	107.4	65.0	4.9
	9.0	4.2	9.7	1080	40.4	26.1	2.05	19.7	47.4	90.5	3.3	5.6	2.0	4.6	1080	49.7	2.62	5.6	40.8	112.6	65.0	5.0
	9.0	4.2	9.7	1250	41.1	28.1	2.12	19.4	48.3	90.7	3.4	5.6	2.0	4.6	1250	50.5	2.54	5.8	41.8	107.4	65.0	4.9
90	4.5	1.5	3.5	1080	35.6	24.1	2.54	14.0	44.3	109.7	5.3	3.3	1.0	2.4	1080	49.7	2.62	5.6	40.8	112.6	65.0	5.0
	4.5	1.5	3.5	1250	37.9	26.7	2.45	15.4	46.2	110.1	4.7	3.3	1.0	2.4	1250	50.5	2.54	5.8	41.8	107.4	65.0	4.9
	6.8	2.6	6.1	1080	37.2	24.9	2.37	15.7	45.3	103.4	4.6	3.3	1.0	2.4	1080	49.7	2.62	5.6	40.8	112.6	65.0	5.0
	6.8	2.6	6.1	1250	37.9	26.7	2.45	15.4	46.2	103.7	4.7	3.3	1.0	2.4	1250	50.5	2.54	5.8	41.8	107.4	65.0	4.9
	9.0	4.1	9.5	1080	38.1	25.2	2.28	16.7	45.9	100.2	4.3	3.3	1.0	2.4	1080	49.7	2.62	5.6	40.8	112.6	65.0	5.0
	9.0	4.1	9.5	1250	38.7	27.1	2.36	16.4	46.8	100.4	4.3	3.3	1.0	2.4	1250	50.5	2.54	5.8	41.8	107.4	65.0	4.9
100	4.5	1.5	3.5	1080	33.2	23.0	2.82	11.8	42.8	119.0	6.5	2.4	0.7	1.7	1080	49.7	2.62	5.6	40.8	112.6	65.0	5.0
	4.5	1.5	3.5	1250	33.7	24.8	2.92	11.6	43.7	119.4	6.7	2.4	0.7	1.7	1250	50.5	2.54	5.8	41.8	107.4	65.0	4.9
	6.8	2.6	6.1	1080	34.8	23.8	2.63	13.2	43.7	113.0	5.7	2.4	0.7	1.7	1080	49.7	2.62	5.6	40.8	112.6	65.0	5.0
	6.8	2.6	6.1	1250	35.4	25.6	2.73	13.0	44.7	113.2	5.8	2.4	0.7	1.7	1250	50.5	2.54	5.8	41.8	107.4	65.0	4.9
	9.0	4.1	9.4	1080	35.6	24.1	2.54	14.0	44.3	109.8	5.3	2.4	0.7	1.7	1080	49.7	2.62	5.6	40.8	112.6	65.0	5.0
	9.0	4.1	9.4	1250	36.2	26.0	2.63	13.7	45.2	110.0	5.4	2.4	0.7	1.7	1250	50.5	2.54	5.8	41.8	107.4	65.0	4.9
110	4.5	1.4	3.2	1080	30.8	21.9	3.11	9.9	41.5	128.4	7.9	1.9	0.4	1.0	1080	49.7	2.62	5.6	40.8	112.6	65.0	5.0
	4.5	1.4	3.2	1250	31.4	23.5	3.23	9.7	42.4	128.8	8.0	1.9	0.4	1.0	1250	50.5	2.54	5.8	41.8	107.4	65.0	4.9
	6.8	2.5	5.9	1080	32.3	22.6	2.92	11.1	42.3	122.5	7.0	1.9	0.4	1.0	1080	49.7	2.62	5.6	40.8	112.6	65.0	5.0
	6.8	2.5	5.9	1250	32.9	24.3	3.03	10.9	43.2	122.8	7.1	1.9	0.4	1.0	1250	50.5	2.54	5.8	41.8	107.4	65.0	4.9
	9.0	4.0	9.2	1080	33.1	23.0	2.83	11.7	42.7	119.5	6.6	1.9	0.4	1.0	1080	49.7	2.62	5.6	40.8	112.6	65.0	5.0
	9.0	4.0	9.2	1250	33.7	24.7	2.93	11.5	43.6	119.7	6.7	1.9	0.4	1.0	1250	50.5	2.54	5.8	41.8	107.4	65.0	4.9
120	4.5	1.1	2.6	1080	28.7	20.8	3.43	8.4	40.4	138.0	9.4	1.5	0.1	0.2	1080	49.7	2.62	5.6	40.8	112.6	65.0	5.0
	4.5	1.1	2.6	1250	29.2	22.3	3.55	8.2	41.4	138.4	9.6	1.5	0.1	0.2	1250	50.5	2.54	5.8	41.8	107.4	65.0	4.9
	6.8	2.4	5.4	1080	30.0	21.4	3.23	9.3	41.0	132.2	8.4	1.5	0.1	0.2	1080	49.7	2.62	5.6	40.8	112.6	65.0	5.0
	6.8	2.4	5.4	1250	30.5	23.1	3.35	9.1	41.9	132.4	8.6	1.5	0.1	0.2	1250	50.5	2.54	5.8	41.8	107.4	65.0	4.9
	9.0	3.9	8.9	1080	30.7	21.8	3.13	9.8	41.4	129.2	7.9	1.5	0.1	0.2	1080	49.7	2.62	5.6	40.8	112.6	65.0	5.0
	9.0	3.9	8.9	1250	31.2	23.4	3.25	9.6	42.3	129.4	8.1	1.5	0.1	0.2	1250	50.5	2.54	5.8	41.8	107.4	65.0	4.9

Interpolation is permissible; extrapolation is not.
Flow is controlled to maintain minimum LWT 70° F in cooling and maximum LWT 65° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
For operation in the shaded areas, please see the Performance Data Selection Notes.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 30 Model 049 - Part Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	1.9	0.1	0.2	1150	41.6	30.3	1.38	30.2	46.3	70.0	1.5	9.0	3.2	7.4	1150	22.8	2.26	3.0	15.1	88.4	16.6	2.6
	1.9	0.1	0.2	1350	42.4	32.4	1.40	30.3	47.2	70.0	1.5	9.0	3.2	7.4	1350	23.1	2.17	3.1	15.7	85.9	16.5	2.5
30	2.4	0.1	0.2	1150	41.6	30.3	1.38	30.2	46.3	70.0	1.5	4.5	0.6	1.4	1150	25.1	2.28	3.2	17.3	90.2	22.3	2.7
	2.4	0.1	0.2	1350	42.4	32.4	1.40	30.3	47.2	70.0	1.5	4.5	0.6	1.4	1350	25.4	2.18	3.4	18.0	87.4	22.0	2.6
	2.4	0.1	0.2	1150	41.6	30.3	1.38	30.2	46.3	70.0	1.5	6.8	1.6	3.6	1150	26.1	2.28	3.4	18.3	91.0	24.6	2.7
	2.4	0.1	0.2	1350	42.4	32.4	1.40	30.3	47.2	70.0	1.5	6.8	1.6	3.6	1350	26.5	2.19	3.5	19.0	88.2	24.4	2.6
	2.4	0.1	0.2	1150	41.6	30.3	1.38	30.2	46.3	70.0	1.5	9.0	2.7	6.4	1150	26.7	2.29	3.4	18.9	91.5	25.8	2.7
	2.4	0.1	0.2	1350	42.4	32.4	1.40	30.3	47.2	70.0	1.5	9.0	2.7	6.4	1350	27.1	2.19	3.6	19.6	88.6	25.6	2.6
40	3.1	0.1	0.2	1150	41.6	30.3	1.38	30.2	46.3	70.0	1.5	4.5	0.5	1.1	1150	28.9	2.30	3.7	21.1	93.3	30.6	2.7
	3.1	0.1	0.2	1350	42.4	32.4	1.40	30.3	47.2	70.0	1.5	4.5	0.5	1.1	1350	29.3	2.20	3.9	21.8	90.1	30.3	2.7
	3.1	0.1	0.2	1150	41.6	30.3	1.38	30.2	46.3	70.0	1.5	6.8	1.3	3.0	1150	30.4	2.30	3.9	22.5	94.4	33.3	2.8
	3.1	0.1	0.2	1350	42.4	32.4	1.40	30.3	47.2	70.0	1.5	6.8	1.3	3.0	1350	30.8	2.21	4.1	23.3	91.1	33.1	2.7
	3.1	0.1	0.2	1150	41.6	30.3	1.38	30.2	46.3	70.0	1.5	9.0	2.4	5.6	1150	31.2	2.30	4.0	23.3	95.1	34.8	2.8
	3.1	0.1	0.2	1350	42.4	32.4	1.40	30.3	47.2	70.0	1.5	9.0	2.4	5.6	1350	31.6	2.21	4.2	24.1	91.7	34.7	2.7
50	4.5	0.4	0.9	1150	41.4	30.2	1.40	29.7	46.2	70.5	1.5	4.5	0.4	0.9	1150	33.2	2.31	4.2	25.3	96.7	38.8	2.9
	4.5	0.4	0.9	1350	42.2	32.4	1.42	29.7	47.1	70.9	1.5	4.5	0.4	0.9	1350	33.6	2.21	4.5	26.1	93.1	38.4	2.8
	4.7	0.4	1.0	1150	41.6	30.3	1.38	30.2	46.3	70.0	1.5	6.8	1.2	2.7	1150	35.0	2.31	4.4	27.1	98.2	42.0	2.9
	4.7	0.4	1.0	1350	42.4	32.4	1.40	30.3	47.2	70.0	1.5	6.8	1.2	2.7	1350	35.5	2.22	4.7	27.9	94.3	41.7	2.9
	4.7	0.4	1.0	1150	41.6	30.3	1.38	30.2	46.3	70.0	1.5	9.0	2.2	5.1	1150	36.0	2.32	4.6	28.1	99.0	43.8	3.0
	4.7	0.4	1.0	1350	42.4	32.4	1.40	30.3	47.2	70.0	1.5	9.0	2.2	5.1	1350	36.5	2.22	4.8	28.9	95.0	43.6	2.9
60	4.5	0.4	0.8	1150	39.5	29.6	1.61	24.6	44.9	80.0	2.0	4.5	0.4	0.8	1150	37.6	2.32	4.7	29.7	100.3	46.8	3.0
	4.5	0.4	0.8	1350	40.3	31.7	1.64	24.6	45.9	80.4	2.1	4.5	0.4	0.8	1350	38.1	2.22	5.0	30.5	96.1	46.4	3.0
	6.8	1.1	2.5	1150	40.8	30.0	1.46	28.0	45.8	73.6	1.6	6.8	1.1	2.5	1150	39.8	2.33	5.0	31.8	102.0	50.6	3.1
	6.8	1.1	2.5	1350	41.7	32.2	1.48	28.1	46.7	73.8	1.7	6.8	1.1	2.5	1350	40.3	2.23	5.3	32.7	97.7	50.3	3.0
	9.0	2.0	4.7	1150	41.5	30.2	1.39	29.9	46.2	70.3	1.5	9.0	2.0	4.7	1150	41.0	2.33	5.2	33.0	103.0	52.7	3.2
	9.0	2.0	4.7	1350	42.3	32.4	1.41	30.0	47.2	70.5	1.5	9.0	2.0	4.7	1350	41.6	2.23	5.5	33.9	98.5	52.5	3.1
70	4.5	0.4	0.9	1150	37.3	28.9	1.85	20.2	43.7	89.4	2.7	4.5	0.4	0.9	1150	42.1	2.33	5.3	34.1	103.9	54.8	3.2
	4.5	0.4	0.9	1350	38.1	31.0	1.89	20.2	44.5	89.8	2.8	4.5	0.4	0.9	1350	42.7	2.24	5.6	35.1	99.3	54.4	3.1
	6.8	1.0	2.4	1150	38.8	29.4	1.68	23.1	44.5	83.2	2.2	6.8	1.0	2.4	1150	44.6	2.35	5.6	36.6	105.9	59.2	3.4
	6.8	1.0	2.4	1350	39.6	31.5	1.71	23.1	45.4	83.5	2.3	6.8	1.0	2.4	1350	45.2	2.25	5.9	37.6	101.0	58.9	3.3
	9.0	2.0	4.5	1150	39.5	29.6	1.60	24.7	45.0	80.0	2.0	9.0	2.0	4.5	1150	46.0	2.35	5.7	37.9	107.0	61.6	3.4
	9.0	2.0	4.5	1350	40.3	31.7	1.63	24.7	45.9	80.2	2.1	9.0	2.0	4.5	1350	46.6	2.26	6.1	38.9	102.0	61.4	3.3
80	4.5	0.4	0.9	1150	35.1	28.0	2.13	16.4	42.4	98.8	3.7	4.5	0.4	0.9	1150	46.6	2.36	5.8	38.5	107.5	62.9	3.5
	4.5	0.4	0.9	1350	35.8	30.0	2.17	16.5	43.2	99.2	3.7	4.5	0.4	0.9	1350	47.2	2.26	6.1	39.5	102.4	62.4	3.4
	6.8	1.0	2.4	1150	36.6	28.6	1.95	18.8	43.2	92.8	3.0	5.5	0.6	1.5	1150	48.0	2.37	5.9	39.9	108.6	65.0	3.6
	6.8	1.0	2.4	1350	37.3	30.7	1.98	18.8	44.1	93.1	3.1	5.5	0.6	1.5	1350	48.6	2.27	6.3	40.9	103.4	65.0	3.5
	9.0	1.9	4.4	1150	37.3	28.9	1.85	20.1	43.7	89.7	2.8	5.5	0.6	1.5	1150	48.0	2.37	5.9	39.9	108.6	65.0	3.6
	9.0	1.9	4.4	1350	38.1	31.0	1.89	20.2	44.5	89.9	2.8	5.5	0.6	1.5	1350	48.6	2.27	6.3	40.9	103.4	65.0	3.5
90	4.5	0.4	1.0	1150	32.8	27.0	2.45	13.4	41.2	108.3	4.8	3.3	0.2	0.5	1150	48.0	2.37	5.9	39.9	108.6	65.0	3.6
	4.5	0.4	1.0	1350	35.0	29.6	2.29	15.3	42.8	108.7	4.1	3.3	0.2	0.5	1350	48.6	2.27	6.3	40.9	103.4	65.0	3.5
	6.8	1.0	2.4	1150	34.3	27.7	2.25	15.2	41.9	102.4	4.1	3.3	0.2	0.5	1150	48.0	2.37	5.9	39.9	108.6	65.0	3.6
	6.8	1.0	2.4	1350	35.0	29.6	2.29	15.3	42.8	102.7	4.1	3.3	0.2	0.5	1350	48.6	2.27	6.3	40.9	103.4	65.0	3.5
	9.0	1.9	4.4	1150	35.0	28.0	2.15	16.3	42.3	99.4	3.7	3.3	0.2	0.5	1150	48.0	2.37	5.9	39.9	108.6	65.0	3.6
	9.0	1.9	4.4	1350	35.7	30.0	2.19	16.3	43.2	99.6	3.8	3.3	0.2	0.5	1350	48.6	2.27	6.3	40.9	103.4	65.0	3.5
100	4.5	0.4	1.0	1150	30.5	25.8	2.81	10.9	40.1	117.8	6.1	2.3	0.2	0.4	1150	48.0	2.37	5.9	39.9	108.6	65.0	3.6
	4.5	0.4	1.0	1350	31.1	27.6	2.86	10.9	40.9	118.2	6.2	2.3	0.2	0.4	1350	48.6	2.27	6.3	40.9	103.4	65.0	3.5
	6.8	1.0	2.4	1150	31.9	26.5	2.59	12.3	40.7	112.1	5.3	2.3	0.2	0.4	1150	48.0	2.37	5.9	39.9	108.6	65.0	3.6
	6.8	1.0	2.4	1350	32.5	28.4	2.63	12.4	41.5	112.3	5.4	2.3	0.2	0.4	1350	48.6	2.27	6.3	40.9	103.4	65.0	3.5
	9.0	1.9	4.3	1150	32.6	26.9	2.48	13.2	41.1	109.1	4.9	2.3	0.2	0.4	1150	48.0	2.37	5.9	39.9	108.6	65.0	3.6
	9.0	1.9	4.3	1350	33.3	28.8	2.52	13.2	41.9	109.3	5.0	2.3	0.2	0.4	1350	48.6	2.27	6.3	40.9	103.4	65.0	3.5
110	4.5	0.4	0.9	1150	28.2	24.4	3.20	8.8	39.2	127.4	7.6	1.8	0.1	0.2	1150	48.0	2.37	5.9	39.9	108.6	65.0	3.6
	4.5	0.4	0.9	1350	28.8	26.1	3.26	8.8	39.9	127.7	7.8	1.8	0.1	0.2	1350	48.6	2.27	6.3	40.9	103.4	65.0	3.5
	6.8	1.0	2.3	1150	29.6	25.2	2.96	10.0	39.7	121.8	6.7	1.8	0.1	0.2	1150	48.0	2.37	5.9	39.9	108.6	65.0	3.6
	6.8	1.0	2.3	1350	30.2	27.0	3.02	10.0	40.5	122.0	6.8	1.8	0.1	0.2	1350	48.6	2.27	6.3	40.9	103.4	65.0	3.5
	9.0	1.8	4.3	1150	30.3	25.6	2.84	10.6	40.0	118.9	6.2	1.8	0.1	0.2	1150	48.0	2.37	5.9	39.9	108.6	65.0	3.6
	9.0	1.8	4.3	1350	30.9	27.5	2.90	10.7	40.8	119.1	6.3	1.8	0.1	0.2	1350	48.6	2.27	6.3	40.9	103.4	65.0	3.5
120	4.5	0.3	0.7	1150	26.1	22.9	3.64	7.2	38.5	137.1	9.4	1.5	0.1	0.2	1150	48.0	2.37	5.9	39.9	108.6	65.0	3.6
	4.5	0.3	0.7	1350	26.6	24.6	3.71	7.2	39.3	137.5	9.6	1.5	0.1	0.2	1350	48.6	2.27	6.3	40.9	103.4	65.0	3.5
	6.8	0.9	2.1	1150	27.3	23.8	3.38	8.1	38.9	131.5	8.3	1.5	0.1	0.2	1150	48.0	2.37	5.9	39.9	108.6	65.0	3.6
	6.8	0.9	2.1	1350	27.9	25.5	3.44	8.1	39.6	131.7	8.5	1.5	0.1	0.2	1350	48.6	2.27	6.3	40.9	103.4	65.0	3.5
	9.0	1.8	4.1	1150	28.0	24.2	3.25	8.6	39.1	128.7	7.8	1.5	0.1	0.2	1150	48.0	2.37	5.9	39.9	108.6	65.0	3.6
	9.0	1.8	4.1	1350	28.5	26.0	3.31	8.6	39.8	128.9	8.0	1.5	0.1	0.2	1350	48.6	2.27	6.3	40.9	103.4	65.0	3.5

Interpolation is permissible; extrapolation is not.
Flow is controlled to maintain minimum LWT 70° F in cooling and maximum LWT 65° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
For operation in the shaded areas, please see the Performance Data Selection Notes.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 30 Model 049 - Full Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	2.6	0.2	0.5	1330	56.4	37.6	2.22	25.5	64.0	70.0	2.3	12.0	5.2	12.1	1430	33.0	2.94	3.3	23.0	91.4	16.2	3.4
	2.6	0.2	0.5	1550	57.4	40.4	2.30	25.0	65.3	70.0	2.3	12.0	5.2	12.1	1650	33.5	2.85	3.4	23.8	88.8	16.0	3.3
30	3.3	0.2	0.5	1330	56.4	37.6	2.22	25.5	64.0	70.0	2.3	6.0	1.2	2.8	1430	35.6	3.03	3.4	25.2	93.0	21.6	3.6
	3.3	0.2	0.5	1550	57.4	40.4	2.30	25.0	65.3	70.0	2.3	6.0	1.2	2.8	1650	36.1	2.94	3.6	26.1	90.3	21.3	3.5
	3.3	0.2	0.5	1330	56.4	37.6	2.22	25.5	64.0	70.0	2.3	9.0	2.7	6.4	1430	36.9	3.07	3.5	26.5	93.9	24.1	3.6
	3.3	0.2	0.5	1550	57.4	40.4	2.30	25.0	65.3	70.0	2.3	9.0	2.7	6.4	1650	37.5	2.98	3.7	27.3	91.0	23.9	3.5
	3.3	0.2	0.5	1330	56.4	37.6	2.22	25.5	64.0	70.0	2.3	12.0	4.7	10.8	1430	37.7	3.10	3.6	27.1	94.4	25.5	3.7
	3.3	0.2	0.5	1550	57.4	40.4	2.30	25.0	65.3	70.0	2.3	12.0	4.7	10.8	1650	38.3	3.00	3.7	28.1	91.5	25.3	3.6
40	4.4	0.4	1.0	1330	56.4	37.6	2.22	25.5	64.0	70.0	2.3	6.0	1.0	2.3	1430	40.3	3.17	3.7	29.5	96.1	30.2	3.8
	4.4	0.4	1.0	1550	57.4	40.4	2.30	25.0	65.3	70.0	2.3	6.0	1.0	2.3	1650	40.9	3.07	3.9	30.4	93.0	29.9	3.7
	4.4	0.4	1.0	1330	56.4	37.6	2.22	25.5	64.0	70.0	2.3	9.0	2.4	5.6	1430	42.1	3.21	3.8	31.2	97.3	33.1	3.9
	4.4	0.4	1.0	1550	57.4	40.4	2.30	25.0	65.3	70.0	2.3	9.0	2.4	5.6	1650	42.8	3.11	4.0	32.1	94.0	32.9	3.8
	4.4	0.4	1.0	1330	56.4	37.6	2.22	25.5	64.0	70.0	2.3	12.0	4.2	9.7	1430	43.1	3.24	3.9	32.1	97.9	34.7	4.0
	4.4	0.4	1.0	1550	57.4	40.4	2.30	25.0	65.3	70.0	2.3	12.0	4.2	9.7	1650	43.8	3.14	4.1	33.1	94.6	34.5	3.9
50	6.0	0.9	2.0	1330	56.1	37.4	2.25	24.9	63.8	71.3	2.3	6.0	0.9	2.0	1430	45.5	3.30	4.0	34.3	99.5	38.6	4.1
	6.0	0.9	2.0	1550	57.1	40.2	2.33	24.4	65.0	71.7	2.4	6.0	0.9	2.0	1650	46.2	3.20	4.2	35.3	95.9	38.2	4.0
	6.5	1.1	2.5	1330	56.4	37.6	2.22	25.5	64.0	70.0	2.3	9.0	2.2	5.1	1430	47.8	3.35	4.2	36.4	101.0	41.9	4.3
	6.5	1.1	2.5	1550	57.4	40.4	2.30	25.0	65.3	70.0	2.3	9.0	2.2	5.1	1650	48.5	3.25	4.4	37.5	97.2	41.7	4.1
	6.5	1.1	2.5	1330	56.4	37.6	2.22	25.5	64.0	70.0	2.3	12.0	3.9	9.0	1430	49.1	3.38	4.3	37.5	101.8	43.7	4.3
	6.5	1.1	2.5	1550	57.4	40.4	2.30	25.0	65.3	70.0	2.3	12.0	3.9	9.0	1650	49.8	3.28	4.5	38.7	98.0	43.6	4.2
60	6.0	0.8	1.9	1330	53.7	36.5	2.48	21.7	62.2	80.7	2.9	6.0	0.8	1.9	1430	51.1	3.43	4.4	39.4	103.1	46.9	4.5
	6.0	0.8	1.9	1550	54.7	39.2	2.57	21.3	63.4	81.1	2.9	6.0	0.8	1.9	1650	51.9	3.33	4.6	40.5	99.1	46.5	4.3
	9.0	2.0	4.7	1330	55.5	37.1	2.31	24.0	63.4	74.1	2.5	9.0	2.0	4.7	1430	53.8	3.50	4.5	41.9	104.9	50.7	4.7
	9.0	2.0	4.7	1550	56.4	39.9	2.40	23.6	64.6	74.4	2.5	9.0	2.0	4.7	1650	54.7	3.39	4.7	43.1	100.7	50.4	4.5
	12.0	3.6	8.4	1330	56.3	37.5	2.24	25.2	63.9	70.6	2.3	12.0	3.6	8.4	1430	55.4	3.54	4.6	43.3	105.9	52.8	4.8
	12.0	3.6	8.4	1550	57.2	40.3	2.32	24.7	65.1	70.9	2.3	12.0	3.6	8.4	1650	56.2	3.43	4.8	44.5	101.5	52.6	4.6
70	6.0	0.8	1.8	1330	51.0	35.6	2.73	18.7	60.3	90.1	3.6	6.0	0.8	1.8	1430	56.9	3.57	4.7	44.7	106.8	55.1	4.9
	6.0	0.8	1.8	1550	51.8	38.2	2.83	18.3	61.5	90.5	3.7	6.0	0.8	1.8	1650	57.7	3.46	4.9	45.9	102.4	54.7	4.7
	9.0	2.0	4.5	1330	52.9	36.2	2.55	20.8	61.6	83.7	3.1	9.0	2.0	4.5	1430	60.0	3.66	4.8	47.6	108.9	59.4	5.1
	9.0	2.0	4.5	1550	53.9	38.9	2.64	20.4	62.9	84.0	3.1	9.0	2.0	4.5	1650	61.0	3.54	5.0	48.9	104.2	59.1	5.0
	12.0	3.5	8.1	1330	53.9	36.5	2.46	21.9	62.3	80.4	2.8	12.0	3.5	8.1	1430	61.8	3.71	4.9	49.1	110.0	61.8	5.2
	12.0	3.5	8.1	1550	54.8	39.3	2.55	21.5	63.5	80.6	2.9	12.0	3.5	8.1	1650	62.7	3.59	5.1	50.5	105.2	61.6	5.1
80	6.0	0.8	1.8	1330	47.9	34.6	3.02	15.8	58.2	99.4	4.5	6.0	0.8	1.8	1430	62.7	3.73	4.9	50.0	110.6	63.3	5.3
	6.0	0.8	1.8	1550	48.7	37.2	3.13	15.5	59.4	99.8	4.5	6.0	0.8	1.8	1650	63.7	3.62	5.2	51.3	105.7	62.9	5.2
	9.0	1.9	4.4	1330	50.0	35.3	2.82	17.7	59.6	93.2	3.8	7.0	1.1	2.6	1430	64.2	3.78	5.0	51.3	111.6	65.0	5.6
	9.0	1.9	4.4	1550	50.8	37.9	2.92	17.4	60.8	93.5	3.9	7.0	1.1	2.6	1650	65.2	3.66	5.2	52.7	106.6	65.0	5.4
	12.0	3.4	7.8	1330	51.0	35.6	2.72	18.7	60.3	90.1	3.6	7.0	1.1	2.6	1430	64.2	3.78	5.0	51.3	111.6	65.0	5.6
	12.0	3.4	7.8	1550	51.9	38.3	2.82	18.4	61.5	90.3	3.6	7.0	1.1	2.6	1650	65.2	3.66	5.2	52.7	106.6	65.0	5.4
90	6.0	0.8	1.9	1330	44.7	33.4	3.36	13.3	56.2	108.7	5.5	4.2	0.4	0.9	1430	64.2	3.78	5.0	51.3	111.6	65.0	5.6
	6.0	0.8	1.9	1550	47.6	36.8	3.25	14.6	58.7	109.1	4.9	4.2	0.4	0.9	1650	65.2	3.66	5.2	52.7	106.6	65.0	5.4
	9.0	1.9	4.4	1330	46.8	34.2	3.14	14.9	57.5	102.8	4.8	4.2	0.4	0.9	1430	64.2	3.78	5.0	51.3	111.6	65.0	5.6
	9.0	1.9	4.4	1550	47.6	36.8	3.25	14.6	58.7	103.0	4.9	4.2	0.4	0.9	1650	65.2	3.66	5.2	52.7	106.6	65.0	5.4
	12.0	3.3	7.7	1330	47.9	34.6	3.03	15.8	58.2	99.7	4.5	4.2	0.4	0.9	1430	64.2	3.78	5.0	51.3	111.6	65.0	5.6
	12.0	3.3	7.7	1550	48.7	37.2	3.14	15.5	59.4	99.9	4.6	4.2	0.4	0.9	1650	65.2	3.66	5.2	52.7	106.6	65.0	5.4
100	6.0	0.8	1.9	1330	41.6	32.2	3.75	11.1	54.4	118.1	6.7	3.0	0.2	0.5	1430	64.2	3.78	5.0	51.3	111.6	65.0	5.6
	6.0	0.8	1.9	1550	42.4	34.6	3.88	10.9	55.6	118.5	6.9	3.0	0.2	0.5	1650	65.2	3.66	5.2	52.7	106.6	65.0	5.4
	9.0	1.9	4.3	1330	43.6	33.0	3.50	12.5	55.5	112.3	5.9	3.0	0.2	0.5	1430	64.2	3.78	5.0	51.3	111.6	65.0	5.6
	9.0	1.9	4.3	1550	44.3	35.5	3.62	12.2	56.7	112.6	6.1	3.0	0.2	0.5	1650	65.2	3.66	5.2	52.7	106.6	65.0	5.4
	12.0	3.3	7.6	1330	44.6	33.4	3.38	13.2	56.1	109.4	5.6	3.0	0.2	0.5	1430	64.2	3.78	5.0	51.3	111.6	65.0	5.6
	12.0	3.3	7.6	1550	45.4	35.9	3.50	13.0	57.3	109.6	5.7	3.0	0.2	0.5	1650	65.2	3.66	5.2	52.7	106.6	65.0	5.4
110	6.0	0.8	1.8	1330	38.8	30.9	4.19	9.2	53.1	127.7	8.2	2.3	0.1	0.3	1430	64.2	3.78	5.0	51.3	111.6	65.0	5.6
	6.0	0.8	1.8	1550	39.5	33.2	4.35	9.1	54.3	128.1	8.4	2.3	0.1	0.3	1650	65.2	3.66	5.2	52.7	106.6	65.0	5.4
	9.0	1.8	4.3	1330	40.5	31.7	3.91	10.3	53.8	122.0	7.3	2.3	0.1	0.3	1430	64.2	3.78	5.0	51.3	111.6	65.0	5.6
	9.0	1.8	4.3	1550	41.2	34.1	4.06	10.2	55.0	122.2	7.4	2.3	0.1	0.3	1650	65.2	3.66	5.2	52.7	106.6	65.0	5.4
	12.0	3.3	7.5	1330	41.4	32.1	3.78	11.0	54.3	119.1	6.8	2.3	0.1	0.3	1430	64.2	3.78	5.0	51.3	111.6	65.0	5.6
	12.0	3.3	7.5	1550	42.1	34.5	3.92	10.8	55.5	119.2	7.0	2.3	0.1	0.3	1650	65.2	3.66	5.2	52.7	106.6	65.0	5.4
120	6.0	0.7	1.6	1330	36.4	29.6	4.71	7.7	52.5	137.5	9.9	1.9	0.1	0.3	1430	64.2	3.78	5.0	51.3	111.6	65.0	5.6
	6.0	0.7	1.6	1550	37.0	31.8	4.88	7.6	53.7	137.9	10.1	1.9	0.1	0.3	1650	65.2	3.66	5.2	52.7	106.6	65.0	5.4
	9.0	1.8	4.1	1330	37.8	30.4	4.39	8.6	52.7	131.7	8.8	1.9	0.1	0.3	1430	64.2	3.78	5.0	51.3	111.6	65.0	5.6
	9.0	1.8	4.1	1550	38.4	32.6	4.55	8.4	53.9	132.0	9.0	1.9	0.1	0.3	1650	65.2	3.66	5.2	52.7	106.6	65.0	5.4
	12.0	3.2	7.4	1330	38.5	30.8	4.24	9.1	53.0	128.8	8.3	1.9	0.1	0.3	1430	64.2	3.78	5.0	51.3	111.6	65.0	5.6
	12.0	3.2	7.4	1550	39.2	33.1	4.39	8.9	54.2	129.0	8.5	1.9	0.1	0.3	1650	65.2	3.66	5.2	52.7	106.6	65.0	5.4

Interpolation is permissible; extrapolation is not.
Flow is controlled to maintain minimum LWT 70° F in cooling and maximum LWT 65° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
For operation in the shaded areas, please see the Performance Data Selection Notes.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 30 Model 064 - Part Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F											Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	2.4	0.1	0.1	1280	53.7	37.2	1.80	29.8	59.9	70.0	1.8	12.0	5.2	11.9	1430	28.2	2.87	2.9	18.5	88.3	16.9	3.2
	2.4	0.1	0.1	1500	54.8	39.9	1.84	29.9	61.1	70.0	1.8	12.0	5.2	11.9	1650	28.6	2.75	3.1	19.3	86.1	16.8	3.1
30	3.1	0.1	0.1	1280	53.7	37.2	1.80	29.8	59.9	70.0	1.8	6.0	0.9	2.1	1430	31.7	2.88	3.2	21.9	90.5	22.7	3.3
	3.1	0.1	0.2	1500	54.8	39.9	1.84	29.9	61.1	70.0	1.8	6.0	0.9	2.1	1650	32.2	2.76	3.4	22.7	88.0	22.4	3.2
	3.1	0.1	0.2	1280	53.7	37.2	1.80	29.8	59.9	70.0	1.8	9.0	2.5	5.7	1430	33.1	2.89	3.4	23.3	91.4	24.8	3.3
	3.1	0.1	0.2	1500	54.8	39.9	1.84	29.9	61.1	70.0	1.8	9.0	2.5	5.7	1650	33.6	2.77	3.6	24.1	88.8	24.6	3.2
	3.1	0.1	0.2	1280	53.7	37.2	1.80	29.8	59.9	70.0	1.8	12.0	4.1	9.6	1430	33.9	2.89	3.4	24.0	91.9	26.0	3.3
	3.1	0.1	0.2	1500	54.8	39.9	1.84	29.9	61.1	70.0	1.8	12.0	4.1	9.6	1650	34.4	2.77	3.6	24.9	89.3	25.8	3.2
40	4.1	0.1	0.2	1280	53.7	37.2	1.80	29.8	59.9	70.0	1.8	6.0	0.5	1.1	1430	37.0	2.91	3.7	27.1	94.0	31.0	3.4
	4.1	0.1	0.2	1500	54.8	39.9	1.84	29.9	61.1	70.0	1.8	6.0	0.5	1.1	1650	37.6	2.79	3.9	28.0	91.1	30.7	3.3
	4.1	0.1	0.2	1280	53.7	37.2	1.80	29.8	59.9	70.0	1.8	9.0	1.9	4.3	1430	38.8	2.92	3.9	28.9	95.1	33.6	3.5
	4.1	0.1	0.2	1500	54.8	39.9	1.84	29.9	61.1	70.0	1.8	9.0	1.9	4.3	1650	39.4	2.80	4.1	29.8	92.1	33.4	3.4
	4.1	0.1	0.2	1280	53.7	37.2	1.80	29.8	59.9	70.0	1.8	12.0	3.4	7.9	1430	39.8	2.93	4.0	29.8	95.8	35.0	3.5
	4.1	0.1	0.2	1500	54.8	39.9	1.84	29.9	61.1	70.0	1.8	12.0	3.4	7.9	1650	40.4	2.81	4.2	30.8	92.7	34.9	3.4
50	6.0	0.2	0.6	1280	53.7	37.2	1.81	29.6	59.8	69.9	1.8	6.0	0.2	0.6	1430	42.5	2.95	4.2	32.5	97.5	39.2	3.6
	6.0	0.2	0.6	1500	54.8	39.8	1.85	29.7	61.1	70.4	1.8	6.0	0.2	0.6	1650	43.1	2.82	4.5	33.5	94.2	38.8	3.5
	6.1	0.3	0.7	1280	53.7	37.2	1.80	29.8	59.9	70.0	1.8	9.0	1.5	3.5	1430	44.7	2.96	4.4	34.6	98.9	42.3	3.6
	6.1	0.3	0.7	1500	54.8	39.9	1.84	29.9	61.1	70.0	1.8	9.0	1.5	3.5	1650	45.3	2.84	4.7	35.7	95.4	42.1	3.5
	6.1	0.3	0.7	1280	53.7	37.2	1.80	29.8	59.9	70.0	1.8	12.0	3.0	6.9	1430	45.9	2.97	4.5	35.8	99.7	44.0	3.7
	6.1	0.3	0.7	1500	54.8	39.9	1.84	29.9	61.1	70.0	1.8	12.0	3.0	6.9	1650	46.6	2.85	4.8	36.9	96.1	43.9	3.6
60	6.0	0.2	0.4	1280	51.4	36.3	2.07	24.8	58.4	79.5	2.4	6.0	0.2	0.4	1430	48.1	2.99	4.7	37.9	101.1	47.4	3.8
	6.0	0.2	0.4	1500	52.4	38.9	2.11	24.8	59.6	79.9	2.5	6.0	0.2	0.4	1650	48.8	2.86	5.0	39.0	97.4	47.0	3.7
	9.0	1.4	3.1	1280	53.0	36.9	1.89	28.0	59.4	73.2	2.0	9.0	1.4	3.1	1430	50.6	3.01	4.9	40.4	102.8	51.0	3.9
	9.0	1.4	3.1	1500	54.1	39.5	1.93	28.1	60.6	73.5	2.0	9.0	1.4	3.1	1650	51.4	2.89	5.2	41.5	98.8	50.8	3.8
	12.0	2.7	6.3	1280	53.7	37.2	1.81	29.7	59.9	70.0	1.8	12.0	2.7	6.3	1430	52.1	3.02	5.0	41.7	103.7	53.0	4.0
	12.0	2.7	6.3	1500	54.8	39.9	1.84	29.8	61.1	70.2	1.8	12.0	2.7	6.3	1650	52.8	2.90	5.3	42.9	99.6	52.8	3.8
70	6.0	0.2	0.4	1280	48.6	35.4	2.38	20.4	56.7	88.9	3.3	6.0	0.2	0.4	1430	53.6	3.04	5.2	43.3	104.7	55.6	4.0
	6.0	0.2	0.4	1500	49.6	37.9	2.42	20.4	57.8	89.3	3.3	6.0	0.2	0.4	1650	54.4	2.91	5.5	44.5	100.5	55.2	3.9
	9.0	1.3	3.0	1280	50.4	36.0	2.17	23.2	57.9	82.9	2.7	9.0	1.3	3.0	1430	56.5	3.07	5.4	46.1	106.6	59.8	4.2
	9.0	1.3	3.0	1500	51.5	38.6	2.21	23.3	59.0	83.1	2.7	9.0	1.3	3.0	1650	57.3	2.94	5.7	47.3	102.2	59.5	4.1
	12.0	2.6	6.0	1280	51.3	36.3	2.07	24.8	58.4	79.7	2.4	12.0	2.6	6.0	1430	58.1	3.08	5.5	47.6	107.6	62.1	4.3
	12.0	2.6	6.0	1500	52.4	38.9	2.11	24.8	59.6	79.9	2.5	12.0	2.6	6.0	1650	58.9	2.96	5.8	48.8	103.1	61.9	4.2
80	6.0	0.2	0.6	1280	45.5	34.3	2.73	16.7	54.9	98.3	4.3	6.0	0.2	0.6	1430	59.1	3.10	5.6	48.5	108.3	63.8	4.3
	6.0	0.2	0.6	1500	46.5	36.7	2.78	16.7	56.0	98.7	4.4	6.0	0.2	0.6	1650	59.9	2.97	5.9	49.8	103.6	63.4	4.2
	9.0	1.3	3.1	1280	47.5	35.0	2.50	19.0	56.0	92.5	3.6	6.8	0.5	1.2	1430	60.2	3.11	5.7	49.6	109.0	65.0	4.4
	9.0	1.3	3.1	1500	48.5	37.5	2.55	19.0	57.2	92.7	3.7	6.8	0.5	1.2	1650	61.0	2.98	6.0	50.8	104.2	65.0	4.3
	12.0	2.6	5.9	1280	48.5	35.3	2.39	20.3	56.6	89.4	3.3	6.8	0.5	1.2	1430	60.2	3.11	5.7	49.6	109.0	65.0	4.4
	12.0	2.6	5.9	1500	49.5	37.8	2.44	20.3	57.8	89.6	3.4	6.8	0.5	1.2	1650	61.0	2.98	6.0	50.8	104.2	65.0	4.3
90	6.0	0.3	0.7	1280	42.4	33.0	3.13	13.6	53.1	107.7	5.5	4.1	0.2	0.5	1430	60.2	3.11	5.7	49.6	109.0	65.0	4.4
	6.0	0.3	0.7	1500	45.2	36.2	2.93	15.4	55.2	108.0	4.8	4.1	0.2	0.5	1650	61.0	2.98	6.0	50.8	104.2	65.0	4.3
	9.0	1.4	3.2	1280	44.3	33.8	2.88	15.4	54.2	102.0	4.7	4.1	0.2	0.5	1430	60.2	3.11	5.7	49.6	109.0	65.0	4.4
	9.0	1.4	3.2	1500	45.2	36.2	2.93	15.4	55.2	102.3	4.8	4.1	0.2	0.5	1650	61.0	2.98	6.0	50.8	104.2	65.0	4.3
	12.0	2.6	6.0	1280	45.3	34.2	2.76	16.4	54.7	99.1	4.4	4.1	0.2	0.5	1430	60.2	3.11	5.7	49.6	109.0	65.0	4.4
	12.0	2.6	6.0	1500	46.2	36.6	2.81	16.5	55.8	99.3	4.4	4.1	0.2	0.5	1650	61.0	2.98	6.0	50.8	104.2	65.0	4.3
100	6.0	0.3	0.8	1280	39.4	31.6	3.55	11.1	51.5	117.2	6.9	2.9	0.1	0.2	1430	60.2	3.11	5.7	49.6	109.0	65.0	4.4
	6.0	0.3	0.8	1500	40.2	33.9	3.62	11.1	52.5	117.5	7.0	2.9	0.1	0.2	1650	61.0	2.98	6.0	50.8	104.2	65.0	4.3
	9.0	1.4	3.2	1280	41.2	32.5	3.30	12.5	52.4	111.6	6.0	2.9	0.1	0.2	1430	60.2	3.11	5.7	49.6	109.0	65.0	4.4
	9.0	1.4	3.2	1500	42.0	34.7	3.36	12.5	53.4	111.9	6.1	2.9	0.1	0.2	1650	61.0	2.98	6.0	50.8	104.2	65.0	4.3
	12.0	2.6	6.0	1280	42.1	32.9	3.17	13.3	52.9	108.8	5.6	2.9	0.1	0.2	1430	60.2	3.11	5.7	49.6	109.0	65.0	4.4
	12.0	2.6	6.0	1500	43.0	35.2	3.23	13.3	54.0	109.0	5.7	2.9	0.1	0.2	1650	61.0	2.98	6.0	50.8	104.2	65.0	4.3
110	6.0	0.3	0.6	1280	36.6	30.2	4.02	9.1	50.3	126.8	8.5	2.3	0.1	0.1	1430	60.2	3.11	5.7	49.6	109.0	65.0	4.4
	6.0	0.3	0.6	1500	37.4	32.4	4.09	9.1	51.3	127.1	8.7	2.3	0.1	0.1	1650	61.0	2.98	6.0	50.8	104.2	65.0	4.3
	9.0	1.3	3.1	1280	38.2	31.0	3.75	10.2	50.9	121.3	7.5	2.3	0.1	0.1	1430	60.2	3.11	5.7	49.6	109.0	65.0	4.4
	9.0	1.3	3.1	1500	38.9	33.2	3.81	10.2	52.0	121.5	7.7	2.3	0.1	0.1	1650	61.0	2.98	6.0	50.8	104.2	65.0	4.3
	12.0	2.5	5.8	1280	39.0	31.4	3.61	10.8	51.3	118.6	7.1	2.3	0.1	0.1	1430	60.2	3.11	5.7	49.6	109.0	65.0	4.4
	12.0	2.5	5.8	1500	39.8	33.7	3.68	10.8	52.3	118.7	7.2	2.3	0.1	0.1	1650	61.0	2.98	6.0	50.8	104.2	65.0	4.3
120	6.0	0.0	0.0	1280	34.4	28.9	4.51	7.6	49.8	136.6	10.3	1.8	0.1	0.1	1430	60.2	3.11	5.7	49.6	109.0	65.0	4.4
	6.0	0.0	0.0	1500	35.1	31.0	4.59	7.6	50.8	136.9	10.5	1.8	0.1	0.1	1650	61.0	2.98	6.0	50.8	104.2	65.0	4.3
	9.0	1.1	2.6	1280	35.6	29.6	4.23	8.4	50.0	131.1	9.3	1.8	0.1	0.1	1430	60.2	3.11	5.7	49.6	109.0	65.0	4.4
	9.0	1.1	2.6	1500	36.3	31.7	4.30	8.4	51.0	131.3	9.4	1.8	0.1	0.1	1650	61.0	2.98	6.0	50.8	104.2	65.0	4.3
	12.0	2.3	5.4	1280	36.3	30.0	4.09	8.9	50.2	128.4	8.7	1.8	0.1	0.1	1430	60.2	3.11	5.7	49.6	109.0	65.0	4.4
	12.0	2.3	5.4	1500	37.0	32.2	4.16	8.9	51.2	128.5	8.9	1.8	0.1	0.1	1650	61.0	2.98	6.0	50.8	104.2	65.0	4.3

Interpolation is permissible; extrapolation is not.
Flow is controlled to maintain minimum LWT 70° F in cooling and maximum LWT 65° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
For operation in the shaded areas, please see the Performance Data Selection Notes.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 30 Model 064 - Full Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	3.4	0.1	0.2	1590	73.0	48.1	3.02	24.2	83.3	70.0	2.7	15.0	7.3	16.8	1750	42.8	3.89	3.2	29.5	92.6	16.1	4.0
	3.4	0.1	0.2	1850	74.3	51.7	3.13	23.7	85.0	70.0	2.8	15.0	7.3	16.8	2050	43.4	3.77	3.4	30.6	89.6	15.9	3.8
30	4.2	0.1	0.2	1590	73.0	48.1	3.02	24.2	83.3	70.0	2.7	7.5	1.7	3.9	1750	46.9	3.95	3.5	33.4	94.8	21.1	4.1
	4.2	0.1	0.1	1850	74.3	51.7	3.13	23.7	85.0	70.0	2.8	7.5	1.7	3.9	2050	47.6	3.82	3.6	34.5	91.5	20.8	4.0
	4.2	0.1	0.1	1590	73.0	48.1	3.02	24.2	83.3	70.0	2.7	11.3	3.7	8.6	1750	49.1	3.98	3.6	35.6	96.0	23.7	4.2
	4.2	0.1	0.1	1850	74.3	51.7	3.13	23.7	85.0	70.0	2.8	11.3	3.7	8.6	2050	49.9	3.86	3.8	36.7	92.5	23.5	4.1
	4.2	0.1	0.1	1590	73.0	48.1	3.02	24.2	83.3	70.0	2.7	15.0	6.1	14.1	1750	50.4	4.00	3.7	36.7	96.7	25.1	4.2
	4.2	0.1	0.1	1850	74.3	51.7	3.13	23.7	85.0	70.0	2.8	15.0	6.1	14.1	2050	51.2	3.88	3.9	37.9	93.1	24.9	4.1
40	5.7	0.3	0.8	1590	73.0	48.1	3.02	24.2	83.3	70.0	2.7	7.5	1.2	2.7	1750	53.9	4.06	3.9	40.0	98.5	29.3	4.4
	5.7	0.3	0.8	1850	74.3	51.7	3.13	23.7	85.0	70.0	2.8	7.5	1.2	2.7	2050	54.7	3.94	4.1	41.3	94.7	29.0	4.2
	5.7	0.3	0.8	1590	73.0	48.1	3.02	24.2	83.3	70.0	2.7	11.3	3.0	7.0	1750	56.7	4.12	4.0	42.7	100.0	32.4	4.5
	5.7	0.3	0.8	1850	74.3	51.7	3.13	23.7	85.0	70.0	2.8	11.3	3.0	7.0	2050	57.6	3.99	4.2	44.0	96.0	32.2	4.4
	5.7	0.3	0.8	1590	73.0	48.1	3.02	24.2	83.3	70.0	2.7	15.0	5.3	12.2	1750	58.3	4.15	4.1	44.1	100.8	34.1	4.6
	5.7	0.3	0.8	1850	74.3	51.7	3.13	23.7	85.0	70.0	2.8	15.0	5.3	12.2	2050	59.2	4.02	4.3	45.5	96.7	33.9	4.4
50	7.5	0.9	2.0	1590	72.4	47.8	3.08	23.5	82.9	72.1	2.8	7.5	0.9	2.0	1750	61.1	4.21	4.3	46.8	102.4	37.5	4.7
	7.5	0.9	2.0	1850	73.6	51.4	3.20	23.0	84.5	72.5	2.9	7.5	0.9	2.0	2050	62.1	4.08	4.5	48.2	98.0	37.2	4.6
	8.5	1.3	3.0	1590	73.0	48.1	3.02	24.2	83.3	70.0	2.7	11.3	2.6	6.0	1750	64.5	4.28	4.4	49.9	104.1	41.1	4.9
	8.5	1.3	3.0	1850	74.3	51.7	3.13	23.7	85.0	70.0	2.8	11.3	2.6	6.0	2050	65.5	4.15	4.6	51.3	99.6	40.9	4.7
	8.5	1.3	3.0	1590	73.0	48.1	3.02	24.2	83.3	70.0	2.7	15.0	4.7	10.8	1750	66.3	4.32	4.5	51.6	105.1	43.1	5.0
	8.5	1.3	3.0	1850	74.3	51.7	3.13	23.7	85.0	70.0	2.8	15.0	4.7	10.8	2050	67.3	4.19	4.7	53.0	100.4	42.9	4.8
60	7.5	0.7	1.7	1590	69.5	46.7	3.35	20.7	81.0	81.6	3.5	7.5	0.7	1.7	1750	68.5	4.37	4.6	53.6	106.2	45.7	5.1
	7.5	0.7	1.7	1850	70.7	50.3	3.47	20.4	82.6	82.0	3.6	7.5	0.7	1.7	2050	69.5	4.24	4.8	55.1	101.4	45.3	5.0
	11.3	2.4	5.4	1590	71.7	47.6	3.15	22.8	82.5	74.7	3.0	11.3	2.4	5.4	1750	72.3	4.46	4.7	57.1	108.3	49.9	5.3
	11.3	2.4	5.4	1850	73.0	51.1	3.26	22.4	84.1	75.0	3.1	11.3	2.4	5.4	2050	73.4	4.33	5.0	58.6	103.2	49.6	5.2
	15.0	4.3	10.0	1590	72.7	48.0	3.05	23.8	83.1	71.1	2.8	15.0	4.3	10.0	1750	74.4	4.52	4.8	59.0	109.4	52.1	5.5
	15.0	4.3	10.0	1850	74.0	51.6	3.16	23.4	84.8	71.3	2.8	15.0	4.3	10.0	2050	75.5	4.38	5.1	60.6	104.1	51.9	5.3
70	7.5	0.7	1.7	1590	66.1	45.5	3.67	18.0	78.7	91.0	4.4	7.5	0.7	1.7	1750	75.8	4.55	4.9	60.3	110.1	53.9	5.6
	7.5	0.7	1.7	1850	67.3	48.9	3.81	17.7	80.3	91.4	4.5	7.5	0.7	1.7	2050	77.0	4.41	5.1	61.9	104.8	53.5	5.4
	11.3	2.3	5.2	1590	68.6	46.4	3.43	20.0	80.4	84.3	3.8	11.3	2.3	5.2	1750	80.1	4.67	5.0	64.2	112.4	58.6	5.8
	11.3	2.3	5.2	1850	69.8	49.9	3.56	19.6	82.0	84.6	3.8	11.3	2.3	5.2	2050	81.3	4.52	5.3	65.9	106.7	58.3	5.7
	15.0	4.1	9.5	1590	69.9	46.9	3.32	21.0	81.2	80.8	3.5	15.0	4.1	9.5	1750	82.4	4.73	5.1	66.3	113.6	61.2	6.0
	15.0	4.1	9.5	1850	71.1	50.4	3.44	20.6	82.8	81.0	3.5	15.0	4.1	9.5	2050	83.7	4.59	5.3	68.0	107.8	60.9	5.8
80	7.5	0.8	1.8	1590	62.5	44.1	4.05	15.4	76.3	100.3	5.5	7.5	0.8	1.8	1750	83.1	4.75	5.1	66.9	114.0	62.2	6.1
	7.5	0.8	1.8	1850	63.5	47.5	4.19	15.1	77.8	100.8	5.6	7.5	0.8	1.8	2050	84.4	4.61	5.4	68.7	108.1	61.7	5.9
	11.3	2.2	5.2	1590	65.1	45.1	3.78	17.2	78.0	93.9	4.7	9.5	1.5	3.6	1750	86.0	4.84	5.2	69.5	115.5	65.0	6.3
	11.3	2.2	5.2	1850	66.2	48.5	3.91	16.9	79.6	94.1	4.8	9.5	1.5	3.6	2050	87.3	4.69	5.5	71.3	109.4	65.0	6.1
	15.0	4.1	9.4	1590	66.4	45.6	3.65	18.2	78.8	90.5	4.3	9.5	1.5	3.6	1750	86.0	4.84	5.2	69.5	115.5	65.0	6.3
	15.0	4.1	9.4	1850	67.5	49.0	3.78	17.9	80.4	90.7	4.4	9.5	1.5	3.6	2050	87.3	4.69	5.5	71.3	109.4	65.0	6.1
90	7.5	0.8	2.0	1590	58.7	42.6	4.49	13.1	74.0	109.7	6.7	5.7	0.2	0.5	1750	86.0	4.84	5.2	69.5	115.5	65.0	6.3
	7.5	0.8	2.0	1850	62.3	47.0	4.33	14.4	77.1	110.2	5.9	5.7	0.2	0.5	2050	87.3	4.69	5.5	71.3	109.4	65.0	6.1
	11.3	2.3	5.2	1590	61.3	43.7	4.18	14.7	75.5	103.4	5.8	5.7	0.2	0.5	1750	86.0	4.84	5.2	69.5	115.5	65.0	6.3
	11.3	2.3	5.2	1850	62.3	47.0	4.33	14.4	77.1	103.7	5.9	5.7	0.2	0.5	2050	87.3	4.69	5.5	71.3	109.4	65.0	6.1
	15.0	4.0	9.3	1590	62.6	44.2	4.03	15.5	76.4	100.2	5.4	5.7	0.2	0.5	1750	86.0	4.84	5.2	69.5	115.5	65.0	6.3
	15.0	4.0	9.3	1850	63.7	47.5	4.18	15.2	77.9	100.4	5.5	5.7	0.2	0.5	2050	87.3	4.69	5.5	71.3	109.4	65.0	6.1
100	7.5	0.9	2.0	1590	55.2	41.1	5.00	11.0	72.3	119.3	8.1	4.1	0.1	0.2	1750	86.0	4.84	5.2	69.5	115.5	65.0	6.3
	7.5	0.9	2.0	1850	56.2	44.2	5.18	10.8	73.9	119.7	8.3	4.1	0.1	0.2	2050	87.3	4.69	5.5	71.3	109.4	65.0	6.1
	11.3	2.3	5.2	1590	57.5	42.1	4.65	12.4	73.4	113.0	7.1	4.1	0.1	0.2	1750	86.0	4.84	5.2	69.5	115.5	65.0	6.3
	11.3	2.3	5.2	1850	58.5	45.3	4.82	12.1	75.0	113.3	7.3	4.1	0.1	0.2	2050	87.3	4.69	5.5	71.3	109.4	65.0	6.1
	15.0	4.0	9.3	1590	58.8	42.6	4.48	13.1	74.1	109.9	6.7	4.1	0.1	0.2	1750	86.0	4.84	5.2	69.5	115.5	65.0	6.3
	15.0	4.0	9.3	1850	59.8	45.9	4.65	12.9	75.6	110.1	6.8	4.1	0.1	0.2	2050	87.3	4.69	5.5	71.3	109.4	65.0	6.1
110	7.5	0.8	1.8	1590	52.2	39.6	5.60	9.3	71.3	129.0	9.8	3.2	0.1	0.1	1750	86.0	4.84	5.2	69.5	115.5	65.0	6.3
	7.5	0.8	1.8	1850	53.1	42.6	5.80	9.2	72.9	129.4	10.0	3.2	0.1	0.1	2050	87.3	4.69	5.5	71.3	109.4	65.0	6.1
	11.3	2.2	5.1	1590	54.1	40.6	5.20	10.4	71.8	122.8	8.7	3.2	0.1	0.1	1750	86.0	4.84	5.2	69.5	115.5	65.0	6.3
	11.3	2.2	5.1	1850	55.0	43.6	5.39	10.2	73.4	123.1	8.8	3.2	0.1	0.1	2050	87.3	4.69	5.5	71.3	109.4	65.0	6.1
	15.0	4.0	9.2	1590	55.2	41.1	5.01	11.0	72.3	119.6	8.2	3.2	0.1	0.1	1750	86.0	4.84	5.2	69.5	115.5	65.0	6.3
	15.0	4.0	9.2	1850	56.1	44.2	5.19	10.8	73.8	119.8	8.3	3.2	0.1	0.1	2050	87.3	4.69	5.5	71.3	109.4	65.0	6.1
120	7.5	0.6	1.3	1590	50.0	38.5	6.30	7.9	71.5	139.1	11.7	2.6	0.1	0.1	1750	86.0	4.84	5.2	69.5	115.5	65.0	6.3
	7.5	0.6	1.3	1850	50.8	41.4	6.53	7.8	73.1	139.5	11.9	2.6	0.1	0.1	2050	87.3	4.69	5.5	71.3	109.4	65.0	6.1
	11.3	2.0	4.7	1590	51.3	39.2	5.83	8.8	71.2	132.7	10.4	2.6	0.1	0.1	1750	86.0	4.84	5.2	69.5	115.5	65.0	6.3
	11.3	2.0	4.7	1850	52.2	42.1	6.04	8.6	72.8	132.9	10.6	2.6	0.1	0.1	2050	87.3	4.69	5.5	71.3	109.4	65.0	6.1
	15.0	3.8	8.8	1590	52.1	39.6	5.62	9.3	71.3	129.5	9.8	2.6	0.1	0.1	1750	86.0	4.84	5.2	69.5	115.5	65.0	6.3
	15.0	3.8	8.8	1850	53.0	42.6	5.82	9.1	72.9	129.7	10.0	2.6	0.1	0.1	2050	87.3	4.69	5.5	71.3	109.4	65.0	6.1

Interpolation is permissible; extrapolation is not.
Flow is controlled to maintain minimum LWT 70° F in cooling and maximum LWT 65° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
For operation in the shaded areas, please see the Performance Data Selection Notes.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 30 Model 072 - Part Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	2.8	0.1	0.2	1325	61.7	39.2	2.27	27.2	69.5	70.0	2.6	14.0	6.5	15.1	1430	32.9	3.66	2.6	20.5	91.3	17.1	4.3
	2.8	0.1	0.2	1550	63.0	42.0	2.31	27.2	70.9	70.0	2.7	14.0	6.5	15.1	1650	33.4	3.51	2.8	21.4	88.7	16.9	4.1
30	3.5	0.1	0.2	1325	61.7	39.2	2.27	27.2	69.5	70.0	2.6	7.0	1.4	3.3	1430	37.2	3.72	2.9	24.5	94.1	23.0	4.4
	3.5	0.1	0.2	1550	63.0	42.0	2.31	27.2	70.9	70.0	2.7	7.0	1.4	3.3	1650	37.7	3.57	3.1	25.5	91.1	22.7	4.3
	3.5	0.1	0.2	1325	61.7	39.2	2.27	27.2	69.5	70.0	2.6	10.5	3.3	7.6	1430	38.7	3.75	3.0	25.9	95.1	25.1	4.4
	3.5	0.1	0.2	1550	63.0	42.0	2.31	27.2	70.9	70.0	2.7	10.5	3.3	7.6	1650	39.3	3.59	3.2	27.0	92.0	24.9	4.3
	3.5	0.1	0.2	1325	61.7	39.2	2.27	27.2	69.5	70.0	2.6	14.0	5.4	12.5	1430	39.6	3.76	3.1	26.8	95.6	26.2	4.4
	3.5	0.1	0.2	1550	63.0	42.0	2.31	27.2	70.9	70.0	2.7	14.0	5.4	12.5	1650	40.1	3.60	3.3	27.8	92.5	26.0	4.3
40	4.7	0.2	0.5	1325	61.7	39.2	2.27	27.2	69.5	70.0	2.6	7.0	0.9	2.2	1430	43.3	3.81	3.3	30.3	98.0	31.4	4.6
	4.7	0.2	0.5	1550	63.0	42.0	2.31	27.2	70.9	70.0	2.7	7.0	0.9	2.2	1650	43.9	3.65	3.5	31.4	94.6	31.0	4.5
	4.7	0.2	0.5	1325	61.7	39.2	2.27	27.2	69.5	70.0	2.6	10.5	2.6	6.1	1430	45.2	3.84	3.5	32.1	99.3	33.9	4.7
	4.7	0.2	0.5	1550	63.0	42.0	2.31	27.2	70.9	70.0	2.7	10.5	2.6	6.1	1650	45.8	3.68	3.7	33.3	95.7	33.7	4.5
	4.7	0.2	0.5	1325	61.7	39.2	2.27	27.2	69.5	70.0	2.6	14.0	4.6	10.7	1430	46.3	3.85	3.5	33.1	100.0	35.3	4.7
	4.7	0.2	0.5	1550	63.0	42.0	2.31	27.2	70.9	70.0	2.7	14.0	4.6	10.7	1650	46.9	3.69	3.7	34.3	96.3	35.1	4.5
50	7.0	0.7	1.5	1325	61.7	39.2	2.28	27.1	69.4	69.8	2.6	7.0	0.7	1.5	1430	49.4	3.90	3.7	36.1	102.0	39.7	4.9
	7.0	0.7	1.5	1550	62.9	41.9	2.32	27.1	70.8	70.2	2.7	7.0	0.7	1.5	1650	50.1	3.74	3.9	37.4	98.1	39.3	4.8
	7.1	0.7	1.6	1325	61.7	39.2	2.27	27.2	69.5	70.0	2.6	10.5	2.2	5.1	1430	51.7	3.93	3.9	38.3	103.5	42.7	5.0
	7.1	0.7	1.6	1550	63.0	42.0	2.31	27.2	70.9	70.0	2.7	10.5	2.2	5.1	1650	52.5	3.77	4.1	39.6	99.4	42.5	4.9
	7.1	0.7	1.6	1325	61.7	39.2	2.27	27.2	69.5	70.0	2.6	14.0	4.1	9.4	1430	53.0	3.95	3.9	39.5	104.3	44.4	5.1
	7.1	0.7	1.6	1550	63.0	42.0	2.31	27.2	70.9	70.0	2.7	14.0	4.1	9.4	1650	53.8	3.78	4.2	40.8	100.2	44.2	4.9
60	7.0	0.5	1.3	1325	59.0	38.1	2.60	22.7	67.9	79.4	3.2	7.0	0.5	1.3	1430	55.6	3.98	4.1	42.0	106.0	48.0	5.3
	7.0	0.5	1.3	1550	60.2	40.8	2.65	22.7	69.3	79.8	3.2	7.0	0.5	1.3	1650	56.4	3.82	4.3	43.3	101.6	47.6	5.2
	10.5	2.0	4.6	1325	60.9	38.8	2.38	25.6	69.0	73.1	2.8	10.5	2.0	4.6	1430	58.3	4.02	4.2	44.6	107.7	51.5	5.4
	10.5	2.0	4.6	1550	62.1	41.6	2.42	25.6	70.4	73.4	2.9	10.5	2.0	4.6	1650	59.1	3.86	4.5	46.0	103.2	51.2	5.3
	14.0	3.8	8.7	1325	61.7	39.2	2.28	27.1	69.5	69.9	2.7	14.0	3.8	8.7	1430	59.8	4.04	4.3	46.0	108.7	53.4	5.5
	14.0	3.8	8.7	1550	63.0	42.0	2.32	27.2	70.9	70.1	2.7	14.0	3.8	8.7	1650	60.6	3.88	4.6	47.4	104.0	53.2	5.4
70	7.0	0.5	1.3	1325	56.0	36.9	2.98	18.8	66.1	88.9	4.2	7.0	0.5	1.3	1430	61.8	4.07	4.4	47.9	110.0	56.3	5.8
	7.0	0.5	1.3	1550	57.1	39.5	3.04	18.8	67.5	89.3	4.3	7.0	0.5	1.3	1650	62.6	3.90	4.7	49.3	105.1	55.9	5.6
	10.5	1.9	4.5	1325	58.0	37.7	2.73	21.3	67.3	82.8	3.6	10.5	1.9	4.5	1430	64.8	4.12	4.6	50.8	112.0	60.3	6.0
	10.5	1.9	4.5	1550	59.2	40.3	2.78	21.3	68.7	83.1	3.7	10.5	1.9	4.5	1650	65.8	3.95	4.9	52.3	106.9	60.0	5.8
	14.0	3.6	8.3	1325	59.0	38.1	2.61	22.6	67.9	79.7	3.4	14.0	3.6	8.3	1430	66.5	4.14	4.7	52.4	113.1	62.5	6.1
	14.0	3.6	8.3	1550	60.2	40.7	2.65	22.7	69.3	79.9	3.5	14.0	3.6	8.3	1650	67.5	3.97	5.0	53.9	107.9	62.3	5.9
80	7.0	0.6	1.4	1325	52.6	35.6	3.42	15.4	64.3	98.4	5.7	7.0	0.6	1.4	1430	68.0	4.17	4.8	53.7	114.0	64.6	6.3
	7.0	0.6	1.4	1550	53.7	38.1	3.48	15.4	65.6	98.7	5.8	7.0	0.6	1.4	1650	68.9	3.99	5.1	55.3	108.7	64.2	6.1
	10.5	1.9	4.5	1325	54.8	36.4	3.13	17.5	65.5	92.5	4.9	7.4	0.8	1.8	1430	68.5	4.17	4.8	54.3	114.4	65.0	6.3
	10.5	1.9	4.5	1550	55.9	39.0	3.19	17.5	66.8	92.7	5.0	7.4	0.8	1.8	1650	69.5	4.00	5.1	55.8	109.0	65.0	6.1
	14.0	3.5	8.1	1325	55.9	36.8	3.00	18.6	66.1	89.4	4.5	7.4	0.8	1.8	1430	68.5	4.17	4.8	54.3	114.4	65.0	6.3
	14.0	3.5	8.1	1550	57.0	39.4	3.05	18.7	67.4	89.6	4.6	7.4	0.8	1.8	1650	69.5	4.00	5.1	55.8	109.0	65.0	6.1
90	7.0	0.7	1.5	1325	49.1	34.2	3.91	12.6	62.4	107.8	7.5	4.5	0.3	0.6	1430	68.5	4.17	4.8	54.3	114.4	65.0	6.3
	7.0	0.7	1.5	1550	52.3	37.5	3.67	14.3	64.8	108.2	6.7	4.5	0.3	0.6	1650	69.5	4.00	5.1	55.8	109.0	65.0	6.1
	10.5	2.0	4.5	1325	51.3	35.0	3.60	14.2	63.6	102.1	6.5	4.5	0.3	0.6	1430	68.5	4.17	4.8	54.3	114.4	65.0	6.3
	10.5	2.0	4.5	1550	52.3	37.5	3.67	14.3	64.8	102.3	6.7	4.5	0.3	0.6	1650	69.5	4.00	5.1	55.8	109.0	65.0	6.1
	14.0	3.5	8.1	1325	52.4	35.5	3.45	15.2	64.2	99.2	6.1	4.5	0.3	0.6	1430	68.5	4.17	4.8	54.3	114.4	65.0	6.3
	14.0	3.5	8.1	1550	53.5	38.0	3.51	15.2	65.4	99.3	6.2	4.5	0.3	0.6	1650	69.5	4.00	5.1	55.8	109.0	65.0	6.1
100	7.0	0.7	1.6	1325	45.5	32.9	4.45	10.2	60.7	117.3	9.7	3.2	0.2	0.4	1430	68.5	4.17	4.8	54.3	114.4	65.0	6.3
	7.0	0.7	1.6	1550	46.4	35.2	4.54	10.2	61.9	117.7	9.9	3.2	0.2	0.4	1650	69.5	4.00	5.1	55.8	109.0	65.0	6.1
	10.5	2.0	4.5	1325	47.6	33.7	4.12	11.6	61.7	111.8	8.6	3.2	0.2	0.4	1430	68.5	4.17	4.8	54.3	114.4	65.0	6.3
	10.5	2.0	4.5	1550	48.6	36.0	4.20	11.6	62.9	112.0	8.8	3.2	0.2	0.4	1650	69.5	4.00	5.1	55.8	109.0	65.0	6.1
	14.0	3.5	8.1	1325	48.7	34.1	3.96	12.3	62.2	108.9	8.1	3.2	0.2	0.4	1430	68.5	4.17	4.8	54.3	114.4	65.0	6.3
	14.0	3.5	8.1	1550	49.7	36.5	4.03	12.3	63.5	109.1	8.2	3.2	0.2	0.4	1650	69.5	4.00	5.1	55.8	109.0	65.0	6.1
110	7.0	0.6	1.4	1325	42.0	31.5	5.06	8.3	59.2	126.9	12.4	2.5	0.1	0.2	1430	68.5	4.17	4.8	54.3	114.4	65.0	6.3
	7.0	0.6	1.4	1550	42.9	33.8	5.15	8.3	60.4	127.3	12.6	2.5	0.1	0.2	1650	69.5	4.00	5.1	55.8	109.0	65.0	6.1
	10.5	1.9	4.4	1325	44.0	32.3	4.70	9.4	60.1	121.4	11.1	2.5	0.1	0.2	1430	68.5	4.17	4.8	54.3	114.4	65.0	6.3
	10.5	1.9	4.4	1550	44.9	34.6	4.78	9.4	61.2	121.7	11.3	2.5	0.1	0.2	1650	69.5	4.00	5.1	55.8	109.0	65.0	6.1
	14.0	3.5	8.0	1325	45.1	32.7	4.52	10.0	60.5	118.6	10.5	2.5	0.1	0.2	1430	68.5	4.17	4.8	54.3	114.4	65.0	6.3
	14.0	3.5	8.0	1550	46.0	35.0	4.61	10.0	61.7	118.8	10.7	2.5	0.1	0.2	1650	69.5	4.00	5.1	55.8	109.0	65.0	6.1
120	7.0	0.4	0.9	1325	38.7	30.3	5.72	6.8	58.2	136.6	15.4	2.0	0.1	0.1	1430	68.5	4.17	4.8	54.3	114.4	65.0	6.3
	7.0	0.4	0.9	1550	39.5	32.5	5.82	6.8	59.4	137.0	15.7	2.0	0.1	0.1	1650	69.5	4.00	5.1	55.8	109.0	65.0	6.1
	10.5	1.7	3.9	1325	40.5	31.0	5.33	7.6	58.7	131.2	14.0	2.0	0.1	0.1	1430	68.5	4.17	4.8	54.3	114.4	65.0	6.3
	10.5	1.7	3.9	1550	41.4	33.2	5.43	7.6	59.9	131.4	14.3	2.0	0.1	0.1	1650	69.5	4.00	5.1	55.8	109.0	65.0	6.1
	14.0	3.3	7.6	1325	41.5	31.3	5.14	8.1	59.1	128.4	13.3	2.0	0.1	0.1	1430	68.5	4.17	4.8	54.3	114.4	65.0	6.3
	14.0	3.3	7.6	1550	42.4	33.6	5.24	8.1	60.2	128.6	13.6	2.0	0.1	0.1	1650	69.5	4.00	5.1	55.8	109.0	65.0	6.1

Interpolation is permissible; extrapolation is not.
Flow is controlled to maintain minimum LWT 70° F in cooling and maximum LWT 65° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
For operation in the shaded areas, please see the Performance Data Selection Notes.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 30 Model 072 - Full Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F											Heating - EAT 70°F								
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	3.7	0.3	0.6	1590	79.6	49.1	3.49	22.8	91.5	70.0	4.4	17.0	8.9	20.6	1750	46.6	4.66	2.9	30.7	94.7	16.4	5.2
	3.7	0.3	0.6	1850	81.0	52.8	3.61	22.4	93.3	70.0	4.5	17.0	8.9	20.6	2050	47.3	4.52	3.1	31.9	91.4	16.2	5.0
30	4.7	0.3	0.6	1590	79.6	49.1	3.49	22.8	91.5	70.0	4.4	8.5	2.2	5.1	1750	51.6	4.77	3.2	35.3	97.3	21.7	5.4
	4.7	0.3	0.6	1850	81.0	52.8	3.61	22.4	93.3	70.0	4.5	8.5	2.2	5.1	2050	52.4	4.63	3.3	36.6	93.7	21.4	5.2
	4.7	0.3	0.6	1590	79.6	49.1	3.49	22.8	91.5	70.0	4.4	12.8	4.6	10.6	1750	54.0	4.83	3.3	37.5	98.6	24.1	5.5
	4.7	0.3	0.6	1850	81.0	52.8	3.61	22.4	93.3	70.0	4.5	12.8	4.6	10.6	2050	54.8	4.68	3.4	38.8	94.8	23.9	5.4
	4.7	0.3	0.6	1590	79.6	49.1	3.49	22.8	91.5	70.0	4.4	17.0	7.6	17.6	1750	55.3	4.86	3.3	38.7	99.2	25.4	5.6
	4.7	0.3	0.6	1850	81.0	52.8	3.61	22.4	93.3	70.0	4.5	17.0	7.6	17.6	2050	56.1	4.71	3.5	40.1	95.3	25.3	5.5
40	6.2	0.6	1.3	1590	79.6	49.1	3.49	22.8	91.5	70.0	4.4	8.5	1.6	3.8	1750	59.4	4.96	3.5	42.4	101.4	30.0	5.9
	6.2	0.6	1.3	1850	81.0	52.8	3.61	22.4	93.3	70.0	4.5	8.5	1.6	3.8	2050	60.3	4.80	3.7	43.9	97.2	29.7	5.7
	6.2	0.6	1.3	1590	79.6	49.1	3.49	22.8	91.5	70.0	4.4	12.8	3.9	8.9	1750	62.1	5.02	3.6	45.0	102.9	32.9	6.1
	6.2	0.6	1.3	1850	81.0	52.8	3.61	22.4	93.3	70.0	4.5	12.8	3.9	8.9	2050	63.1	4.87	3.8	46.5	98.5	32.7	5.9
	6.2	0.6	1.3	1590	79.6	49.1	3.49	22.8	91.5	70.0	4.4	17.0	6.7	15.5	1750	63.6	5.06	3.7	46.4	103.7	34.5	6.2
	6.2	0.6	1.3	1850	81.0	52.8	3.61	22.4	93.3	70.0	4.5	17.0	6.7	15.5	2050	64.6	4.90	3.9	47.9	99.2	34.4	6.1
50	8.5	1.3	3.0	1590	79.1	49.0	3.54	22.3	91.2	71.5	4.5	8.5	1.3	3.0	1750	66.9	5.14	3.8	49.4	105.4	38.4	6.5
	8.5	1.3	3.0	1850	80.5	52.6	3.67	21.9	93.0	71.9	4.6	8.5	1.3	3.0	2050	67.9	4.99	4.0	50.9	100.7	38.0	6.3
	9.3	1.7	3.9	1590	79.6	49.1	3.49	22.8	91.5	70.0	4.4	12.8	3.4	7.8	1750	70.1	5.23	3.9	52.3	107.1	41.8	6.8
	9.3	1.7	3.9	1850	81.0	52.8	3.61	22.4	93.3	70.0	4.5	12.8	3.4	7.8	2050	71.2	5.07	4.1	53.9	102.1	41.5	6.6
	9.3	1.7	3.9	1590	79.6	49.1	3.49	22.8	91.5	70.0	4.4	17.0	6.0	13.9	1750	71.8	5.27	4.0	53.8	108.0	43.7	7.0
	9.3	1.7	3.9	1850	81.0	52.8	3.61	22.4	93.3	70.0	4.5	17.0	6.0	13.9	2050	72.9	5.11	4.2	55.5	102.9	43.5	6.8
60	8.5	1.2	2.7	1590	76.1	47.8	3.87	19.6	89.3	81.0	5.4	8.5	1.2	2.7	1750	74.4	5.34	4.1	56.2	109.4	46.8	7.3
	8.5	1.2	2.7	1850	77.4	51.4	4.01	19.3	91.1	81.4	5.6	8.5	1.2	2.7	2050	75.5	5.18	4.3	57.9	104.1	46.4	7.1
	12.8	3.1	7.1	1590	78.3	48.7	3.63	21.6	90.7	74.2	4.7	12.8	3.1	7.1	1750	78.0	5.44	4.2	59.4	111.3	50.7	7.7
	12.8	3.1	7.1	1850	79.7	52.3	3.76	21.2	92.5	74.5	4.8	12.8	3.1	7.1	2050	79.2	5.28	4.4	61.2	105.8	50.4	7.4
	17.0	5.6	13.0	1590	79.3	49.1	3.52	22.6	91.3	70.7	4.4	17.0	5.6	13.0	1750	80.0	5.50	4.3	61.2	112.3	52.8	7.9
	17.0	5.6	13.0	1850	80.7	52.7	3.64	22.2	93.1	71.0	4.5	17.0	5.6	13.0	2050	81.2	5.33	4.5	63.0	106.7	52.6	7.7
70	8.5	1.1	2.6	1590	72.4	46.3	4.26	17.0	87.0	90.5	6.7	8.5	1.1	2.6	1750	81.9	5.56	4.3	62.9	113.3	55.2	8.1
	8.5	1.1	2.6	1850	73.7	49.8	4.42	16.7	88.7	90.9	6.8	8.5	1.1	2.6	2050	83.2	5.38	4.5	64.8	107.6	54.8	7.9
	12.8	3.0	6.8	1590	75.0	47.4	3.98	18.9	88.6	83.9	5.8	12.8	3.0	6.8	1750	86.0	5.68	4.4	66.6	115.5	59.6	8.6
	12.8	3.0	6.8	1850	76.3	50.9	4.12	18.5	90.4	84.2	5.9	12.8	3.0	6.8	2050	87.3	5.50	4.6	68.5	109.4	59.3	8.4
	17.0	5.4	12.4	1590	76.3	47.9	3.85	19.8	89.4	80.5	5.4	17.0	5.4	12.4	1750	88.2	5.75	4.5	68.6	116.7	61.9	8.9
	17.0	5.4	12.4	1850	77.6	51.5	3.99	19.5	91.2	80.7	5.5	17.0	5.4	12.4	2050	89.5	5.57	4.7	70.5	110.4	61.7	8.7
80	8.5	1.2	2.7	1590	68.4	44.7	4.72	14.5	84.5	99.9	8.2	8.5	1.2	2.7	1750	89.5	5.79	4.5	69.8	117.4	63.6	9.1
	8.5	1.2	2.7	1850	69.5	48.1	4.89	14.2	86.2	100.3	8.4	8.5	1.2	2.7	2050	90.9	5.61	4.7	71.7	111.0	63.1	8.8
	12.8	2.9	6.7	1590	71.2	45.8	4.40	16.2	86.2	93.5	7.1	9.8	1.6	3.8	1750	91.2	5.84	4.6	71.3	118.3	65.0	9.5
	12.8	2.9	6.7	1850	72.4	49.3	4.56	15.9	88.0	93.8	7.3	9.8	1.6	3.8	2050	92.6	5.66	4.8	73.3	111.8	65.0	9.2
	17.0	5.2	12.1	1590	72.6	46.4	4.24	17.1	87.1	90.2	6.6	9.8	1.6	3.8	1750	91.2	5.84	4.6	71.3	118.3	65.0	9.5
	17.0	5.2	12.1	1850	73.8	49.9	4.40	16.8	88.8	90.5	6.7	9.8	1.6	3.8	2050	92.6	5.66	4.8	73.3	111.8	65.0	9.2
90	8.5	1.2	2.8	1590	64.1	43.0	5.26	12.2	82.0	109.3	10.0	5.9	0.3	0.6	1750	91.2	5.84	4.6	71.3	118.3	65.0	9.5
	8.5	1.2	2.8	1850	68.1	47.4	5.07	13.4	85.4	109.7	9.0	5.9	0.3	0.6	2050	92.6	5.66	4.8	73.3	111.8	65.0	9.2
	12.8	2.9	6.7	1590	67.0	44.1	4.89	13.7	83.6	103.1	8.8	5.9	0.3	0.6	1750	91.2	5.84	4.6	71.3	118.3	65.0	9.5
	12.8	2.9	6.7	1850	68.1	47.4	5.07	13.4	85.4	103.4	9.0	5.9	0.3	0.6	2050	92.6	5.66	4.8	73.3	111.8	65.0	9.2
	17.0	5.2	12.0	1590	68.4	44.7	4.71	14.5	84.5	99.9	8.2	5.9	0.3	0.6	1750	91.2	5.84	4.6	71.3	118.3	65.0	9.5
	17.0	5.2	12.0	1850	69.6	48.1	4.88	14.2	86.3	100.1	8.4	5.9	0.3	0.6	2050	92.6	5.66	4.8	73.3	111.8	65.0	9.2
100	8.5	1.2	2.8	1590	59.8	41.2	5.88	10.2	79.9	118.8	12.2	4.2	0.1	0.2	1750	91.2	5.84	4.6	71.3	118.3	65.0	9.5
	8.5	1.2	2.8	1850	60.9	44.3	6.09	10.0	81.6	119.2	12.5	4.2	0.1	0.2	2050	92.6	5.66	4.8	73.3	111.8	65.0	9.2
	12.8	2.9	6.7	1590	62.6	42.3	5.46	11.5	81.2	112.7	10.8	4.2	0.1	0.2	1750	91.2	5.84	4.6	71.3	118.3	65.0	9.5
	12.8	2.9	6.7	1850	63.7	45.5	5.66	11.2	83.0	113.0	11.0	4.2	0.1	0.2	2050	92.6	5.66	4.8	73.3	111.8	65.0	9.2
	17.0	5.2	12.0	1590	64.0	42.9	5.27	12.2	82.0	109.6	10.1	4.2	0.1	0.2	1750	91.2	5.84	4.6	71.3	118.3	65.0	9.5
	17.0	5.2	12.0	1850	65.1	46.2	5.46	11.9	83.8	109.9	10.3	4.2	0.1	0.2	2050	92.6	5.66	4.8	73.3	111.8	65.0	9.2
110	8.5	1.1	2.6	1590	55.7	39.5	6.61	8.4	78.2	128.4	14.7	3.3	0.1	0.1	1750	91.2	5.84	4.6	71.3	118.3	65.0	9.5
	8.5	1.1	2.6	1850	56.7	42.5	6.85	8.3	80.0	128.8	15.0	3.3	0.1	0.1	2050	92.6	5.66	4.8	73.3	111.8	65.0	9.2
	12.8	2.9	6.6	1590	58.3	40.6	6.13	9.5	79.2	122.4	13.1	3.3	0.1	0.1	1750	91.2	5.84	4.6	71.3	118.3	65.0	9.5
	12.8	2.9	6.6	1850	59.3	43.6	6.36	9.3	81.0	122.7	13.4	3.3	0.1	0.1	2050	92.6	5.66	4.8	73.3	111.8	65.0	9.2
	17.0	5.1	11.8	1590	59.6	41.1	5.91	10.1	79.8	119.4	12.3	3.3	0.1	0.1	1750	91.2	5.84	4.6	71.3	118.3	65.0	9.5
	17.0	5.1	11.8	1850	60.7	44.2	6.12	9.9	81.6	119.6	12.6	3.3	0.1	0.1	2050	92.6	5.66	4.8	73.3	111.8	65.0	9.2
120	8.5	0.9	2.1	1590	52.0	38.1	7.45	7.0	77.4	138.2	17.6	2.7	0.1	0.1	1750	91.2	5.84	4.6	71.3	118.3	65.0	9.5
	8.5	0.9	2.1	1850	52.9	41.0	7.72	6.8	79.2	138.6	18.0	2.7	0.1	0.1	2050	92.6	5.66	4.8	73.3	111.8	65.0	9.2
	12.8	2.7	6.2	1590	54.2	39.0	6.91	7.8	77.8	132.2	15.8	2.7	0.1	0.1	1750	91.2	5.84	4.6	71.3	118.3	65.0	9.5
	12.8	2.7	6.2	1850	55.2	41.9	7.16	7.7	79.6	132.5	16.1	2.7	0.1	0.1	2050	92.6	5.66	4.8	73.3	111.8	65.0	9.2
	17.0	5.0	11.5	1590	55.5	39.4	6.65	8.3	78.2	129.2	14.9	2.7	0.1	0.1	1750	91.2	5.84	4.6	71.3	118.3	65.0	9.5
	17.0	5.0	11.5	1850	56.4	42.4	6.90	8.2	80.0	129.4	15.2	2.7	0.1	0.1	2050	92.6	5.66	4.8	73.3	111.8	65.0	9.2

Interpolation is permissible; extrapolation is not.
Flow is controlled to maintain minimum LWT 70° F in cooling and maximum LWT 65° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
For operation in the shaded areas, please see the Performance Data Selection Notes.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

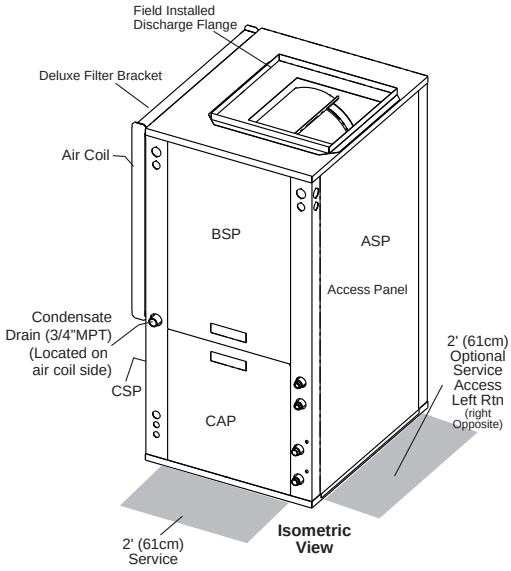
Physical Data

Model	026	038	049	064	072
Compressor (1 Each)	Copeland UltraTech Two-Stage Scroll				
Factory Charge HFC-410a, oz [kg]	60 [1.70]	64 [1.81]	81 [2.30]	142 [4.02]	140 [4.0]
ECM Motor & Blower					
Fan Motor, hp [W]	1/2 [373]	1/2 [373]	1 [746]	1 [746]	1 [746]
Blower Wheel Size (Dia x W), in [mm]	9 x 7 [229 x 178]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
Water Connection Size					
Swivel - Residential Class	1”	1”	1”	1”	1”
HWG Water Connection Size					
Swivel - Residential Class	1”	1”	1”	1”	1”
Vertical Upflow					
Air Coil Dimensions (H x W), in [mm]	28 x 20 [711 x 542]	28 x 25 [711 x 635]	32 x 25 [813 x 635]	36 x 25 [914 x 635]	36 x 25 [914 x 635]
Standard Filter - 2” [51mm] Pleated MERV11 Throwaway, in [mm]	28 x 24 [712 x 610]	28 x 29.5 [712 x 749]	32 x 29.5 [813 x 749]	36 x 29.5 [914 x 749]	36 x 29.5 [914 x 749]
Weight - Operating, lbs [kg]	298 [135]	359 [163]	448 [203]	475 [215]	475 [215]
Weight - Packaged, lbs [kg]	308 [140]	369 [167]	458 [208]	485 [220]	485 [220]
Horizontal					
Air Coil Dimensions (H x W), in [mm]	18 x 31 [457 x 787]	20 x 35 [508 x 889]	20 x 40 [508 x 1018]	20 x 45 [508 x 1143]	20 x 45 [508 x 1143]
Standard Filter - 2” [51mm] Pleated MERV11 Throwaway, in [mm]	2 - 18 x 18 [457 x 457]	1 - 12 x 20 [305 x 508] 1 - 20 x 25 [508 x 635]	1 - 18 x 20 [457 x 508] 1 - 20 x 24 [508 x 610]	2 - 20 x 24 [508 x 610]	2 - 20 x 24 [508 x 610]
Weight - Operating, lbs [kg]	298 [135]	359 [163]	448 [203]	475 [215]	475 [215]
Weight - Packaged, lbs [kg]	308 [140]	369 [167]	458 [208]	485 [220]	485 [220]

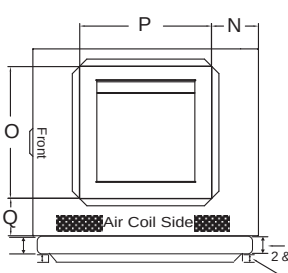
All units have grommet compressor mountings, TXV expansion devices, and 1/2” [12.7mm] & 3/4” [19.1mm] electrical knockouts.

Dimensions - Vertical Upflow Tranquility® 30

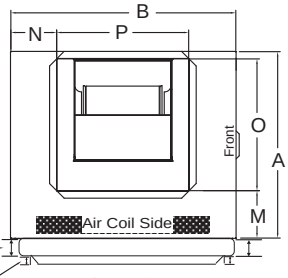
Legend
CAP=Control Access Panel
CSP=Compressor Service Panel
BSP=Blower Service Panel
ASP=Alternate Service Panel



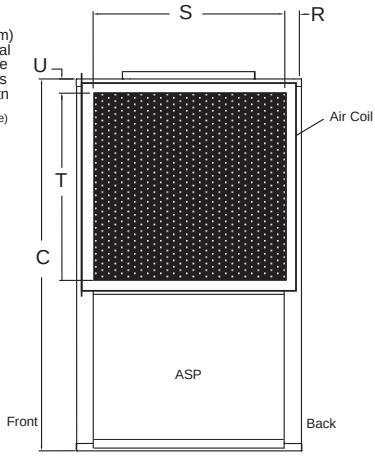
Isometric View



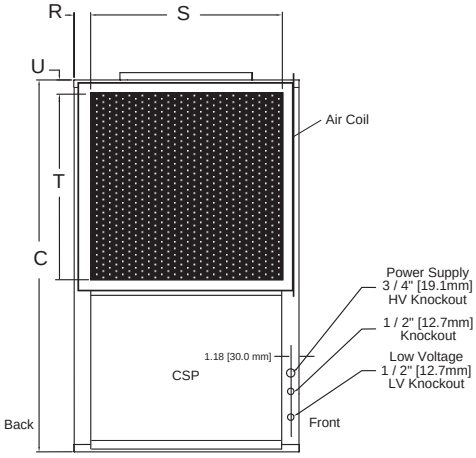
Top View-Right Return



Top View-Left Return



Right Return Right View - Filter Rack Knife Edge



Left Return Left View - Filter Rack Knife Edge

Vertical Upflow Model		Overall Cabinet		
		A Width	B Depth	C Height
TE026	in	22.4	25.6	48.5
	cm	56.8	65.1	123.2
TE038	in	25.4	30.6	50.5
	cm	64.5	77.8	128.3
TE049	in	25.4	30.6	54.5
	cm	64.5	77.8	138.4
TE064	in	25.4	30.6	58.5
	cm	64.5	77.8	148.6
TE072	in	25.4	30.6	58.5
	cm	64.5	77.8	148.6

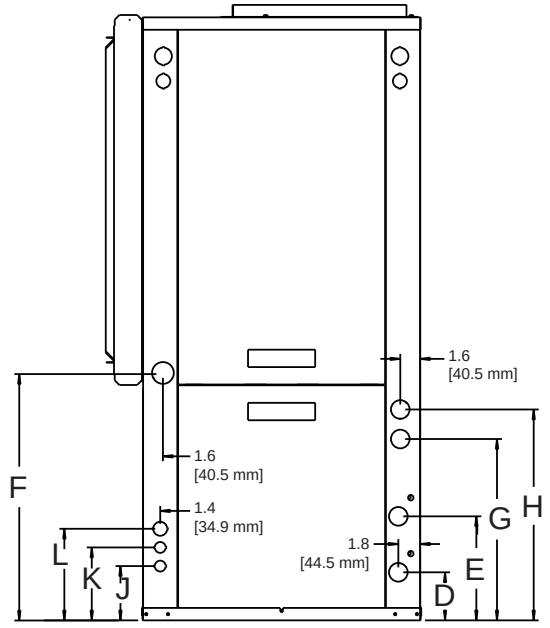
Vertical Upflow Model		Discharge Connection Duct Flange Installed (+/- 0.20 in, +/- 5.1mm)					Return Connection Standard Deluxe Filter Rack (+/- 0.20 in, +/- 5.1mm)			
		M Left Return	N	O Supply Width	P Supply Depth	Q Right Return	R	S Return Depth	T Return Height	U
026	in	7.8	5.8	14.0	14.0	4.9	1.7	22.2	26.2	1.7
	cm	18.3	14.8	35.6	35.6	12.4	4.3	56.4	66.5	4.3
038	in	6.4	6.3	18.0	18.0	5.3	1.7	27.2	26.2	1.7
	cm	16.1	16.0	45.7	45.7	13.5	4.3	69.1	66.5	4.3
049	in	6.4	6.3	18.0	18.0	5.3	1.7	27.2	30.2	1.7
	cm	16.1	16.0	45.7	45.7	13.5	4.3	69.1	76.7	4.3
064	in	6.4	6.3	18.0	18.0	5.3	1.7	27.2	34.2	1.7
	cm	16.1	16.0	45.7	45.7	13.5	4.3	69.1	86.9	4.3
072	in	6.4	6.3	18.0	18.0	5.3	1.7	27.2	34.2	1.7
	cm	16.1	16.0	45.7	45.7	13.5	4.3	69.1	86.9	4.3

Dimensions - Vertical Upflow Tranquility® 30

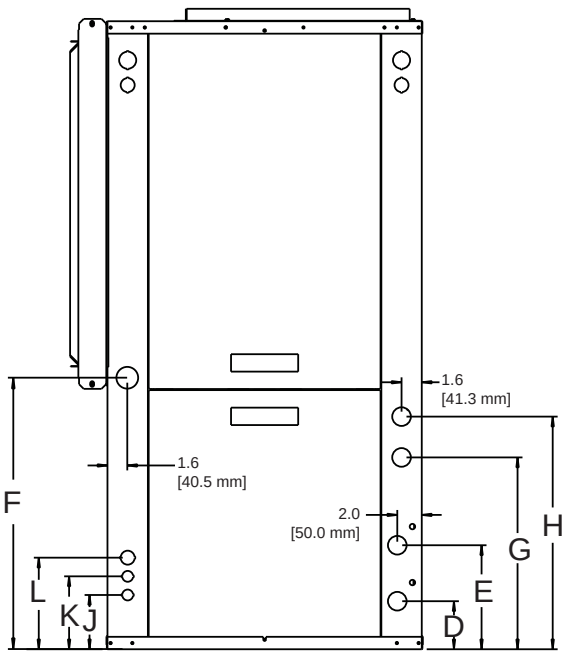
Vertical Upflow Model		Water Connections							
		D	E	F	G	H	Loop Water FPT	HWG FPT	Cond. Drain
		Loop In	Loop Out	Condensate	HWG In	HWG Out			
026	in	3.9	8.4	19.9	14.6	17.0	1"	1"	3/4"
	cm	9.9	21.3	50.5	37.1	43.2	Swivel	Swivel	MPT
038	in	3.9	8.4	21.8	15.4	18.7	1"	1"	3/4"
	cm	9.9	21.3	55.4	39.1	47.5	Swivel	Swivel	MPT
049	in	3.9	8.4	21.8	15.4	18.7	1"	1"	3/4"
	cm	9.9	21.3	55.4	39.1	47.5	Swivel	Swivel	MPT
064	in	3.9	8.4	21.8	15.4	18.7	1"	1"	3/4"
	cm	9.9	21.3	55.4	39.1	47.5	Swivel	Swivel	MPT
072	in	3.9	8.4	21.8	15.4	18.7	1"	1"	3/4"
	cm	9.9	21.3	55.4	39.1	47.5	Swivel	Swivel	MPT

Vertical Upflow Model		Electrical Knockouts		
		J 1/2"	K 1/2"	L 3/4"
		Low Voltage	External Pump	Power Supply
026 - 072	in	4.4	5.9	7.4
	cm	11.2	15.0	18.8

Condensate connection is 3/4" MPT and is located on the air coil side of the front of the unit.
Unit shipped with deluxe duct collar/filter rack extending from unit 3" [7.6cm] and is suitable for duct connection.
Discharge flange is field installed.



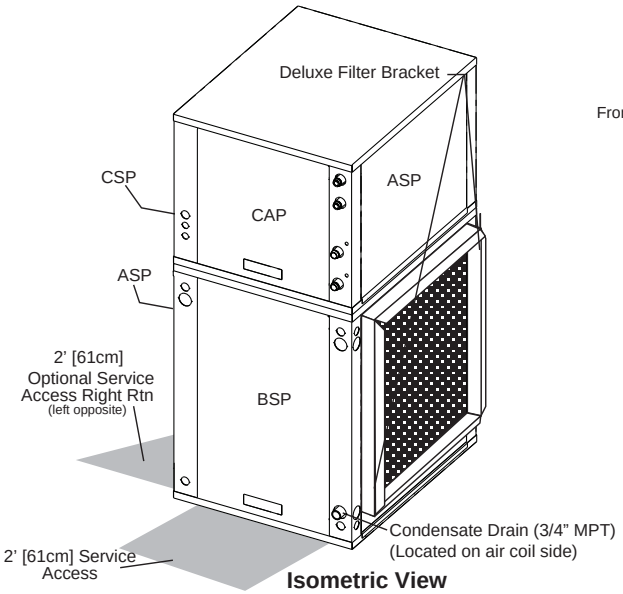
Front-View
TE026



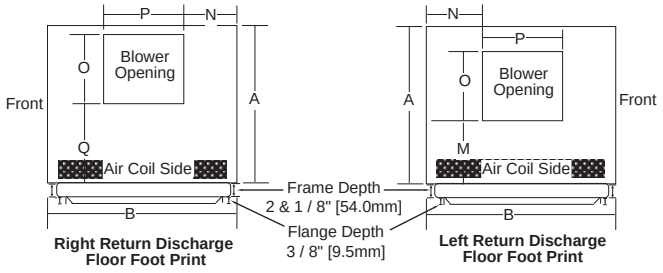
Front-View
TE038 - 072

Dimensions - Vertical Downflow Tranquility® 30

Legend
CAP=Control Access Panel
CSP=Compressor Service Panel
BSP=Blower Service Panel
ASP=Alternate Service Panel

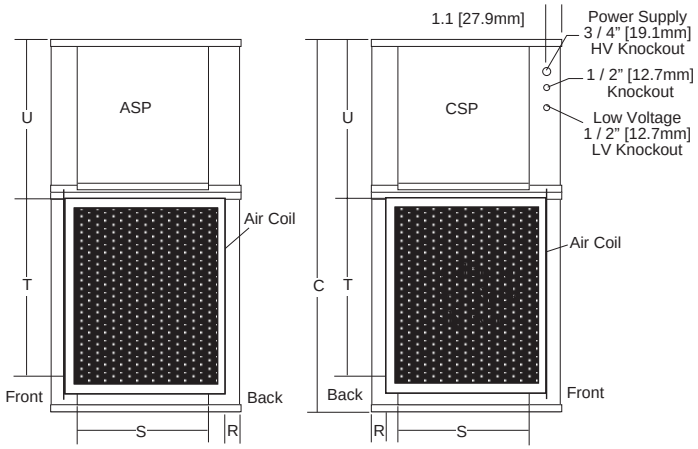


Isometric View



Right Return Discharge Floor Foot Print

Left Return Discharge Floor Foot Print



Right Return Right View - Filter Rack Knife Edge

Left Return Left View - Filter Rack Knife Edge

Vertical Downflow Model		Overall Cabinet		
		A Width	B Depth	C Height
TE026	in	22.4	25.6	52.5
	cm	56.8	65.1	133.4
TE038	in	25.4	30.6	54.5
	cm	64.5	77.8	138.4
TE049	in	25.4	30.6	58.5
	cm	64.5	77.8	148.6
TE064	in	25.4	30.6	62.5
	cm	64.5	77.8	158.8
TE072	in	25.4	30.6	62.5
	cm	64.5	77.8	158.8

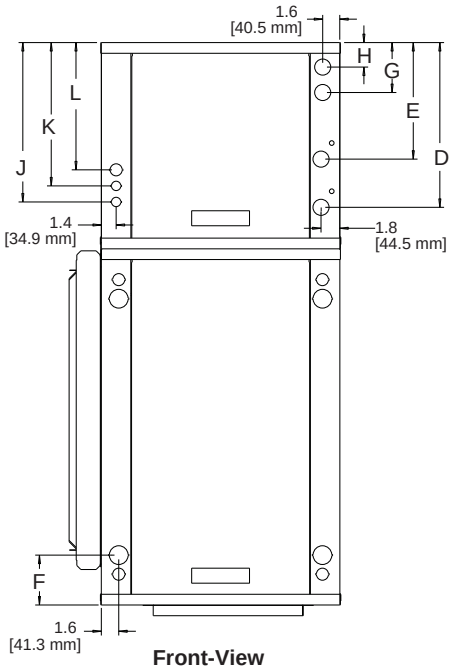
Vertical Downflow Model		Discharge Connection Duct Flange Installed (+/- 0.20 in, +/- 5.1mm)					Return Connection Standard Deluxe Filter Rack (+/- 0.20 in, +/- 5.1mm)			
		M Left Return	N	O Supply Width	P Supply Depth	Q Right Return	R	S Return Depth	T Return Height	U
026	in	6.7	8.4	9.9	9.1	10.8	1.7	22.2	26.2	21.9
	cm	17.1	21.4	25.3	23.0	27.4	4.3	56.4	66.5	55.6
038	in	7.4	9.0	13.1	12.9	10.4	1.7	27.2	26.2	23.9
	cm	18.7	22.9	33.3	32.7	26.5	4.3	69.1	66.5	60.7
049	in	7.4	9.0	13.1	12.9	10.4	1.7	27.2	30.2	23.9
	cm	18.7	22.9	33.3	32.7	26.5	4.3	69.1	76.7	60.7
064	in	7.4	9.0	13.1	12.9	10.4	1.7	27.2	34.2	23.9
	cm	18.7	22.9	33.3	32.7	26.5	4.3	69.1	86.9	60.7
072	in	7.4	9.0	13.1	12.9	10.4	1.7	27.2	34.2	23.9
	cm	18.7	22.9	33.3	32.7	26.5	4.3	69.1	86.9	60.7

Dimensions - Vertical Downflow Tranquility® 30

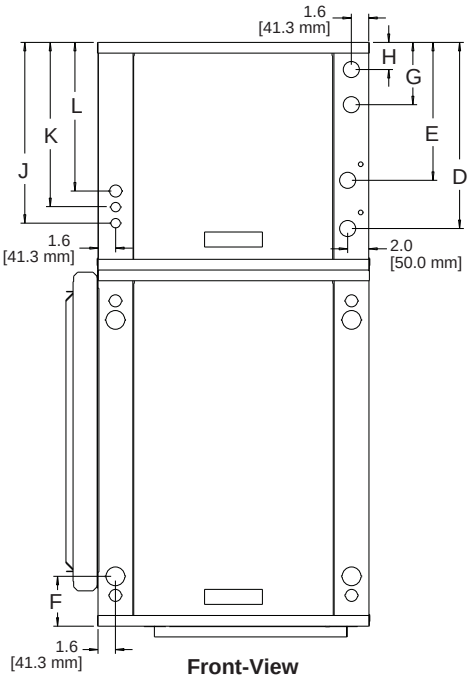
Vertical Downflow Model		Water Connections							
		D	E	F	G	H	Loop Water FPT	HWG FPT	Cond. Drain
		In	Out	Condensate	HWG In	HWG Out			
026	in cm	15.4 39.1	10.9 27.7	4.7 11.9	4.7 11.9	2.3 5.8	1" Swivel	1" Swivel	3/4" MPT
038	in cm	17.4 44.2	12.9 32.8	4.7 11.9	5.8 14.7	2.5 6.4	1" Swivel	1" Swivel	3/4" MPT
049	in cm	17.4 44.2	12.9 32.8	4.7 11.9	5.8 14.7	2.5 6.4	1" Swivel	1" Swivel	3/4" MPT
064	in cm	17.4 44.2	12.9 32.8	4.7 11.9	5.8 14.7	2.5 6.4	1" Swivel	1" Swivel	3/4" MPT
072	in cm	17.4 44.2	12.9 32.8	4.7 11.9	5.8 14.7	2.5 6.4	1" Swivel	1" Swivel	3/4" MPT

Vertical Upflow Model		Electrical Knockouts		
		J 1/2"	K 1/2"	L 3/4"
		Low Voltage	External Pump	Power Supply
026	in cm	14.9 37.8	13.4 34.0	11.9 30.2
038 - 049	in cm	16.9 42.9	15.3 38.9	13.9 35.3

Condensate connection is 3/4" MPT and is located on the air coil side of the front of the unit.
Unit shipped with deluxe duct collar/filter rack extending from unit 3" [7.6cm] and is suitable for duct connection.
Downflow unit does not have discharge flange, and is rated for zero clearance installation.



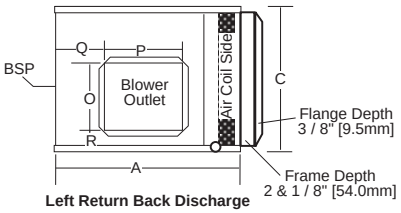
Front-View
TE 026



Front-View
TE 038-072

Dimensions - Horizontal Tranquility® 30

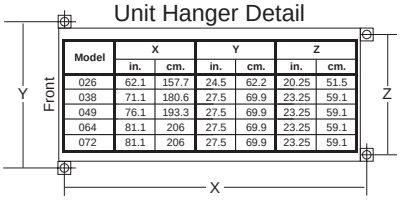
Legend
CAP=Control Access Panel
CSP=Compressor Service Panel
BSP=Blower Service Panel
ASP=Alternate Service Panel

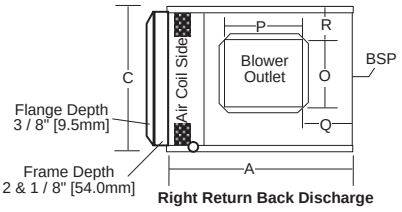


Left Return Back Discharge

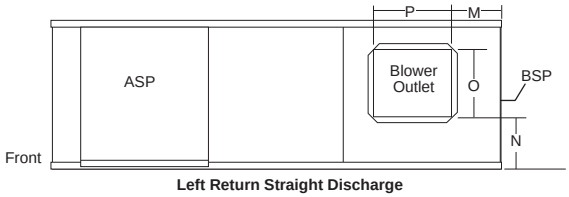
Unit Hanger Detail

Model	X		Y		Z	
	in.	cm.	in.	cm.	in.	cm.
026	62.1	157.7	24.5	62.2	20.25	51.5
038	71.1	180.6	27.5	69.9	23.25	59.1
049	76.1	193.3	27.5	69.9	23.25	59.1
064	81.1	206	27.5	69.9	23.25	59.1
072	81.1	206	27.5	69.9	23.25	59.1

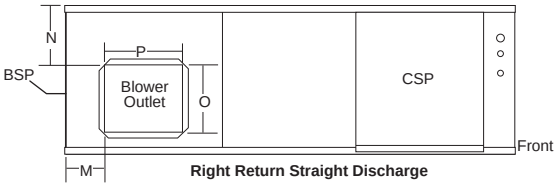




Right Return Back Discharge

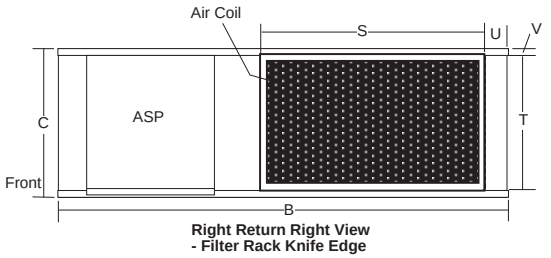


Left Return Straight Discharge

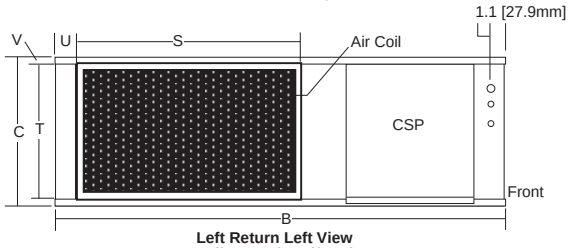


Right Return Straight Discharge

Horizontal Model		Overall Cabinet		
		A Width	B Depth	C Height
TE026	in	22.4	62.2	19.3
	cm	56.8	158.0	48.9
TE038	in	25.4	71.2	21.3
	cm	64.5	180.8	54.0
TE049	in	25.4	76.2	21.3
	cm	64.5	193.5	54.0
TE064	in	25.4	81.2	21.3
	cm	64.5	206.2	54.0
TE072	in	25.4	81.2	21.3
	cm	64.5	206.2	54.0



Right Return Right View
- Filter Rack Knife Edge



Left Return Left View
- Filter Rack Knife Edge

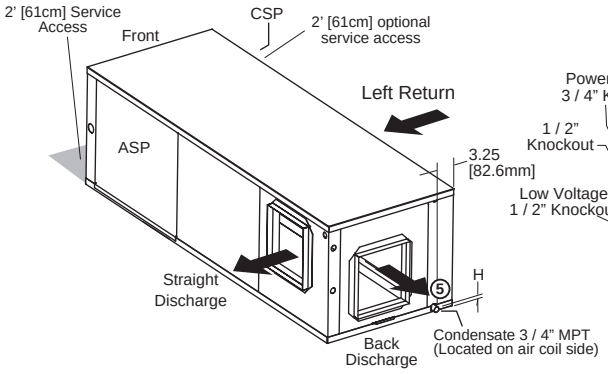
Horizontal Model		1Discharge Connection Duct Flange Installed (+/- 0.20 in, +/- 5.1mm)						Return Connection Standard Deluxe Filter Rack (+/- 0.20 in, +/- 5.1mm)			
		M	N	O Supply Height	P Supply Width	Q	R	S Return Width	T Return Height	U	V
026	in	3.6	2.0	12.5	15.5	3.6	2.0	33.8	16.2	2.3	1.7
	cm	9.3	5.1	31.8	39.4	9.2	5.2	85.8	41.0	5.8	4.3
038	in	*3.1	1.2	19.0	17.5	*3.1	1.0	34.8	18.2	3.1	1.7
	cm	7.9	3.1	48.3	44.5	7.9	2.6	88.3	46.1	7.8	4.3
049	in	3.1	1.2	19.0	17.5	3.1	1.0	39.8	18.2	3.1	1.7
	cm	7.9	3.1	48.3	44.5	7.9	2.6	101.0	46.1	7.8	4.3
064	in	3.1	1.2	19.0	17.5	3.1	1.0	44.8	18.2	3.1	1.7
	cm	7.9	3.1	48.3	44.5	7.9	2.6	113.7	46.1	7.8	4.3
072	in	3.1	1.2	19.0	17.5	3.1	1.0	44.8	18.2	3.1	1.7
	cm	7.9	3.1	48.3	44.5	7.9	2.6	113.7	46.1	7.8	4.3

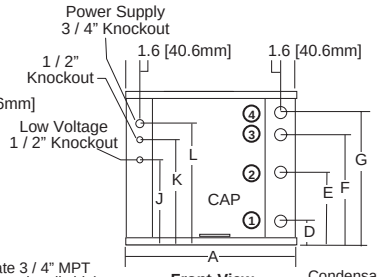
*For units with modulating reheat option this dimension is 2.9" (7.4 cm).
1Discharge connection will change when using the accessory auxiliary electric heat package. Refer to the heater IOM for details.

Dimensions - Horizontal Tranquility® 30

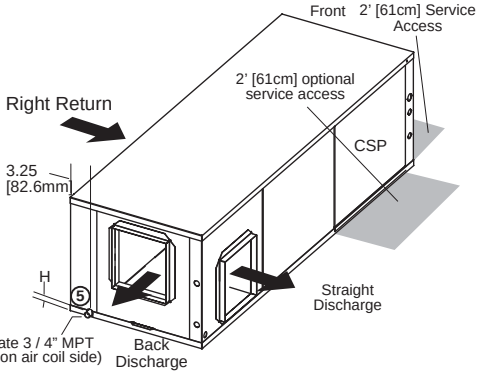
Legend
CAP=Control Access Panel
CSP=Compressor Service Panel
BSP=Blower Service Panel
ASP=Alternate Service Panel

LEFT RETURN





RIGHT RETURN



Horizontal Model		Water Connections							
		D	E	F	G	H	Loop Water FPT	HWG FPT	Cond. Drain
		In	Out	HWG IN	HWG Out	Condensate			
026	in	3.9	8.4	19.9	14.6	0.6	1" Swivel	1" Swivel	3/4" MPT
	cm	9.9	21.3	50.5	37.1	1.5			
038	in	3.9	8.4	21.8	15.4	0.6	1" Swivel	1" Swivel	3/4" MPT
	cm	9.9	21.3	55.4	39.1	1.5			
049	in	3.9	8.4	21.8	15.4	0.6	1" Swivel	1" Swivel	3/4" MPT
	cm	9.9	21.3	55.4	39.1	1.5			
064	in	3.9	8.4	21.8	15.4	0.6	1" Swivel	1" Swivel	3/4" MPT
	cm	9.9	21.3	55.4	39.1	1.5			
072	in	3.9	8.4	21.8	15.4	0.6	1" Swivel	1" Swivel	3/4" MPT
	cm	9.9	21.3	55.4	39.1	1.5			

Horizontal Model		Electrical Knockouts		
		J 1/2"	K 1/2"	L 3/4"
		Low Voltage	External Pump	Power Supply
026 - 072	in	4.4	5.9	7.4
	cm	11.2	15.0	18.8

Condensate is 3/4" MPT.
Unit shipped with deluxe duct collar/filter rack extending from unit 3" [7.6cm] and is suitable for duct connection.
Discharge flange and hanger brackets are factory installed.

Electrical Data

With Internal Flow Controller

Model	Compressor			HWG Pump FLA	Ext Loop FLA	Fan Motor FLA	Total Unit FLA	Min Circuit Amps	Max/ Fuse HACR
	RLA	LRA	Qty						
026	11.7	58.3	1	0.5	1.7	3.9	17.8	20.7	30
038	15.8	83.0	1	0.5	1.7	3.9	21.4	25.2	40
049	21.7	104.0	1	0.5	1.7	6.9	30.3	35.6	50
064	27.1	152.9	1	0.5	1.7	6.9	36.2	42.9	70
072	29.7	179.2	1	0.5	1.7	6.9	38.8	46.2	70

Rated Voltage of 208-230/60/1
HACR circuit breaker in USA only

Min/Max Voltage of 197/254
All fuses Class RK-5

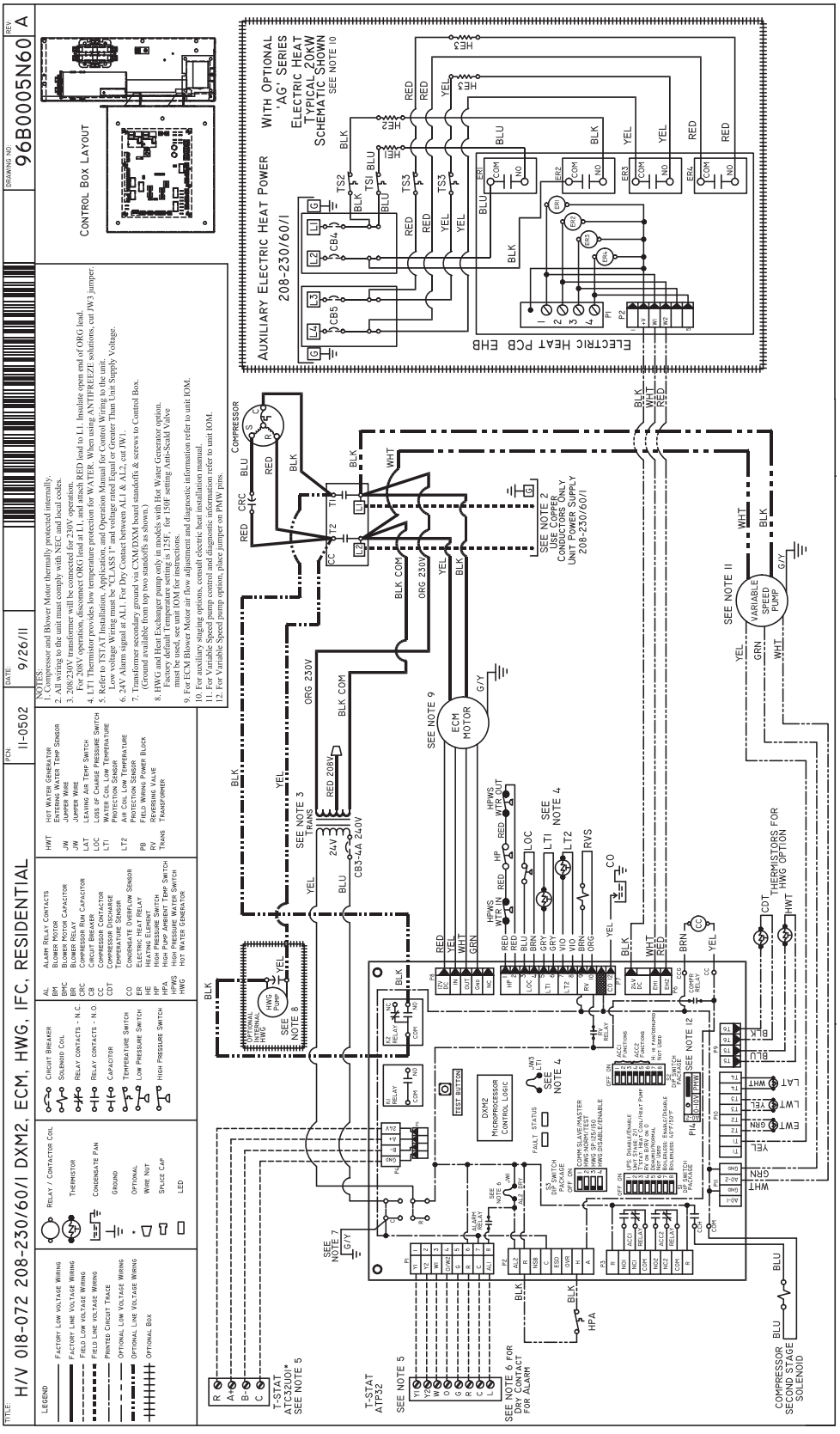
With Motorized Modulating Valve

Model	Compressor			HWG Pump FLA	Fan Motor FLA	Total Unit FLA	Min Circuit Amps	Max/ Fuse HACR
	RLA	LRA	Qty					
026	11.7	58.3	1	0.5	3.9	16.1	19.0	30
038	15.8	83.0	1	0.5	3.9	19.7	23.5	35
049	21.7	104.0	1	0.5	6.9	28.6	33.9	50
064	27.1	152.9	1	0.5	6.9	34.5	41.2	60
072	29.7	179.2	1	0.5	6.9	37.1	44.5	70

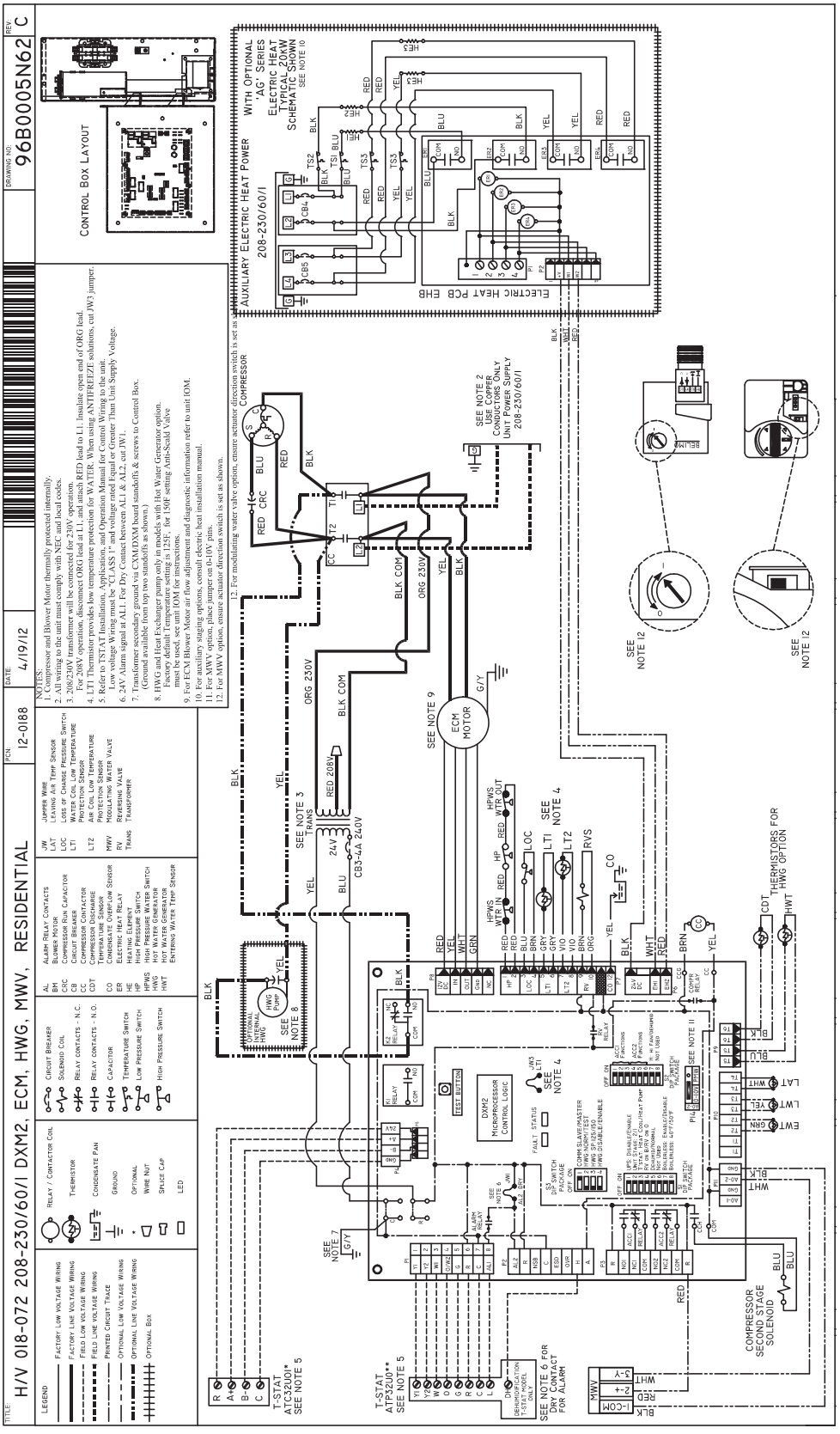
Rated Voltage of 208-230/60/1
HACR circuit breaker in USA only

Min/Max Voltage of 197/254
All fuses Class RK-5

Tranquility® 30 Internal Flow Controller Electrical Wiring Diagram - 96B0005N60



Tranquility® 30 Modulating Water Valve Electrical Wiring Diagram - 96B0005N62



ECM Blower Control

The ECM fan is controlled directly by the DXM2 control board that converts thermostat inputs and CFM settings to signals used by the ECM motor controller. To take full advantage of the ECM motor features, a communicating multi-stage thermostat should be used (ATC32U**).

The DXM2 control maintains a selectable operating airflow [CFM] for each heat pump operating mode. For each operating mode there are maximum and minimum airflow limits. See the ECM Blower Performance tables for the maximum, minimum, and default operating airflows.

Airflow levels are selected using the configuration menus of a communicating thermostat (ATC32U**) or diagnostic tool (ACDU**). The configuration menus allow the installer to independently select and adjust the operating airflow for each of the operating modes. Air flow can be selected in 25 CFM increments within the minimum and maximum limits shown in the ECM Blower Performance Table. The blower operating modes include:

- First Stage Cooling (Y1 & O)
- Second Stage Cooling (Y1, Y2, & O)
- First Stage Cooling in Dehumidification Mode (Y1, O, & Dehumid)
- Second Stage Cooling in Dehumidification Mode (Y1, Y2, O, & Dehumid)
- First Stage Heating (Y1)
- Second Stage Heating (Y1 & Y2)
- Third Stage (Auxiliary) Heating (Y1, Y2, & W)
- Emergency Heating (W with no Y1 or Y2)
- Fan (G with no Y1, Y2, or W)

It is highly recommended that ATC32U** or ACDU** be used to set dehumidification mode electronically. Dehumidification can NOT be selected when using a non-communicating thermostat with a vFlow™ unit with Internal Flow Controller (pump). For dehumidification settings on other units using the non-communicating stat, refer to DXM2 AOM (part #97B0003N15).

The ECM motor includes “soft start” and “ramp down” features. The soft start feature is a gentle increase of motor rpm at blower start up. This creates a much quieter blower start cycle.

The ramp down feature allows the blower to slowly decrease rpm to a full stop at the end of each blower cycle. This creates a much quieter end to each blower cycle and adds overall unit efficiency.

The ramp down feature is eliminated during an ESD (Emergency Shut Down) situation. When the DXM2 ESD input is activated, the blower and all other control outputs are immediately de-activated.

The ramp down feature (also known as the heating or cooling “Off Delay”) is field selectable by the installer. The allowable range is 0 to 255 seconds.

Airflow Configuration Screen on Communicating Thermostat

AIRFLOW SELECTION	CFM
HEAT STAGE 1	600
HEAT STAGE 2	750
AUXILIARY HEAT	850
EMERGENCY HEAT	850
COOL STAGE 1	525
COOL STAGE 2	700
COOL DEHUMID 1	425
COOL DEHUMID 2	550
CONTINUOUS FAN	350
HEAT OFF DELAY	60
COOL OFF DELAY	30
◀ PREVIOUS	NEXT ▶

Blower Performance Data

Airflow in CFM with wet coil and clean air filter

Model	Max ESP (in. wg)	Fan Motor (hp)	Range	Cooling Mode		Dehumid Mode		Heating Mode		Fan Only Mode	Aux/ Emerg Mode
				Stg 2	Stg 1	Stg 2	Stg 1	Stg 2	Stg 1		
026	1.0	1/2	Default	700	525	550	425	750	600	350	850
			Maximum	1000	800	800	600	1000	850	1000	1000
			Minimum	600	450	550	400	600	450	300	700
038	0.9	1/2	Default	1050	800	850	650	1100	850	550	1350
			Maximum	1500	1100	1200	900	1500	1100	1500	1500
			Minimum	900	600	825	550	900	600	450	1350
049	1.0	1	Default	1400	1050	1100	850	1500	1150	700	1500
			Maximum	2000	1500	1600	1200	2000	1500	2000	2000
			Minimum	1200	900	1100	825	1200	900	600	1350
064	0.7	1	Default	1750	1300	1400	1050	1875	1450	875	1875
			Maximum	2300	1900	2000	1500	2300	1900	2300	2300
			Minimum	1500	1100	1375	1000	1500	1100	750	1500
072	0.7	1	Default	1900	1450	1650	1250	2000	1650	950	2000
			Maximum	2300	2200	2000	1800	2300	2200	2300	2300
			Minimum	1800	1350	1650	1250	1800	1350	900	1800

Airflow is controlled within 5% up to the Max ESP shown with wet coil

Auxiliary Electric Heat

Auxiliary Heat Ratings

Auxiliary Electric Heat Model	TS, TT, TE Models				TZ Models			TAH Models				kW Rating		Btuh Rating		Minimum CFM Required
	018	024-030	036-038	042-072	024	030-042	048-060	Auxiliary Electric Heat Model*	026	038	049-064	240V	208V	240V	208V	
AGM4A	■	■			■	■		AGM4C	■			3.8	2.9	13000	9900	500
AGM5A	■	■			■	■		AGM5C	■			4.8	3.6	16300	12300	500
AGM8A		■			■	■		AGM8C	■			7.6	5.7	25900	19400	650
AGM10A		■			■	■		AGM10C	■			9.6	7.2	32700	24600	650
AGM12A						■						11.4	8.6	38900	29200	750
AGL4A			■	■			■	AGL4C		■	■	3.8	2.9	13000	9900	500
AGL10A			■	■			■	AGL10C		■	■	9.6	7.2	32700	24600	1300
AGL15A			■	■			■	AGL15C		■	■	14.4	10.8	49100	36900	1350
AGL20A				■			■	AGL20C			■	19.2	14.4	65500	49200	1350

Black area denotes compatibility
Note: Horizontal units rated for zero clearance unit and 1" clearance for the first three feet of duct,
Vertical units rated for zero clearance for both unit and duct.
* Can be used on corresponding TZ, TE, TS and TT models

Auxiliary Heat Electrical Data

Auxiliary Electric Heat Model	Supply Circuit	Heater Amps		Minimum Circuit Amps		Maximum Fuse	
		240V	208V	240V	208V	240V	208V
AGM4A	Single	15.8	14.0	19.8	17.1	20	20
AGM5A	Single	20.0	17.3	25.0	21.6	25	25
AGM8A	Single	31.7	27.5	39.6	34.4	40	35
AGM10A	Single	40.0	34.7	50.0	43.4	50	45
AGM12A	Single	47.5	41.2	59.4	51.5	60	60
	Dual - L1/L2	31.7	27.5	39.6	34.4	40	35
	Dual - L3/L4	15.8	13.7	19.8	17.1	20	20
AGL4A	Single	15.8	14.0	19.8	17.1	20	20
AGL10A	Single	40.0	34.7	50.0	43.4	50	45
AGL15A	Single	60.0	52.0	75.0	65.0	80	70
	Dual - L1/L2	40.0	34.7	50.0	43.4	50	45
	Dual - L3/L4	20.0	17.3	25.0	21.6	25	25
AGL20A	Single	80.0	69.3	100.0	86.6	100	90
	Dual - L1/L2	40.0	34.7	50.0	43.4	50	45
	Dual - L3/L4	40.0	34.7	50.0	43.4	50	45

All heaters rated single phase 208-240V 60Hz
All models 15kW or larger feature internal circuit breakers
All Fuses UL Class K general purpose

Accessories & Options

vFlow™ Internal Variable Speed Water-flow Control

ClimateMaster takes ease and speed of installation of geothermal heating and cooling systems to the next level with vFlow™ variable water flow control. vFlow™ integrates water-flow control inside the unit AND matches the flow to the unit's operating requirements. Compared to conventional units that can just turn the water-flow on or off, Tranquility® 30 Digital varies the water-flow, which results in lower operating cost and longer system life. New 2-way communicating control (and communicating Pump / modulating valve) make vFlow™ a reality and are only available on ClimateMaster Tranquility® systems.

Hot Water Generator

The optional Hot Water Generator includes an insulated double wall vented heat reclaiming heat exchanger suitable for potable water. The heat exchanger coil and hot water circulating pump are factory mounted internal to the unit. The microprocessor Hot Water Generator control uses sensors to monitor the entering potable water temperature and the compressor discharge line temperature and allows the Hot Water Generator to operate any time conditions permit. The Hot Water Generator includes a pump sampling mode to sense the hot water storage temperature while the Hot Water Generator is inactive.

Thermostat (field installed)

The ATC32U** communicating thermostat is a programmable multi-stage auto-changeover electronic digital thermostat. The ATC offers up to 3 heating and 2 cooling stages with precise temperature control. The ATC is capable of controlling heating and cooling stages using a differential or proportional integral control algorithm. Multiple system temperatures and data can be displayed. The ATC is an integral component in system configuration and diagnostics.

Auxiliary Heater (field installed)

An optional, internal, field-installed electric heater provides supplemental and/or emergency heat capability when used with the three stage heating thermostat. (Heater is externally mounted on horizontal units).

Hose Connection Kit (field installed)

An accessory hose kit includes 10' of 150psi 1" rubber hose with brass fittings equipped with service pressure/temperature ports for connection between the unit and Flow Controller.

Warranty Information

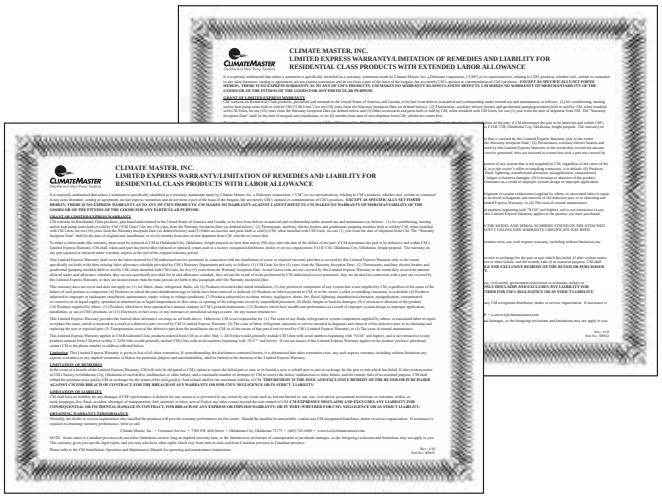
ClimateMaster residential class heat pumps are backed by a ten-year limited warranty on all unit parts, including the following accessories when installed with ClimateMaster units: Flow Controllers, Thermostats & Electric Heaters.

ClimateMaster goes even further to back up its commitment to quality by including a service labor allowance for the first five years on unit parts and thermostats, auxiliary electric heaters and geothermal pumping modules.

See ClimateMaster's 2010 Limited Express Residential Warranty Certificate RP851 for specific coverage and limitation.

The Optional Extended Factory Service Labor Allowance Warranty offers additional length of term protection to the consumer by offsetting service labor costs for 10 years.

To order this warranty, contact your ClimateMaster distributor. This coverage must be purchased within 90 days of unit installation. See Limited Express Extended Labor Warranty Certificate RP852 for details.



CLIMATE MASTER, INC.
LIMITED EXPRESS WARRANTY/LIMITATION OF REMEDIES AND LIABILITY FOR RESIDENTIAL CLASS PRODUCTS WITH LABOR ALLOWANCE

Revision History

Date	Page #	Description
10 Aug., 12	27, 29, 32	'Located on Air Coil Side' Note Added to Drawing
8 May, 12	All	First Published

Tranquility® 27 (TT) Series

TWO-STAGE
HORIZONTAL VERTICAL AND DOWNFLOW
EARTHPURE® SYSTEMS SIZES 026-072 [7.0-19.3 kW]

Table of Contents

What's New with ClimateMaster's Tranquility® 27?

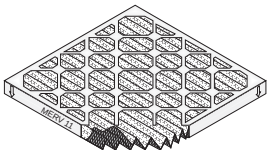
EarthPure® Refrigerant

EarthPure® is a non-chlorine based (HFC-410A) refrigerant, that with R-407C and R-134A, is seen as the future of all refrigerants used worldwide.

HFC-410A characteristics compared to R-22 are:

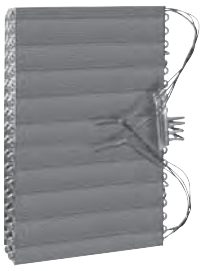
- Binary and near azeotropic mixture of 50% R-32 and 50% R-125.
- Higher efficiencies (50-60% higher operating pressures)
- Zero ozone depletion potential and low global warming potential.
- Virtually no glide. Unlike other alternative refrigerants, the two components in HFC-410A have virtually the same leak rates. Therefore, refrigerant can be added if necessary without recovering the charge.

MERV 11 2" Pleated filter



All Tranquility® 27 units include a factory installed 2" filter rack/ duct collar with a 2" pleated high efficiency MERV 11 air filter. The MERV (minimum efficiency reporting value per ASHRAE Standard 52.2) design features ultra low velocity (<300 fpm) for extended filter life, low pressure drop (0.13 – 0.18 in. wg.) and high particulate efficiency (size E1=41%, E2=69% and E3=87%). The pleated design and low velocity combine to allow the filter to store a large amount of dirt and result in a practical replacement life of up to 6 months.

Tin Plated Air Coil



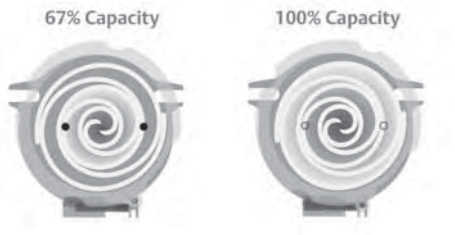
All ClimateMaster Tranquility® 27 Series models feature an tin plated air-coil. This plating process will provide years of protection against corrosion from airborne chemicals resulting from modern building material out gassing and most environmental chemicals found in the air. Modern building materials such as counter-tops, floor coverings, paints and other materials can "outgas" chemicals into the home's air. Some of these chemicals are suspected of contributing to corrosion in the air coils found in both traditional and geothermal heating and cooling equipment. Corrosion often results in refrigerant leaks and eventual failure of the air coil costing hundreds of dollars to replace. Studies have also shown that the air coil plating improves moisture shedding and therefore improve a unit's moisture removal capability resulting in a more comfortable home. The Tranquility® 27 Series is your assurance of both maximum air coil life and comfort.

Copeland Scroll Compressor

Achieve a greater level of comfort. The Copeland Scroll UltraTech™ provides superior comfort than fixed-capacity compressors by incorporating a revolutionary two-step design. With a unique 67% part-load capacity step, systems with UltraTech™ maintain precise temperature levels and lower relative humidity. This eliminates uneven peaks and valleys and allows for steady cooling comfort. Homeowners now have a better, more efficient way to power their heating and cooling system, raising their level of comfort, while lowering energy bills. So when your customers need a new heating and cooling system, make sure it has the best technology inside – the Copeland Scroll UltraTech™ compressor.

Save with superior efficiency. Over 40% of summer utility bills can come from the air conditioner compressor operation. A system with the Copeland Scroll UltraTech™ compressor delivers higher efficiency than any other single compressor system. In fact, systems with UltraTech™ provide up to 50% greater energy efficiency as compared to 13-SEER systems – which can save homeowners hundreds of dollars a year in energy costs.

Take it easy with quieter control. Copeland Scroll UltraTech™ is remarkably quiet at both full- and part-load capacity. In fact, it is up to four times quieter than a reciprocating compressor. Homeowners can enjoy its superior efficiency and comfort without having to hear the operation.



Learn the beauty of the design. With Copeland Scroll UltraTech™, two internal bypass ports enable the system to run at 67% part-load capacity for better efficiency and humidity control. Based on demand, the modulation ring is activated, sealing the bypass ports and instantly shifting capacity to 100%. Take advantage of "shift on the fly" stage changing (no stopping and starting required like other two-stage compressors).

Choose proven scroll performance. While Copeland Scroll UltraTech™ builds on established scroll technology, it is still a scroll at heart, which means it operates with fewer moving parts, no volumetric efficiency drop-off or compression leakage. The result is unsurpassed reliability and virtually silent operation for both indoor and outdoor applications.

Other New Features

- Stylish two-tone look with textured black powder coat paint and stainless steel front access panels.
- Liftout handles for front access panels.
- Corrosion and stain resistant stainless steel drain pan with extra slope designed in.
- Factory mounted filter drier for trouble free reliability.
- Easy access low profile horizontal control box.
- Double isolated compressor for quiet and vibration free operation.
- Foil faced insulation in air handling compartment to allow easy cleaning and prevent microfiber introduction into the air stream.
- Open Service-Friendly Cabinet (i.e, all components in compressor section can be serviced from the front).

Tranquility® 27 Design Features

The Tranquility® 27 Series has abundant features and ultra high efficiency.

Application Flexibility

- Five Capacities 026, 038, 049, 064, and 072.
- Extended range operation (20-120°F EWT) and flow rates as low as 1.5 gpm per ton.
- Two-Stage upflow, downflow, and horizontal right or left return.
- Internally trapped condensate drain.
- Variable speed ECM fan motor adapts to various duct systems.
- Internal electric heat unit (optional) designed for easy field installation.
- Circuit breaker protected loop and hot water generator pumps.
- Field selectable low-temperature protection setting for GWHP or GLHP.
- Standard pre-installed 2" filter frame with 2" high performance MERV 11 pleated air filter.*

Operating Efficiencies

- EarthPure® HFC-410A zero ozone depletion refrigerant.
- Highest efficiencies in AHRI/ISO/ASHRAE/ANSI 13256-1 ratings for heating COP's, cooling EER's with low water flow rates.
- 27 EER/4.6 COP.
- Two-Stage operation for ultra high efficiencies and unsurpassed comfort.
- Optional hot water generator with internal pump generates hot water at considerable savings.
- Rugged and highly efficient next generation Copeland UltraTech™ scroll compressors provide ultra high efficiencies and full capacity with reduced cycling losses.
- Oversized coaxial tube water-to-refrigerant heat exchangers operate at low liquid pressure drop. Convoluted copper (and optional cupro-nickel) water tube functions efficiently at low-flow rates and provides low-temperature-damage resistance.
- Oversized tin plated, rifled tube/lanced aluminum fin, air to refrigerant heat exchangers provide high efficiency at low face velocity.
- Large low RPM blowers with variable speed fan motors provide quiet, efficient air movement with high static capability.
- Exceeds federal requirements for 30% tax credit on installation costs.
- Exceeds ASHRAE 90.1 and Energy Star 3.0 efficiencies.

Service & Installation Advantages

- Removable panels - 3 for compressor 2 for air handling compartment.
- Low profile control box grants easy access to all internal components.
- Factory installed liquid line filter/drier.
- Brass swivel-type water connections for quick connection and elimination of wrenches or sealants during installation.
- Bi-directional thermal expansion valve.
- CXM control features status lights with memory for easy diagnostics.
- Circuit breaker protected 75VA control transformer.
- ECM control board features thermostat signal diagnostic LEDs, airflow display LED (100 CFM per flash), and simplified CFM selection.
- Insulated divider and separate air handling/compressor compartments permit service testing without air bypass.
- Fan motors have quick attach wiring harness for fast removal.
- Internal dropout blower for easy servicing.
- High and low pressure service ports on refrigerant circuit.
- Accurate refrigerant sensing low-temperature protection.
- Solid state CXM digital compressor control features: Anti-short cycle, high & low pressure, loss of charge protection, LED fault, and status indication with memory for easy diagnostics.
- Intelligent fault retry -Condensate overflow protection.
- Air coil low temperature cut-out using high accuracy thermistor.
- 24vac accessory relays.
- Exclusive UPS (Unit Performance Sentinel) feature provides early warning of inefficient operating conditions before unit shutdown actually occurs reducing the need for emergency service work, thus letting you fix problems in the early stages. Fault types are not only indicated at the control, but are stored in memory after a user reset for future service use. Fault types can be displayed at the thermostat if equipped with fault LED or display.
- Electronic fan control module (units with ECM fan motor): Independent Heating and Cooling CFM selection, CFM display LED, Input status LEDs, and Dehumidification mode.

Factory Quality & Industry Certifications

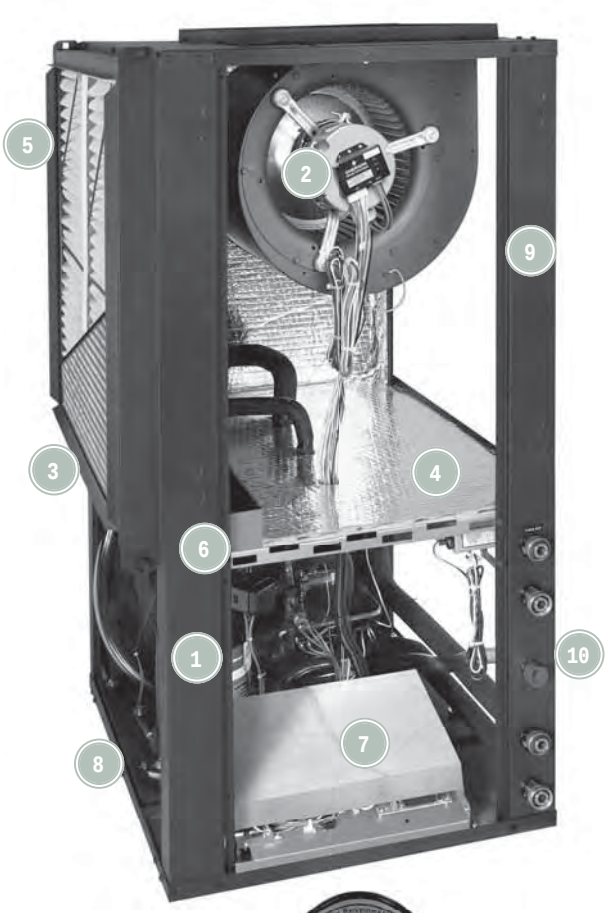
- All units are built on our Integrated Process Control Assembly System (IPCS). The IPCS is a unique state-of-the-art manufacturing system that is designed to assure quality of the highest standards of any manufacturer in the water-source industry. Our IPCS system:
  - Verifies that the correct components are being assembled.
  - Automatically performs special leak tests on all joints.
  - Conducts pressure tests.
  - Performs highly detailed run test unparalleled in the HVAC industry.
  - Automatically disables packaging for a "failed" unit.
- All units are water run-tested in all modes to insure efficiency and reliability.
- Heavy gauge galvanized steel cabinets are epoxy powder coated for durable and long-lasting finish.
- All refrigerant brazing is done in a nitrogen atmosphere.
- All units are deep evacuated to less than 100 microns prior to refrigerant charging.
- All joints are both helium and halogen leak tested to insure annual leak rate of less than 1/4 ounce.
- Coaxial heat exchanger, refrigerant suction lines and all water lines are fully insulated to eliminate condensation problems in low temperature applications.
- Noise reduction features include: dual level compressor isolation; insulated compressor compartment; interior cabinet insulation using 1/2" coated glass fiber and variable speed fan.
- Safety features include: high pressure and loss of charge to protect the compressor, condensate overflow protection, low-temperature protection sensors to safeguard the coaxial heat exchanger and air coil, hot water high-limit, and low compressor discharge temperature switch provided to shut down the hot

Tranquility® 27 Design Features

water generator when conditions dictate. Fault lockout enables emergency heat and prevents compressor operation until thermostat or circuit breaker has been reset.
- Standard 10-year limited warranty on all parts with 5-year labor allowance; Optional additional extended 5-year limited labor allowance available.
- AHRI/ASHRAE/ANSI/ISO 13256-1 certified.
- ETL listed.
- US EPA "Energy Star" compliant.
- ISO 9001:2000 Certified.

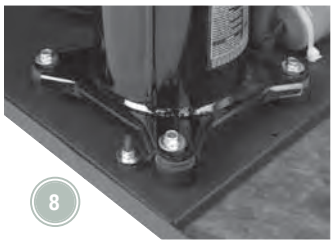
Simplified Controls
- CXM solid state control module.
- 'CFM' LED displays airflow.
- Dehumidification mode for higher latent cooling.

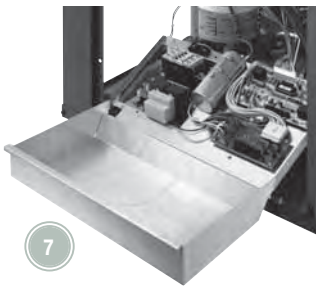
Options & Accessories
- Hot water generator with internally mounted pump.
- Cupro-nickel coaxial heat exchanger.
- Electronic thermostat.
- Closed loop flow controller.
- Electronic auto-changeover thermostat with 3-stage heat, 2-stage cool and indicator LEDs.
- Hose kits.
- ClimaDry® Whole House Dehumidification.
- Additional extended 5-year limited labor allowance.
- Internal electric heat for easy field installation.



Features EarthPure® HFC-410A Zero Ozone Depletion Refrigerant

1. Copeland™ Ultra-Tech™ Two-Stage Unloading Scroll Compressor
2. Variable speed ECM fan motor adapts to various duct systems
3. Tin Plated Air Coil- Long Life, Easy Cleaning and Better Condensate Runoff
4. Foil Faced Insulation in the Blower Section, Fully Insulated Compressor Section
5. Two Inch Filter Frame With High Performance MERV 11 Pleated Air Filter*
6. Stainless Steel Drain Pan for Long Life
7. Unit Performance Sentinel: Automatic Alert System Lets You Know If The System Is Not Running At Peak Performance**
8. Dual Level Compressor Isolation for Ultra Quiet Operation
9. Five Easy, Lift-out Service Access Panels With Stainless Steel Front Panels
10. Internally Trapped Condensate Piping

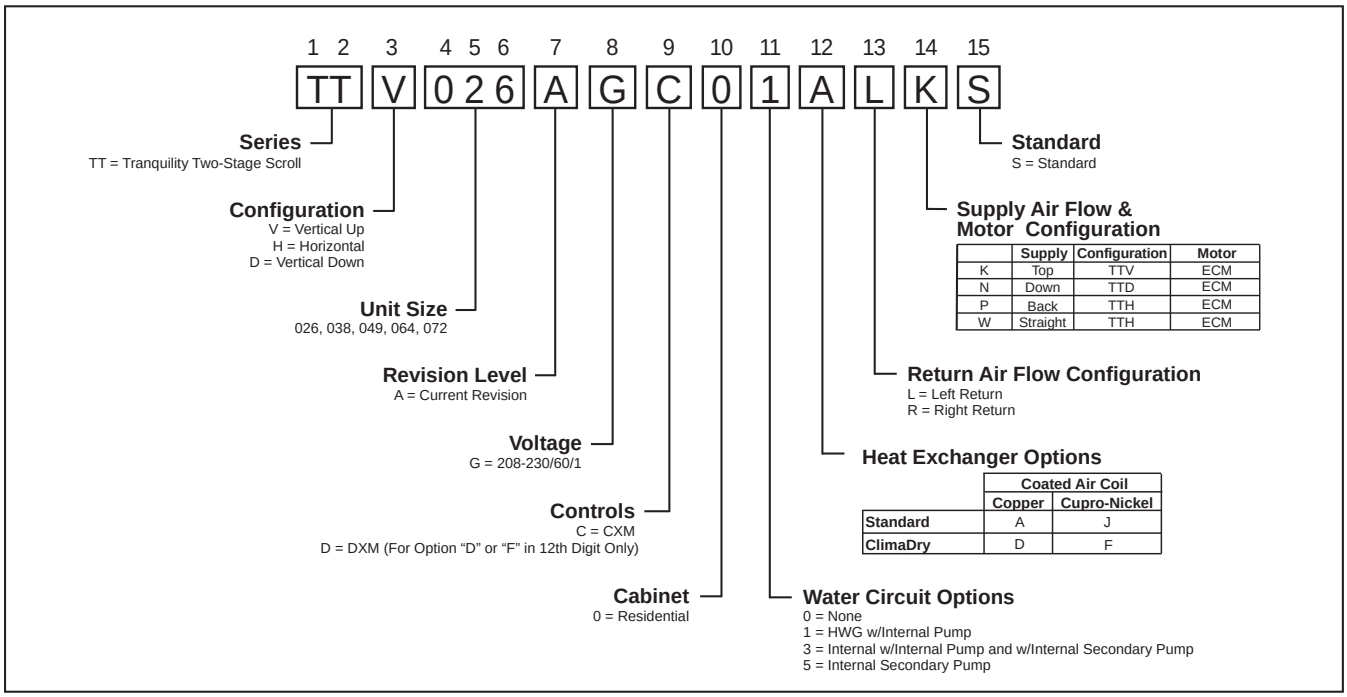




* MERV= Minimum Efficiency Reporting Value as specified by ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineers) standard 52.2.

** When installed with a ClimateMaster Residential Thermostat.

Unit Model Key



About AHRI/ISO/ASHRAE 13256-1

About AHRI/ISO/ASHRAE 13256-1

AHRI/ASHRAE/ISO 13256-1 (Air-Conditioning and Refrigeration Institute/American Society of Heating, Refrigerating and Air Conditioning Engineers/International Standards Organization) is a certification standard for water-source heat pumps used in the following applications:

- WLHP (Water Loop Heat Pump – Boiler/Tower)
- GWHP (Ground Water Heat Pump – Open Loop)
- GLHP (Ground Loop Heat Pump – Geothermal)

The directory at http://www.ahrinet.org/ is constantly being updated and immediately available on the Internet. All ratings are submitted by the manufacturer for certification, and must be approved by AHRI. Therefore, there is a significant difference between AHRI "certified" and AHRI "rated." Thirty percent of a manufacturer's basic models must be tested each year. AHRI selects models at random from stock for testing on the basis of its evaluation of a participant's certification data.

Units that fail one or more certified test (90% of declared performance or lower) may be declared defective. If the initial failure is a performance test, the manufacturer must obsolete all units within the same basic model group or elect to have a second sample tested. If the second unit fails a performance test, it must be obsoleted, together with all units within the same basic model group. ClimateMaster takes certification seriously. We were recently awarded a certificate for consecutive years of no AHRI failures.

Temperatures used in AHRI certification standards are S.I. (Système International – metric) based. For example, typical catalog data for cooling is shown at 80°F DB/67°F WB [26.7°C DB/19.4°C] entering air temperature, but the AHRI standard for cooling is 80.6°F DB/66.2°F WB [27°C DB/19°C], since it is based upon whole numbers in degrees Celsius. Water and air temperatures for the standard are shown below.

Test Condition Comparison Table

	WLHP	GWHP	GLHP
Cooling			
Entering Air Temperature - DB/WB °F [°C]	80.6/66.2 [27/19]	80.6/66.2 [27/19]	80.6/66.2 [27/19]
Entering Water Temperature - °F [°C]	86 [30]	59 [15]	77 [25]
Fluid Flow Rate	*	*	*
Heating			
Entering Air Temperature - DB/WB °F [°C]	68 [20]	68 [20]	68 [20]
Entering Water Temperature - °F [°C]	68 [20]	50 [10]	32 [0]
Fluid Flow Rate	*	*	*

*Flow rate is specified by the manufacturer

Data certified by AHRI include heating/cooling capacities, EER (Energy Efficiency Ratio – Btuh per Watt) and COP (Btuh per Btuh) at the various conditions shown above. Pump power correction is calculated to adjust efficiencies for pumping Watts. Within each model, only one water flow rate is specified for all three groups, and pumping Watts are calculated using the formula below. This additional power is added onto the existing power consumption.

- Pump power correction = (gpm x 0.0631) x (Press Drop x 2990)/300

Fan power is corrected to zero external static pressure using the equation below. The nominal airflow is rated at a specific external static pressure. This effectively reduces the power consumption of the unit and increases cooling capacity but decreases heating capacity.

- Fan Power Correction = (cfm x 0.472) x (esp x 249)/300

Capacities and efficiencies are calculated using the following equations:

- ISO Cooling Capacity = Cooling Capacity (Btuh) + [Fan Power Correction (Watts) x 3.412]
- ISO EER Efficiency (Btuh/W) =
  ISO Cooling Capacity (Btuh)/[Power Input (Watts) – Fan Power Correction (Watts) + Pump Power Correction (Watts)]
- ISO Heating Capacity = Heating Capacity (Btuh) – [Fan Power Correction (Watts) x 3.412]
- ISO COP Efficiency (Btuh/Btuh) =
  ISO Heating Capacity (Btuh) x 3.412/[Power Input (Watts) - Fan Power Correction (Watts) + Pump Power Correction (Watts)]

AHRI/ISO/ASHRAE/ANSI 13256-1 Performance

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

Model	Capacity Modulation	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 Full Load 77°F Part Load 68°F		Heating Full Load 32°F Part Load 41°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
TT026	Full	25,300	15.9	30,800	5.3	28,900	24.5	25,700	4.8	26,600	18.5	19,800	4.0
	Part	19,400	18.3	22,400	6.1	22,200	30.8	18,600	5.1	21,300	26.0	16,500	4.6
TT038	Full	36,200	15.6	44,800	5.3	41,200	23.0	36,700	4.7	38,200	18.2	29,000	4.0
	Part	26,200	18.5	30,800	6.3	30,200	31.5	24,800	5.1	28,900	27.0	22,100	4.5
TT049	Full	48,400	15.7	59,900	5.2	54,600	22.5	48,300	4.7	50,600	17.9	37,500	4.0
	Part	36,100	18.0	44,300	6.2	40,700	28.7	35,400	5.1	39,600	24.9	31,200	4.6
TT064	Full	61,500	15.0	72,300	5.0	68,600	22.0	59,600	4.4	64,800	17.5	48,000	3.9
	Part	44,900	17.6	51,100	5.7	51,900	29.7	41,800	4.7	49,800	25.3	37,500	4.3
TT072	Full	68,700	14.2	88,600	4.9	77,100	19.9	70,200	4.3	71,600	16.2	54,100	3.6
	Part	52,800	16.0	65,200	5.1	59,800	24.5	51,700	4.3	57,700	21.4	45,400	3.9

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
Ground Loop Heat Pump ratings based on 15% methanol antifreeze solution
All ratings based upon operation at lower voltage of dual voltage rated models

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

Model	Capacity Modulation	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 Full Load 25°C Part Load 20°C		Heating Full Load 0°C Part Load 5°C	
		Capacity Watts	EER W/W	Capacity Watts	COP	Capacity Watts	EER W/W	Capacity Watts	COP	Capacity Watts	EER W/W	Capacity Watts	COP
TT026	Full	7,415	4.7	9,027	5.3	8,470	7.2	7,532	4.8	7,796	5.4	5,803	4.0
	Part	5,686	5.4	6,565	6.1	6,506	9.0	5,451	5.1	6,243	7.6	4,836	4.6
TT038	Full	10,610	4.6	13,130	5.3	12,075	6.7	10,756	4.7	11,196	5.3	8,499	4.0
	Part	7,679	5.4	9,027	6.3	8,851	9.2	7,268	5.1	8,470	7.9	6,477	4.5
TT049	Full	14,185	4.6	17,556	5.2	16,002	6.6	14,156	4.7	14,830	5.2	10,991	4.0
	Part	10,580	5.3	12,984	6.2	11,928	8.4	10,375	5.1	11,606	7.3	9,144	4.6
TT064	Full	18,025	4.4	21,190	5.0	20,106	6.4	17,468	4.4	18,992	5.1	14,068	3.9
	Part	13,159	5.2	14,977	5.7	15,211	8.7	12,251	4.7	14,596	7.4	10,991	4.3
TT072	Full	20,135	4.2	25,967	4.9	22,597	5.8	20,574	4.3	20,985	4.7	15,856	3.6
	Part	15,475	4.7	19,109	5.1	17,526	7.2	15,152	4.3	16,911	6.3	13,306	3.9

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
Ground Loop Heat Pump ratings based on 15% methanol antifreeze solution
All ratings based upon operation at lower voltage of dual voltage rated models

Reference Calculations & Legend

Heating

$$LWT = EWT - \frac{HE}{GPM \times 500}$$

$$LAT = EAT + \frac{HC}{CFM \times 1.08}$$

Cooling

$$LWT = EWT + \frac{HR}{GPM \times 500}$$

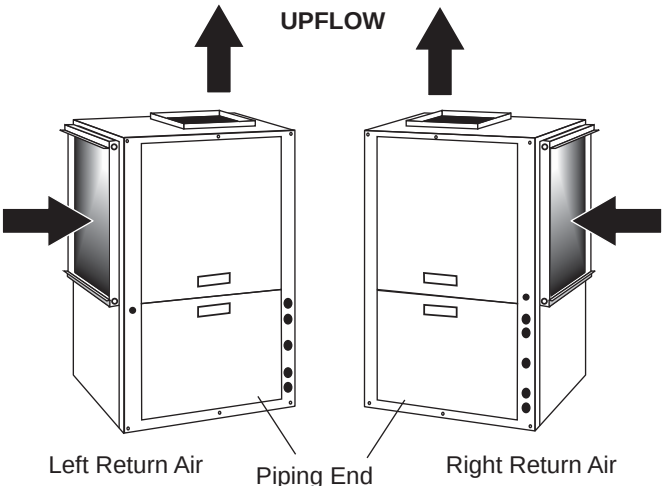
$$LAT\ (DB) = EAT\ (DB) - \frac{SC}{CFM \times 1.08}$$

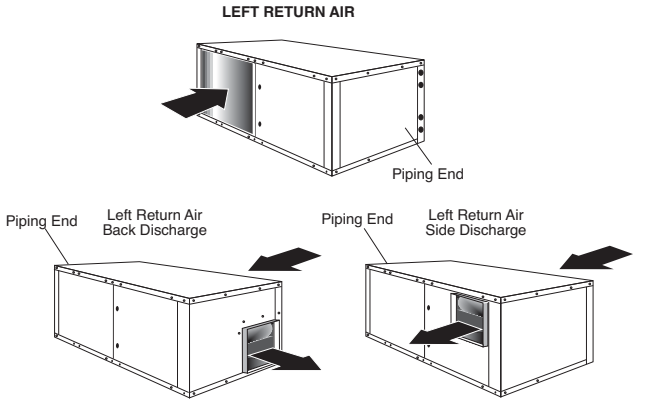
$$LC = TC - SC$$

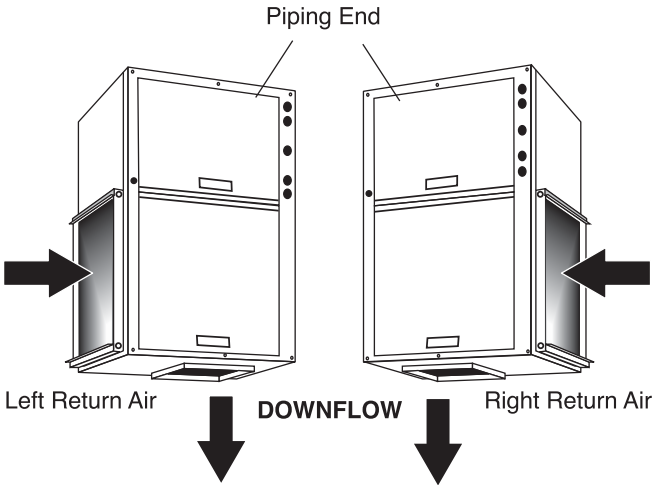
$$S/T = \frac{SC}{TC}$$

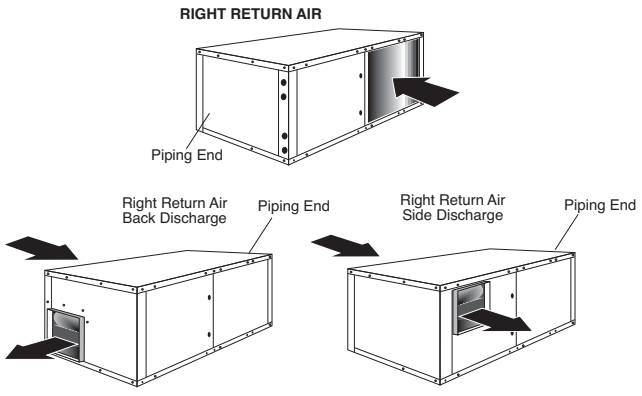
Hot Water Generator capacities (HWC) are based on potable water flow rate of 0.4 gpm per nominal equipment ton and 90°F entering potable water temperature.

CFM	=	airflow, cubic feet/minute	HE	=	total heat of extraction, Mbtuh
EWT	=	entering water temperature, ˚F	HWC	=	Hot Water Generator (desuperheater) capacity, Mbtuh
GPM	=	water flow in US gallons/minute	WPD	=	Water coil pressure drop (psi & ft hd)
EAT	=	entering air temperature, Fahrenheit (dry bulb/wet bulb)	EER	=	Energy Efficiency Ratio = BTU output/Watt input
HC	=	air heating capacity, Mbtuh	COP	=	Coefficient of Performance = BTU output/BTU input
TC	=	total cooling capacity, Mbtuh	LWT	=	leaving water temperature, °F
SC	=	sensible cooling capacity, Mbtuh	LAT	=	leaving air temperature, °F
KW	=	total power unit input, KiloWatts	LC	=	latent cooling capacity, Mbtuh
HR	=	total heat of rejection, Mbtuh	S/T	=	sensible to total cooling ratio









Full Load Correction Factors

Air Flow Correction Table

Airflow	Cooling				Heating		
% of Rated	Total Capacity	Sensible Capacity	Power	Heat of Rejection	Heating Capacity	Power	Heat of Extraction
60%	0.925	0.788	0.913	0.922	0.946	1.153	0.896
69%	0.946	0.829	0.926	0.942	0.959	1.107	0.924
75%	0.960	0.861	0.937	0.955	0.969	1.078	0.942
81%	0.972	0.895	0.950	0.968	0.977	1.053	0.959
88%	0.983	0.930	0.965	0.979	0.985	1.032	0.974
94%	0.992	0.965	0.982	0.990	0.993	1.014	0.988
100%	1.000	1.000	1.000	1.000	1.000	1.000	1.000
106%	1.007	1.033	1.020	1.009	1.006	0.989	1.011
113%	1.012	1.064	1.042	1.018	1.012	0.982	1.019
119%	1.016	1.092	1.066	1.025	1.018	0.979	1.027
125%	1.018	1.116	1.091	1.032	1.022	0.977	1.033
130%	1.019	1.132	1.112	1.037	1.026	0.975	1.038

Entering Air Correction Table

Heating			
Entering Air DB°F	Heating Capacity	Power	Heat of Extraction
40	1.052	0.779	1.120
45	1.043	0.808	1.102
50	1.035	0.841	1.084
55	1.027	0.877	1.065
60	1.019	0.915	1.045
65	1.010	0.957	1.023
68	1.004	0.982	1.010
70	1.000	1.000	1.000
75	0.989	1.045	0.974
80	0.976	1.093	0.946

* = Sensible capacity equals total capacity
AHRI/ISO/ASHRAE 13256-1 uses entering air conditions of Cooling - 80.6°F DB/66.2°F WB, and Heating - 68°F DB/59°F WB entering air temperature

Cooling													
Entering Air WB°F	Total Capacity	Sensible Cooling Capacity Multiplier - Entering DB °F										Power	Heat of Rejection
		60	65	70	75	80	80.6	85	90	95	100		
45	0.832	1.346	1.461	1.603	*	*	*	*	*	*	*	0.946	0.853
50	0.850	1.004	1.174	1.357	*	*	*	*	*	*	*	0.953	0.870
55	0.880	0.694	0.902	1.115	1.331	*	*	*	*	*	*	0.964	0.896
60	0.922		0.646	0.875	1.103	1.329	1.356	*	*	*	*	0.977	0.932
65	0.975			0.639	0.869	1.096	1.123	1.320	*	*	*	0.993	0.979
66.2	0.990			0.582	0.812	1.039	1.066	1.262	1.482	*	*	0.997	0.991
67	1.000			0.545	0.774	1.000	1.027	1.223	1.444	*	*	1.000	1.000
70	1.040				0.630	0.853	0.880	1.075	1.297	1.517	*	1.011	1.035
75	1.117					0.601	0.627	0.821	1.046	1.275	1.510	1.033	1.101

Part Load Correction Factors

Air Flow Correction Table

Airflow	Cooling				Heating		
% of Rated	Total Capacity	Sensible Capacity	Power	Heat of Rejection	Heating Capacity	Power	Heat of Extraction
60%	0.920	0.781	0.959	0.927	0.946	1.241	0.881
69%	0.942	0.832	0.964	0.946	0.960	1.163	0.915
75%	0.956	0.867	0.696	0.959	0.969	1.115	0.937
81%	0.969	0.901	0.975	0.970	0.978	1.076	0.956
88%	0.981	0.934	0.982	0.981	0.986	1.043	0.973
94%	0.991	0.967	0.990	0.991	0.993	1.018	0.988
100%	1.000	1.000	1.000	1.000	1.000	1.000	1.000
106%	1.007	1.033	1.011	1.008	1.006	0.990	1.010
113%	1.013	1.065	1.023	1.015	1.012	0.986	1.017
119%	1.018	1.098	1.036	1.021	1.017	0.983	1.024
125%	1.021	1.131	1.051	1.026	1.021	0.981	1.030
130%	1.023	1.159	1.063	1.030	1.024	0.979	1.034

Entering Air Correction Table

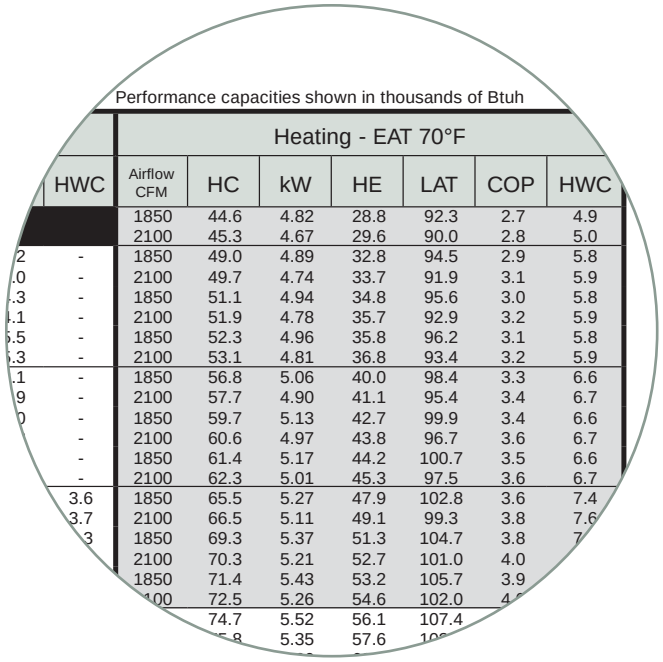
Heating			
Entering Air DB°F	Heating Capacity	Power	Heat of Extraction
40	1.084	0.732	1.161
45	1.073	0.764	1.140
50	1.060	0.802	1.117
55	1.046	0.846	1.090
60	1.031	0.893	1.061
65	1.016	0.945	1.031
68	1.006	0.978	1.013
70	1.000	1.000	1.000
75	0.984	1.058	0.968
80	0.968	1.117	0.936

* = Sensible capacity equals total capacity
AHRI/ISO/ASHRAE 13256-1 uses entering air conditions of Cooling - 80.6°F DB/66.2°F WB, and Heating - 68°F DB/59°F WB entering air temperature

Cooling													
Entering Air WB°F	Total Capacity	Sensible Cooling Capacity Multiplier - Entering DB °F										Power	Heat of Rejection
		60	65	70	75	80	80.6	85	90	95	100		
45	0.876	1.286	1.302	1.389	*	*	*	*	*	*	*	0.981	0.895
50	0.883	1.002	1.099	1.241	*	*	*	*	*	*	*	0.985	0.901
55	0.903	0.706	0.871	1.060	1.271	*	*	*	*	*	*	0.989	0.918
60	0.935		0.617	0.844	1.079	1.319	1.349	*	*	*	*	0.993	0.945
65	0.979			0.595	0.849	1.096	1.128	1.342	*	*	*	0.998	0.982
66.2	0.991			0.531	0.789	1.040	1.070	1.284	1.522	*	*	0.999	0.993
67	1.000			0.486	0.747	1.000	1.030	1.245	1.481	*	*	1.000	1.000
70	1.035				0.583	0.842	0.873	1.090	1.327	1.552	*	1.003	1.030
75	1.105					0.552	0.584	0.811	1.057	1.290	1.510	1.008	1.088

Performance Data Selection Notes

For operation in the shaded area when water is used in lieu of an anti-freeze solution, the LWT (Leaving Water Temperature) must be calculated. Flow must be maintained to a level such that the LWT is maintained above 40°F [4.4*C] when the JW3 jumper is not clipped (see example below). Otherwise, appropriate levels of a proper anti-freeze should be used in systems with leaving water temperatures of 40°F or below and the JW3 jumper should be clipped. This is due to the potential of the refrigerant temperature being as low as 32°F [0°C] with 40°F [4.4°C] LWT, which may lead to a nuisance cutout due to the activation of the Low Temperature Protection. JW3 should never be clipped for standard range equipment or systems without antifreeze.



Performance capacities shown in thousands of Btuh

		Heating - EAT 70°F					
	HWC	Airflow CFM	HC	kW	HE	LAT	COP	HWC
		1850	44.6	4.82	28.8	92.3	2.7	4.9
		2100	45.3	4.67	29.6	90.0	2.8	5.0
2	-	1850	49.0	4.89	32.8	94.5	2.9	5.8
.0	-	2100	49.7	4.74	33.7	91.9	3.1	5.9
.3	-	1850	51.1	4.94	34.8	95.6	3.0	5.8
4.1	-	2100	51.9	4.78	35.7	92.9	3.2	5.9
5.5	-	1850	52.3	4.96	35.8	96.2	3.1	5.8
5.3	-	2100	53.1	4.81	36.8	93.4	3.2	5.9
.1	-	1850	56.8	5.06	40.0	98.4	3.3	6.6
9	-	2100	57.7	4.90	41.1	95.4	3.4	6.7
0	-	1850	59.7	5.13	42.7	99.9	3.4	6.6
	-	2100	60.6	4.97	43.8	96.7	3.6	6.7
	-	1850	61.4	5.17	44.2	100.7	3.5	6.6
	-	2100	62.3	5.01	45.3	97.5	3.6	6.7
	3.6	1850	65.5	5.27	47.9	102.8	3.6	7.4
	3.7	2100	66.5	5.11	49.1	99.3	3.8	7.6
	3	1850	69.3	5.37	51.3	104.7	3.8	7
		2100	70.3	5.21	52.7	101.0	4.0	
		1850	71.4	5.43	53.2	105.7	3.9	
		100	72.5	5.26	54.6	102.0	4.0	
			74.7	5.52	56.1	107.4		
			5.8	5.35	57.6	10		

Example:

At 50°F EWT (Entering Water Temperature) and 1.5 gpm/ton, a 3 ton unit has a HE of 22,500 Btuh. To calculate LWT, rearrange the formula for HE as follows:

HE = TD x GPM x 500, where HE = Heat of Extraction (Btuh); TD = temperature difference (EWT - LWT) and GPM = U.S. Gallons per Minute.

TD = HE/(GPM x 500)

TD = 22,500/(4.5 x 500)

TD = 10°F

LWT = EWT - TD

LWT = 50 - 10 = 40°F

In this example, as long as the EWT does not fall below 50°F, the system will operate as designed. For EWTs below 50°F, higher flow rates will be required (open loop systems, for example, require at least 2 gpm/ton when EWT is below 50°F).

Antifreeze Correction Table

Antifreeze Type	Antifreeze %	Cooling			Heating		WPD Corr. Fct. EWT 30°F
		EWT 90°F			EWT 30°F		
		Total Cap	Sens Cap	Power	Htg Cap	Power	
Water	0	1.000	1.000	1.000	1.000	1.000	1.000
Propylene Glycol	5	0.995	0.995	1.003	0.989	0.997	1.070
	15	0.986	0.986	1.009	0.968	0.990	1.210
	25	0.978	0.978	1.014	0.947	0.983	1.360
Methanol	5	0.997	0.997	1.002	0.989	0.997	1.070
	15	0.990	0.990	1.007	0.968	0.990	1.160
	25	0.982	0.982	1.012	0.949	0.984	1.220
Ethanol	5	0.998	0.998	1.002	0.981	0.994	1.140
	15	0.994	0.994	1.005	0.944	0.983	1.300
	25	0.986	0.986	1.009	0.917	0.974	1.360
Ethylene Glycol	5	0.998	0.998	1.002	0.993	0.998	1.040
	15	0.994	0.994	1.004	0.980	0.994	1.120
	25	0.988	0.988	1.008	0.966	0.990	1.200

Performance Data — Tranquility® 27 Model 026 - Part Load

725 CFM Nominal (ISO Rated) Airflow Cooling, 825 CFM Nominal (ISO Rated) Airflow Heating

Performance capacities shown in thousands of Btuh

EWT °F	GPM	WPD		Cooling - EAT 80/67°F							Heating - EAT 70°F						
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	HW	Airflow CFM	HC	kW	HE	LAT	COP	HW
20	7.0	4.5	10.3	Operation not recommended							710	11.6	1.05	8.2	85.1	3.25	1.4
	7.0	4.5	10.3								825	11.7	1.02	8.4	83.2	3.38	1.5
30	3.5	1.2	2.8	620	22.2	14.0	0.58	24.1	38.3	0.5	710	13.6	1.09	10.1	87.8	3.66	1.6
	3.5	1.2	2.8	725	22.5	14.7	0.59	24.4	38.3	0.5	825	13.8	1.06	10.3	85.5	3.81	1.6
	5.8	2.9	6.6	620	22.4	14.0	0.57	24.3	39.2	0.4	710	14.2	1.09	10.7	88.5	3.81	1.6
	5.8	2.9	6.6	725	22.7	14.7	0.58	24.7	39.2	0.5	825	14.4	1.06	10.9	86.1	3.97	1.7
	7.0	4.1	9.4	620	22.5	14.0	0.56	24.4	39.8	0.4	710	14.4	1.09	10.9	88.8	3.86	1.7
	7.0	4.1	9.4	725	22.8	14.7	0.57	24.7	39.8	0.4	825	14.6	1.06	11.1	86.3	4.02	1.7
40	3.5	1.1	2.5	620	22.9	15.1	0.65	25.1	35.3	0.7	710	16.1	1.15	12.3	90.9	4.08	1.7
	3.5	1.1	2.5	725	23.3	15.8	0.66	25.5	35.3	0.7	825	16.2	1.12	12.6	88.2	4.25	1.7
	5.8	2.6	5.9	620	23.1	15.1	0.61	25.2	37.9	0.7	710	16.7	1.15	13.0	91.8	4.25	1.8
	5.8	2.6	5.9	725	23.4	15.9	0.62	25.5	37.9	0.7	825	16.9	1.12	13.3	89.0	4.42	1.8
	7.0	3.6	8.4	620	23.2	15.1	0.60	25.2	38.3	0.6	710	16.9	1.16	13.2	92.1	4.30	1.8
	7.0	3.6	8.4	725	23.5	15.9	0.61	25.6	38.3	0.6	825	17.1	1.12	13.5	89.2	4.47	1.8
50	3.5	1.0	2.3	620	22.7	15.4	0.74	25.2	30.7	1.1	710	18.3	1.18	14.5	93.9	4.56	1.8
	3.5	1.0	2.3	725	23.0	16.2	0.75	25.6	30.7	1.1	825	18.5	1.14	14.8	90.8	4.75	1.8
	5.8	2.4	5.6	620	22.9	15.5	0.69	25.3	33.4	1.0	710	19.1	1.18	15.2	94.8	4.73	1.9
	5.8	2.4	5.6	725	23.3	16.3	0.70	25.6	33.4	1.0	825	19.3	1.15	15.5	91.6	4.93	1.9
	7.0	3.4	7.9	620	23.0	15.5	0.67	25.3	34.1	0.9	710	19.3	1.18	15.4	95.1	4.78	1.9
	7.0	3.4	7.9	725	23.3	16.3	0.68	25.6	34.1	0.9	825	19.5	1.15	15.7	91.9	4.98	2.0
60	3.5	1.0	2.2	620	21.9	15.3	0.85	24.8	25.9	2.2	710	20.4	1.21	16.5	96.6	4.93	2.0
	3.5	1.0	2.2	725	22.2	16.1	0.86	25.1	25.9	2.2	825	20.6	1.18	16.8	93.2	5.13	2.0
	5.8	2.3	5.2	620	22.4	15.5	0.78	25.1	28.6	2.0	710	21.2	1.22	17.3	97.7	5.10	2.1
	5.8	2.3	5.2	725	22.7	16.3	0.80	25.4	28.6	2.0	825	21.5	1.18	17.6	94.1	5.31	2.1
	7.0	3.2	7.4	620	22.5	15.5	0.77	25.1	29.4	1.7	710	21.5	1.22	17.5	98.0	5.15	2.1
	7.0	3.2	7.4	725	22.9	16.3	0.78	25.5	29.4	1.8	825	21.7	1.19	17.8	94.3	5.36	2.2
70	3.5	0.9	2.1	620	20.7	14.8	0.97	24.0	21.4	1.9	710	22.4	1.23	18.4	99.2	5.35	2.2
	3.5	0.9	2.1	725	21.0	15.6	0.98	24.3	21.4	2.0	825	22.7	1.19	18.8	95.4	5.57	2.2
	5.8	2.1	4.9	620	21.4	15.1	0.90	24.4	23.8	1.8	710	23.3	1.24	19.3	100.4	5.52	2.2
	5.8	2.1	4.9	725	21.7	15.9	0.91	24.8	23.8	1.8	825	23.5	1.20	19.6	96.4	5.75	2.3
	7.0	3.0	7.0	620	21.6	15.2	0.88	24.6	24.5	1.6	710	23.5	1.24	19.5	100.7	5.57	2.3
	7.0	3.0	7.0	725	21.9	16.0	0.89	24.9	24.5	1.6	825	23.8	1.20	19.9	96.7	5.80	2.4
80	3.5	0.8	1.9	620	19.3	14.2	1.10	23.1	17.5	2.5	710	24.4	1.25	20.3	101.8	5.73	2.3
	3.5	0.8	1.9	725	19.6	14.9	1.12	23.4	17.5	2.5	825	24.6	1.21	20.7	97.7	5.97	2.3
	5.8	2.0	4.6	620	20.1	14.5	1.03	23.6	19.5	2.3	710	25.3	1.26	21.2	103.0	5.90	2.4
	5.8	2.0	4.6	725	20.4	15.3	1.04	23.9	19.5	2.3	825	25.6	1.22	21.6	98.7	6.15	2.4
	7.0	2.8	6.5	620	20.3	14.6	1.01	23.7	20.1	2.1	710	25.6	1.26	21.5	103.4	5.95	2.5
	7.0	2.8	6.5	725	20.6	15.4	1.02	24.0	20.1	2.2	825	25.9	1.22	21.9	99.0	6.20	2.5
85	3.5	0.8	1.9	620	18.7	13.9	1.18	22.7	15.9	2.9	710	25.3	1.26	21.2	103.0	5.91	2.4
	3.5	0.8	1.9	725	18.9	14.6	1.19	23.0	15.9	3.0	825	25.6	1.22	21.7	98.7	6.15	2.4
	5.8	1.9	4.5	620	19.3	14.2	1.10	23.1	17.5	2.7	710	26.3	1.27	22.2	104.3	6.08	2.5
	5.8	1.9	4.5	725	19.6	14.9	1.12	23.4	17.5	2.8	825	26.6	1.23	22.6	99.9	6.33	2.5
	7.0	2.7	6.3	620	19.5	14.3	1.08	23.2	18.0	2.5	710	26.6	1.27	22.5	104.7	6.13	2.6
	7.0	2.7	6.3	725	19.8	15.0	1.10	23.6	18.0	2.6	825	26.9	1.24	22.9	100.2	6.38	2.6
90	3.5	0.8	1.8	620	18.0	13.7	1.25	22.3	14.4	3.3	710	26.3	1.27	22.2	104.3	6.08	2.5
	3.5	0.8	1.8	725	18.3	14.4	1.27	22.6	14.4	3.4	825	26.6	1.23	22.6	99.8	6.33	2.5
	5.8	1.9	4.4	620	18.6	13.8	1.18	22.6	15.8	3.1	710	27.3	1.28	23.1	105.6	6.25	2.5
	5.8	1.9	4.4	725	18.9	14.6	1.20	22.9	15.8	3.1	825	27.6	1.24	23.6	101.0	6.51	2.6
	7.0	2.7	6.2	620	18.8	13.9	1.16	22.7	16.3	2.8	710	27.6	1.28	23.4	106.0	6.30	2.6
	7.0	2.7	6.2	725	19.1	14.7	1.17	23.1	16.3	2.9	825	27.9	1.25	23.9	101.3	6.56	2.7
100	3.5	0.8	1.8	620	16.6	13.0	1.41	21.4	11.7	3.9	Operation not recommended						
	3.5	0.8	1.8	725	16.8	13.7	1.43	21.7	11.7	4.0							
	5.8	1.8	4.2	620	17.1	13.2	1.34	21.7	12.7	3.7							
	5.8	1.8	4.2	725	17.4	13.8	1.36	22.0	12.7	3.8							
	7.0	2.6	6.0	620	17.3	13.3	1.32	21.8	13.1	3.6							
	7.0	2.6	6.0	725	17.5	13.9	1.34	22.1	13.1	3.7							
110	3.5	0.7	1.7	620	15.5	12.7	1.59	20.9	9.7	5.0							
	3.5	0.7	1.7	725	15.7	13.4	1.61	21.2	9.7	5.1							
	5.8	1.7	4.0	620	15.8	12.7	1.53	21.0	10.3	4.8							
	5.8	1.7	4.0	725	16.0	13.3	1.55	21.3	10.3	4.9							
	7.0	2.5	5.7	620	16.0	12.7	1.50	21.1	10.6	4.6							
	7.0	2.5	5.7	725	16.2	13.4	1.52	21.4	10.6	4.7							
120	3.5	0.7	1.6	620	14.5	12.6	1.84	20.8	7.9	6.3							
	3.5	0.7	1.6	725	14.7	13.3	1.86	21.1	7.9	6.4							
	5.8	1.7	3.9	620	14.8	12.5	1.73	20.7	8.6	6.0							
	5.8	1.7	3.9	725	15.0	13.2	1.76	21.0	8.6	6.2							
	7.0	2.4	5.5	620	14.9	12.5	1.71	20.7	8.7	5.8							
	7.0	2.4	5.5	725	15.1	13.2	1.73	21.0	8.7	5.9							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Performance Data — Tranquility® 27 Model 026 - Full Load

850 CFM Nominal (ISO Rated) Airflow Cooling, 950 CFM Nominal (ISO Rated) Airflow Heating

Performance capacities shown in thousands of Btuh

EWT °F	GPM	WPD		Cooling - EAT 80/67°F							Heating - EAT 70°F						
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	HW	Airflow CFM	HC	kW	HE	LAT	COP	HW
20	8.0	5.6	12.9	Operation not recommended							820	15.0	1.47	10.2	86.9	3.00	1.7
	8.0	5.6	12.9								950	15.3	1.41	10.6	84.9	3.19	1.7
30	4.0	1.5	3.5	730	30.2	17.9	0.97	33.4	31.0	0.6	820	17.8	1.53	12.7	90.1	3.41	2.0
	4.0	1.5	3.5	850	30.9	19.6	1.02	34.3	30.4	0.6	950	18.1	1.46	13.2	87.7	3.63	2.0
	6.0	3.1	7.2	730	30.3	17.9	0.93	33.4	32.7	0.5	820	18.6	1.54	13.5	91.0	3.53	2.1
	6.0	3.1	7.2	850	31.1	19.6	0.97	34.4	32.1	0.6	950	19.0	1.48	14.0	88.5	3.76	2.1
	8.0	5.1	11.7	730	30.5	17.9	0.91	33.5	33.7	0.5	820	19.1	1.55	13.9	91.5	3.59	2.1
	8.0	5.1	11.7	850	31.2	19.6	0.95	34.5	33.1	0.5	950	19.4	1.49	14.4	88.9	3.82	2.2
40	4.0	1.4	3.1	730	29.9	18.2	1.07	33.5	28.1	1.0	820	21.2	1.61	15.9	94.0	3.88	2.3
	4.0	1.4	3.1	850	30.6	20.0	1.11	34.4	27.5	1.0	950	21.6	1.54	16.4	91.1	4.12	2.3
	6.0	2.8	6.5	730	30.2	18.3	1.01	33.6	29.8	0.9	820	22.2	1.63	16.7	95.0	3.99	2.4
	6.0	2.8	6.5	850	30.9	20.0	1.06	34.5	29.2	0.9	950	22.6	1.56	17.3	92.0	4.24	2.4
	8.0	4.6	10.5	730	30.3	18.3	0.99	33.6	30.7	0.8	820	22.7	1.64	17.2	95.6	4.05	2.5
	8.0	4.6	10.5	850	31.0	20.0	1.03	34.5	30.1	0.9	950	23.1	1.57	17.8	92.5	4.31	2.5
50	4.0	1.3	2.9	730	29.1	18.3	1.17	33.1	24.8	1.6	820	24.4	1.69	18.7	97.5	4.24	2.6
	4.0	1.3	2.9	850	29.8	20.0	1.23	34.0	24.3	1.6	950	24.9	1.62	19.4	94.2	4.51	2.7
	6.0	2.6	6.1	730	29.6	18.4	1.11	33.4	26.7	1.4	820	25.4	1.71	19.6	98.7	4.34	2.7
	6.0	2.6	6.1	850	30.3	20.1	1.16	34.3	26.1	1.5	950	25.9	1.64	20.3	95.2	4.62	2.8
	8.0	4.3	9.9	730	29.9	18.4	1.08	33.5	27.6	1.3	820	25.9	1.73	20.1	99.3	4.40	2.8
	8.0	4.3	9.9	850	30.6	20.2	1.13	34.4	27.0	1.3	950	26.4	1.66	20.8	95.7	4.68	2.9
60	4.0	1.2	2.8	730	28.0	17.9	1.30	32.4	21.6	2.2	820	27.2	1.77	21.3	100.8	4.52	2.9
	4.0	1.2	2.8	850	28.6	19.6	1.35	33.3	21.2	2.2	950	27.8	1.69	22.0	97.1	4.81	3.0
	6.0	2.5	5.7	730	28.7	18.1	1.23	32.8	23.4	2.0	820	28.3	1.8	22.2	101.9	4.62	3.1
	6.0	2.5	5.7	850	29.3	19.9	1.28	33.7	22.9	2.0	950	28.8	1.72	23.0	98.1	4.91	3.1
	8.0	4.0	9.3	730	29.0	18.2	1.19	33.0	24.3	1.7	820	28.8	1.81	22.7	102.6	4.66	3.2
	8.0	4.0	9.3	850	29.7	20.0	1.24	33.9	23.8	1.8	950	29.4	1.74	23.5	98.6	4.96	3.2
70	4.0	1.1	2.6	730	26.6	17.3	1.43	31.4	18.5	2.9	820	29.9	1.84	23.6	103.7	4.75	3.3
	4.0	1.1	2.6	850	27.2	19.0	1.50	32.3	18.2	3.0	950	30.5	1.77	24.4	99.7	5.05	3.3
	6.0	2.3	5.4	730	27.4	17.7	1.36	31.9	20.2	2.6	820	31.0	1.88	24.6	105.0	4.83	3.4
	6.0	2.3	5.4	850	28.0	19.4	1.42	32.8	19.8	2.7	950	31.6	1.80	25.4	100.8	5.14	3.5
	8.0	3.8	8.7	730	27.7	17.8	1.32	32.2	21.0	2.3	820	31.5	1.90	25.1	105.6	4.87	3.5
	8.0	3.8	8.7	850	28.4	19.5	1.38	33.1	20.6	2.4	950	32.1	1.82	25.9	101.3	5.18	3.6
80	4.0	1.0	2.4	730	25.0	16.6	1.59	30.4	15.7	3.5	820	32.3	1.92	25.8	106.5	4.93	3.6
	4.0	1.0	2.4	850	25.6	18.3	1.66	31.2	15.4	3.6	950	33.0	1.84	26.7	102.1	5.24	3.6
	6.0	2.2	5.0	730	25.8	17.0	1.50	30.9	17.2	3.2	820	33.5	1.96	26.8	107.8	5.01	3.7
	6.0	2.2	5.0	850	26.4	18.7	1.57	31.8	16.8	3.3	950	34.1	1.88	27.7	103.2	5.32	3.8
	8.0	3.5	8.1	730	26.3	17.2	1.46	31.2	17.9	3.0	820	34.0	1.98	27.3	108.4	5.04	3.9
	8.0	3.5	8.1	850	26.9	18.9	1.53	32.1	17.6	3.0	950	34.7	1.90	28.2	103.8	5.36	3.9
85	4.0	1.0	2.4	730	24.2	16.3	1.68	29.9	14.4	3.9	820	33.5	1.96	26.8	107.9	5.01	3.7
	4.0	1.0	2.4	850	24.7	17.8	1.75	30.7	14.1	4.0	950	34.2	1.88	27.8	103.3	5.33	3.8
	6.0	2.1	4.9	730	25.0	16.7	1.59	30.4	15.7	3.6	820	34.7	2.00	27.8	109.1	5.08	3.9
	6.0	2.1	4.9	850	25.6	18.3	1.66	31.3	15.4	3.7	950	35.3	1.92	28.8	104.4	5.40	3.9
	8.0	3.4	7.9	730	25.4	16.8	1.55	30.7	16.5	3.3	820	35.2	2.02	28.4	109.8	5.12	4.0
	8.0	3.4	7.9	850	26.0	18.5	1.61	31.5	16.1	3.4	950	35.9	1.93	29.3	105.0	5.44	4.1
90	4.0	1.0	2.3	730	23.3	15.9	1.77	29.4	13.2	4.5	820	34.7	2.00	27.9	109.2	5.09	3.9
	4.0	1.0	2.3	850	23.9	17.4	1.84	30.2	13.0	4.6	950	35.4	1.92	28.8	104.5	5.41	3.9
	6.0	2.1	4.8	730	24.2	16.3	1.67	29.9	14.4	4.1	820	35.9	2.04	28.9	110.5	5.16	4.0
	6.0	2.1	4.8	850	24.7	17.9	1.75	30.7	14.2	4.2	950	36.6	1.95	29.9	105.6	5.48	4.1
	8.0	3.4	7.8	730	24.6	16.5	1.63	30.2	15.1	3.8	820	36.5	2.06	29.4	111.2	5.19	4.2
	8.0	3.4	7.8	850	25.2	18.1	1.70	31.0	14.8	3.9	950	37.2	1.97	30.4	106.2	5.52	4.3
100	4.0	1.0	2.2	730	21.7	15.2	1.97	28.4	11.0	4.9	Operation not recommended						
	4.0	1.0	2.2	850	22.2	16.7	2.05	29.2	10.8	5.0							
	6.0	2.0	4.6	730	22.5	15.5	1.86	28.9	12.1	4.7							
	6.0	2.0	4.6	850	23.0	17.0	1.95	29.7	11.8	4.8							
	8.0	3.2	7.4	730	22.9	15.7	1.81	29.1	12.6	4.5							
	8.0	3.2	7.4	850	23.4	17.2	1.89	29.9	12.4	4.6							
110	4.0	0.9	2.1	730	20.1	14.6	2.19	27.7	9.2	5.8							
	4.0	0.9	2.1	850	20.6	16.0	2.29	28.4	9.0	6.0							
	6.0	1.9	4.4	730	20.9	14.8	2.08	28.0	10.0	5.6							
	6.0	1.9	4.4	850	21.3	16.3	2.17	28.8	9.8	5.8							
	8.0	3.1	7.2	730	21.2	15.0	2.03	28.2	10.5	5.4							
	8.0	3.1	7.2	850	21.7	16.4	2.11	29.0	10.3	5.5							
120	4.0	0.9	2.0	730	18.8	14.1	2.45	27.2	7.7	6.9							
	4.0	0.9	2.0	850	19.2	15.5	2.55	28.0	7.5	7.1							
	6.0	1.8	4.2	730	19.4	14.3	2.32	27.4	8.3	6.7							
	6.0	1.8	4.2	850	19.8	15.7	2.43	28.2	8.2	6.8							
	8.0	3.0	6.9	730	19.7	14.4	2.26	27.5	8.7	6.4							
	8.0	3.0	6.9	850	20.2	15.8	2.36	28.3	8.5	6.5							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Performance Data — Tranquility® 27 Model 038 - Part Load

1000 CFM Nominal (ISO Rated) Airflow Cooling, 1000 CFM Nominal (ISO Rated) Airflow Heating

Performance capacities shown in thousands of Btuh

EWT °F	GPM	WPD		Cooling - EAT 80/67°F							Heating - EAT 70°F						
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	HW	Airflow CFM	HC	kW	HE	LAT	COP	HW
20	8.0	4.7	10.9	Operation not recommended							860	17.5	1.60	12.4	88.9	3.21	1.9
	8.0	4.7	10.9								1000	17.7	1.55	12.6	86.4	3.34	1.9
30	4.0	1.2	2.8	860	30.4	19.2	0.79	33.0	38.3	0.5	860	19.3	1.61	14.1	90.8	3.52	2.1
	4.0	1.2	2.8	1000	30.8	20.2	0.80	33.5	38.3	0.5	1000	19.5	1.56	14.4	88.1	3.67	2.1
	6.0	2.6	6.1	860	30.7	19.2	0.75	33.2	40.9	0.5	860	20.0	1.61	14.8	91.5	3.64	2.2
	6.0	2.6	6.1	1000	31.1	20.2	0.76	33.6	40.9	0.5	1000	20.2	1.56	15.1	88.7	3.79	2.2
	8.0	4.5	10.4	860	30.9	19.3	0.73	33.3	42.2	0.4	860	20.4	1.61	15.2	91.9	3.70	2.3
	8.0	4.5	10.4	1000	31.3	20.3	0.74	33.8	42.2	0.5	1000	20.6	1.57	15.5	89.1	3.85	2.3
40	4.0	1.1	2.5	860	31.1	20.8	0.90	34.1	34.5	0.8	860	22.0	1.62	16.8	93.7	3.98	2.3
	4.0	1.1	2.5	1000	31.6	21.8	0.91	34.6	34.5	0.8	1000	22.3	1.57	17.1	90.6	4.15	2.3
	6.0	2.6	5.9	860	31.3	20.8	0.84	34.2	37.3	0.7	860	22.9	1.63	17.6	94.6	4.12	2.4
	6.0	2.6	5.9	1000	31.8	21.9	0.85	34.6	37.3	0.7	1000	23.1	1.58	18.0	91.4	4.30	2.4
	8.0	4.4	10.2	860	31.5	20.8	0.81	34.2	38.8	0.7	860	23.3	1.63	18.1	95.1	4.20	2.5
	8.0	4.4	10.2	1000	32.0	21.9	0.82	34.7	38.8	0.7	1000	23.6	1.58	18.4	91.9	4.37	2.5
50	4.0	1.0	2.2	860	30.9	21.4	1.04	34.4	29.8	1.2	860	24.9	1.64	19.6	96.8	4.45	2.4
	4.0	1.0	2.2	1000	31.3	22.5	1.05	34.8	29.8	1.2	1000	25.2	1.59	20.0	93.3	4.64	2.5
	6.0	2.5	5.7	860	31.2	21.6	0.96	34.4	32.6	1.1	860	25.9	1.64	20.6	97.9	4.62	2.5
	6.0	2.5	5.7	1000	31.7	22.7	0.97	34.9	32.6	1.1	1000	26.2	1.60	21.0	94.3	4.81	2.6
	8.0	4.2	9.7	860	31.4	21.6	0.92	34.5	34.1	1.0	860	26.5	1.65	21.1	98.5	4.70	2.6
	8.0	4.2	9.7	1000	31.8	22.7	0.93	35.0	34.1	1.0	1000	26.8	1.60	21.5	94.8	4.89	2.6
60	4.0	0.9	2.0	860	29.7	21.5	1.19	33.8	25.0	2.5	860	27.8	1.66	22.5	100.0	4.93	2.7
	4.0	0.9	2.0	1000	30.2	22.6	1.21	34.2	25.0	2.6	1000	28.1	1.61	22.9	96.1	5.13	2.7
	6.0	2.4	5.5	860	30.4	21.7	1.10	34.2	27.7	2.3	860	29.0	1.66	23.7	101.3	5.12	2.8
	6.0	2.4	5.5	1000	30.9	22.8	1.11	34.6	27.7	2.3	1000	29.4	1.62	24.1	97.2	5.33	2.8
	8.0	4.1	9.5	860	30.7	21.7	1.06	34.3	29.1	2.0	860	29.7	1.67	24.3	102.0	5.22	2.9
	8.0	4.1	9.5	1000	31.2	22.8	1.07	34.8	29.1	2.0	1000	30.0	1.62	24.8	97.8	5.44	2.9
70	4.0	0.8	1.8	860	28.2	20.9	1.37	32.8	20.6	2.2	860	30.9	1.68	25.4	103.2	5.40	2.9
	4.0	0.8	1.8	1000	28.6	22.0	1.39	33.3	20.6	2.3	1000	31.2	1.63	25.9	98.9	5.63	3.0
	6.0	2.3	5.3	860	29.1	21.3	1.27	33.4	23.0	2.0	860	32.3	1.68	26.8	104.8	5.62	3.1
	6.0	2.3	5.3	1000	29.5	22.4	1.28	33.8	23.0	2.1	1000	32.7	1.64	27.4	100.3	5.85	3.1
	8.0	4.0	9.2	860	29.5	21.4	1.22	33.6	24.3	1.8	860	33.1	1.69	27.6	105.6	5.74	3.2
	8.0	4.0	9.2	1000	29.9	22.5	1.23	34.1	24.3	1.8	1000	33.5	1.64	28.1	101.0	5.98	3.2
80	4.0	0.7	1.7	860	26.4	20.1	1.56	31.7	16.9	2.8	860	34.0	1.70	28.5	106.7	5.88	3.2
	4.0	0.7	1.7	1000	26.8	21.2	1.59	32.2	16.9	2.9	1000	34.4	1.65	29.1	101.9	6.13	3.2
	6.0	2.3	5.2	860	27.4	20.6	1.45	32.3	18.8	2.6	860	35.7	1.71	30.2	108.4	6.13	3.3
	6.0	2.3	5.2	1000	27.8	21.6	1.47	32.8	18.8	2.7	1000	36.1	1.66	30.7	103.4	6.38	3.3
	8.0	3.9	9.0	860	27.9	20.8	1.40	32.6	19.9	2.4	860	36.6	1.71	31.0	109.4	6.27	3.4
	8.0	3.9	9.0	1000	28.3	21.8	1.42	33.1	19.9	2.5	1000	37.0	1.66	31.7	104.3	6.53	3.4
85	4.0	0.7	1.6	860	25.5	19.7	1.67	31.2	15.3	3.4	860	35.7	1.71	30.1	108.4	6.13	3.3
	4.0	0.7	1.6	1000	25.9	20.8	1.70	31.7	15.3	3.5	1000	36.1	1.66	30.7	103.4	6.38	3.3
	6.0	2.2	5.1	860	26.5	20.2	1.56	31.8	17.0	3.1	860	37.5	1.72	31.9	110.3	6.39	3.4
	6.0	2.2	5.1	1000	26.9	21.2	1.58	32.2	17.0	3.2	1000	37.9	1.67	32.5	105.1	6.66	3.4
	8.0	3.8	8.8	860	27.0	20.4	1.50	32.1	17.9	2.9	860	38.5	1.73	32.8	111.4	6.54	3.5
	8.0	3.8	8.8	1000	27.4	21.4	1.53	32.5	17.9	3.0	1000	38.9	1.67	33.5	106.0	6.81	3.6
90	4.0	0.7	1.5	860	24.7	19.3	1.79	30.7	13.8	3.8	860	37.3	1.72	31.7	110.2	6.37	3.4
	4.0	0.7	1.5	1000	25.0	20.3	1.81	31.2	13.8	3.9	1000	37.7	1.67	32.3	104.9	6.63	3.4
	6.0	2.1	4.9	860	25.6	19.7	1.67	31.2	15.3	3.6	860	39.2	1.73	33.6	112.2	6.65	3.5
	6.0	2.1	4.9	1000	25.9	20.8	1.69	31.7	15.3	3.6	1000	39.7	1.68	34.2	106.7	6.92	3.5
	8.0	3.7	8.5	860	26.1	20.0	1.61	31.5	16.2	3.3	860	40.3	1.74	34.6	113.4	6.80	3.6
	8.0	3.7	8.5	1000	26.4	21.0	1.63	32.0	16.2	3.4	1000	40.8	1.69	35.3	107.7	7.08	3.7
100	4.0	0.6	1.4	860	23.1	18.8	2.03	30.0	11.4	4.5	Operation not recommended						
	4.0	0.6	1.4	1000	23.4	19.7	2.06	30.4	11.4	4.6							
	6.0	2.1	4.8	860	23.8	19.0	1.90	30.3	12.5	4.4							
	6.0	2.1	4.8	1000	24.2	20.0	1.93	30.8	12.5	4.4							
	8.0	3.6	8.3	860	24.3	19.2	1.84	30.5	13.2	4.2							
	8.0	3.6	8.3	1000	24.6	20.2	1.87	31.0	13.2	4.3							
110	4.0	0.6	1.3	860	21.9	18.6	2.30	29.7	9.5	5.8							
	4.0	0.6	1.3	1000	22.2	19.6	2.34	30.2	9.5	5.9							
	6.0	2.0	4.6	860	22.4	18.6	2.16	29.8	10.4	5.6							
	6.0	2.0	4.6	1000	22.7	19.6	2.19	30.2	10.4	5.7							
	8.0	3.4	7.9	860	22.7	18.7	2.10	29.9	10.8	5.4							
	8.0	3.4	7.9	1000	23.0	19.6	2.13	30.3	10.8	5.5							
120	4.0	0.5	1.2	860	21.0	18.2	2.58	29.9	8.2	7.3							
	4.0	0.5	1.2	1000	21.3	19.2	2.61	30.3	8.2	7.5							
	6.0	1.9	4.5	860	21.5	18.6	2.45	29.9	8.8	7.0							
	6.0	1.9	4.5	1000	21.8	19.6	2.49	30.3	8.8	7.2							
	8.0	3.3	7.7	860	21.7	18.7	2.41	29.9	9.0	6.8							
	8.0	3.3	7.7	1000	22.0	19.7	2.45	30.3	9.0	6.9							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Performance Data — Tranquility® 27 Model 038 - Full Load

1250 CFM Nominal (ISO Rated) Airflow Cooling, 1250 CFM Nominal (ISO Rated) Airflow Heating

Performance capacities shown in thousands of Btuh

EWT °F	GPM	WPD		Cooling - EAT 80/67°F							Heating - EAT 70°F						
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	HW	Airflow CFM	HC	kW	HE	LAT	COP	HW
20	9.0	5.9	13.7	Operation not recommended							1080	25.7	2.28	18.2	92.0	3.30	2.2
	9.0	5.9	13.7								1250	26.2	2.18	18.8	89.4	3.51	2.3
30	4.5	1.7	3.9	1080	43.1	27.4	1.55	48.3	27.9	0.6	1080	27.9	2.32	20.2	93.9	3.52	2.7
	4.5	1.7	3.9	1250	44.1	30.1	1.61	49.6	27.3	0.6	1250	28.4	2.22	20.9	91.1	3.75	2.8
	6.8	3.3	7.7	1080	43.3	27.5	1.44	48.1	30.0	0.6	1080	29.2	2.35	21.4	95.0	3.64	2.8
	6.8	3.3	7.7	1250	44.3	30.1	1.51	49.4	29.4	0.6	1250	29.7	2.25	22.1	92.0	3.87	2.9
	9.0	5.7	13.1	1080	43.4	27.5	1.39	48.1	31.2	0.6	1080	29.9	2.36	22.0	95.6	3.71	2.9
	9.0	5.7	13.1	1250	44.4	30.1	1.45	49.4	30.6	0.6	1250	30.4	2.26	22.8	92.5	3.94	3.0
40	4.5	1.5	3.5	1080	42.3	27.5	1.69	48.0	25.0	1.1	1080	31.8	2.40	23.8	97.2	3.88	3.1
	4.5	1.5	3.5	1250	43.3	30.1	1.77	49.4	24.5	1.1	1250	32.4	2.30	24.6	94.0	4.12	3.2
	6.8	3.2	7.4	1080	42.9	27.6	1.59	48.2	27.1	1.0	1080	33.3	2.44	25.2	98.6	4.01	3.3
	6.8	3.2	7.4	1250	43.9	30.2	1.66	49.6	26.5	1.1	1250	33.9	2.34	26.0	95.1	4.26	3.3
	9.0	5.4	12.5	1080	43.1	27.6	1.53	48.3	28.1	0.9	1080	34.1	2.46	25.9	99.3	4.08	3.4
	9.0	5.4	12.5	1250	44.1	30.3	1.60	49.6	27.6	1.0	1250	34.8	2.35	26.8	95.8	4.33	3.4
50	4.5	1.3	3.1	1080	41.1	27.1	1.85	47.4	22.2	1.8	1080	35.7	2.49	27.4	100.6	4.20	3.6
	4.5	1.3	3.1	1250	42.1	29.7	1.93	48.7	21.8	1.8	1250	36.4	2.39	28.3	97.0	4.47	3.6
	6.8	3.1	7.2	1080	42.0	27.4	1.74	47.9	24.2	1.6	1080	37.5	2.54	29.0	102.2	4.34	3.7
	6.8	3.1	7.2	1250	43.0	30.0	1.81	49.2	23.7	1.7	1250	38.3	2.43	30.0	98.3	4.61	3.8
	9.0	5.2	12.0	1080	42.4	27.5	1.68	48.1	25.2	1.5	1080	38.5	2.56	29.9	103.0	4.41	3.9
	9.0	5.2	12.0	1250	43.4	30.1	1.75	49.4	24.8	1.5	1250	39.3	2.46	30.9	99.1	4.68	3.9
60	4.5	1.2	2.8	1080	39.6	26.4	2.02	46.4	19.6	2.5	1080	39.8	2.60	31.0	104.1	4.50	4.1
	4.5	1.2	2.8	1250	40.5	29.0	2.11	47.7	19.2	2.6	1250	40.6	2.49	32.1	100.1	4.78	4.1
	6.8	3.0	6.9	1080	40.7	26.9	1.90	47.1	21.4	2.3	1080	41.9	2.65	32.9	105.9	4.63	4.2
	6.8	3.0	6.9	1250	41.7	29.5	1.98	48.4	21.0	2.3	1250	42.7	2.54	34.1	101.6	4.92	4.3
	9.0	5.0	11.6	1080	41.2	27.1	1.84	47.4	22.4	2.0	1080	43.1	2.69	34.0	106.9	4.70	4.4
	9.0	5.0	11.6	1250	42.2	29.7	1.92	48.7	22.0	2.0	1250	43.9	2.58	35.1	102.5	5.00	4.4
70	4.5	1.1	2.5	1080	37.8	25.7	2.22	45.3	17.0	3.4	1080	44.0	2.71	34.8	107.7	4.75	4.5
	4.5	1.1	2.5	1250	38.7	28.2	2.32	46.6	16.7	3.5	1250	44.8	2.60	36.0	103.2	5.05	4.6
	6.8	2.9	6.7	1080	39.1	26.2	2.08	46.1	18.8	3.0	1080	46.4	2.79	36.9	109.8	4.88	4.7
	6.8	2.9	6.7	1250	40.0	28.8	2.17	47.4	18.4	3.1	1250	47.3	2.67	38.2	105.0	5.19	4.8
	9.0	4.8	11.0	1080	39.7	26.5	2.01	46.5	19.7	2.7	1080	47.8	2.83	38.2	111.0	4.95	4.9
	9.0	4.8	11.0	1250	40.6	29.0	2.10	47.8	19.3	2.7	1250	48.7	2.71	39.5	106.1	5.27	5.0
80	4.5	1.0	2.3	1080	35.8	24.8	2.44	44.2	14.7	4.0	1080	48.3	2.84	38.6	111.4	4.98	5.0
	4.5	1.0	2.3	1250	36.7	27.2	2.55	45.4	14.4	4.1	1250	49.2	2.73	39.9	106.5	5.29	5.0
	6.8	2.8	6.6	1080	37.2	25.4	2.29	45.0	16.3	3.7	1080	51.1	2.93	41.1	113.8	5.10	5.2
	6.8	2.8	6.6	1250	38.0	27.9	2.39	46.2	15.9	3.8	1250	52.1	2.81	42.5	108.6	5.43	5.2
	9.0	4.5	10.4	1080	37.8	25.7	2.21	45.4	17.1	3.4	1080	52.7	2.99	42.4	115.1	5.17	5.4
	9.0	4.5	10.4	1250	38.7	28.2	2.31	46.6	16.8	3.5	1250	53.7	2.86	43.9	109.8	5.50	5.4
85	4.5	1.0	2.2	1080	34.8	24.3	2.57	43.6	13.6	4.5	1080	50.5	2.92	40.6	113.3	5.08	5.2
	4.5	1.0	2.2	1250	35.6	26.7	2.68	44.8	13.3	4.6	1250	51.5	2.80	41.9	108.1	5.40	5.3
	6.8	2.8	6.4	1080	36.2	25.0	2.40	44.4	15.0	4.2	1080	53.5	3.02	43.2	115.9	5.20	5.4
	6.8	2.8	6.4	1250	37.0	27.4	2.51	45.6	14.7	4.3	1250	54.5	2.89	44.7	110.4	5.53	5.5
	9.0	4.5	10.3	1080	36.8	25.3	2.33	44.8	15.8	3.9	1080	55.2	3.07	44.7	117.3	5.26	5.6
	9.0	4.5	10.3	1250	37.7	27.7	2.43	46.0	15.5	3.9	1250	56.3	2.95	46.2	111.7	5.59	5.7
90	4.5	0.9	2.1	1080	33.8	23.9	2.70	43.0	12.5	5.2	1080	52.7	2.99	42.5	115.2	5.17	5.4
	4.5	0.9	2.1	1250	34.6	26.2	2.81	44.2	12.3	5.3	1250	53.7	2.86	44.0	109.8	5.50	5.5
	6.8	2.7	6.2	1080	35.1	24.5	2.52	43.8	13.9	4.8	1080	55.9	3.10	45.3	117.9	5.29	5.6
	6.8	2.7	6.2	1250	36.0	26.9	2.63	45.0	13.7	4.9	1250	57.0	2.97	46.9	112.2	5.62	5.7
	9.0	4.4	10.2	1080	35.8	24.8	2.44	44.2	14.7	4.4	1080	57.7	3.16	46.9	119.5	5.35	5.8
	9.0	4.4	10.2	1250	36.7	27.2	2.55	45.4	14.4	4.5	1250	58.8	3.03	48.5	113.6	5.69	5.9
100	4.5	0.8	1.9	1080	31.8	22.9	2.99	42.0	10.6	5.7	Operation not recommended						
	4.5	0.8	1.9	1250	32.5	25.2	3.12	43.2	10.4	5.8							
	6.8	2.6	6.1	1080	33.1	23.5	2.80	42.6	11.8	5.5							
	6.8	2.6	6.1	1250	33.8	25.8	2.92	43.8	11.6	5.6							
	9.0	4.2	9.7	1080	33.7	23.9	2.70	43.0	12.5	5.3							
	9.0	4.2	9.7	1250	34.5	26.2	2.82	44.2	12.2	5.4							
110	4.5	0.8	1.8	1080	29.8	22.1	3.34	41.3	8.9	6.8							
	4.5	0.8	1.8	1250	30.5	24.2	3.49	42.4	8.7	7.0							
	6.8	2.5	5.9	1080	31.0	22.6	3.12	41.7	10.0	6.6							
	6.8	2.5	5.9	1250	31.7	24.8	3.25	42.9	9.8	6.7							
	9.0	4.0	9.2	1080	31.7	22.9	3.01	42.0	10.5	6.3							
	9.0	4.0	9.2	1250	32.4	25.1	3.14	43.1	10.3	6.5							
120	4.5	0.7	1.6	1080	28.0	21.3	3.74	40.9	7.5	8.1							
	4.5	0.7	1.6	1250	28.7	23.3	3.91	42.0	7.3	8.2							
	6.8	2.5	5.9	1080	29.1	21.7	3.49	41.1	8.3	7.8							
	6.8	2.5	5.9	1250	29.8	23.8	3.64	42.2	8.2	7.9							
	9.0	3.8	8.8	1080	29.7	22.0	3.36	41.2	8.8	7.5							
	9.0	3.8	8.8	1250	30.4	24.1	3.51	42.4	8.6	7.6							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Performance Data — Tranquility® 27 Model 049 - Part Load

1300 CFM Nominal (ISO Rated) Airflow Cooling, 1400 CFM Nominal (ISO Rated) Airflow Heating

Performance capacities shown in thousands of Btuh

EWT °F	GPM	WPD		Cooling - EAT 80/67°F							Heating - EAT 70°F						
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	HW	Airflow CFM	HC	kW	HE	LAT	COP	HW
20	11.0	4.0	9.3	Operation not recommended							1200	23.2	2.16	16.2	87.9	3.14	2.3
	11.0	4.0	9.3								1400	23.5	2.10	16.6	85.5	3.27	2.3
30	5.5	1.1	2.5	1120	38.6	24.0	1.20	42.6	32.0	0.6	1200	25.6	2.20	18.6	89.8	3.42	2.5
	5.5	1.1	2.5	1300	39.1	25.2	1.22	43.3	32.0	0.6	1400	25.9	2.14	18.9	87.2	3.56	2.5
	8.3	2.3	5.2	1120	38.8	24.0	1.14	42.6	34.2	0.5	1200	26.6	2.21	19.4	90.5	3.52	2.6
	8.3	2.3	5.2	1300	39.4	25.3	1.15	43.2	34.2	0.6	1400	26.9	2.15	19.8	87.8	3.67	2.6
	11.0	3.9	8.9	1120	39.0	24.0	1.10	42.7	35.4	0.5	1200	27.1	2.22	19.9	90.9	3.58	2.7
	11.0	3.9	8.9	1300	39.6	25.2	1.12	43.3	35.4	0.5	1400	27.4	2.15	20.3	88.1	3.73	2.7
40	5.5	1.0	2.3	1120	40.8	26.2	1.37	45.5	29.9	1.0	1200	29.6	2.24	22.4	92.9	3.88	2.7
	5.5	1.0	2.3	1300	41.4	27.6	1.38	46.1	29.9	1.0	1400	30.0	2.18	22.9	89.8	4.04	2.8
	8.3	2.2	5.0	1120	41.2	26.3	1.28	45.5	32.1	0.9	1200	30.9	2.25	23.6	93.8	4.02	2.8
	8.3	2.2	5.0	1300	41.8	27.6	1.30	46.2	32.1	1.0	1400	31.2	2.19	24.1	90.7	4.19	2.9
	11.0	3.7	8.6	1120	41.3	26.3	1.25	45.5	32.9	0.9	1200	31.6	2.26	24.3	94.4	4.10	2.9
	11.0	3.7	8.6	1300	41.9	27.6	1.27	46.1	32.9	0.9	1400	31.9	2.19	24.8	91.1	4.27	3.0
50	5.5	0.9	2.1	1120	40.8	26.8	1.49	45.9	27.3	1.6	1200	34.0	2.28	26.7	96.3	4.38	2.9
	5.5	0.9	2.1	1300	41.4	28.2	1.51	46.5	27.3	1.7	1400	34.4	2.21	27.2	92.8	4.56	2.9
	8.3	2.1	4.9	1120	41.2	26.9	1.41	45.9	29.1	1.5	1200	35.6	2.29	28.2	97.5	4.56	3.0
	8.3	2.1	4.9	1300	41.7	28.2	1.43	46.6	29.1	1.5	1400	36.0	2.23	28.8	93.8	4.74	3.0
	11.0	3.6	8.3	1120	41.3	26.9	1.40	46.0	29.4	1.3	1200	36.5	2.30	29.1	98.2	4.65	3.1
	11.0	3.6	8.3	1300	41.9	28.3	1.42	46.7	29.4	1.4	1400	36.9	2.23	29.6	94.4	4.85	3.2
60	5.5	0.8	2.0	1120	40.0	27.1	1.73	45.9	23.2	3.5	1200	38.7	2.32	31.2	99.8	4.89	3.2
	5.5	0.8	2.0	1300	40.6	28.5	1.75	46.5	23.2	3.6	1400	39.1	2.25	31.8	95.9	5.09	3.3
	8.3	2.0	4.7	1120	40.7	27.2	1.62	46.2	25.1	3.2	1200	40.6	2.33	33.0	101.3	5.10	3.3
	8.3	2.0	4.7	1300	41.3	28.6	1.64	46.9	25.1	3.2	1400	41.1	2.27	33.7	97.2	5.31	3.4
	11.0	3.5	8.1	1120	41.0	27.2	1.57	46.3	26.1	2.8	1200	41.7	2.34	34.1	102.1	5.21	3.5
	11.0	3.5	8.1	1300	41.5	28.7	1.59	46.9	26.1	2.9	1400	42.1	2.27	34.7	97.9	5.43	3.5
70	5.5	0.8	1.8	1120	38.2	26.5	1.94	44.8	19.7	3.1	1200	43.4	2.36	35.7	103.5	5.39	3.5
	5.5	0.8	1.8	1300	38.8	27.9	1.97	45.4	19.7	3.2	1400	43.9	2.29	36.4	99.0	5.62	3.6
	8.3	2.0	4.6	1120	39.3	26.9	1.82	45.5	21.6	2.8	1200	45.6	2.38	37.9	105.2	5.62	3.7
	8.3	2.0	4.6	1300	39.9	28.3	1.85	46.1	21.6	2.9	1400	46.1	2.31	38.6	100.5	5.85	3.7
	11.0	3.3	7.5	1120	39.8	27.1	1.76	45.7	22.6	2.5	1200	46.8	2.39	39.0	106.1	5.73	3.8
	11.0	3.3	7.5	1300	40.3	28.4	1.79	46.4	22.6	2.5	1400	47.3	2.32	39.7	101.3	5.97	3.9
80	5.5	0.7	1.7	1120	35.9	25.7	2.17	43.3	16.5	4.0	1200	48.0	2.40	40.2	107.1	5.86	3.8
	5.5	0.7	1.7	1300	36.5	27.0	2.20	43.9	16.5	4.1	1400	48.6	2.33	41.0	102.1	6.10	3.8
	8.3	1.9	4.5	1120	37.2	26.2	2.04	44.2	18.2	3.7	1200	50.4	2.43	42.5	108.9	6.07	3.9
	8.3	1.9	4.5	1300	37.7	27.5	2.07	44.8	18.2	3.8	1400	50.9	2.36	43.3	103.7	6.33	4.0
	11.0	3.2	7.3	1120	37.8	26.4	1.98	44.6	19.1	3.4	1200	51.6	2.45	43.7	109.8	6.18	4.1
	11.0	3.2	7.3	1300	38.4	27.8	2.01	45.2	19.1	3.5	1400	52.2	2.38	44.5	104.5	6.44	4.1
85	5.5	0.7	1.7	1120	34.7	25.2	2.30	42.5	15.0	4.8	1200	50.2	2.43	42.3	108.8	6.06	3.9
	5.5	0.7	1.7	1300	35.2	26.5	2.34	43.1	15.0	5.0	1400	50.8	2.36	43.1	103.6	6.31	4.0
	8.3	1.9	4.3	1120	36.0	25.7	2.17	43.4	16.6	4.5	1200	52.6	2.46	44.6	110.6	6.26	4.1
	8.3	1.9	4.3	1300	36.5	27.0	2.20	44.0	16.6	4.6	1400	53.2	2.39	45.4	105.2	6.52	4.1
	11.0	3.1	7.3	1120	36.6	25.9	2.10	43.8	17.4	4.1	1200	53.8	2.48	45.7	111.5	6.35	4.2
	11.0	3.1	7.3	1300	37.1	27.3	2.13	44.4	17.4	4.2	1400	54.4	2.41	46.6	106.0	6.62	4.3
90	5.5	0.7	1.6	1120	33.4	24.7	2.44	41.7	13.7	5.5	1200	52.4	2.46	44.4	110.5	6.25	4.0
	5.5	0.7	1.6	1300	33.9	25.9	2.47	42.3	13.7	5.6	1400	53.0	2.39	45.3	105.1	6.51	4.1
	8.3	1.8	4.2	1120	34.7	25.2	2.30	42.6	15.1	5.1	1200	54.8	2.50	46.7	112.3	6.44	4.2
	8.3	1.8	4.2	1300	35.2	26.5	2.33	43.2	15.1	5.2	1400	55.4	2.42	47.6	106.7	6.70	4.3
	11.0	3.1	7.2	1120	35.4	25.5	2.23	43.0	15.9	4.7	1200	56.0	2.52	47.8	113.2	6.52	4.4
	11.0	3.1	7.2	1300	35.9	26.8	2.26	43.6	15.9	4.8	1400	56.7	2.45	48.8	107.5	6.79	4.4
100	5.5	0.7	1.5	1120	30.9	23.7	2.73	40.2	11.3	6.5	Operation not recommended						
	5.5	0.7	1.5	1300	31.3	24.9	2.77	40.7	11.3	6.6							
	8.3	1.8	4.1	1120	32.1	24.2	2.58	40.9	12.5	6.3							
	8.3	1.8	4.1	1300	32.6	25.4	2.62	41.5	12.5	6.4							
	11.0	3.0	6.8	1120	32.8	24.4	2.50	41.3	13.1	6.0							
	11.0	3.0	6.8	1300	33.3	25.7	2.54	41.9	13.1	6.2							
110	5.5	0.6	1.5	1120	28.5	22.9	3.07	39.0	9.3	8.4							
	5.5	0.6	1.5	1300	28.9	24.1	3.11	39.6	9.3	8.5							
	8.3	1.7	4.0	1120	29.6	23.3	2.90	39.5	10.2	8.0							
	8.3	1.7	4.0	1300	30.0	24.5	2.94	40.1	10.2	8.2							
	11.0	2.8	6.6	1120	30.2	23.5	2.82	39.8	10.7	7.7							
	11.0	2.8	6.6	1300	30.6	24.7	2.86	40.4	10.7	7.9							
120	5.5	0.6	1.4	1120	26.7	22.7	3.45	38.4	7.7	10.6							
	5.5	0.6	1.4	1300	27.0	23.8	3.50	39.0	7.7	10.8							
	8.3	1.7	3.8	1120	27.5	22.7	3.26	38.6	8.4	10.2							
	8.3	1.7	3.8	1300	27.9	23.9	3.31	39.2	8.4	10.4							
	11.0	2.7	6.3	1120	27.9	22.8	3.17	38.8	8.8	9.8							
	11.0	2.7	6.3	1300	28.3	24.0	3.22	39.3	8.8	10.0							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Performance Data — Tranquility® 27 Model 049 - Full Load

1550 CFM Nominal (ISO Rated) Airflow Cooling, 1650 CFM Nominal (ISO Rated) Airflow Heating

Performance capacities shown in thousands of Btuh

EWT °F	GPM	WPD		Cooling - EAT 80/67°F							Heating - EAT 70°F						
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	HW	Airflow CFM	HC	kW	HE	LAT	COP	HW
20	12.0	4.8	11.0	Operation not recommended							1430	31.6	2.90	22.1	90.5	3.20	2.7
	12.0	4.8	11.0								1650	32.3	2.78	22.9	88.1	3.40	2.7
30	6.0	1.3	2.9	1330	56.1	32.1	2.13	63.2	26.4	0.8	1430	34.7	2.98	24.9	92.5	3.41	3.2
	6.0	1.3	2.9	1550	57.4	35.1	2.22	65.0	25.9	0.8	1650	35.4	2.86	25.7	89.9	3.62	3.3
	9.0	2.7	6.1	1330	56.5	32.1	2.01	63.2	28.2	0.7	1430	36.3	3.03	26.3	93.5	3.51	3.4
	9.0	2.7	6.1	1550	57.9	35.2	2.09	65.0	27.6	0.7	1650	37.0	2.90	27.2	90.8	3.73	3.4
	12.0	4.6	10.5	1330	56.8	32.1	1.94	63.3	29.3	0.7	1430	37.2	3.05	27.0	94.1	3.57	3.5
	12.0	4.6	10.5	1550	58.2	35.2	2.03	65.1	28.7	0.7	1650	37.9	2.93	28.0	91.3	3.79	3.5
40	6.0	1.1	2.7	1330	55.8	33.0	2.32	63.6	24.1	1.5	1430	40.0	3.13	29.6	95.9	3.75	3.8
	6.0	1.1	2.7	1550	57.1	36.2	2.42	65.4	23.6	1.5	1650	40.8	3.00	30.6	92.9	3.99	3.8
	9.0	2.6	5.9	1330	56.4	33.0	2.19	63.7	25.8	1.4	1430	42.0	3.18	31.4	97.2	3.87	3.9
	9.0	2.6	5.9	1550	57.7	36.2	2.28	65.5	25.3	1.4	1650	42.8	3.05	32.4	94.0	4.11	4.0
	12.0	4.4	10.1	1330	56.6	33.0	2.12	63.8	26.7	1.2	1430	43.1	3.21	32.4	97.9	3.94	4.1
	12.0	4.4	10.1	1550	58.0	36.2	2.22	65.5	26.2	1.3	1650	43.9	3.08	33.5	94.6	4.19	4.1
50	6.0	1.1	2.5	1330	54.5	33.3	2.51	63.0	21.8	2.5	1430	45.5	3.27	34.6	99.5	4.08	4.3
	6.0	1.1	2.5	1550	55.8	36.5	2.62	64.7	21.3	2.6	1650	46.4	3.14	35.8	96.0	4.34	4.4
	9.0	2.5	5.7	1330	55.6	33.4	2.37	63.6	23.5	2.3	1430	48.0	3.33	36.8	101.1	4.22	4.5
	9.0	2.5	5.7	1550	56.9	36.6	2.47	65.4	23.0	2.3	1650	48.9	3.20	38.0	97.4	4.48	4.5
	12.0	4.2	9.6	1330	56.0	33.4	2.30	63.7	24.3	2.0	1430	49.3	3.37	38.0	101.9	4.29	4.6
	12.0	4.2	9.6	1550	57.3	36.7	2.40	65.5	23.8	2.0	1650	50.3	3.23	39.3	98.2	4.56	4.7
60	6.0	1.0	2.3	1330	52.5	32.6	2.71	61.7	19.4	3.5	1430	51.3	3.42	39.8	103.2	4.39	4.9
	6.0	1.0	2.3	1550	53.7	35.8	2.82	63.4	19.0	3.6	1650	52.3	3.28	41.1	99.3	4.67	5.0
	9.0	2.4	5.5	1330	54.0	33.1	2.56	62.7	21.1	3.2	1430	54.2	3.50	42.4	105.1	4.54	5.1
	9.0	2.4	5.5	1550	55.3	36.3	2.67	64.4	20.7	3.2	1650	55.2	3.36	43.8	101.0	4.83	5.2
	12.0	4.0	9.2	1330	54.7	33.3	2.49	63.1	21.9	2.8	1430	55.8	3.54	43.8	106.1	4.62	5.3
	12.0	4.0	9.2	1550	55.9	36.5	2.60	64.8	21.5	2.9	1650	56.9	3.40	45.3	101.9	4.91	5.4
70	6.0	0.9	2.2	1330	49.9	31.7	2.93	59.9	17.1	4.8	1430	57.2	3.58	45.1	107.1	4.68	5.5
	6.0	0.9	2.2	1550	51.1	34.8	3.06	61.6	16.7	4.9	1650	58.3	3.44	46.6	102.7	4.98	5.6
	9.0	2.3	5.4	1330	51.7	32.4	2.77	61.1	18.7	4.3	1430	60.6	3.68	48.1	109.2	4.83	5.7
	9.0	2.3	5.4	1550	53.0	35.5	2.89	62.8	18.3	4.4	1650	61.7	3.53	49.7	104.7	5.13	5.8
	12.0	3.8	8.8	1330	52.6	32.7	2.70	61.7	19.5	3.8	1430	62.4	3.73	49.7	110.4	4.90	5.9
	12.0	3.8	8.8	1550	53.8	35.8	2.81	63.4	19.1	3.9	1650	63.6	3.58	51.4	105.7	5.21	6.0
80	6.0	0.9	2.1	1330	47.1	30.6	3.18	57.9	14.8	5.8	1430	63.2	3.76	50.5	111.0	4.94	6.0
	6.0	0.9	2.1	1550	48.2	33.6	3.32	59.5	14.5	5.9	1650	64.5	3.60	52.2	106.2	5.25	6.1
	9.0	2.3	5.2	1330	49.0	31.4	3.01	59.3	16.3	5.4	1430	67.0	3.87	53.8	113.4	5.07	6.2
	9.0	2.3	5.2	1550	50.2	34.4	3.14	60.9	16.0	5.5	1650	68.3	3.71	55.7	108.3	5.39	6.3
	12.0	3.6	8.3	1330	50.0	31.7	2.92	59.9	17.1	4.9	1430	69.1	3.94	55.7	114.8	5.14	6.5
	12.0	3.6	8.3	1550	51.2	34.8	3.05	61.6	16.8	5.0	1650	70.5	3.78	57.6	109.5	5.47	6.6
85	6.0	0.9	2.0	1330	45.5	30.1	3.32	56.9	13.7	6.5	1430	66.3	3.85	53.2	112.9	5.04	6.3
	6.0	0.9	2.0	1550	46.6	33.0	3.47	58.5	13.4	6.7	1650	67.6	3.69	55.0	107.9	5.36	6.4
	9.0	2.2	5.1	1330	47.5	30.8	3.14	58.2	15.1	6.0	1430	70.3	3.98	56.7	115.5	5.18	6.5
	9.0	2.2	5.1	1550	48.6	33.8	3.28	59.8	14.8	6.2	1650	71.6	3.82	58.6	110.2	5.50	6.6
	12.0	3.6	8.2	1330	48.5	31.2	3.05	58.9	15.9	5.5	1430	72.5	4.06	58.6	116.9	5.24	6.8
	12.0	3.6	8.2	1550	49.6	34.2	3.19	60.5	15.6	5.7	1650	73.9	3.89	60.6	111.5	5.57	6.9
90	6.0	0.9	2.0	1330	44.0	29.5	3.47	55.9	12.7	7.5	1430	69.3	3.95	55.8	114.9	5.15	6.5
	6.0	0.9	2.0	1550	45.0	32.4	3.62	57.4	12.4	7.6	1650	70.7	3.78	57.7	109.7	5.47	6.6
	9.0	2.2	5.0	1330	46.0	30.2	3.28	57.2	14.0	6.9	1430	73.5	4.09	59.5	117.6	5.27	6.8
	9.0	2.2	5.0	1550	47.1	33.2	3.42	58.8	13.8	7.1	1650	74.9	3.92	61.6	112.1	5.60	6.9
	12.0	3.5	8.1	1330	47.0	30.6	3.18	57.9	14.8	6.3	1430	75.8	4.17	61.5	119.1	5.33	7.1
	12.0	3.5	8.1	1550	48.1	33.6	3.32	59.5	14.5	6.5	1650	77.3	4.00	63.6	113.4	5.66	7.2
100	6.0	0.8	1.9	1330	40.9	28.5	3.80	53.9	10.7	8.2	Operation not recommended						
	6.0	0.8	1.9	1550	41.8	31.2	3.97	55.4	10.5	8.4							
	9.0	2.1	4.8	1330	42.8	29.1	3.59	55.1	11.9	7.9							
	9.0	2.1	4.8	1550	43.8	31.9	3.74	56.6	11.7	8.1							
	12.0	3.3	7.7	1330	43.8	29.4	3.48	55.8	12.6	7.6							
	12.0	3.3	7.7	1550	44.9	32.3	3.64	57.3	12.3	7.8							
110	6.0	0.8	1.8	1330	37.8	27.6	4.19	52.2	9.0	9.9							
	6.0	0.8	1.8	1550	38.7	30.2	4.38	53.7	8.8	10.1							
	9.0	2.0	4.7	1330	39.6	28.1	3.95	53.2	10.0	9.5							
	9.0	2.0	4.7	1550	40.6	30.8	4.12	54.7	9.8	9.7							
	12.0	3.2	7.3	1330	40.6	28.4	3.83	53.7	10.6	9.2							
	12.0	3.2	7.3	1550	41.5	31.1	4.00	55.2	10.4	9.4							
120	6.0	0.8	1.7	1330	34.9	27.0	4.65	51.0	7.5	11.7							
	6.0	0.8	1.7	1550	35.8	29.6	4.86	52.4	7.4	12.0							
	9.0	2.0	4.5	1330	36.6	27.3	4.37	51.6	8.4	11.3							
	9.0	2.0	4.5	1550	37.4	29.9	4.57	53.1	8.2	11.5							
	12.0	3.0	7.0	1330	37.4	27.5	4.24	52.0	8.8	10.9							
	12.0	3.0	7.0	1550	38.3	30.1	4.43	53.5	8.7	11.1							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Performance Data — Tranquility® 27 Model 064 - Part Load

1500 CFM Nominal (ISO Rated) Airflow Cooling, 1650 CFM Nominal (ISO Rated) Airflow Heating

Performance capacities shown in thousands of Btuh

EWT °F	GPM	WPD		Cooling - EAT 80/67°F							Heating - EAT 70°F						
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	HW	Airflow CFM	HC	kW	HE	LAT	COP	HW
20	14.0	4.1	9.4	Operation not recommended							1430	28.7	2.85	19.5	88.6	2.95	2.4
	14.0	4.1	9.4								1650	29.0	2.77	19.9	86.3	3.07	2.5
30	7.0	0.5	1.1	1280	49.1	33.2	1.54	54.2	31.8	0.6	1430	31.7	2.87	22.5	90.5	3.24	2.7
	7.0	0.5	1.1	1500	49.7	35.0	1.56	55.0	31.8	0.6	1650	32.0	2.78	22.9	88.0	3.37	2.7
	10.5	1.9	4.4	1280	50.1	33.6	1.50	55.1	33.4	0.6	1430	32.7	2.87	23.4	91.2	3.34	2.8
	10.5	1.9	4.4	1500	50.8	35.3	1.52	55.9	33.4	0.6	1650	33.0	2.79	23.9	88.5	3.47	2.8
	14.0	3.9	9.0	1280	51.6	34.4	1.48	56.6	34.7	0.5	1430	33.2	2.87	24.0	91.5	3.39	2.9
	14.0	3.9	9.0	1500	52.3	36.2	1.51	57.4	34.7	0.5	1650	33.6	2.79	24.4	88.8	3.53	2.9
40	7.0	0.4	0.9	1280	51.9	35.8	1.68	57.6	30.9	1.1	1430	36.1	2.89	26.8	93.4	3.67	2.9
	7.0	0.4	0.9	1500	52.7	37.6	1.71	58.4	30.9	1.1	1650	36.5	2.80	27.4	90.5	3.82	3.0
	10.5	1.8	4.3	1280	52.3	35.8	1.60	57.7	32.7	1.0	1430	37.4	2.89	28.1	94.2	3.79	3.0
	10.5	1.8	4.3	1500	53.1	37.7	1.63	58.5	32.7	1.0	1650	37.8	2.81	28.6	91.2	3.95	3.1
	14.0	3.7	8.6	1280	52.7	35.9	1.57	57.9	33.6	0.9	1430	38.1	2.90	28.8	94.7	3.86	3.1
	14.0	3.7	8.6	1500	53.4	37.7	1.59	58.8	33.6	0.9	1650	38.5	2.81	29.3	91.6	4.02	3.2
50	7.0	0.3	0.7	1280	52.0	36.5	1.88	58.4	27.7	1.7	1430	40.9	2.91	31.5	96.5	4.11	3.1
	7.0	0.3	0.7	1500	52.8	38.4	1.91	59.2	27.7	1.8	1650	41.3	2.83	32.1	93.2	4.28	3.1
	10.5	1.8	4.1	1280	52.6	36.5	1.76	58.5	29.8	1.6	1430	42.4	2.92	33.0	97.5	4.26	3.2
	10.5	1.8	4.1	1500	53.3	38.4	1.79	59.3	29.8	1.6	1650	42.9	2.83	33.6	94.1	4.43	3.3
	14.0	3.6	8.2	1280	52.7	36.5	1.71	58.5	30.8	1.4	1430	43.2	2.92	33.8	98.0	4.33	3.3
	14.0	3.6	8.2	1500	53.5	38.4	1.74	59.4	30.8	1.4	1650	43.7	2.84	34.4	94.5	4.51	3.4
60	7.0	0.3	0.6	1280	50.2	35.8	2.12	57.3	23.7	3.8	1430	45.7	2.94	36.2	99.6	4.55	3.4
	7.0	0.3	0.6	1500	50.9	37.6	2.15	58.2	23.7	3.8	1650	46.2	2.86	36.9	95.9	4.74	3.5
	10.5	1.7	4.0	1280	51.3	36.2	1.98	58.0	25.9	3.4	1430	47.5	2.96	37.9	100.8	4.71	3.6
	10.5	1.7	4.0	1500	52.0	38.1	2.01	58.8	25.9	3.4	1650	48.0	2.87	38.7	97.0	4.91	3.6
	14.0	3.4	7.8	1280	51.8	36.4	1.91	58.3	27.1	3.0	1430	48.5	2.96	38.9	101.4	4.79	3.7
	14.0	3.4	7.8	1500	52.5	38.3	1.94	59.1	27.1	3.0	1650	49.0	2.88	39.6	97.5	4.99	3.8
70	7.0	0.2	0.5	1280	47.5	34.5	2.41	55.7	19.8	3.3	1430	50.6	2.98	40.9	102.8	4.97	3.8
	7.0	0.2	0.5	1500	48.2	36.3	2.44	56.5	19.8	3.4	1650	51.2	2.90	41.7	98.7	5.18	3.8
	10.5	1.7	3.9	1280	49.1	35.2	2.24	56.7	21.9	3.0	1430	52.6	3.01	42.9	104.1	5.13	3.9
	10.5	1.7	3.9	1500	49.7	37.1	2.28	57.5	21.9	3.0	1650	53.2	2.92	43.7	99.9	5.35	4.0
	14.0	3.3	7.5	1280	49.8	35.6	2.17	57.1	23.0	2.6	1430	53.7	3.02	43.9	104.8	5.22	4.1
	14.0	3.3	7.5	1500	50.5	37.4	2.20	57.9	23.0	2.7	1650	54.3	2.93	44.8	100.5	5.43	4.1
80	7.0	0.2	0.4	1280	44.5	33.0	2.74	53.8	16.2	4.3	1430	55.4	3.04	45.6	105.9	5.35	4.1
	7.0	0.2	0.4	1500	45.1	34.7	2.78	54.5	16.2	4.4	1650	56.1	2.95	46.5	101.5	5.57	4.1
	10.5	1.6	3.8	1280	46.1	33.8	2.56	54.8	18.0	4.0	1430	57.6	3.07	47.7	107.3	5.50	4.2
	10.5	1.6	3.8	1500	46.8	35.6	2.59	55.6	18.0	4.1	1650	58.3	2.98	48.6	102.7	5.73	4.3
	14.0	3.1	7.2	1280	46.9	34.2	2.47	55.3	19.0	3.7	1430	58.8	3.09	48.8	108.1	5.58	4.4
	14.0	3.1	7.2	1500	47.6	36.0	2.51	56.1	19.0	3.7	1650	59.5	3.00	49.7	103.4	5.81	4.4
85	7.0	0.2	0.4	1280	42.8	32.3	2.93	52.8	14.6	5.2	1430	57.8	3.08	47.8	107.4	5.51	4.2
	7.0	0.2	0.4	1500	43.5	34.0	2.97	53.6	14.6	5.3	1650	58.4	2.99	48.7	102.8	5.73	4.3
	10.5	1.6	3.7	1280	44.5	33.1	2.74	53.8	16.2	4.8	1430	60.0	3.11	49.9	108.9	5.65	4.4
	10.5	1.6	3.7	1500	45.1	34.8	2.78	54.6	16.2	4.9	1650	60.7	3.02	50.9	104.1	5.88	4.4
	14.0	3.0	7.0	1280	45.3	33.5	2.65	54.3	17.1	4.4	1430	61.2	3.14	51.0	109.6	5.72	4.5
	14.0	3.0	7.0	1500	46.0	35.2	2.68	55.1	17.1	4.5	1650	61.9	3.04	52.0	104.7	5.96	4.6
90	7.0	0.1	0.3	1280	41.2	31.6	3.12	51.8	13.2	5.9	1430	60.1	3.11	50.0	108.9	5.66	4.3
	7.0	0.1	0.3	1500	41.8	33.2	3.16	52.6	13.2	6.0	1650	60.8	3.02	51.0	104.1	5.90	4.4
	10.5	1.5	3.6	1280	42.9	32.3	2.92	52.8	14.7	5.4	1430	62.4	3.16	52.1	110.4	5.80	4.5
	10.5	1.5	3.6	1500	43.5	34.0	2.96	53.6	14.7	5.5	1650	63.1	3.06	53.2	105.4	6.04	4.6
	14.0	3.0	6.8	1280	43.7	32.7	2.82	53.3	15.5	5.0	1430	63.6	3.18	53.2	111.2	5.86	4.7
	14.0	3.0	6.8	1500	44.3	34.4	2.86	54.1	15.5	5.1	1650	64.3	3.09	54.3	106.1	6.10	4.8
100	7.0	0.1	0.2	1280	38.1	30.3	3.54	50.2	10.8	6.9	Operation not recommended						
	7.0	0.1	0.2	1500	38.7	31.9	3.59	50.9	10.8	7.1							
	10.5	1.5	3.5	1280	39.6	30.9	3.33	51.0	11.9	6.7							
	10.5	1.5	3.5	1500	40.2	32.5	3.38	51.7	11.9	6.8							
	14.0	2.8	6.5	1280	40.4	31.2	3.22	51.4	12.5	6.4							
	14.0	2.8	6.5	1500	41.0	32.8	3.27	52.1	12.5	6.6							
110	7.0	0.1	0.2	1280	35.5	29.6	4.02	49.3	8.8	8.9							
	7.0	0.1	0.2	1500	36.0	31.1	4.08	49.9	8.8	9.1							
	10.5	1.5	3.3	1280	36.7	29.8	3.79	49.6	9.7	8.6							
	10.5	1.5	3.3	1500	37.2	31.4	3.84	50.3	9.7	8.8							
	14.0	2.7	6.2	1280	37.3	30.0	3.67	49.9	10.2	8.3							
	14.0	2.7	6.2	1500	37.9	31.6	3.73	50.6	10.2	8.4							
120	7.0	0.1	0.1	1280	33.7	29.2	4.57	49.3	7.4	11.3							
	7.0	0.1	0.1	1500	34.2	30.7	4.63	50.0	7.4	11.5							
	10.5	1.4	3.2	1280	34.4	29.3	4.30	49.1	8.0	10.9							
	10.5	1.4	3.2	1500	34.9	30.8	4.36	49.8	8.0	11.1							
	14.0	2.6	6.0	1280	34.9	29.5	4.18	49.1	8.3	10.5							
	14.0	2.6	6.0	1500	35.4	31.0	4.24	49.8	8.3	10.7							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Performance Data — Tranquility® 27 Model 064 - Full Load

1825 CFM Nominal (ISO Rated) Airflow Cooling, 2050 CFM Nominal (ISO Rated) Airflow Heating

Performance capacities shown in thousands of Btuh

EWT °F	GPM	WPD		Cooling - EAT 80/67°F							Heating - EAT 70°F						
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	HW	Airflow CFM	HC	kW	HE	LAT	COP	HW
20	15.0	5.0	11.6	Operation not recommended							1750	41.0	3.87	28.3	91.7	3.10	2.9
	15.0	5.0	11.6								2050	41.8	3.71	29.2	88.9	3.30	2.9
30	7.5	0.6	1.5	1580	65.8	41.6	2.78	75.1	23.7	0.8	1750	44.6	3.96	31.5	93.6	3.29	3.5
	7.5	0.6	1.5	1825	67.3	45.6	2.90	77.2	23.2	0.8	2050	45.4	3.8	32.6	90.5	3.50	3.5
	11.3	2.3	5.3	1580	66.7	42.1	2.65	75.7	25.2	0.7	1750	46.4	4.01	33.1	94.6	3.39	3.6
	11.3	2.3	5.3	1825	68.3	46.2	2.77	77.8	24.7	0.8	2050	47.3	3.85	34.3	91.4	3.60	3.7
	15.0	4.8	11	1580	68.1	42.9	2.60	76.8	26.2	0.7	1750	47.4	4.04	34.0	95.1	3.44	3.8
	15.0	4.8	11	1825	69.7	47.1	2.71	78.9	25.7	0.7	2050	48.3	3.88	35.2	91.8	3.65	3.8
40	7.5	0.5	1.2	1580	67.5	43.1	3.00	77.6	22.5	1.6	1750	50.6	4.13	36.9	96.8	3.59	4.0
	7.5	0.5	1.2	1825	69.1	47.3	3.13	79.8	22.0	1.6	2050	51.5	3.96	38.1	93.3	3.82	4.1
	11.3	2.2	5.1	1580	68.4	43.4	2.85	78.0	24.0	1.4	1750	52.8	4.19	38.8	97.9	3.69	4.2
	11.3	2.2	5.1	1825	70.0	47.6	2.98	80.2	23.5	1.5	2050	53.8	4.02	40.2	94.3	3.92	4.3
	15.0	4.5	10.4	1580	68.7	43.5	2.78	78.0	24.7	1.3	1750	53.9	4.22	39.9	98.5	3.74	4.4
	15.0	4.5	10.4	1825	70.3	47.7	2.90	80.2	24.2	1.3	2050	55.0	4.05	41.3	94.8	3.98	4.4
50	7.5	0.4	1.0	1580	67.7	43.9	3.27	78.7	20.7	2.7	1750	56.7	4.30	42.4	100.0	3.86	4.6
	7.5	0.4	1.0	1825	69.3	48.1	3.41	80.9	20.3	2.7	2050	57.8	4.12	43.8	96.1	4.11	4.7
	11.3	2.1	4.9	1580	68.4	43.9	3.08	78.8	22.2	2.4	1750	59.3	4.37	44.7	101.4	3.97	4.8
	11.3	2.1	4.9	1825	70.1	48.1	3.21	81.0	21.8	2.4	2050	60.4	4.19	46.2	97.3	4.22	4.9
	15.0	4.3	9.9	1580	68.8	43.9	2.99	78.9	23.0	2.1	1750	60.7	4.41	45.9	102.1	4.03	5.0
	15.0	4.3	9.9	1825	70.4	48.2	3.13	81.1	22.5	2.2	2050	61.8	4.23	47.5	97.9	4.28	5.1
60	7.5	0.4	0.8	1580	65.8	43.4	3.56	77.9	18.5	3.8	1750	63.0	4.48	48.0	103.3	4.12	5.3
	7.5	0.4	0.8	1825	67.3	47.6	3.72	80.0	18.1	3.8	2050	64.2	4.30	49.6	99.0	4.38	5.3
	11.3	2.1	4.8	1580	67.2	43.8	3.35	78.6	20.1	3.4	1750	66.0	4.57	50.6	104.9	4.23	5.5
	11.3	2.1	4.8	1825	68.8	48.0	3.49	80.7	19.7	3.4	2050	67.3	4.38	52.4	100.4	4.50	5.6
	15.0	4.1	9.4	1580	67.8	43.9	3.25	78.8	20.9	3.0	1750	67.6	4.62	52.1	105.8	4.29	5.7
	15.0	4.1	9.4	1825	69.4	48.1	3.39	80.9	20.5	3.0	2050	68.9	4.43	53.9	101.1	4.57	5.8
70	7.5	0.3	0.7	1580	63.1	42.5	3.91	76.4	16.1	5.1	1750	69.4	4.67	53.7	106.7	4.36	5.9
	7.5	0.3	0.7	1825	64.6	46.7	4.08	78.5	15.8	5.2	2050	70.8	4.48	55.6	102.0	4.63	6.0
	11.3	2.0	4.6	1580	65.0	43.2	3.66	77.5	17.8	4.6	1750	72.9	4.78	56.8	108.6	4.48	6.1
	11.3	2.0	4.6	1825	66.6	47.3	3.82	79.6	17.4	4.7	2050	74.4	4.58	58.8	103.6	4.76	6.2
	15.0	3.9	8.9	1580	65.9	43.4	3.54	77.9	18.6	4.0	1750	74.9	4.83	58.6	109.6	4.54	6.4
	15.0	3.9	8.9	1825	67.5	47.6	3.70	80.1	18.2	4.1	2050	76.3	4.63	60.6	104.5	4.83	6.5
80	7.5	0.2	0.5	1580	59.8	41.4	4.31	74.5	13.9	6.2	1750	76.1	4.87	59.7	110.3	4.58	6.5
	7.5	0.2	0.5	1825	61.2	45.4	4.50	76.6	13.6	6.3	2050	77.6	4.67	61.7	105.1	4.87	6.6
	11.3	2.0	4.5	1580	62.1	42.2	4.03	75.8	15.4	5.7	1750	80.2	5.00	63.3	112.4	4.70	6.7
	11.3	2.0	4.5	1825	63.6	46.3	4.21	77.9	15.1	5.8	2050	81.8	4.79	65.4	106.9	5.00	6.8
	15.0	3.7	8.4	1580	63.2	42.6	3.90	76.4	16.2	5.2	1750	82.5	5.07	65.3	113.6	4.77	7.0
	15.0	3.7	8.4	1825	64.7	46.7	4.07	78.6	15.9	5.3	2050	84.1	4.86	67.5	108.0	5.07	7.1
85	7.5	0.2	0.5	1580	58.0	40.7	4.54	73.6	12.8	7.0	1750	79.6	4.98	62.8	112.1	4.69	6.7
	7.5	0.2	0.5	1825	59.4	44.7	4.74	75.6	12.5	7.1	2050	81.2	4.78	64.9	106.7	4.98	6.8
	11.3	1.9	4.4	1580	60.4	41.6	4.24	74.9	14.2	6.4	1750	84.0	5.12	66.6	114.5	4.81	7.0
	11.3	1.9	4.4	1825	61.8	45.6	4.43	76.9	14.0	6.6	2050	85.6	4.91	68.9	108.7	5.11	7.1
	15.0	3.6	8.2	1580	61.5	42.0	4.10	75.5	15.0	5.9	1750	86.5	5.20	68.8	115.8	4.88	7.3
	15.0	3.6	8.2	1825	63.0	46.1	4.28	77.6	14.7	6.0	2050	88.1	4.98	71.2	109.8	5.19	7.4
90	7.5	0.2	0.4	1580	56.2	40.1	4.78	72.6	11.8	8.0	1750	83.1	5.09	65.9	114.0	4.79	7.0
	7.5	0.2	0.4	1825	57.5	43.9	4.99	74.6	11.5	8.1	2050	84.7	4.88	68.1	108.3	5.09	7.1
	11.3	1.9	4.3	1580	58.7	41.0	4.46	73.9	13.2	7.4	1750	87.8	5.24	70.0	116.5	4.91	7.3
	11.3	1.9	4.3	1825	60.0	44.9	4.65	75.9	12.9	7.5	2050	89.5	5.02	72.4	110.4	5.22	7.4
	15.0	3.5	8.0	1580	59.9	41.4	4.31	74.6	13.9	6.7	1750	90.5	5.32	72.3	117.9	4.98	7.6
	15.0	3.5	8.0	1825	61.3	45.4	4.49	76.6	13.6	6.9	2050	92.2	5.10	74.8	111.7	5.30	7.7
100	7.5	0.1	0.3	1580	52.4	38.6	5.32	70.7	9.8	8.7	Operation not recommended						
	7.5	0.1	0.3	1825	53.6	42.3	5.55	72.6	9.7	8.9							
	11.3	1.8	4.2	1580	54.9	39.6	4.96	71.9	11.1	8.4							
	11.3	1.8	4.2	1825	56.2	43.4	5.18	73.9	10.9	8.6							
	15.0	3.3	7.6	1580	56.1	40.1	4.79	72.5	11.7	8.1							
	15.0	3.3	7.6	1825	57.5	43.9	5.00	74.6	11.5	8.3							
110	7.5	0.1	0.2	1580	48.6	37.1	5.95	69.0	8.2	10.5							
	7.5	0.1	0.2	1825	49.7	40.7	6.21	71.0	8.0	10.8							
	11.3	1.8	4.0	1580	51.0	38.1	5.54	70.0	9.2	10.2							
	11.3	1.8	4.0	1825	52.2	41.7	5.78	72.0	9.0	10.4							
	15.0	3.1	7.2	1580	52.2	38.6	5.34	70.6	9.8	9.8							
	15.0	3.1	7.2	1825	53.5	42.3	5.58	72.5	9.6	10.0							
120	7.5	0.1	0.1	1580	44.9	35.7	6.67	67.9	6.7	12.5							
	7.5	0.1	0.1	1825	46.0	39.2	6.97	69.8	6.6	12.8							
	11.3	1.7	3.9	1580	47.1	36.6	6.21	68.5	7.6	12.0							
	11.3	1.7	3.9	1825	48.3	40.1	6.48	70.5	7.4	12.3							
	15.0	2.9	6.8	1580	48.3	37.0	5.99	69.0	8.1	11.6							
	15.0	2.9	6.8	1825	49.5	40.6	6.25	70.9	7.9	11.8							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Performance Data — Tranquility® 27 Model 072 - Part Load

1500 CFM Nominal (ISO Rated) Airflow Cooling, 1600 CFM Nominal (ISO Rated) Airflow Heating

Performance capacities shown in thousands of Btuh

EWT °F	GPM	WPD		Cooling - EAT 80/67°F							Heating - EAT 70°F						
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	HW	Airflow CFM	HC	kW	HE	LAT	COP	HW
20	15	10.1	23.3	Operation not recommended							1400	32.5	3.69	20.4	91.5	2.58	3.2
	15	10.1	23.3								1600	33.0	3.57	20.9	89.1	2.70	3.2
30	7.5	1.7	3.9	1400	58.2	39.3	2.15	65.5	27.1	0.7	1400	36.3	3.75	24.0	94.0	2.84	3.5
	7.5	1.7	3.9	1500	58.7	40.7	2.19	66.2	26.8	0.8	1600	36.9	3.64	24.6	91.3	2.97	3.6
	11.25	3.9	9.0	1400	59.1	39.7	2.05	66.0	28.9	0.7	1400	37.7	3.77	25.2	94.9	2.93	3.7
	11.25	3.9	9.0	1500	59.6	41.2	2.08	66.7	28.4	0.7	1600	38.3	3.66	25.9	92.1	3.07	3.7
	15.0	6.9	15.9	1400	60.1	40.2	2.01	66.8	30.0	0.6	1400	38.4	3.78	25.9	95.4	2.98	3.8
	15.0	6.9	15.9	1500	60.5	41.7	2.04	67.5	29.4	0.7	1600	39.0	3.67	26.6	92.6	3.12	3.9
40	7.5	1.6	3.7	1400	60.2	40.2	2.34	68.1	25.7	1.4	1400	42.4	3.84	29.7	98.1	3.24	3.9
	7.5	1.6	3.7	1500	60.7	41.6	2.39	68.8	25.2	1.5	1600	43.1	3.73	30.5	94.9	3.39	3.9
	11.25	3.6	8.3	1400	60.9	40.6	2.22	68.4	27.4	1.3	1400	44.3	3.87	31.5	99.3	3.35	4.0
	11.25	3.6	8.3	1500	61.4	42.1	2.26	69.1	27.0	1.3	1600	45.0	3.75	32.3	96.0	3.52	4.1
	15.0	6.5	15.0	1400	61.5	40.9	2.16	68.8	28.5	1.2	1400	45.4	3.89	32.4	100.0	3.42	4.2
	15.0	6.5	15.0	1500	62.0	42.4	2.20	69.5	28.0	1.2	1600	46.1	3.77	33.3	96.7	3.58	4.2
50	7.5	1.5	3.5	1400	61.0	40.6	2.59	69.8	23.5	2.4	1400	49.1	3.94	35.9	102.5	3.65	4.1
	7.5	1.5	3.5	1500	61.5	42.1	2.64	70.5	23.1	2.5	1600	49.9	3.82	36.9	98.9	3.82	4.2
	11.25	3.4	7.9	1400	61.7	41.0	2.44	69.9	25.3	2.2	1400	51.5	3.98	38.2	104.1	3.80	4.3
	11.25	3.4	7.9	1500	62.2	42.5	2.48	70.6	24.9	2.2	1600	52.3	3.86	39.2	100.3	3.98	4.3
	15.0	6	13.9	1400	62.0	41.1	2.36	70.0	26.2	1.9	1400	52.9	4.00	39.5	105.0	3.88	4.4
	15.0	6	13.9	1500	62.5	42.6	2.41	70.7	25.8	2.0	1600	53.7	3.88	40.5	101.1	4.06	4.5
60	7.5	1.4	3.2	1400	58.8	39.6	2.88	68.6	20.4	5.5	1400	56.1	4.05	42.5	107.1	4.06	4.6
	7.5	1.4	3.2	1500	59.3	41.0	2.93	69.3	20.1	5.6	1600	56.9	3.92	43.6	103.0	4.25	4.6
	11.25	3.1	7.2	1400	60.3	40.3	2.70	69.4	22.4	4.9	1400	59.0	4.09	45.2	109.0	4.22	4.7
	11.25	3.1	7.2	1500	60.7	41.7	2.75	70.1	22.0	5.0	1600	59.9	3.97	46.4	104.7	4.43	4.8
	15.0	5.4	12.5	1400	60.9	40.6	2.61	69.7	23.3	4.3	1400	60.6	4.12	46.7	110.1	4.31	4.9
	15.0	5.4	12.5	1500	61.3	42.0	2.66	70.4	22.9	4.4	1600	61.6	3.99	48.0	105.6	4.52	5.0
70	7.5	1.3	3.0	1400	55.9	38.2	3.21	66.9	17.4	4.8	1400	63.1	4.16	49.0	111.8	4.45	5.0
	7.5	1.3	3.0	1500	56.4	39.6	3.27	67.5	17.1	4.9	1600	64.1	4.03	50.3	107.1	4.66	5.1
	11.25	3	6.9	1400	57.8	39.0	3.00	68.0	19.2	4.3	1400	66.5	4.22	52.1	114.0	4.62	5.2
	11.25	3	6.9	1500	58.2	40.5	3.06	68.7	18.9	4.4	1600	67.5	4.09	53.5	109.1	4.84	5.3
	15.0	5.4	12.5	1400	58.6	39.4	2.90	68.5	20.2	3.8	1400	68.3	4.25	53.8	115.2	4.71	5.4
	15.0	5.4	12.5	1500	59.1	40.9	2.96	69.2	19.8	3.9	1600	69.3	4.12	55.3	110.1	4.94	5.5
80	7.5	1.3	3.0	1400	52.5	36.8	3.59	64.8	14.7	6.3	1400	70.0	4.28	55.4	116.3	4.80	5.4
	7.5	1.3	3.0	1500	53.0	38.1	3.65	65.5	14.4	6.4	1600	71.1	4.15	56.9	111.1	5.02	5.5
	11.25	2.8	6.5	1400	54.6	37.6	3.36	66.0	16.3	5.8	1400	73.6	4.35	58.7	118.7	4.96	5.6
	11.25	2.8	6.5	1500	55.0	39.0	3.42	66.7	16.0	5.9	1600	74.7	4.21	60.3	113.2	5.20	5.7
	15.0	5	11.6	1400	55.6	38.1	3.25	66.6	17.1	5.3	1400	75.5	4.38	60.5	119.9	5.05	5.8
	15.0	5	11.6	1500	56.0	39.4	3.31	67.3	16.8	5.4	1600	76.6	4.25	62.1	114.4	5.29	5.9
85	7.5	1.3	3.0	1400	50.8	36.1	3.80	63.8	13.4	7.6	1400	73.3	4.34	58.4	118.5	4.95	5.6
	7.5	1.3	3.0	1500	51.2	37.4	3.87	64.4	13.2	7.7	1600	74.4	4.21	60.0	113.1	5.18	5.7
	11.25	2.8	6.5	1400	52.8	36.9	3.56	65.0	14.9	7.0	1400	76.9	4.42	61.7	120.8	5.10	5.8
	11.25	2.8	6.5	1500	53.2	38.2	3.63	65.6	14.6	7.1	1600	78.0	4.28	63.4	115.2	5.34	5.9
	15.0	5	11.6	1400	53.8	37.3	3.44	65.6	15.7	6.4	1400	78.7	4.46	63.4	122.0	5.17	6.0
	15.0	5	11.6	1500	54.2	38.7	3.51	66.2	15.4	6.5	1600	79.9	4.32	65.1	116.2	5.42	6.1
90	7.5	1.3	3.0	1400	49.0	35.4	4.02	62.7	12.2	8.6	1400	76.5	4.41	61.4	120.6	5.09	5.8
	7.5	1.3	3.0	1500	49.4	36.6	4.09	63.3	12.0	8.8	1600	77.7	4.27	63.1	115.0	5.33	5.9
	11.25	2.8	6.5	1400	51.0	36.1	3.76	63.9	13.5	8.0	1400	80.1	4.49	64.7	123.0	5.23	6.0
	11.25	2.8	6.5	1500	51.4	37.5	3.83	64.5	13.3	8.1	1600	81.3	4.35	66.4	117.1	5.48	6.1
	15.0	5	11.6	1400	52.1	36.6	3.64	64.5	14.3	7.3	1400	81.9	4.53	66.3	124.2	5.30	6.2
	15.0	5	11.6	1500	52.5	37.9	3.71	65.2	14.0	7.5	1600	83.1	4.39	68.1	118.1	5.55	6.3
100	7.5	1.2	2.8	1400	45.4	34.1	4.51	60.9	10.1	10.2	Operation not recommended						
	7.5	1.2	2.8	1500	45.8	35.4	4.59	61.5	9.9	10.4							
	11.25	2.7	6.2	1400	47.3	34.8	4.23	61.8	11.2	9.8							
	11.25	2.7	6.2	1500	47.7	36.0	4.31	62.5	11.0	10.0							
	15.0	4.8	11.1	1400	48.4	35.1	4.09	62.4	11.8	9.4							
	15.0	4.8	11.1	1500	48.7	36.4	4.17	63.0	11.6	9.6							
110	7.5	1.1	2.5	1400	42.2	33.3	5.06	59.6	8.3	13.2							
	7.5	1.1	2.5	1500	42.6	34.5	5.15	60.2	8.2	13.5							
	11.25	2.5	5.8	1400	43.9	33.7	4.75	60.2	9.2	12.7							
	11.25	2.5	5.8	1500	44.2	34.9	4.84	60.8	9.1	13.0							
	15.0	4.5	10.4	1400	44.8	34.0	4.61	60.6	9.7	12.2							
	5.0	4.5	10.4	1500	45.1	35.2	4.69	61.2	9.6	12.5							
120	7.5	1.1	2.5	1400	39.6	33.1	5.70	59.2	7.0	16.7							
	7.5	1.1	2.5	1500	40.0	34.3	5.80	59.8	6.8	17.1							
	11.25	2.4	5.5	1400	40.9	33.1	5.35	59.3	7.6	16.1							
	11.25	2.4	5.5	1500	41.2	34.3	5.45	59.9	7.5	16.5							
	15.0	4.3	9.9	1400	41.6	33.2	5.19	59.4	8.0	15.5							
	15.0	4.3	9.9	1500	42.0	34.4	5.28	60.0	7.9	15.8							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Performance Data — Tranquility® 27 Model 072 - Full Load

1950 CFM Nominal (Rated) Airflow Cooling, 2100 CFM Nominal (Rated) Airflow Heating

Performance capacities shown in thousands of Btuh

EWT °F	GPM	WPD		Cooling - EAT 80/67°F							Heating - EAT 70°F						
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	HW	Airflow CFM	HC	kW	HE	LAT	COP	HW
20	17.0	10.1	23.3	Operation not recommended							1850	44.6	4.82	28.8	92.3	2.7	3.8
	17.0	10.1	23.3								2100	45.3	4.67	29.6	90.0	2.8	3.8
30	8.5	2.2	5.1	1830	74.3	47.4	3.2	85.2	23.2	1.0	1850	49.0	4.89	32.8	94.5	2.9	4.6
	8.5	2.2	5.1	1950	74.9	49.2	3.3	86.0	23.0	1.1	2100	49.7	4.74	33.7	91.9	3.1	4.7
	12.8	5.0	11.6	1830	74.8	47.9	3.1	85.2	24.3	1.0	1850	51.1	4.94	34.8	95.6	3.0	4.8
	12.8	5.0	11.6	1950	75.4	49.6	3.1	86.1	24.1	1.0	2100	51.9	4.78	35.7	92.9	3.2	4.9
	17.0	8.9	20.6	1830	75.4	48.3	3.0	85.4	25.5	0.9	1850	52.3	4.96	35.8	96.2	3.1	5.0
	17.0	8.9	20.6	1950	76.0	50.0	3.0	86.3	25.3	0.9	2100	53.1	4.81	36.8	93.4	3.2	5.1
40	8.5	2.1	4.9	1830	78.6	49.6	3.4	90.1	23.1	2.2	1850	56.8	5.06	40.0	98.4	3.3	5.4
	8.5	2.1	4.9	1950	79.2	51.4	3.5	91.0	22.9	2.3	2100	57.7	4.90	41.1	95.4	3.4	5.5
	12.8	4.7	10.9	1830	79.1	50.0	3.3	90.2	24.0	2.0	1850	59.7	5.13	42.7	99.9	3.4	5.6
	12.8	4.7	10.9	1950	79.7	51.8	3.4	91.1	23.8	2.0	2100	60.6	4.97	43.8	96.7	3.6	5.7
	17.0	8.3	19.2	1830	79.6	50.3	3.2	90.3	25.1	1.8	1850	61.4	5.17	44.2	100.7	3.5	5.8
	17.0	8.3	19.2	1950	80.2	52.2	3.2	91.2	24.8	1.8	2100	62.3	5.01	45.3	97.5	3.6	5.9
50	8.5	1.9	4.4	1830	79.5	49.9	3.9	92.7	20.4	3.8	1850	65.5	5.27	47.9	102.8	3.6	6.2
	8.5	1.9	4.4	1950	80.1	51.7	4.0	93.7	20.2	3.9	2100	66.5	5.11	49.1	99.3	3.8	6.3
	12.8	4.3	9.9	1830	80.1	50.6	3.7	92.9	21.4	3.4	1850	69.3	5.37	51.3	104.7	3.8	6.4
	12.8	4.3	9.9	1950	80.8	52.5	3.8	93.8	21.2	3.5	2100	70.3	5.21	52.7	101.0	4.0	6.5
	17.0	7.7	17.8	1830	80.7	51.1	3.6	92.9	22.3	3.0	1850	71.4	5.43	53.2	105.7	3.9	6.7
	17.0	7.7	17.8	1950	81.3	53.0	3.7	93.9	22.1	3.1	2100	72.5	5.26	54.6	102.0	4.0	6.8
60	8.5	1.7	3.9	1830	77.4	49.0	4.4	92.5	17.5	5.5	1850	74.7	5.52	56.1	107.4	4.0	7.0
	8.5	1.7	3.9	1950	78.0	50.8	4.5	93.4	17.3	5.6	2100	75.8	5.35	57.6	103.4	4.2	7.1
	12.8	3.9	9.0	1830	78.2	49.6	4.2	92.7	18.5	4.9	1850	79.2	5.66	60.2	109.7	4.1	7.3
	12.8	3.9	9.0	1950	78.9	51.4	4.3	93.6	18.3	5.0	2100	80.5	5.49	61.8	105.5	4.3	7.4
	17.0	7.0	16.2	1830	79.1	50.0	4.2	93.2	19.0	4.3	1850	81.8	5.74	62.4	110.9	4.2	7.6
	17.0	7.0	16.2	1950	79.7	51.8	4.2	94.2	18.8	4.4	2100	83.0	5.56	64.1	106.6	4.4	7.7
70	8.5	1.7	3.9	1830	71.9	48.6	4.8	88.2	15.0	7.5	1850	84.0	5.81	64.4	112.0	4.2	7.9
	8.5	1.7	3.9	1950	72.5	50.3	4.9	89.1	14.9	7.7	2100	85.3	5.63	66.1	107.6	4.4	8.0
	12.8	3.9	9.0	1830	74.4	48.9	4.5	89.8	16.5	6.7	1850	89.2	5.99	68.9	114.6	4.4	8.2
	12.8	3.9	9.0	1950	75.0	50.7	4.6	90.8	16.3	6.8	2100	90.5	5.80	70.7	109.9	4.6	8.3
	17.0	6.9	15.9	1830	75.5	49.1	4.4	90.5	17.1	5.9	1850	92.0	6.09	71.3	116.0	4.4	8.5
	17.0	6.9	15.9	1950	76.1	50.8	4.5	91.4	16.9	6.0	2100	93.4	5.90	73.2	111.2	4.6	8.7
80	8.5	1.6	3.7	1830	67.5	48.0	5.2	85.4	13.0	9.1	1850	93.1	6.13	72.3	116.6	4.5	8.6
	8.5	1.6	3.7	1950	68.1	49.8	5.3	86.2	12.8	9.3	2100	94.5	5.94	74.3	111.7	4.7	8.8
	12.8	3.6	8.3	1830	70.6	48.4	4.9	87.4	14.4	8.4	1850	98.6	6.34	77.0	119.3	4.6	9.0
	12.8	3.6	8.3	1950	71.2	50.2	5.0	88.2	14.2	8.5	2100	100.1	6.15	79.1	114.1	4.8	9.1
	17.0	6.5	15.0	1830	72.0	48.6	4.8	88.3	15.1	7.7	1850	101.4	6.46	79.4	120.7	4.6	9.4
	17.0	6.5	15.0	1950	72.6	50.4	4.9	89.2	15.0	7.8	2100	102.9	6.26	81.5	115.4	4.8	9.5
85	8.5	1.6	3.7	1830	65.2	47.6	5.5	83.9	12.0	10.3	1850	97.4	6.30	76.0	118.7	4.5	9.0
	8.5	1.6	3.7	1950	65.7	49.3	5.6	84.8	11.9	10.5	2100	98.9	6.11	78.0	113.6	4.7	9.2
	12.8	3.6	8.3	1830	68.3	48.1	5.1	85.9	13.3	9.5	1850	102.7	6.53	80.5	121.4	4.6	9.4
	12.8	3.6	8.3	1950	68.8	49.8	5.2	86.7	13.2	9.7	2100	104.3	6.33	82.7	116.0	4.8	9.6
	17.0	6.5	15.0	1830	69.8	48.3	5.0	86.9	14.0	8.7	1850	105.4	6.67	82.8	122.8	4.6	9.8
	17.0	6.5	15.0	1950	70.4	50.1	5.1	87.7	13.9	8.9	2100	107.0	6.46	85.0	117.2	4.9	9.9
90	8.5	1.6	3.7	1830	62.9	47.1	5.7	82.5	11.0	11.8	1850	101.6	6.48	79.6	120.9	4.6	9.4
	8.5	1.6	3.7	1950	63.4	48.8	5.8	83.3	10.9	12.0	2100	103.2	6.27	81.8	115.5	4.8	9.6
	12.8	3.6	8.3	1830	66.0	47.8	5.4	84.4	12.3	10.9	1850	106.9	6.73	84.0	123.5	4.7	9.8
	12.8	3.6	8.3	1950	66.5	49.5	5.5	85.2	12.1	11.1	2100	108.5	6.52	86.3	117.9	4.9	10.0
	17.0	6.5	15.0	1830	67.6	48.0	5.2	85.4	13.0	9.9	1850	109.5	6.87	86.1	124.8	4.7	10.2
	17.0	6.5	15.0	1950	68.1	49.8	5.3	86.3	12.8	10.2	2100	111.1	6.65	88.4	119.0	4.9	10.4
100	8.5	1.5	3.5	1830	58.4	45.7	6.3	80.0	9.3	12.9	Operation not recommended						
	8.5	1.5	3.5	1950	58.8	47.3	6.4	80.8	9.2	13.2							
	12.8	3.4	7.9	1830	61.2	46.6	5.9	81.5	10.3	12.5							
	12.8	3.4	7.9	1950	61.7	48.3	6.0	82.3	10.2	12.7							
	17.0	6.1	14.1	1830	62.7	47.1	5.7	82.4	10.9	12.0							
	17.0	6.1	14.1	1950	63.2	48.8	5.8	83.2	10.8	12.2							
110	8.5	1.4	3.2	1830	54.7	43.8	6.9	78.5	7.9	15.6							
	8.5	1.4	3.2	1950	55.1	45.4	7.1	79.3	7.8	16.0							
	12.8	3.3	7.6	1830	56.8	45.0	6.5	79.3	8.7	15.0							
	12.8	3.3	7.6	1950	57.3	46.6	6.6	80.1	8.6	15.4							
	17.0	5.8	13.4	1830	58.1	45.6	6.3	79.9	9.2	14.5							
	17.0	5.8	13.4	1950	58.6	47.2	6.4	80.7	9.1	14.8							
120	8.5	1.4	3.2	1830	52.5	41.8	7.6	78.7	6.9	18.6							
	8.5	1.4	3.2	1950	52.9	43.3	7.8	79.5	6.8	19.0							
	12.8	3.1	7.2	1830	53.6	43.0	7.2	78.3	7.5	17.9							
	12.8	3.1	7.2	1950	54.0	44.6	7.3	79.1	7.4	18.2							
	17.0	5.6	12.9	1830	54.4	43.7	7.0	78.4	7.8	17.2							
	17.0	5.6	12.9	1950	54.9	45.2	7.1	79.2	7.7	17.6							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Physical Data

Model	026	038	049	064	072
Compressor (1 Each)	Copeland UltraTech Two-Stage Scroll				
Factory Charge HFC-410a, oz [kg]	58 [1.64]	78 [2.21]	81 [2.30]	144 [4.08]	156 [4.42]
ECM Fan Motor & Blower Wheel					
Fan Motor Type & Speeds	ECM Variable Speed				
Fan Motor, hp [W]	1/2 [373]	1/2 [373]	1 [746]	1 [746]	1 [746]
Blower Wheel Size (Dia x W), in [mm]	9 x 7 [229 x 178]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
Water Connection Size					
Swivel - Residential Class	1”	1”	1”	1”	1”
HWG Water Connection Size					
Swivel - Residential Class	1”	1”	1”	1”	1”
Vertical Upflow/Downflow					
Air Coil Dimensions (H x W), in [mm]	28 x 20 [711 x 542]	28 x 25 [711 x 635]	32 x 25 [813 x 635]	36 x 25 [914 x 635]	36 x 25 [914 x 635]
Standard Filter - 2” [51mm] Pleated MERV11 Throwaway, in [mm]	28 x 24 [712 x 610]	28 x 29.5 [712 x 749]	32 x 29.5 [813 x 749]	36 x 29.5 [914 x 749]	36 x 29.5 [914 x 749]
Weight - Operating, lbs [kg]	266 [120.7	327 [148.6]	416 [189.1]	443 [201.4]	443 [201]
Weight - Packaged, lbs [kg]	276 [125.2]	337 [153.2]	426 [193.6]	453 [205.9]	453 [206]
Horizontal					
Air Coil Dimensions (H x W), in [mm]	18 x 31 [457 x 787]	20 x 35 [508 x 889]	20 x 40 [508 x 1018]	20 x 45 [508 x 1143]	20 x 45 [508 x 1143]
Standard Filter - 2” [51mm] Pleated MERV11 Throwaway, in [mm]	2 - 18 x 18 [457 x 457]	1 - 12 x 20 [305 x 508] 1 - 20 x 25 [508 x 635]	1 - 18 x 20 [457 x 508] 1 - 20 x 24 [508 x 610]	2 - 20 x 24 [508 x 610]	2 - 20 x 24 [508 x 610]
Weight - Operating, lbs [kg]	266 [120.7]	327 [148.6]	416 [189.1]	443 [201.4]	443 [201]
Weight - Packaged, lbs [kg]	276 [125.2]	337 [153.2]	426 [193.6]	453 [205.9]	453 [206]

All units have grommet compressor mountings, TXV expansion devices, and 1/2” [12.7mm] & 3/4” [19.1mm] electrical knockouts.

Dimensions — Vertical Upflow Tranquility® 27

Vertical Upflow Model		Overall Cabinet		
		A Width	B Depth	C Height
TT026	in	22.4	25.6	48.5
	cm	56.8	65.1	123.2
TT038	in	25.4	30.6	50.5
	cm	64.5	77.8	128.3
TT049	in	25.4	30.6	54.5
	cm	64.5	77.8	138.4
TT064	in	25.4	30.6	58.5
	cm	64.5	77.8	148.6
TT072	in	25.4	30.6	58.5
	cm	64.5	77.8	148.6

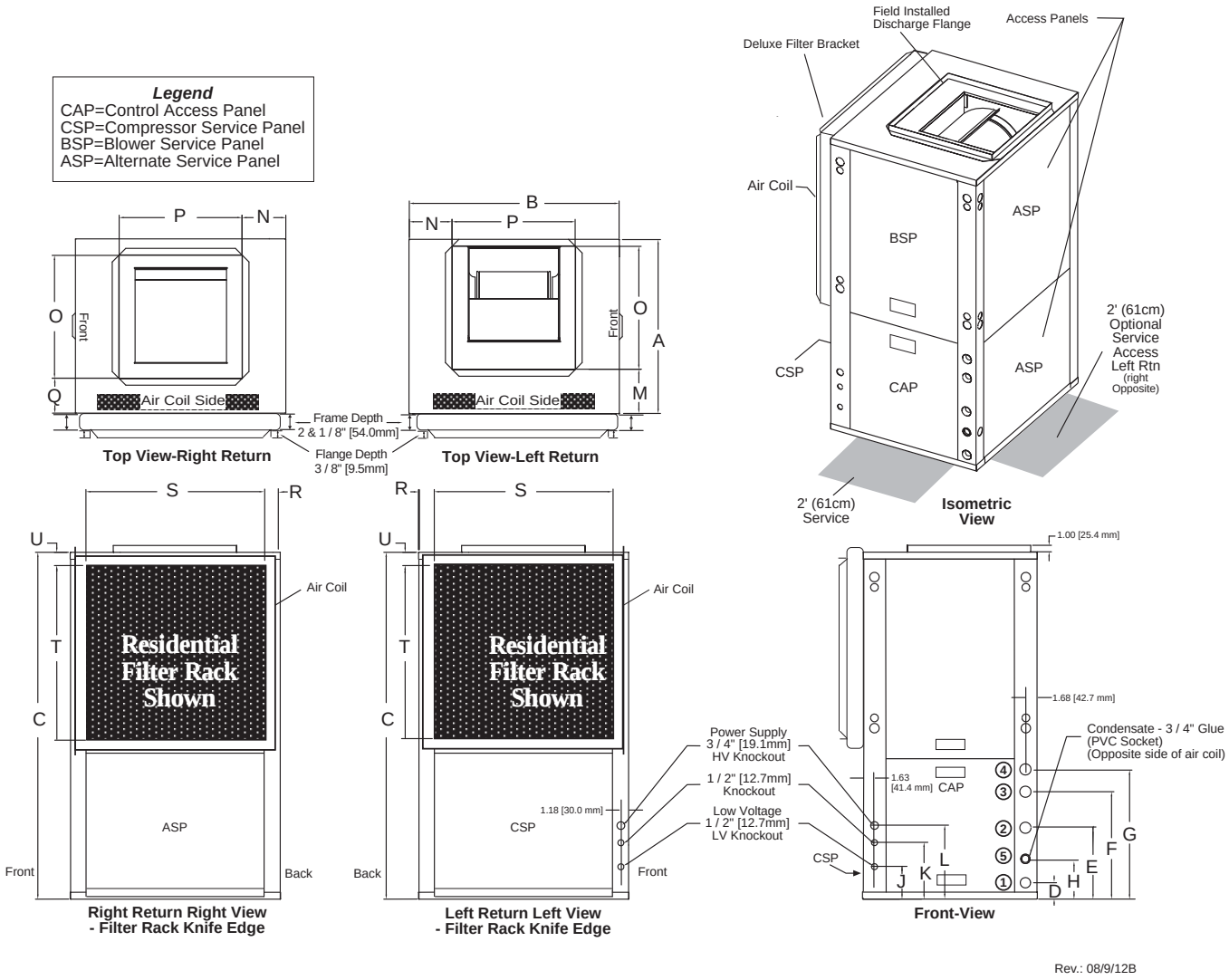
Vertical Upflow Model		Water Connections						
		1	2	3	4	5		
		D In	E Out	F HWG IN	G HWG Out	H Condensate	Loop Water FPT	HWG FPT
026	in	2.1	10.0	13.9	16.9	7.8	1” Swivel	1” Swivel
	cm	5.2	25.4	35.2	42.9	19.8		
038	in	3.4	10.8	15.6	18.9	7.8	1” Swivel	1” Swivel
	cm	8.6	27.5	39.7	47.9	19.8		
049	in	3.4	10.8	15.6	18.9	7.8	1” Swivel	1” Swivel
	cm	8.6	27.5	39.7	47.9	19.8		
064	in	3.4	10.8	15.6	18.9	7.8	1” Swivel	1” Swivel
	cm	8.6	27.5	39.7	47.9	19.8		
072	in	3.4	10.8	15.6	18.9	7.8	1” Swivel	1” Swivel
	cm	8.6	27.5	39.7	47.9	19.7		

Vertical Upflow Model		Electrical Knockouts		
		J 1/2”	K 1/2”	L 3/4”
		Low Voltage	External Pump	Power Supply
026	in	3.6	6.1	8.6
	cm	9.2	15.6	21.9
038	in	3.6	6.1	8.6
	cm	9.2	15.6	21.9
049	in	3.6	6.1	8.6
	cm	9.2	15.6	21.9
064	in	3.6	6.1	8.6
	cm	9.2	15.6	21.9
072	in	3.6	6.1	8.6
	cm	9.2	15.6	21.9

Condensate is 3/4” PVC female glue socket and is switchable from front to side.
Unit shipped with deluxe duct collar/filter rack extending from unit 3” [7.6cm] and is suitable for duct connection.
Discharge flange is field installed.

Dimensions — Vertical Upflow Tranquility® 27

Vertical Upflow Model		Discharge Connection Duct Flange Installed (+/- 0.20 in, +/- 5.1mm)					Return Connection Standard Deluxe Filter Rack (+/- 0.20 in, +/- 5.1mm)			
		M Left Return	N	O Supply Width	P Supply Depth	Q Right Return	R	S Return Depth	T Return Height	U
026	in	7.8	5.8	14.0	14.0	4.9	1.7	22.2	26.2	1.7
	cm	18.3	14.8	35.6	35.6	12.4	4.3	56.4	66.5	4.3
038	in	6.4	6.3	18.0	18.0	5.3	1.7	27.2	26.2	1.7
	cm	16.1	16.0	45.7	45.7	13.5	4.3	69.1	66.5	4.3
049	in	6.4	6.3	18.0	18.0	5.3	1.7	27.2	30.2	1.7
	cm	16.1	16.0	45.7	45.7	13.5	4.3	69.1	76.7	4.3
064	in	6.4	6.3	18.0	18.0	5.3	1.7	27.2	34.2	1.7
	cm	16.1	16.0	45.7	45.7	13.5	4.3	69.1	86.9	4.3
072	in	6.4	6.3	18.0	18.0	5.3	1.7	27.2	34.2	1.7
	cm	16.1	16.0	45.7	45.7	13.5	4.3	69.1	86.9	4.3



Rev.: 08/9/12B

Dimensions — Vertical Downflow Tranquility® 27

Vertical Downflow Model		Overall Cabinet		
		A Width	B Depth	C Height
026	in	22.4	25.6	52.5
	cm	56.8	65.1	133.4
038	in	25.4	30.6	54.5
	cm	64.5	77.8	138.4
049	in	25.4	30.6	58.5
	cm	64.5	77.8	148.6
064	in	25.4	30.6	62.5
	cm	64.5	77.8	158.8
072	in	25.4	30.6	62.5
	cm	64.5	77.8	158.8

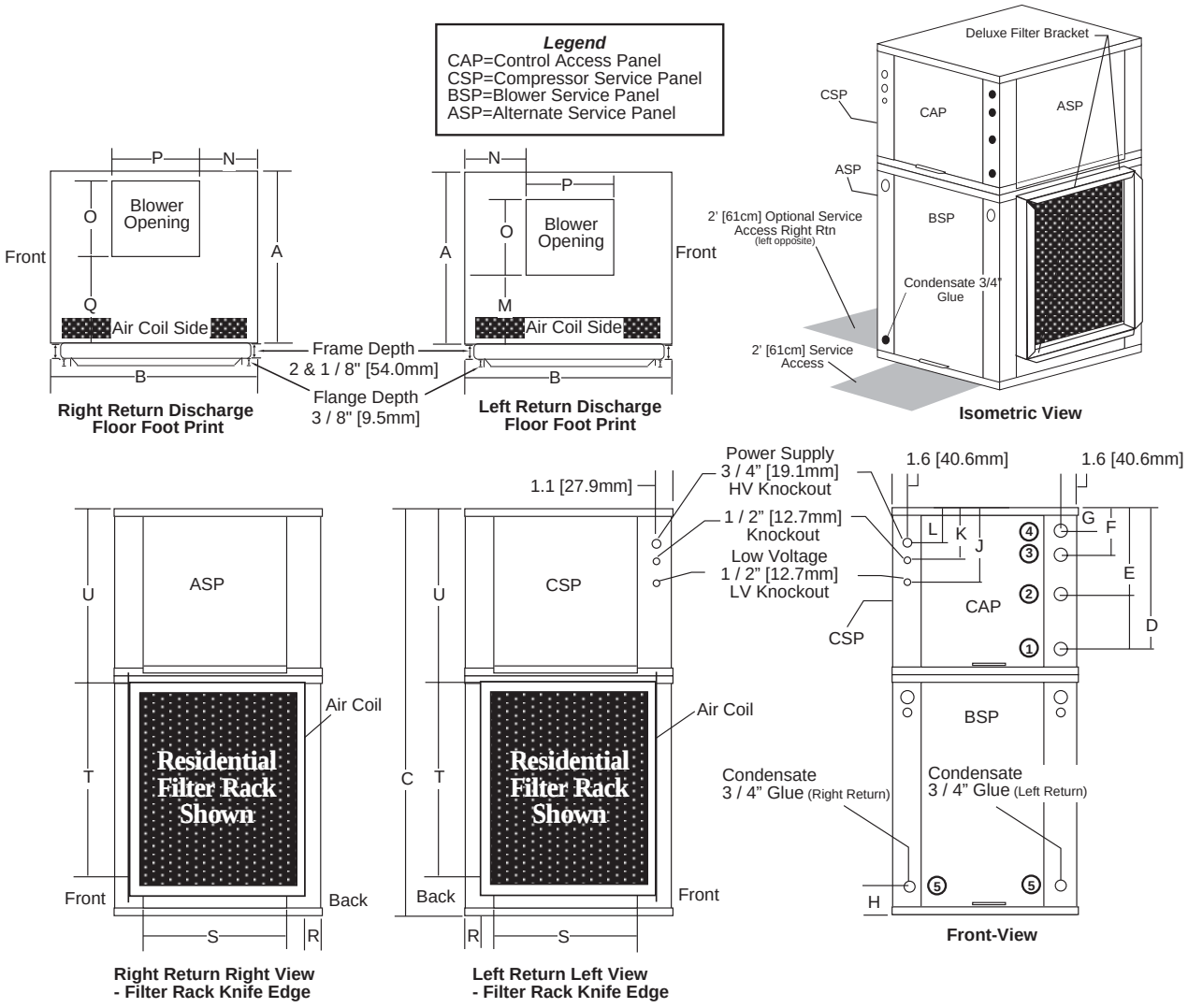
Vertical Downflow Model		Water Connections						
		1	2	3	4	5		
		D In	E Out	F HWG IN	G HWG Out	H Condensate	Loop Water FPT	HWG FPT
026	in	17.2	9.3	5.4	2.4	3.6	1”	1”
	cm	43.7	23.6	13.7	6.1	9.2	Swivel	Swivel
038	in	17.9	10.5	5.7	2.4	3.6	1”	1”
	cm	45.5	26.7	14.5	6.1	9.2	Swivel	Swivel
049	in	17.9	10.5	5.7	2.4	3.6	1”	1”
	cm	45.5	26.7	14.5	6.1	9.2	Swivel	Swivel
064	in	17.9	10.5	5.7	2.4	3.6	1”	1”
	cm	45.5	26.7	14.5	6.1	9.2	Swivel	Swivel
072	in	17.9	10.5	5.7	2.4	3.6	1”	1”
	cm	45.5	26.7	14.5	6.1	9.2	Swivel	Swivel

Vertical Downflow Model		Electrical Knockouts		
		J 1/2”	K 1/2”	L 3/4”
		Low Voltage	External Pump	Power Supply
026	in	15.7	13.2	10.7
	cm	39.9	33.5	27.2
038	in	17.7	15.2	12.7
	cm	45.0	38.6	32.3
049	in	17.7	15.2	12.7
	cm	45.0	38.6	32.3
064	in	17.7	15.2	12.7
	cm	45.0	38.6	32.3
072	in	17.7	15.2	12.7
	cm	45.0	38.6	32.3

Condensate is 3/4” PVC female glue socket and is switchable from front to side.
Unit shipped with deluxe duct collar/filter rack extending from unit 3” [7.6cm] and is suitable for duct connection.
Downflow unit does not have discharge flange, and is rated for zero clearance installation.

Dimensions — Vertical Downflow Tranquility® 27

Vertical Downflow Model		Discharge Connection Duct Flange Installed (+/- 0.20 in, +/- 5.1mm)					Return Connection Standard Deluxe Filter Rack (+/- 0.20 in, +/- 5.1mm)			
		M Left Return	N	O Supply Width	P Supply Depth	Q Right Return	R	S Return Depth	T Return Height	U
026	in	6.7	8.4	9.9	9.1	10.8	1.7	22.2	26.2	21.9
	cm	17.1	21.4	25.3	23.0	27.4	4.3	56.4	66.5	55.6
038	in	7.4	9.0	13.1	12.9	10.4	1.7	27.2	26.2	23.9
	cm	18.7	22.9	33.3	32.7	26.5	4.3	69.1	66.5	60.7
049	in	7.4	9.0	13.1	12.9	10.4	1.7	27.2	30.2	23.9
	cm	18.7	22.9	33.3	32.7	26.5	4.3	69.1	76.7	60.7
064	in	7.4	9.0	13.1	12.9	10.4	1.7	27.2	34.2	23.9
	cm	18.7	22.9	33.3	32.7	26.5	4.3	69.1	86.9	60.7
072	in	7.4	9.0	13.1	12.9	10.4	1.7	27.2	34.2	23.9
	cm	18.7	22.9	33.3	32.7	26.5	4.3	69.1	86.9	60.7



Dimensions — Horizontal Tranquility® 27

Horizontal Model		Overall Cabinet		
		A Width	B Depth	C Height
026	in	22.4	62.2	19.3
	cm	56.8	158.0	48.9
038	in	25.4	71.2	21.3
	cm	64.5	180.8	54.0
049	in	25.4	76.2	21.3
	cm	64.5	193.5	54.0
064	in	25.4	81.2	21.3
	cm	64.5	206.2	54.0
072	in	25.4	81.2	21.3
	cm	64.5	206.2	54.0

Horizontal Model		Water Connections						
		1	2	3	4	5		
		D In	E Out	F HWG IN	G HWG Out	H Condensate	Loop Water FPT	HWG FPT
026	in	2.1	10.0	13.9	16.9	0.6	1”	1”
	cm	5.2	25.4	35.2	42.9	1.5	Swivel	Swivel
038	in	3.4	10.8	15.6	18.9	0.6	1”	1”
	cm	8.6	27.5	39.7	47.9	1.5	Swivel	Swivel
049	in	3.4	10.8	15.6	18.9	0.6	1”	1”
	cm	8.6	27.5	39.7	47.9	1.5	Swivel	Swivel
064	in	3.4	10.8	15.6	18.9	0.6	1”	1”
	cm	8.6	27.5	39.7	47.9	1.5	Swivel	Swivel
072	in	3.4	10.8	15.6	18.9	0.6	1”	1”
	cm	8.6	27.5	39.7	47.9	1.5	Swivel	Swivel

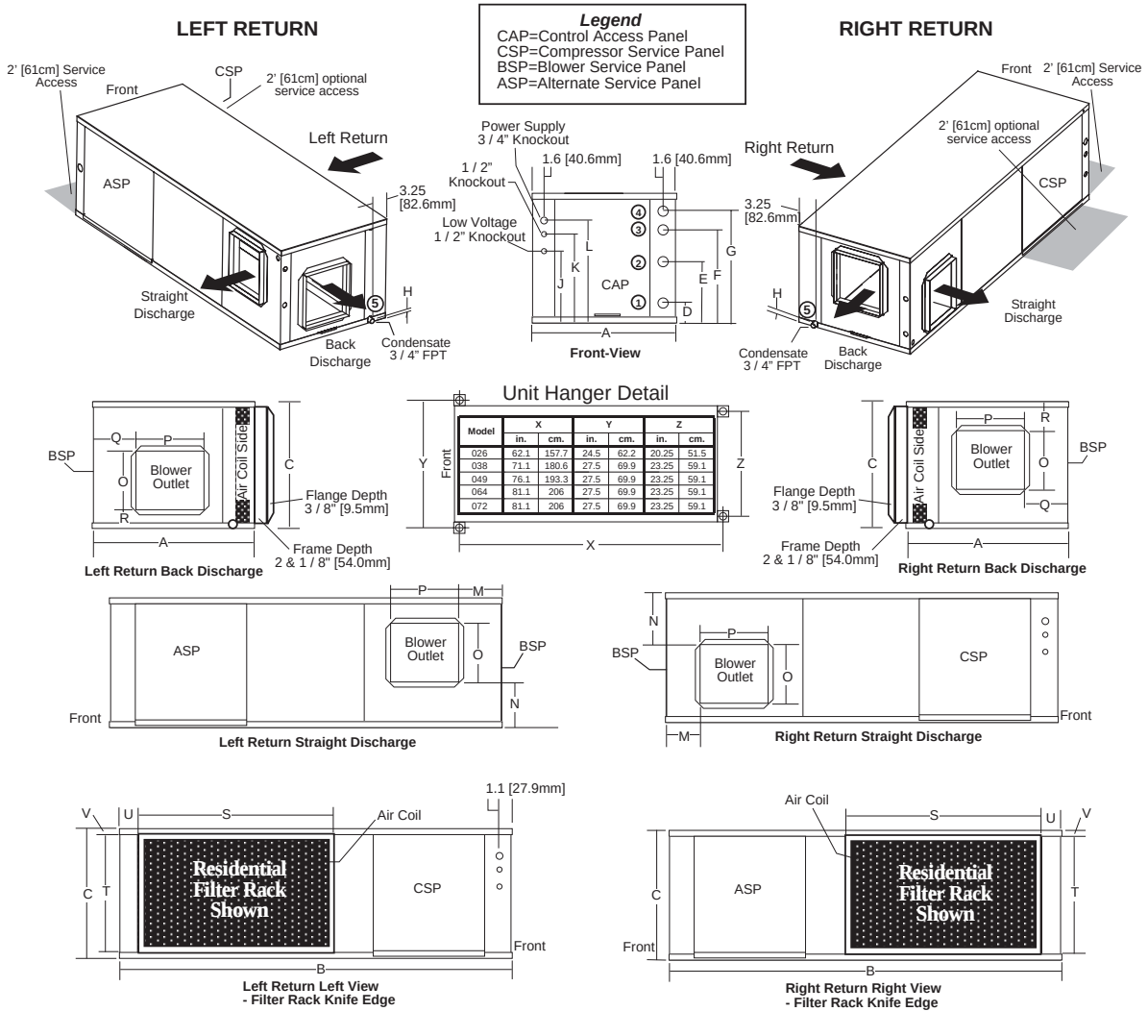
Horizontal Model		Electrical Knockouts		
		J 1/2”	K 1/2”	L 3/4”
		Low Voltage	External Pump	Power Supply
026	in	3.6	6.1	8.6
	cm	9.2	15.6	21.9
038	in	3.4	6.1	8.6
	cm	9.2	15.6	21.9
049	in	3.6	6.1	8.6
	cm	9.2	15.6	21.9
064	in	3.6	6.1	8.6
	cm	9.2	15.6	21.9
072	in	3.6	6.1	8.6
	cm	9.2	15.6	21.9

Condensate is 3/4” FPT.
Unit shipped with deluxe duct collar/filter rack extending from unit 3” [7.6cm] and is suitable for duct connection.
Discharge flange and hanger brackets are factory installed.

Dimensions — Horizontal Tranquility® 27

Horizontal Model		1Discharge Connection Duct Flange Installed (+/- 0.20 in, +/- 5.1mm)						Return Connection Standard Deluxe Filter Rack (+/- 0.20 in, +/- 5.1mm)			
		M	N	O Supply Height	P Supply Width	Q	R	S Return Width	T Return Height	U	V
026	in	3.6	2.0	12.5	15.5	3.6	2.0	33.8	16.2	2.3	1.7
	cm	9.3	5.1	31.8	39.4	9.2	5.2	85.8	41.0	5.8	4.3
038	in	*3.1	1.2	19.0	17.5	*3.1	1.0	34.8	18.2	3.1	1.7
	cm	7.9	3.1	48.3	44.5	7.9	2.6	88.3	46.1	7.8	4.3
049	in	3.1	1.2	19.0	17.5	3.1	1.0	39.8	18.2	3.1	1.7
	cm	7.9	3.1	48.3	44.5	7.9	2.6	101.0	46.1	7.8	4.3
064	in	3.1	1.2	19.0	17.5	3.1	1.0	44.8	18.2	3.1	1.7
	cm	7.9	3.1	48.3	44.5	7.9	2.6	113.7	46.1	7.8	4.3
072	in	3.1	1.2	19.0	17.5	3.1	1.0	44.8	18.2	3.1	1.7
	cm	7.9	3.1	48.3	44.5	7.9	2.6	113.7	46.1	7.8	4.3

*For units with modulating reheat option this dimension is 2.9" (7.4 cm).
1Discharge connection will change when using the accessory auxiliary electric heat package. Refer to the heater IOM for details.



Rev.: 06/18/10B

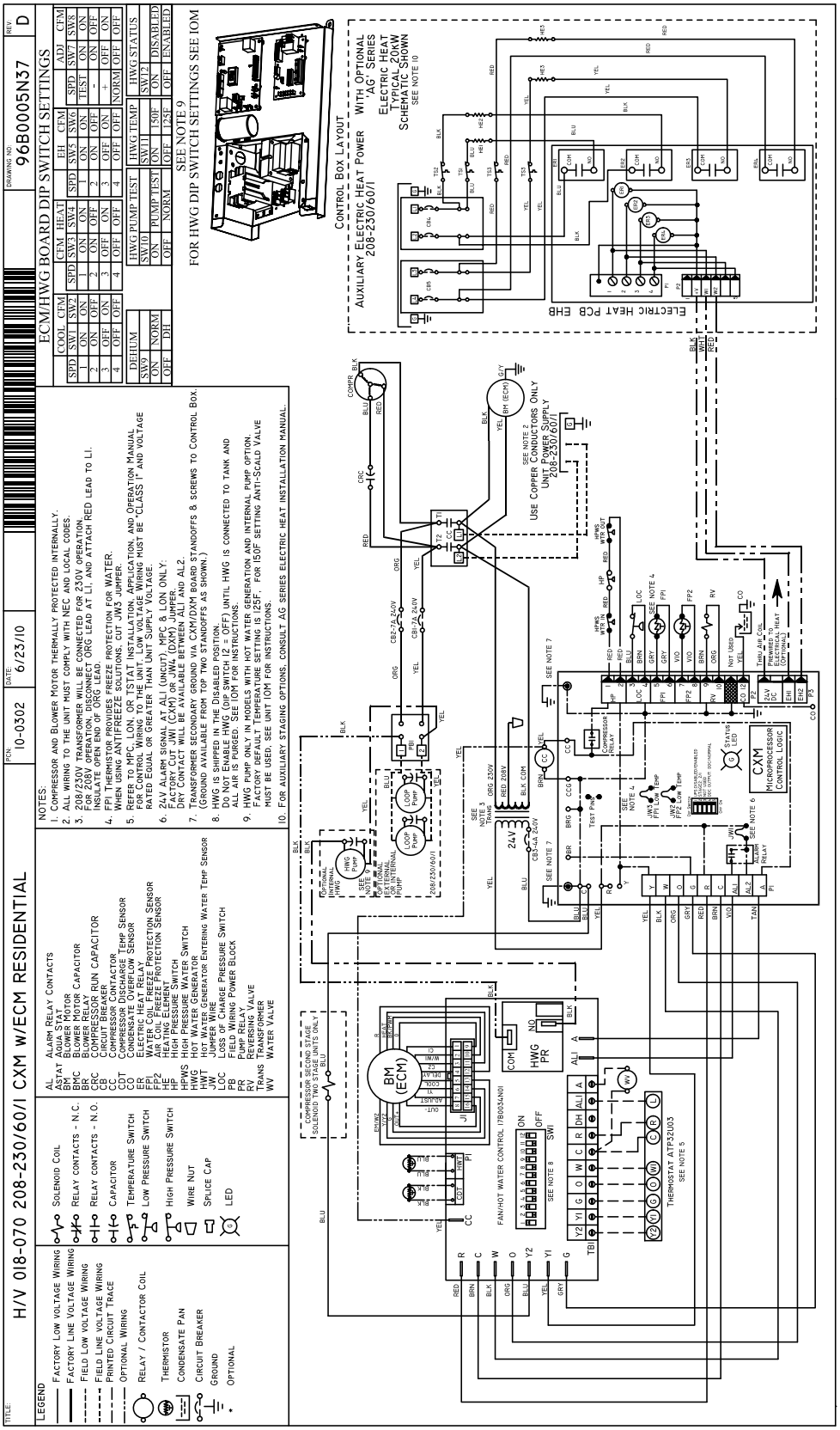
Electrical Data

All TT Units with Emerson ECM Fan Motor							TT Units (ECM) Standard			TT Units (ECM) with ClimaDry			
Model	Compressor			HWG Pump FLA	Ext Loop Pump FLA	Fan Motor FLA	Total Unit FLA	Min Circuit Amps	Max Fuse/ HACR (2)	ClimaDry Pump FLA	Total Unit FLA	Min Circuit Amps	Max/ Fuse HACR (2)
	RLA	LRA	Qty										
026	10.3	52.0	1	0.40	4.0	3.9	18.6	21.2	30	0.8	19.4	22.0	30
038	16.7	82.0	1	0.40	4.0	3.9	25.0	29.2	45	0.8	25.8	30.0	45
049	21.2	96.0	1	0.40	4.0	6.9	32.5	37.8	50	1.07	33.6	38.9	60
064	25.6	118.0	1	0.40	4.0	6.9	36.9	43.3	60	1.07	38.0	44.4	60
072	27.2	150.0	1	0.40	4.0	6.9	38.5	45.3	70	1.07	39.6	46.4	70

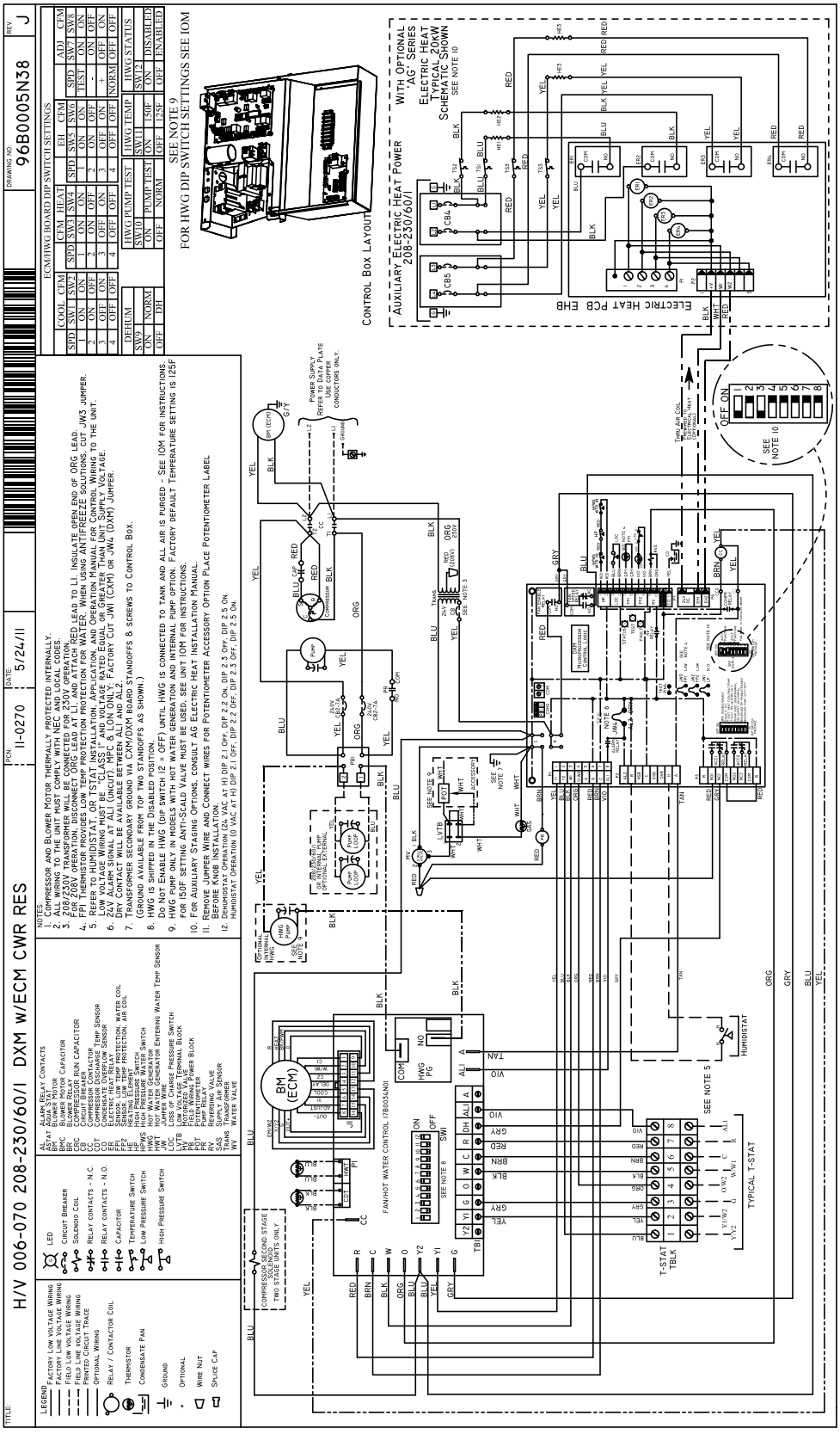
Rated Voltage of 208-230/60/1
HACR circuit breaker in USA only

Min/Max Voltage of 197/254
All fuses Class RK-5

Tranquility® 27 Electrical Wiring Diagram - 96B0005N37



Tranquility® 27 with ClimaDry® Electrical Wiring Diagram - 96B0005N38



Tranquility® 27 ECM Control Features

The ECM fan is controlled by an interface board that converts thermostat inputs and field selectable CFM settings to signals used by the ECM motor controller. Units manufactured before July 2005 have version I (P/N 69243707). Units manufactured between July 2005 and May 11, 2009 have version II (P/N 17B0019N01). Fan speeds are selected with jumpers for version I or via a nine position DIP switch for version II and III. To take full advantage of the ECM motor features, a multi-stage thermostat should be used (2-stage heat/2-stage cool or 3-stage heat/2-stage cool).

HFC-410A packaged units built after May 11, 2009 have ECM controller version III (P/N 17B0034N01). This controller includes logic and a relay to control the HWG functions.

Note: Power must be off to the unit for at least three seconds before the ECM motor will recognize a speed change. The motor will recognize a change in the CFM Adjust or dehumidification mode settings while the unit is powered.

There are four different airflow settings from lowest airflow rate (speed tap 1) to the highest airflow rate (speed tap 4). The charts below indicate settings for both versions of the ECM interface board, followed by detailed information for each setting.

Cooling Settings: The cooling setting determines the cooling (normal) CFM for all units with ECM motor. Cooling (normal) setting is used when the unit is not in dehumidification mode. This setting also determines the heating CFM for Genesis (GS) units. Tap 1 is the lowest CFM setting, while tap 4 is the highest CFM setting. To avoid air coil freeze-up, tap 1 may not be used if the dehumidification mode is selected. Consult submittal data or specifications catalog for the specific unit series and model to correlate speed tap setting to airflow in CFM.

Heating Settings: The heating setting determines the heating CFM for Tranquility® 27 (TT) and Tranquility® 20 (TS) units. This setting is not used for Genesis (GS) units. Tap 1 is the lowest CFM setting, while tap 4 is the highest CFM setting. Consult submittal data or specifications catalog for the specific unit series and model to correlate speed tap setting to airflow in CFM.

Auxiliary/Emergency Heat Settings: The auxiliary/emergency heat setting determines the CFM when the unit is in auxiliary heat or emergency heat mode. This setting is used for residential units with internal electric heat. When auxiliary electric heat is energized (i.e. compressor and electric heat), the greater of the auxiliary/emergency or heating setting will be used. A “G” (fan) signal must be present from the thermostat for electric heat to operate. Consult the submittal data or specifications catalog for the specific unit series and model to correlate speed tap setting to airflow in CFM.

CFM Adjust Settings: The CFM adjust setting allows four selections. The NORM setting is the factory default position. The + or – settings adjust the airflow by +/- 15%. The +/- settings are used to “fine tune” airflow adjustments. The TEST setting runs the ECM motor at 70% torque, which causes the motor to operate like a standard PSC motor, and disables the CFM counter.

Dehumidification Mode Settings: The dehumidification mode setting provides field selection of humidity control. When operating in the normal mode, the cooling airflow settings are determined by the cooling tap setting above. When dehumidification is enabled there is a reduction in airflow in cooling to increase the moisture removal of the heat pump. Consult submittal data or specifications catalog for the specific unit series and model to correlate speed tap to airflow in CFM. The dehumidification mode can be enabled in two ways.

1. Constant Dehumidification Mode: When the dehumidification mode is selected (via DIP switch or jumper setting), the ECM motor will operate with a multiplier applied to the cooling CFM settings (approx. 20-25% lower airflow). Any time the unit is running in the cooling mode, it will operate at the lower airflow to improve latent capacity. The “DEHUM” LED will be illuminated at all times. Heating airflow is not affected. NOTE: Do not select dehumidification mode if cooling setting is tap 1.
2. Automatic (Humidistat-controlled) Dehumidification Mode: When the dehumidification mode is selected (via DIP switch or jumper setting) AND a humidistat is connected to terminal DH (version II) or HUM (version I), the cooling airflow will only be reduced when the humidistat senses that additional dehumidification is required. The DH (or HUM) terminal is reverse logic. Therefore, a humidistat (not dehumidistat) is required. The “DEHUM” LED will be illuminated only when the humidistat is calling for dehumidification mode. Heating airflow is not affected. NOTE: Do not select dehumidification mode if cooling setting is tap 1.

Tranquility® 27 ECM Control Features

ECM Board Tap Settings

Cooling settings: TT, TS Units

Tap Setting	Version I 69243707 *HP CFM* Jumper	Version II and III (17B0019N01 & 17B0034N01) DIP Switch SW1	SW2
1	1	ON	ON
2	2	ON	OFF
3	3	OFF	ON
4	4	OFF	OFF

Heating settings: TT, TS Units

Tap Setting	Version I 69243707 *DELAY* Jumper	Version II and III (17B0019N01 & 17B0034N01) DIP Switch SW3	SW4
1	1	ON	ON
2	2	ON	OFF
3	3	OFF	ON
4	4	OFF	OFF

Aux/Emerg Heat settings: TT, TS Units

Tap Setting	Version I 69243707 *AUX CFM* Jumper	Version II and III (17B0019N01 & 17B0034N01) DIP Switch SW5	SW6
1	1	ON	ON
2	2	ON	OFF
3	3	OFF	ON
4	4	OFF	OFF

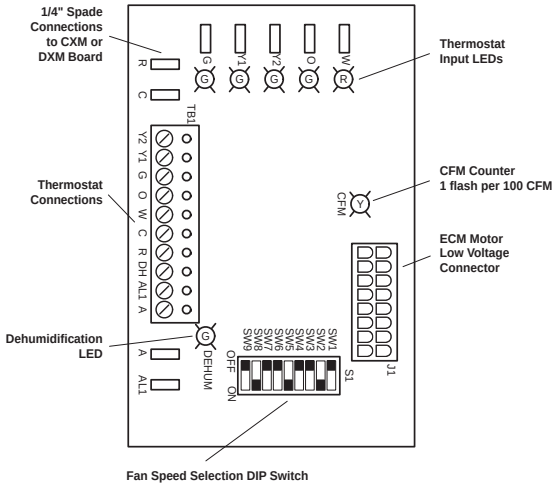
CFM Adjust settings: TT, TS Units

Tap Setting	Version I 69243707 *CFM Adj* Jumper	Version II and III (17B0019N01 & 17B0034N01) DIP Switch SW7	SW8
TEST	1	ON	ON
-	2	ON	OFF
+	3	OFF	ON
NORM	4	OFF	OFF

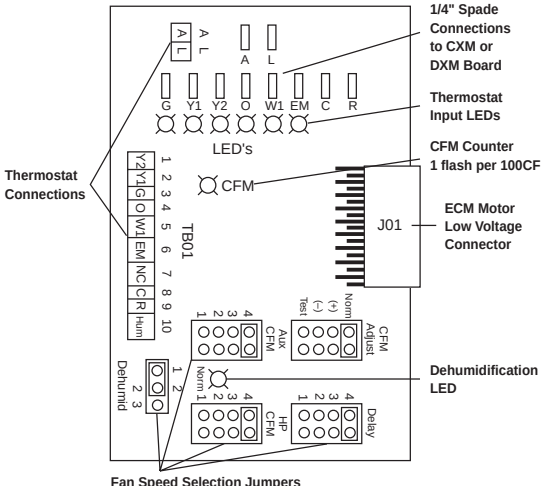
Dehum Mode settings: TT, TS Units

Tap Setting	Version I 69243707 *Dehumid* Jumper	Version II and III (17B0019N01 & 17B0034N01) DIP Switch SW9
NORM	pins 1,2	ON
Dehumid	pins 2,3	OFF

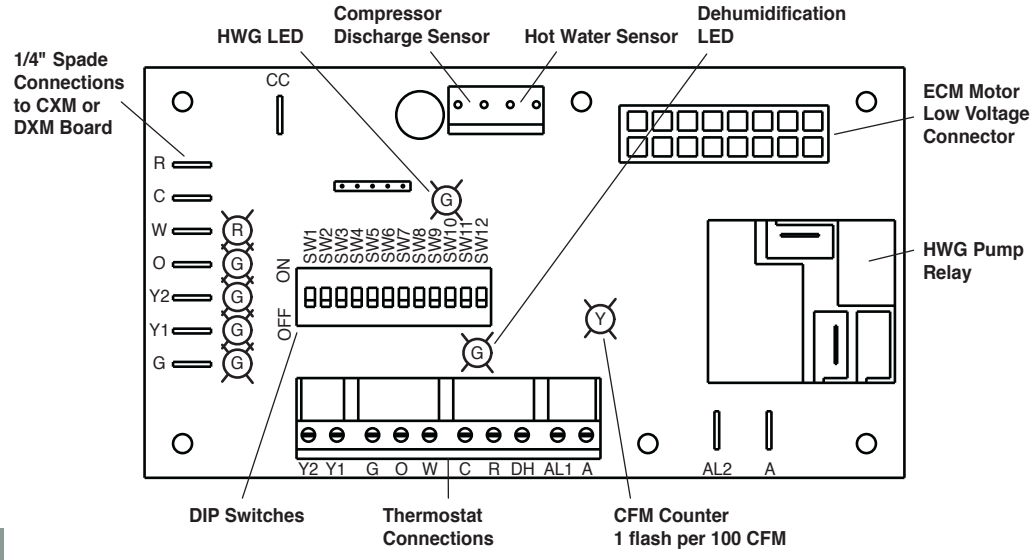
ECM Version II Interface Layout



ECM Version I Interface Layout



ECM Version III Interface Layout



Blower Performance Data

Airflow in CFM with wet coil and clean air filter

Model	Max ESP (in. wg)	Fan Motor (hp)	Tap Setting	Cooling Mode			Dehumid Mode			Heating Mode			Residential Units Only: AUX CFM	Residential Units Only: Aux/ Emerg Mode
				Stg 1	Stg 2	Fan	Stg 1	Stg 2	Fan	Stg 1	Stg 2	Fan		
026	0.50	1/2	4	810	950	475	630	740	475	920	1060	475	4	1060
	0.50	1/2	3	725	850	425	560	660	425	825	950	425	3	950
	0.50	1/2	2	620	730	370	490	570	370	710	820	370	2	820
	0.50	1/2	1	520	610	300				600	690	300	1	690
038	0.50	1/2	4	1120	1400	700	870	1090	700	1120	1400	700	4	1400
	0.50	1/2	3	1000	1250	630	780	980	630	1000	1250	630	3	1350
	0.50	1/2	2	860	1080	540	670	840	540	860	1080	540	2	1350
	0.50	1/2	1	730	900	450				730	900	450	1	1350
049	0.75	1	4	1460	1730	870	1140	1350	870	1560	1850	870	4	1850
	0.75	1	3	1300	1550	780	1020	1210	780	1400	1650	780	3	1660
	0.75	1	2	1120	1330	670	870	1040	670	1200	1430	670	2	1430
	0.75	1	1	940	1120	560				1010	1200	560	1	1350
064	0.75	1	4	1670	2050	1020	1300	1600	1020	1860	2280	1020	4	2280
	0.75	1	3	1500	1825	920	1160	1430	920	1650	2050	920	3	2040
	0.75	1	2	1280	1580	790	1000	1230	790	1430	1750	790	2	1750
	0.75	1	1	1080	1320	660				1200	1470	660	1	1470
072	0.75	1	4	1620	2190	1050	1270	1650	1050	1690	2230	1050	4	2230
	0.75	1	3	1500	1950	980	1170	1520	980	1600	2100	980	3	2100
	0.75	1	2	1400	1830	910	1100	1420	910	1400	1850	910	2	1870
	0.75	1	1	1320	1700	850				1240	1620	850	1	1670

Factory shipped on Tap Setting 2
During Auxiliary operation (residential units only) the CFM will run at the higher if the heating (delay jumper) or AUX settings
Airflow is controlled within +/- 5% up to Max ESP shown with wet coil and standard 1" fiberglass filter
Do not select Dehumidification mode if HP CFM is on setting 1
All units AHRI/ISO/ASHRAE 13256-1 rated HP (Cooling) Delay (Heating) CFM Setting 3

Auxiliary Electric Heat

Auxiliary Heat Ratings

Auxiliary Electric Heat Model	TS, TT, TE Models				TZ Models			TAH Models				kW Rating		Btuh Rating		Minimum CFM Required
	018	024-030	036-038	042-072	024	030-042	048-060	Auxiliary Electric Heat Model*	026	038	049-064	240V	208V	240V	208V	
AGM4A	■	■			■	■		AGM4C	■			3.8	2.9	13000	9900	500
AGM5A	■	■			■	■		AGM5C	■			4.8	3.6	16300	12300	500
AGM8A		■			■	■		AGM8C	■			7.6	5.7	25900	19400	650
AGM10A		■			■	■		AGM10C	■			9.6	7.2	32700	24600	650
AGM12A						■						11.4	8.6	38900	29200	750
AGL4A			■	■			■	AGL4C		■	■	3.8	2.9	13000	9900	500
AGL10A			■	■			■	AGL10C		■	■	9.6	7.2	32700	24600	1300
AGL15A			■	■			■	AGL15C		■	■	14.4	10.8	49100	36900	1350
AGL20A				■			■	AGL20C			■	19.2	14.4	65500	49200	1350

Black area denotes compatibility
Note: Horizontal units rated for zero clearance unit and 1" clearance for the first three feet of duct,
Vertical units rated for zero clearance for both unit and duct.
* Can be used on corresponding TZ, TE, TS and TT models

Auxiliary Heat Electrical Data

Auxiliary Electric Heat Model	Supply Circuit	Heater Amps		Minimum Circuit Amps		Maximum Fuse	
		240V	208V	240V	208V	240V	208V
AGM4A	Single	15.8	14.0	19.8	17.1	20	20
AGM5A	Single	20.0	17.3	25.0	21.6	25	25
AGM8A	Single	31.7	27.5	39.6	34.4	40	35
AGM10A	Single	40.0	34.7	50.0	43.4	50	45
AGM12A	Single	47.5	41.2	59.4	51.5	60	60
	Dual - L1/L2	31.7	27.5	39.6	34.4	40	35
	Dual - L3/L4	15.8	13.7	19.8	17.1	20	20
AGL4A	Single	15.8	14.0	19.8	17.1	20	20
AGL10A	Single	40.0	34.7	50.0	43.4	50	45
AGL15A	Single	60.0	52.0	75.0	65.0	80	70
	Dual - L1/L2	40.0	34.7	50.0	43.4	50	45
	Dual - L3/L4	20.0	17.3	25.0	21.6	25	25
AGL20A	Single	80.0	69.3	100.0	86.6	100	90
	Dual - L1/L2	40.0	34.7	50.0	43.4	50	45
	Dual - L3/L4	40.0	34.7	50.0	43.4	50	45

All heaters rated single phase 208-240V 60Hz
All models 15kW or larger feature internal circuit breakers
All Fuses UL Class K general purpose

Engineering Guide Specifications

General
The water source heating/cooling units shall be vertical upflow air discharge. Units shall be AHRI/ISO/ASHRAE 13256-1 (ground-source closed-loop) performance certified and listed by a nationally recognized safety-testing laboratory or agency. Each unit shall be water run-tested at the factory. Each unit shall be pallet mounted and shipped with appropriate protective packaging to help avoid damage in transportation.

Units shall be warranted by the manufacturer against defects in materials and workmanship for a period ten years on the compressor and refrigerant circuit parts and five years on all remaining parts, with a service labor allowance for the first five years on the compressor and refrigerant circuit parts and two years on all remaining parts. An optional extended labor warranty is available which extends the service labor allowance to ten years for the compressor and refrigeration circuit parts and five years on all remaining parts.

The water source units shall be designed to operate with entering fluid temperature between 20°F and 120°F.

Casing & Cabinet
The cabinet shall be fabricated from heavy-gauge galvanized steel and painted with an epoxy powder coating. The interior shall be insulated with 1/2" thick, multi-density, coated glass fiber. Insulation in the air handler section shall be foil backed for ease of cleaning. Two (vertical), one (horizontal) blower compartment and three compressor compartment access panels shall be provided and shall be removable with supply and return ductwork in place. The internal component layout shall provide for major service with the unit in-place for restricted access installations.

A duct collar (Field installed) shall be provided on the supply air opening. 2" high efficiency MERV11 pleated filters shall be provided with each unit. Units shall have filter frames. The units shall have an insulated divider panel between the air handling section and the compressor section to minimize the transmission of compressor noise, and to permit operational service testing without air bypass. Units shall be supplied with left or right air inlet.

Refrigerant Circuit
All units shall contain EarthPure® (HFC-410A) sealed refrigerant circuit employing a hermetic motor-compressor, bidirectional thermal expansion valve, finned tube air-to-refrigerant heat exchanger, reversing valve, coaxial tube water-to-refrigerant heat exchanger and service ports. An optional Hot Water Generator (desuperheater) coil shall be provided.

Compressors shall be Copeland UltraTech™ Two-Stage scroll type designed for heat pump duty and mounted on vibration isolators. Compressor motors shall be single phase PSC with internal overload protection. A factory installed bidirectional filter drier shall be provided on all models. The finned tube coil shall be sized for low-face velocity and constructed of lanced aluminum fins bonded to rifled copper tubes in a staggered pattern not less than three rows deep. Entire air coil surface shall be tin plated for corrosion protection.

The coaxial water-to-refrigerant heat exchangers shall be designed for close approach temperatures and be constructed of a convoluted copper (optional cupro-nickel) inner tube and a steel outer tube. The thermal expansion valves shall provide proper superheat over the entire fluid temperature range with minimal "hunting". The valve shall operate bi-directionally without the use of check valves.

The water-to-refrigerant heat exchanger and refrigerant suction lines shall be insulated to prevent condensation at low liquid temperatures.

Fan Motor and Blower
The fan shall be a direct drive centrifugal type with a dynamically balanced wheel. The housing and wheel shall be designed for quiet low outlet velocity operation and of galvanized steel construction. Tight fan housing geometry shall not be permitted. The fan housing shall be removable from the unit without disconnecting the supply air ductwork for servicing of the fan motor. The fan motor shall be an ECM variable speed type. The ECM fan motor shall provide soft starting, maintain constant CFM over its static operating range and provide airflow adjustment on its control board. The fan motor shall be isolated from the housing by rubber grommets. The motor shall be permanently lubricated and have thermal overload protection.

Electrical
CXM Control - A microprocessor-based compressor controller shall be provided to monitor and control unit operation. The control shall provide compressor and electric heater sequencing, high and low pressure monitoring, field selectable water and air coil low temperature protection sensing, condensate overflow sensing, over/under voltage monitoring, and unit performance sentinel (UPS). The control shall also provide for water valve connection, a test mode, short cycle protection, random start-up, as well as fault LED, fault memory, and intelligent fault retry.

The control shall employ quick attach harness assemblies for low voltage connections to the control board to aid in troubleshooting or replacement. An integral terminal block with screw terminals shall be provided on the control for all field low voltage connections. A circuit breaker protected 75VA transformer shall be employed. Line voltage box lugs shall be provided for unit wiring. Units shall have knockouts for entrance of low and line voltage wiring. The fan motor and control box shall be harness plug-connected for easy removal.

Residential models shall have a dual circuit-breaker protected power block for the connection of external flow controller pump module.

Piping
Supply and return water connections, as well as Hot Water Generator (desuperheater) connections shall be 1" FPT (Female Pipe Thread) brass swivel fittings which provide a union and eliminate the need for pipe wrenches and sealants when making field connections. A thread by sweat fitting shall be provided for connection to the water heater. All water piping shall be insulated to prevent condensation at low liquid temperatures.

The condensate connection shall be a 3/4" PVC glue (socket) with internal-trap (Vertical Models).

Tranquility® 27 Two-Stage (TT) Series Submittal Data

Models TTD/H/V 026 - 072 60Hz - HFC-410A

Residential

CLIMATEMASTER®
Geothermal Heat Pump Systems

SUBMITTAL DATA - I-P UNITS

Unit Designation: _____

Job Name: _____

Architect: _____

Engineer: _____

Contractor: _____

PERFORMANCE DATA

Cooling Capacity: _____ Btuh

EER: _____

Heating Capacity: _____ Btuh

COP: _____

Ambient Air Temp: _____ °F

Entering Water Temp (Clg): _____ °F

Entering Air Temp (Clg): _____ °F

Entering Water Temp (Htg): _____ °F

Entering Air Temp (Htg): _____ °F

Airflow: _____ CFM

Fan Speed or Motor/RPM/Turns: _____

Operating Weight: _____ (lb)

ELECTRICAL DATA

Power Supply: 208/230 Volts Single Phase 60 Hz

Minimum Circuit Ampacity: _____

Maximum Overcurrent Protection: _____

Accessories & Options

ClimaDry® Whole House Dehumidification
An optional internal whole house dehumidifier shall be factory installed, which allows the unit to operate in one of three modes, heating, cooling, or dehumidification. Operation must include modulating controls to provide neutral air (72°F) regardless of entering water temperature. Requires ATP32U04 thermostat or separate humidistat. See the ClimaDry® Installation Guide/ Application Manual for more details and unit availability.

Hot Water Generator
An optional insulated heat reclaiming desuperheater coil of vented double-wall copper construction suitable for potable water shall be provided. The coil and hot water circulating pump shall be factory mounted inside the unit. A high limit and low compressor discharge line temperature switch shall be provided to disable the pump when these conditions occur.

Cupro-Nickel Heat Exchanger
An optional corrosion resistant CuNi coaxial heat exchanger shall be factory installed in lieu of standard copper construction.

Thermostat (field installed)
A multistage auto-changeover electronic digital thermostat shall be provided. The thermostat shall offer 3 heating and 2 cooling stages with precise temperature control. An OFF-HEAT-AUTO-COOL-EMERG system switch, OFF-AUTO fan switch, and indicating LED's shall be provided. The thermostat shall read out in °F or °C. An optional remote indoor sensor and outdoor sensor use shall be available on some models.

Flow Controller (field installed)
A self-contained module shall provide all fluid pumping, fill and connection requirements for ground-source closed-loop systems up to 20 GPM. The Flow Controller shall provide 1" pump isolation valves and 3-way service valves. Pump heads shall be removable from the volute for easy replacement. The Flow Controller shall be enclosed in a polystyrene case and fully insulated with urethane foam to prevent condensation.

Auxiliary Heater (field installed)
An internal, field-installed electric heater shall provide supplemental and/or emergency heating capability when used with the three stage heating thermostat. (Heater is externally mounted on horizontal units).

Hose Connection Kit (field installed)
An accessory hose kit shall provide 150psi 1" rubber hose with brass fittings equipped with service pressure/temperature ports for connection between the unit and Flow Controller.

Warranty Information

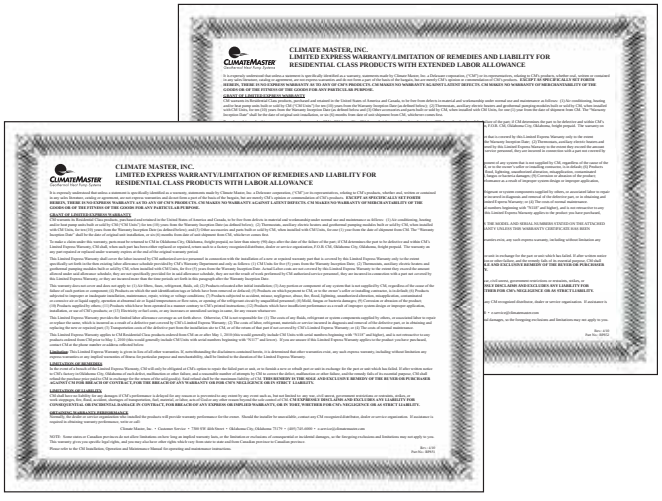
The 2010 standard warranty applies to units ordered on or after May 1, 2010. See ClimateMaster's 2010 Limited Express Residential Warranty Certificate RP851 for specific coverage and limitation.

ClimateMaster residential class heat pumps are backed by a ten-year limited warranty on all unit parts, including the following accessories when installed with ClimateMaster units: Flow Controllers, Thermostats & Electric Heaters.

ClimateMaster goes even further to back up its commitment to quality by including a service labor allowance for the first five years on unit parts and thermostats, auxiliary electric heaters and geothermal pumping modules.

The Optional Extended Factory Service Labor Allowance Warranty offers additional length of term protection to the consumer by offsetting service labor costs for 10 years.

To order this warranty, contact your ClimateMaster distributor. This coverage must be purchased within 90 days of unit installation. See Limited Express Extended Labor Warranty Certificate RP852 for details.


CLIMATE MASTER, INC.
LIMITED EXPRESS WARRANTY/LIMITATION OF REMEDIES AND LIABILITY FOR RESIDENTIAL CLASS PRODUCTS WITH LABOR ALLOWANCE

Revision History

Date	Page #	Description
10 Aug., 12	73	'Opposite Side of Air Coil' Note Added to Drawing
10 Aug., 12	86	Submittal Data Page Added
24 Sept., 10	77	Note Added for Electric Heat
24 Sept., 10	78	Electrical Data Updated
25 Aug., 10	77	Horizontal units supply air dimension M and Q updated
26 July, 10	Wire Diagram Pages	Wire Diagram revision: water-side high pressure switches added
14 July, 10	85	Compressor isolation upgrade from Springs to grommets
4 June, 10	77	Dim. M & Q Changed
8 June, 09	Various	Edits to pages 49, 52, 53, 79-82, and 86
05 June, 08	All	Reformatted Document Size
03 Mar, 08	37	Updated Specifications
03 Mar, 08	26	Updated Downflow Dimensional Data
01 Mar, 07	30	Added New Notes to Electrical Data
01 Mar, 07	All	Added Model 072 Information
01 Oct, 06	All	First Published

PRELIMINARY

Tranquility® 22 Digital (TZ) Series

TWO-STAGE
HORIZONTAL AND VERTICAL
EARTHPURE® SYSTEMS SIZES 024-060 [7.0-17.5 kW]

Table of Contents

How to Use this Catalog

As with any unit selection the first step is to perform a proper load calculation. Once the design cooling and heating loads are known the predominant load can be used to select the appropriate unit. In northern climates the heating load may be used to select the unit, whereas in southern climates the cooling load may be used. Likewise, the anticipated maximum EWT should be used for the cooling mode and the minimum anticipated EWT should be used when selecting for the heating mode. These EWTs may be the same temperature in the case of a ground water application.

Use the Full Load performance pages to select the unit size. Once the unit size is determined read the associated flow rate (gpm) for the needed capacity. Typically this is 1.5 – 2 gpm/nominal ton for ground water applications and 2.25 – 3 gpm/ton for ground loop applications.

For Closed Loop Applications

For closed loop systems where an internal circulating pump is desired, the TZ22 units can be ordered with an internal, variable speed loop circulator. This would typically be for a ground loop or secondary pumping application. This internal loop circulator is the variable speed Grundfos Magna 25-140 for all TZ22 units. The maximum possible pump curve for the 25-140 is shown below. The 25-140 can also operate at any point below the curve as a "partial load" pumping condition. The designer/installer should use the information presented in this catalog to determine the available pump head for any external piping/accessories and ground loop (if applicable). This can be done in the following manner.

1. Determine the desired flow rate through the TZ22 from the performance pages (as described above). Read the associated pressure drop in feet of head for the worst case condition (lowest anticipated entering water temperature) at the required flow rate.
2. Determine the maximum pump head from the pump curve associated with the required flow rate from step 1.
3. Subtract the unit pressure drop (from step 1) from the maximum available pump head (from step 2).
4. The remainder is the available pump head to overcome any external piping/accessories and the ground loop.

If the available pump head is equal to or greater than the calculated external piping and loop pressure drop, no other steps are required. If the available pump head is less than the calculated pressure drop of all external piping and the loop, then changes to the loop design should be considered.

Typically residential loops consist of ¾" circuit piping and 1 ¼" supply and return piping. If the available pump head is less than the calculated pressure drop of all external piping and the loop, it is recommended that larger pipe sizes be investigated such as 1" circuit piping and/or 1 ½" or 2" supply and return piping. This will significantly reduce system pressure drop with little change in Reynolds number. If this causes the Reynolds number to fall to an unacceptable level, try reducing the overall number of circuits. This will increase the flow rate through each circuit, increasing the Reynolds number.

Another solution might be to allow the system flow rate to be reduced. Typical geothermal flow rates are between 2.25 and 3 gpm/ton. As long as the system flow rate using the internal variable speed circulator is at or above 2.25 gpm/ton it is safe to operate the system. A quick review of the unit performance tables will show that this causes very little change in unit performance.

ClimateMaster's Pressure Drop Software can be used in conjunction with the pump performance information presented here to determine actual flow rate when the internal circulator is not able to provide the desired design flow rate.

For secondary pumping applications follow the above steps except do not consider the pressure drop of the loop. The internal 25-140 circulator will only need to overcome the pressure drop of the unit and any piping connecting the unit to the primary loop.

The TZ22 can also be ordered with an internal modulating water control valve for closed loop systems with multiple units and a central pump. In this case the modulating water valve will stop water flow through the unit when the unit is not operating and control the flow rate through the unit during operation, saving pumping energy in both cases.

Modulating Valves for Closed Loop Applications

TZ024		
Valve Cv = 4.7		
	60°F Water	
GPM	Valve ΔP @ GPM (psi)	Valve ΔP @ GPM (ft hd)
2.0	0.181	0.4
3.0	0.407	0.9
4.0	0.724	1.7
5.0	1.132	2.6
6.0	1.630	3.8

TZ030 & 036		
Valve Cv = 7.4		
	60°F Water	
GPM	Valve ΔP @ GPM (psi)	Valve ΔP @ GPM (ft hd)
3.0	0.2	0.4
4.0	0.3	0.7
5.0	0.5	1.1
6.0	0.7	1.5
7.0	0.9	2.1
8.0	1.2	2.7
9.0	1.5	3.4

TZ042 & 048		
Valve Cv = 10		
	60°F Water	
GPM	Valve ΔP @ GPM (psi)	Valve ΔP @ GPM (ft hd)
4.0	0.2	0.4
5.0	0.3	0.6
6.0	0.4	0.8
7.0	0.5	1.1
8.0	0.6	1.5
9.0	0.8	1.9
10.0	1.0	2.3
11.0	1.2	2.8
12.0	1.4	3.3

TZ060		
Valve Cv = 19		
	60°F Water	
GPM	Valve ΔP @ GPM (psi)	Valve ΔP @ GPM (ft hd)
6.0	0.1	0.2
7.0	0.1	0.3
8.0	0.2	0.4
9.0	0.2	0.5
10.0	0.3	0.6
11.0	0.3	0.8
12.0	0.4	0.9
13.0	0.5	1.1
14.0	0.5	1.3
15.0	0.6	1.4

How to Use this Catalog

When using an internal modulating water valve the central pump must be able to overcome the pressure drop of the valve in addition to the pressure drop of the unit. Because of this, internal modulating valves for closed loop systems are designed with a low pressure drop in mind. The minimum pressure drop for the internal closed loop valve is shown in the table below. This pressure drop should be added to the unit pressure drop when determining system pressure drop for central pump selection.

For Open Loop Applications

The TZ22 can also be ordered with the internal modulating water control valve for open loop systems with an external well pump. In this case the modulating water valve will stop water flow through the unit when the unit is not operating and act as a flow control device to control the flow rate through the unit during operation.

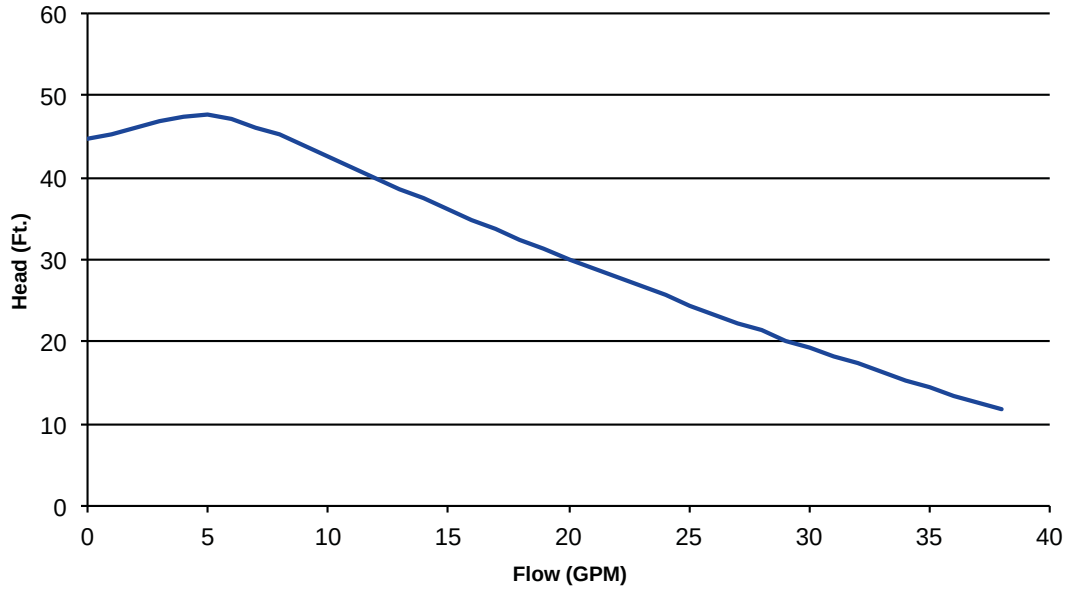
When using an internal modulating water valve the external pump must be able to overcome the minimum pressure drop of the valve in addition to the pressure drop of the unit. The minimum pressure drop for the open loop internal valve is shown in the table below. This pressure drop should be added to the unit pressure drop when determining overall equipment pressure drop.

Modulating Valves for Open Loop Applications

TZ024, 030, 036, 042, &048		
Valve Cv = 4.7		
	60°F Water	
GPM	Valve ΔP @ GPM (psi)	Valve ΔP @ GPM (ft hd)
2.0	0.181	0.4
3.0	0.407	0.9
4.0	0.724	1.7
5.0	1.132	2.6
6.0	1.630	3.8
7.0	2.218	5.1
8.0	2.897	6.7
9.0	3.667	8.5
10.0	4.527	10.5
11.0	5.478	12.7
12.0	6.519	15.1

TZ060		
Valve Cv = 7.4		
	60°F Water	
GPM	Valve ΔP @ GPM (psi)	Valve ΔP @ GPM (ft hd)
4.0	0.292	0.7
5.0	0.457	1.1
6.0	0.657	1.5
7.0	0.895	2.1
8.0	1.169	2.7
9.0	1.479	3.4
10.0	1.826	4.2

Magna Geo 25-140 Pump Performance



GPM	Head (ft)
0.0	44.7
1.0	45.4
2.0	46.1
3.0	46.8
4.0	47.5
5.0	47.7
6.0	47.1
7.0	46.1
8.0	45.3
9.0	43.9
10.0	42.6
11.0	41.2
12.0	39.9
13.0	38.7
14.0	37.4
15.0	36.1
16.0	34.9
17.0	33.7
18.0	32.5
19.0	31.3
20.0	30.1
21.0	28.9
22.0	27.8
23.0	26.7
24.0	25.6
25.0	24.5

What's New with ClimateMaster's Tranquility® 22 Digital?

Overview

The Tranquility® 22 Digital is a game-changing new geothermal heat pump that is the first in the industry to integrate digital communicating controls, two-stage capacity, variable-speed fan and variable-flow geothermal source functions within a single compact "plug and play" package. Available at a breakthrough price point, this innovative product line has been specifically designed and developed for price sensitive, and many times space limited, new home construction and replacement/retrofit applications.

The Tranquility® 22 Digital is a packaged water-to-air system that provides high efficiency heating and cooling and, via an integrated desuperheating package, most of the annual hot water requirement.

The eco-friendly Tranquility® 22 Digital already meets ENERGY STAR® Tier 3 efficiency levels, so it will qualify for the uncapped 30% federal geothermal heat pump tax credit in 2012 and beyond. Tranquility® 22 Digital systems are available in vertical and horizontal configurations in nominal capacities of 24, 30, 36, 42, 48 and 60 kBtuh.

Plug and Play

The Tranquility® 22 Digital offers integrated source control for ground loop, ground water or central pump geothermal applications. For stand-alone ground loops, all flow control functions are provided: 3-way flush valves and ports, expansion tank, high efficiency variable-speed pump, source temperature sensors and even flow rate readout.

For ground water or central pump applications, a modulating water flow control valve and source temperature sensors are provided.

In either configuration, the DXM2 controller provides optimal geothermal source flow to maximize overall system efficiency and performance for each operating mode.

- Emerson UltraTech® variable-speed communicating fan motor with soft start and constant CFM control
- Refrigerant schrader ports located on bracket at the front panel

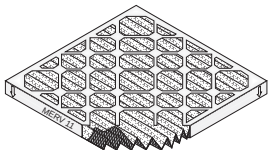
DXM2 Digital Communicating Controls

An exclusive integrated electronic controller provides advanced unit functionality and comprehensive diagnostic and setup capabilities through digital communication links with the variable-speed fan motor, variable-speed geothermal source pump (or modulating valve depending on applications) and matching electronic LCD thermostat.

The DXM2 allows (1) configuration and diagnostics on the thermostat (2) monitoring key performance metrics on the thermostat and (3) a 4-wire connection between the unit and the thermostat.

One Inch Merv 8 Filter

All Tranquility® 22 Digital units include a factory installed 1" filter frame/duct collar with a 1" pleated high efficiency MERV 8 air filter.



Two-Stage Copeland Scroll Compressor

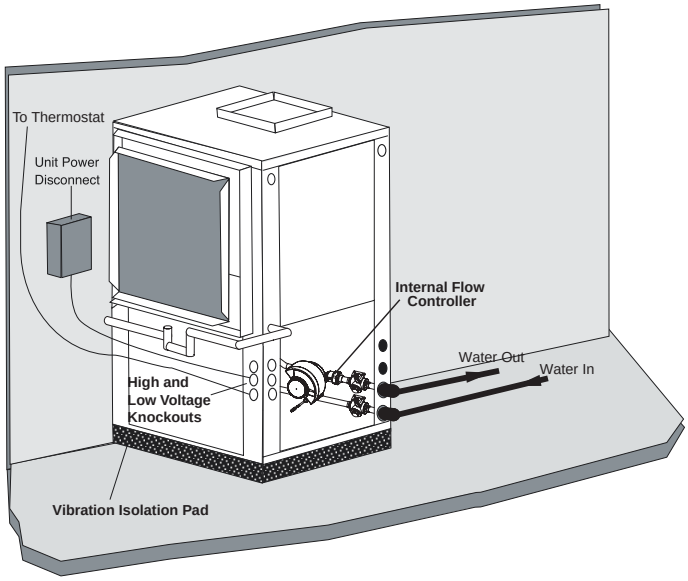
Achieve a greater level of comfort. The Copeland Scroll UltraTech™ provides superior comfort than fixed-capacity compressors by incorporating a revolutionary two-step design. With a unique 67% part-load capacity step, systems with UltraTech™ maintain precise temperature levels and lower relative humidity. This eliminates uneven peaks and valleys and allows for steady cooling comfort. Homeowners now have a better, more efficient way to power their heating and cooling system, raising their level of comfort, while lowering energy bills. So when your customers need a new heating and cooling system, make sure it has the best technology inside – the Copeland Scroll UltraTech™ compressor.

Learn the beauty of the design. With Copeland Scroll UltraTech™, two internal bypass ports enable the system to run at 67% part-load capacity for better efficiency and humidity control. Based on demand, the modulation ring is activated, sealing the bypass ports and instantly shifting capacity to 100%. Take advantage of "shift on the fly" stage changing (no stopping and starting required like other two-stage compressors).

Variable-Speed ECM Motor

Tranquility® 22 Digital has a standard variable-speed ECM motor directly controlled by the DXM2 control.

The target CFM for ECM motor can now be set directly from the thermostat, due to full digital controls of the Tranquility® 22 Digital.



Tranquility® 22 Digital Design Features

The Tranquility® 22 Digital Series has abundant features and ultra high efficiency.

Application Flexibility

- Six Capacities 024, 030, 036, 042, 048, and 060
- Entering water temperature operation range (20-120°F EWT)
- Available in vertical and horizontal configurations
- Optional matching electric auxiliary heaters
- Exceeds the federal requirements for 30% tax credit on installation costs
- ClimateMaster Tranquility® 22 Digital Series Products shall be warranted by the manufacturer against defects in materials and workmanship for a period ten years on the compressor and refrigerant circuit parts and five years on all remaining parts, with a service labor allowance for the first five years on the compressor and refrigerant circuit parts and two years on all remaining parts. An optional extended labor warranty is available which extends the service labor allowance to ten years for the compressor and refrigeration circuit parts and five years on all remaining parts.
- Integrated plug and play functionality for most geothermal applications

Operating Efficiencies

- Exceeds ASHRAE 90.1 and meets Energy Star Tier 3 efficicency levels
- Energy Star® Most Efficient
- EarthPure® HFC-410A zero ozone depletion refrigerant.
- Two-Stage operation for ultra high efficiencies and unsurpassed comfort.
- Optional hot water generator with internally mounted pump.
- Rugged and highly efficient next generation Copeland UltraTech™ scroll compressors provide ultra high efficiencies and full capacity with reduced cycling losses.
- Oversized coaxial tube water-to-refrigerant heat exchangers operate at low liquid pressure drop. Convoluted copper (and optional cupro-nickel) water tube functions efficiently at low-flow rates and provides low-temperature-damage resistance.
- Oversized tin plated, rifled tube/lanced aluminum fin, air to refrigerant heat exchangers provide high efficiency at low face velocity.
- Large low RPM blowers with variable speed fan motors provide quiet, efficient air movement with high static capability.

Service & Installation Advantages

ClimateMaster's Tranquility® 22 Digital series incorporates features that are industry firsts, which make it extremely easy to install:

- Ease of installation: [1] Plug and Play- with the industry exclusive features, these units are ready to install out of the box with no external pumps expansion tanks or valves for the ground loop removing a lot of the complexity of installation. [2] Full digital controls that communicate with the thermostat which allows all unit configuration from the thermostat… the most ease of installation setup for any level of installer. This is much simpler than the use of dip-switches on the control board inside the unit.
- Only 4 wires between stat and unit: Tranquility® 22 is the only system in the Geothermal segment that requires only 4 wires between the thermostat and the unit. Others require up to 14 wires for full functionality. This is achieved leveraging the full power of the microprocessor on the control.
- Small footprint: The small size of the Tranquility® 22 units allows the dealer to install this unit in places they either (1) couldn't install before or (2) were very tight fit before, like 2.0/3.0 door jams, small mechanical closets, attic doors and crawl spaces.
- Ground source heat pumps are among the HVAC industry's easiest equipment to service. There are no outdoor air coils to clean, there are no combustible heat exchangers to service and have less moving parts than most conventional systems. The communicating DXM2 control board diagnostic and communicating thermostat feature allow the home owner to tell the installing contractor what is wrong with the unit without an inconvenient and expensive call back. The two-section swing-out control box design provides wide-open service access. Five unit access panels allow technicians to access any side of the cabinet. Service friendly highly accessible high/low pressure ports are located on a service bracket at the front of the unit. No other product / manufacturer in the geothermal segment offer this convenience.
- An extremely compact cabinet to allow for installation in tight or hard to reach locations. For example, units up through size 42 will easily fit through a 2'0" doorway or attic scuttle. Since geothermal source functions are integrated within the cabinet, there is no additional space required for bulky external pumping modules. A unique control box and thoughtful internal layout allow the ability for all servicing from the front access panel. Of course, the majority of the unit troubleshooting can be done right at the thermostat keeping the technician out of tight spaces.
  Geothermal Industry Exclusives:
  - Smallest cabinet footprint
  - Integrated geo source functions eliminate bulky external pumping modules
- An innovative two-section electrical control box design that tucks the stationary line voltage components safely behind a swing-out low voltage control panel to provide clear service access through the front of the unit. The low voltage panel can even be quickly pulled off the hinges and removed. Harness connections make controller replacement a snap.
  Geothermal Industry Exclusive:
  - Two-section swing-out control box design provides wide-open service access
- An exclusive integrated electronic controller provides advanced unit functionality and comprehensive diagnostic and setup capabilities through digital communication links with the variable-speed fan motor, variable-speed geothermal source pump and matching electronic LCD thermostat.
- Diagnostic display of system inputs, outputs, and configuration settings at thermostat.
- Diagnostic display of system temperatures at thermostat:
  - Geo source in and out
  - Refrigerant discharge, liquid, and evaporator
  - Leaving air
  - Entering hot water
- Immediate manual control of all DXM2 outputs at thermostat for rapid troubleshooting
- No outdoor units to clean with ants fouling up contactors, no

Tranquility® 22 Digital Design Features

combustion heat exchangers to condemn… indoor packaged unit- no remote components, with the plug and play features, the loop pump, flushing, purging valves, ports and expansion tank are located inside the unit… just change the air filter… period. "Flat" ground loops are a thing of the past… costly call backs go away with the internally mounted expansion tank.

- Any application:
  - Ground Loop, ground Water and tower boiler applications
  - Ultra Compact Cabinet and foot print- installation capable in very small confines
  - Residential and commercial new construction, retrofit/ replacement- multi-family
  - Single-phase 208-230V
  - Entering water temperature operation range 20-120˚F
- ClimateMaster stocking parts distributors are located in every major city across the United States and Canada. All parts are HVAC common.
- HP/LP ports located behind front access panel
- Five access panels allowing access from any side of the cabinet
- Accessible components, including high and low pressure ports for easy repair / diagnostics
- Expansion tank eliminates "flat loop" callbacks
- Brass swivel-type geo and hot water connections.
- Insulated divider and separate air handling/compressor compartments permit service testing without air bypass.
- Intelligent fault retry with history retention.
- Auxiliary relay outputs for accessory connections.
- UPS (Unit Performance Sentinel) provides early warning of inefficient operation.

Factory Quality & Industry Certifications

All units are built and factory run tested on our Integrated Process Control Assembly System (IPCS). The IPCS is a unique state of the art manufacturing system that is designed to assure quality of the highest standards of any manufacturer in the water-source industry. Our IPCS system:

- Verifies that the correct components are being assembled.
- Automatically performs special leak tests on all joints
- Conducts pressure tests
- Performs highly detailed run test unparalleled in the HVAC industry
- Automatically disables packaging for a "failed" unit
- Creates computer database for future service analysis and diagnostics from run test results
- All refrigerant brazing is done in a nitrogen atmosphere
- All units are deep evacuated to less than 100 microns prior to refrigerant charging
- All joints are both helium and halogen leak tested to insure annual leak rate of less than ¼ ounce

- All units are water run-tested in all modes to insure efficiency and reliability.
- Heavy gauge galvanized steel cabinets are epoxy powder coated for durable and long-lasting finish.
- Coaxial heat exchanger, refrigerant suction lines and all water lines are fully insulated to eliminate condensation problems in low temperature applications.
- Noise reduction features include: dual level compressor isolation; insulated compressor compartment; interior cabinet insulation using 1/2" coated glass fiber and variable speed fan.
- Safety features include: high pressure and loss of charge to protect the compressor, condensate overflow protection, low-temperature protection sensors to safeguard the coaxial heat exchanger and air coil, hot water high-limit, and low compressor discharge temperature sensor provided to shut down the hot water generator when conditions dictate. Fault lockout enables emergency heat and prevents compressor operation until thermostat or circuit breaker has been reset.
- AHRI/ASHRAE/ANSI/ISO 13256-1 certified.
- ETL listed.
- US EPA "Energy Star" Tier 3 compliant.
- ISO 9001:2000 Certified.

Simplified Controls

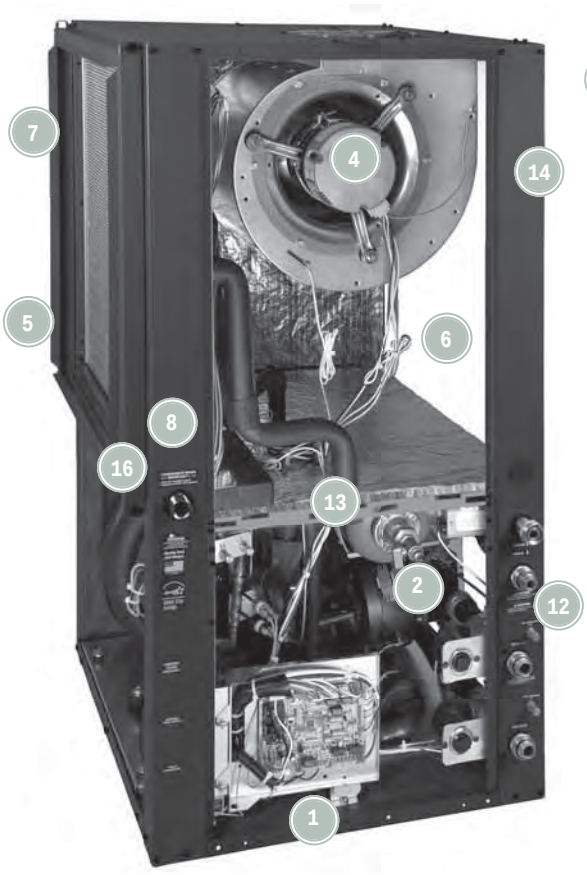
DXM2 Integrated Unit Controller:

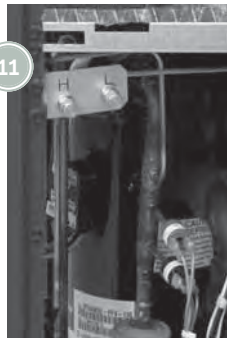
- Communicating interface to thermostat, fan motor and geo source pump
- Comprehensive setup and diagnostics via system thermostat or service tool
- 7 temperature sensor inputs for system protection and control
- Anti-short cycle and over/under voltage protection
- High pressure, loss of charge, and condensate overflow protection
- LED fault and status indication at controller
- Service tool port for optional setup and diagnostics at unit

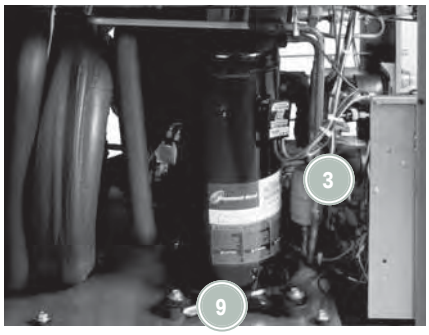
ATC32U01 Communicating Electronic LCD Thermostat:

- 4 wire connection
- 3 heat / 2 cool staged operation
- Integrated humidity control
- Manual or automatic changeover
- Standard or programmable operation
- Utility demand reduction via independent time programs or external input
- Display of system faults with cause and troubleshooting guidance
- Comprehensive installation setup menus
- Comprehensive service diagnostics menus

Tranquility® 22 Digital Design Features







1. Exclusive Integrated Electronic Communicating Interface to Thermostat, Fan Motor and Geo Source Pump - For Configuration Monitoring Fault Display and Diagnostics AT THERMOSTAT**
2. "Plug and Play" Internal Variable Water Flow System with Internal Flow Center or Internal Motorized Modulating Valve
3. Next Generation Copeland™ Ultra-Tech™ Two-Stage Scroll Compressor
4. Emerson UltraTech® variable-speed Communicating Fan Motor with Soft Start and Constant CFM Control
5. Tin-Plated Copper Air Coils to resist Formicary Corrosion
6. Foil-faced Insulation in the Blower Section and Fully Insulated Compressor Section Conform to ASHRAE 62 Specifications
7. One Inch MERV 8* Filter with Access Frame Designed for Low-Leakage Duct Connection
8. Double-sloped Stainless Steel Drain Pan is Easy to Clean
9. Dual Level Compressor Isolation for Ultra Quiet Operation
10. Two-section Swing-out Control Box Design Provides Wide-open Service Access
11. Refrigerant Schrader Ports Located on Bracket at the Front Access Panel
12. Water Schrader Ports on Corner Post to Read Pressure Drop Across Water Heat Exchanger
13. Small Cabinet Footprint
14. Heavy Gauge Galvanized steel cabinet is Epoxy Powder-Coated in a Durable and Attractive Bond Silver Finish
15. Designed for External P-trap to Eliminate Internal Drain-Line Cleanouts

* MERV= Minimum Efficiency Reporting Value as specified by ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineers) standard 52.2.

** When installed with a ClimateMaster Residential Thermostat.

Unit Model Key

1 2	3	4 5 6	7	8	9	10	11	12	13	14	15
TZ	V	0 2 4	A	G	D	0	2	C	L	T	S

SERIES
TZ = Tranquility® 22 Digital

CONFIGURATION
V = Vertical Up
H = Horizontal

UNIT SIZE
024, 030, 036, 042, 048, 060

REVISION LEVEL
A = Current Revision

VOLTAGE
G = 208-230/60/1

CONTROLS
D = DXM2

CABINET
0 = Residential

WATER CIRCUIT OPTIONS
2 = Magna Internal Flow Controller - Closed Loop
5 = Motorized Modulating Valve (Central Pumping Applications) - Closed Loop
6 = Motorized Valve (Modulating) Open Loop Applications, High System Pressure Drop

HEAT EXCHANGER OPTIONS

	Tin Plated Air Coil	
	Copper	Cupro-Nickel
Standard	A	J
HWG W/Pump	C	N

RETURN AIR FLOW CONFIGURATION
L = Left Return w/ 1" Merv 8 pleated filter and frame
R = Right Return w/ 1" Merv 8 pleated filter and frame

SUPPLY AIR FLOW & MOTOR CONFIGURATION

	Supply	Configuration	Motor
T	Top	TZV	ECM
B	Back	TZH	ECM
S	Straight	TZH	ECM

STANDARD
S = Standard

In Position 11 and 12, only the following combinations are available:

Without HWG	With HWG	Description
2A	2C	Internal Flow Controller with Copper Water Coil
5A	5C	Motorized Modulating Valve with Copper Water Coil
6J	6N	Motorized Modulating Valve with Cupro-Nickel Water Coil

About AHRI/ISO/ASHRAE 13256-1

About AHRI/ISO/ASHRAE 13256-1

AHRI/ASHRAE/ISO 13256-1 (Air-Conditioning and Refrigeration Institute/American Society of Heating, Refrigerating and Air Conditioning Engineers/International Standards Organization) is a certification standard for water-source heat pumps used in the following applications:

- WLHP (Water Loop Heat Pump – Boiler/Tower)
- GWHP (Ground Water Heat Pump – Open Loop)
- GLHP (Ground Loop Heat Pump – Geothermal)

The directory at http://www.ahrinet.org/ is constantly being updated and immediately available on the Internet. All ratings are submitted by the manufacturer for certification, and must be approved by AHRI. Therefore, there is a significant difference between AHRI "certified" and AHRI "rated." Thirty percent of a manufacturer's basic models must be tested each year. AHRI selects models at random from stock for testing on the basis of its evaluation of a participant's certification data.

Units that fail one or more certified test (90% of declared performance or lower) may be declared defective. If the initial failure is a performance test, the manufacturer must obsolete all units within the same basic model group or elect to have a second sample tested. If the second unit fails a performance test, it must be obsoleted, together with all units within the same basic model group. ClimateMaster takes certification seriously. We were recently awarded a certificate for consecutive years of no AHRI failures.

Temperatures used in AHRI certification standards are S.I. (Système International – metric) based. For example, typical catalog data for cooling is shown at 80°F DB/67°F WB [26.7°C DB/19.4°C] entering air temperature, but the AHRI standard for cooling is 80.6°F DB/66.2°F WB [27°C DB/19°C], since it is based upon whole numbers in degrees Celsius. Water and air temperatures for the standard are shown below.

Test Condition Comparison Table

	WLHP	GWHP	GLHP
Cooling			
Entering Air Temperature - DB/WB °F [°C]	80.6/66.2 [27/19]	80.6/66.2 [27/19]	80.6/66.2 [27/19]
Entering Water Temperature - °F [°C]	86 [30]	59 [15]	77 [25]
Fluid Flow Rate	*	*	*
Heating			
Entering Air Temperature - DB/WB °F [°C]	68 [20]	68 [20]	68 [20]
Entering Water Temperature - °F [°C]	68 [20]	50 [10]	32 [0]
Fluid Flow Rate	*	*	*

*Flow rate is specified by the manufacturer

Data certified by AHRI include heating/cooling capacities, EER (Energy Efficiency Ratio – Btuh per Watt) and COP (Btuh per Btuh) at the various conditions shown above. Pump power correction is calculated to adjust efficiencies for pumping Watts. Within each model, only one water flow rate is specified for all three groups, and pumping Watts are calculated using the formula below. This additional power is added onto the existing power consumption.

- Pump power correction = (gpm x 0.0631) x (Press Drop x 2990)/300

Fan power is corrected to zero external static pressure using the equation below. The nominal airflow is rated at a specific external static pressure. This effectively reduces the power consumption of the unit and increases cooling capacity but decreases heating capacity.

- Fan Power Correction = (cfm x 0.472) x (esp x 249)/300

Capacities and efficiencies are calculated using the following equations:

- ISO Cooling Capacity = Cooling Capacity (Btuh) + [Fan Power Correction (Watts) x 3.412]
- ISO EER Efficiency (Btuh/W) =
  ISO Cooling Capacity (Btuh)/[Power Input (Watts) – Fan Power Correction (Watts) + Pump Power Correction (Watts)]
- ISO Heating Capacity = Heating Capacity (Btuh) – [Fan Power Correction (Watts) x 3.412]
- ISO COP Efficiency (Btuh/Btuh) =
  ISO Heating Capacity (Btuh) x 3.412/[Power Input (Watts) - Fan Power Correction (Watts) + Pump Power Correction (Watts)]

AHRI/ISO/ASHRAE/ANSI 13256-1 Performance

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

Model	Capacity Modulation	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 Full Load 77°F Part Load 68°F		Heating Full Load 32°F Part Load 41°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
024	Part	16,500	14.5	19,600	5.1	18,800	24.2	16,400	4.4	18,000	20.2	14,300	3.8
	Full	22,200	13.4	27,900	4.8	25,100	20.4	23,100	4.3	22,900	15.2	18,400	3.6
030	Part	21,900	15.2	26,300	5.0	24,900	24.8	22,000	4.3	24,200	20.9	19,400	3.9
	Full	28,500	13.8	35,800	4.6	32,300	20.7	30,000	4.2	29,900	15.7	23,800	3.6
036	Part	25,000	15.2	30,000	5.3	27,900	25.2	24,700	4.5	27,100	20.6	22,300	4.0
	Full	33,500	13.4	41,900	4.6	37,400	19.8	34,900	4.2	34,700	14.8	27,900	3.6
042	Part	31,000	15.8	36,800	5.1	35,200	26.4	30,500	4.3	34,000	22.0	26,900	3.8
	Full	41,100	14.3	50,200	4.6	46,300	21.3	42,300	4.1	43,100	16.1	33,300	3.4
048	Part	34,100	15.2	39,500	5.5	39,200	26.8	32,600	4.6	37,600	21.2	29,200	4.1
	Full	45,900	13.7	53,800	4.9	51,800	20.9	45,000	4.4	48,150	15.5	35,600	3.7
060	Part	43,000	15.8	50,700	5.1	49,100	26.1	42,300	4.3	47,200	22.0	37,200	3.9
	Full	57,200	14.0	69,500	4.5	64,000	20.6	58,200	4.0	59,800	16.1	45,900	3.5

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
Ground Loop Heat Pump ratings based on 15% methanol antifreeze solution
All ratings based upon operation at lower voltage of dual voltage rated models

Reference Calculations & Legend

Heating

$$LWT = EWT - \frac{HE}{GPM \times 500}$$

$$LAT = EAT + \frac{HC}{CFM \times 1.08}$$

Cooling

$$LWT = EWT + \frac{HR}{GPM \times 500}$$

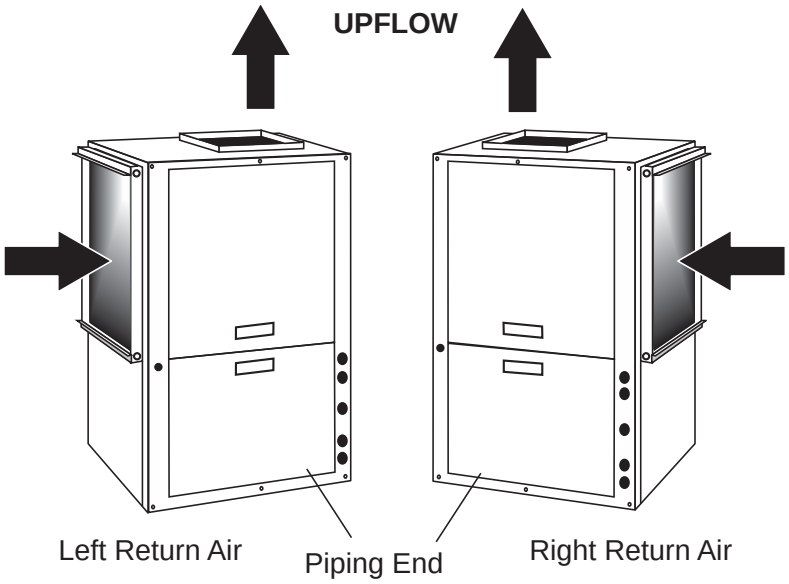
$$LAT\ (DB) = EAT\ (DB) - \frac{SC}{CFM \times 1.08}$$

$$LC = TC - SC$$

$$S/T = \frac{SC}{TC}$$

Hot Water Generator capacities (HWC) are based on potable water flow rate of 0.4 gpm per nominal equipment ton and 90°F entering potable water temperature.

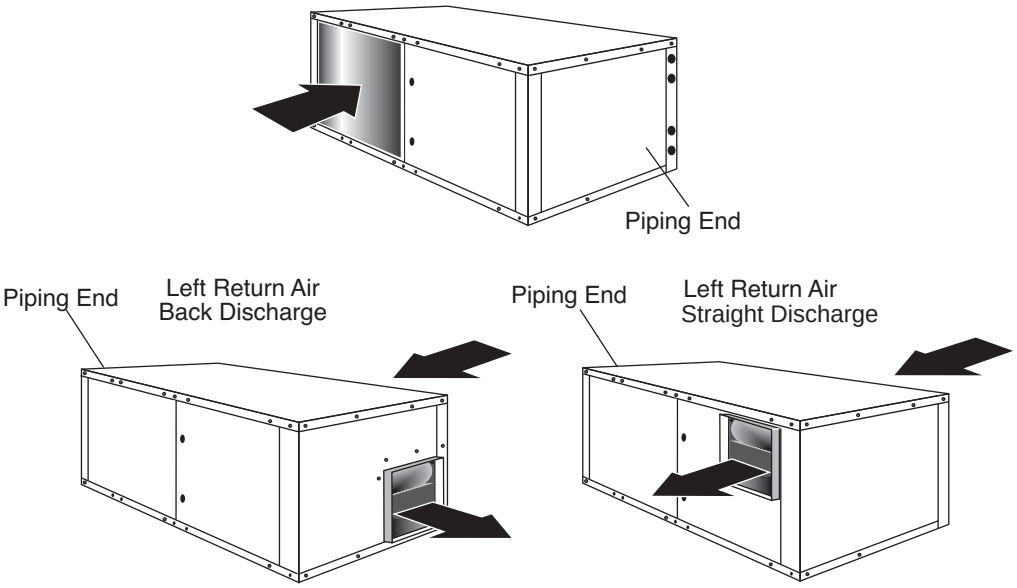
CFM	=	airflow, cubic feet/minute	HE	=	total heat of extraction, Mbtuh
EWT	=	entering water temperature, ˚F	HWC	=	Hot Water Generator (desuperheater) capacity, Mbtuh
GPM	=	water flow in US gallons/minute	WPD	=	Water coil pressure drop (psi & ft hd)
EAT	=	entering air temperature, Fahrenheit (dry bulb/wet bulb)	EER	=	Energy Efficiency Ratio = BTU output/Watt input
HC	=	air heating capacity, Mbtuh	COP	=	Coefficient of Performance = BTU output/BTU input
TC	=	total cooling capacity, Mbtuh	LWT	=	leaving water temperature, °F
SC	=	sensible cooling capacity, Mbtuh	LAT	=	leaving air temperature, °F
KW	=	total power unit input, KiloWatts	LC	=	latent cooling capacity, Mbtuh
HR	=	total heat of rejection, Mbtuh	S/T	=	sensible to total cooling ratio



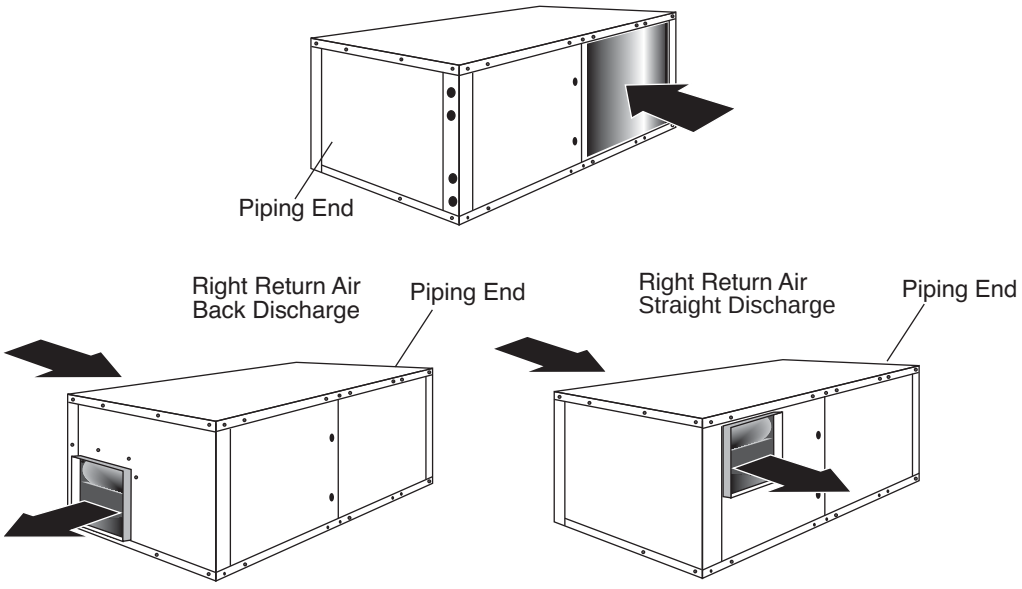
Horizontal diagrams on following page

Horizontal Diagrams

LEFT RETURN AIR



RIGHT RETURN AIR



Full Load Correction Factors

Air Flow Correction Table

Airflow	Cooling					Heating		
% of Rated	Total Capacity	Sensible Capacity	S/T	Power	Heat of Rejection	Heating Capacity	Power	Heat of Extraction
80%	0.976	0.919	0.941	0.939	0.969	0.983	1.040	0.967
85%	0.984	0.941	0.957	0.953	0.977	0.987	1.018	0.978
90%	0.990	0.962	0.972	0.968	0.986	0.991	1.004	0.988
95%	0.996	0.982	0.986	0.983	0.993	0.996	0.998	0.995
100%	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
105%	1.003	1.017	1.014	1.018	1.006	1.005	1.010	1.003
110%	1.005	1.032	1.027	1.036	1.012	1.009	1.028	1.004

Entering Air Correction Table

Heating			
Entering Air DB°F	Heating Capacity	Power	Heat of Extraction
50	1.030	0.808	1.092
55	1.026	0.858	1.073
60	1.020	0.905	1.052
65	1.011	0.951	1.027
70	1.000	1.000	1.000
75	0.989	1.054	0.971
80	0.978	1.114	0.940

Cooling											
Entering Air WB°F	Total Capacity	Sensible Cooling Capacity Multiplier - Entering DB °F								Power	Heat of Rejection
		65	70	75	80	85	90	95	100		
45	0.638	*	*	*	*	*	*	*	*	0.914	0.694
50	0.720	*	*	*	*	*	*	*	*	0.934	0.763
55	0.803	1.044	*	*	*	*	*	*	*	0.953	0.833
60	0.885	0.751	0.927	1.114	*	*	*	*	*	0.973	0.903
65	0.967		0.693	0.886	1.089	1.300	*	*	*	0.992	0.972
67	1.000		0.607	0.798	1.000	1.211	1.432	*	*	1.000	1.000
70	1.049			0.669	0.866	1.076	1.299	*	*	1.012	1.042
75	1.132				0.644	0.848	1.077	1.329	1.605	1.031	1.111

* = Sensible capacity equals total capacity
AHRI/ISO/ASHRAE 13256-1 uses entering air conditions of Cooling - 80.6°F DB/66.2°F WB, and Heating - 68°F DB/59°F WB entering air temperature

Part Load Correction Factors

Air Flow Correction Table

Airflow	Cooling					Heating		
% of Rated	Total Capacity	Sensible Capacity	S/T	Power	Heat of Rejection	Heating Capacity	Power	Heat of Extraction
80%	0.980	0.917	0.936	0.955	0.975	0.979	1.035	0.965
85%	0.986	0.939	0.953	0.964	0.982	0.984	1.021	0.975
90%	0.992	0.961	0.969	0.975	0.988	0.990	1.011	0.984
95%	0.996	0.981	0.985	0.986	0.994	0.995	1.004	0.993
100%	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
105%	1.003	1.017	1.014	1.016	1.005	1.006	1.002	1.007
110%	1.004	1.031	1.027	1.033	1.010	1.011	1.006	1.012

Entering Air Correction Table

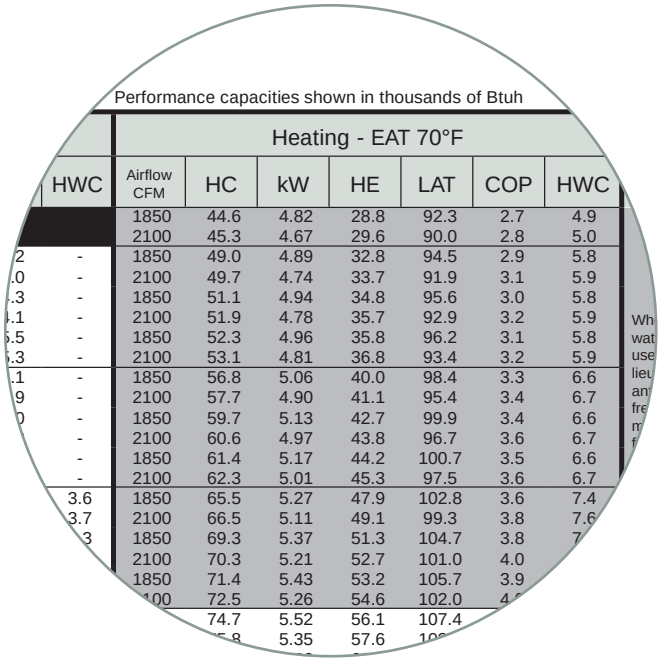
Heating			
Entering Air DB°F	Heating Capacity	Power	Heat of Extraction
50	1.023	0.773	1.084
55	1.021	0.827	1.068
60	1.016	0.882	1.049
65	1.009	0.940	1.026
70	1.000	1.000	1.000
75	0.989	1.063	0.971
80	0.978	1.128	0.941

Cooling											
Entering Air WB°F	Total Capacity	Sensible Cooling Capacity Multiplier - Entering DB °F								Power	Heat of Rejection
		65	70	75	80	85	90	95	100		
45	0.628	*	*	*	*	*	*	*	*	1.010	0.698
50	0.712	*	*	*	*	*	*	*	*	1.008	0.767
55	0.797	1.026	*		*	*	*	*	*	1.006	0.835
60	0.882	0.669	0.894	1.111	*	*	*	*	*	1.003	0.904
65	0.966		0.693	0.890	1.092	1.298	*	*	*	1.001	0.973
67	1.000		0.640	0.810	1.000	1.202	*	*	*	1.000	1.000
70	1.051			0.706	0.862	1.060	1.298	*	*	0.999	1.041
75	1.135				0.633	0.860	1.087	1.314	1.541	0.996	1.110

* = Sensible capacity equals total capacity
AHRI/ISO/ASHRAE 13256-1 uses entering air conditions of Cooling - 80.6°F DB/66.2°F WB, and Heating - 68°F DB/59°F WB entering air temperature

Performance Data Selection Notes

For operation in the shaded area when water is used in lieu of an anti-freeze solution, the LWT (Leaving Water Temperature) must be calculated. Flow must be maintained to a level such that the LWT is maintained above 40°F [4.4*C] when the JW3 jumper is not clipped (see example below). Otherwise, appropriate levels of a proper anti-freeze should be used in systems with leaving water temperatures of 40°F or below and the JW3 jumper should be clipped. This is due to the potential of the refrigerant temperature being as low as 32°F [0°C] with 40°F [4.4°C] LWT, which may lead to a nuisance cutout due to the activation of the Low Temperature Protection. JW3 should never be clipped for standard range equipment or systems without antifreeze.


Performance capacities shown in thousands of Btuh

		Heating - EAT 70°F					
HWC	Airflow CFM	HC	kW	HE	LAT	COP	HWC
	1850	44.6	4.82	28.8	92.3	2.7	4.9
	2100	45.3	4.67	29.6	90.0	2.8	5.0
-	1850	49.0	4.89	32.8	94.5	2.9	5.8
-	2100	49.7	4.74	33.7	91.9	3.1	5.9
-	1850	51.1	4.94	34.8	95.6	3.0	5.8
-	2100	51.9	4.78	35.7	92.9	3.2	5.9
-	1850	52.3	4.96	35.8	96.2	3.1	5.8
-	2100	53.1	4.81	36.8	93.4	3.2	5.9
-	1850	56.8	5.06	40.0	98.4	3.3	6.6
-	2100	57.7	4.90	41.1	95.4	3.4	6.7
-	1850	59.7	5.13	42.7	99.9	3.4	6.6
-	2100	60.6	4.97	43.8	96.7	3.6	6.7
-	1850	61.4	5.17	44.2	100.7	3.5	6.6
-	2100	62.3	5.01	45.3	97.5	3.6	6.7
3.6	1850	65.5	5.27	47.9	102.8	3.6	7.4
3.7	2100	66.5	5.11	49.1	99.3	3.8	7.6
3	1850	69.3	5.37	51.3	104.7	3.8	7
	2100	70.3	5.21	52.7	101.0	4.0	
	1850	71.4	5.43	53.2	105.7	3.9	
	00	72.5	5.26	54.6	102.0	4	
		74.7	5.52	56.1	107.4		
		8	5.35	57.6	10		

Example:

At 50°F EWT (Entering Water Temperature) and 1.5 gpm/ton, a 3 ton unit has a HE of 22,500 Btuh. To calculate LWT, rearrange the formula for HE as follows:

HE = TD x GPM x 500, where HE = Heat of Extraction (Btuh); TD = temperature difference (EWT - LWT) and GPM = U.S. Gallons per Minute.

TD = HE/(GPM x 500)

TD = 22,500/(4.5 x 500)

TD = 10°F

LWT = EWT - TD

LWT = 50 - 10 = 40°F

In this example, as long as the EWT does not fall below 50°F, the system will operate as designed. For EWTs below 50°F, higher flow rates will be required (open loop systems, for example, require at least 2 gpm/ton when EWT is below 50°F).

Antifreeze Correction Table

Antifreeze Type	Antifreeze %	Cooling			Heating		WPD Corr. Fct. EWT 30°F
		EWT 90°F			EWT 30°F		
		Total Cap	Sens Cap	Power	Htg Cap	Power	
Water	0	1.000	1.000	1.000	N/A	N/A	N/A
Propylene Glycol	5	0.995	0.995	1.003	0.989	0.997	1.070
	15	0.986	0.986	1.009	0.968	0.990	1.210
	25	0.978	0.978	1.014	0.947	0.983	1.360
Methanol	5	0.997	0.997	1.002	0.989	0.997	1.070
	15	0.990	0.990	1.007	0.968	0.990	1.160
	25	0.982	0.982	1.012	0.949	0.984	1.220
Ethanol	5	0.998	0.998	1.002	0.981	0.994	1.140
	15	0.994	0.994	1.005	0.944	0.983	1.300
	25	0.986	0.986	1.009	0.917	0.974	1.360
Ethylene Glycol	5	0.998	0.998	1.002	0.993	0.998	1.040
	15	0.994	0.994	1.004	0.980	0.994	1.120
	25	0.988	0.988	1.008	0.966	0.990	1.200

Performance Data — Tranquility® 22 Model 024 - Part Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	1.1	1.8	4.1	480	19.7	13.0	0.7	28.6	22.0	60.0	0.8	4.5	7.4	17.0	480	11.0	1.2	2.7	6.9	91	16.9	1.6
	1.1	1.8	4.1	600	20.1	14.2	0.7	27.8	22.5	60.0	0.8	4.5	7.4	17.0	600	11.2	1.2	2.8	7.3	87	16.8	1.6
30	1.5	1.7	3.9	480	19.7	13.0	0.7	28.6	22.0	60.0	0.8	2.3	2.9	6.7	480	12.3	1.2	3.0	8.1	94	22.8	1.7
	1.5	1.7	3.9	600	20.1	14.2	0.7	27.8	22.5	60.0	0.8	2.3	2.9	6.7	600	12.5	1.2	3.1	8.5	89	22.4	1.7
	1.5	1.7	3.9	480	19.7	13.0	0.7	28.6	22.0	60.0	0.8	3.4	4.7	10.8	480	12.8	1.2	3.1	8.6	95	24.9	1.7
	1.5	1.7	3.9	600	20.1	14.2	0.7	27.8	22.5	60.0	0.8	3.4	4.7	10.8	600	13.0	1.2	3.2	9.0	90	24.7	1.7
	1.5	1.7	3.9	480	19.7	13.0	0.7	28.6	22.0	60.0	0.8	4.5	6.7	15.5	480	13.0	1.2	3.1	8.9	95	26.1	1.8
	1.5	1.7	3.9	600	20.1	14.2	0.7	27.8	22.5	60.0	0.8	4.5	6.7	15.5	600	13.3	1.2	3.3	9.3	91	25.9	1.7
40	2.3	2.2	5.2	480	19.7	13.0	0.7	28.6	22.0	60.0	0.8	2.3	2.2	5.2	480	14.2	1.2	3.4	10.0	97	31.1	1.8
	2.3	2.2	5.2	600	20.1	14.2	0.7	27.8	22.5	60.0	0.8	2.3	2.2	5.2	600	14.5	1.2	3.6	10.4	92	30.7	1.8
	2.3	2.2	5.2	480	19.7	13.0	0.7	28.6	22.0	60.0	0.8	3.4	3.8	8.7	480	14.8	1.2	3.5	10.6	99	33.8	1.9
	2.3	2.2	5.2	600	20.1	14.2	0.7	27.8	22.5	60.0	0.8	3.4	3.8	8.7	600	15.2	1.2	3.7	11.1	93	33.5	1.8
	2.3	2.2	5.2	480	19.7	13.0	0.7	28.6	22.0	60.0	0.8	4.5	5.6	12.9	480	15.2	1.2	3.6	11.0	99	35.1	1.9
	2.3	2.2	5.2	600	20.1	14.2	0.7	27.8	22.5	60.0	0.8	4.5	5.6	12.9	600	15.5	1.2	3.8	11.4	94	34.9	1.8
50	2.3	1.6	3.7	480	19.2	12.7	0.8	24.4	21.9	69.5	1.1	2.3	1.6	3.7	480	16.2	1.2	3.8	11.9	101	39.4	2.0
	2.3	1.6	3.7	600	19.6	13.9	0.8	23.8	22.4	69.9	1.1	2.3	1.6	3.7	600	16.5	1.2	4.0	12.4	95	39.0	1.9
	3.4	2.9	6.7	480	19.5	12.9	0.7	27.2	22.0	62.9	0.9	3.4	2.9	6.7	480	16.9	1.3	4.0	12.7	103	42.5	2.0
	3.4	2.9	6.7	600	19.9	14.1	0.8	26.5	22.5	63.2	0.9	3.4	2.9	6.7	600	17.3	1.2	4.2	13.2	97	42.3	2.0
	4.5	4.4	10.2	480	19.7	13.0	0.7	28.6	22.0	60.0	0.8	4.5	4.4	10.2	480	17.3	1.3	4.1	13.1	103	44.2	2.0
	4.5	4.4	10.2	600	20.1	14.2	0.7	27.8	22.5	60.0	0.8	4.5	4.4	10.2	600	17.7	1.2	4.3	13.6	97	44.0	2.0
60	2.3	1.5	3.5	480	18.5	12.4	0.9	20.5	21.6	79.2	1.5	2.3	1.5	3.5	480	18.1	1.3	4.2	13.8	105	47.7	2.1
	2.3	1.5	3.5	600	18.9	13.5	0.9	20.0	22.1	79.7	1.5	2.3	1.5	3.5	600	18.5	1.2	4.5	14.4	99	47.2	2.0
	3.4	2.7	6.3	480	19.0	12.6	0.8	23.1	21.8	72.8	1.2	3.4	2.7	6.3	480	19.0	1.3	4.4	14.7	107	51.4	2.2
	3.4	2.7	6.3	600	19.4	13.7	0.9	22.5	22.3	73.1	1.2	3.4	2.7	6.3	600	19.4	1.2	4.7	15.2	100	51.0	2.1
	4.5	4.2	9.7	480	19.2	12.7	0.8	24.4	21.9	69.7	1.1	4.5	4.2	9.7	480	19.5	1.3	4.5	15.1	108	53.3	2.2
	4.5	4.2	9.7	600	19.6	13.9	0.8	23.8	22.4	70.0	1.1	4.5	4.2	9.7	600	19.9	1.2	4.8	15.7	101	53.0	2.2
70	2.3	1.5	3.4	480	17.7	12.0	1.0	17.1	21.2	88.9	2.0	2.3	1.5	3.4	480	20.0	1.3	4.6	15.7	109	56.0	2.3
	2.3	1.5	3.4	600	18.0	13.1	1.1	16.6	21.7	89.3	2.1	2.3	1.5	3.4	600	20.5	1.2	4.9	16.3	102	55.5	2.2
	3.4	2.6	6.0	480	18.3	12.3	0.9	19.3	21.5	82.6	1.7	3.4	2.6	6.0	480	21.0	1.3	4.8	16.6	111	60.2	2.4
	3.4	2.6	6.0	600	18.6	13.4	1.0	18.8	22.0	83.0	1.7	3.4	2.6	6.0	600	21.4	1.2	5.1	17.2	103	59.9	2.3
	4.5	4.0	9.3	480	18.5	12.4	0.9	20.5	21.6	79.6	1.5	4.5	4.0	9.3	480	21.5	1.3	4.9	17.1	111	62.4	2.4
	4.5	4.0	9.3	600	18.9	13.5	0.9	19.9	22.1	79.8	1.5	4.5	4.0	9.3	600	21.9	1.2	5.2	17.7	104	62.1	2.4
80	2.3	1.4	3.3	480	16.7	11.7	1.2	14.1	20.7	98.4	2.7	2.3	1.4	3.3	480	21.9	1.3	5.0	17.5	112	64.5	2.5
	2.3	1.4	3.3	600	17.0	12.7	1.2	13.7	21.3	98.9	2.8	2.3	1.4	3.3	600	22.3	1.2	5.3	18.1	104	63.9	2.4
	3.4	2.5	5.8	480	17.3	11.9	1.1	16.0	21.1	92.4	2.3	3.4	2.5	5.8	480	22.8	1.3	5.2	18.4	114	69.2	2.6
	3.4	2.5	5.8	600	17.7	13.0	1.1	15.6	21.6	92.7	2.3	3.4	2.5	5.8	600	23.3	1.2	5.5	19.0	106	68.8	2.5
	4.5	3.8	8.9	480	17.6	12.0	1.0	16.9	21.2	89.4	2.1	3.9	2.9	6.8	480	23.1	1.3	5.2	18.6	114	70.0	2.7
	4.5	3.8	8.9	600	18.0	13.1	1.1	16.5	21.7	89.7	2.1	3.9	2.9	6.8	600	23.5	1.2	5.5	19.3	106	70.0	2.6
90	2.3	1.4	3.1	480	15.6	11.3	1.4	11.6	20.3	108.0	3.5	1.9	1.2	2.8	480	23.1	1.3	5.2	18.6	114	70.0	2.7
	2.3	1.4	3.1	600	16.6	12.6	1.3	12.8	21.1	108.5	3.1	1.9	1.2	2.8	600	23.5	1.2	5.5	19.3	106	70.0	2.6
	3.4	2.4	5.5	480	16.3	11.5	1.2	13.1	20.6	102.1	3.0	1.9	1.2	2.8	480	23.1	1.3	5.2	18.6	114	70.0	2.7
	3.4	2.4	5.5	600	16.6	12.6	1.3	12.8	21.1	102.4	3.1	1.9	1.2	2.8	600	23.5	1.2	5.5	19.3	106	70.0	2.6
	4.5	3.7	8.5	480	16.6	11.6	1.2	13.9	20.7	99.2	2.8	1.9	1.2	2.8	480	23.1	1.3	5.2	18.6	114	70.0	2.7
	4.5	3.7	8.5	600	17.0	12.7	1.3	13.6	21.2	99.4	2.8	1.9	1.2	2.8	600	23.5	1.2	5.5	19.3	106	70.0	2.6
100	2.3	1.3	3.0	480	14.6	10.9	1.5	9.5	19.8	117.6	4.5	1.3	0.9	2.0	480	23.1	1.3	5.2	18.6	114	70.0	2.7
	2.3	1.3	3.0	600	14.9	11.9	1.6	9.3	20.4	118.1	4.6	1.3	0.9	2.0	600	23.5	1.2	5.5	19.3	106	70.0	2.6
	3.4	2.3	5.3	480	15.2	11.2	1.4	10.7	20.1	111.8	3.9	1.3	0.9	2.0	480	23.1	1.3	5.2	18.6	114	70.0	2.7
	3.4	2.3	5.3	600	15.5	12.2	1.5	10.5	20.6	112.1	4.0	1.3	0.9	2.0	600	23.5	1.2	5.5	19.3	106	70.0	2.6
	4.5	3.5	8.1	480	15.6	11.3	1.4	11.4	20.2	109.0	3.6	1.3	0.9	2.0	480	23.1	1.3	5.2	18.6	114	70.0	2.7
	4.5	3.5	8.1	600	15.9	12.3	1.4	11.1	20.8	109.2	3.7	1.3	0.9	2.0	600	23.5	1.2	5.5	19.3	106	70.0	2.6
110	2.3	1.2	2.8	480	13.5	10.6	1.7	7.8	19.5	127.3	5.6	1.0	0.7	1.5	480	23.1	1.3	5.2	18.6	114	70.0	2.7
	2.3	1.2	2.8	600	13.8	11.5	1.8	7.6	20.0	127.8	5.8	1.0	0.7	1.5	600	23.5	1.2	5.5	19.3	106	70.0	2.6
	3.4	2.2	5.0	480	14.2	10.8	1.6	8.8	19.7	121.6	4.9	1.0	0.7	1.5	480	23.1	1.3	5.2	18.6	114	70.0	2.7
	3.4	2.2	5.0	600	14.4	11.8	1.7	8.6	20.2	121.9	5.0	1.0	0.7	1.5	600	23.5	1.2	5.5	19.3	106	70.0	2.6
	4.5	3.4	7.8	480	14.5	10.9	1.6	9.3	19.8	118.8	4.6	1.0	0.7	1.5	480	23.1	1.3	5.2	18.6	114	70.0	2.7
	4.5	3.4	7.8	600	14.8	11.9	1.6	9.1	20.3	119.0	4.7	1.0	0.7	1.5	600	23.5	1.2	5.5	19.3	106	70.0	2.6
120	2.3	1.1	2.6	480	12.6	10.3	2.0	6.4	19.2	137.1	6.9	0.8	0.3	0.8	480	23.1	1.3	5.2	18.6	114	70.0	2.7
	2.3	1.1	2.6	600	12.8	11.2	2.0	6.3	19.8	137.6	7.1	0.8	0.3	0.8	600	23.5	1.2	5.5	19.3	106	70.0	2.6
	3.4	2.1	4.8	480	13.1	10.5	1.8	7.2	19.3	131.4	6.1	0.8	0.3	0.8	480	23.1	1.3	5.2	18.6	114	70.0	2.7
	3.4	2.1	4.8	600	13.4	11.4	1.9	7.0	19.9	131.7	6.3	0.8	0.3	0.8	600	23.5	1.2	5.5	19.3	106	70.0	2.6
	4.5	3.3	7.5	480	13.4	10.6	1.8	7.6	19.4	128.6	5.7	0.8	0.3	0.8	480	23.1	1.3	5.2	18.6	114	70.0	2.7
	4.5	3.3	7.5	600	13.7	11.5	1.8	7.4	20.0	128.9	5.9	0.8	0.3	0.8	600	23.5	1.2	5.5	19.3	106	70.0	2.6

Interpolation is permissible; extrapolation is not.
Flow is changed to maintain minimum LWT 60° F in cooling and maximum LWT 70° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 22 Model 024 - Full Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	1.6	2.3	5.3	600	26.4	16.8	1.1	23.7	30.2	60.0	1.2	6.0	11.1	25.6	600	15.4	1.5	2.9	10.1	94	16.6	2.1
	1.6	2.3	5.3	750	27.0	18.3	1.2	22.8	31.1	60.0	1.2	6.0	11.1	25.6	750	15.7	1.5	3.1	10.6	89	16.5	2.0
30	2.1	2.3	5.4	600	26.4	16.8	1.1	23.7	30.2	60.0	1.2	3.0	4.0	9.2	600	17.1	1.6	3.2	11.7	96	22.2	2.2
	2.1	2.3	5.4	750	27.0	18.3	1.2	22.8	31.1	60.0	1.2	3.0	4.0	9.2	750	17.4	1.5	3.3	12.2	92	21.9	2.1
	2.1	2.3	5.4	600	26.4	16.8	1.1	23.7	30.2	60.0	1.2	4.5	6.7	15.5	600	17.9	1.6	3.3	12.4	98	24.5	2.2
	2.1	2.3	5.4	750	27.0	18.3	1.2	22.8	31.1	60.0	1.2	4.5	6.7	15.5	750	18.2	1.6	3.4	12.9	92	24.3	2.2
	2.1	2.3	5.4	600	26.4	16.8	1.1	23.7	30.2	60.0	1.2	6.0	10.0	23.1	600	18.3	1.6	3.3	12.8	98	25.7	2.2
	2.1	2.3	5.4	750	27.0	18.3	1.2	22.8	31.1	60.0	1.2	6.0	10.0	23.1	750	18.6	1.6	3.5	13.3	93	25.6	2.2
40	3.0	3.2	7.4	600	26.3	16.8	1.1	23.5	30.1	60.1	1.2	3.0	3.2	7.4	600	19.8	1.7	3.5	14.1	101	30.6	2.3
	3.0	3.2	7.4	750	27.0	18.3	1.2	22.6	31.0	60.7	1.3	3.0	3.2	7.4	750	20.1	1.6	3.7	14.7	95	30.2	2.3
	3.1	3.3	7.6	600	26.4	16.8	1.1	23.7	30.2	60.0	1.2	4.5	5.6	12.9	600	20.7	1.7	3.6	15.0	102	33.3	2.4
	3.1	3.3	7.6	750	27.0	18.3	1.2	22.8	31.1	60.0	1.2	4.5	5.6	12.9	750	21.1	1.6	3.8	15.5	96	33.1	2.3
	3.1	3.3	7.6	600	26.4	16.8	1.1	23.7	30.2	60.0	1.2	6.0	8.4	19.4	600	21.2	1.7	3.7	15.4	103	34.9	2.5
	3.1	3.3	7.6	750	27.0	18.3	1.2	22.8	31.1	60.0	1.2	6.0	8.4	19.4	750	21.6	1.6	3.9	16.0	97	34.7	2.4
50	3.0	2.4	5.5	600	25.5	16.5	1.2	20.9	29.7	69.8	1.6	3.0	2.4	5.5	600	22.4	1.7	3.8	16.6	105	39.0	2.6
	3.0	2.4	5.5	750	26.1	18.0	1.3	20.1	30.6	70.4	1.6	3.0	2.4	5.5	750	22.8	1.7	4.0	17.2	98	38.6	2.5
	4.5	4.4	10.2	600	26.1	16.7	1.1	22.7	30.0	63.3	1.3	4.5	4.4	10.2	600	23.5	1.8	3.9	17.5	106	42.2	2.7
	4.5	4.4	10.2	750	26.7	18.2	1.2	21.8	30.9	63.7	1.4	4.5	4.4	10.2	750	23.9	1.7	4.2	18.2	100	41.9	2.6
	6.0	6.9	15.8	600	26.3	16.8	1.1	23.6	30.1	60.0	1.2	6.0	6.9	15.8	600	24.1	1.8	4.0	18.1	107	44.0	2.7
	6.0	6.9	15.8	750	27.0	18.3	1.2	22.7	31.0	60.3	1.2	6.0	6.9	15.8	750	24.5	1.7	4.2	18.7	100	43.8	2.7
60	3.0	2.3	5.2	600	24.6	16.2	1.4	18.2	29.2	79.5	2.1	3.0	2.3	5.2	600	25.0	1.8	4.1	18.9	109	47.4	2.8
	3.0	2.3	5.2	750	25.2	17.6	1.4	17.5	30.1	80.1	2.1	3.0	2.3	5.2	750	25.5	1.7	4.3	19.6	101	46.9	2.8
	4.5	4.2	9.8	600	25.2	16.4	1.3	20.0	29.5	73.1	1.7	4.5	4.2	9.8	600	26.2	1.8	4.2	20.0	110	51.1	3.0
	4.5	4.2	9.8	750	25.8	17.9	1.3	19.2	30.4	73.5	1.8	4.5	4.2	9.8	750	26.7	1.7	4.5	20.7	103	50.8	2.9
	6.0	6.6	15.2	600	25.5	16.5	1.2	20.9	29.7	69.9	1.6	6.0	6.6	15.2	600	26.9	1.8	4.3	20.6	111	53.1	3.1
	6.0	6.6	15.2	750	26.1	18.0	1.3	20.1	30.6	70.2	1.6	6.0	6.6	15.2	750	27.3	1.8	4.5	21.3	104	52.9	3.0
70	3.0	2.2	5.0	600	23.5	15.8	1.5	15.6	28.7	89.1	2.6	3.0	2.2	5.0	600	27.6	1.9	4.4	21.3	113	55.8	3.2
	3.0	2.2	5.0	750	24.1	17.2	1.6	15.0	29.6	89.7	2.7	3.0	2.2	5.0	750	28.1	1.8	4.6	22.0	105	55.3	3.1
	4.5	4.0	9.3	600	24.2	16.1	1.4	17.3	29.0	82.9	2.2	4.5	4.0	9.3	600	28.9	1.9	4.5	22.4	115	60.0	3.4
	4.5	4.0	9.3	750	24.8	17.5	1.5	16.6	29.9	83.3	2.3	4.5	4.0	9.3	750	29.4	1.8	4.8	23.2	106	59.7	3.3
	6.0	6.3	14.5	600	24.6	16.2	1.4	18.2	29.2	79.7	2.1	6.0	6.3	14.5	600	29.5	1.9	4.6	23.0	116	62.3	3.5
	6.0	6.3	14.5	750	25.2	17.6	1.4	17.5	30.1	80.0	2.1	6.0	6.3	14.5	750	30.0	1.8	4.8	23.8	107	62.1	3.4
80	3.0	2.1	4.8	600	22.4	15.3	1.7	13.3	28.1	98.7	3.3	3.0	2.1	4.8	600	30.0	1.9	4.6	23.5	116	64.3	3.6
	3.0	2.1	4.8	750	22.9	16.7	1.8	12.8	29.0	99.4	3.4	3.0	2.1	4.8	750	30.5	1.8	4.9	24.3	108	63.8	3.4
	4.5	3.8	8.9	600	23.1	15.6	1.6	14.8	28.5	92.7	2.8	4.5	3.8	8.9	600	31.3	2.0	4.7	24.7	118	69.0	3.8
	4.5	3.8	8.9	750	23.7	17.0	1.7	14.2	29.4	93.1	2.9	4.5	3.8	8.9	750	31.9	1.9	5.0	25.5	109	68.7	3.7
	6.0	6.0	14.0	600	23.5	15.8	1.5	15.6	28.7	89.6	2.6	5.2	4.7	10.7	600	31.7	2.0	4.7	25.0	119	70.0	3.9
	6.0	6.0	14.0	750	24.1	17.2	1.6	15.0	29.6	89.9	2.7	5.2	4.7	10.7	750	32.3	1.9	5.0	25.8	110	70.0	3.8
90	3.0	2.0	4.6	600	21.1	14.8	1.9	11.2	27.6	108.4	4.0	2.6	1.6	3.8	600	31.7	2.0	4.7	25.0	119	70.0	3.9
	3.0	2.0	4.6	750	22.5	16.5	1.9	12.0	28.8	109.0	3.7	2.6	1.6	3.8	750	32.3	1.9	5.0	25.8	110	70.0	3.8
	4.5	3.7	8.5	600	21.9	15.1	1.8	12.5	27.9	102.4	3.5	2.6	1.6	3.8	600	31.7	2.0	4.7	25.0	119	70.0	3.9
	4.5	3.7	8.5	750	22.5	16.5	1.9	12.0	28.8	102.8	3.7	2.6	1.6	3.8	750	32.3	1.9	5.0	25.8	110	70.0	3.8
	6.0	5.8	13.4	600	22.3	15.3	1.7	13.2	28.1	99.4	3.3	2.6	1.6	3.8	600	31.7	2.0	4.7	25.0	119	70.0	3.9
	6.0	5.8	13.4	750	22.9	16.6	1.8	12.7	29.0	99.7	3.4	2.6	1.6	3.8	750	32.3	1.9	5.0	25.8	110	70.0	3.8
100	3.0	1.9	4.4	600	19.8	14.3	2.1	9.4	27.0	118.0	4.9	1.7	1.1	2.4	600	31.7	2.0	4.7	25.0	119	70.0	3.9
	3.0	1.9	4.4	750	20.3	15.5	2.2	9.0	27.9	118.6	5.0	1.7	1.1	2.4	750	32.3	1.9	5.0	25.8	110	70.0	3.8
	4.5	3.5	8.1	600	20.6	14.6	2.0	10.5	27.3	112.2	4.3	1.7	1.1	2.4	600	31.7	2.0	4.7	25.0	119	70.0	3.9
	4.5	3.5	8.1	750	21.1	15.9	2.1	10.1	28.3	112.6	4.5	1.7	1.1	2.4	750	32.3	1.9	5.0	25.8	110	70.0	3.8
	6.0	5.7	13.1	600	21.1	14.8	1.9	11.1	27.5	109.2	4.1	1.7	1.1	2.4	600	31.7	2.0	4.7	25.0	119	70.0	3.9
	6.0	5.7	13.1	750	21.6	16.1	2.0	10.7	28.5	109.5	4.2	1.7	1.1	2.4	750	32.3	1.9	5.0	25.8	110	70.0	3.8
110	3.0	1.8	4.1	600	18.4	13.7	2.4	7.8	26.4	127.6	5.8	1.3	0.8	1.7	600	31.7	2.0	4.7	25.0	119	70.0	3.9
	3.0	1.8	4.1	750	18.8	14.9	2.5	7.5	27.4	128.3	6.0	1.3	0.8	1.7	750	32.3	1.9	5.0	25.8	110	70.0	3.8
	4.5	3.4	7.8	600	19.3	14.0	2.2	8.7	26.8	121.9	5.2	1.3	0.8	1.7	600	31.7	2.0	4.7	25.0	119	70.0	3.9
	4.5	3.4	7.8	750	19.7	15.3	2.3	8.4	27.7	122.3	5.4	1.3	0.8	1.7	750	32.3	1.9	5.0	25.8	110	70.0	3.8
	6.0	5.5	12.7	600	19.7	14.2	2.1	9.3	26.9	119.0	4.9	1.3	0.8	1.7	600	31.7	2.0	4.7	25.0	119	70.0	3.9
	6.0	5.5	12.7	750	20.2	15.5	2.3	8.9	27.9	119.3	5.1	1.3	0.8	1.7	750	32.3	1.9	5.0	25.8	110	70.0	3.8
120	3.0	1.7	3.9	600	16.9	13.1	2.6	6.4	25.8	137.2	6.8	1.0	0.4	1.0	600	31.7	2.0	4.7	25.0	119	70.0	3.9
	3.0	1.7	3.9	750	17.3	14.2	2.8	6.2	26.8	137.9	7.0	1.0	0.4	1.0	750	32.3	1.9	5.0	25.8	110	70.0	3.8
	4.5	3.3	7.5	600	17.8	13.4	2.5	7.2	26.2	131.6	6.2	1.0	0.4	1.0	600	31.7	2.0	4.7	25.0	119	70.0	3.9
	4.5	3.3	7.5	750	18.2	14.6	2.6	7.0	27.2	132.1	6.4	1.0	0.4	1.0	750	32.3	1.9	5.0	25.8	110	70.0	3.8
	6.0	5.4	12.4	600	18.2	13.6	2.4	7.7	26.4	128.8	5.9	1.0	0.4	1.0	600	31.7	2.0	4.7	25.0	119	70.0	3.9
	6.0	5.4	12.4	750	18.7	14.8	2.5	7.4	27.3	129.1	6.0	1.0	0.4	1.0	750	32.3	1.9	5.0	25.8	110	70.0	3.8

Interpolation is permissible; extrapolation is not.
Flow is changed to maintain minimum LWT 60° F in cooling and maximum LWT 70° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 22 Model 030 - Part Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	1.5	1.2	2.8	600	26.0	16.0	0.9	28.3	29.1	60.0	1.0	6.0	4.3	9.9	600	15.4	1.5	2.9	10.1	94	16.6	2.1
	1.5	1.2	2.8	750	26.5	17.4	1.0	27.6	29.8	60.0	1.0	6.0	4.3	9.9	750	15.7	1.5	3.1	10.6	89	16.5	2.1
30	2.0	1.0	2.4	600	26.0	16.0	0.9	28.3	29.1	60.0	1.0	3.0	1.7	4.0	600	16.8	1.6	3.1	11.5	96	22.4	2.2
	2.0	1.0	2.4	750	26.5	17.4	1.0	27.6	29.8	60.0	1.0	3.0	1.7	4.0	750	17.2	1.5	3.3	12.0	91	22.0	2.1
	2.0	1.0	2.4	600	26.0	16.0	0.9	28.3	29.1	60.0	1.0	4.5	2.7	6.3	600	17.4	1.6	3.2	12.1	97	24.6	2.2
	2.0	1.0	2.4	750	26.5	17.4	1.0	27.6	29.8	60.0	1.0	4.5	2.7	6.3	750	17.8	1.5	3.4	12.6	92	24.4	2.2
	2.0	1.0	2.4	600	26.0	16.0	0.9	28.3	29.1	60.0	1.0	6.0	3.8	8.9	600	17.8	1.6	3.3	12.4	97	25.9	2.3
	2.0	1.0	2.4	750	26.5	17.4	1.0	27.6	29.8	60.0	1.0	6.0	3.8	8.9	750	18.2	1.5	3.5	13.0	92	25.7	2.2
40	3.0	1.2	2.8	600	26.0	16.0	0.9	28.3	29.1	60.0	1.0	3.0	1.3	3.0	600	19.1	1.6	3.5	13.6	99	30.9	2.3
	3.0	1.2	2.8	750	26.5	17.4	1.0	27.6	29.8	60.0	1.0	3.0	1.3	3.0	750	19.5	1.5	3.7	14.2	94	30.5	2.3
	3.0	1.2	2.8	600	26.0	16.0	0.9	28.3	29.1	60.0	1.0	4.5	2.2	5.0	600	19.8	1.6	3.6	14.3	101	33.6	2.4
	3.0	1.2	2.8	750	26.5	17.4	1.0	27.6	29.8	60.0	1.0	4.5	2.2	5.0	750	20.3	1.6	3.8	14.9	95	33.4	2.3
	3.0	1.2	2.8	600	26.0	16.0	0.9	28.3	29.1	60.0	1.0	6.0	3.1	7.3	600	20.2	1.6	3.7	14.7	101	35.1	2.4
	3.0	1.2	2.8	750	26.5	17.4	1.0	27.6	29.8	60.0	1.0	6.0	3.1	7.3	750	20.7	1.6	3.9	15.3	96	34.9	2.4
50	3.0	0.9	2.0	600	25.1	15.7	1.0	24.3	28.7	69.1	1.3	3.0	0.9	2.0	600	21.4	1.6	3.8	15.8	103	39.5	2.5
	3.0	0.9	2.0	750	25.7	17.1	1.1	23.6	29.4	69.6	1.3	3.0	0.9	2.0	750	21.8	1.6	4.0	16.4	97	39.1	2.4
	4.5	1.6	3.6	600	25.7	15.9	1.0	27.0	29.0	62.9	1.1	4.5	1.6	3.6	600	22.3	1.7	3.9	16.6	104	42.6	2.6
	4.5	1.6	3.6	750	26.3	17.3	1.0	26.3	29.7	63.2	1.1	4.5	1.6	3.6	750	22.7	1.6	4.2	17.3	98	42.3	2.5
	6.0	2.4	5.5	600	26.0	16.0	0.9	28.3	29.1	60.0	1.0	6.0	2.4	5.6	600	22.7	1.7	4.0	17.1	105	44.3	2.6
	6.0	2.4	5.5	750	26.5	17.4	1.0	27.6	29.8	60.0	1.0	6.0	2.4	5.6	750	23.2	1.6	4.2	17.7	99	44.1	2.6
60	3.0	0.8	1.9	600	24.1	15.2	1.2	20.4	28.1	78.7	1.8	3.0	0.8	1.9	600	23.7	1.7	4.1	18.0	107	48.0	2.7
	3.0	0.8	1.9	750	24.6	16.6	1.2	19.9	28.8	79.2	1.8	3.0	0.8	1.9	750	24.2	1.6	4.4	18.6	100	47.6	2.6
	4.5	1.5	3.4	600	24.8	15.5	1.1	22.9	28.5	72.7	1.4	4.5	1.5	3.4	600	24.7	1.7	4.3	18.9	108	51.6	2.8
	4.5	1.5	3.4	750	25.3	16.9	1.1	22.3	29.2	73.0	1.5	4.5	1.5	3.4	750	25.2	1.6	4.5	19.6	101	51.3	2.7
	6.0	2.3	5.3	600	25.1	15.6	1.0	24.2	28.7	69.6	1.3	6.0	2.3	5.3	600	25.3	1.7	4.3	19.4	109	53.5	2.9
	6.0	2.3	5.3	750	25.6	17.1	1.1	23.6	29.4	69.8	1.3	6.0	2.3	5.3	750	25.8	1.7	4.6	20.2	102	53.3	2.8
70	3.0	0.8	1.8	600	22.9	14.8	1.3	17.1	27.5	88.3	2.4	3.0	0.8	1.8	600	26.0	1.7	4.4	20.1	110	56.6	2.9
	3.0	0.8	1.8	750	23.4	16.1	1.4	16.7	28.2	88.8	2.5	3.0	0.8	1.8	750	26.6	1.7	4.7	20.9	103	56.1	2.9
	4.5	1.4	3.2	600	23.7	15.1	1.2	19.2	27.9	82.4	2.0	4.5	1.4	3.2	600	27.2	1.7	4.6	21.2	112	60.6	3.1
	4.5	1.4	3.2	750	24.2	16.4	1.3	18.7	28.6	82.7	2.0	4.5	1.4	3.2	750	27.7	1.7	4.8	22.0	104	60.2	3.0
	6.0	2.2	5.0	600	24.1	15.2	1.2	20.3	28.1	79.4	1.8	6.0	2.2	5.0	600	27.8	1.8	4.7	21.8	113	62.7	3.1
	6.0	2.2	5.0	750	24.5	16.6	1.2	19.8	28.8	79.6	1.8	6.0	2.2	5.0	750	28.4	1.7	4.9	22.6	105	62.5	3.0
80	3.0	0.8	1.8	600	21.6	14.2	1.5	14.2	26.8	97.9	3.2	3.0	0.8	1.8	600	28.4	1.8	4.7	22.4	114	65.1	3.2
	3.0	0.8	1.8	750	22.1	15.5	1.6	13.9	27.5	98.3	3.3	3.0	0.8	1.8	750	29.0	1.7	5.0	23.2	106	64.6	3.1
	4.5	1.4	3.2	600	22.4	14.6	1.4	15.9	27.2	92.1	2.7	4.5	1.4	3.2	600	29.6	1.8	4.9	23.6	116	69.5	3.3
	4.5	1.4	3.2	750	22.9	15.9	1.5	15.5	27.9	92.4	2.8	4.5	1.4	3.2	750	30.2	1.7	5.2	24.4	107	69.2	3.2
	6.0	2.1	4.9	600	22.8	14.7	1.4	16.9	27.4	89.1	2.5	4.9	1.6	3.6	600	29.9	1.8	4.9	23.8	116	70.0	3.3
	6.0	2.1	4.9	750	23.3	16.1	1.4	16.5	28.1	89.4	2.5	4.9	1.6	3.6	750	30.5	1.7	5.2	24.6	108	70.0	3.2
90	3.0	0.8	1.8	600	20.3	13.7	1.7	11.8	26.2	107.4	4.2	2.5	0.6	1.5	600	29.9	1.8	4.9	23.8	116	70.0	3.3
	3.0	0.8	1.8	750	21.5	15.3	1.7	12.9	27.2	107.9	3.7	2.5	0.6	1.5	750	30.5	1.7	5.2	24.6	108	70.0	3.2
	4.5	1.4	3.2	600	21.1	14.0	1.6	13.2	26.5	101.8	3.6	2.5	0.6	1.5	600	29.9	1.8	4.9	23.8	116	70.0	3.3
	4.5	1.4	3.2	750	21.5	15.3	1.7	12.9	27.2	102.1	3.7	2.5	0.6	1.5	750	30.5	1.7	5.2	24.6	108	70.0	3.2
	6.0	2.1	4.8	600	21.5	14.2	1.5	14.0	26.7	98.9	3.3	2.5	0.6	1.5	600	29.9	1.8	4.9	23.8	116	70.0	3.3
	6.0	2.1	4.8	750	21.9	15.5	1.6	13.6	27.4	99.1	3.4	2.5	0.6	1.5	750	30.5	1.7	5.2	24.6	108	70.0	3.2
100	3.0	0.7	1.7	600	18.9	13.1	1.9	9.8	25.6	117.0	5.3	1.6	0.4	0.9	600	29.9	1.8	4.9	23.8	116	70.0	3.3
	3.0	0.7	1.7	750	19.3	14.3	2.0	9.5	26.3	117.5	5.5	1.6	0.4	0.9	750	30.5	1.7	5.2	24.6	108	70.0	3.2
	4.5	1.3	3.0	600	19.7	13.4	1.8	10.9	25.9	111.5	4.6	1.6	0.4	0.9	600	29.9	1.8	4.9	23.8	116	70.0	3.3
	4.5	1.3	3.0	750	20.1	14.7	1.9	10.6	26.6	111.8	4.8	1.6	0.4	0.9	750	30.5	1.7	5.2	24.6	108	70.0	3.2
	6.0	2.0	4.6	600	20.1	13.6	1.7	11.5	26.1	108.7	4.3	1.6	0.4	0.9	600	29.9	1.8	4.9	23.8	116	70.0	3.3
	6.0	2.0	4.6	750	20.5	14.8	1.8	11.3	26.8	108.9	4.4	1.6	0.4	0.9	750	30.5	1.7	5.2	24.6	108	70.0	3.2
110	3.0	0.7	1.5	600	17.7	12.6	2.2	8.1	25.1	126.7	6.7	1.2	0.2	0.6	600	29.9	1.8	4.9	23.8	116	70.0	3.3
	3.0	0.7	1.5	750	18.0	13.7	2.3	7.9	25.8	127.2	6.8	1.2	0.2	0.6	750	30.5	1.7	5.2	24.6	108	70.0	3.2
	4.5	1.2	2.8	600	18.4	12.9	2.0	9.0	25.4	121.3	5.9	1.2	0.2	0.6	600	29.9	1.8	4.9	23.8	116	70.0	3.3
	4.5	1.2	2.8	750	18.8	14.0	2.1	8.8	26.1	121.6	6.0	1.2	0.2	0.6	750	30.5	1.7	5.2	24.6	108	70.0	3.2
	6.0	1.9	4.4	600	18.8	13.0	2.0	9.5	25.5	118.5	5.5	1.2	0.2	0.6	600	29.9	1.8	4.9	23.8	116	70.0	3.3
	6.0	1.9	4.4	750	19.2	14.2	2.1	9.3	26.2	118.7	5.6	1.2	0.2	0.6	750	30.5	1.7	5.2	24.6	108	70.0	3.2
120												1.0	0.1	0.2	600	29.9	1.8	4.9	23.8	116	70.0	3.3
												1.0	0.1	0.2	750	30.5	1.7	5.2	24.6	108	70.0	3.2
	4.5	1.1	2.6	600	17.1	12.3	2.3	7.5	25.0	131.1	7.3	1.0	0.1	0.2	600	29.9	1.8	4.9	23.8	116	70.0	3.3
	4.5	1.1	2.6	750	17.5	13.5	2.4	7.3	25.7	131.4	7.5	1.0	0.1	0.2	750	30.5	1.7	5.2	24.6	108	70.0	3.2
	6.0	1.8	4.1	600	17.5	12.5	2.2	7.9	25.1	128.4	6.9	1.0	0.1	0.2	600	29.9	1.8	4.9	23.8	116	70.0	3.3
	6.0	1.8	4.1	750	17.9	13.6	2.3	7.7	25.8	128.6	7.0	1.0	0.1	0.2	750	30.5	1.7	5.2	24.6	108	70.0	3.2

Interpolation is permissible; extrapolation is not.
Flow is changed to maintain minimum LWT 60° F in cooling and maximum LWT 70° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 22 Model 030 - Full Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	2.0	1.5	3.4	720	33.8	19.8	1.4	23.9	38.7	60.0	1.6	7.5	5.7	13.3	720	21.4	2.0	3.1	14.5	98	16.1	2.8
	2.0	1.5	3.4	900	34.7	21.5	1.5	23.0	39.8	60.0	1.7	7.5	5.7	13.3	900	21.8	1.9	3.3	15.2	92	16.0	2.7
30	2.7	1.4	3.2	720	33.8	19.8	1.4	23.9	38.7	60.0	1.6	3.8	2.3	5.2	720	23.1	2.1	3.3	16.1	100	21.4	2.9
	2.7	1.4	3.2	900	34.7	21.5	1.5	23.0	39.8	60.0	1.7	3.8	2.3	5.2	900	23.5	2.0	3.5	16.7	94	21.1	2.8
	2.7	1.4	3.2	720	33.8	19.8	1.4	23.9	38.7	60.0	1.6	5.6	3.5	8.1	720	24.0	2.1	3.4	16.9	101	24.0	3.0
	2.7	1.4	3.2	900	34.7	21.5	1.5	23.0	39.8	60.0	1.7	5.6	3.5	8.1	900	24.5	2.0	3.6	17.6	95	23.7	2.9
	2.7	1.4	3.2	720	33.8	19.8	1.4	23.9	38.7	60.0	1.6	7.5	5.1	11.8	720	24.6	2.1	3.4	17.3	102	25.4	3.0
	2.7	1.4	3.2	900	34.7	21.5	1.5	23.0	39.8	60.0	1.7	7.5	5.1	11.8	900	25.0	2.0	3.6	18.0	96	25.2	2.9
40	3.8	1.7	4.0	720	33.7	19.7	1.4	23.5	38.6	60.6	1.6	3.8	1.7	4.0	720	26.1	2.2	3.5	18.7	104	30.0	3.1
	3.8	1.7	4.0	900	34.5	21.5	1.5	22.6	39.7	61.2	1.7	3.8	1.7	4.0	900	26.6	2.1	3.7	19.5	97	29.6	3.0
	4.0	1.8	4.2	720	33.8	19.8	1.4	23.9	38.7	60.0	1.6	5.6	2.9	6.6	720	27.2	2.2	3.6	19.7	105	33.0	3.2
	4.0	1.8	4.2	900	34.7	21.5	1.5	23.0	39.8	60.0	1.7	5.6	2.9	6.6	900	27.7	2.1	3.8	20.5	98	32.7	3.1
	4.0	1.8	4.2	720	33.8	19.8	1.4	23.9	38.7	60.0	1.6	7.5	4.3	10.0	720	27.8	2.2	3.7	20.3	106	34.6	3.3
	4.0	1.8	4.2	900	34.7	21.5	1.5	23.0	39.8	60.0	1.7	7.5	4.3	10.0	900	28.3	2.1	3.9	21.0	99	34.4	3.2
50	3.8	1.2	2.8	720	32.7	19.3	1.6	20.8	38.0	70.3	2.2	3.8	1.2	2.8	720	29.2	2.3	3.8	21.5	108	38.5	3.4
	3.8	1.2	2.8	900	33.5	21.0	1.7	20.0	39.2	70.9	2.2	3.8	1.2	2.8	900	29.7	2.2	4.0	22.3	101	38.1	3.3
	5.6	2.2	5.1	720	33.4	19.6	1.5	22.7	38.4	63.7	1.8	5.6	2.2	5.1	720	30.5	2.3	3.9	22.6	109	42.0	3.6
	5.6	2.2	5.1	900	34.2	21.4	1.6	21.8	39.6	64.1	1.8	5.6	2.2	5.1	900	31.0	2.2	4.1	23.5	102	41.7	3.5
	7.5	3.5	8.1	720	33.8	19.8	1.4	23.7	38.6	60.3	1.6	7.5	3.5	8.1	720	31.2	2.3	3.9	23.3	110	43.8	3.6
	7.5	3.5	8.1	900	34.6	21.5	1.5	22.8	39.8	60.6	1.7	7.5	3.5	8.1	900	31.7	2.2	4.2	24.1	103	43.6	3.5
60	3.8	1.2	2.7	720	31.4	18.9	1.7	18.2	37.3	79.9	2.8	3.8	1.2	2.7	720	32.3	2.4	4.0	24.3	112	47.1	3.8
	3.8	1.2	2.7	900	32.1	20.5	1.8	17.5	38.4	80.5	2.9	3.8	1.2	2.7	900	32.9	2.3	4.2	25.1	104	46.6	3.7
	5.6	2.0	4.6	720	32.3	19.2	1.6	20.0	37.8	73.4	2.3	5.6	2.0	4.6	720	33.8	2.4	4.1	25.6	113	50.9	4.0
	5.6	2.0	4.6	900	33.1	20.9	1.7	19.2	38.9	73.8	2.4	5.6	2.0	4.6	900	34.4	2.3	4.4	26.5	105	50.6	3.9
	7.5	3.3	7.6	720	32.7	19.4	1.6	20.9	38.0	70.1	2.1	7.5	3.3	7.6	720	34.6	2.4	4.2	26.3	114	53.0	4.1
	7.5	3.3	7.6	900	33.5	21.1	1.7	20.1	39.2	70.5	2.2	7.5	3.3	7.6	900	35.2	2.3	4.4	27.2	106	52.8	4.0
70	3.8	1.1	2.5	720	29.9	18.3	1.9	15.7	36.4	89.4	3.5	3.8	1.1	2.5	720	35.4	2.5	4.2	27.0	116	55.6	4.2
	3.8	1.1	2.5	900	30.7	19.9	2.0	15.1	37.6	90.0	3.7	3.8	1.1	2.5	900	36.0	2.4	4.5	28.0	107	55.1	4.1
	5.6	1.9	4.5	720	30.9	18.7	1.8	17.4	37.0	83.2	3.0	5.6	1.9	4.5	720	37.0	2.5	4.3	28.5	118	59.9	4.5
	5.6	1.9	4.5	900	31.7	20.3	1.9	16.7	38.1	83.6	3.1	5.6	1.9	4.5	900	37.7	2.4	4.6	29.4	109	59.5	4.4
	7.5	3.1	7.2	720	31.4	18.9	1.7	18.2	37.3	79.9	2.8	7.5	3.1	7.2	720	37.9	2.5	4.4	29.2	119	62.2	4.6
	7.5	3.1	7.2	900	32.2	20.5	1.8	17.6	38.4	80.2	2.9	7.5	3.1	7.2	900	38.6	2.4	4.6	30.2	110	61.9	4.5
80	3.8	1.1	2.5	720	28.3	17.7	2.1	13.5	35.5	98.9	4.4	3.8	1.1	2.5	720	38.5	2.6	4.4	29.8	120	64.1	4.7
	3.8	1.1	2.5	900	29.0	19.2	2.2	13.0	36.7	99.6	4.6	3.8	1.1	2.5	900	39.2	2.5	4.7	30.8	110	63.6	4.6
	5.6	1.9	4.4	720	29.4	18.1	2.0	14.9	36.1	92.8	3.8	5.6	1.9	4.4	720	40.3	2.6	4.5	31.3	122	68.9	5.1
	5.6	1.9	4.4	900	30.1	19.7	2.1	14.4	37.3	93.2	3.9	5.6	1.9	4.4	900	40.9	2.5	4.8	32.4	112	68.5	4.9
	7.5	3.0	7.0	720	29.9	18.3	1.9	15.7	36.4	89.7	3.5	6.6	2.4	5.5	720	40.8	2.6	4.5	31.8	122	70.0	5.3
	7.5	3.0	7.0	900	30.7	19.9	2.0	15.1	37.6	90.0	3.7	6.6	2.4	5.5	900	41.5	2.5	4.8	32.8	113	70.0	5.1
90	3.8	1.1	2.5	720	26.7	17.0	2.3	11.4	34.6	108.5	5.4	3.3	0.9	2.0	720	40.8	2.6	4.5	31.8	122	70.0	5.3
	3.8	1.1	2.5	900	28.4	19.0	2.3	12.2	36.4	109.1	4.9	3.3	0.9	2.0	900	41.5	2.5	4.8	32.8	113	70.0	5.1
	5.6	1.9	4.3	720	27.8	17.4	2.2	12.7	35.2	102.5	4.7	3.3	0.9	2.0	720	40.8	2.6	4.5	31.8	122	70.0	5.3
	5.6	1.9	4.3	900	28.4	19.0	2.3	12.2	36.4	102.9	4.9	3.3	0.9	2.0	900	41.5	2.5	4.8	32.8	113	70.0	5.1
	7.5	2.9	6.8	720	28.3	17.6	2.1	13.4	35.5	99.5	4.4	3.3	0.9	2.0	720	40.8	2.6	4.5	31.8	122	70.0	5.3
	7.5	2.9	6.8	900	29.0	19.2	2.2	12.9	36.7	99.8	4.6	3.3	0.9	2.0	900	41.5	2.5	4.8	32.8	113	70.0	5.1
100	3.8	1.0	2.3	720	25.0	16.2	2.6	9.6	33.8	118.0	6.5	2.2	0.5	1.2	720	40.8	2.6	4.5	31.8	122	70.0	5.3
	3.8	1.0	2.3	900	25.6	17.7	2.8	9.2	35.0	118.7	6.7	2.2	0.5	1.2	900	41.5	2.5	4.8	32.8	113	70.0	5.1
	5.6	1.8	4.1	720	26.0	16.7	2.4	10.7	34.3	112.2	5.8	2.2	0.5	1.2	720	40.8	2.6	4.5	31.8	122	70.0	5.3
	5.6	1.8	4.1	900	26.7	18.2	2.6	10.3	35.5	112.6	6.0	2.2	0.5	1.2	900	41.5	2.5	4.8	32.8	113	70.0	5.1
	7.5	2.8	6.5	720	26.6	16.9	2.3	11.3	34.6	109.2	5.4	2.2	0.5	1.2	720	40.8	2.6	4.5	31.8	122	70.0	5.3
	7.5	2.8	6.5	900	27.2	18.4	2.5	10.9	35.8	109.5	5.6	2.2	0.5	1.2	900	41.5	2.5	4.8	32.8	113	70.0	5.1
110	3.8	0.9	2.2	720	23.2	15.5	2.9	8.0	33.2	127.7	7.7	1.6	0.3	0.8	720	40.8	2.6	4.5	31.8	122	70.0	5.3
	3.8	0.9	2.2	900	23.8	16.9	3.1	7.7	34.4	128.3	8.0	1.6	0.3	0.8	900	41.5	2.5	4.8	32.8	113	70.0	5.1
	5.6	1.7	3.9	720	24.3	16.0	2.7	8.9	33.6	121.9	7.0	1.6	0.3	0.8	720	40.8	2.6	4.5	31.8	122	70.0	5.3
	5.6	1.7	3.9	900	24.9	17.4	2.9	8.6	34.8	122.4	7.2	1.6	0.3	0.8	900	41.5	2.5	4.8	32.8	113	70.0	5.1
	7.5	2.7	6.2	720	24.8	16.2	2.6	9.5	33.8	119.0	6.6	1.6	0.3	0.8	720	40.8	2.6	4.5	31.8	122	70.0	5.3
	7.5	2.7	6.2	900	25.5	17.6	2.8	9.1	35.0	119.3	6.8	1.6	0.3	0.8	900	41.5	2.5	4.8	32.8	113	70.0	5.1
120												1.3	0.1	0.2	720	40.8	2.6	4.5	31.8	122	70.0	5.3
												1.3	0.1	0.2	900	41.5	2.5	4.8	32.8	113	70.0	5.1
	5.6	1.6	3.7	720	22.6	15.2	3.0	7.4	33.0	131.7	8.3	1.3	0.1	0.2	720	40.8	2.6	4.5	31.8	122	70.0	5.3
	5.6	1.6	3.7	900	23.1	16.5	3.2	7.1	34.2	132.2	8.5	1.3	0.1	0.2	900	41.5	2.5	4.8	32.8	113	70.0	5.1
	7.5	2.6	6.0	720	23.1	15.4	2.9	7.9	33.1	128.8	7.8	1.3	0.1	0.2	720	40.8	2.6	4.5	31.8	122	70.0	5.3
	7.5	2.6	6.0	900	23.7	16.8	3.1	7.6	34.4	129.2	8.1	1.3	0.1	0.2	900	41.5	2.5	4.8	32.8	113	70.0	5.1

Interpolation is permissible; extrapolation is not.
Flow is changed to maintain minimum LWT 60° F in cooling and maximum LWT 70° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 22 Model 036 - Part Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	1.7	1.3	3.0	760	29.4	19.5	1.0	28.2	32.9	60.0	1.1	6.0	4.3	9.9	760	16.5	1.7	2.8	10.5	90	16.5	2.6
	1.7	1.3	3.0	950	30.0	21.2	1.1	27.5	33.7	60.0	1.1	6.0	4.3	9.9	950	16.9	1.7	2.9	11.1	86	16.3	2.5
30	2.2	1.2	2.7	760	29.4	19.5	1.0	28.2	32.9	60.0	1.1	3.0	1.7	4.0	760	18.2	1.8	3.0	12.2	92	21.9	2.7
	2.2	1.2	2.7	950	30.0	21.2	1.1	27.5	33.7	60.0	1.1	3.0	1.7	4.0	950	18.6	1.7	3.2	12.8	88	21.5	2.6
	2.2	1.2	2.7	760	29.4	19.5	1.0	28.2	32.9	60.0	1.1	4.5	2.7	6.3	760	19.1	1.8	3.1	13.0	93	24.2	2.7
	2.2	1.2	2.7	950	30.0	21.2	1.1	27.5	33.7	60.0	1.1	4.5	2.7	6.3	950	19.5	1.7	3.3	13.6	89	24.0	2.6
	2.2	1.2	2.7	760	29.4	19.5	1.0	28.2	32.9	60.0	1.1	6.0	3.8	8.9	760	19.5	1.8	3.2	13.4	94	25.5	2.7
	2.2	1.2	2.7	950	30.0	21.2	1.1	27.5	33.7	60.0	1.1	6.0	3.8	8.9	950	19.9	1.7	3.4	14.1	89	25.3	2.7
40	3.0	1.3	3.0	760	29.2	19.2	1.1	27.4	32.9	61.9	1.2	3.0	1.3	3.0	760	21.0	1.8	3.4	14.9	96	30.1	2.8
	3.0	1.3	3.0	950	29.8	21.0	1.1	26.7	33.6	62.4	1.2	3.0	1.3	3.0	950	21.4	1.7	3.6	15.5	91	29.7	2.8
	3.4	1.4	3.2	760	29.4	19.5	1.0	28.2	32.9	60.0	1.1	4.5	2.2	5.0	760	22.0	1.8	3.6	15.9	97	33.0	2.9
	3.4	1.4	3.2	950	30.0	21.2	1.1	27.5	33.7	60.0	1.1	4.5	2.2	5.0	950	22.5	1.7	3.8	16.5	92	32.7	2.8
	3.4	1.4	3.2	760	29.4	19.5	1.0	28.2	32.9	60.0	1.1	6.0	3.1	7.2	760	22.6	1.8	3.7	16.4	97	34.5	3.0
	3.4	1.4	3.2	950	30.0	21.2	1.1	27.5	33.7	60.0	1.1	6.0	3.1	7.2	950	23.0	1.7	3.9	17.1	92	34.3	2.9
50	3.0	0.9	2.0	760	28.4	18.5	1.2	23.7	32.5	71.7	1.6	3.0	0.9	2.0	760	23.8	1.8	3.8	17.6	99	38.3	3.0
	3.0	0.9	2.0	950	29.0	20.1	1.3	23.1	33.3	72.2	1.7	3.0	0.9	2.0	950	24.3	1.8	4.1	18.3	94	37.8	3.0
	4.5	1.6	3.6	760	29.0	19.0	1.1	26.5	32.8	64.6	1.3	4.5	1.6	3.6	760	25.0	1.8	4.0	18.7	100	41.7	3.1
	4.5	1.6	3.6	950	29.6	20.7	1.1	25.8	33.6	64.9	1.3	4.5	1.6	3.6	950	25.5	1.8	4.2	19.5	95	41.3	3.0
	6.0	2.4	5.6	760	29.3	19.3	1.1	27.8	32.9	61.0	1.2	6.0	2.4	5.6	760	25.6	1.8	4.1	19.4	101	43.5	3.2
	6.0	2.4	5.6	950	29.9	21.1	1.1	27.1	33.7	61.2	1.2	6.0	2.4	5.6	950	26.2	1.8	4.4	20.1	95	43.3	3.1
60	3.0	0.8	1.9	760	27.3	17.9	1.4	19.9	32.0	81.3	2.3	3.0	0.8	1.9	760	26.5	1.8	4.3	20.3	102	46.5	3.3
	3.0	0.8	1.9	950	27.9	19.6	1.4	19.4	32.7	81.8	2.3	3.0	0.8	1.9	950	27.1	1.8	4.5	21.1	96	46.0	3.2
	4.5	1.5	3.4	760	28.1	18.3	1.2	22.7	32.4	74.4	1.8	4.5	1.5	3.4	760	27.9	1.8	4.5	21.6	104	50.4	3.4
	4.5	1.5	3.4	950	28.7	20.0	1.3	22.1	33.1	74.7	1.8	4.5	1.5	3.4	950	28.5	1.8	4.7	22.4	98	50.0	3.3
	6.0	2.3	5.3	760	28.5	18.5	1.2	24.1	32.5	70.8	1.6	6.0	2.3	5.3	760	28.6	1.8	4.6	22.4	105	52.5	3.5
	6.0	2.3	5.3	950	29.1	20.2	1.2	23.5	33.3	71.1	1.6	6.0	2.3	5.3	950	29.3	1.8	4.8	23.2	99	52.3	3.4
70	3.0	0.8	1.8	760	26.0	17.5	1.6	16.5	31.3	90.9	3.1	3.0	0.8	1.8	760	29.3	1.8	4.7	23.0	106	54.7	3.5
	3.0	0.8	1.8	950	26.5	19.1	1.6	16.1	32.1	91.4	3.1	3.0	0.8	1.8	950	29.9	1.8	4.9	23.8	99	54.1	3.4
	4.5	1.4	3.2	760	26.9	17.8	1.4	19.0	31.8	84.1	2.5	4.5	1.4	3.2	760	30.8	1.9	4.9	24.5	108	59.1	3.7
	4.5	1.4	3.2	950	27.5	19.4	1.5	18.5	32.6	84.5	2.5	4.5	1.4	3.2	950	31.5	1.8	5.1	25.4	101	58.7	3.6
	6.0	2.2	5.0	760	27.4	18.0	1.4	20.3	32.0	80.7	2.2	6.0	2.2	5.0	760	31.7	1.9	5.0	25.3	109	61.6	3.8
	6.0	2.2	5.0	950	28.0	19.6	1.4	19.8	32.8	80.9	2.2	6.0	2.2	5.0	950	32.3	1.8	5.3	26.2	102	61.3	3.7
80	3.0	0.8	1.8	760	24.4	17.1	1.8	13.6	30.6	100.4	4.1	3.0	0.8	1.8	760	32.0	1.9	5.0	25.6	109	62.9	3.8
	3.0	0.8	1.8	950	24.9	18.7	1.9	13.3	31.4	100.9	4.2	3.0	0.8	1.8	950	32.7	1.8	5.3	26.5	102	62.3	3.7
	4.5	1.4	3.2	760	25.5	17.4	1.6	15.6	31.1	93.8	3.3	4.5	1.4	3.2	760	33.7	1.9	5.3	27.3	111	67.9	4.0
	4.5	1.4	3.2	950	26.1	19.0	1.7	15.2	31.9	94.2	3.4	4.5	1.4	3.2	950	34.4	1.8	5.6	28.2	104	67.5	3.9
	6.0	2.1	4.9	760	26.1	17.6	1.6	16.8	31.4	90.5	3.0	5.8	2.0	4.6	760	34.5	1.9	5.4	28.1	112	70.0	4.1
	6.0	2.1	4.9	950	26.6	19.1	1.6	16.3	32.1	90.7	3.1	5.8	2.0	4.6	950	35.3	1.8	5.7	29.1	104	70.0	4.0
90	3.0	0.8	1.8	760	22.8	16.7	2.0	11.2	29.8	109.9	5.2	2.9	0.8	1.8	760	34.5	1.9	5.4	28.1	112	70.0	4.1
	3.0	0.8	1.8	950	24.5	18.5	2.0	12.5	31.1	110.4	4.5	2.9	0.8	1.8	950	35.3	1.8	5.7	29.1	104	70.0	4.0
	4.5	1.4	3.2	760	24.0	17.0	1.9	12.8	30.4	103.5	4.4	2.9	0.8	1.8	760	34.5	1.9	5.4	28.1	112	70.0	4.1
	4.5	1.4	3.2	950	24.5	18.5	2.0	12.5	31.1	103.8	4.5	2.9	0.8	1.8	950	35.3	1.8	5.7	29.1	104	70.0	4.0
	6.0	2.1	4.8	760	24.5	17.2	1.8	13.7	30.6	100.2	4.0	2.9	0.8	1.8	760	34.5	1.9	5.4	28.1	112	70.0	4.1
	6.0	2.1	4.8	950	25.0	18.7	1.9	13.4	31.4	100.5	4.1	2.9	0.8	1.8	950	35.3	1.8	5.7	29.1	104	70.0	4.0
100	3.0	0.7	1.7	760	21.2	16.1	2.3	9.2	29.1	119.4	6.6	1.9	0.5	1.1	760	34.5	1.9	5.4	28.1	112	70.0	4.1
	3.0	0.7	1.7	950	21.6	17.5	2.4	8.9	29.9	119.9	6.8	1.9	0.5	1.1	950	35.3	1.8	5.7	29.1	104	70.0	4.0
	4.5	1.3	3.0	760	22.3	16.5	2.1	10.5	29.6	113.2	5.7	1.9	0.5	1.1	760	34.5	1.9	5.4	28.1	112	70.0	4.1
	4.5	1.3	3.0	950	22.8	18.0	2.2	10.2	30.4	113.5	5.8	1.9	0.5	1.1	950	35.3	1.8	5.7	29.1	104	70.0	4.0
	6.0	2.0	4.6	760	22.9	16.7	2.0	11.2	29.8	109.9	5.2	1.9	0.5	1.1	760	34.5	1.9	5.4	28.1	112	70.0	4.1
	6.0	2.0	4.6	950	23.3	18.2	2.1	10.9	30.6	110.2	5.3	1.9	0.5	1.1	950	35.3	1.8	5.7	29.1	104	70.0	4.0
110	3.0	0.7	1.5	760	19.6	15.3	2.6	7.6	28.4	129.0	8.2	1.5	0.3	0.7	760	34.5	1.9	5.4	28.1	112	70.0	4.1
	3.0	0.7	1.5	950	20.0	16.7	2.7	7.4	29.3	129.5	8.4	1.5	0.3	0.7	950	35.3	1.8	5.7	29.1	104	70.0	4.0
	4.5	1.2	2.8	760	20.7	15.8	2.4	8.6	28.9	122.8	7.1	1.5	0.3	0.7	760	34.5	1.9	5.4	28.1	112	70.0	4.1
	4.5	1.2	2.8	950	21.1	17.3	2.5	8.4	29.7	123.2	7.3	1.5	0.3	0.7	950	35.3	1.8	5.7	29.1	104	70.0	4.0
	6.0	1.9	4.4	760	21.2	16.1	2.3	9.2	29.1	119.7	6.6	1.5	0.3	0.7	760	34.5	1.9	5.4	28.1	112	70.0	4.1
	6.0	1.9	4.4	950	21.6	17.5	2.4	8.9	29.9	120.0	6.8	1.5	0.3	0.7	950	35.3	1.8	5.7	29.1	104	70.0	4.0
120	3.0	0.6	1.4	760	18.1	14.4	2.9	6.3	27.9	138.6	10.0	1.2	0.1	0.2	760	34.5	1.9	5.4	28.1	112	70.0	4.1
	3.0	0.6	1.4	950	18.5	15.7	3.0	6.1	28.7	139.2	10.2	1.2	0.1	0.2	950	35.3	1.8	5.7	29.1	104	70.0	4.0
	4.5	1.1	2.6	760	19.1	15.0	2.7	7.1	28.2	132.5	8.8	1.2	0.1	0.2	760	34.5	1.9	5.4	28.1	112	70.0	4.1
	4.5	1.1	2.6	950	19.5	16.4	2.8	6.9	29.1	132.9	9.0	1.2	0.1	0.2	950	35.3	1.8	5.7	29.1	104	70.0	4.0
	6.0	1.8	4.1	760	19.6	15.3	2.6	7.5	28.4	129.5	8.2	1.2	0.1	0.2	760	34.5	1.9	5.4	28.1	112	70.0	4.1
	6.0	1.8	4.1	950	20.0	16.7	2.7	7.3	29.2	129.7	8.4	1.2	0.1	0.2	950	35.3	1.8	5.7	29.1	104	70.0	4.0

Interpolation is permissible; extrapolation is not.
Flow is changed to maintain minimum LWT 60° F in cooling and maximum LWT 70° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 22 Model 036 - Full Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	2.3	1.7	3.8	920	39.3	24.3	1.7	22.8	45.2	60.0	2.0	9.0	7.4	17.2	920	24.8	2.4	3.0	16.6	95	16.3	3.5
	2.3	1.7	3.8	1150	40.3	26.4	1.8	22.0	46.6	60.0	2.1	9.0	7.4	17.2	1,150	25.3	2.3	3.2	17.3	90	16.1	3.4
30	3.1	1.6	3.7	920	39.3	24.3	1.7	22.8	45.2	60.0	2.0	4.5	2.7	6.3	920	27.0	2.5	3.2	18.5	97	21.8	3.6
	3.1	1.6	3.7	1150	40.3	26.4	1.8	22.0	46.6	60.0	2.1	4.5	2.7	6.3	1,150	27.5	2.4	3.4	19.3	92	21.4	3.5
	3.1	1.6	3.7	920	39.3	24.3	1.7	22.8	45.2	60.0	2.0	6.8	4.5	10.4	920	28.1	2.5	3.3	19.5	98	24.2	3.7
	3.1	1.6	3.7	1150	40.3	26.4	1.8	22.0	46.6	60.0	2.1	6.8	4.5	10.4	1,150	28.6	2.4	3.5	20.3	93	24.0	3.6
	3.1	1.6	3.7	920	39.3	24.3	1.7	22.8	45.2	60.0	2.0	9.0	6.6	15.3	920	28.7	2.5	3.3	20.0	99	25.5	3.8
	3.1	1.6	3.7	1150	40.3	26.4	1.8	22.0	46.6	60.0	2.1	9.0	6.6	15.3	1,150	29.2	2.4	3.5	20.9	93	25.4	3.7
40	4.5	2.2	5.0	920	39.3	24.4	1.7	22.7	45.2	60.1	2.0	4.5	2.2	5.0	920	30.7	2.6	3.5	21.8	101	30.3	3.9
	4.5	2.2	5.0	1150	40.3	26.5	1.8	21.8	46.6	60.7	2.1	4.5	2.2	5.0	1,150	31.2	2.5	3.7	22.7	95	29.9	3.8
	4.7	2.3	5.3	920	39.3	24.3	1.7	22.8	45.2	60.0	2.0	6.8	3.7	8.6	920	32.0	2.6	3.6	23.0	102	33.2	4.0
	4.7	2.3	5.3	1150	40.3	26.4	1.8	22.0	46.6	60.0	2.1	6.8	3.7	8.6	1,150	32.5	2.5	3.8	23.9	96	32.9	3.9
	4.7	2.3	5.3	920	39.3	24.3	1.7	22.8	45.2	60.0	2.0	9.0	5.6	13.0	920	32.7	2.6	3.6	23.7	103	34.7	4.1
	4.7	2.3	5.3	1150	40.3	26.4	1.8	22.0	46.6	60.0	2.1	9.0	5.6	13.0	1,150	33.3	2.5	3.8	24.6	97	34.5	4.0
50	4.5	1.6	3.6	920	38.4	23.7	1.9	20.4	44.8	69.9	2.7	4.5	1.6	3.6	920	34.4	2.7	3.7	25.2	105	38.8	4.3
	4.5	1.6	3.6	1150	39.3	25.7	2.0	19.6	46.2	70.5	2.8	4.5	1.6	3.6	1,150	35.0	2.6	4.0	26.2	98	38.4	4.2
	6.8	3.0	6.9	920	39.1	24.2	1.8	22.0	45.1	63.4	2.2	6.8	3.0	6.9	920	36.0	2.7	3.8	26.6	106	42.1	4.5
	6.8	3.0	6.9	1150	40.0	26.3	1.9	21.1	46.5	63.8	2.3	6.8	3.0	6.9	1,150	36.6	2.6	4.1	27.6	99	41.8	4.3
	9.0	4.6	10.7	920	39.3	24.4	1.7	22.8	45.2	60.0	2.0	9.0	4.6	10.7	920	36.8	2.8	3.9	27.4	107	43.9	4.6
	9.0	4.6	10.7	1150	40.3	26.6	1.8	21.9	46.6	60.3	2.1	9.0	4.6	10.7	1,150	37.4	2.7	4.1	28.4	100	43.7	4.4
60	4.5	1.5	3.4	920	37.1	22.9	2.1	18.0	44.2	79.6	3.5	4.5	1.5	3.4	920	38.2	2.8	4.0	28.6	108	47.3	4.8
	4.5	1.5	3.4	1150	38.0	24.9	2.2	17.3	45.5	80.2	3.6	4.5	1.5	3.4	1,150	38.9	2.7	4.2	29.7	101	46.8	4.6
	6.8	2.8	6.5	920	38.0	23.4	1.9	19.6	44.7	73.2	2.9	6.8	2.8	6.5	920	40.0	2.9	4.1	30.2	110	51.0	5.0
	6.8	2.8	6.5	1150	39.0	25.5	2.1	18.9	46.0	73.6	3.0	6.8	2.8	6.5	1,150	40.7	2.7	4.3	31.3	103	50.7	4.9
	9.0	4.4	10.2	920	38.4	23.7	1.9	20.4	44.9	70.0	2.7	9.0	4.4	10.2	920	40.9	2.9	4.2	31.1	111	53.1	5.1
	9.0	4.4	10.2	1150	39.4	25.8	2.0	19.6	46.2	70.3	2.8	9.0	4.4	10.2	1,150	41.6	2.8	4.4	32.2	104	52.9	5.0
70	4.5	1.4	3.2	920	35.5	22.2	2.3	15.7	43.3	89.2	4.4	4.5	1.4	3.2	920	42.0	2.9	4.2	32.0	112	55.8	5.3
	4.5	1.4	3.2	1150	36.4	24.2	2.4	15.1	44.6	89.8	4.6	4.5	1.4	3.2	1,150	42.7	2.8	4.5	33.2	104	55.3	5.1
	6.8	2.6	6.1	920	36.6	22.7	2.1	17.2	43.9	83.0	3.8	6.8	2.6	6.1	920	43.9	3.0	4.3	33.8	114	60.0	5.6
	6.8	2.6	6.1	1150	37.5	24.7	2.3	16.6	45.3	83.4	3.9	6.8	2.6	6.1	1,150	44.7	2.9	4.6	34.9	106	59.6	5.5
	9.0	4.2	9.7	920	37.1	22.9	2.1	18.0	44.2	79.8	3.5	9.0	4.2	9.7	920	45.0	3.0	4.4	34.7	115	62.3	5.8
	9.0	4.2	9.7	1150	38.1	25.0	2.2	17.4	45.5	80.1	3.6	9.0	4.2	9.7	1,150	45.8	2.9	4.6	35.9	107	62.0	5.6
80	4.5	1.4	3.2	920	33.7	21.5	2.5	13.5	42.3	98.8	5.5	4.5	1.4	3.2	920	45.7	3.0	4.4	35.4	116	64.3	5.9
	4.5	1.4	3.2	1150	34.6	23.4	2.7	13.0	43.7	99.4	5.7	4.5	1.4	3.2	1,150	46.5	2.9	4.7	36.6	107	63.7	5.8
	6.8	2.6	6.0	920	34.9	22.0	2.3	14.9	42.9	92.7	4.8	6.8	2.6	6.0	920	47.8	3.1	4.5	37.2	118	69.0	6.4
	6.8	2.6	6.0	1150	35.8	23.9	2.5	14.4	44.3	93.1	4.9	6.8	2.6	6.0	1,150	48.6	3.0	4.8	38.5	109	68.6	6.2
	9.0	4.1	9.4	920	35.5	22.2	2.3	15.7	43.3	89.6	4.4	7.8	3.2	7.3	920	48.4	3.1	4.5	37.8	119	70.0	6.5
	9.0	4.1	9.4	1150	36.4	24.2	2.4	15.1	44.6	89.9	4.6	7.8	3.2	7.3	1,150	49.2	3.0	4.8	39.0	110	70.0	6.3
90	4.5	1.4	3.2	920	31.8	20.8	2.8	11.4	41.3	108.3	6.7	3.9	1.1	2.5	920	48.4	3.1	4.5	37.8	119	70.0	6.5
	4.5	1.4	3.2	1150	33.9	23.1	2.8	12.2	43.3	109.0	6.1	3.9	1.1	2.5	1,150	49.2	3.0	4.8	39.0	110	70.0	6.3
	6.8	2.5	5.8	920	33.0	21.2	2.6	12.7	41.9	102.4	5.9	3.9	1.1	2.5	920	48.4	3.1	4.5	37.8	119	70.0	6.5
	6.8	2.5	5.8	1150	33.9	23.1	2.8	12.2	43.3	102.8	6.1	3.9	1.1	2.5	1,150	49.2	3.0	4.8	39.0	110	70.0	6.3
	9.0	3.9	9.1	920	33.7	21.5	2.5	13.4	42.2	99.4	5.5	3.9	1.1	2.5	920	48.4	3.1	4.5	37.8	119	70.0	6.5
	9.0	3.9	9.1	1150	34.5	23.4	2.7	12.9	43.6	99.7	5.7	3.9	1.1	2.5	1,150	49.2	3.0	4.8	39.0	110	70.0	6.3
100	4.5	1.3	3.0	920	29.7	20.1	3.1	9.5	40.4	117.9	8.1	2.6	0.7	1.5	920	48.4	3.1	4.5	37.8	119	70.0	6.5
	4.5	1.3	3.0	1150	30.4	21.9	3.3	9.2	41.8	118.6	8.4	2.6	0.7	1.5	1,150	49.2	3.0	4.8	39.0	110	70.0	6.3
	6.8	2.4	5.6	920	31.0	20.5	2.9	10.7	40.9	112.1	7.2	2.6	0.7	1.5	920	48.4	3.1	4.5	37.8	119	70.0	6.5
	6.8	2.4	5.6	1150	31.8	22.3	3.1	10.3	42.3	112.5	7.5	2.6	0.7	1.5	1,150	49.2	3.0	4.8	39.0	110	70.0	6.3
	9.0	3.8	8.8	920	31.7	20.7	2.8	11.3	41.2	109.2	6.8	2.6	0.7	1.5	920	48.4	3.1	4.5	37.8	119	70.0	6.5
	9.0	3.8	8.8	1150	32.4	22.6	3.0	10.9	42.6	109.5	7.0	2.6	0.7	1.5	1,150	49.2	3.0	4.8	39.0	110	70.0	6.3
110	4.5	1.2	2.8	920	27.7	19.4	3.5	7.9	39.7	127.6	9.7	2.0	0.4	0.9	920	48.4	3.1	4.5	37.8	119	70.0	6.5
	4.5	1.2	2.8	1150	28.3	21.1	3.7	7.6	41.1	128.3	10.0	2.0	0.4	0.9	1,150	49.2	3.0	4.8	39.0	110	70.0	6.3
	6.8	2.3	5.3	920	28.9	19.8	3.3	8.9	40.1	121.9	8.7	2.0	0.4	0.9	920	48.4	3.1	4.5	37.8	119	70.0	6.5
	6.8	2.3	5.3	1150	29.6	21.6	3.5	8.5	41.5	122.3	9.0	2.0	0.4	0.9	1,150	49.2	3.0	4.8	39.0	110	70.0	6.3
	9.0	3.7	8.5	920	29.6	20.0	3.1	9.4	40.3	119.0	8.2	2.0	0.4	0.9	920	48.4	3.1	4.5	37.8	119	70.0	6.5
	9.0	3.7	8.5	1150	30.3	21.8	3.3	9.0	41.7	119.3	8.5	2.0	0.4	0.9	1,150	49.2	3.0	4.8	39.0	110	70.0	6.3
120												1.6	0.1	0.3	920	48.4	3.1	4.5	37.8	119	70.0	6.5
												1.6	0.1	0.3	1,150	49.2	3.0	4.8	39.0	110	70.0	6.3
	6.8	2.2	5.1	920	26.9	19.1	3.7	7.3	39.5	131.7	10.3	1.6	0.1	0.3	920	48.4	3.1	4.5	37.8	119	70.0	6.5
	6.8	2.2	5.1	1150	27.5	20.8	3.9	7.0	40.9	132.1	10.7	1.6	0.1	0.3	1,150	49.2	3.0	4.8	39.0	110	70.0	6.3
	9.0	3.5	8.1	920	27.5	19.3	3.6	7.7	39.6	128.8	9.8	1.6	0.1	0.3	920	48.4	3.1	4.5	37.8	119	70.0	6.5
	9.0	3.5	8.1	1150	28.2	21.0	3.8	7.4	41.1	129.1	10.1	1.6	0.1	0.3	1,150	49.2	3.0	4.8	39.0	110	70.0	6.3

Interpolation is permissible; extrapolation is not.
Flow is changed to maintain minimum LWT 60° F in cooling and maximum LWT 70° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 22 Model 042 - Part Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	2.1	1.1	2.6	880	36.8	25.9	1.2	30.5	41.0	60.0	1.2	7.5	5.0	11.7	880	19.4	2.2	2.6	12.0	90	16.8	2.6
	2.1	1.1	2.6	1100	37.6	28.3	1.3	29.8	41.9	60.0	1.2	7.5	5.0	11.7	1,100	19.8	2.1	2.8	12.7	87	16.6	2.5
30	2.8	1.1	2.5	880	36.8	25.9	1.2	30.5	41.0	60.0	1.2	3.8	1.7	3.9	880	21.7	2.2	2.9	14.2	93	22.4	2.7
	2.8	1.1	2.5	1100	37.6	28.3	1.3	29.8	41.9	60.0	1.2	3.8	1.7	3.9	1,100	22.1	2.1	3.1	14.9	89	22.1	2.6
	2.8	1.1	2.5	880	36.8	25.9	1.2	30.5	41.0	60.0	1.2	5.6	2.9	6.7	880	22.6	2.2	3.0	15.1	94	24.6	2.8
	2.8	1.1	2.5	1100	37.6	28.3	1.3	29.8	41.9	60.0	1.2	5.6	2.9	6.7	1,100	23.1	2.1	3.2	15.8	89	24.4	2.7
	2.8	1.1	2.5	880	36.8	25.9	1.2	30.5	41.0	60.0	1.2	7.5	4.5	10.3	880	23.2	2.2	3.1	15.6	94	25.8	2.8
	2.8	1.1	2.5	1100	37.6	28.3	1.3	29.8	41.9	60.0	1.2	7.5	4.5	10.3	1,100	23.7	2.1	3.2	16.4	90	25.6	2.7
40	3.8	1.4	3.2	880	36.6	26.1	1.2	29.4	40.9	61.8	1.2	3.8	1.4	3.2	880	25.1	2.2	3.3	17.5	96	30.7	2.9
	3.8	1.4	3.2	1100	37.4	28.5	1.3	28.6	41.8	62.3	1.2	3.8	1.4	3.2	1,100	25.6	2.2	3.5	18.3	92	30.3	2.8
	4.2	1.6	3.7	880	36.8	25.9	1.2	30.5	41.0	60.0	1.2	5.6	2.4	5.6	880	26.3	2.2	3.4	18.6	98	33.4	3.0
	4.2	1.6	3.7	1100	37.6	28.3	1.3	29.8	41.9	60.0	1.2	5.6	2.4	5.6	1,100	26.8	2.2	3.6	19.4	93	33.1	2.9
	4.2	1.6	3.7	880	36.8	25.9	1.2	30.5	41.0	60.0	1.2	7.5	3.8	8.8	880	26.9	2.3	3.5	19.3	98	34.9	3.0
	4.2	1.6	3.7	1100	37.6	28.3	1.3	29.8	41.9	60.0	1.2	7.5	3.8	8.8	1,100	27.5	2.2	3.7	20.1	93	34.6	2.9
50	3.8	1.0	2.4	880	35.5	25.6	1.4	24.9	40.4	71.6	1.6	3.8	1.0	2.4	880	28.5	2.3	3.7	20.8	100	38.9	3.1
	3.8	1.0	2.4	1100	36.3	27.9	1.5	24.3	41.4	72.1	1.6	3.8	1.0	2.4	1,100	29.1	2.2	3.9	21.6	95	38.5	3.0
	5.6	2.0	4.5	880	36.4	26.0	1.3	28.2	40.8	64.5	1.3	5.6	2.0	4.5	880	29.9	2.3	3.8	22.1	101	42.1	3.2
	5.6	2.0	4.5	1100	37.1	28.4	1.4	27.5	41.7	64.8	1.3	5.6	2.0	4.5	1,100	30.5	2.2	4.1	23.0	96	41.8	3.1
	7.5	3.1	7.2	880	36.7	26.2	1.2	29.9	40.9	60.9	1.1	7.5	3.1	7.2	880	30.6	2.3	3.9	22.8	102	43.9	3.2
	7.5	3.1	7.2	1100	37.5	28.6	1.3	29.2	41.9	61.2	1.2	7.5	3.1	7.2	1,100	31.3	2.2	4.2	23.8	96	43.7	3.1
60	3.8	1.0	2.3	880	34.1	24.8	1.6	20.9	39.7	81.2	2.2	3.8	1.0	2.3	880	31.9	2.3	4.1	24.0	104	47.2	3.3
	3.8	1.0	2.3	1100	34.8	27.1	1.7	20.4	40.7	81.7	2.2	3.8	1.0	2.3	1,100	32.5	2.2	4.3	25.0	97	46.7	3.2
	5.6	1.8	4.2	880	35.2	25.4	1.5	23.8	40.2	74.3	1.7	5.6	1.8	4.2	880	33.4	2.3	4.2	25.5	105	50.9	3.5
	5.6	1.8	4.2	1100	35.9	27.7	1.5	23.2	41.2	74.6	1.8	5.6	1.8	4.2	1,100	34.1	2.2	4.5	26.5	99	50.6	3.4
	7.5	3.0	6.9	880	35.7	25.6	1.4	25.4	40.5	70.8	1.5	7.5	3.0	6.9	880	34.3	2.3	4.3	26.4	106	53.0	3.5
	7.5	3.0	6.9	1100	36.4	28.0	1.5	24.7	41.4	71.0	1.6	7.5	3.0	6.9	1,100	35.0	2.2	4.6	27.3	99	52.7	3.4
70	3.8	0.9	2.1	880	32.4	24.0	1.9	17.4	38.8	90.7	3.0	3.8	0.9	2.1	880	35.1	2.3	4.4	27.2	107	55.5	3.6
	3.8	0.9	2.1	1100	33.1	26.2	2.0	16.9	39.8	91.2	3.0	3.8	0.9	2.1	1,100	35.9	2.2	4.7	28.2	100	54.9	3.5
	5.6	1.7	4.0	880	33.7	24.6	1.7	19.8	39.5	84.0	2.4	5.6	1.7	4.0	880	36.8	2.3	4.6	28.9	109	59.7	3.8
	5.6	1.7	4.0	1100	34.4	26.8	1.8	19.3	40.4	84.4	2.4	5.6	1.7	4.0	1,100	37.6	2.3	4.9	29.9	102	59.4	3.6
	7.5	2.8	6.5	880	34.3	24.9	1.6	21.2	39.8	80.6	2.1	7.5	2.8	6.5	880	37.8	2.3	4.7	29.8	110	62.1	3.8
	7.5	2.8	6.5	1100	35.0	27.2	1.7	20.7	40.7	80.9	2.2	7.5	2.8	6.5	1,100	38.6	2.3	5.0	30.8	102	61.8	3.7
80	3.8	0.9	2.1	880	30.5	23.2	2.1	14.4	37.8	100.1	3.9	3.8	0.9	2.1	880	38.3	2.3	4.8	30.3	110	63.8	3.9
	3.8	0.9	2.1	1100	31.1	25.3	2.2	14.0	38.7	100.7	4.0	3.8	0.9	2.1	1,100	39.1	2.3	5.1	31.4	103	63.3	3.8
	5.6	1.7	3.9	880	31.9	23.8	1.9	16.4	38.5	93.7	3.2	5.6	1.7	3.9	880	40.1	2.4	5.0	32.1	112	68.6	4.1
	5.6	1.7	3.9	1100	32.5	25.9	2.0	16.0	39.5	94.0	3.3	5.6	1.7	3.9	1,100	41.0	2.3	5.3	33.2	104	68.2	4.0
	7.5	2.7	6.3	880	32.5	24.1	1.9	17.6	38.9	90.4	2.9	6.8	2.2	5.2	880	40.7	2.4	5.0	32.7	113	70.0	4.2
	7.5	2.7	6.3	1100	33.2	26.2	1.9	17.1	39.8	90.6	3.0	6.8	2.2	5.2	1,100	41.6	2.3	5.3	33.8	105	70.0	4.1
90	3.8	0.9	2.0	880	28.4	22.3	2.4	11.8	36.6	109.5	5.1	3.4	0.9	2.0	880	40.7	2.4	5.0	32.7	113	70.0	4.2
	3.8	0.9	2.0	1100	30.5	25.0	2.3	13.2	38.4	110.1	4.4	3.4	0.9	2.0	1,100	41.6	2.3	5.3	33.8	105	70.0	4.1
	5.6	1.6	3.8	880	29.9	22.9	2.2	13.5	37.4	103.3	4.3	3.4	0.9	2.0	880	40.7	2.4	5.0	32.7	113	70.0	4.2
	5.6	1.6	3.8	1100	30.5	25.0	2.3	13.2	38.4	103.6	4.4	3.4	0.9	2.0	1,100	41.6	2.3	5.3	33.8	105	70.0	4.1
	7.5	2.6	6.1	880	30.6	23.2	2.1	14.5	37.8	100.1	3.9	3.4	0.9	2.0	880	40.7	2.4	5.0	32.7	113	70.0	4.2
	7.5	2.6	6.1	1100	31.2	25.3	2.2	14.1	38.8	100.3	4.0	3.4	0.9	2.0	1,100	41.6	2.3	5.3	33.8	105	70.0	4.1
100	3.8	0.9	2.0	880	26.3	21.6	2.7	9.7	35.5	118.9	6.4	2.3	0.6	1.5	880	40.7	2.4	5.0	32.7	113	70.0	4.2
	3.8	0.9	2.0	1100	26.8	23.5	2.8	9.5	36.4	119.4	6.5	2.3	0.6	1.5	1,100	41.6	2.3	5.3	33.8	105	70.0	4.1
	5.6	1.6	3.6	880	27.7	22.1	2.5	11.1	36.2	112.9	5.5	2.3	0.6	1.5	880	40.7	2.4	5.0	32.7	113	70.0	4.2
	5.6	1.6	3.6	1100	28.3	24.1	2.6	10.8	37.2	113.2	5.6	2.3	0.6	1.5	1,100	41.6	2.3	5.3	33.8	105	70.0	4.1
	7.5	2.6	5.9	880	28.5	22.3	2.4	11.8	36.6	109.8	5.0	2.3	0.6	1.5	880	40.7	2.4	5.0	32.7	113	70.0	4.2
	7.5	2.6	5.9	1100	29.0	24.4	2.5	11.5	37.6	110.0	5.2	2.3	0.6	1.5	1,100	41.6	2.3	5.3	33.8	105	70.0	4.1
110	3.8	0.8	1.9	880	24.0	20.8	3.0	7.9	34.3	128.3	7.9	1.7	0.5	1.2	880	40.7	2.4	5.0	32.7	113	70.0	4.2
	3.8	0.8	1.9	1100	24.5	22.7	3.2	7.7	35.3	128.8	8.1	1.7	0.5	1.2	1,100	41.6	2.3	5.3	33.8	105	70.0	4.1
	5.6	1.5	3.5	880	25.4	21.3	2.8	9.0	35.0	122.5	6.9	1.7	0.5	1.2	880	40.7	2.4	5.0	32.7	113	70.0	4.2
	5.6	1.5	3.5	1100	26.0	23.2	2.9	8.8	36.0	122.8	7.1	1.7	0.5	1.2	1,100	41.6	2.3	5.3	33.8	105	70.0	4.1
	7.5	2.5	5.7	880	26.2	21.5	2.7	9.7	35.4	119.4	6.4	1.7	0.5	1.2	880	40.7	2.4	5.0	32.7	113	70.0	4.2
	7.5	2.5	5.7	1100	26.7	23.5	2.8	9.4	36.4	119.7	6.6	1.7	0.5	1.2	1,100	41.6	2.3	5.3	33.8	105	70.0	4.1
120												1.4	0.3	0.7	880	40.7	2.4	5.0	32.7	113	70.0	4.2
												1.4	0.3	0.7	1,100	41.6	2.3	5.3	33.8	105	70.0	4.1
	5.6	1.5	3.4	880	23.1	20.5	3.1	7.3	33.8	132.0	8.5	1.4	0.3	0.7	880	40.7	2.4	5.0	32.7	113	70.0	4.2
	5.6	1.5	3.4	1100	23.6	22.4	3.3	7.2	34.8	132.4	8.7	1.4	0.3	0.7	1,100	41.6	2.3	5.3	33.8	105	70.0	4.1
	7.5	2.4	5.5	880	23.8	20.8	3.0	7.8	34.2	129.1	7.9	1.4	0.3	0.7	880	40.7	2.4	5.0	32.7	113	70.0	4.2
	7.5	2.4	5.5	1100	24.3	22.7	3.2	7.6	35.2	129.4	8.2	1.4	0.3	0.7	1,100	41.6	2.3	5.3	33.8	105	70.0	4.1

Interpolation is permissible; extrapolation is not.
Flow is changed to maintain minimum LWT 60° F in cooling and maximum LWT 70° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 22 Model 042 - Full Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	2.8	1.5	3.4	1040	48.2	33.2	2.0	24.6	54.9	60.0	1.6	10.5	8.4	19.4	1,040	29.1	2.9	2.9	19.0	96	16.4	3.4
	2.8	1.5	3.4	1300	49.4	36.1	2.1	23.6	56.6	60.0	1.7	10.5	8.4	19.4	1,300	29.6	2.8	3.1	19.9	91	16.2	3.3
30	3.8	1.6	3.6	1040	48.2	33.2	2.0	24.6	54.9	60.0	1.6	5.3	2.7	6.2	1,040	31.8	3.0	3.1	21.5	98	21.8	3.6
	3.8	1.6	3.6	1300	49.4	36.1	2.1	23.6	56.6	60.0	1.7	5.3	2.7	6.2	1,300	32.4	2.9	3.3	22.5	93	21.4	3.4
	3.8	1.6	3.6	1040	48.2	33.2	2.0	24.6	54.9	60.0	1.6	7.9	4.8	11.1	1,040	33.1	3.0	3.2	22.8	100	24.2	3.6
	3.8	1.6	3.6	1300	49.4	36.1	2.1	23.6	56.6	60.0	1.7	7.9	4.8	11.1	1,300	33.7	2.9	3.4	23.7	94	24.0	3.5
	3.8	1.6	3.6	1040	48.2	33.2	2.0	24.6	54.9	60.0	1.6	10.5	7.4	17.0	1,040	33.9	3.1	3.2	23.4	100	25.5	3.7
	3.8	1.6	3.6	1300	49.4	36.1	2.1	23.6	56.6	60.0	1.7	10.5	7.4	17.0	1,300	34.4	2.9	3.4	24.4	95	25.4	3.6
40	5.3	1.8	4.1	1040	48.0	33.0	2.0	24.1	54.8	60.9	1.7	5.3	1.8	4.1	1,040	36.2	3.1	3.4	25.6	102	30.3	3.8
	5.3	1.8	4.1	1300	49.2	35.9	2.1	23.2	56.4	61.5	1.8	5.3	1.8	4.1	1,300	36.9	3.0	3.6	26.6	96	29.9	3.7
	5.7	2.2	5.1	1040	48.2	33.2	2.0	24.6	54.9	60.0	1.6	7.9	4.1	9.5	1,040	37.8	3.2	3.5	27.0	104	33.1	3.9
	5.7	2.2	5.1	1300	49.4	36.1	2.1	23.6	56.6	60.0	1.7	7.9	4.1	9.5	1,300	38.5	3.0	3.7	28.1	97	32.9	3.8
	5.7	2.2	5.1	1040	48.2	33.2	2.0	24.6	54.9	60.0	1.6	10.5	6.4	14.7	1,040	38.6	3.2	3.6	27.8	104	34.7	4.0
	5.7	2.2	5.1	1300	49.4	36.1	2.1	23.6	56.6	60.0	1.7	10.5	6.4	14.7	1,300	39.3	3.1	3.8	28.9	98	34.5	3.9
50	5.3	1.8	4.1	1040	46.6	32.2	2.2	21.4	54.0	70.6	2.2	5.3	1.8	4.1	1,040	40.6	3.2	3.7	29.6	106	38.7	4.2
	5.3	1.8	4.1	1300	47.8	35.0	2.3	20.6	55.7	71.2	2.3	5.3	1.8	4.1	1,300	41.3	3.1	3.9	30.7	99	38.3	4.1
	7.9	3.4	7.9	1040	47.7	32.8	2.0	23.3	54.6	63.9	1.8	7.9	3.4	7.9	1,040	42.4	3.3	3.8	31.2	108	42.1	4.4
	7.9	3.4	7.9	1300	48.8	35.7	2.2	22.5	56.2	64.3	1.9	7.9	3.4	7.9	1,300	43.2	3.2	4.0	32.4	101	41.8	4.2
	10.5	5.4	12.5	1040	48.1	33.1	2.0	24.3	54.9	60.5	1.7	10.5	5.4	12.5	1,040	43.4	3.3	3.8	32.1	109	43.9	4.5
	10.5	5.4	12.5	1300	49.3	36.0	2.1	23.4	56.5	60.8	1.7	10.5	5.4	12.5	1,300	44.1	3.2	4.1	33.3	101	43.7	4.3
60	5.3	1.7	3.9	1040	45.0	31.3	2.4	18.8	53.1	80.2	2.9	5.3	1.7	3.9	1,040	45.0	3.3	3.9	33.6	110	47.2	4.6
	5.3	1.7	3.9	1300	46.1	34.1	2.5	18.1	54.7	80.9	3.0	5.3	1.7	3.9	1,300	45.8	3.2	4.2	34.8	103	46.7	4.5
	7.9	3.2	7.5	1040	46.1	31.9	2.2	20.6	53.8	73.7	2.4	7.9	3.2	7.5	1,040	47.0	3.4	4.0	35.4	112	51.0	4.9
	7.9	3.2	7.5	1300	47.3	34.8	2.4	19.8	55.4	74.1	2.5	7.9	3.2	7.5	1,300	47.8	3.3	4.3	36.6	104	50.7	4.7
	10.5	5.2	11.9	1040	46.7	32.3	2.2	21.6	54.1	70.3	2.2	10.5	5.2	11.9	1,040	48.1	3.4	4.1	36.4	113	53.1	5.0
	10.5	5.2	11.9	1300	47.9	35.1	2.3	20.7	55.7	70.6	2.3	10.5	5.2	11.9	1,300	48.9	3.3	4.3	37.6	105	52.8	4.9
70	5.3	1.6	3.6	1040	43.1	30.4	2.6	16.3	52.1	89.8	3.7	5.3	1.6	3.6	1,040	49.3	3.5	4.2	37.5	114	55.7	5.2
	5.3	1.6	3.6	1300	44.1	33.1	2.8	15.7	53.7	90.5	3.8	5.3	1.6	3.6	1,300	50.1	3.3	4.4	38.8	106	55.2	5.0
	7.9	3.1	7.1	1040	44.4	31.0	2.5	18.0	52.8	83.4	3.1	7.9	3.1	7.1	1,040	51.5	3.5	4.3	39.4	116	60.0	5.5
	7.9	3.1	7.1	1300	45.5	33.8	2.6	17.3	54.4	83.8	3.2	7.9	3.1	7.1	1,300	52.4	3.4	4.5	40.8	107	59.6	5.3
	10.5	4.9	11.3	1040	45.0	31.4	2.4	18.9	53.2	80.1	2.9	10.5	4.9	11.3	1,040	52.6	3.6	4.3	40.5	117	62.3	5.7
	10.5	4.9	11.3	1300	46.1	34.1	2.5	18.2	54.8	80.4	3.0	10.5	4.9	11.3	1,300	53.5	3.4	4.6	41.9	108	62.0	5.5
80	5.3	1.5	3.5	1040	41.0	29.5	2.9	14.1	50.9	99.4	4.6	5.3	1.5	3.5	1,040	53.5	3.6	4.4	41.2	118	64.3	5.8
	5.3	1.5	3.5	1300	42.0	32.2	3.1	13.5	52.6	100.0	4.7	5.3	1.5	3.5	1,300	54.4	3.4	4.6	42.6	109	63.8	5.6
	7.9	3.0	6.9	1040	42.4	30.1	2.7	15.6	51.7	93.1	4.0	7.9	3.0	6.9	1,040	55.8	3.7	4.5	43.3	120	69.0	6.2
	7.9	3.0	6.9	1300	43.5	32.8	2.9	15.0	53.3	93.5	4.1	7.9	3.0	6.9	1,300	56.8	3.5	4.7	44.8	110	68.6	6.0
	10.5	4.8	11.0	1040	43.1	30.4	2.6	16.4	52.1	89.9	3.7	9.1	3.7	8.5	1,040	56.4	3.7	4.5	43.9	120	70.0	6.3
	10.5	4.8	11.0	1300	44.2	33.1	2.8	15.8	53.7	90.2	3.8	9.1	3.7	8.5	1,300	57.4	3.5	4.8	45.4	111	70.0	6.1
90	5.3	1.5	3.4	1040	38.7	28.7	3.2	12.0	49.7	108.9	5.6	4.5	1.2	2.8	1,040	56.4	3.7	4.5	43.9	120	70.0	6.3
	5.3	1.5	3.4	1300	41.2	31.8	3.2	12.8	52.2	109.6	5.1	4.5	1.2	2.8	1,300	57.4	3.5	4.8	45.4	111	70.0	6.1
	7.9	2.9	6.6	1040	40.2	29.3	3.0	13.3	50.5	102.8	4.9	4.5	1.2	2.8	1,040	56.4	3.7	4.5	43.9	120	70.0	6.3
	7.9	2.9	6.6	1300	41.2	31.8	3.2	12.8	52.2	103.3	5.1	4.5	1.2	2.8	1,300	57.4	3.5	4.8	45.4	111	70.0	6.1
	10.5	4.7	10.7	1040	41.0	29.5	2.9	14.1	50.9	99.7	4.6	4.5	1.2	2.8	1,040	56.4	3.7	4.5	43.9	120	70.0	6.3
	10.5	4.7	10.7	1300	42.0	32.2	3.1	13.5	52.6	100.0	4.7	4.5	1.2	2.8	1,300	57.4	3.5	4.8	45.4	111	70.0	6.1
100	5.3	1.4	3.3	1040	36.2	27.9	3.6	10.1	48.5	118.5	6.7	3.0	0.8	1.8	1,040	56.4	3.7	4.5	43.9	120	70.0	6.3
	5.3	1.4	3.3	1300	37.1	30.4	3.8	9.7	50.2	119.1	6.9	3.0	0.8	1.8	1,300	57.4	3.5	4.8	45.4	111	70.0	6.1
	7.9	2.8	6.4	1040	37.8	28.4	3.4	11.3	49.3	112.5	6.0	3.0	0.8	1.8	1,040	56.4	3.7	4.5	43.9	120	70.0	6.3
	7.9	2.8	6.4	1300	38.8	31.0	3.6	10.9	51.0	112.9	6.2	3.0	0.8	1.8	1,300	57.4	3.5	4.8	45.4	111	70.0	6.1
	10.5	4.5	10.4	1040	38.6	28.7	3.2	11.9	49.7	109.5	5.6	3.0	0.8	1.8	1,040	56.4	3.7	4.5	43.9	120	70.0	6.3
	10.5	4.5	10.4	1300	39.6	31.2	3.4	11.5	51.4	109.8	5.8	3.0	0.8	1.8	1,300	57.4	3.5	4.8	45.4	111	70.0	6.1
110	5.3	1.4	3.2	1040	33.6	27.2	4.0	8.4	47.3	128.0	8.0	2.3	0.6	1.3	1,040	56.4	3.7	4.5	43.9	120	70.0	6.3
	5.3	1.4	3.2	1300	34.5	29.6	4.3	8.1	49.0	128.7	8.2	2.3	0.6	1.3	1,300	57.4	3.5	4.8	45.4	111	70.0	6.1
	7.9	2.7	6.2	1040	35.3	27.7	3.7	9.4	48.0	122.2	7.2	2.3	0.6	1.3	1,040	56.4	3.7	4.5	43.9	120	70.0	6.3
	7.9	2.7	6.2	1300	36.2	30.1	4.0	9.1	49.7	122.6	7.4	2.3	0.6	1.3	1,300	57.4	3.5	4.8	45.4	111	70.0	6.1
	10.5	4.4	10.1	1040	36.1	27.9	3.6	10.0	48.4	119.2	6.8	2.3	0.6	1.3	1,040	56.4	3.7	4.5	43.9	120	70.0	6.3
	10.5	4.4	10.1	1300	37.0	30.4	3.8	9.6	50.1	119.5	7.0	2.3	0.6	1.3	1,300	57.4	3.5	4.8	45.4	111	70.0	6.1
120												1.8	0.3	0.8	1,040	56.4	3.7	4.5	43.9	120	70.0	6.3
												1.8	0.3	0.8	1,300	57.4	3.5	4.8	45.4	111	70.0	6.1
	7.9	2.6	6.0	1040	32.6	26.9	4.2	7.8	46.8	131.9	8.5	1.8	0.3	0.8	1,040	56.4	3.7	4.5	43.9	120	70.0	6.3
	7.9	2.6	6.0	1300	33.4	29.3	4.4	7.5	48.5	132.3	8.8	1.8	0.3	0.8	1,300	57.4	3.5	4.8	45.4	111	70.0	6.1
	10.5	4.2	9.8	1040	33.4	27.2	4.0	8.3	47.2	129.0	8.1	1.8	0.3	0.8	1,040	56.4	3.7	4.5	43.9	120	70.0	6.3
	10.5	4.2	9.8	1300	34.3	29.6	4.3	8.0	48.9	129.3	8.3	1.8	0.3	0.8	1,300	57.4	3.5	4.8	45.4	111	70.0	6.1

Interpolation is permissible; extrapolation is not.
Flow is changed to maintain minimum LWT 60° F in cooling and maximum LWT 70° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 22 Model 048 - Part Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	2.3	0.7	1.6	1000	40.4	26.0	1.4	28.2	45.2	60.0	1.5	9.0	5.2	12.1	1,000	22.6	2.3	2.9	14.9	91	16.7	3.1
	2.3	0.7	1.6	1250	41.2	28.3	1.5	27.5	46.3	60.0	1.5	9.0	5.2	12.1	1,250	23.0	2.2	3.1	15.6	87	16.5	3.0
30	3.1	0.7	1.7	1000	40.4	26.0	1.4	28.2	45.2	60.0	1.5	4.5	1.4	3.2	1,000	24.8	2.3	3.2	17.0	93	22.4	3.1
	3.1	0.7	1.7	1250	41.2	28.3	1.5	27.5	46.3	60.0	1.5	4.5	1.4	3.2	1,250	25.3	2.2	3.4	17.8	89	22.1	3.0
	3.1	0.7	1.7	1000	40.4	26.0	1.4	28.2	45.2	60.0	1.5	6.8	2.5	5.7	1,000	25.7	2.3	3.3	17.9	94	24.7	3.1
	3.1	0.7	1.7	1250	41.2	28.3	1.5	27.5	46.3	60.0	1.5	6.8	2.5	5.7	1,250	26.3	2.2	3.5	18.8	89	24.4	3.1
	3.1	0.7	1.7	1000	40.4	26.0	1.4	28.2	45.2	60.0	1.5	9.0	4.0	9.2	1,000	26.2	2.3	3.4	18.5	94	25.9	3.2
	3.1	0.7	1.7	1250	41.2	28.3	1.5	27.5	46.3	60.0	1.5	9.0	4.0	9.2	1,250	26.8	2.2	3.6	19.3	90	25.7	3.1
40	4.5	1.2	2.8	1000	40.3	25.9	1.4	28.0	45.2	60.1	1.5	4.5	1.2	2.8	1,000	28.2	2.3	3.6	20.4	96	30.9	3.2
	4.5	1.2	2.8	1250	41.1	28.3	1.5	27.3	46.3	60.6	1.5	4.5	1.2	2.8	1,250	28.8	2.2	3.8	21.3	91	30.5	3.1
	4.6	1.3	2.9	1000	40.4	26.0	1.4	28.2	45.2	60.0	1.5	6.8	2.4	5.5	1,000	29.4	2.3	3.7	21.5	97	33.6	3.3
	4.6	1.3	2.9	1250	41.2	28.3	1.5	27.5	46.3	60.0	1.5	6.8	2.4	5.5	1,250	30.0	2.2	4.0	22.4	92	33.4	3.2
	4.6	1.3	2.9	1000	40.4	26.0	1.4	28.2	45.2	60.0	1.5	9.0	3.8	8.7	1,000	30.0	2.3	3.8	22.2	98	35.1	3.3
	4.6	1.3	2.9	1250	41.2	28.3	1.5	27.5	46.3	60.0	1.5	9.0	3.8	8.7	1,250	30.7	2.2	4.0	23.1	93	34.9	3.2
50	4.5	1.1	2.5	1000	39.1	25.5	1.6	23.8	44.7	69.9	2.1	4.5	1.1	2.5	1,000	31.8	2.3	4.0	23.9	99	39.4	3.4
	4.5	1.1	2.5	1250	39.9	27.8	1.7	23.3	45.7	70.3	2.1	4.5	1.1	2.5	1,250	32.4	2.2	4.3	24.8	94	39.0	3.3
	6.8	2.1	4.9	1000	40.0	25.8	1.5	26.7	45.1	63.4	1.7	6.8	2.1	4.9	1,000	33.1	2.3	4.2	25.2	101	42.5	3.5
	6.8	2.1	4.9	1250	40.8	28.2	1.6	26.0	46.1	63.7	1.7	6.8	2.1	4.9	1,250	33.8	2.2	4.4	26.2	95	42.2	3.4
	9.0	3.4	7.9	1000	40.3	25.9	1.4	28.1	45.2	60.1	1.5	9.0	3.4	7.9	1,000	33.9	2.3	4.3	26.0	101	44.2	3.5
	9.0	3.4	7.9	1250	41.2	28.3	1.5	27.4	46.3	60.3	1.5	9.0	3.4	7.9	1,250	34.6	2.2	4.5	26.9	96	44.0	3.4
60	4.5	1.0	2.3	1000	37.5	24.9	1.9	19.9	44.0	79.5	2.8	4.5	1.0	2.3	1,000	35.3	2.3	4.4	27.4	103	47.8	3.6
	4.5	1.0	2.3	1250	38.3	27.2	2.0	19.4	45.1	80.0	2.9	4.5	1.0	2.3	1,250	36.1	2.3	4.7	28.4	97	47.4	3.5
	6.8	2.0	4.6	1000	38.6	25.3	1.7	22.5	44.5	73.2	2.3	6.8	2.0	4.6	1,000	36.9	2.3	4.6	28.9	104	51.4	3.7
	6.8	2.0	4.6	1250	39.4	27.6	1.8	22.0	45.5	73.5	2.4	6.8	2.0	4.6	1,250	37.7	2.3	4.9	29.9	98	51.1	3.6
	9.0	3.2	7.5	1000	39.1	25.5	1.6	23.9	44.7	69.9	2.1	9.0	3.2	7.5	1,000	37.7	2.3	4.7	29.7	105	53.4	3.8
	9.0	3.2	7.5	1250	39.9	27.9	1.7	23.3	45.8	70.2	2.1	9.0	3.2	7.5	1,250	38.5	2.3	5.0	30.8	99	53.2	3.7
70	4.5	0.9	2.0	1000	35.7	24.1	2.2	16.4	43.2	89.2	3.8	4.5	0.9	2.0	1,000	38.8	2.3	4.8	30.8	106	56.3	3.9
	4.5	0.9	2.0	1250	36.5	26.3	2.3	16.0	44.2	89.7	3.9	4.5	0.9	2.0	1,250	39.7	2.3	5.1	31.9	99	55.8	3.7
	6.8	1.8	4.2	1000	37.0	24.7	2.0	18.7	43.7	83.0	3.1	6.8	1.8	4.2	1,000	40.6	2.4	5.0	32.5	108	60.4	4.0
	6.8	1.8	4.2	1250	37.7	26.9	2.1	18.2	44.8	83.3	3.2	6.8	1.8	4.2	1,250	41.4	2.3	5.3	33.7	101	60.0	3.9
	9.0	3.0	6.9	1000	37.6	24.9	1.9	19.9	44.0	79.8	2.8	9.0	3.0	6.9	1,000	41.5	2.4	5.2	33.5	108	62.6	4.1
	9.0	3.0	6.9	1250	38.3	27.2	2.0	19.4	45.1	80.0	2.9	9.0	3.0	6.9	1,250	42.4	2.3	5.4	34.6	101	62.3	4.0
80	4.5	0.9	2.0	1000	33.7	23.3	2.5	13.4	42.2	98.8	4.9	4.5	0.9	2.0	1,000	42.3	2.4	5.2	34.2	109	64.8	4.2
	4.5	0.9	2.0	1250	34.4	25.4	2.6	13.1	43.3	99.3	5.1	4.5	0.9	2.0	1,250	43.2	2.3	5.5	35.4	102	64.3	4.0
	6.8	1.8	4.0	1000	35.0	23.8	2.3	15.3	42.9	92.7	4.2	6.8	1.8	4.0	1,000	44.2	2.4	5.5	36.1	111	69.3	4.3
	6.8	1.8	4.0	1250	35.8	26.0	2.4	14.9	43.9	93.0	4.3	6.8	1.8	4.0	1,250	45.1	2.3	5.8	37.3	103	68.9	4.2
	9.0	2.9	6.7	1000	35.7	24.1	2.2	16.3	43.1	89.6	3.8	7.5	2.1	4.8	1,000	44.6	2.4	5.5	36.5	111	70.0	4.5
	9.0	2.9	6.7	1250	36.4	26.3	2.3	15.9	44.2	89.8	3.9	7.5	2.1	4.8	1,250	45.5	2.3	5.8	37.7	104	70.0	4.3
90	4.5	0.8	1.8	1000	31.5	22.4	2.9	11.0	41.3	108.3	6.3	3.8	0.7	1.6	1,000	44.6	2.4	5.5	36.5	111	70.0	4.5
	4.5	0.8	1.8	1250	33.6	25.1	2.8	12.2	43.0	108.8	5.5	3.8	0.7	1.6	1,250	45.5	2.3	5.8	37.7	104	70.0	4.3
	6.8	1.7	3.9	1000	32.9	23.0	2.6	12.5	41.9	102.4	5.4	3.8	0.7	1.6	1,000	44.6	2.4	5.5	36.5	111	70.0	4.5
	6.8	1.7	3.9	1250	33.6	25.1	2.8	12.2	43.0	102.7	5.5	3.8	0.7	1.6	1,250	45.5	2.3	5.8	37.7	104	70.0	4.3
	9.0	2.8	6.5	1000	33.6	23.3	2.5	13.3	42.2	99.4	5.0	3.8	0.7	1.6	1,000	44.6	2.4	5.5	36.5	111	70.0	4.5
	9.0	2.8	6.5	1250	34.3	25.4	2.6	13.0	43.3	99.6	5.1	3.8	0.7	1.6	1,250	45.5	2.3	5.8	37.7	104	70.0	4.3
100	4.5	0.8	1.8	1000	29.1	21.6	3.3	8.9	40.3	117.9	7.8	2.5	0.4	1.0	1,000	44.6	2.4	5.5	36.5	111	70.0	4.5
	4.5	0.8	1.8	1250	29.7	23.5	3.4	8.7	41.4	118.4	8.0	2.5	0.4	1.0	1,250	45.5	2.3	5.8	37.7	104	70.0	4.3
	6.8	1.6	3.7	1000	30.6	22.1	3.0	10.1	40.9	112.1	6.8	2.5	0.4	1.0	1,000	44.6	2.4	5.5	36.5	111	70.0	4.5
	6.8	1.6	3.7	1250	31.2	24.1	3.2	9.9	42.0	112.4	7.0	2.5	0.4	1.0	1,250	45.5	2.3	5.8	37.7	104	70.0	4.3
	9.0	2.7	6.1	1000	31.3	22.4	2.9	10.8	41.2	109.2	6.4	2.5	0.4	1.0	1,000	44.6	2.4	5.5	36.5	111	70.0	4.5
	9.0	2.7	6.1	1250	32.0	24.4	3.0	10.5	42.3	109.4	6.5	2.5	0.4	1.0	1,250	45.5	2.3	5.8	37.7	104	70.0	4.3
110	4.5	0.7	1.7	1000	26.7	20.7	3.7	7.3	39.3	127.5	9.6	1.9	0.3	0.7	1,000	44.6	2.4	5.5	36.5	111	70.0	4.5
	4.5	0.7	1.7	1250	27.3	22.6	3.9	7.1	40.4	128.0	9.8	1.9	0.3	0.7	1,250	45.5	2.3	5.8	37.7	104	70.0	4.3
	6.8	1.5	3.5	1000	28.2	21.2	3.4	8.2	39.9	121.8	8.5	1.9	0.3	0.7	1,000	44.6	2.4	5.5	36.5	111	70.0	4.5
	6.8	1.5	3.5	1250	28.8	23.2	3.6	8.0	41.0	122.2	8.7	1.9	0.3	0.7	1,250	45.5	2.3	5.8	37.7	104	70.0	4.3
	9.0	2.6	5.9	1000	28.9	21.5	3.3	8.8	40.2	118.9	8.0	1.9	0.3	0.7	1,000	44.6	2.4	5.5	36.5	111	70.0	4.5
	9.0	2.6	5.9	1250	29.5	23.4	3.5	8.5	41.3	119.2	8.2	1.9	0.3	0.7	1,250	45.5	2.3	5.8	37.7	104	70.0	4.3
120	4.5	0.7	1.7	1000	24.3	20.0	4.1	5.9	38.4	137.1	11.5	1.5	0.1	0.3	1,000	44.6	2.4	5.5	36.5	111	70.0	4.5
	4.5	0.7	1.7	1250	24.8	21.8	4.3	5.8	39.5	137.6	11.8	1.5	0.1	0.3	1,250	45.5	2.3	5.8	37.7	104	70.0	4.3
	6.8	1.5	3.5	1000	25.8	20.4	3.9	6.7	38.9	131.5	10.3	1.5	0.1	0.3	1,000	44.6	2.4	5.5	36.5	111	70.0	4.5
	6.8	1.5	3.5	1250	26.3	22.3	4.0	6.5	40.1	131.9	10.6	1.5	0.1	0.3	1,250	45.5	2.3	5.8	37.7	104	70.0	4.3
	9.0	2.5	5.9	1000	26.5	20.7	3.7	7.1	39.2	128.7	9.8	1.5	0.1	0.3	1,000	44.6	2.4	5.5	36.5	111	70.0	4.5
	9.0	2.5	5.9	1250	27.0	22.5	3.9	6.9	40.4	129.0	10.0	1.5	0.1	0.3	1,250	45.5	2.3	5.8	37.7	104	70.0	4.3

Interpolation is permissible; extrapolation is not.
Flow is changed to maintain minimum LWT 60° F in cooling and maximum LWT 70° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 22 Model 048 - Full Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	3.1	1.1	2.5	1200	52.8	33.2	2.2	23.9	60.4	60.0	2.4	12.0	7.7	17.8	1,200	31.9	3.0	3.1	21.7	95	16.4	3.6
	3.1	1.1	2.5	1500	54.1	36.1	2.4	23.0	62.2	60.0	2.5	12.0	7.7	17.8	1,500	32.4	2.9	3.3	22.6	90	16.2	3.5
30	4.1	1.2	2.8	1200	52.8	33.2	2.2	23.9	60.4	60.0	2.4	6.0	2.0	4.6	1,200	34.6	3.0	3.3	24.1	97	22.0	3.8
	4.1	1.2	2.8	1500	54.1	36.1	2.4	23.0	62.2	60.0	2.5	6.0	2.0	4.6	1,500	35.2	2.9	3.5	25.1	92	21.6	3.6
	4.1	1.2	2.8	1200	52.8	33.2	2.2	23.9	60.4	60.0	2.4	9.0	4.0	9.2	1,200	35.8	3.1	3.4	25.3	98	24.4	3.8
	4.1	1.2	2.8	1500	54.1	36.1	2.4	23.0	62.2	60.0	2.5	9.0	4.0	9.2	1,500	36.5	3.0	3.6	26.4	93	24.1	3.7
	4.1	1.2	2.8	1200	52.8	33.2	2.2	23.9	60.4	60.0	2.4	12.0	6.5	15.1	1,200	36.6	3.1	3.5	26.0	98	25.7	3.9
	4.1	1.2	2.8	1500	54.1	36.1	2.4	23.0	62.2	60.0	2.5	12.0	6.5	15.1	1,500	37.2	3.0	3.7	27.0	93	25.5	3.8
40	6.0	1.9	4.4	1200	52.8	33.1	2.2	23.7	60.4	60.1	2.5	6.0	1.9	4.4	1,200	39.1	3.1	3.6	28.3	100	30.6	4.0
	6.0	1.9	4.4	1500	54.1	36.1	2.4	22.8	62.2	60.7	2.5	6.0	1.9	4.4	1,500	39.7	3.0	3.9	29.4	95	30.2	3.9
	6.2	2.0	4.7	1200	52.8	33.2	2.2	23.9	60.4	60.0	2.4	9.0	3.8	8.7	1,200	40.7	3.2	3.8	29.8	101	33.4	4.1
	6.2	2.0	4.7	1500	54.1	36.1	2.4	23.0	62.2	60.0	2.5	9.0	3.8	8.7	1,500	41.4	3.1	4.0	30.9	96	33.1	4.0
	6.2	2.0	4.7	1200	52.8	33.2	2.2	23.9	60.4	60.0	2.4	12.0	6.0	13.9	1,200	41.5	3.2	3.8	30.6	102	34.9	4.2
	6.2	2.0	4.7	1500	54.1	36.1	2.4	23.0	62.2	60.0	2.5	12.0	6.0	13.9	1,500	42.3	3.1	4.0	31.8	96	34.7	4.1
50	6.0	1.7	4.0	1200	51.7	32.7	2.4	21.4	60.0	70.0	3.1	6.0	1.7	4.0	1,200	43.8	3.2	4.0	32.7	104	39.1	4.4
	6.0	1.7	4.0	1500	53.0	35.6	2.6	20.5	61.8	70.6	3.2	6.0	1.7	4.0	1,500	44.6	3.1	4.2	33.9	98	38.7	4.2
	9.0	3.4	7.9	1200	52.5	33.0	2.3	23.0	60.3	63.4	2.6	9.0	3.4	7.9	1,200	45.7	3.3	4.1	34.5	105	42.3	4.5
	9.0	3.4	7.9	1500	53.8	36.0	2.4	22.2	62.1	63.8	2.7	9.0	3.4	7.9	1,500	46.5	3.2	4.3	35.7	99	42.1	4.4
	12.0	5.5	12.7	1200	52.8	33.2	2.2	23.8	60.4	60.1	2.4	12.0	5.5	12.7	1,200	46.8	3.3	4.1	35.5	106	44.1	4.6
	12.0	5.5	12.7	1500	54.1	36.1	2.4	22.9	62.2	60.4	2.5	12.0	5.5	12.7	1,500	47.6	3.2	4.4	36.7	99	43.9	4.5
60	6.0	1.6	3.7	1200	50.0	32.1	2.7	18.6	59.2	79.7	3.9	6.0	1.6	3.7	1,200	48.7	3.3	4.3	37.3	108	47.6	4.7
	6.0	1.6	3.7	1500	51.3	34.9	2.9	17.9	61.0	80.3	4.0	6.0	1.6	3.7	1,500	49.5	3.2	4.5	38.5	101	47.2	4.6
	9.0	3.2	7.5	1200	51.2	32.6	2.5	20.5	59.8	73.3	3.3	9.0	3.2	7.5	1,200	50.9	3.4	4.4	39.3	109	51.3	4.9
	9.0	3.2	7.5	1500	52.5	35.4	2.7	19.7	61.6	73.7	3.4	9.0	3.2	7.5	1,500	51.8	3.3	4.7	40.7	102	51.0	4.8
	12.0	5.3	12.2	1200	51.8	32.7	2.4	21.4	60.0	70.0	3.0	12.0	5.3	12.2	1,200	52.1	3.4	4.5	40.5	110	53.3	5.0
	12.0	5.3	12.2	1500	53.0	35.6	2.6	20.6	61.8	70.3	3.1	12.0	5.3	12.2	1,500	53.0	3.3	4.7	41.8	103	53.0	4.9
70	6.0	1.4	3.3	1200	47.9	31.3	3.0	15.9	58.1	89.4	4.8	6.0	1.4	3.3	1,200	53.7	3.5	4.6	41.9	111	56.0	5.2
	6.0	1.4	3.3	1500	49.1	34.0	3.2	15.3	60.0	90.0	5.0	6.0	1.4	3.3	1,500	54.6	3.3	4.8	43.2	104	55.6	5.0
	9.0	3.0	6.9	1200	49.4	31.8	2.8	17.7	58.9	83.1	4.2	9.0	3.0	6.9	1,200	56.2	3.5	4.7	44.2	113	60.2	5.4
	9.0	3.0	6.9	1500	50.6	34.7	3.0	17.1	60.7	83.5	4.3	9.0	3.0	6.9	1,500	57.2	3.4	5.0	45.6	105	59.9	5.3
	12.0	4.9	11.3	1200	50.1	32.1	2.7	18.7	59.2	79.9	3.8	12.0	4.9	11.3	1,200	57.6	3.5	4.8	45.5	114	62.4	5.6
	12.0	4.9	11.3	1500	51.3	34.9	2.9	18.0	61.0	80.2	4.0	12.0	4.9	11.3	1,500	58.6	3.4	5.0	46.9	106	62.2	5.4
80	6.0	1.4	3.3	1200	45.4	30.3	3.4	13.3	57.0	99.0	6.0	6.0	1.4	3.3	1,200	58.6	3.6	4.8	46.5	115	64.5	5.7
	6.0	1.4	3.3	1500	46.5	33.0	3.6	12.8	58.9	99.6	6.2	6.0	1.4	3.3	1,500	59.7	3.4	5.1	47.9	107	64.0	5.5
	9.0	2.9	6.7	1200	47.1	31.0	3.1	15.0	57.8	92.8	5.2	9.0	2.9	6.7	1,200	61.4	3.6	4.9	49.0	117	69.1	6.0
	9.0	2.9	6.7	1500	48.2	33.7	3.3	14.4	59.6	93.2	5.4	9.0	2.9	6.7	1,500	62.5	3.5	5.2	50.5	109	68.8	5.8
	12.0	4.8	11.1	1200	47.9	31.3	3.0	15.9	58.1	89.7	4.8	10.2	3.6	8.3	1,200	62.1	3.7	5.0	49.6	118	70.0	6.1
	12.0	4.8	11.1	1500	49.1	34.0	3.2	15.3	60.0	90.0	5.0	10.2	3.6	8.3	1,500	63.2	3.5	5.3	51.2	109	70.0	5.9
90	6.0	1.3	3.1	1200	42.8	29.3	3.9	11.1	55.9	108.6	7.3	5.1	1.1	2.5	1,200	62.1	3.7	5.0	49.6	118	70.0	6.1
	6.0	1.3	3.1	1500	45.6	32.6	3.8	12.0	58.5	109.3	6.6	5.1	1.1	2.5	1,500	63.2	3.5	5.3	51.2	109	70.0	5.9
	9.0	2.8	6.5	1200	44.5	30.0	3.6	12.5	56.6	102.6	6.4	5.1	1.1	2.5	1,200	62.1	3.7	5.0	49.6	118	70.0	6.1
	9.0	2.8	6.5	1500	45.6	32.6	3.8	12.0	58.5	103.0	6.6	5.1	1.1	2.5	1,500	63.2	3.5	5.3	51.2	109	70.0	5.9
	12.0	4.7	10.9	1200	45.4	30.3	3.4	13.3	57.0	99.5	6.0	5.1	1.1	2.5	1,200	62.1	3.7	5.0	49.6	118	70.0	6.1
	12.0	4.7	10.9	1500	46.5	33.0	3.6	12.8	58.9	99.8	6.2	5.1	1.1	2.5	1,500	63.2	3.5	5.3	51.2	109	70.0	5.9
100	6.0	1.3	3.0	1200	40.0	28.2	4.4	9.1	55.0	118.3	8.9	3.4	0.6	1.4	1,200	62.1	3.7	5.0	49.6	118	70.0	6.1
	6.0	1.3	3.0	1500	41.0	30.7	4.7	8.8	57.0	119.0	9.2	3.4	0.6	1.4	1,500	63.2	3.5	5.3	51.2	109	70.0	5.9
	9.0	2.7	6.1	1200	41.8	28.9	4.0	10.3	55.6	112.3	7.9	3.4	0.6	1.4	1,200	62.1	3.7	5.0	49.6	118	70.0	6.1
	9.0	2.7	6.1	1500	42.8	31.5	4.3	9.9	57.5	112.8	8.1	3.4	0.6	1.4	1,500	63.2	3.5	5.3	51.2	109	70.0	5.9
	12.0	4.5	10.4	1200	42.7	29.3	3.9	11.0	55.9	109.3	7.4	3.4	0.6	1.4	1,200	62.1	3.7	5.0	49.6	118	70.0	6.1
	12.0	4.5	10.4	1500	43.7	31.8	4.1	10.6	57.8	109.6	7.6	3.4	0.6	1.4	1,500	63.2	3.5	5.3	51.2	109	70.0	5.9
110	6.0	1.2	2.8	1200	37.4	27.2	5.0	7.5	54.4	128.1	10.6	2.6	0.4	0.9	1,200	62.1	3.7	5.0	49.6	118	70.0	6.1
	6.0	1.2	2.8	1500	38.3	29.5	5.3	7.2	56.5	128.8	11.0	2.6	0.4	0.9	1,500	63.2	3.5	5.3	51.2	109	70.0	5.9
	9.0	2.6	5.9	1200	39.0	27.8	4.6	8.5	54.7	122.2	9.5	2.6	0.4	0.9	1,200	62.1	3.7	5.0	49.6	118	70.0	6.1
	9.0	2.6	5.9	1500	40.0	30.3	4.9	8.2	56.7	122.6	9.8	2.6	0.4	0.9	1,500	63.2	3.5	5.3	51.2	109	70.0	5.9
	12.0	4.4	10.1	1200	39.9	28.2	4.4	9.0	55.0	119.2	9.0	2.6	0.4	0.9	1,200	62.1	3.7	5.0	49.6	118	70.0	6.1
	12.0	4.4	10.1	1500	40.9	30.6	4.7	8.7	56.9	119.5	9.2	2.6	0.4	0.9	1,500	63.2	3.5	5.3	51.2	109	70.0	5.9
120												2.0	0.2	0.4	1,200	62.1	3.7	5.0	49.6	118	70.0	6.1
												2.0	0.2	0.4	1,500	63.2	3.5	5.3	51.2	109	70.0	5.9
												2.0	0.2	0.4	1,200	62.1	3.7	5.0	49.6	118	70.0	6.1
												2.0	0.2	0.4	1,500	63.2	3.5	5.3	51.2	109	70.0	5.9
	12.0	4.3	10.0	1200	37.2	27.1	5.0	7.4	54.4	129.1	10.7	2.0	0.2	0.4	1,200	62.1	3.7	5.0	49.6	118	70.0	6.1
	12.0	4.3	10.0	1500	38.2	29.5	5.4	7.1	56.4	129.4	11.1	2.0	0.2	0.4	1,500	63.2	3.5	5.3	51.2	109	70.0	5.9

Interpolation is permissible; extrapolation is not.
Flow is changed to maintain minimum LWT 60° F in cooling and maximum LWT 70° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 22 Model 060 - Part Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	2.9	2.3	5.2	1280	50.8	35.2	1.6	30.9	56.4	60.0	1.4	12.0	11.5	26.5	1,280	28.3	3.0	2.8	18.1	90	17.0	3.8
	2.9	2.3	5.2	1600	51.9	38.4	1.7	30.1	57.7	60.0	1.5	12.0	11.5	26.5	1,600	28.9	2.9	2.9	19.0	87	16.8	3.7
30	3.8	2.2	5.1	1280	50.8	35.2	1.6	30.9	56.4	60.0	1.4	6.0	4.1	9.6	1,280	31.4	3.0	3.1	21.1	93	23.0	3.9
	3.8	2.2	5.1	1600	51.9	38.4	1.7	30.1	57.7	60.0	1.5	6.0	4.1	9.6	1,600	32.0	2.9	3.2	22.1	89	22.6	3.8
	3.8	2.2	5.1	1280	50.8	35.2	1.6	30.9	56.4	60.0	1.4	9.0	6.9	15.9	1,280	32.5	3.0	3.2	22.3	94	25.1	3.9
	3.8	2.2	5.1	1600	51.9	38.4	1.7	30.1	57.7	60.0	1.5	9.0	6.9	15.9	1,600	33.2	2.9	3.3	23.3	89	24.8	3.8
	3.8	2.2	5.1	1280	50.8	35.2	1.6	30.9	56.4	60.0	1.4	12.0	10.4	23.9	1,280	33.2	3.0	3.2	22.9	94	26.2	3.9
	3.8	2.2	5.1	1600	51.9	38.4	1.7	30.1	57.7	60.0	1.5	12.0	10.4	23.9	1,600	33.9	2.9	3.4	23.9	90	26.0	3.8
40	5.8	2.9	6.8	1280	50.8	35.2	1.6	30.9	56.4	60.0	1.4	6.0	3.3	7.6	1,280	35.9	3.0	3.4	25.5	96	31.5	4.0
	5.8	2.9	6.8	1600	51.9	38.4	1.7	30.1	57.7	60.0	1.5	6.0	3.3	7.6	1,600	36.6	2.9	3.6	26.6	91	31.1	3.9
	5.8	2.9	6.8	1280	50.8	35.2	1.6	30.9	56.4	60.0	1.4	9.0	5.7	13.2	1,280	37.2	3.1	3.6	26.8	97	34.0	4.1
	5.8	2.9	6.8	1600	51.9	38.4	1.7	30.1	57.7	60.0	1.5	9.0	5.7	13.2	1,600	38.0	3.0	3.8	27.9	92	33.8	4.0
	5.8	2.9	6.8	1280	50.8	35.2	1.6	30.9	56.4	60.0	1.4	12.0	8.7	20.2	1,280	38.0	3.1	3.6	27.5	97	35.4	4.1
	5.8	2.9	6.8	1600	51.9	38.4	1.7	30.1	57.7	60.0	1.5	12.0	8.7	20.2	1,600	38.8	3.0	3.8	28.7	92	35.2	4.0
50	6.0	2.5	5.7	1280	49.7	34.9	1.8	26.9	56.0	68.7	1.9	6.0	2.5	5.7	1,280	40.3	3.1	3.8	29.7	99	40.1	4.2
	6.0	2.5	5.7	1600	50.7	38.1	1.9	26.2	57.3	69.1	2.0	6.0	2.5	5.7	1,600	41.1	3.0	4.0	30.9	94	39.7	4.1
	9.0	4.5	10.5	1280	50.5	35.1	1.7	29.7	56.3	62.5	1.6	9.0	4.5	10.5	1,280	41.8	3.1	3.9	31.2	100	43.1	4.3
	9.0	4.5	10.5	1600	51.6	38.3	1.8	28.9	57.7	62.8	1.6	9.0	4.5	10.5	1,600	42.7	3.0	4.2	32.5	95	42.8	4.2
	11.5	7.2	16.5	1280	50.8	35.2	1.6	30.9	56.4	60.0	1.4	12.0	7.1	16.4	1,280	42.7	3.1	4.0	32.0	101	44.7	4.4
	11.5	7.2	16.5	1600	51.9	38.4	1.7	30.1	57.7	60.0	1.5	12.0	7.1	16.4	1,600	43.6	3.0	4.2	33.3	95	44.4	4.2
60	6.0	2.3	5.4	1280	47.8	34.4	2.1	22.6	55.0	78.3	2.7	6.0	2.3	5.4	1,280	44.6	3.1	4.2	33.9	102	48.7	4.5
	6.0	2.3	5.4	1600	48.8	37.5	2.2	22.1	56.3	78.8	2.7	6.0	2.3	5.4	1,600	45.6	3.0	4.4	35.2	96	48.3	4.4
	9.0	4.3	10.0	1280	49.0	34.8	1.9	25.3	55.7	72.4	2.2	9.0	4.3	10.0	1,280	46.4	3.2	4.3	35.6	104	52.1	4.6
	9.0	4.3	10.0	1600	50.1	37.9	2.0	24.7	57.0	72.7	2.2	9.0	4.3	10.0	1,600	47.4	3.1	4.5	36.9	97	51.8	4.5
	12.0	6.8	15.7	1280	49.6	34.9	1.9	26.7	55.9	69.3	2.0	12.0	6.8	15.7	1,280	47.3	3.2	4.4	36.5	104	53.9	4.7
	12.0	6.8	15.7	1600	50.6	38.1	1.9	26.0	57.2	69.5	2.0	12.0	6.8	15.7	1,600	48.3	3.1	4.6	37.9	98	53.7	4.5
70	6.0	2.2	5.1	1280	45.5	33.6	2.4	18.8	53.8	87.9	3.6	6.0	2.2	5.1	1,280	48.9	3.2	4.5	38.0	105	57.3	4.8
	6.0	2.2	5.1	1600	46.5	36.7	2.5	18.3	55.1	88.4	3.6	6.0	2.2	5.1	1,600	49.9	3.1	4.8	39.4	99	56.9	4.7
	9.0	4.1	9.5	1280	47.0	34.1	2.2	21.1	54.6	82.1	3.0	9.0	4.1	9.5	1,280	50.8	3.2	4.6	39.9	107	61.1	5.0
	9.0	4.1	9.5	1600	48.0	37.2	2.3	20.6	55.9	82.4	3.0	9.0	4.1	9.5	1,600	51.9	3.1	4.9	41.3	100	60.8	4.8
	12.0	6.5	15.0	1280	47.7	34.4	2.1	22.4	55.0	79.2	2.7	12.0	6.5	15.0	1,280	51.9	3.2	4.7	40.9	108	63.2	5.1
	12.0	6.5	15.0	1600	48.7	37.5	2.2	21.8	56.3	79.4	2.8	12.0	6.5	15.0	1,600	53.0	3.1	5.0	42.4	101	62.9	4.9
80	6.0	2.1	4.9	1280	43.0	32.6	2.8	15.5	52.4	97.5	4.6	6.0	2.1	4.9	1,280	53.1	3.2	4.8	42.1	108	66.0	5.2
	6.0	2.1	4.9	1600	43.9	35.6	2.9	15.2	53.7	97.9	4.8	6.0	2.1	4.9	1,600	54.2	3.1	5.1	43.6	101	65.5	5.0
	9.0	3.9	9.1	1280	44.6	33.3	2.6	17.5	53.3	91.8	4.0	9.0	3.9	9.1	1,280	55.2	3.2	5.0	44.1	110	70.2	5.4
	9.0	3.9	9.1	1600	45.5	36.3	2.7	17.0	54.6	92.1	4.1	9.0	3.9	9.1	1,600	56.4	3.1	5.3	45.7	103	69.9	5.3
	12.0	6.3	14.4	1280	45.3	33.5	2.4	18.5	53.7	88.9	3.6	9.1	4.0	9.2	1,280	55.3	3.2	5.0	44.2	110	70.0	5.5
	12.0	6.3	14.4	1600	46.3	36.6	2.6	18.1	55.0	89.2	3.7	9.1	4.0	9.2	1,600	56.4	3.1	5.3	45.7	103	70.0	5.3
90	6.0	2.0	4.7	1280	40.3	31.4	3.1	12.8	51.1	107.0	5.9	4.6	1.5	3.5	1,280	55.3	3.2	5.0	44.2	110	70.0	5.5
	6.0	2.0	4.7	1600	42.8	35.1	3.1	14.0	53.2	107.5	5.3	4.6	1.5	3.5	1,600	56.4	3.1	5.3	45.7	103	70.0	5.3
	9.0	3.8	8.7	1280	41.9	32.1	2.9	14.4	51.9	101.5	5.1	4.6	1.5	3.5	1,280	55.3	3.2	5.0	44.2	110	70.0	5.5
	9.0	3.8	8.7	1600	42.8	35.1	3.1	14.0	53.2	101.8	5.3	4.6	1.5	3.5	1,600	56.4	3.1	5.3	45.7	103	70.0	5.3
	12.0	6.0	13.9	1280	42.7	32.5	2.8	15.2	52.3	98.7	4.8	4.6	1.5	3.5	1,280	55.3	3.2	5.0	44.2	110	70.0	5.5
	12.0	6.0	13.9	1600	43.6	35.4	2.9	14.8	53.6	98.9	4.9	4.6	1.5	3.5	1,600	56.4	3.1	5.3	45.7	103	70.0	5.3
100	6.0	2.0	4.6	1280	37.8	30.1	3.6	10.6	49.9	116.6	7.4	3.0	0.9	2.1	1,280	55.3	3.2	5.0	44.2	110	70.0	5.5
	6.0	2.0	4.6	1600	38.5	32.8	3.7	10.3	51.3	117.1	7.6	3.0	0.9	2.1	1,600	56.4	3.1	5.3	45.7	103	70.0	5.3
	9.0	3.7	8.5	1280	39.2	30.9	3.3	11.8	50.6	111.2	6.5	3.0	0.9	2.1	1,280	55.3	3.2	5.0	44.2	110	70.0	5.5
	9.0	3.7	8.5	1600	40.0	33.7	3.5	11.5	51.9	111.5	6.7	3.0	0.9	2.1	1,600	56.4	3.1	5.3	45.7	103	70.0	5.3
	12.0	5.9	13.5	1280	40.0	31.3	3.2	12.5	50.9	108.5	6.1	3.0	0.9	2.1	1,280	55.3	3.2	5.0	44.2	110	70.0	5.5
	12.0	5.9	13.5	1600	40.8	34.1	3.3	12.2	52.3	108.7	6.3	3.0	0.9	2.1	1,600	56.4	3.1	5.3	45.7	103	70.0	5.3
110	6.0	1.9	4.4	1280	35.4	28.7	4.0	8.8	49.1	126.4	9.1	2.3	0.5	1.1	1,280	55.3	3.2	5.0	44.2	110	70.0	5.5
	6.0	1.9	4.4	1600	36.1	31.4	4.2	8.6	50.5	126.8	9.3	2.3	0.5	1.1	1,600	56.4	3.1	5.3	45.7	103	70.0	5.3
	9.0	3.6	8.2	1280	36.7	29.5	3.8	9.8	49.5	121.0	8.1	2.3	0.5	1.1	1,280	55.3	3.2	5.0	44.2	110	70.0	5.5
	9.0	3.6	8.2	1600	37.5	32.2	3.9	9.5	50.9	121.3	8.3	2.3	0.5	1.1	1,600	56.4	3.1	5.3	45.7	103	70.0	5.3
	12.0	5.7	13.2	1280	37.4	29.9	3.6	10.3	49.8	118.3	7.6	2.3	0.5	1.1	1,280	55.3	3.2	5.0	44.2	110	70.0	5.5
	12.0	5.7	13.2	1600	38.2	32.6	3.8	10.1	51.1	118.5	7.8	2.3	0.5	1.1	1,600	56.4	3.1	5.3	45.7	103	70.0	5.3
120	6.0	1.9	4.3	1280	33.5	27.5	4.5	7.5	48.8	136.3	11.0	1.8	0.1	0.2	1,280	55.3	3.2	5.0	44.2	110	70.0	5.5
	6.0	1.9	4.3	1600	34.2	30.0	4.7	7.3	50.2	136.7	11.3	1.8	0.1	0.2	1,600	56.4	3.1	5.3	45.7	103	70.0	5.3
	9.0	3.5	8.0	1280	34.5	28.2	4.2	8.2	48.9	130.9	9.9	1.8	0.1	0.2	1,280	55.3	3.2	5.0	44.2	110	70.0	5.5
	9.0	3.5	8.0	1600	35.2	30.7	4.4	8.0	50.3	131.2	10.2	1.8	0.1	0.2	1,600	56.4	3.1	5.3	45.7	103	70.0	5.3
	12.0	5.5	12.8	1280	35.1	28.5	4.1	8.6	49.0	128.2	9.4	1.8	0.1	0.2	1,280	55.3	3.2	5.0	44.2	110	70.0	5.5
	12.0	5.5	12.8	1600	35.8	31.1	4.3	8.4	50.4	128.4	9.6	1.8	0.1	0.2	1,600	56.4	3.1	5.3	45.7	103	70.0	5.3

Interpolation is permissible; extrapolation is not.
Flow is changed to maintain minimum LWT 60° F in cooling and maximum LWT 70° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Performance Data — Tranquility® 22 Model 060 - Full Load

Performance capacities shown in thousands of Btuh

Antifreeze use recommended in this range. Also Clip JW3 on DXM2 board.

EWT °F	Cooling - EAT 80/67°F										Heating - EAT 70°F									
	GPM	WPD		CFM	TC	SC	kW	EER	HR	LWT	HWC	GPM	WPD		CFM	HC	kW	COP	HE	LAT	LWT	HWC
		PSI	FT										PSI	FT								
20	4.0	3.1	7.1	1520	67.8	44.9	2.8	24.2	77.3	60.0	2.4	14.0	14.5	33.5	1,520	40.5	4.1	2.9	26.7	95	16.2	4.7
	4.0	3.1	7.1	1900	69.4	48.8	3.0	23.3	79.6	60.0	2.5	14.0	14.5	33.5	1,900	41.2	3.9	3.1	28.0	90	16.0	4.5
30	5.3	3.3	7.5	1520	67.8	44.9	2.8	24.2	77.3	60.0	2.4	7.0	5.0	11.5	1,520	44.2	4.1	3.1	30.0	97	21.4	4.8
	5.3	3.3	7.5	1900	69.4	48.8	3.0	23.3	79.6	60.0	2.5	7.0	5.0	11.5	1,900	45.0	4.0	3.3	31.4	92	21.0	4.7
	5.3	3.3	7.5	1520	67.8	44.9	2.8	24.2	77.3	60.0	2.4	10.5	8.5	19.7	1,520	46.1	4.2	3.2	31.8	98	23.9	4.9
	5.3	3.3	7.5	1900	69.4	48.8	3.0	23.3	79.6	60.0	2.5	10.5	8.5	19.7	1,900	46.9	4.0	3.4	33.1	93	23.7	4.8
	5.3	3.3	7.5	1520	67.8	44.9	2.8	24.2	77.3	60.0	2.4	14.0	13.2	30.4	1,520	47.1	4.2	3.3	32.7	99	25.3	5.0
	5.3	3.3	7.5	1900	69.4	48.8	3.0	23.3	79.6	60.0	2.5	14.0	13.2	30.4	1,900	48.0	4.1	3.5	34.1	93	25.1	4.8
40	7.0	4.0	9.2	1520	67.3	44.5	2.8	23.7	77.0	62.0	2.6	7.0	4.0	9.3	1,520	50.2	4.3	3.4	35.5	101	29.8	5.2
	7.0	4.0	9.2	1900	68.9	48.5	3.0	22.8	79.2	62.6	2.6	7.0	4.0	9.3	1,900	51.1	4.1	3.6	37.0	95	29.4	5.0
	8.0	4.6	10.7	1520	67.8	44.9	2.8	24.2	77.3	60.0	2.4	10.5	7.1	16.5	1,520	52.4	4.4	3.5	37.6	102	32.8	5.3
	8.0	4.6	10.7	1900	69.4	48.8	3.0	23.3	79.6	60.0	2.5	10.5	7.1	16.5	1,900	53.4	4.2	3.7	39.0	96	32.6	5.2
	8.0	4.6	10.7	1520	67.8	44.9	2.8	24.2	77.3	60.0	2.4	14.0	11.1	25.6	1,520	53.7	4.4	3.6	38.7	103	34.5	5.4
	8.0	4.6	10.7	1900	69.4	48.8	3.0	23.3	79.6	60.0	2.5	14.0	11.1	25.6	1,900	54.6	4.2	3.8	40.2	97	34.3	5.2
50	7.0	3.1	7.2	1520	65.1	43.4	3.0	21.5	75.4	71.6	3.2	7.0	3.1	7.2	1,520	56.2	4.5	3.7	41.0	104	38.3	5.6
	7.0	3.1	7.2	1900	66.7	47.3	3.2	20.6	77.7	72.2	3.3	7.0	3.1	7.2	1,900	57.2	4.3	3.9	42.5	98	37.9	5.4
	10.5	5.8	13.3	1520	66.8	44.3	2.9	23.2	76.6	64.6	2.7	10.5	5.8	13.3	1,520	58.7	4.5	3.8	43.3	106	41.8	5.8
	10.5	5.8	13.3	1900	68.4	48.2	3.1	22.3	78.9	65.0	2.8	10.5	5.8	13.3	1,900	59.7	4.4	4.0	44.9	99	41.5	5.6
	14.0	9.0	20.9	1520	67.5	44.7	2.8	23.9	77.1	61.0	2.5	14.0	9.0	20.9	1,520	60.1	4.6	3.9	44.5	107	43.6	5.9
	14.0	9.0	20.9	1900	69.2	48.6	3.0	23.0	79.4	61.3	2.6	14.0	9.0	20.9	1,900	61.1	4.4	4.1	46.1	100	43.4	5.7
60	7.0	2.9	6.8	1520	62.5	42.4	3.3	18.9	73.8	81.1	4.0	7.0	2.9	6.8	1,520	62.1	4.6	3.9	46.3	108	46.8	6.1
	7.0	2.9	6.8	1900	64.0	46.1	3.5	18.2	76.0	81.7	4.1	7.0	2.9	6.8	1,900	63.1	4.4	4.2	48.0	101	46.3	5.9
	10.5	5.5	12.7	1520	64.4	43.2	3.1	20.8	75.0	74.3	3.4	10.5	5.5	12.7	1,520	64.9	4.7	4.0	48.8	110	50.7	6.3
	10.5	5.5	12.7	1900	66.0	47.0	3.3	20.0	77.3	74.7	3.5	10.5	5.5	12.7	1,900	66.0	4.5	4.3	50.6	102	50.4	6.1
	14.0	8.7	20.1	1520	65.4	43.6	3.0	21.7	75.6	70.8	3.1	14.0	8.7	20.1	1,520	66.4	4.7	4.1	50.2	110	52.8	6.5
	14.0	8.7	20.1	1900	67.0	47.4	3.2	20.9	77.9	71.1	3.2	14.0	8.7	20.1	1,900	67.5	4.6	4.3	52.0	103	52.6	6.3
70	7.0	2.8	6.5	1520	59.6	41.4	3.6	16.4	72.1	90.6	5.0	7.0	2.8	6.5	1,520	67.8	4.8	4.2	51.5	111	55.3	6.6
	7.0	2.8	6.5	1900	61.1	45.0	3.9	15.8	74.3	91.2	5.2	7.0	2.8	6.5	1,900	69.0	4.6	4.4	53.3	104	54.8	6.4
	10.5	5.2	12.1	1520	61.7	42.1	3.4	18.2	73.3	84.0	4.3	10.5	5.2	12.1	1,520	70.9	4.9	4.3	54.3	113	59.7	6.9
	10.5	5.2	12.1	1900	63.2	45.8	3.6	17.5	75.6	84.4	4.4	10.5	5.2	12.1	1,900	72.1	4.7	4.5	56.2	105	59.3	6.7
	14.0	8.3	19.3	1520	62.7	42.5	3.3	19.1	73.9	80.6	3.9	14.0	8.3	19.3	1,520	72.5	4.9	4.3	55.8	114	62.0	7.1
	14.0	8.3	19.3	1900	64.3	46.2	3.5	18.4	76.2	80.9	4.1	14.0	8.3	19.3	1,900	73.8	4.7	4.6	57.7	106	61.8	6.9
80	7.0	2.7	6.2	1520	56.6	40.2	4.0	14.0	70.4	100.1	6.2	7.0	2.7	6.2	1,520	73.5	4.9	4.4	56.7	115	63.8	7.3
	7.0	2.7	6.2	1900	58.0	43.7	4.3	13.5	72.7	100.8	6.4	7.0	2.7	6.2	1,900	74.8	4.8	4.6	58.6	106	63.3	7.0
	10.5	5.0	11.6	1520	58.7	41.0	3.8	15.6	71.6	93.6	5.3	10.5	5.0	11.6	1,520	76.8	5.0	4.5	59.6	117	68.6	7.7
	10.5	5.0	11.6	1900	60.2	44.6	4.0	15.0	73.8	94.1	5.5	10.5	5.0	11.6	1,900	78.2	4.8	4.7	61.6	108	68.3	7.4
	14.0	8.1	18.6	1520	59.8	41.4	3.6	16.5	72.2	90.3	4.9	12.5	6.6	15.1	1,520	77.9	5.1	4.5	60.6	117	70.0	7.7
	14.0	8.1	18.6	1900	61.3	45.1	3.9	15.9	74.4	90.6	5.1	12.5	6.6	15.1	1,900	79.3	4.9	4.8	62.6	109	70.0	7.5
90	7.0	2.6	5.9	1520	53.5	38.9	4.5	11.9	68.9	109.7	7.5	6.3	2.3	5.2	1,520	77.9	5.1	4.5	60.6	117	70.0	7.7
	7.0	2.6	5.9	1900	57.0	43.3	4.5	12.8	72.2	110.3	6.8	6.3	2.3	5.2	1,900	79.3	4.9	4.8	62.6	109	70.0	7.5
	10.5	4.8	11.2	1520	55.6	39.8	4.2	13.3	69.9	103.3	6.6	6.3	2.3	5.2	1,520	77.9	5.1	4.5	60.6	117	70.0	7.7
	10.5	4.8	11.2	1900	57.0	43.3	4.5	12.8	72.2	103.8	6.8	6.3	2.3	5.2	1,900	79.3	4.9	4.8	62.6	109	70.0	7.5
	14.0	7.8	18.0	1520	56.7	40.2	4.0	14.1	70.5	100.1	6.1	6.3	2.3	5.2	1,520	77.9	5.1	4.5	60.6	117	70.0	7.7
	14.0	7.8	18.0	1900	58.1	43.8	4.3	13.5	72.7	100.4	6.3	6.3	2.3	5.2	1,900	79.3	4.9	4.8	62.6	109	70.0	7.5
100	7.0	2.5	5.7	1520	50.5	37.5	5.0	10.1	67.7	119.3	9.1	4.2	1.3	3.0	1,520	77.9	5.1	4.5	60.6	117	70.0	7.7
	7.0	2.5	5.7	1900	51.8	40.8	5.3	9.7	70.0	120.0	9.4	4.2	1.3	3.0	1,900	79.3	4.9	4.8	62.6	109	70.0	7.5
	10.5	4.7	10.9	1520	52.5	38.5	4.7	11.3	68.5	113.0	8.0	4.2	1.3	3.0	1,520	77.9	5.1	4.5	60.6	117	70.0	7.7
	10.5	4.7	10.9	1900	53.8	41.9	5.0	10.8	70.8	113.5	8.3	4.2	1.3	3.0	1,900	79.3	4.9	4.8	62.6	109	70.0	7.5
	14.0	7.6	17.5	1520	53.6	38.9	4.5	11.9	68.9	109.8	7.5	4.2	1.3	3.0	1,520	77.9	5.1	4.5	60.6	117	70.0	7.7
	14.0	7.6	17.5	1900	54.9	42.4	4.8	11.5	71.2	110.2	7.7	4.2	1.3	3.0	1,900	79.3	4.9	4.8	62.6	109	70.0	7.5
110	7.0	2.4	5.6	1520	47.8	36.0	5.6	8.6	66.9	129.1	10.8	3.1	0.8	1.8	1,520	77.9	5.1	4.5	60.6	117	70.0	7.7
	7.0	2.4	5.6	1900	49.0	39.1	5.9	8.2	69.3	129.8	11.2	3.1	0.8	1.8	1,900	79.3	4.9	4.8	62.6	109	70.0	7.5
	10.5	4.6	10.6	1520	49.6	37.0	5.2	9.5	67.3	122.8	9.6	3.1	0.8	1.8	1,520	77.9	5.1	4.5	60.6	117	70.0	7.7
	10.5	4.6	10.6	1900	50.8	40.2	5.5	9.2	69.7	123.3	10.0	3.1	0.8	1.8	1,900	79.3	4.9	4.8	62.6	109	70.0	7.5
	14.0	7.4	17.1	1520	50.6	37.5	5.0	10.1	67.7	119.7	9.1	3.1	0.8	1.8	1,520	77.9	5.1	4.5	60.6	117	70.0	7.7
	14.0	7.4	17.1	1900	51.8	40.8	5.3	9.7	70.0	120.0	9.4	3.1	0.8	1.8	1,900	79.3	4.9	4.8	62.6	109	70.0	7.5
120	7.0	2.3	5.4	1520	45.5	34.4	6.2	7.3	66.6	139.0	12.8	2.5	0.2	0.4	1,520	77.9	5.1	4.5	60.6	117	70.0	7.7
	7.0	2.3	5.4	1900	46.6	37.4	6.6	7.1	69.1	139.7	13.2	2.5	0.2	0.4	1,900	79.3	4.9	4.8	62.6	109	70.0	7.5
	10.5	4.4	10.2	1520	47.0	35.4	5.8	8.1	66.7	132.7	11.5	2.5	0.2	0.4	1,520	77.9	5.1	4.5	60.6	117	70.0	7.7
	10.5	4.4	10.2	1900	48.1	38.5	6.2	7.8	69.1	133.2	11.9	2.5	0.2	0.4	1,900	79.3	4.9	4.8	62.6	109	70.0	7.5
	14.0	7.2	16.7	1520	47.8	35.9	5.6	8.6	66.8	129.5	10.9	2.5	0.2	0.4	1,520	77.9	5.1	4.5	60.6	117	70.0	7.7
	14.0	7.2	16.7	1900	49.0	39.1	6.0	8.2	69.3	129.9	11.2	2.5	0.2	0.4	1,900	79.3	4.9	4.8	62.6	109	70.0	7.5

Interpolation is permissible; extrapolation is not.
Flow is changed to maintain minimum LWT 60° F in cooling and maximum LWT 70° F in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.
Operation at or below 40° F EWT is based on 15% methanol antifreeze solution.
See Performance correction tables for operating conditions other than those listed above.

Physical Data

Model	024	030	036	042	048	060
Compressor (1 Each)	Copeland UltraTech Two-Stage Scroll					
Factory Charge HFC-410a, oz [kg]	49	48	48	70	80	84
ECM Fan Motor & Blower						
Fan Motor, hp [W]	1/2 [373]	1/2 [373]	1/2 [373]	3/4 [559]	3/4 [559]	1 [746]
Blower Wheel Size (Dia x W), in [mm]	9 x 7 [229 x 178]	9 x 7 [229 x 178]	9 x 8 [229 x 203]	9 x 8 [229 x 203]	10 x 10 [254 x 254]	11 x 10 [279 x 254]
Water Connection Size						
Swivel - Residential Class	1”	1”	1”	1”	1”	1”
HWG Water Connection Size						
Swivel - Residential Class	1”	1”	1”	1”	1”	1”
Vertical Upflow						
Air Coil Dimensions (H x W), in [mm]	20 x 17.25 [508 x 438]	20 x 17.25 [508 x 438]	24 x 21.75 [610 x 552]	24 x 21.75 [610 x 552]	28.75 x 24 [730 x 610]	28.75 x 24 [730 x 610]
Standard Filter - 1” [25.4mm] Throw-away, qty (in) [mm]	20 x 20 [508 x 508}	20 x 20 [508 x 508}	24 x 24 [610 x 610]	24 x 24 [610 x 610]	28 x 28 [711 x 711]	28 x 28 [711 x 711]
Weight - Operating, lbs [kg]	216 [98.0]	224 [101.6]	245 [111.1]	260 [117.9]	315 [142.9]	330 [149.7]
Weight - Packaged, lbs [kg]	221 [100.2]	229 [103.9]	251 [113.8]	266 [120.6]	322 [146.0]	337 [152.9]
Horizontal						
Air Coil Dimensions (H x W), in [mm]	16 x 22 [406 x 559]	16 x 22 [406 x 559]	20 x 25 [508 x 635]	20 x 25 [508 x 635]	20 x 35 [508 x 889]	20 x 35 [508 x 889]
Standard Filter - 1” [25mm] Pleated MERV 8 Throwaway, in [mm]	18 x 24 [457 x 610]	18 x 24 [457 x 610]	2 - 14 x 20 [356 x 508]	2 - 14 x 20 [356 x 508]	1 - 20 x 24 [508 x 610] 1 - 14 x 20 [356 x 508]	1 - 20 x 24 [508 x 610] 1 - 14 x 20 [356 x 508]
Weight - Operating, lbs [kg]	200 [90.7]	208 [94.3]	229 [103.9]	244 [110.7]	299 [135.6]	314 [142.4]
Weight - Packaged, lbs [kg]	205 [93.0]	213 [96.6]	235 [106.6]	250 [113.4]	306 [138.8]	321 [145.6]

All units have grommet compressor mountings, TXV expansion devices, and 1/2” [12.7mm] & 3/4” [19.1mm] electrical knockouts.

Dimensions — Vertical Upflow Tranquility® 22

Vertical Upflow Model		Overall Cabinet		
		A Width	B Depth	C Height
024-030	in	22.4	22.4	40.5
	cm	56.9	56.9	102.9
036-042	in	22.4	26.0	46.5
	cm	56.9	66.0	118.1
048 -060	in	25.4	29.3	50.5
	cm	64.5	74.4	128.3

Vertical Upflow Model		Water Connections - Standard Units						
		1	2	3	4	5		
		D Loop In	E Loop Out	Cond. F	HWG In G	HWG Out H	Loop Water FPT	HWG FPT
024 - 030	in	3.8	8.8	19.5	13.4	15.7	1”	1”
	cm	9.6	22.3	49.5	34.0	39.9		
036 - 042	in	3.8	8.8	22.1	15.2	18.5	1”	1”
	cm	9.6	22.3	56.1	38.6	47.0		
048 - 060	in	4.0	9.5	22.1	15.2	18.5	1”	1”
	cm	10.2	24.1	56.1	38.6	47.0		

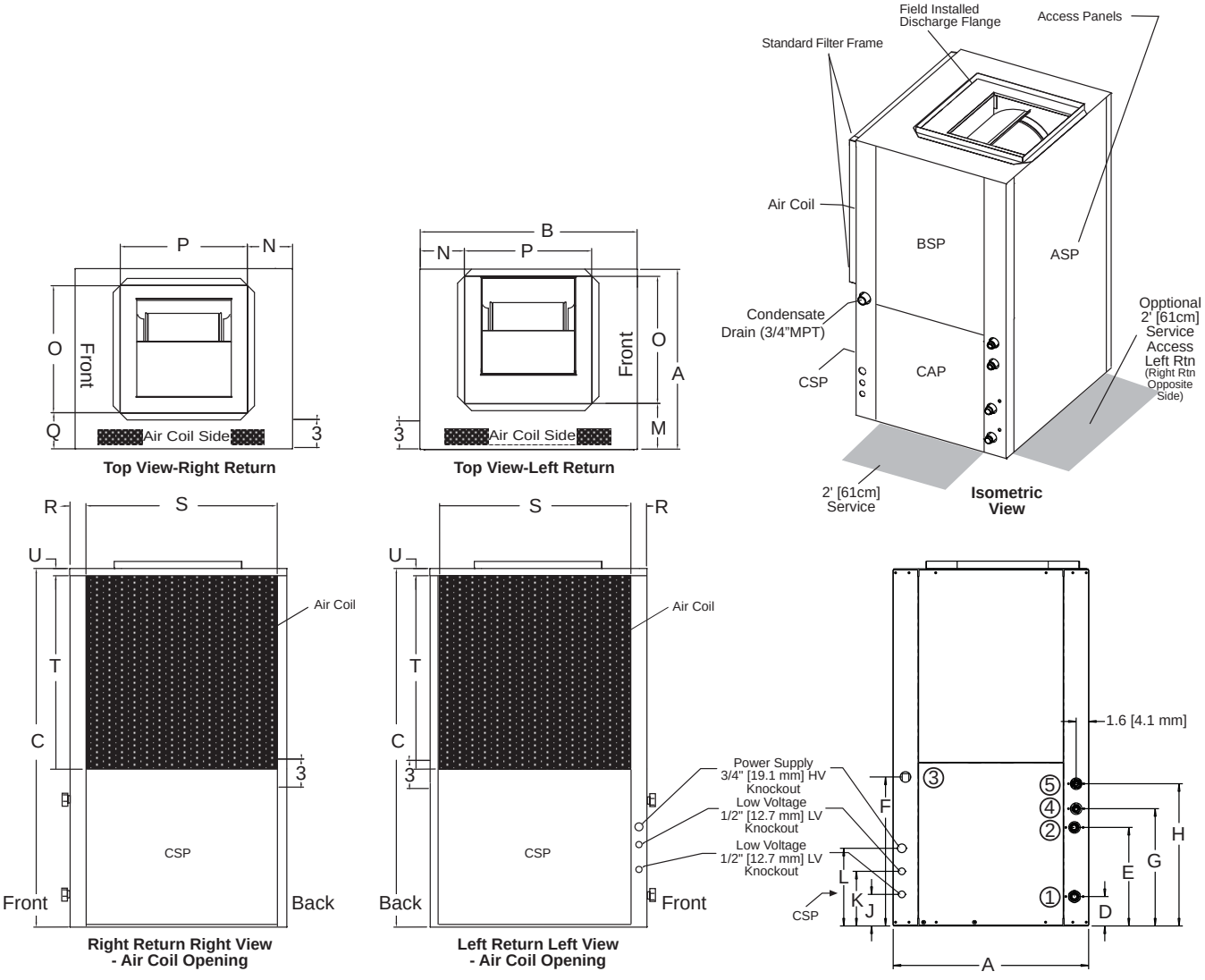
Vertical Model		Electrical Knockouts		
		J 1/2”	K 1/2”	L 3/4”
		Low Voltage	Ext Pump	Power Supply
024 - 060	in	4.6	6.1	7.6
	cm	11.7	15.5	19.3

Condensate is 3/4” FPT.
Unit shipped with deluxe duct collar/filter frame extending from unit 2” [7.6cm] and is suitable for duct connection.
Discharge flange is field installed.

Dimensions — Vertical Upflow Tranquility® 22

Vertical Upflow Model		Discharge Connection Duct Flange Installed (+/- 0.10 in, +/- 2.5mm)					Return Connection Standard Deluxe Filter Frame (+/- 0.10 in, +/- 2.5mm)			
		M Left Return	N	O Supply Width	P Supply Depth	Q Right Return	R	S Return Depth	T Return Height	U
024 - 030	in	7.4	4.2	13.9	14.0	6.7	2.2	18.0	18.0	1.0
	cm	18.8	10.7	35.3	35.6	17.0	5.6	45.7	45.7	2.5
036 - 042	in	7.4	6.0	13.9	14.0	7.4	1.4	22.5	22.0	1.0
	cm	18.8	15.2	35.3	35.6	18.8	3.5	57.1	55.9	2.5
048 - 060	in	7.4	6.0	13.9	14.0	8.4	2.8	25.8	26.2	1.0
	cm	18.8	15.2	35.3	35.6	21.3	7.1	65.5	66.4	2.5

Auxiliary Electric Heaters mounted externally.



Dimensions — Horizontal Tranquility® 22

Horizontal Model		Overall Cabinet		
		A Width	B Depth	C Height
TZ024-030	in	22.5	48.3	18.2
	cm	57.1	122.9	46.2
TZ036-042	in	22.5	53.3	21.2
	cm	57.1	135.4	53.8
TZ048-060	in	25.4	68.0	21.2
	cm	64.5	172.7	53.8

Horizontal Model		Water Connections						
		1	2	3	4	5		
		D In	E Out	F HWG IN	G HWG Out	H Condensate	Loop Water FPT	HWG FPT
024 - 030	in	3.8	8.8	13.4	15.7	0.7	1”	1”
	cm	9.6	22.3	34.0	39.9	1.8		
036 - 042	in	3.8	8.8	15.2	18.5	0.7	1”	1”
	cm	9.6	22.3	38.6	47.0	1.8		
048 - 060	in	4.0	9.5	15.2	18.5	0.7	1”	1”
	cm	10.2	24.1	38.6	47.0	1.8		

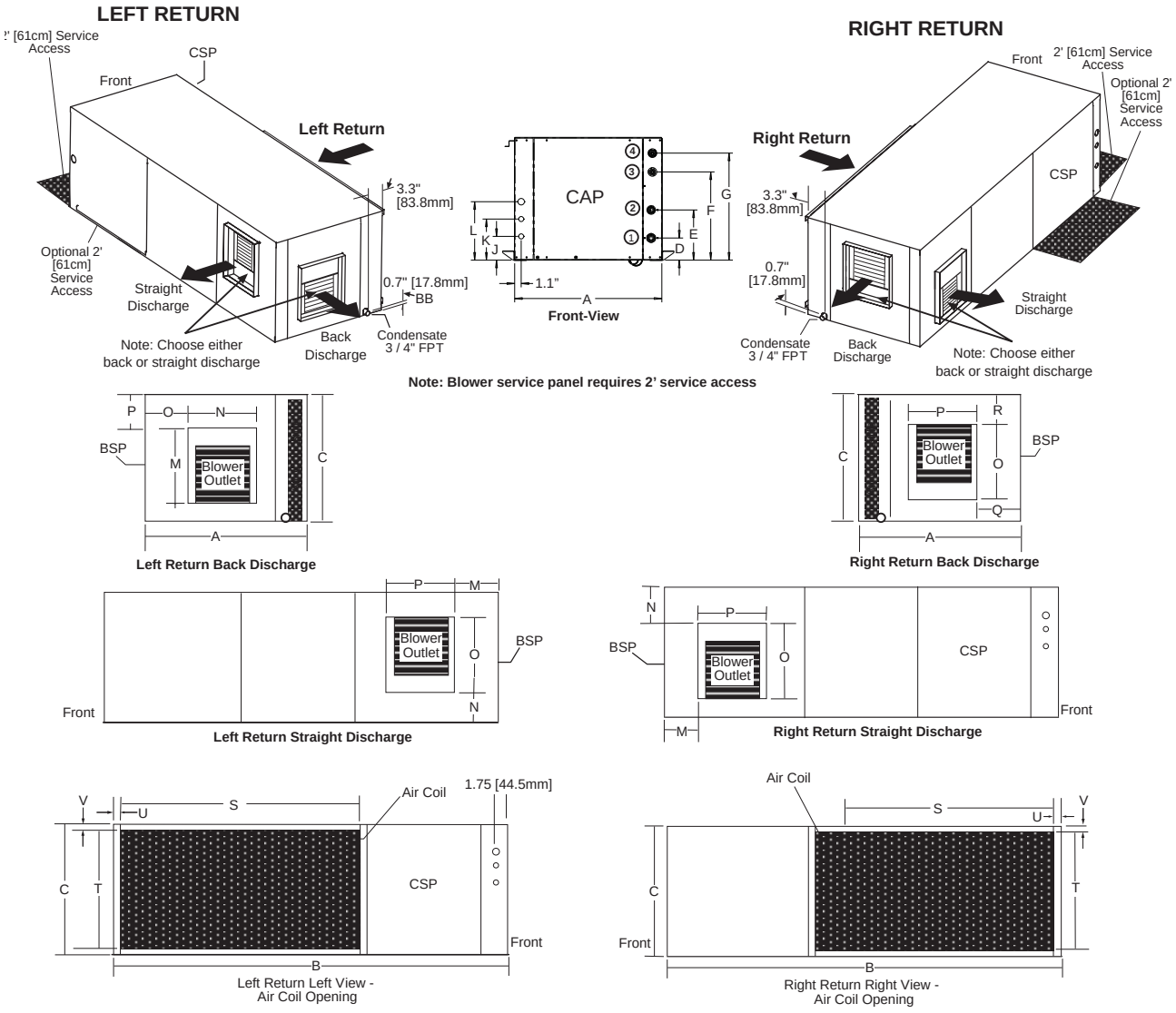
Horizontal Model		Electrical Knockouts		
		J 1/2”	K 1/2”	L 3/4”
		Low Voltage	Low Voltage	Power Supply
024 - 060	in	4.6	6.1	7.6
	cm	11.7	15.5	19.3

Condensate is 3/4” FPT.
Unit shipped with deluxe duct collar/filter frame extending from unit 2” [7.6cm] and is suitable for duct connection.
Discharge flange and hanger brackets are factory installed.

Dimensions — Horizontal Tranquility® 22

Horizontal Model		1Discharge Connection Duct Flange Installed (+/- 0.10 in, +/- 2.5mm)						Return Connection Standard Deluxe Filter Frame (+/- 0.10 in, +/- 2.5mm)			
		M	N	O Supply Height	P Supply Width	Q	R	S Return Width	T Return Height	U	V
024 - 030	in	2.6	4.8	11.9	11.9	2.6	4.8	22.6	15.8	0.8	1.0
	cm	6.6	12.2	30.2	30.2	6.6	12.2	57.4	40.1	2.0	2.5
036 - 042	in	2.1	3.4	15.4	12.4	2.1	3.4	25.7	18	0.8	1.0
	cm	5.3	8.6	39.1	31.5	5.3	8.6	65.3	45.7	2.0	2.5
048 - 060	in	2.5	1.5	18.2	15.9	2.5	1.5	36	18	0.8	1.0
	cm	6.3	3.8	46.2	40.4	6.3	3.8	91.4	45.7	2.0	2.5

1Discharge connection will change when using the accessory auxiliary electric heat package. Refer to the heater IOM for details.



Electrical Data

With Internal Flow Controller

Model	Compressor			HWG Pump FLA	Int Loop Pump FLA	Fan Motor FLA	Total Unit FLA	Min Circuit Amps	Max Fuse/ HACR
	RLA	LRA	Qty						
024	11.7	58.3	1	0.5	1.7	3.9	17.8	20.7	30
030	14.7	73.0	1	0.5	1.7	3.9	19.2	22.4	35
036	18.0	83.0	1	0.5	1.7	3.9	21.4	25.2	40
042	21.8	96.0	1	0.5	1.7	5.2	25.3	29.7	45
048	25.0	104.0	1	0.5	1.7	5.2	28.6	33.9	50
060	28.9	152.9	1	0.5	1.7	6.9	36.2	42.9	70

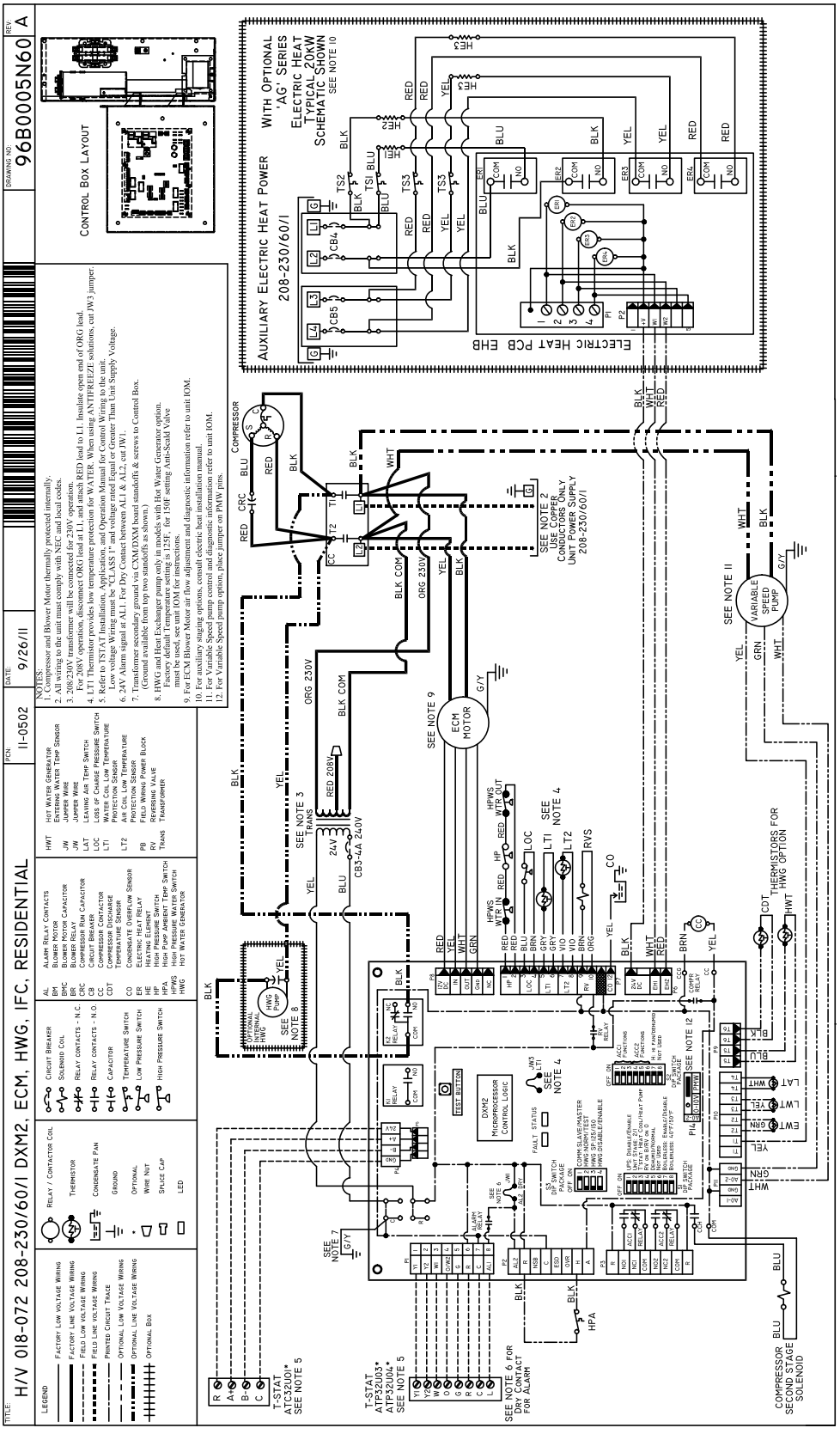
With Motorized Modulating Valve

Model	Compressor			HWG Pump FLA	Fan Motor FLA	Total Unit FLA	Min Circuit Amps	Max Fuse/ HACR
	RLA	LRA	Qty					
024	11.7	58.3	1	0.5	3.9	16.1	19.0	30
030	14.7	73.0	1	0.5	3.9	17.5	20.7	30
036	18.0	83.0	1	0.5	3.9	19.7	23.5	35
042	21.8	96.0	1	0.5	5.2	23.6	28.0	45
048	25.0	104.0	1	0.5	5.2	26.9	32.2	50
060	28.9	152.9	1	0.5	6.9	34.5	41.2	60

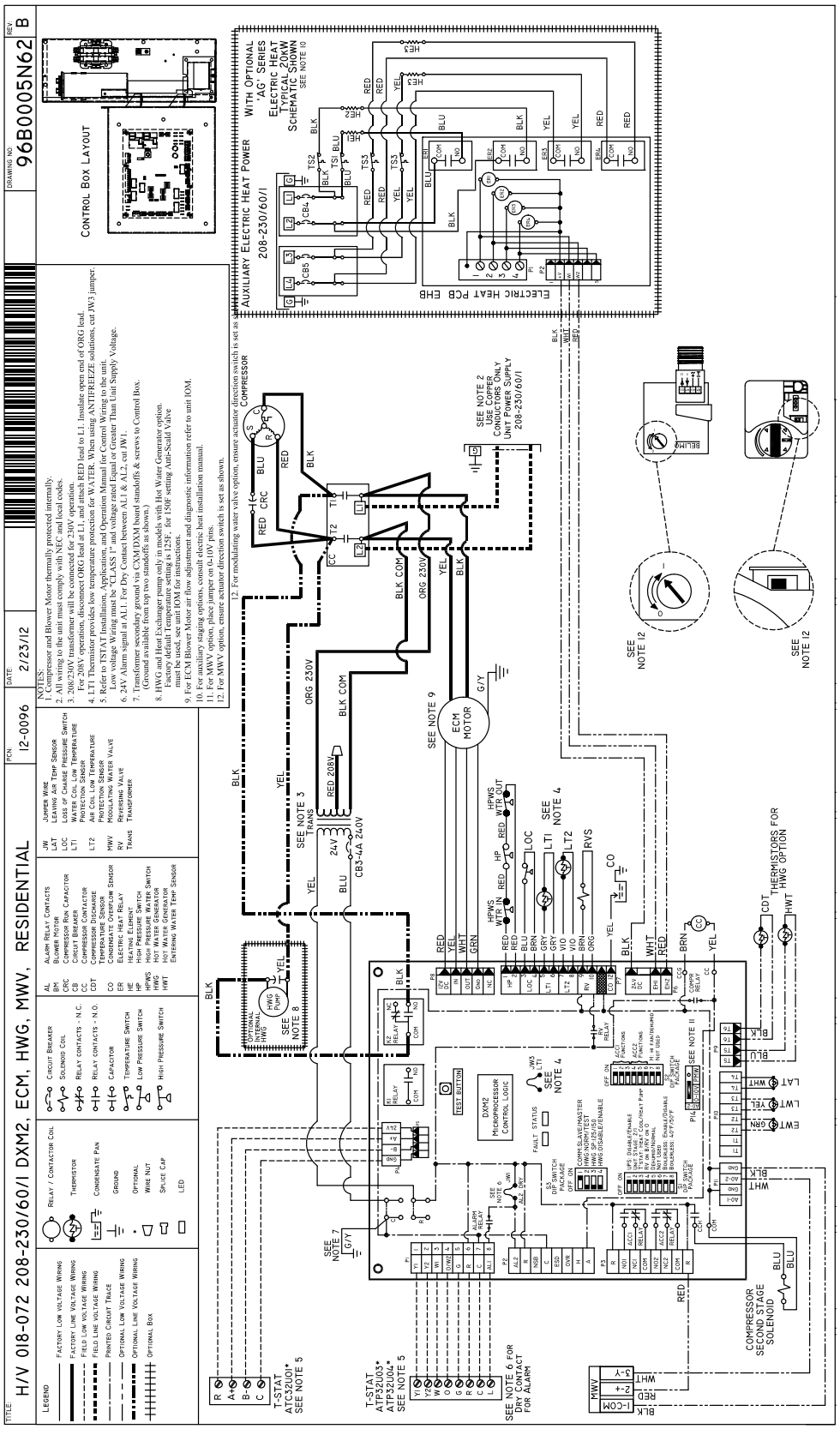
Rated Voltage of 208-230/60/1
HACR circuit breaker in USA only

Min/Max Voltage of 197/254
All fuses Class RK-5

Tranquility® 22 Internal Flow Controller Electrical Wiring Diagram - 96B0005N60



Tranquility® 22 Modulating Water Valve Electrical Wiring Diagram - 96B0005N62



Blower Performance Data

Airflow in CFM with wet coil and clean air filter

Model	Max ESP (in. wg)	Fan Motor (hp)	Range	Cooling Mode		Dehumid Mode		Heating Mode		Residential Units Only	
				Stg 2	Stg 1	Stg 2	Stg 1	Stg 2	Stg 1	Fan Only Mode	Aux/ Emerg Mode
024	0.75	1/2	Default	750	575	650	500	750	575	350	750
			Maximum	850	650	800	600	850	850	850	850
			Minimum	600	450	600	450	600	450	300	650
030	0.5	1/2	Default	950	650	800	575	950	650	450	950
			Maximum	1100	750	1000	700	1100	1100	1100	1100
			Minimum	750	525	750	525	750	525	375	750
036	0.6	1/2	Default	1125	750	975	650	1125	750	525	1125
			Maximum	1250	950	1200	800	1250	1250	1250	1250
			Minimum	900	600	900	600	900	600	450	900
042	0.6	3/4	Default	1300	925	1125	825	1300	925	600	1300
			Maximum	1475	1100	1400	1000	1475	1475	1475	1475
			Minimum	1050	750	1050	750	1050	750	525	1050
048	0.75	3/4	Default	1500	1125	1300	975	1500	1125	700	1500
			Maximum	1700	1300	1600	1200	1700	1700	1700	1700
			Minimum	1200	900	1200	900	1200	900	600	1350
060	0.75	1	Default	1875	1500	1625	1300	1875	1500	875	1875
			Maximum	2100	1700	2000	1600	2100	2100	2100	2100
			Minimum	1500	1200	1500	1200	1500	1200	750	1500

Airflow is controlled within 5% up to the Max ESP shown with wet coil
Factory shipped on default CFM

Auxiliary Electric Heat

Auxiliary Heat Ratings

Auxiliary Electric Heat Model	TZ Models			kW Rating		Btuh Rating		Minimum CFM Required
	024	030-042	048-060	240V	208V	240V	208V	
AGM4A/C	■	■		3.8	2.9	13000	9900	500
AGM5A/C	■	■		4.8	3.6	16300	12300	500
AGM8A/C	■	■		7.6	5.7	25900	19400	650
AGM10A/C	■	■		9.6	7.2	32700	24600	650
AGM12A/C		■		11.4	8.6	38900	29200	750
AGL4A/C			■	3.8	2.9	13000	9900	500
AGL10A/C			■	9.6	7.2	32700	24600	1300
AGL15A/C			■	14.4	10.8	49100	36900	1350
AGL20A/C			■	19.2	14.4	65500	49200	1350

Black area denotes compatibility
Note: Horizontal units rated for zero clearance unit and 1" clearance for the first three feet of duct, Vertical units rated for zero clearance for both unit and duct.

Auxiliary Heat Electrical Data - Rev 'A' Heaters

Auxiliary Electric Heat Model	Supply Circuit	Heater Amps		Minimum Circuit Amps		Maximum Fuse	
		240V	208V	240V	208V	240V	208V
AGM4A	Single	15.8	14.0	19.8	17.1	20	20
AGM5A	Single	20.0	17.3	25.0	21.6	25	25
AGM8A	Single	31.7	27.5	39.6	34.4	40	35
AGM10A	Single	40.0	34.7	50.0	43.4	50	45
AGL4A	Single	15.8	14.0	19.8	17.1	20	20
AGL10A	Single	40.0	34.7	50.0	43.4	50	45
AGM12A	Single	47.5	41.2	59.4	51.5	60	60
	Dual - L1/L2 Dual - L3/L4	31.7 15.8	27.5 13.7	39.6 19.8	34.4 17.1	40 20	35 20
AGL15A	Single	60.0	52.0	75.0	65.0	80	70
	Dual - L1/L3	40.0	34.7	50.0	43.4	50	45
	Dual - L2/L4	20.0	17.3	25.0	21.6	25	25
AGL20A	Single	80.0	69.3	100.0	86.6	100	90
	Dual - L1/L3	40.0	34.7	50.0	43.4	50	45
	Dual - L2/L4	40.0	34.7	50.0	43.4	50	45

All heaters rated single phase 208-240V 60Hz
All models 12kW or larger feature internal circuit breakers
All Fuses UL Class K general purpose

Auxiliary Heat Electrical Data - Rev 'C' Heaters

Unit Model	Head Kit Model	Supply	Heater Amps 240	Heater Amps 208	Blower FLA	Minimum Circuit Amps		Maximum Breaker Size	
						240 V	208 V	240 V	208 V
TAH026	AGM4C	SINGLE	15.8	14	4.3	25	23	25	25
	AGM 5C	SINGLE	20	17.3	4.3	30	27	30	30
	AGM 8C	SINGLE	31.7	27.5	4.3	45	40	45	40
	AGM 10C	SINGLE	40	34.7	4.3	55	49	60	50
TAH038	AGL4C	SINGLE	15.8	14	4.3	28.5	26.25	30	30
	AGL10C	SINGLE	40	34.7	4.3	59	52	60	60
	AGL15C	DUAL L1/L2	40	34.7	0	50	43	50	45
		L3/L4	20	17.3	4.3	34	30	35	30
TAH049 and TAH060	AGL4C	SINGLE	15.8	14	7	28.5	26.25	30	30
	AGL10C	SINGLE	40	34.7	7.0	59	52	60	60
	AGL15C	DUAL L1/L2	40	34.7	0.0	50	43	50	45
		L3/L4	20	17.3	7.0	34	30	35	30
	AGL20C	DUAL L1/L2	40	34.7	0.0	50	43	50	45
		L3/L4	40	34.7	7.0	59	52	60	60

All heaters rated single phase 208-240V 60Hz
All models 15kW or larger feature internal circuit breakers

All Fuses UL Class K general purpose

Engineering Guide Specifications

General
The water source heating/cooling units shall be vertical upflow air discharge. Units shall be AHRI/ISO/ASHRAE 13256-1 (ground-source closed-loop) performance certified and listed by a nationally recognized safety-testing laboratory or agency. Each unit shall be water run-tested at the factory. Each unit shall be pallet mounted and shipped with appropriate protective packaging to help avoid damage in transportation.

Units shall carry a 10-year warranty on parts and a 5-year service labor allowance.

The water source units shall be designed to operate with entering fluid temperature between 20°F and 120°F.

Control
The unit shall have communicating controls, allowing (1) configuration and diagnostics on the thermostat (2) monitoring key performance metrics on the thermostat and (3) a 4-wire connection between the unit and the thermostat.

Integrated Water Circuit with Variable Flow Control
The unit shall have INTERNAL components to vary the water flow to the heat exchanger based on difference between entering and leaving water temperature. Internal components shall include either (1) Internal Variable-speed Flow Controller, which includes a high efficiency variable speed pump, 3 way flush valves and ports, expansion tank, source temperature sensors and communicating system to digitally monitor performance on a thermostat OR (2) internal motorized modulating valve, which includes motorized modulating water flow control valve, source temperature sensors and communicating system to monitor performance on a thermostat.

Casing & Cabinet
The cabinet shall be fabricated from heavy-gauge galvanized steel and painted with an epoxy powder coating. The interior shall be insulated with 1/2" thick, multi-density, coated glass fiber. Insulation in the air handler section shall be foil backed for ease of cleaning. Two (vertical), one (horizontal) blower compartment and three compressor compartment access panels shall be provided and shall be removable with supply and return ductwork in place. The internal component layout shall provide for major service with the unit in-place for restricted access installations.

A duct collar (Field installed) shall be provided for the supply air opening. 1" high efficiency MERV 8 pleated filters shall be provided with each unit. Units shall have filter frames. The units shall have an insulated divider panel between the air handling section and the compressor section to minimize the transmission of compressor noise, and to permit operational service testing without air bypass. Units shall be supplied with left or right air inlet.

Refrigerant Circuit
All units shall contain EarthPure® (HFC-410A) sealed refrigerant circuit employing a hermetic motor-compressor, bidirectional thermal expansion valve, finned tube air-to-refrigerant heat exchanger, reversing valve, coaxial tube water-to-refrigerant heat exchanger and service ports. An optional Hot Water Generator (desuperheater) coil shall be provided.

Compressors shall be Next Generation Copeland UltraTech™ Two-Stage scroll type designed for heat pump duty and mounted on vibration isolators. Compressor motors shall be single phase PSC with internal overload protection. A factory installed bidirectional filter drier shall be provided on all models. The finned tube coil shall be sized for low-face velocity and constructed of lanced aluminum fins bonded to rifled copper tubes in a staggered pattern not less than three rows deep. Air coil shall include tin plating for superior corrosion protection.

The coaxial water-to-refrigerant heat exchangers shall be designed for close approach temperatures and be constructed of a convoluted copper (optional cupro-nickel) inner tube and a steel outer tube. The thermal expansion valve shall provide proper superheat over the entire fluid temperature range with minimal "hunting". The valve shall operate bi-directionally without the use of check valves.

The water-to-refrigerant heat exchanger and low temperature refrigerant lines shall be insulated to prevent condensation at low liquid temperatures.

Fan Motor and Blower
The fan shall be a direct drive centrifugal type with a dynamically balanced wheel. The housing and wheel shall be designed for quiet low outlet velocity operation and of galvanized steel construction. Tight fan housing geometry shall not be permitted. The fan housing shall be removable from the unit without disconnecting the supply air ductwork for servicing of the fan motor. The fan motor shall be an ECM variable speed type. The ECM fan motor shall provide soft starting, maintain constant CFM over its static operating range and provide airflow adjustment in 25 CVM increments via its control board. The fan motor shall be isolated from the housing by rubber grommets. The motor shall be permanently lubricated and have thermal overload protection.

Electrical
The control shall employ quick attach harness assemblies for low voltage connections to the control board to aid in troubleshooting or replacement. An integral terminal block with screw terminals shall be provided on the control for all field low voltage connections. A circuit breaker protected 75VA transformer shall be employed. Line voltage box lugs shall be provided for unit wiring. Units shall have knockouts for entrance of low and line voltage wiring. The fan motor and control box shall be harness plug-connected for easy removal.

Piping
Supply and return water connections, as well as Hot Water Generator (desuperheater) connections shall be 1" FPT (Female Pipe Thread) brass swivel fittings which provide a union and eliminate the need for pipe wrenches and sealants when making field connections. A thread by sweat fitting shall be provided for connection to the water heater. All water piping shall be insulated to prevent condensation at low liquid temperatures.

Tranquility® 22 Digital (TZ) Series Submittal Data

Models TZH/V 024 - 060
60Hz - HFC-410A

Residential

CLIMATEMASTER®
Geothermal Heat Pump Systems

SUBMITTAL DATA - I-P UNITS

Unit Designation: _____

Job Name: _____

Architect: _____

Engineer: _____

Contractor: _____

PERFORMANCE DATA

Cooling Capacity: _____ Btuh

EER: _____

Heating Capacity: _____ Btuh

COP: _____

Ambient Air Temp: _____ °F

Entering Water Temp (Clg): _____ °F

Entering Air Temp (Clg): _____ °F

Entering Water Temp (Htg): _____ °F

Entering Air Temp (Htg): _____ °F

Airflow: _____ CFM

Fan Speed or Motor/RPM/Turns: _____

Operating Weight: _____ (lb)

ELECTRICAL DATA

Power Supply: 208/230 Volts Single Phase 60 Hz

Minimum Circuit Ampacity: _____

Maximum Overcurrent Protection: _____

Accessories & Warranty

The condensate connection shall be a 3/4" FPT with external trap field provided.

Accessories & Options

Hot Water Generator
An optional insulated heat reclaiming desuperheater coil of vented double-wall copper construction suitable for potable water shall be provided. The coil, hot water circulating pump, and associated controls shall be factory mounted inside the unit cabinet. Sensors mounted on the compressor discharge line and the potable water inlet shall transmit temperatures to the unit microprocessor where internal logic will determine when hot water generation is feasible. The microprocessor shall cycle the pump periodically during unit operation to sample the DHW tank temperature. The microprocessor shall include multiple temperature set points to select from for hot water generation control.

Cupro-Nickel Heat Exchanger
An optional corrosion resistant CuNi coaxial heat exchanger shall be factory installed in lieu of standard copper construction.

Thermostat (field installed)
An electronic communicating LCD thermostat shall be provided. The thermostat shall offer three stages of heating and two stages of cooling with precise temperature control and have a four-wire connection to the unit. The thermostat shall be capable of manual or automatic change-over operation and shall operate in standard or programmable mode. An integrated humidity control feature shall be included to control a humidifier and/or a dehumidifier. The thermostat shall include a utility demand reduction feature to be initiated by an independent time program or an external input.

The thermostat shall have a comprehensive installation setup menu to include configuration of the unit CFM for each mode of operation and configuration of the water flow rate through the unit, including variation of the water flow rate based on the stage of unit operation.

The thermostat shall display system faults with probable cause and troubleshooting guidance. Comprehensive service diagnostics menus shall display, system inputs, system outputs, configuration settings, Geo source inlet and outlet temperatures, compressor discharge line temperature, liquid line temperature, leaving air temperature, and entering potable water temperature (on units equipped with a Hot Water Generator). The thermostat shall allow for immediate manual control of all DXM2 outputs at the thermostat for rapid troubleshooting.

Auxiliary Heater (field installed)
An external, field-installed electric heater shall provide supplemental and/or emergency heating capability when used with the three stage heating thermostat.

Warranty Information

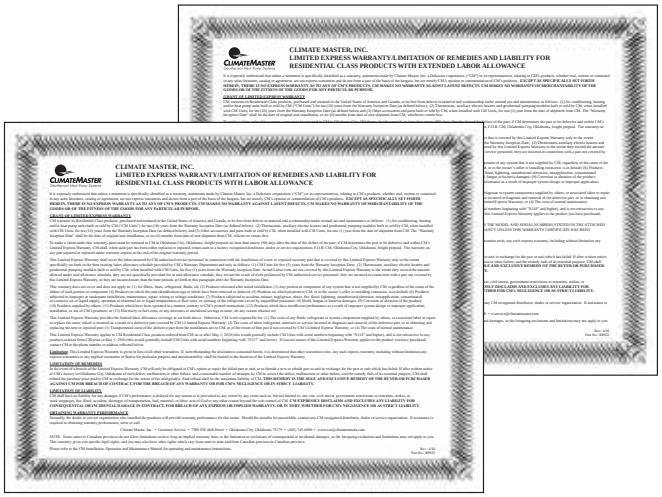
The 2010 standard warranty applies to units ordered on or after May 1, 2010. See ClimateMaster's 2010 Limited Express Residential Warranty Certificate RP851 for specific coverage and limitation.

ClimateMaster residential class heat pumps are backed by a ten-year limited warranty on all unit parts, including the following accessories when installed with ClimateMaster units: Flow Controllers, Thermostats & Electric Heaters.

ClimateMaster goes even further to back up its commitment to quality by including a service labor allowance for the first five years on unit parts and thermostats, auxiliary electric heaters and geothermal pumping modules.

The Optional Extended Factory Service Labor Allowance Warranty offers additional length of term protection to the consumer by offsetting service labor costs for 10 years.

To order this warranty, contact your ClimateMaster distributor. This coverage must be purchased within 90 days of unit installation. See Limited Express Extended Labor Warranty Certificate RP852 for details.


CLIMATE MASTER, INC.
LIMITED EXPRESS WARRANTY/LIMITATION OF REMEDIES AND LIABILITY FOR RESIDENTIAL CLASS PRODUCTS WITH EXTENDED LABOR ALLOWANCE

CLIMATE MASTER, INC.
LIMITED EXPRESS WARRANTY/LIMITATION OF REMEDIES AND LIABILITY FOR RESIDENTIAL CLASS PRODUCTS WITH LABOR ALLOWANCE

Notes:

Revision History

Date	Page #	Description
29 Feb. 12	41	Added Submittal Data Page
24 Oct., 11	All	First Published

Tranquility Split (TTS / TTP / TAC / TAH) Series

TWO-STAGE
INDOOR AND OUTDOOR SPLIT EARTHPURE® SYSTEMS
SIZES 026 - 064 [7.0 - 19.3 kW]

Table of Contents

Rounding Out the Product Line

Building upon the overwhelming market success of the Tranquility 27® packaged unit, the split system uses the same components in a more flexible configuration. The Tranquility split system compressor section can be coupled with TAH air handlers and TAC furnace coils to achieve ultra high efficiencies, while still providing the flexibility of an all-electric or dual fuel system and a remote compressor section location. Split systems are often used in areas where it would be difficult to install a packaged unit, such as in an attic, crawl space or even outdoors.

EarthPure® Refrigerant

EarthPure® is a non-chlorine based (HFC-410A) refrigerant, that with R-407C and R-134A, is seen as the future of all refrigerants used worldwide.

HFC 410A characteristics compared to R-22 are:

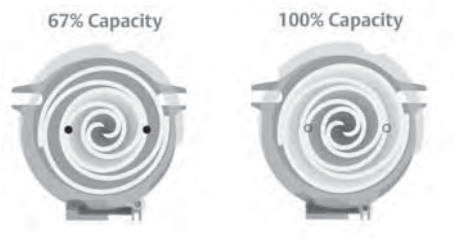
- Binary and near azeotropic mixture of 50% R-32 and 50% R-125.
- Higher efficiencies (50-60% higher operating pressures)
- Zero ozone depletion potential and low global warming potential.
- Virtually no glide. Unlike other alternative refrigerants, the two components in HFC-410A have virtually the same leak rates. Therefore, refrigerant can be added if necessary without recovering the charge.

Copeland Scroll Compressor

Achieve a greater level of comfort. The Copeland Scroll UltraTech™ provides superior comfort than fixed-capacity compressors by incorporating a revolutionary two-step design. With a unique 67% part-load capacity step, systems with UltraTech™ maintain precise temperature levels and lower relative humidity. This eliminates uneven peaks and valleys and allows for steady cooling comfort. Homeowners now have a better, more efficient way to power their heating and cooling system, raising their level of comfort, while lowering energy bills. So when your customers need a new heating and cooling system, make sure it has the best technology inside – the Copeland Scroll UltraTech™ compressor.

Save with superior efficiency. Over 40% of summer utility bills can come from the air conditioner compressor operation. A system with the Copeland Scroll UltraTech™ compressor delivers higher efficiency than any other single compressor system. In fact, systems with UltraTech™ provide up to 50% greater energy efficiency as compared to 13-SEER systems – which can save homeowners hundreds of dollars a year in energy costs.

Take it easy with quieter control. Copeland Scroll UltraTech™ is remarkably quiet at both full- and part-load capacity. In fact, it is up to four times quieter than a reciprocating compressor. Homeowners can enjoy its superior efficiency and comfort without having to hear the operation.



Learn the beauty of the design. With Copeland Scroll UltraTech™, two internal bypass ports enable the system to run at 67% part-load capacity for better efficiency and humidity control. Based on demand, the modulation ring is activated, sealing the bypass ports and instantly shifting capacity to 100%. Take advantage of "shift on the fly" stage changing (no stopping and starting required like other two-stage compressors).

Choose proven scroll performance. While Copeland Scroll UltraTech™ builds on established scroll technology, it is still a scroll at heart, which means it operates with fewer moving parts, no volumetric efficiency drop-off or compression leakage. The result is unsurpassed reliability and virtually silent operation for both indoor and outdoor applications.

Other New Features (Indoor Unit)

- Stylish two-tone look with textured black powder coat paint and stainless steel front access panel.
- Liftout handles for front access panel.
- Factory supplied filter drier for trouble free reliability.
- Easy access low profile horizontal control box.
- Double isolated compressor for quiet and vibration free operation.
- Open Service-Friendly Cabinet (i.e, all components in compressor section can be serviced from the front).

Other New Features (Outdoor Unit)

- Stylish and durable silver baked-on powder coat finish.
- Large, easy access service panels.
- Double isolated compressor for quiet and vibration-free operation.
- Easy access spacious control box.
- Built-in Earth loop circulating pump and flushing valves.
- Built-in expansion tank for more stable Earth loop pressures.

Tranquility Split (TTS/TTP) Design Features

The Tranquility Split (TTS/TTP) Series has abundant features and industry leading efficiency.

Application Flexibility

- Four Capacities 026, 038, 049, and 064.
- Extended range operation (20-120°F EWT) and flow rates as low as 1.5 gpm per ton.
- Circuit breaker protected loop and hot water generator pumps (indoor model).
- Field selectable low-temperature protection setting for GWHP or GLHP (indoor model).
- Open service-friendly cabinet (i.e., all components in compressor section can be serviced from the front).
- Precharged compressor section with back-seating service valves for quick installation.
- Indoor and outdoor models available.
- Built-in earth loop circulating pump, flushing valves, hose kit and loop expansion tank for easy loop connection (outdoor model).
- AHRI matched and rated with TAC and TAH products.
- Exceeds Federal requirements for 30% tax credit on installation costs.*
- Exceeds ASHRAE 90.1 and Energy Star 3.0 efficiencies.*
- Thru-the-Bottom loop access (outdoor model).
- Ideal for remote applications like 2nd floor or crawl space areas.
- Can be used as a total electric heat pump or add on heat pump with fossil fuel backup.

* When installed with a ClimateMaster TAC or TAH product.

Operating Efficiencies

- EarthPure® HFC-410A zero ozone depletion refrigerant.
- Among the highest efficiencies in AHRI/ISO/ASHRAE/ANSI 13256-1 ratings for heating COP's, cooling EER's with low water flow rates.
- 26 EER/4.7 COP.
- Two-stage operation for ultra high efficiencies and unsurpassed comfort.
- Optional hot water generator generates hot water at considerable savings.
- Rugged and highly efficient next generation Copeland UltraTech™ scroll compressors provide the industry's highest efficiencies and full capacity with reduced cycling losses.
- Oversized coaxial tube water-to-refrigerant heat exchangers operate at low liquid pressure drop. Convoluted copper (and optional cupro-nickel) water tube functions efficiently at low-flow rates and provides low-temperature-damage resistance.

Service & Installation Advantages

- Large removable access panels provide an open service-friendly.
- Control box provides easy access to all internal components.
- Ideal for unit replacement market, designed for quiet outdoor installations with weather tight cabinet (outdoor model).
- Factory installed liquid line filter/drier.
- Brass swivel-type water connections for quick connection and elimination of wrenches or sealants during installation (indoor model).
- Bi-directional thermal expansion valve.
- CXM control features status lights with memory for easy diagnostics.
- High and low pressure service ports on refrigerant circuit.
- Accurate refrigerant sensing low-temperature protection.
- Exclusive UPS (Unit Performance Sentinel) feature provides early warning of inefficient operating lconditions before unit shutdown actually occurs reducing the need for emergency service work, thus letting you fix problems in the early stages. Fault types are not only indicated at the control, but are stored in memory after a user reset for future service use. Fault types can be displayed at the thermostat if equipped with fault LED or display.
- Brass service valves.

Factory Quality & Industry Certifications

- All units are built on our Integrated Process Control Assembly System (IPCS). The IPCS is a unique state of the art manufacturing system that is designed to assure quality of the highest standards of any manufacturer in the water-source industry. Our IPCS system:
  - Verifies that the correct components are being assembled.
  - Automatically performs special leak tests on all joints.
  - Conducts pressure tests.
  - Performs highly detailed run test unparalleled in the HVAC industry.
  - Automatically disables packaging for a "failed" unit.
  - Creates computer database for future service analysis and diagnostics from run test results.
- Heavy gauge galvanized steel cabinets are epoxy powder coated for durable and long-lasting finish.
- All refrigerant brazing is done in a nitrogen atmosphere.
- All units are deep evacuated to less than 100 microns prior to refrigerant charging.
- All joints are both helium and halogen leak tested to insure annual leak rate of less than 1/4 ounce.
- Coaxial heat exchanger, refrigerant suction lines and all water lines are fully insulated to eliminate condensation problems in low temperature applications.
- Noise Reduction features include: dual level compressor isolation; insulated compressor compartment; interior cabinet insulation using 1/2" coated glass fiber.
- Safety features include: high pressure and loss of charge to protect the compressor, low temperature protection sensors to safeguard the coaxial heat exchanger, hot water high-limit, and low compressor discharge temperature switch provided to shut down the hot water generator when conditions dictate. Fault lockout enables emergency heat and prevents compressor operation until thermostat or circuit breaker has been reset.
- Standard 10-year limited warranty on all parts with 5-year labor allowance; Optional additional extended 5-year limited labor allowance available.
- AHRI/ASHRAE/ANSI/ISO 13256-1 certified.
- ETL listed.
- US EPA "Energy Star" compliant.
- ISO 9001:2000 Certified.

Tranquility Split (TTS/TTP) Design Features

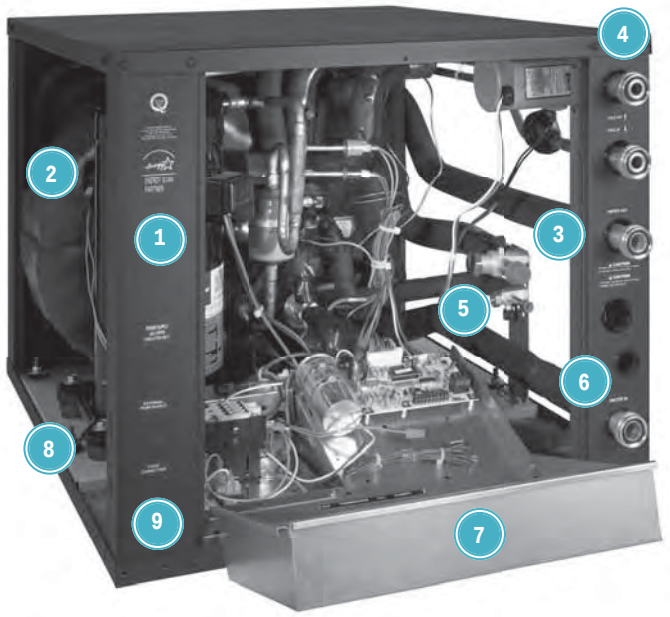
Simplified Controls
- CXM solid state control module.
- 'CFM' LED displays airflow.

Options & Accessories
- Hot water generator with internally mounted pump (indoor models), external on outdoor models.
- Cupro-nickel coaxial heat exchanger.
- Electronic thermostat.
- Closed loop Flow Controller (standard on outdoor model).
- Electronic auto-changeover thermostat with 3-stage heat, 2-stage cool and indicator LEDs.
- Hose kits.
- Additional extended 5-year limited labor allowance.

Tranquility (TTS) Indoor Split Design Features

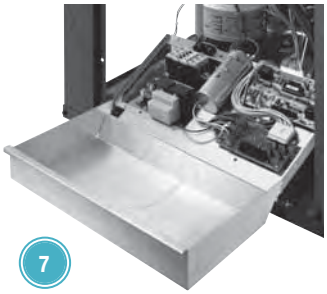
1. Copeland™ Ultra-Tech™ Two-Stage Unloading Scroll Compressor
2. Oversized Water Coil
3. Fully Insulated Water and Refrigerant Lines
4. Factory Installed Hot Water Generator with Internal Pump
5. Backseating Brass Service Valves with Service Port
6. Brass Swivel Water Connections
7. Unit Performance Sentinel: Automatic Alert System Lets You Know if the System is Not Running at Peak Performance*
8. Dual Level Compressor Isolation for Ultra Quiet Operation
9. Three Easy Lift-out Service Access Panels with Stainless Steel Front Panels

* When installed with a ClimateMaster Residential Thermostat.



EarthPure® HFC410A

Features EarthPure® HFC-410A Zero Ozone Depletion Refrigerant



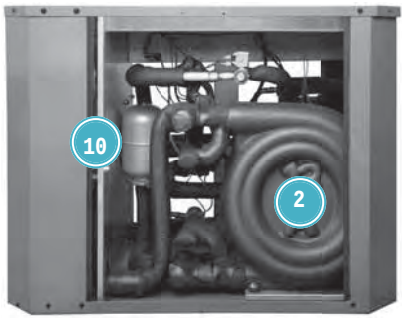
Tranquility (TTP) Outdoor Split Design Features

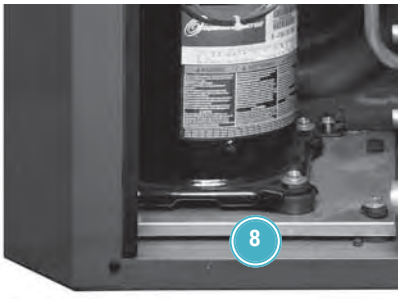
1. Copeland™ Ultra-Tech™ Two-Stage Unloading Scroll Compressor
2. Oversized Water Coil
3. Fully Insulated Water and Refrigerant Lines
4. Large Easily Accessible Control Box
5. Backseating Brass Service Valves with Service Port
6. Stainless Steel Braided Hoses for Easy Connection to Loop Piping
7. Unit Performance Sentinel: Automatic Alert System Lets You Know if the System is Not Running at Peak Performance*
8. Dual Level Compressor Isolation for Ultra Quiet Operation
9. Factory Built-In Loop Pump with Flushing Valves
10. Factory Built-In Expansion Tank for More Stable Loop Pressure

* When installed with a ClimateMaster Residential Thermostat.

EarthPure® HFC410A

Features EarthPure® HFC-410A Zero Ozone Depletion Refrigerant





Tranquility Split (TAC) Design Features

The Tranquility Split (TAC) Series has abundant features and industry leading efficiency.

Application Flexibility

- Four Capacities 026, 038, 049, & 064.
- Fully convertible vertical upflow or downflow, and horizontal left or horizontal right airflow.
- Thermoset plastic drain pan.
- AHRI matched and rated with TTP and TTS products.
- Easily connects to a new or existing fossil fuel furnaces.
- Large removable access panel provide an open service-friendly cabinet.
- Heavy gauge galvanized steel construction with attractive grey powder coat finish.

Operating Efficiencies

- EarthPure® HFC-410A zero ozone depletion refrigerant.
- Highest efficiencies in AHRI/ISO/ASHRAE/ANSI 13256-1 ratings for heating COP's, cooling EER's with low water flow rates when matched with TTP/TTS models.
- Exceeds federal requirements for 30% tax credit on installation costs.*
- Exceeds ASHRAE 90.1 and Energy Star 3.0 efficiencies.*

* When matched with a ClimateMaster Tranquility split compressor sections.

Service & Installation Advantages

- Large removable access panels.
- Bi-directional thermal expansion valve.
- Fully convertible.

Factory Quality & Industry Certifications

- All units are built on our Integrated Process Control Assembly System (IPCS). The IPCS is a unique state of the art manufacturing system that is designed to assure quality of the highest standards of any manufacturer in the water-source industry. Our IPCS system:
  - Verifies that the correct components are being assembled.
  - Automatically performs special leak tests on all joints.
  - Conducts pressure tests.
- All refrigerant brazing is done in a nitrogen atmosphere.
- All joints are both helium and halogen leak tested to insure annual leak rate of less than 1/4 ounce.
- Refrigerant suction lines are fully insulated to eliminate condensation problems in low temperature applications.
- Standard 10-year limited warranty on all parts with 5-year labor allowance; Optional additional extended 5-year limited labor allowance available.
- AHRI/ASHRAE/ANSI/ISO 13256-1 certified.
- NRTL & CSA listed.
- US EPA "Energy Star" compliant.
- ISO 9001:2000 Certified.

Features

- Fully convertible vertical upflow or downflow, and horizontal left or horizontal right airflow.
- Thermoset plastic drain pan.
- Large easily removable access panel provide an open service-friendly cabinet.
- Heavy gauge galvanized steel construction with attractive grey powder coat finish.

Tranquility Split (TAH) Design Features

The Tranquility Split (TAH) Series has abundant features and industry leading efficiency.

Application Flexibility
- Four Capacities 026, 038, 049, & 064.
- Variable speed ECM fan motor adapts to various duct systems.
- Condensate over-flow protection.
- 230v and 115v field convertible
- Fully field convertible for vertical upflow, downflow, horizontal left and horizontal right airflow.
- Less than 2% air leakage.
- AHRI matched and rated with TTP and TTS products.
- Three cabinet foot prints: 026 - 18" wide, 026-049 - 22.5" wide, & 038-064 - 25.5" wide.
- Ideal for remote applications like a 2nd floor, crawl spaces, and attics.
- Air coil temperature sensor factory mounted.
- Dehumidification mode for high latent cooling (when matched with ATP32UO4 thermostat)
- 1 or 2" compatible filterbase.

Operating Efficiencies
- EarthPure® HFC-410A zero ozone depletion refrigerant.
- Large low RPM blowers with variable speed fan motors provide quiet, efficient air movement with high static capability.
- Exceeds federal requirements for 30% tax credit on installation costs.*
- Exceeds ASHRAE 90.1 and Energy Star 3.0 efficiencies.*
- Highest efficiencies in AHRI/ISO/ASHRAE/ANSI 13256-1 ratings for heating COP's, cooling EER's with low water flow rates when matched with TTP/TTS models.

* When matched with a ClimateMaster Tranquility split compressor sections.

Service & Installation Advantages
- Low profile control box grants easy access to all internal components.
- Bi-directional thermal expansion valve.
- Circuit breaker protected 75VA control transformer.
- ECM control board features thermostat signal diagnostic LED's, airflow display LED (100 CFM per flash), and simplified CFM selection.
- Fan motors have quick attach wiring harness for fast removal.
- Internal dropout blower for easy servicing.
- Accurate refrigerant sensing low-temperature protection.
- Intelligent fault retry -condensate overflow protection.
- Air coil low temperature cut-out using high accuracy thermistor.
- 24vac accessory relays.
- Electronic fan control module (units with ECM fan motor): Independent Heating and Cooling CFM selection, CFM display LED, Input status LEDs, & Dehumidification mode.
- Thermostat fault recognition with ATP32 Series thermostat.
- Large removable access panel provides an open service-friendly cabinet.
- 20 gauge galvanized steel construction with attractive pewter epoxy powder coat paint and stainless steel service access panels.

Factory Quality & Industry Certifications
- All units are built on our Integrated Process Control Assembly System (IPCS). The IPCS is a unique state of the art manufacturing system that is designed to assure quality of the highest standards of any manufacturer in the water-source industry. Our IPCS system:
  - Verifies that the correct components are being assembled.
  - Automatically performs special leak tests on all joints.
  - Conducts pressure tests.
  - Performs highly detailed run test unparalleled in the HVAC industry.
  - Automatically disables packaging for a "failed" unit.
  - Creates computer database for future service analysis and diagnostics from run test results.
- Heavy gauge galvanized steel cabinets are epoxy powder coated for durable and long-lasting finish.
- All refrigerant brazing is done in a nitrogen atmosphere.
- All joints are both helium and halogen leak tested to insure annual leak rate of less than 1/4 ounce.
- Standard 10-year limited warranty on all parts with 5-year labor allowance; Optional additional extended 5-year limited labor allowance available.
- AHRI/ASHRAE/ANSI/ISO 13256-1 certified.
- ETL listed.
- US EPA "Energy Star" compliant.
- ISO 9001:2000 Certified.

Options & Accessories
- Electronic thermostat.
- Electronic auto-changeover thermostat with 3-stage heat, 2-stage cool and indicator LED's.
- Additional extended 5-year limited labor allowance.
- Internal Electric Heat for Easy Field Installation.
- Dehumidification mode for high latent cooling (when matched with ATP32UO4 thermostat).

Tranquility (TAC) Cased Air Coil Design Features

1. Fully convertible vertical upflow or downflow, and horizontal left or horizontal right airflow
2. Thermoset plastic drain pan
3. Large easily removable access panel provide an open service-friendly cabinet
4. Heavy gauge galvanized steel construction with attractive grey powder coat finish

Features EarthPure® HFC-410A Zero Ozone Depletion Refrigerant

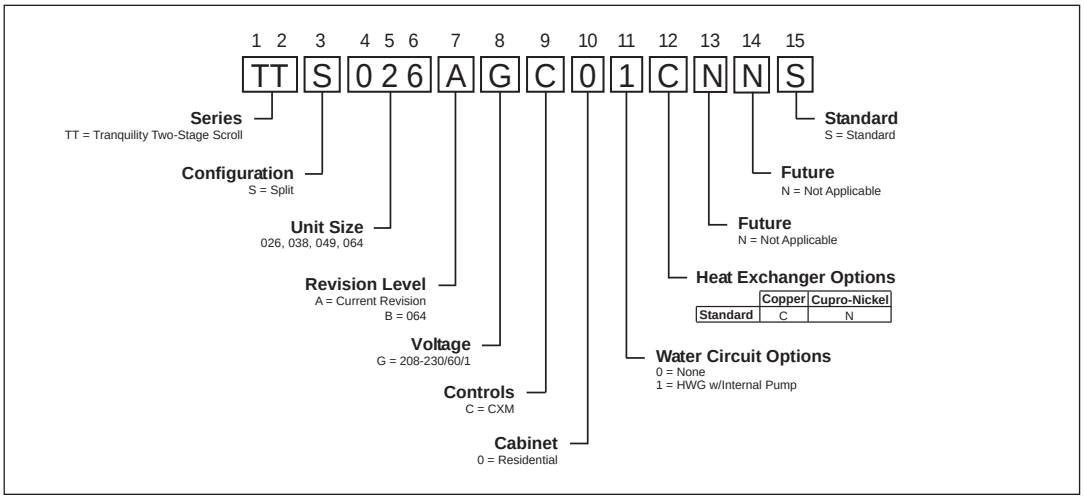
Tranquility (TAH) Air Handler Design Features

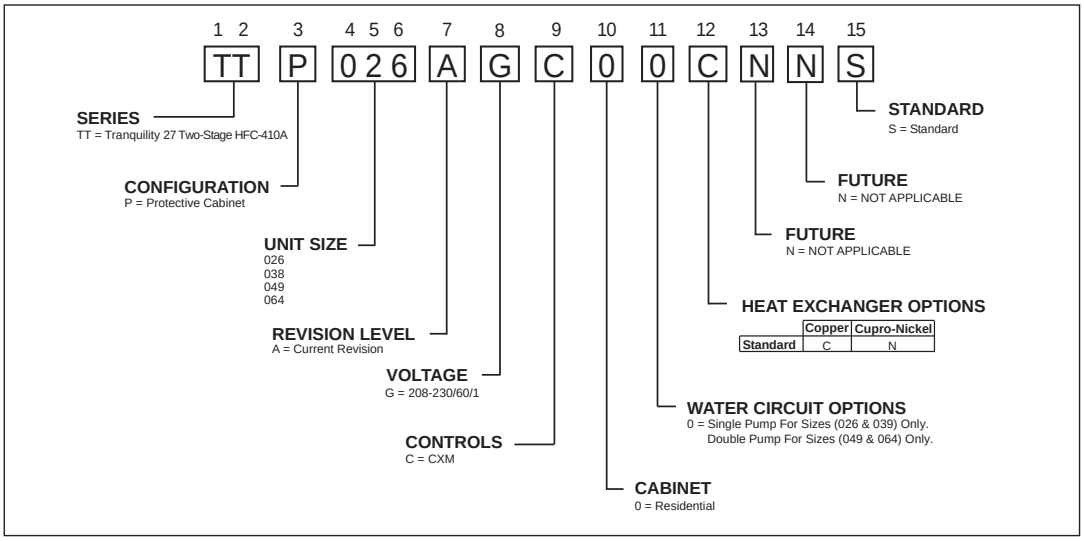
1. State-of-the-Art Variable Speed Blower Motor
2. Foil faced insulation
3. Two Lift-out Service Access Panels with Stainless Steel Front Panels
4. FP2 sensor factory mounted
5. 20 gauge galvanized steel construction with attractive pewter epoxy powder coat paint and stainless steel service access panels
6. Condensate over-flow protection

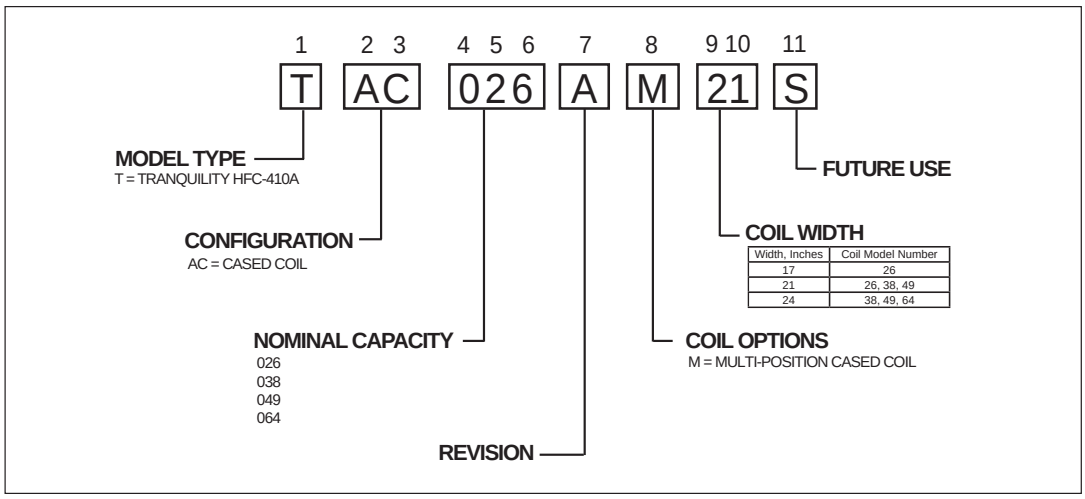
Features EarthPure® HFC-410A Zero Ozone Depletion Refrigerant

Model Key

Unit Model Key

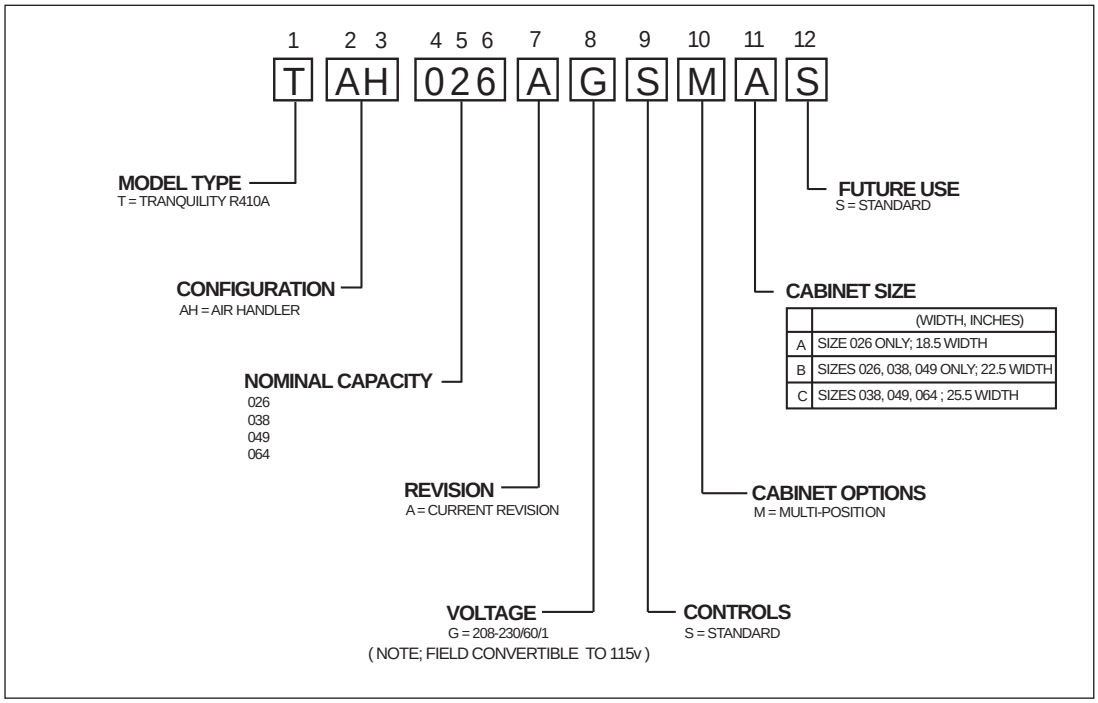






Model Key, Reference Calculations & Legend

Unit Model Key



Heating

$$LWT = EWT - \frac{HE}{GPM \times 500}$$

$$LAT = EAT + \frac{HC}{CFM \times 1.08}$$

Cooling

$$LWT = EWT + \frac{HR}{GPM \times 500}$$

$$LAT\ (DB) = EAT\ (DB) - \frac{SC}{CFM \times 1.08}$$

$$LC = TC - SC$$

$$S/T = \frac{SC}{TC}$$

Hot Water Generator capacities (HWC) are based on potable water flow rate of 0.4 gpm per nominal equipment ton and 90°F entering potable water temperature.

CFM	=	airflow, cubic feet/minute	HE	=	total heat of extraction, Mbtuh
EWT	=	entering water temperature, °F	HWC	=	Hot Water Generator (desuperheater) capacity, Mbtuh
GPM	=	water flow in US gallons/minute	WPD	=	Water coil pressure drop (psi & ft hd)
EAT	=	entering air temperature, Fahrenheit (dry bulb/wet bulb)	EER	=	Energy Efficiency Ratio = BTU output/Watt input
HC	=	air heating capacity, Mbtuh	COP	=	Coefficient of Performance = BTU output/BTU input
TC	=	total cooling capacity, Mbtuh	LWT	=	leaving water temperature, °F
SC	=	sensible cooling capacity, Mbtuh	LAT	=	leaving air temperature, °F
KW	=	total power unit input, KiloWatts	LC	=	latent cooling capacity, Mbtuh
HR	=	total heat of rejection, Mbtuh	S/T	=	sensible to total cooling ratio

About AHRI/ISO/ASHRAE 13256-1

About AHRI/ISO/ASHRAE 13256-1

AHRI/ASHRAE/ISO 13256-1 (Air-Conditioning and Refrigeration Institute/American Society of Heating, Refrigerating and Air Conditioning Engineers/International Standards Organization) is a certification standard for water-source heat pumps used in the following applications:

- WLHP (Water Loop Heat Pump – Boiler/Tower)
- GWHP (Ground Water Heat Pump – Open Loop)
- GLHP (Ground Loop Heat Pump – Geothermal)

The directory at http://www.ahrinet.org/ is constantly being updated and immediately available on the Internet. All ratings are submitted by the manufacturer for certification, and must be approved by AHRI. Therefore, there is a significant difference between AHRI "certified" and AHRI "rated." Thirty percent of a manufacturer's basic models must be tested each year. AHRI selects models at random from stock for testing on the basis of its evaluation of a participant's certification data.

Units that fail one or more certified test (90% of declared performance or lower) may be declared defective. If the initial failure is a performance test, the manufacturer must obsolete all units within the same basic model group or elect to have a second sample tested. If the second unit fails a performance test, it must be obsoleted, together with all units within the same basic model group. ClimateMaster takes certification seriously. We were recently awarded a certificate for consecutive years of no AHRI failures.

Temperatures used in AHRI certification standards are S.I. (Système International – metric) based. For example, typical catalog data for cooling is shown at 80°F DB/67°F WB [26.7°C DB/19.4°C] entering air temperature, but the AHRI standard for cooling is 80.6°F DB/66.2°F WB [27°C DB/19°C], since it is based upon whole numbers in degrees Celsius. Water and air temperatures for the standard are shown below.

Test Condition Comparison Table

	WLHP	GWHP	GLHP
Cooling			
Entering Air Temperature - DB/WB °F [°C]	80.6/66.2 [27/19]	80.6/66.2 [27/19]	80.6/66.2 [27/19]
Entering Water Temperature - °F [°C]	86 [30]	59 [15]	77 [25]
Fluid Flow Rate	*	*	*
Heating			
Entering Air Temperature - DB/WB °F [°C]	68 [20]	68 [20]	68 [20]
Entering Water Temperature - °F [°C]	68 [20]	50 [10]	32 [0]
Fluid Flow Rate	*	*	*

*Flow rate is specified by the manufacturer

Data certified by AHRI include heating/cooling capacities, EER (Energy Efficiency Ratio – Btuh per Watt) and COP (Btuh per Btuh) at the various conditions shown above. Pump power correction is calculated to adjust efficiencies for pumping Watts. Within each model, only one water flow rate is specified for all three groups, and pumping Watts are calculated using the formula below. This additional power is added onto the existing power consumption.

- Pump power correction = (gpm x 0.0631) x (Press Drop x 2990)/300

Fan power is corrected to zero external static pressure using the equation below. The nominal airflow is rated at a specific external static pressure. This effectively reduces the power consumption of the unit and increases cooling capacity but decreases heating capacity.

- Fan Power Correction = (cfm x 0.472) x (esp x 249)/300

Capacities and efficiencies are calculated using the following equations:

- ISO Cooling Capacity = Cooling Capacity (Btuh) + [Fan Power Correction (Watts) x 3.412]
- ISO EER Efficiency (Btuh/W) =
  ISO Cooling Capacity (Btuh)/[Power Input (Watts) – Fan Power Correction (Watts) + Pump Power Correction (Watts)]
- ISO Heating Capacity = Heating Capacity (Btuh) – [Fan Power Correction (Watts) x 3.412]
- ISO COP Efficiency (Btuh/Btuh) =
  ISO Heating Capacity (Btuh) x 3.412/[Power Input (Watts) - Fan Power Correction (Watts) + Pump Power Correction (Watts)]

AHRI/ISO/ASHRAE/ANSI 13256-1 Performance

ASHRAE/AHRI/ISO 13256-1. English (IP) Units with Tranquility Air Handler

Model	Capacity	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	
	Modulation	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
TTS/P026	Full	25,800	15.60	28,100	5.00	29,200	23.40	25,100	4.70	26,600	17.70	20,000	4.00
	Part	19,800	18.80	22,200	6.20	22,700	31.70	18,900	5.40	21,400	26.20	16,600	4.70
TTS/P038	Full	37,300	15.40	44,500	5.30	41,500	22.40	36,900	4.80	37,600	17.00	28,400	4.00
	Part	27,000	17.80	31,700	6.10	30,300	29.80	26,200	5.10	28,600	24.80	22,700	4.50
TTS/P049	Full	47,600	14.80	59,500	5.20	52,300	21.50	48,600	4.80	48,100	16.50	37,600	4.00
	Part	35,700	16.20	44,500	6.20	40,100	26.70	36,100	5.30	37,800	22.30	31,400	4.70
TTS/P064	Full	58,900	14.00	71,700	4.70	64,100	20.30	60,100	4.20	60,400	16.00	45,800	3.50
	Part	45,000	16.10	53,900	5.40	51,200	27.10	42,800	4.40	48,100	22.40	37,200	3.90

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 TT ratings based upon 208V operation

ASHRAE/AHRI/ISO 13256-1. English (IP) Units with Tranquility Cased Coil

Model	Capacity	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 Full Load 77°F Part Load 68°F		Heating Full Load 32°F Part Load 41°F	
	Modulation	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
TTS/P026	Full	25,500	14.90	29,300	5.10	28,900	22.50	25,400	4.70	26,700	17.30	20,300	4.00
	Part	19,400	17.60	22,300	6.40	22,100	29.30	18,800	5.30	21,200	24.90	16,800	4.70
TTS/P038	Full	37,400	15.40	42,400	5.10	42,000	22.60	35,500	4.70	39,100	17.60	28,300	4.10
	Part	27,600	18.30	30,700	6.20	30,500	30.10	25,300	5.20	29,800	25.80	22,500	4.60
TTS/P049	Full	49,200	15.40	55,300	5.10	54,900	22.20	46,300	4.70	50,300	17.20	35,800	4.00
	Part	37,200	17.50	42,900	6.10	42,700	28.50	34,400	5.10	39,800	23.60	30,100	4.50
TTS/P064	Full	57,100	13.70	68,700	4.60	62,400	19.90	56,200	4.10	60,100	16.00	45,300	3.60
	Part	44,400	15.70	51,900	5.30	50,600	25.60	42,400	4.50	49,000	22.10	37,900	4.00

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 TT ratings based upon 208V operation

ASHRAE/AHRI/ISO 13256-1. Metric (SI) Units with Tranquility Cased Coil

Model	Capacity	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 Full Load 25°C Part Load 20°C		Heating Full Load 0°C Part Load 5°C	
	Modulation	Capacity Watts	EER W/W	Capacity Watts	COP	Capacity Watts	EER W/W	Capacity Watts	COP	Capacity Watts	EER W/W	Capacity Watts	COP
TTS/P026	Full	7,239	4.4	9,203	5.3	8,382	6.8	7,503	4.7	7,737	5.3	5,715	3.9
	Part	5,363	4.8	7,122	5.4	6,448	8.6	5,627	4.6	6,096	7.2	4,865	4.1
TTS/P038	Full	10,522	4.3	13,101	5.0	11,753	6.3	10,522	4.5	10,932	4.9	7,913	3.8
	Part	7,151	4.8	8,880	5.6	8,206	7.9	7,151	4.6	7,943	6.9	6,272	4.1
TTS/P049	Full	14,097	4.3	17,409	5.2	15,797	6.1	13,980	4.6	14,713	4.9	10,903	4.0
	Part	9,760	4.7	12,309	5.4	11,342	7.9	9,906	4.7	10,844	6.7	8,763	4.2
TTS/P064	Full	16,676	4.2	21,688	4.7	18,699	5.6	17,233	4.3	17,438	4.5	13,394	3.6
	Part	11,958	4.6	15,445	5.2	13,482	7.5	12,397	4.4	13,130	6.5	10,991	4.0

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
Ground Loop Heat Pump ratings based on 15% methanol antifreeze solution
All ratings based upon operation at lower voltage of dual voltage rated models

Full Load Correction Factors

Air Flow Correction Table

Airflow	Heating				Cooling			
% of Nominal	Htg Cap	Power	Heat of Extraction	Total Cap	Sens Cap	S/T	Power	Heat of Rejection
60.00	0.946	1.153	0.896	0.925	0.788	0.852	0.913	0.922
68.75	0.959	1.107	0.924	0.946	0.829	0.876	0.926	0.942
75.00	0.969	1.078	0.942	0.960	0.861	0.897	0.937	0.955
81.25	0.977	1.053	0.959	0.972	0.895	0.921	0.950	0.968
87.50	0.985	1.032	0.974	0.983	0.930	0.946	0.965	0.979
93.75	0.993	1.014	0.988	0.992	0.965	0.973	0.982	0.990
100.00	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
106.25	1.006	0.989	1.011	1.007	1.033	1.027	1.020	1.009
112.50	1.012	0.982	1.019	1.012	1.064	1.052	1.042	1.018
118.75	1.018	0.979	1.027	1.016	1.092	1.075	1.066	1.025
125.00	1.022	0.977	1.033	1.018	1.116	1.096	1.091	1.032
130.00	1.026	0.975	1.038	1.019	1.132	1.110	1.112	1.037

Entering Air Correction Table

Full Load Heating Corrections			
Entering Air DB°F	Heating Capacity	Power	Heat of Extraction
40	1.052	0.779	1.120
45	1.043	0.808	1.102
50	1.035	0.841	1.084
55	1.027	0.877	1.065
60	1.019	0.915	1.045
65	1.010	0.957	1.023
68	1.004	0.982	1.010
70	1.000	1.000	1.000
75	0.989	1.045	0.974
80	0.976	1.093	0.946

* = Sensible capacity equals total capacity
AHRI/ISO/ASHRAE 13256-1 uses entering air conditions of Cooling - 80.6°F DB/66.2°F WB, 1 and Heating - 68°F DB/59°F WB entering air temperature

Cooling													
Entering Air WB°F	Total Capacity	Sensible Cooling Capacity Multiplier - Entering DB °F										Power	Heat of Rejection
		60	65	70	75	80	80.6	85	90	95	100		
45	0.832	1.346	1.461	1.603	*	*	*	*	*	*	*	0.946	0.853
50	0.850	1.004	1.174	1.357	*	*	*	*	*	*	*	0.953	0.870
55	0.880	0.694	0.902	1.115	1.331	*	*	*	*	*	*	0.964	0.896
60	0.922		0.646	0.875	1.103	1.329	1.356	*	*	*	*	0.977	0.932
65	0.975			0.639	0.869	1.096	1.123	1.320	*	*	*	0.993	0.979
66.2	0.990			0.582	0.812	1.039	1.066	1.262	1.482	*	*	0.997	0.991
67	1.000			0.545	0.774	1.000	1.027	1.223	1.444	*	*	1.000	1.000
70	1.040				0.630	0.853	0.880	1.075	1.297	1.517	*	1.011	1.035
75	1.117					0.601	0.627	0.821	1.046	1.275	1.510	1.033	1.101

* Sensible capacity equals total capacity.

Part Load Correction Factors

Air Flow Correction Table

Airflow	Heating				Cooling			
% of Nominal	Htg Cap	Power	Heat of Extraction	Total Cap	Sens Cap	S/T	Power	Heat of Rejection
60.00	0.946	1.153	0.896	0.925	0.788	0.852	0.913	0.922
68.75	0.959	1.107	0.924	0.946	0.829	0.876	0.926	0.942
75.00	0.969	1.078	0.942	0.960	0.861	0.897	0.937	0.955
81.25	0.977	1.053	0.959	0.972	0.895	0.921	0.950	0.968
87.50	0.985	1.032	0.974	0.983	0.930	0.946	0.965	0.979
93.75	0.993	1.014	0.988	0.992	0.965	0.973	0.982	0.990
100.00	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
106.25	1.006	0.989	1.011	1.007	1.033	1.027	1.020	1.009
112.50	1.012	0.982	1.019	1.012	1.064	1.052	1.042	1.018
118.75	1.018	0.979	1.027	1.016	1.092	1.075	1.066	1.025
125.00	1.022	0.977	1.033	1.018	1.116	1.096	1.091	1.032
130.00	1.026	0.975	1.038	1.019	1.132	1.110	1.112	1.037

Entering Air Correction Table

Full Load Heating Corrections			
Entering Air DB°F	Heating Capacity	Power	Heat of Extraction
40	1.084	0.732	1.161
45	1.073	0.764	1.140
50	1.060	0.802	1.117
55	1.046	0.846	1.090
60	1.031	0.893	1.061
65	1.016	0.945	1.031
68	1.006	0.978	1.013
70	1.000	1.000	1.000
75	0.984	1.058	0.968
80	0.968	1.117	0.936

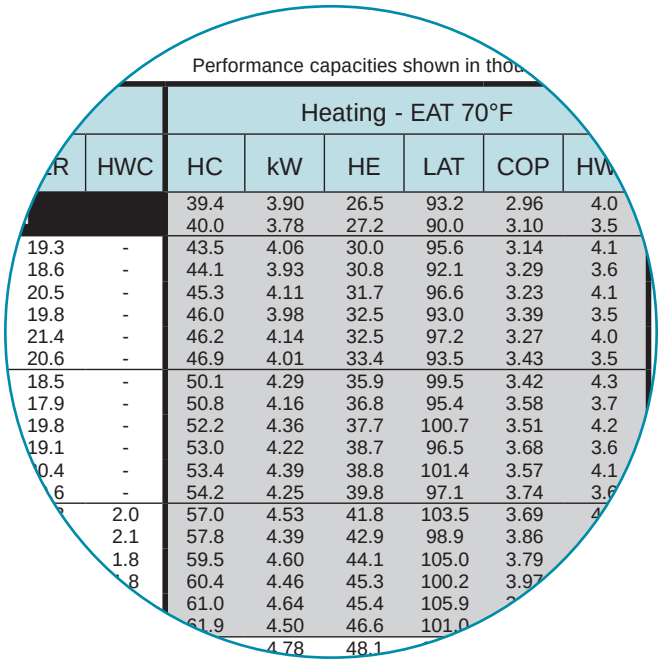
* = Sensible capacity equals total capacity
AHRI/ISO/ASHRAE 13256-1 uses entering air conditions of Cooling - 80.6°F DB/66.2°F WB, 1 and Heating - 68°F DB/59°F WB entering air temperature

Cooling													
Entering Air WB°F	Total Capacity	Sensible Cooling Capacity Multiplier - Entering DB °F										Power	Heat of Rejection
		60	65	70	75	80	80.6	85	90	95	100		
45	0.876	1.286	1.302	1.389	*	*	*	*	*	*	*	0.981	0.895
50	0.883	1.002	1.099	1.241	*	*	*	*	*	*	*	0.985	0.901
55	0.903	0.706	0.871	1.060	1.271	*	*	*	*	*	*	0.989	0.918
60	0.935		0.617	0.844	1.079	1.319	1.349	*	*	*	*	0.993	0.945
65	0.979			0.595	0.849	1.096	1.128	1.342	*	*	*	0.998	0.982
66.2	0.991			0.531	0.789	1.040	1.070	1.284	1.522	*	*	0.999	0.993
67	1.000			0.486	0.747	1.000	1.030	1.245	1.481	*	*	1.000	1.000
70	1.035				0.583	0.842	0.873	1.090	1.327	1.552	*	1.003	1.030
75	1.105					0.552	0.584	0.811	1.057	1.290	1.510	1.008	1.086

* Sensible capacity equals total capacity.

Performance Data Selection Notes

For operation in the shaded area when water is used in lieu of an anti-freeze solution, the LWT (Leaving Water Temperature) must be calculated. Flow must be maintained to a level such that the LWT is maintained above 40°F [4.4*C] when the JW3 jumper is not clipped (see example below). Otherwise, appropriate levels of a proper anti-freeze should be used in systems with leaving water temperatures of 40°F or below and the JW3 jumper should be clipped. This is due to the potential of the refrigerant temperature being as low as 32°F [0°C] with 40°F [4.4°C] LWT, which may lead to a nuisance cutout due to the activation of the Low Temperature Protection. JW3 should never be clipped for standard range equipment or systems without antifreeze.


Performance capacities shown in thou

		Heating - EAT 70°F					
R	HWC	HC	kW	HE	LAT	COP	HW
		39.4	3.90	26.5	93.2	2.96	4.0
		40.0	3.78	27.2	90.0	3.10	3.5
19.3	-	43.5	4.06	30.0	95.6	3.14	4.1
18.6	-	44.1	3.93	30.8	92.1	3.29	3.6
20.5	-	45.3	4.11	31.7	96.6	3.23	4.1
19.8	-	46.0	3.98	32.5	93.0	3.39	3.5
21.4	-	46.2	4.14	32.5	97.2	3.27	4.0
20.6	-	46.9	4.01	33.4	93.5	3.43	3.5
18.5	-	50.1	4.29	35.9	99.5	3.42	4.3
17.9	-	50.8	4.16	36.8	95.4	3.58	3.7
19.8	-	52.2	4.36	37.7	100.7	3.51	4.2
19.1	-	53.0	4.22	38.7	96.5	3.68	3.6
0.4	-	53.4	4.39	38.8	101.4	3.57	4.1
6	-	54.2	4.25	39.8	97.1	3.74	3.6
	2.0	57.0	4.53	41.8	103.5	3.69	4
	2.1	57.8	4.39	42.9	98.9	3.86	
	1.8	59.5	4.60	44.1	105.0	3.79	
	8	60.4	4.46	45.3	100.2	3.97	
		61.0	4.64	45.4	105.9	3	
		61.9	4.50	46.6	101.0		
			4.78	48.1			

Example:

At 50°F EWT (Entering Water Temperature) and 1.5 gpm/ton, a 3 ton unit has a HE of 22,500 Btuh. To calculate LWT, rearrange the formula for HE as follows:

HE = TD x GPM x 500, where HE = Heat of Extraction (Btuh); TD = temperature difference (EWT - LWT) and GPM = U.S. Gallons per Minute.

TD = HE/(GPM x 500)

TD = 22,500/(4.5 x 500)

TD = 10°F

LWT = EWT - TD

LWT = 50 - 10 = 40°F

In this example, as long as the EWT does not fall below 50°F, the system will operate as designed. For EWTs below 50°F, higher flow rates will be required (open loop systems, for example, require at least 2 gpm/ton when EWT is below 50°F).

Antifreeze Correction Table

Antifreeze Type	Antifreeze %	Cooling			Heating		WPD Corr. Fct. EWT 30°F
		EWT 90°F			EWT 30°F		
		Total Cap	Sens Cap	Power	Htg Cap	Power	
Water	0	1.000	1.000	1.000	1.000	1.000	1.000
Propylene Glycol	5	0.995	0.995	1.003	0.989	0.997	1.070
	15	0.986	0.986	1.009	0.968	0.990	1.210
	25	0.978	0.978	1.014	0.947	0.983	1.360
Methanol	5	0.997	0.997	1.002	0.989	0.997	1.070
	15	0.990	0.990	1.007	0.968	0.990	1.160
	25	0.982	0.982	1.012	0.949	0.984	1.220
Ethanol	5	0.998	0.998	1.002	0.981	0.994	1.140
	15	0.994	0.994	1.005	0.944	0.983	1.300
	25	0.986	0.986	1.009	0.917	0.974	1.360
Ethylene Glycol	5	0.998	0.998	1.002	0.993	0.998	1.040
	15	0.994	0.994	1.004	0.980	0.994	1.120
	25	0.988	0.988	1.008	0.966	0.990	1.200

Performance Data — TTS/TTP026 Part Load With TAH

825 CFM Nominal (Rated) Airflow Heating, 725 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btuh

EWT °F	GPM	PD		Cooling - EAT 80/67°F								Heating - EAT 70°F							
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	TTS HWC	TTP HWC	Airflow CFM	HC	kW	HE	LAT	COP	TTS HWC	TTP HWC
20	7.0	4.5	10.4	590	Operation Not Recommended							**670**	**12.6**	**1.21**	**8.7**	**87.4**	**3.1**	**1.9**	**1.8**
	7.0	4.5	10.4	725								**825**	**12.9**	**1.12**	**9.1**	**84.4**	**3.4**	**1.7**	**1.6**
30	3.5	1.2	2.8	590	20.3	12.7	0.58	22.2	35.2			670	14.0	1.22	10.0	89.4	3.4	2.0	1.9
	3.5	1.2	2.8	725	20.9	14.1	0.59	22.9	35.4			825	14.4	1.13	10.5	86.1	3.7	1.7	1.6
	5.3	2.9	6.7	590	19.3	11.9	0.55	21.2	35.4			670	14.5	1.22	10.5	90.0	3.5	2.0	1.9
	5.3	2.9	6.7	725	19.9	13.2	0.56	21.9	35.6			825	14.8	1.13	10.9	86.6	3.8	1.7	1.6
	7.0	4.1	9.5	590	18.8	11.5	0.54	20.6	35.1			670	14.7	1.22	10.7	90.3	3.5	1.9	1.8
	7.0	4.1	9.5	725	19.4	12.8	0.55	21.3	35.3			825	15.0	1.13	11.2	86.9	3.9	1.7	1.6
40	3.5	1.1	2.5	590	21.5	14.0	0.65	23.8	33.0			670	16.1	1.23	12.0	92.3	3.8	2.0	1.9
	3.5	1.1	2.5	725	22.2	15.5	0.67	24.5	33.2			825	16.5	1.14	12.6	88.5	4.2	1.8	1.7
	5.3	2.6	6.0	590	21.1	13.5	0.61	23.2	34.4			670	16.6	1.23	12.5	93.0	4.0	2.0	1.9
	5.3	2.6	6.0	725	21.8	15.0	0.63	23.9	34.6			825	17.0	1.14	13.1	89.1	4.4	1.7	1.6
	7.0	3.6	8.3	590	20.8	13.2	0.60	22.9	34.4			670	16.9	1.23	12.8	93.4	4.0	2.0	1.9
	7.0	3.6	8.3	725	21.5	14.7	0.62	23.6	34.6			825	17.3	1.14	13.4	89.4	4.4	1.7	1.6
50	3.5	1.0	2.3	590	21.8	14.5	0.75	24.4	29.0	0.7	0.7	670	18.2	1.23	14.1	95.1	4.3	2.1	2.0
	3.5	1.0	2.3	725	22.5	16.1	0.77	25.1	29.2	0.7	0.7	825	18.6	1.14	14.7	90.9	4.8	1.8	1.7
	5.3	2.4	5.5	590	21.8	14.3	0.70	24.2	31.0	0.6	0.6	670	18.8	1.23	14.6	95.9	4.5	2.1	2.0
	5.3	2.4	5.5	725	22.5	15.9	0.72	24.9	31.2	0.6	0.6	825	19.2	1.14	15.3	91.5	4.9	1.8	1.7
	7.0	3.4	7.9	590	21.7	14.2	0.68	24.0	31.8	0.6	0.6	670	19.1	1.23	14.9	96.4	4.6	2.0	1.9
	7.0	3.4	7.9	725	22.4	15.8	0.70	24.8	32.0	0.6	0.6	825	19.5	1.14	15.6	91.9	5.0	1.8	1.7
60	3.5	1.0	2.3	590	21.4	14.6	0.86	24.3	24.9	1.1	1.0	670	20.2	1.23	16.0	97.9	4.8	2.2	2.1
	3.5	1.0	2.3	725	22.1	16.2	0.88	25.0	25.1	1.1	1.0	825	20.6	1.14	16.7	93.2	5.3	1.9	1.8
	5.3	2.3	5.3	590	21.6	14.6	0.80	24.4	27.1	1.0	1.0	670	20.8	1.23	16.6	98.8	5.0	2.2	2.1
	5.3	2.3	5.3	725	22.3	16.2	0.82	25.1	27.2	1.0	1.0	825	21.3	1.14	17.4	93.9	5.5	1.9	1.8
	7.0	3.2	7.4	590	21.7	14.6	0.78	24.4	27.9	0.9	0.9	670	21.1	1.23	16.9	99.2	5.1	2.1	2.0
	7.0	3.2	7.4	725	22.4	16.2	0.80	25.1	28.0	0.9	0.9	825	21.6	1.14	17.7	94.3	5.6	1.9	1.8
70	3.5	0.9	2.1	590	20.5	14.2	0.98	23.8	21.0	1.4	1.3	670	22.0	1.23	17.8	100.4	5.3	2.3	2.2
	3.5	0.9	2.1	725	21.1	15.8	1.00	24.5	21.1	1.5	1.4	825	22.5	1.14	18.6	95.3	5.8	2.0	1.9
	5.3	2.1	4.9	590	20.9	14.4	0.92	24.1	22.8	1.3	1.2	670	22.6	1.23	18.4	101.3	5.4	2.3	2.2
	5.3	2.1	4.9	725	21.6	16.0	0.94	24.8	23.0	1.4	1.3	825	23.1	1.14	19.2	96.0	5.9	2.0	1.9
	7.0	3.0	6.9	590	21.1	14.5	0.89	24.2	23.8	1.2	1.1	670	22.9	1.23	18.7	101.7	5.5	2.2	2.1
	7.0	3.0	6.9	725	21.8	16.1	0.91	24.9	24.0	1.2	1.1	825	23.4	1.14	19.5	96.3	6.0	1.9	1.8
80	3.5	0.8	1.8	590	19.3	13.7	1.11	23.1	17.3	1.8	1.7	670	23.6	1.23	19.3	102.5	5.6	2.4	2.3
	3.5	0.8	1.8	725	19.9	15.2	1.14	23.8	17.4	1.8	1.7	825	24.1	1.14	20.2	97.0	6.2	2.1	2.0
	5.3	2.0	4.6	590	19.8	14.0	1.05	23.4	18.8	1.6	1.5	670	24.1	1.24	19.8	103.2	5.7	2.4	2.3
	5.3	2.0	4.6	725	20.5	15.5	1.08	24.1	19.0	1.7	1.6	825	24.6	1.15	20.7	97.6	6.3	2.1	2.0
	7.0	2.8	6.5	590	20.1	14.1	1.01	23.6	19.8	1.5	1.4	670	24.3	1.24	20.0	103.6	5.8	2.4	2.3
	7.0	2.8	6.5	725	20.8	15.7	1.04	24.3	20.0	1.5	1.4	825	24.8	1.15	20.9	97.9	6.3	2.1	2.0
85	3.5	0.8	1.8	590	18.6	13.4	1.19	22.6	15.7	2.0	1.9	670	24.1	1.23	19.8	103.3	5.7	2.5	2.4
	3.5	0.8	1.8	725	19.2	14.9	1.23	23.3	15.8	2.0	1.9	825	24.7	1.15	20.7	97.7	6.3	2.2	2.1
	5.3	1.95	4.5	590	19.2	13.7	1.13	23.0	17.1	1.8	1.7	670	24.5	1.24	20.2	103.9	5.8	2.5	2.4
	5.3	1.95	4.5	725	19.8	15.2	1.16	23.7	17.2	1.9	1.8	825	25.1	1.15	21.1	98.1	6.4	2.2	2.1
	7.0	2.75	6.4	590	19.5	13.8	1.09	23.2	18.0	1.7	1.6	670	24.7	1.24	20.4	104.1	5.8	2.5	2.4
	7.0	2.75	6.4	725	20.1	15.3	1.12	23.9	18.1	1.7	1.6	825	25.2	1.16	21.3	98.3	6.4	2.2	2.1
90	3.5	0.8	1.8	590	17.9	13.1	1.28	22.2	14.0	2.4	2.3	670	24.7	1.24	20.4	104.1	5.8	2.6	2.5
	3.5	0.8	1.8	725	18.5	14.6	1.31	22.9	14.1	2.5	2.4	825	25.2	1.15	21.3	98.3	6.4	2.2	2.1
	5.3	1.9	4.4	590	18.5	13.4	1.20	22.6	15.4	1.9	1.8	670	25.0	1.24	20.6	104.5	5.9	2.6	2.5
	5.3	1.9	4.4	725	19.1	14.9	1.23	23.3	15.5	2.0	1.9	825	25.5	1.15	21.6	98.7	6.5	2.2	2.1
	7.0	2.7	6.2	590	18.8	13.5	1.17	22.8	16.1	1.8	1.7	670	25.1	1.25	20.7	104.7	5.9	2.5	2.4
	7.0	2.7	6.2	725	19.4	15.0	1.20	23.5	16.2	1.8	1.7	825	25.6	1.16	21.7	98.8	6.5	2.2	2.1
100	3.5	0.8	1.8	590	16.5	12.6	1.45	21.4	11.4	2.4	2.3	670	Operation Not Recommended						
	3.5	0.8	1.8	725	17.0	13.9	1.49	22.1	11.4	2.5	2.4	825							
	5.3	1.8	4.2	590	17.1	12.8	1.37	21.8	12.4	2.2	2.1	670							
	5.3	1.8	4.2	725	17.6	14.2	1.41	22.4	12.5	2.3	2.2	825							
	7.0	2.6	6.0	590	17.4	12.9	1.34	21.9	13.0	2.0	1.9	670							
	7.0	2.6	6.0	725	18.0	14.3	1.37	22.6	13.1	2.0	1.9	825							
110	3.5	0.7	1.6	590	15.3	12.1	1.65	20.9	9.3	2.7	2.6	670							
	3.5	0.7	1.6	725	15.7	13.5	1.69	21.5	9.3	2.8	2.7	825							
	5.3	1.7	3.9	590	15.7	12.3	1.56	21.1	10.1	2.5	2.4	670							
	5.3	1.7	3.9	725	16.3	13.6	1.60	21.7	10.2	2.5	2.4	825							
	7.0	2.5	5.8	590	16.0	12.4	1.52	21.2	10.5	2.2	2.1	670							
	7.0	2.5	5.8	725	16.5	13.7	1.56	21.8	10.6	2.3	2.2	825							
120	3.5	0.7	1.6	590	14.2	12.0	1.89	20.6	7.5	3.0	2.9	670							
	3.5	0.7	1.6	725	14.7	13.3	1.94	21.3	7.6	3.0	2.9	825							
	5.3	1.7	3.9	590	14.7	12.0	1.76	20.7	8.3	2.7	2.6	670							
	5.3	1.7	3.9	725	15.1	13.3	1.81	21.3	8.4	2.7	2.6	825							
	7.0	2.4	5.5	590	14.8	12.0	1.73	20.7	8.6	2.4	2.3	670							
	7.0	2.4	5.5	725	15.3	13.3	1.77	21.4	8.6	2.5	2.4	825							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Performance Data — TTS/TTP026 Full Load With TAH

950 CFM Nominal (Rated) Airflow Heating, 850 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btuh

EWT °F	GPM	PD		Cooling - EAT 80/67°F								Heating - EAT 70°F							
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	TTS HWC	TTP HWC	Airflow CFM	HC	kW	HE	LAT	COP	TTS HWC	TTP HWC
20	8.0	5.6	12.9	690	Operation Not Recommended							770	18.0	1.68	12.4	91.6	3.1	2.4	2.3
	8.0	5.6	12.9	850								950	18.4	1.60	12.9	87.9	3.4	2.1	2.0
30	4.0	1.5	3.5	690	26.6	16.8	1.05	31.6	25.4			770	19.8	1.73	14.1	93.8	3.4	2.4	2.3
	4.0	1.5	3.5	850	28.9	18.7	1.10	32.6	26.2			950	20.3	1.64	14.7	89.7	3.6	2.1	2.0
	6.0	3.1	7.2	690	26.3	16.9	0.98	31.1	26.9			770	20.5	1.75	14.7	94.6	3.4	2.4	2.3
	6.0	3.1	7.2	850	28.6	18.9	1.03	32.1	27.7			950	20.9	1.66	15.3	90.4	3.7	2.1	2.0
	8.0	5.1	11.8	690	26.1	17.0	0.95	30.7	27.5			770	20.8	1.75	15.0	95.0	3.5	2.4	2.3
	8.0	5.1	11.8	850	28.4	19.0	1.00	31.8	28.4			950	21.3	1.66	15.6	90.8	3.8	2.1	2.0
40	4.0	1.4	3.2	690	26.6	16.5	1.16	32.0	23.0			770	22.4	1.79	16.4	97.0	3.7	2.5	2.4
	4.0	1.4	3.2	850	28.9	18.4	1.22	33.1	23.7			950	22.9	1.70	17.1	92.4	4.0	2.2	2.1
	6.0	2.8	6.5	690	26.7	16.7	1.10	31.8	24.2			770	23.2	1.81	17.1	97.9	3.8	2.5	2.4
	6.0	2.8	6.5	850	29.0	18.6	1.16	32.9	25.0			950	23.7	1.72	17.8	93.1	4.0	2.2	2.1
	8.0	4.6	10.6	690	26.6	16.7	1.06	31.7	25.0			770	23.6	1.82	17.5	98.4	3.8	2.4	2.3
	8.0	4.6	10.6	850	28.9	18.7	1.12	32.7	25.8			950	24.1	1.73	18.2	93.5	4.1	2.1	2.0
50	4.0	1.3	3.0	690	26.2	16.2	1.27	32.0	20.6	1.1	1.0	770	24.9	1.86	18.7	100.0	3.9	2.6	2.5
	4.0	1.3	3.0	850	28.5	18.1	1.34	33.0	21.2	1.1	1.0	950	25.5	1.77	19.5	94.9	4.2	2.3	2.2
	6.0	2.6	6.0	690	26.5	16.4	1.22	32.1	21.8	1.0	1.0	770	25.8	1.88	19.4	101.0	4.0	2.6	2.5
	6.0	2.6	6.0	850	28.8	18.3	1.28	33.1	22.5	1.0	1.0	950	26.4	1.79	20.3	95.7	4.3	2.3	2.2
	8.0	4.3	9.9	690	26.6	16.4	1.18	32.0	22.6	0.9	0.9	770	26.2	1.90	19.8	101.5	4.0	2.6	2.5
	8.0	4.3	9.9	850	28.9	18.4	1.24	33.1	23.3	0.9	0.9	950	26.8	1.80	20.7	96.1	4.4	2.2	2.1
60	4.0	1.2	2.8	690	25.4	15.9	1.40	31.6	18.2	1.5	1.4	770	27.3	1.94	20.8	102.9	4.1	2.8	2.7
	4.0	1.2	2.8	850	27.6	17.8	1.47	32.6	18.8	1.6	1.5	950	28.0	1.84	21.7	97.3	4.5	2.5	2.4
	6.0	2.5	5.8	690	25.9	16.1	1.33	31.8	19.5	1.3	1.2	770	28.2	1.96	21.6	103.9	4.2	2.8	2.7
	6.0	2.5	5.8	850	28.1	18.0	1.40	32.9	20.1	1.4	1.3	950	28.8	1.86	22.5	98.1	4.5	2.4	2.3
	8.0	4.0	9.2	690	26.1	16.2	1.29	31.9	20.2	1.1	1.0	770	28.6	1.97	21.9	104.4	4.3	2.7	2.6
	8.0	4.0	9.2	850	28.3	18.1	1.36	33.0	20.8	1.2	1.1	950	29.3	1.87	22.9	98.5	4.6	2.4	2.3
70	4.0	1.1	2.5	690	24.4	15.6	1.54	31.0	15.8	2.0	1.9	770	29.5	2.00	22.8	105.5	4.3	3.1	2.9
	4.0	1.1	2.5	850	26.5	17.4	1.62	32.0	16.3	2.1	2.0	950	30.2	1.90	23.7	99.4	4.7	2.7	2.6
	6.0	2.3	5.3	690	25.0	15.8	1.46	31.3	17.1	1.8	1.7	770	30.3	2.02	23.5	106.5	4.4	3.0	2.9
	6.0	2.3	5.3	850	27.1	17.6	1.54	32.4	17.6	1.8	1.7	950	31.1	1.92	24.5	100.3	4.7	2.6	2.5
	8.0	3.8	8.8	690	25.3	15.9	1.43	31.5	17.7	1.5	1.4	770	30.8	2.04	23.9	107.0	4.4	3.0	2.9
	8.0	3.8	8.8	850	27.4	17.7	1.50	32.5	18.3	1.5	1.4	950	31.5	1.94	24.9	100.7	4.8	2.6	2.5
80	4.0	1.0	2.3	690	23.1	15.2	1.70	30.2	13.6	2.6	2.5	770	31.5	2.06	24.5	107.8	4.5	3.4	3.2
	4.0	1.0	2.3	850	25.1	17.0	1.79	31.2	14.0	2.6	2.5	950	32.2	1.96	25.5	101.4	4.8	2.9	2.8
	6.0	2.2	5.1	690	23.8	15.4	1.62	30.6	14.7	2.2	2.1	770	32.2	2.08	25.2	108.8	4.5	3.3	3.1
	6.0	2.2	5.1	850	25.9	17.2	1.70	31.7	15.2	2.3	2.2	950	33.0	1.98	26.2	102.2	4.9	2.9	2.8
	8.0	3.5	8.1	690	24.1	15.5	1.57	30.8	15.4	1.9	1.8	770	32.6	2.10	25.5	109.2	4.6	3.3	3.1
	8.0	3.5	8.1	850	26.2	17.4	1.65	31.9	15.9	1.9	1.8	950	33.4	1.99	26.6	102.5	4.9	2.8	2.7
85	4.0	1.0	2.3	690	22.5	15.0	1.80	29.9	12.5	2.9	2.8	770	32.3	2.09	25.2	108.8	4.5	3.6	3.4
	4.0	1.0	2.3	850	24.4	16.7	1.90	30.9	12.9	3.0	2.9	950	33.1	1.99	26.3	102.2	4.9	3.1	2.9
	6.0	2.15	5.0	690	23.2	15.2	1.71	30.3	13.6	2.5	2.4	770	33.0	2.11	25.9	109.7	4.6	3.5	3.3
	6.0	2.15	5.0	850	25.1	17.0	1.80	31.3	14.1	2.6	2.5	950	33.8	2.01	27.0	102.9	4.9	3.1	2.9
	8.0	3.45	8.0	690	23.5	15.3	1.66	30.5	14.2	2.1	2.0	770	33.4	2.12	26.2	110.1	4.6	3.5	3.3
	8.0	3.45	8.0	850	25.5	17.1	1.75	31.5	14.7	2.1	2.0	950	34.1	2.02	27.3	103.3	5.0	3.0	2.9
90	4.0	1.0	2.3	690	21.8	14.8	1.90	29.5	11.5	3.2	3.0	770	33.1	2.12	26.0	109.9	4.6	3.7	3.5
	4.0	1.0	2.3	850	23.6	16.5	2.00	30.5	11.8	3.3	3.1	950	33.9	2.01	27.1	103.1	4.9	3.3	3.1
	6.0	2.1	4.9	690	22.5	15.0	1.80	29.9	12.5	2.8	2.7	770	33.8	2.14	26.5	110.6	4.6	3.7	3.5
	6.0	2.1	4.9	850	24.4	16.8	1.89	30.9	12.9	2.8	2.7	950	34.6	2.03	27.7	103.7	5.0	3.2	3.0
	8.0	3.4	7.9	690	22.8	15.1	1.75	30.1	13.1	2.3	2.2	770	34.1	2.15	26.8	111.0	4.7	3.6	3.4
	8.0	3.4	7.9	850	24.8	16.9	1.84	31.1	13.5	2.3	2.2	950	34.9	2.04	28.0	104.0	5.0	3.1	2.9
100	4.0	1.0	2.3	690	20.3	14.2	2.15	28.8	9.5	3.9	3.7	770	Operation Not Recommended						
	4.0	1.0	2.3	850	22.1	15.9	2.26	29.8	9.8	4.0	3.8	950							
	6.0	2.0	4.6	690	21.0	14.5	2.01	29.1	10.5	3.4	3.2	770							
	6.0	2.0	4.6	850	22.9	16.2	2.12	30.1	10.8	3.4	3.2	950							
	8.0	3.2	7.4	690	21.4	14.6	1.96	29.3	10.9	2.8	2.7	770							
	8.0	3.2	7.4	850	23.3	16.3	2.06	30.3	11.3	2.8	2.7	950							
110	4.0	0.9	2.1	690	18.9	13.5	2.44	28.3	7.7	4.7	4.5	770							
	4.0	0.9	2.1	850	20.5	15.1	2.57	29.3	8.0	4.8	4.6	950							
	6.0	1.9	4.4	690	19.6	13.9	2.29	28.5	8.6	4.0	3.8	770							
	6.0	1.9	4.4	850	21.3	15.5	2.41	29.5	8.8	4.1	3.9	950							
	8.0	3.1	7.2	690	19.9	14.0	2.21	28.7	9.0	3.3	3.1	770							
	8.0	3.1	7.2	850	21.7	15.7	2.33	29.6	9.3	3.4	3.2	950							
120	4.0	0.9	2.1	690	17.5	12.8	2.79	28.1	6.3	5.6	5.3	770							
	4.0	0.9	2.1	850	19.0	14.3	2.94	29.1	6.5	5.7	5.4	950							
	6.0	1.8	4.2	690	18.2	13.2	2.61	28.2	7.0	4.7	4.5	770							
	6.0	1.8	4.2	850	19.7	14.7	2.75	29.1	7.2	4.8	4.6	950							
	8.0	3.0	6.9	690	18.5	13.4	2.53	28.2	7.3	3.9	3.7	770							
	8.0	3.0	6.9	850	20.1	14.9	2.66	29.2	7.6	4.0	3.8	950							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Performance Data — TTS/TTP038 Part Load With TAH

1000 CFM Nominal (Rated) Airflow Heating, 1000 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btuh

EWT °F	GPM	PD		Cooling - EAT 80/67°F								Heating - EAT 70°F							
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	TTS HWC	TTP HWC	Airflow CFM	HC	kW	HE	LAT	COP	TTS HWC	TTP HWC
20	8.0	4.7	10.9	810	Operation Not Recommended							810	17.2	1.71	11.6	89.7	2.9	2.4	2.3
	8.0	4.7	10.9	1000								1000	17.6	1.59	12.2	86.3	3.2	2.1	2.0
30	4.0	1.2	2.8	810	28.8	18.0	0.84	31.7	34.4			810	19.0	1.73	13.3	91.7	3.2	2.4	2.3
	4.0	1.2	2.8	1000	29.8	20.0	0.86	32.7	34.6			1000	19.4	1.61	13.9	88.0	3.5	2.1	2.0
	6.0	2.6	6.0	810	28.1	17.3	0.80	30.8	35.1			810	19.6	1.73	13.9	92.5	3.3	2.4	2.3
	6.0	2.6	6.0	1000	29.0	19.3	0.82	31.8	35.3			1000	20.1	1.61	14.6	88.6	3.7	2.1	2.0
	8.0	4.5	10.4	810	27.6	17.0	0.79	30.3	35.0			810	20.0	1.73	14.3	92.9	3.4	2.4	2.3
	8.0	4.5	10.4	1000	28.5	18.8	0.81	31.2	35.2			1000	20.5	1.61	14.9	88.9	3.7	2.1	2.0
40	4.0	1.1	2.5	810	29.5	18.7	0.95	32.7	31.2			810	21.7	1.75	15.9	94.8	3.6	2.5	2.4
	4.0	1.1	2.5	1000	30.4	20.8	0.97	33.7	31.4			1000	22.2	1.63	16.7	90.6	4.0	2.2	2.1
	6.0	2.6	6.0	810	29.2	18.4	0.89	32.3	33.0			810	22.6	1.75	16.7	95.8	3.8	2.5	2.4
	6.0	2.6	6.0	1000	30.2	20.4	0.91	33.3	33.2			1000	23.1	1.63	17.5	91.4	4.1	2.1	2.0
	8.0	4.4	10.2	810	29.0	18.2	0.86	32.0	33.8			810	23.0	1.75	17.2	96.3	3.8	2.4	2.3
	8.0	4.4	10.2	1000	29.9	20.2	0.88	33.0	34.0			1000	23.5	1.63	18.0	91.8	4.2	2.1	2.0
50	4.0	1.0	2.3	810	29.4	19.0	1.07	33.1	27.4	0.8	0.8	810	24.6	1.76	18.7	98.1	4.1	2.6	2.5
	4.0	1.0	2.3	1000	30.3	21.0	1.10	34.1	27.6	0.8	0.8	1000	25.2	1.64	19.5	93.3	4.5	2.2	2.1
	6.0	2.5	5.8	810	29.5	18.9	0.99	32.9	29.7	0.7	0.7	810	25.6	1.78	19.6	99.3	4.2	2.6	2.5
	6.0	2.5	5.8	1000	30.5	21.0	1.02	34.0	29.9	0.8	0.8	1000	26.2	1.65	20.6	94.2	4.6	2.2	2.1
	8.0	4.2	9.7	810	29.5	18.8	0.97	32.8	30.6	0.7	0.7	810	26.1	1.78	20.2	99.9	4.3	2.5	2.4
	8.0	4.2	9.7	1000	30.5	20.9	0.99	33.8	30.8	0.7	0.7	1000	26.7	1.65	21.1	94.7	4.7	2.2	2.1
60	4.0	0.9	2.1	810	28.7	18.8	1.23	32.9	23.4	1.3	1.2	810	27.5	1.79	21.5	101.5	4.5	2.7	2.6
	4.0	0.9	2.1	1000	29.6	20.8	1.26	33.9	23.5	1.3	1.2	1000	28.1	1.66	22.5	96.1	5.0	2.3	2.2
	6.0	2.4	5.5	810	29.1	18.9	1.14	33.0	25.6	1.2	1.1	810	28.7	1.80	22.6	102.8	4.7	2.7	2.6
	6.0	2.4	5.5	1000	30.1	21.0	1.17	34.1	25.7	1.2	1.1	1000	29.3	1.67	23.6	97.2	5.1	2.3	2.2
	8.0	4.1	9.5	810	29.3	18.9	1.09	33.1	26.8	1.1	1.0	810	29.3	1.80	23.2	103.5	4.8	2.6	2.5
	8.0	4.1	9.5	1000	30.3	21.0	1.12	34.1	27.0	1.1	1.0	1000	30.0	1.67	24.3	97.8	5.3	2.3	2.2
70	4.0	0.8	1.8	810	27.6	18.3	1.41	32.4	19.5	1.8	1.7	810	30.5	1.81	24.3	104.8	4.9	2.8	2.7
	4.0	0.8	1.8	1000	28.5	20.3	1.45	33.4	19.6	1.8	1.7	1000	31.1	1.68	25.4	98.8	5.4	2.5	2.4
	6.0	2.3	5.3	810	28.3	18.6	1.31	32.7	21.6	1.7	1.6	810	31.8	1.82	25.5	106.3	5.1	2.8	2.7
	6.0	2.3	5.3	1000	29.2	20.7	1.34	33.7	21.8	1.7	1.6	1000	32.5	1.69	26.7	100.1	5.6	2.4	2.3
	8.0	4.0	9.2	810	28.5	18.7	1.26	32.8	22.7	1.5	1.4	810	32.4	1.82	26.2	107.1	5.2	2.8	2.7
	8.0	4.0	9.2	1000	29.5	20.8	1.29	33.9	22.8	1.5	1.4	1000	33.2	1.69	27.4	100.7	5.8	2.4	2.3
80	4.0	0.7	1.6	810	26.2	17.7	1.62	31.7	16.2	2.3	2.2	810	33.3	1.83	27.0	108.1	5.3	3.0	2.9
	4.0	0.7	1.6	1000	27.0	19.6	1.66	32.7	16.3	2.3	2.2	1000	34.1	1.70	28.3	101.6	5.9	2.6	2.5
	6.0	2.3	5.3	810	27.0	18.0	1.50	32.1	18.0	2.1	2.0	810	34.7	1.84	28.4	109.7	5.5	3.0	2.9
	6.0	2.3	5.3	1000	27.8	20.0	1.54	33.1	18.1	2.1	2.0	1000	35.5	1.71	29.7	102.9	6.1	2.6	2.5
	8.0	3.9	9.0	810	27.4	18.2	1.44	32.3	19.0	1.9	1.8	810	35.4	1.84	29.0	110.5	5.6	2.9	2.8
	8.0	3.9	9.0	1000	28.2	20.2	1.48	33.3	19.1	1.9	1.8	1000	36.2	1.71	30.4	103.5	6.2	2.6	2.5
85	4.0	0.7	1.6	810	25.4	17.3	1.7	31.3	14.7	2.5	2.4	810	34.7	1.84	28.4	109.7	5.5	3.2	3.0
	4.0	0.7	1.6	1000	26.2	19.2	1.78	32.3	14.8	2.6	2.5	1000	35.5	1.7	29.7	102.9	6.1	2.7	2.6
	6.0	2.2	5.1	810	26.2	17.7	1.61	31.7	16.4	2.3	2.2	810	36.1	1.9	29.7	111.3	5.7	3.2	3.0
	6.0	2.2	5.1	1000	27.1	19.6	1.65	32.7	16.5	2.3	2.2	1000	36.9	1.7	31.0	104.2	6.3	2.7	2.6
	8.0	3.8	8.8	810	26.6	17.9	1.55	31.9	17.3	2.1	2.0	810	36.8	1.9	30.4	112.1	5.8	3.0	2.9
	8.0	3.8	8.8	1000	27.5	19.8	1.59	32.9	17.4	2.1	2.0	1000	37.6	1.7	31.8	104.9	6.4	2.7	2.5
90	4.0	0.7	1.6	810	24.6	16.9	1.85	30.9	13.3	2.7	2.6	810	36.1	1.85	29.7	111.2	5.7	3.2	3.0
	4.0	0.7	1.6	1000	25.4	18.8	1.90	31.9	13.4	2.8	2.7	1000	36.9	1.72	31.0	104.2	6.3	2.8	2.7
	6.0	2.1	4.9	810	25.5	17.3	1.72	31.3	14.8	2.5	2.4	810	37.5	1.86	31.0	112.8	5.9	3.2	3.0
	6.0	2.1	4.9	1000	26.3	19.2	1.76	32.3	14.9	2.5	2.4	1000	38.3	1.73	32.4	105.5	6.5	2.8	2.7
	8.0	3.7	8.5	810	25.9	17.5	1.66	31.6	15.6	2.2	2.1	810	38.2	1.87	31.7	113.7	6.0	3.1	2.9
	8.0	3.7	8.5	1000	26.7	19.5	1.70	32.5	15.7	2.3	2.2	1000	39.1	1.74	33.1	106.2	6.6	2.7	2.6
100	4.0	0.6	1.4	810	23.0	16.1	2.11	30.1	10.9	3.1	2.9	810	Operation Not Recommended						
	4.0	0.6	1.4	1000	23.7	17.9	2.16	31.1	11.0	3.2	3.0	1000							
	6.0	2.1	4.9	810	23.8	16.5	1.97	30.5	12.1	2.8	2.7	810							
	6.0	2.1	4.9	1000	24.6	18.3	2.02	31.5	12.2	2.9	2.8	1000							
	8.0	3.6	8.3	810	24.3	16.7	1.90	30.7	12.8	2.5	2.4	810							
	8.0	3.6	8.3	1000	25.0	18.6	1.95	31.7	12.8	2.6	2.5	1000							
110	4.0	0.6	1.4	810	21.4	15.3	2.40	29.5	8.9	3.5	3.3	810							
	4.0	0.6	1.4	1000	22.1	17.0	2.46	30.4	9.0	3.5	3.3	1000							
	6.0	2.0	4.6	810	22.2	15.7	2.24	29.8	9.9	3.1	2.9	810							
	6.0	2.0	4.6	1000	22.9	17.4	2.30	30.7	10.0	3.2	3.0	1000							
	8.0	3.4	7.9	810	22.6	15.9	2.17	30.0	10.4	2.8	2.7	810							
	8.0	3.4	7.9	1000	23.3	17.7	2.23	30.9	10.5	2.9	2.8	1000							
120	4.0	0.5	1.2	810	19.9	14.7	2.71	29.2	7.4	3.8	3.6	810							
	4.0	0.5	1.2	1000	20.6	16.3	2.78	30.1	7.4	3.9	3.7	1000							
	6.0	1.9	4.4	810	20.6	15.0	2.54	29.3	8.1	3.4	3.2	810							
	6.0	1.9	4.4	1000	21.3	16.6	2.61	30.2	8.2	3.5	3.3	1000							
	8.0	3.3	7.6	810	21.0	15.2	2.47	29.4	8.5	3.1	2.9	810							
	8.0	3.3	7.6	1000	21.7	16.8	2.53	30.3	8.6	3.1	2.9	1000							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Performance Data — TTS/TTP038 Full Load With TAH

1250 CFM Nominal (Rated) Airflow Heating, 1250 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btuh

EWT °F	GPM	PD		Cooling - EAT 80/67°F								Heating - EAT 70°F							
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	TTS HWC	TTP HWC	Airflow CFM	HC	kW	HE	LAT	COP	TTS HWC	TTP HWC
20	9.0	5.9	13.6	1010	Operation Not Recommended							1010	24.6	2.25	17.1	92.5	3.2	2.9	2.8
	9.0	5.9	13.6	1250								1250	25.2	2.14	17.8	88.6	3.4	2.5	2.4
30	4.5	1.7	3.9	1010	38.2	23.6	1.53	45.5	25.0			1010	26.6	2.30	19.0	94.4	3.4	3.0	2.9
	4.5	1.7	3.9	1250	41.5	26.4	1.61	47.0	25.8			1250	27.2	2.18	19.8	90.2	3.7	2.6	2.5
	6.8	3.3	7.6	1010	37.3	22.8	1.42	44.1	26.3			1010	27.7	2.32	20.0	95.4	3.5	3.0	2.9
	6.8	3.3	7.6	1250	40.5	25.4	1.49	45.5	27.2			1250	28.4	2.20	20.9	91.0	3.8	2.6	2.5
	9.0	5.7	13.2	1010	36.5	22.2	1.35	43.1	27.1			1010	28.3	2.33	20.6	96.0	3.6	2.9	2.8
	9.0	5.7	13.2	1250	39.7	24.8	1.42	44.5	27.9			1250	29.0	2.21	21.4	91.5	3.8	2.5	2.4
40	4.5	1.5	3.5	1010	38.6	24.2	1.69	46.5	22.8			1010	30.3	2.38	22.3	97.7	3.7	3.1	2.9
	4.5	1.5	3.5	1250	41.9	27.0	1.78	48.0	23.6			1250	31.0	2.26	23.3	92.9	4.0	2.7	2.6
	6.8	3.2	7.4	1010	38.5	23.9	1.59	45.9	24.3			1010	31.6	2.42	23.5	99.0	3.8	3.0	2.9
	6.8	3.2	7.4	1250	41.8	26.7	1.67	47.5	25.0			1250	32.4	2.30	24.5	94.0	4.1	2.6	2.5
	9.0	5.4	12.5	1010	38.2	23.6	1.53	45.5	25.0			1010	32.4	2.44	24.2	99.7	3.9	3.0	2.9
	9.0	5.4	12.5	1250	41.5	26.3	1.61	47.0	25.8			1250	33.2	2.32	25.2	94.6	4.2	2.6	2.5
50	4.5	1.3	3.0	1010	38.0	24.2	1.85	46.4	20.5	1.4	1.3	1010	34.1	2.50	25.7	101.3	4.0	3.2	3.0
	4.5	1.3	3.0	1250	41.3	27.0	1.95	48.0	21.2	1.4	1.3	1250	34.9	2.37	26.8	95.8	4.3	2.8	2.7
	6.8	3.1	7.2	1010	38.5	24.2	1.74	46.5	22.2	1.2	1.1	1010	35.7	2.55	27.1	102.8	4.1	3.2	3.0
	6.8	3.1	7.2	1250	41.8	27.1	1.83	48.1	22.9	1.2	1.1	1250	36.6	2.42	28.3	97.1	4.4	2.8	2.7
	9.0	5.2	12.0	1010	38.6	24.2	1.68	46.4	23.0	1.0	1.0	1010	36.6	2.58	27.9	103.6	4.2	3.1	2.9
	9.0	5.2	12.0	1250	41.9	27.0	1.77	48.0	23.7	1.0	1.0	1250	37.5	2.45	29.1	97.8	4.5	2.7	2.6
60	4.5	1.2	2.8	1010	36.8	23.7	2.02	45.8	18.2	1.9	1.8	1010	38.0	2.63	29.1	104.8	4.2	3.5	3.3
	4.5	1.2	2.8	1250	40.0	26.5	2.13	47.3	18.8	1.9	1.8	1250	38.9	2.50	30.4	98.8	4.6	3.0	2.9
	6.8	3.0	6.9	1010	37.7	24.1	1.90	46.3	19.9	1.6	1.5	1010	39.8	2.69	30.7	106.5	4.3	3.4	3.2
	6.8	3.0	6.9	1250	41.0	26.9	2.00	47.8	20.5	1.7	1.6	1250	40.8	2.55	32.0	100.2	4.7	3.0	2.9
	9.0	5.0	11.6	1010	38.1	24.2	1.84	46.5	20.7	1.4	1.3	1010	40.8	2.73	31.6	107.4	4.4	3.4	3.2
	9.0	5.0	11.6	1250	41.4	27.0	1.94	48.0	21.3	1.4	1.3	1250	41.8	2.59	32.9	100.9	4.7	2.9	2.8
70	4.5	1.1	2.5	1010	35.2	23.1	2.22	44.7	15.8	2.5	2.4	1010	41.8	2.76	32.5	108.3	4.4	3.8	3.6
	4.5	1.1	2.5	1250	38.2	25.8	2.34	46.2	16.3	2.6	2.5	1250	42.8	2.62	33.9	101.7	4.8	3.3	3.1
	6.8	2.9	6.7	1010	36.4	23.6	2.08	45.5	17.5	2.2	2.1	1010	43.8	2.82	34.2	110.1	4.5	3.7	3.5
	6.8	2.9	6.7	1250	39.5	26.3	2.19	47.0	18.0	2.2	2.1	1250	44.8	2.68	35.6	103.2	4.9	3.2	3.0
	9.0	4.8	11.1	1010	36.9	23.8	2.01	45.8	18.3	1.8	1.7	1010	44.8	2.85	35.1	111.0	4.6	3.7	3.5
	9.0	4.8	11.1	1250	40.1	26.6	2.12	47.3	18.9	1.9	1.8	1250	45.8	2.71	36.6	103.9	5.0	3.2	3.0
80	4.5	1.0	2.3	1010	33.3	22.2	2.46	43.6	13.5	3.3	3.1	1010	45.4	2.87	35.7	111.6	4.6	4.2	4.0
	4.5	1.0	2.3	1250	36.2	24.8	2.59	45.0	14.0	3.3	3.1	1250	46.5	2.73	37.2	104.4	5.0	3.6	3.4
	6.8	2.8	6.5	1010	34.6	22.8	2.30	44.4	15.1	2.8	2.7	1010	47.4	2.94	37.4	113.4	4.7	4.1	3.9
	6.8	2.8	6.5	1250	37.6	25.5	2.42	45.8	15.5	2.8	2.7	1250	48.5	2.79	39.0	105.9	5.1	3.6	3.4
	9.0	4.5	10.4	1010	35.3	23.1	2.21	44.8	15.9	2.3	2.2	1010	48.3	2.96	38.2	114.3	4.8	4.0	3.8
	9.0	4.5	10.4	1250	38.3	25.8	2.33	46.2	16.4	2.4	2.3	1250	49.5	2.81	39.9	106.6	5.2	3.5	3.3
85	4.5	0.95	2.2	1010	32.4	21.8	2.60	43.1	12.5	3.7	3.5	1010	47.0	2.92	37.1	113.1	4.7	4.4	4.2
	4.5	0.95	2.2	1250	35.1	24.4	2.74	44.5	12.9	3.8	3.6	1250	48.2	2.78	38.7	105.7	5.1	3.6	3.4
	6.8	2.75	6.4	1010	33.6	22.4	2.43	43.8	13.9	3.2	3.0	1010	48.9	2.97	38.8	114.8	4.8	4.4	4.2
	6.8	2.75	6.4	1250	36.5	25.0	2.56	45.2	14.4	3.2	3.0	1250	50.0	2.82	40.4	107.1	5.2	3.6	3.4
	9.0	4.45	10.3	1010	34.3	22.7	2.34	44.2	14.7	2.6	2.5	1010	49.8	2.99	39.6	115.6	4.9	4.5	4.3
	9.0	4.45	10.3	1250	37.2	25.3	2.46	45.6	15.2	2.4	2.3	1250	51.0	2.84	41.3	107.7	5.3	3.7	3.5
90	4.5	0.9	2.1	1010	31.4	21.4	2.75	42.5	11.4	4.1	3.9	1010	48.7	2.97	38.6	114.6	4.8	4.6	4.4
	4.5	0.9	2.1	1250	34.1	23.9	2.89	43.9	11.8	4.2	4.0	1250	49.8	2.82	40.2	106.9	5.2	4.0	3.8
	6.8	2.7	6.2	1010	32.7	21.9	2.56	43.2	12.8	3.5	3.3	1010	50.4	3.00	40.2	116.2	4.9	4.6	4.4
	6.8	2.7	6.2	1250	35.5	24.5	2.69	44.6	13.2	3.6	3.4	1250	51.6	2.85	41.9	108.2	5.3	4.0	3.8
	9.0	4.4	10.2	1010	33.3	22.2	2.46	43.6	13.5	2.9	2.8	1010	51.2	3.01	40.9	117.0	5.0	4.5	4.3
	9.0	4.4	10.2	1250	36.2	24.8	2.59	45.0	14.0	3.0	2.9	1250	52.5	2.86	42.7	108.9	5.4	3.9	3.7
100	4.5	0.8	1.8	1010	29.5	20.6	3.11	41.8	9.5	5.0	4.8	1010	Operation Not Recommended						
	4.5	0.8	1.8	1250	32.0	23.0	3.27	43.2	9.8	5.1	4.8	1250							
	6.8	2.6	6.0	1010	30.7	21.1	2.87	42.2	10.7	4.3	4.1	1010							
	6.8	2.6	6.0	1250	33.3	23.6	3.02	43.6	11.0	4.3	4.1	1250							
	9.0	4.2	9.7	1010	31.3	21.3	2.76	42.5	11.4	3.5	3.3	1010							
	9.0	4.2	9.7	1250	34.0	23.9	2.90	43.9	11.7	3.6	3.4	1250							
110	4.5	0.8	1.8	1010	27.9	20.0	3.55	41.7	7.9	6.0	5.7	1010							
	4.5	0.8	1.8	1250	30.3	22.4	3.74	43.1	8.1	6.1	5.8	1250							
	6.8	2.5	5.8	1010	28.9	20.4	3.26	41.7	8.9	5.1	4.8	1010							
	6.8	2.5	5.8	1250	31.4	22.7	3.43	43.1	9.1	5.2	4.9	1250							
	9.0	4.0	9.2	1010	29.4	20.6	3.13	41.8	9.4	4.2	4.0	1010							
	9.0	4.0	9.2	1250	32.0	23.0	3.29	43.2	9.7	4.3	4.1	1250							
120	4.5	0.7	1.6	1010	26.8	19.9	4.12	42.5	6.5	7.2	6.8	1010							
	4.5	0.7	1.6	1250	29.1	22.2	4.34	43.9	6.7	7.3	6.9	1250							
	6.8	2.5	5.8	1010	27.4	19.9	3.74	41.9	7.3	6.1	5.8	1010							
	6.8	2.5	5.8	1250	29.8	22.3	3.94	43.3	7.6	6.2	5.9	1250							
	9.0	3.8	8.8	1010	27.9	20.0	3.58	41.7	7.8	5.0	4.8	1010							
	9.0	3.8	8.8	1250	30.2	22.4	3.77	43.1	8.0	5.1	4.8	1250							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Performance Data — TTS/TTP049 Part Load With TAH

1400 CFM Nominal (Rated) Airflow Heating, 1300 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btuh

EWT °F	GPM	PD		Cooling - EAT 80/67°F								Heating - EAT 70°F							
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	TTS HWC	TTP HWC	Airflow CFM	HC	kW	HE	LAT	COP	TTS HWC	TTP HWC
20	11.0	4.0	9.2	1060	Operation Not Recommended							1140	24.2	2.41	16.3	89.6	2.9	3.3	3.1
	11.0	4.0	9.2	1300								1400	24.7	2.24	17.1	86.3	3.2	2.8	2.7
30	5.5	1.1	2.5	1060	38.8	22.8	1.38	43.6	28.0			1140	26.4	2.44	18.4	91.4	3.2	3.4	3.2
	5.5	1.1	2.5	1300	40.1	25.3	1.42	44.9	28.2			1400	27.0	2.27	19.2	87.8	3.5	2.9	2.8
	8.3	2.3	5.3	1060	38.2	22.5	1.32	42.7	29.0			1140	27.2	2.45	19.2	92.1	3.3	3.3	3.1
	8.3	2.3	5.3	1300	39.4	24.9	1.35	44.0	29.2			1400	27.8	2.28	20.1	88.4	3.6	2.9	2.8
	11.0	3.9	9.0	1060	37.7	22.3	1.28	42.1	29.5			1140	27.7	2.45	19.6	92.5	3.3	3.0	2.9
	11.0	3.9	9.0	1300	38.9	24.7	1.31	43.4	29.7			1400	28.3	2.28	20.5	88.7	3.6	2.9	2.8
40	5.5	1.0	2.3	1060	39.2	23.0	1.54	44.5	25.5			1140	30.1	2.49	21.9	94.4	3.5	3.5	3.3
	5.5	1.0	2.3	1300	40.5	25.6	1.58	45.9	25.6			1400	30.8	2.31	22.9	90.4	3.9	3.0	2.9
	8.3	2.2	5.1	1060	39.1	22.9	1.45	44.1	26.9			1140	31.3	2.50	23.0	95.4	3.7	3.4	3.2
	8.3	2.2	5.1	1300	40.4	25.5	1.49	45.5	27.1			1400	32.0	2.32	24.1	91.1	4.0	3.0	2.9
	11.0	3.7	8.5	1060	39.0	22.9	1.41	43.8	27.6			1140	31.9	2.51	23.6	95.9	3.7	3.4	3.2
	11.0	3.7	8.5	1300	40.2	25.4	1.45	45.2	27.7			1400	32.6	2.33	24.7	91.6	4.1	2.9	2.8
50	5.5	0.9	2.1	1060	38.8	23.0	1.71	44.6	22.7	0.9	0.9	1140	34.2	2.53	25.8	97.8	4.0	3.6	3.4
	5.5	0.9	2.1	1300	40.0	25.5	1.75	46.0	22.9	0.9	0.9	1400	35.0	2.35	27.0	93.2	4.4	3.1	2.9
	8.3	2.1	4.9	1060	39.1	23.0	1.61	44.6	24.3	0.8	0.8	1140	35.7	2.55	27.2	99.0	4.1	3.5	3.3
	8.3	2.1	4.9	1300	40.4	25.6	1.65	46.0	24.5	0.9	0.9	1400	36.5	2.37	28.5	94.2	4.5	3.1	2.9
	11.0	3.6	8.3	1060	39.2	23.0	1.57	44.6	25.0	0.8	0.8	1140	36.6	2.55	28.0	99.7	4.2	3.5	3.3
	11.0	3.6	8.3	1300	40.4	25.6	1.61	45.9	25.1	0.8	0.8	1400	37.4	2.37	29.3	94.7	4.6	3.0	2.9
60	5.5	0.8	1.8	1060	37.7	22.6	1.91	44.2	19.7	1.6	1.5	1140	38.6	2.57	29.9	101.4	4.4	3.7	3.5
	5.5	0.8	1.8	1300	38.9	25.1	1.96	45.6	19.8	1.6	1.5	1400	39.5	2.39	31.3	96.1	4.8	3.3	3.1
	8.3	2.0	4.6	1060	38.4	22.8	1.79	44.5	21.4	1.4	1.3	1140	40.4	2.59	31.6	102.8	4.6	3.7	3.5
	8.3	2.0	4.6	1300	39.6	25.4	1.84	45.9	21.5	1.5	1.4	1400	41.3	2.41	33.1	97.3	5.0	3.2	3.0
	11.0	3.5	8.1	1060	38.6	22.9	1.75	44.6	22.1	1.3	1.2	1140	41.3	2.60	32.5	103.6	4.7	3.7	3.5
	11.0	3.5	8.1	1300	39.9	25.4	1.79	46.0	22.3	1.3	1.2	1400	42.3	2.42	34.0	97.9	5.1	3.2	3.0
70	5.5	0.8	1.8	1060	36.1	22.1	2.14	43.4	16.9	2.2	2.1	1140	43.0	2.63	34.1	104.9	4.8	3.9	3.7
	5.5	0.8	1.8	1300	37.3	24.5	2.19	44.7	17.0	2.2	2.1	1400	44.0	2.44	35.6	99.1	5.3	3.4	3.2
	8.3	2.0	4.6	1060	37.0	22.4	2.01	43.9	18.4	2.0	1.9	1140	44.9	2.65	35.9	106.5	5.0	3.9	3.7
	8.3	2.0	4.6	1300	38.2	24.9	2.06	45.2	18.5	2.0	1.9	1400	46.0	2.46	37.6	100.4	5.5	3.4	3.2
	11.0	3.3	7.6	1060	37.4	22.6	1.94	44.1	19.3	1.8	1.7	1140	46.0	2.66	36.9	107.4	5.1	3.9	3.7
	11.0	3.3	7.6	1300	38.6	25.0	1.99	45.4	19.4	1.8	1.7	1400	47.0	2.47	38.6	101.1	5.6	3.4	3.2
80	5.5	0.7	1.6	1060	34.2	21.4	2.40	42.4	14.3	2.8	2.7	1140	47.2	2.67	38.1	108.4	5.2	4.2	4.0
	5.5	0.7	1.6	1300	35.3	23.8	2.46	43.7	14.3	2.8	2.7	1400	48.3	2.48	39.8	101.9	5.7	3.6	3.4
	8.3	1.9	4.4	1060	35.3	21.8	2.25	42.9	15.7	2.5	2.4	1140	49.2	2.70	40.0	110.0	5.3	4.1	3.9
	8.3	1.9	4.4	1300	36.4	24.2	2.31	44.3	15.7	2.6	2.5	1400	50.4	2.51	41.8	103.3	5.9	3.6	3.4
	11.0	3.2	7.4	1060	35.8	22.0	2.18	43.2	16.4	2.3	2.2	1140	50.3	2.71	40.9	110.8	5.4	4.1	3.9
	11.0	3.2	7.4	1300	36.9	24.4	2.24	44.5	16.5	2.3	2.2	1400	51.4	2.52	42.8	104.0	6.0	3.6	3.4
85	5.5	0.7	1.6	1060	33.1	21.0	2.6	41.8	13.0	3.1	2.9	1140	49.2	2.70	39.9	109.9	5.3	4.4	4.2
	5.5	0.7	1.6	1300	34.2	23.3	2.62	43.1	13.1	3.1	2.9	1400	50.3	2.5	41.7	103.2	5.9	3.8	3.6
	8.3	1.9	4.3	1060	34.2	21.4	2.40	42.4	14.3	2.8	2.7	1140	51.1	2.7	41.7	111.5	5.5	4.3	4.1
	8.3	1.9	4.3	1300	35.3	23.8	2.46	43.7	14.4	2.9	2.8	1400	52.3	2.5	43.6	104.6	6.0	3.8	3.6
	11.0	3.2	7.3	1060	34.8	21.6	2.32	42.7	15.1	2.5	2.4	1140	52.1	2.7	42.6	112.3	5.6	4.3	4.1
	11.0	3.2	7.3	1300	35.9	24.0	2.38	44.0	15.1	2.6	2.5	1400	53.3	2.5	44.6	105.2	6.1	3.7	3.5
90	5.5	0.7	1.6	1060	32.0	20.6	2.71	41.3	11.8	3.3	3.1	1140	51.1	2.72	41.7	111.5	5.5	4.5	4.3
	5.5	0.7	1.6	1300	33.1	22.9	2.78	42.6	11.9	3.4	3.2	1400	52.3	2.53	43.6	104.6	6.1	3.9	3.7
	8.3	1.8	4.2	1060	33.2	21.0	2.54	41.8	13.0	3.0	2.9	1140	53.0	2.75	43.5	113.1	5.6	4.4	4.2
	8.3	1.8	4.2	1300	34.2	23.4	2.61	43.1	13.1	3.1	2.9	1400	54.2	2.56	45.5	105.8	6.2	3.9	3.7
	11.0	3.1	7.2	1060	33.8	21.3	2.46	42.1	13.7	2.7	2.6	1140	53.9	2.77	44.3	113.8	5.7	4.4	4.2
	11.0	3.1	7.2	1300	34.8	23.6	2.52	43.4	13.8	2.8	2.7	1400	55.1	2.57	46.4	106.5	6.3	3.8	3.6
100	5.5	0.7	1.6	1060	29.8	19.7	3.07	40.2	9.7	3.8	3.6	1140	Operation Not Recommended						
	5.5	0.7	1.6	1300	30.7	21.9	3.15	41.5	9.8	3.9	3.7	1400							
	8.3	1.8	4.2	1060	30.9	20.2	2.88	40.8	10.8	3.5	3.3	1140							
	8.3	1.8	4.2	1300	31.9	22.4	2.95	42.0	10.8	3.5	3.3	1400							
	11.0	3.0	6.9	1060	31.5	20.4	2.79	41.0	11.3	3.1	2.9	1140							
	11.0	3.0	6.9	1300	32.5	22.7	2.86	42.3	11.4	3.2	3.0	1400							
110	5.5	0.6	1.4	1060	27.5	18.8	3.50	39.4	7.9	4.3	4.1	1140							
	5.5	0.6	1.4	1300	28.4	20.9	3.59	40.7	7.9	4.3	4.1	1400							
	8.3	1.7	3.9	1060	28.6	19.3	3.28	39.8	8.7	3.9	3.7	1140							
	8.3	1.7	3.9	1300	29.6	21.4	3.36	41.0	8.8	3.9	3.7	1400							
	11.0	2.8	6.5	1060	29.2	19.5	3.17	40.0	9.2	3.5	3.3	1140							
	11.0	2.8	6.5	1300	30.2	21.6	3.25	41.3	9.3	3.5	3.3	1400							
120	5.5	0.6	1.4	1060	25.4	17.9	4.00	39.0	6.4	4.7	4.5	1140							
	5.5	0.6	1.4	1300	26.2	19.9	4.10	40.2	6.4	4.8	4.6	1400							
	8.3	1.7	3.9	1060	26.4	18.3	3.74	39.2	7.1	4.2	4.0	1140							
	8.3	1.7	3.9	1300	27.3	20.3	3.84	40.4	7.1	4.3	4.1	1400							
	11.0	2.7	6.2	1060	27.0	18.6	3.62	39.3	7.5	3.8	3.6	1140							
	11.0	2.7	6.2	1300	27.8	20.6	3.71	40.5	7.5	3.9	3.7	1400							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Performance Data — TTS/TTP049 Full Load With TAH

1650 CFM Nominal (Rated) Airflow Heating, 1550 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btuh

EWT °F	GPM	PD		Cooling - EAT 80/67°F								Heating - EAT 70°F							
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	TTS HWC	TTP HWC	Airflow CFM	HC	kW	HE	LAT	COP	TTS HWC	TTP HWC
20	12.0	4.8	11.1	1250	Operation Not Recommended							1340	32.8	3.16	22.4	92.6	3.0	3.8	3.6
	12.0	4.8	11.1	1550								1650	33.5	3.00	23.3	88.8	3.3	3.3	3.1
30	6.0	1.3	3.0	1250	47.9	28.8	2.16	57.9	22.2			1340	35.4	3.23	24.7	94.5	3.2	4.0	3.8
	6.0	1.3	3.0	1550	52.1	32.1	2.27	59.8	22.9			1650	36.3	3.07	25.8	90.3	3.5	3.5	3.3
	9.0	2.7	6.2	1250	44.0	26.4	1.85	52.7	23.8			1340	36.8	3.26	26.0	95.4	3.3	3.9	3.7
	9.0	2.7	6.2	1550	47.8	29.5	1.95	54.5	24.5			1650	37.7	3.10	27.1	91.2	3.6	3.4	3.2
	12.0	4.6	10.6	1250	41.6	24.9	1.69	49.6	24.6			1340	37.6	3.30	26.7	96.0	3.3	3.9	3.7
	12.0	4.6	10.6	1550	45.2	27.9	1.78	51.2	25.4			1650	38.5	3.13	27.8	91.6	3.6	3.3	3.1
40	6.0	1.1	2.5	1250	50.6	30.5	2.48	61.8	20.4			1340	40.3	3.37	29.0	97.8	3.5	4.1	3.9
	6.0	1.1	2.5	1550	55.0	34.1	2.61	63.9	21.1			1650	41.2	3.20	30.3	93.1	3.8	3.6	3.4
	9.0	2.6	6.0	1250	49.2	29.6	2.27	59.6	21.7			1340	42.1	3.43	30.7	99.1	3.6	4.0	3.8
	9.0	2.6	6.0	1550	53.4	33.0	2.39	61.6	22.3			1650	43.1	3.26	32.0	94.2	3.9	3.5	3.3
	12.0	4.4	10.2	1250	48.0	28.8	2.16	57.9	22.2			1340	43.1	3.46	31.5	99.8	3.6	4.0	3.8
	12.0	4.4	10.2	1550	52.1	32.2	2.27	59.8	22.9			1650	44.1	3.29	32.9	94.8	3.9	3.4	3.2
50	6.0	1.1	2.5	1250	50.6	30.7	2.71	62.6	18.7	1.9	1.8	1340	45.5	3.54	33.6	101.4	3.8	4.3	4.1
	6.0	1.1	2.5	1550	54.9	34.3	2.85	64.6	19.3	2.0	1.9	1650	46.6	3.36	35.1	96.1	4.1	3.7	3.5
	9.0	2.5	5.8	1250	50.8	30.7	2.56	62.3	19.9	1.7	1.6	1340	47.7	3.61	35.6	102.9	3.9	4.2	4.0
	9.0	2.5	5.8	1550	55.2	34.3	2.69	64.3	20.5	1.7	1.6	1650	48.8	3.43	37.1	97.4	4.2	3.7	3.5
	12.0	4.2	9.7	1250	50.5	30.5	2.46	61.7	20.5	1.4	1.3	1340	48.9	3.65	36.6	103.8	3.9	4.2	4.0
	12.0	4.2	9.7	1550	54.9	34.0	2.59	63.7	21.2	1.4	1.3	1650	50.0	3.47	38.2	98.1	4.2	3.6	3.4
60	6.0	1.0	2.3	1250	48.9	30.0	2.92	61.5	16.8	2.8	2.7	1340	50.8	3.72	38.3	105.1	4.0	4.6	4.4
	6.0	1.0	2.3	1550	53.1	33.5	3.07	63.6	17.3	2.8	2.7	1650	52.0	3.53	39.9	99.2	4.3	4.0	3.8
	9.0	2.4	5.5	1250	50.2	30.6	2.77	62.4	18.1	2.4	2.3	1340	53.2	3.80	40.4	106.8	4.1	4.5	4.3
	9.0	2.4	5.5	1550	54.5	34.2	2.92	64.5	18.7	2.4	2.3	1650	54.5	3.61	42.1	100.6	4.4	3.9	3.7
	12.0	4.0	9.2	1250	50.6	30.7	2.70	62.6	18.8	2.0	1.9	1340	54.5	3.84	41.5	107.7	4.2	4.5	4.3
	12.0	4.0	9.2	1550	55.0	34.3	2.84	64.7	19.4	2.0	1.9	1650	55.8	3.65	43.3	101.3	4.5	3.9	3.7
70	6.0	0.9	2.1	1250	46.3	28.8	3.14	59.6	14.8	3.8	3.6	1340	55.9	3.90	42.8	108.6	4.2	5.0	4.8
	6.0	0.9	2.1	1550	50.3	32.1	3.30	61.6	15.2	3.8	3.6	1650	57.2	3.70	44.6	102.1	4.5	4.4	4.2
	9.0	2.3	5.3	1250	48.2	29.7	2.98	61.0	16.2	3.2	3.0	1340	58.4	3.99	44.9	110.3	4.3	5.0	4.8
	9.0	2.3	5.3	1550	52.4	33.2	3.14	63.0	16.7	3.3	3.1	1650	59.8	3.79	46.8	103.5	4.6	4.3	4.1
	12.0	3.8	8.8	1250	49.0	30.1	2.91	61.6	16.9	2.7	2.6	1340	59.7	4.03	46.0	111.2	4.3	4.9	4.7
	12.0	3.8	8.8	1550	53.3	33.6	3.06	63.7	17.4	2.7	2.6	1650	61.1	3.83	48.0	104.3	4.7	4.2	4.0
80	6.0	0.9	2.1	1250	43.3	27.3	3.40	57.3	12.7	4.9	4.7	1340	60.5	4.06	46.8	111.8	4.4	5.6	5.3
	6.0	0.9	2.1	1550	47.0	30.5	3.58	59.2	13.1	5.0	4.8	1650	62.0	3.86	48.8	104.8	4.7	4.8	4.6
	9.0	2.3	5.3	1250	45.4	28.3	3.21	58.9	14.1	4.2	4.0	1340	62.8	4.15	48.8	113.4	4.4	5.5	5.2
	9.0	2.3	5.3	1550	49.3	31.6	3.38	60.8	14.6	4.3	4.1	1650	64.3	3.94	50.9	106.1	4.8	4.8	4.6
	12.0	3.6	8.3	1250	46.4	28.8	3.13	59.7	14.8	3.5	3.3	1340	63.9	4.19	49.7	114.2	4.5	5.4	5.1
	12.0	3.6	8.3	1550	50.4	32.2	3.29	61.6	15.3	3.5	3.3	1650	65.4	3.98	51.8	106.7	4.8	4.7	4.5
85	6.0	0.9	2.1	1250	41.7	26.5	3.58	56.3	11.7	5.6	5.3	1340	62.4	4.14	48.4	113.2	4.4	5.9	5.6
	6.0	0.9	2.1	1550	45.3	29.6	3.77	58.1	12.1	6.3	6.0	1650	63.9	3.93	50.5	105.9	4.8	5.1	4.8
	9.0	2.25	5.2	1250	43.8	27.5	3.36	57.7	13.1	4.8	4.6	1340	64.5	4.22	50.2	114.5	4.5	5.8	5.5
	9.0	2.25	5.2	1550	47.5	30.7	3.54	59.6	13.5	4.9	4.7	1650	66.0	4.01	52.3	107.0	4.8	5.1	4.8
	12.0	3.55	8.2	1250	44.8	28.0	3.26	58.5	13.8	3.9	3.7	1340	65.3	4.25	50.9	115.1	4.5	5.4	5.1
	12.0	3.55	8.2	1550	48.7	31.3	3.44	60.4	14.2	4.0	3.8	1650	66.9	4.04	53.1	107.5	4.9	5.0	4.8
90	6.0	0.9	2.1	1250	40.1	25.8	3.75	55.2	10.7	6.2	5.9	1340	64.4	4.21	50.1	114.5	4.5	6.2	5.9
	6.0	0.9	2.1	1550	43.6	28.8	3.95	57.0	11.0	6.3	6.0	1650	65.9	4.00	52.2	107.0	4.8	5.4	5.1
	9.0	2.2	5.1	1250	42.2	26.7	3.52	56.5	12.0	5.3	5.0	1340	66.1	4.29	51.6	115.7	4.5	6.1	5.8
	9.0	2.2	5.1	1550	45.8	29.9	3.70	58.4	12.4	5.4	5.1	1650	67.6	4.07	53.8	108.0	4.9	5.3	5.0
	12.0	3.5	8.1	1250	43.2	27.3	3.40	57.3	12.7	4.3	4.1	1340	66.8	4.32	52.1	116.1	4.5	6.0	5.7
	12.0	3.5	8.1	1550	46.9	30.5	3.58	59.2	13.1	4.4	4.2	1650	68.3	4.10	54.4	108.3	4.9	5.2	4.9
100	6.0	0.8	1.8	1250	37.2	24.4	4.23	53.9	8.8	7.6	7.2	1340	Operation Not Recommended						
	6.0	0.8	1.8	1550	40.4	27.3	4.45	55.6	9.1	7.8	7.4	1650							
	9.0	2.1	4.9	1250	39.0	25.2	3.91	54.6	10.0	6.5	6.2	1340							
	9.0	2.1	4.9	1550	42.3	28.2	4.12	56.4	10.3	6.6	6.3	1650							
	12.0	3.3	7.6	1250	40.0	25.7	3.77	55.1	10.6	5.3	5.0	1340							
	12.0	3.3	7.6	1550	43.4	28.7	3.97	56.9	10.9	5.4	5.1	1650							
110	6.0	0.8	1.8	1250	35.2	23.7	4.91	54.0	7.2	9.2	8.7	1340							
	6.0	0.8	1.8	1550	38.2	26.5	5.17	55.8	7.4	9.4	8.9	1650							
	9.0	2.0	4.6	1250	36.3	24.1	4.47	53.7	8.1	7.8	7.4	1340							
	9.0	2.0	4.6	1550	39.4	26.9	4.70	55.5	8.4	7.9	7.5	1650							
	12.0	3.2	7.4	1250	37.1	24.4	4.28	53.8	8.7	6.4	6.1	1340							
	12.0	3.2	7.4	1550	40.2	27.2	4.50	55.6	8.9	6.5	6.2	1650							
120	6.0	0.8	1.8	1250	34.6	24.1	5.89	56.9	5.9	10.9	10.4	1340							
	6.0	0.8	1.8	1550	37.6	27.0	6.20	58.8	6.1	11.1	10.5	1650							
	9.0	2.0	4.6	1250	34.7	23.7	5.23	54.7	6.6	9.3	8.8	1340							
	9.0	2.0	4.6	1550	37.7	26.5	5.50	56.5	6.9	9.4	8.9	1650							
	12.0	3.0	6.9	1250	35.1	23.7	4.96	54.1	7.1	7.6	7.2	1340							
	12.0	3.0	6.9	1550	38.1	26.5	5.22	55.9	7.3	7.7	7.3	1650							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Performance Data — TTS/TTP064 Part Load With TAH

1650 CFM Nominal (Rated) Airflow Heating, 1550 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btuh

EWT °F	GPM	PD		Cooling - EAT 80/67°F								Heating - EAT 70°F							
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	TTS HWC	TTP HWC	Airflow CFM	HC	kW	HE	LAT	COP	TTS HWC	TTP HWC
20	14.0	4.1	9.5	1220	Operation Not Recommended							1340	28.7	3.26	18.1	89.8	2.6	3.4	3.2
	14.0	4.1	9.5	1500								1650	29.3	3.03	19.0	86.5	2.8	3.0	2.9
30	7.0	0.5	1.2	1220	42.0	22.1	1.64	47.6	25.6			1340	30.9	3.29	20.3	91.4	2.8	3.5	3.3
	7.0	0.5	1.2	1500	43.3	24.6	1.68	49.1	25.8			1650	31.6	3.06	21.2	87.8	3.0	3.1	2.9
	11.0	1.9	4.4	1220	39.8	19.6	1.56	45.1	25.5			1340	31.8	3.30	21.1	92.0	2.8	3.5	3.3
	11.0	1.9	4.4	1500	41.1	21.8	1.60	46.5	25.7			1650	32.5	3.07	22.0	88.2	3.1	3.0	2.9
	14.0	3.9	9.0	1220	38.9	18.7	1.54	44.1	25.2			1340	32.2	3.31	21.4	92.2	2.8	3.4	3.2
	14.0	3.9	9.0	1500	40.1	20.7	1.58	45.5	25.4			1650	32.9	3.08	22.4	88.5	3.1	3.0	2.9
40	7.0	0.4	0.9	1220	44.6	25.7	1.82	50.9	24.5			1340	35.1	3.35	24.2	94.2	3.1	3.6	3.4
	7.0	0.4	0.9	1500	46.1	28.5	1.87	52.5	24.6			1650	35.9	3.11	25.3	90.1	3.4	3.1	2.9
	11.0	1.8	4.2	1220	43.5	24.0	1.73	49.4	25.2			1340	36.4	3.36	25.4	95.1	3.2	3.6	3.4
	11.0	1.8	4.2	1500	44.9	26.7	1.77	50.9	25.4			1650	37.2	3.12	26.6	90.9	3.5	3.1	2.9
	14.0	3.7	8.5	1220	43.0	23.3	1.69	48.7	25.5			1340	36.9	3.36	25.9	95.5	3.2	3.5	3.3
	14.0	3.7	8.5	1500	44.3	25.9	1.73	50.2	25.6			1650	37.7	3.12	27.1	91.2	3.5	3.1	2.9
50	7.0	0.3	0.7	1220	45.4	27.4	2.06	52.4	22.1	1.0	1.0	1340	40.0	3.39	28.8	97.6	3.5	3.7	3.5
	7.0	0.3	0.7	1500	46.8	30.4	2.11	54.0	22.2	1.0	1.0	1650	40.9	3.15	30.1	92.9	3.8	3.2	3.0
	11.0	1.8	4.2	1220	45.2	26.6	1.92	51.7	23.5	0.9	0.9	1340	41.7	3.41	30.4	98.8	3.6	3.7	3.5
	11.0	1.8	4.2	1500	46.6	29.6	1.97	53.3	23.7	0.9	0.9	1650	42.6	3.17	31.8	93.9	3.9	3.2	3.0
	14.0	3.6	8.3	1220	45.0	26.2	1.88	51.4	23.9	0.8	0.8	1340	42.4	3.41	31.1	99.3	3.6	3.6	3.4
	14.0	3.6	8.3	1500	46.4	29.1	1.93	53.0	24.0	0.8	0.8	1650	43.3	3.17	32.5	94.3	4.0	3.2	3.0
60	7.0	0.3	0.7	1220	44.8	27.8	2.32	52.7	19.3	1.7	1.6	1340	45.2	3.44	33.7	101.2	3.8	3.9	3.7
	7.0	0.3	0.7	1500	46.2	30.8	2.38	54.3	19.4	1.7	1.6	1650	46.2	3.20	35.3	95.9	4.2	3.4	3.2
	11.0	1.7	3.9	1220	45.3	27.7	2.16	52.7	20.9	1.5	1.4	1340	47.2	3.46	35.6	102.6	4.0	3.8	3.6
	11.0	1.7	3.9	1500	46.7	30.8	2.22	54.3	21.0	1.6	1.5	1650	48.2	3.22	37.3	97.1	4.4	3.3	3.1
	14.0	3.4	7.9	1220	45.4	27.6	2.12	52.6	21.4	1.4	1.3	1340	48.0	3.46	36.4	103.2	4.1	3.8	3.6
	14.0	3.4	7.9	1500	46.8	30.6	2.17	54.2	21.6	1.4	1.3	1650	49.1	3.22	38.1	97.5	4.5	3.3	3.1
70	7.0	0.2	0.5	1220	43.1	27.1	2.63	52.1	16.4	2.3	2.2	1340	50.3	3.49	38.6	104.7	4.2	4.1	3.9
	7.0	0.2	0.5	1500	44.5	30.1	2.70	53.7	16.5	2.4	2.3	1650	51.4	3.24	40.3	98.8	4.6	3.6	3.4
	11.0	1.7	3.9	1220	44.1	27.6	2.46	52.5	18.0	2.1	2.0	1340	52.4	3.51	40.6	106.2	4.4	4.1	3.9
	11.0	1.7	3.9	1500	45.6	30.6	2.52	54.1	18.1	2.2	2.1	1650	53.6	3.26	42.4	100.1	4.8	3.5	3.3
	14.0	3.3	7.6	1220	44.5	27.7	2.39	52.6	18.6	1.9	1.8	1340	53.2	3.52	41.3	106.8	4.4	4.0	3.8
	14.0	3.3	7.6	1500	45.9	30.7	2.45	54.2	18.7	2.0	1.9	1650	54.4	3.27	43.3	100.5	4.9	3.5	3.3
80	7.0	0.2	0.5	1220	40.8	25.9	2.98	51.0	13.7	3.0	2.9	1340	54.9	3.54	42.9	107.9	4.5	4.4	4.2
	7.0	0.2	0.5	1500	42.1	28.8	3.06	52.5	13.8	3.0	2.9	1650	56.1	3.29	44.9	101.5	5.0	3.8	3.6
	11.0	1.6	3.7	1220	42.1	26.7	2.79	51.6	15.1	2.7	2.6	1340	56.8	3.56	44.8	109.3	4.7	4.3	4.1
	11.0	1.6	3.7	1500	43.5	29.6	2.86	53.2	15.2	2.7	2.6	1650	58.1	3.31	46.8	102.6	5.1	3.7	3.5
	14.0	3.1	7.2	1220	42.6	26.9	2.71	51.9	15.7	2.4	2.3	1340	57.5	3.56	45.4	109.8	4.7	4.3	4.1
	14.0	3.1	7.2	1500	44.0	29.9	2.78	53.5	15.8	2.5	2.4	1650	58.8	3.31	47.5	103.0	5.2	3.7	3.5
85	7.0	0.2	0.3	1220	39.4	25.2	3.2	50.2	12.4	3.5	3.3	1340	56.7	3.56	44.7	109.2	4.7	4.6	4.4
	7.0	0.2	0.3	1500	40.6	28.0	3.27	51.8	12.5	3.6	3.4	1650	58.0	3.3	46.7	102.6	5.1	4.0	3.8
	11.0	1.6	3.6	1220	40.8	26.0	2.97	51.0	13.8	3.0	2.9	1340	58.4	3.6	46.2	110.3	4.8	4.5	4.3
	11.0	1.6	3.6	1500	42.1	28.8	3.05	52.6	13.9	3.0	2.9	1650	59.7	3.3	48.3	103.5	5.3	3.9	3.7
	14.0	3.1	7.0	1220	41.4	26.2	2.90	51.2	14.4	2.7	2.6	1340	58.9	3.6	46.7	110.7	4.8	4.5	4.3
	14.0	3.1	7.0	1500	42.7	29.1	2.97	52.8	14.5	2.7	2.6	1650	60.2	3.3	48.9	103.8	5.3	3.9	3.7
90	7.0	0.1	0.2	1220	38.0	24.5	3.38	49.5	11.2	3.5	3.3	1340	58.6	3.57	46.4	110.5	4.8	4.7	4.5
	7.0	0.1	0.2	1500	39.2	27.1	3.47	51.0	11.3	3.6	3.4	1650	59.9	3.32	48.5	103.6	5.3	4.1	3.9
	11.0	1.5	3.5	1220	39.5	25.3	3.16	50.3	12.5	3.2	3.0	1340	59.9	3.59	47.7	111.4	4.9	4.6	4.4
	11.0	1.5	3.5	1500	40.8	28.0	3.24	51.9	12.6	3.3	3.1	1650	61.3	3.34	49.9	104.4	5.4	4.0	3.8
	14.0	3.0	6.9	1220	40.1	25.6	3.08	50.6	13.0	2.9	2.8	1340	60.3	3.60	48.0	111.7	4.9	4.6	4.4
	14.0	3.0	6.9	1500	41.4	28.4	3.16	52.2	13.1	2.9	2.8	1650	61.6	3.35	50.2	104.6	5.4	4.0	3.8
100	7.0	0.1	0.2	1220	35.0	22.9	3.82	48.0	9.2	4.1	3.9	1340	Operation Not Recommended						
	7.0	0.1	0.2	1500	36.1	25.5	3.92	49.5	9.2	4.2	4.0	1650							
	11.0	1.5	3.5	1220	36.6	23.7	3.59	48.8	10.2	3.7	3.5	1340							
	11.0	1.5	3.5	1500	37.7	26.3	3.68	50.3	10.3	3.8	3.6	1650							
	14.0	2.8	6.5	1220	37.2	24.0	3.50	49.1	10.6	3.3	3.1	1340							
	14.0	2.8	6.5	1500	38.4	26.7	3.59	50.6	10.7	3.4	3.2	1650							
110	7.0	0.1	0.2	1220	32.0	21.6	4.32	46.7	7.4	4.6	4.4	1340							
	7.0	0.1	0.2	1500	33.0	24.0	4.43	48.1	7.4	4.7	4.5	1650							
	11.0	1.5	3.5	1220	33.5	22.2	4.07	47.3	8.2	4.1	3.9	1340							
	11.0	1.5	3.5	1500	34.6	24.7	4.17	48.8	8.3	4.2	4.0	1650							
	14.0	2.7	6.2	1220	34.1	22.5	3.97	47.6	8.6	3.7	3.5	1340							
	14.0	2.7	6.2	1500	35.2	25.0	4.07	49.1	8.6	3.8	3.6	1650							
120	7.0	0.1	0.2	1220	29.2	20.7	4.88	45.8	6.0	5.0	4.8	1340							
	7.0	0.1	0.2	1500	30.1	22.9	5.00	47.2	6.0	5.1	4.8	1650							
	11.0	1.4	3.2	1220	30.5	21.1	4.59	46.2	6.6	4.5	4.3	1340							
	11.0	1.4	3.2	1500	31.5	23.4	4.71	47.6	6.7	4.6	4.4	1650							
	14.0	2.6	6.0	1220	31.1	21.3	4.49	46.3	6.9	4.1	3.9	1340							
	14.0	2.6	6.0	1500	32.0	23.6	4.61	47.8	7.0	4.1	3.9	1650							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Performance Data — TTS/TTP064 Full Load With TAH

2050 CFM Nominal (Rated) Airflow Heating, 1825 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btuh

EWT °F	GPM	PD		Cooling - EAT 80/67°F								Heating - EAT 70°F							
		PSI	FT	Airflow CFM	TC	SC	kW	HR	EER	TTS HWC	TTP HWC	Airflow CFM	HC	kW	HE	LAT	COP	TTS HWC	TTP HWC
20	15.0	5	11.6	1480	Operation Not Recommended							1660	40.1	4.31	26.0	92.4	2.7	4.0	3.8
	15.0	5	11.6	1825								2050	41.1	4.09	27.1	88.6	2.9	3.5	3.3
30	7.0	0.6	1.4	1480	55.7	31.6	2.77	68.2	20.1			1660	43.3	4.40	28.8	94.2	2.9	4.1	3.9
	7.0	0.6	1.4	1825	60.5	35.4	2.92	70.5	20.7			2050	44.3	4.18	30.1	90.0	3.1	3.6	3.4
	11.0	2.3	5.3	1480	54.0	29.9	2.66	66.0	20.3			1660	45.2	4.45	30.6	95.2	3.0	4.1	3.9
	11.0	2.3	5.3	1825	58.7	33.4	2.80	68.2	21.0			2050	46.3	4.23	31.9	90.9	3.2	3.5	3.3
	15.0	4.8	11.1	1480	53.1	28.9	2.62	64.9	20.2			1660	46.3	4.49	31.5	95.8	3.0	4.0	3.8
	15.0	4.8	11.1	1825	57.6	32.3	2.76	67.0	20.9			2050	47.4	4.26	32.8	91.4	3.3	3.5	3.3
40	7.0	0.5	1.2	1480	57.0	33.5	2.99	70.3	19.0			1660	49.4	4.58	34.3	97.6	3.2	4.3	4.1
	7.0	0.5	1.2	1825	61.8	37.5	3.15	72.6	19.6			2050	50.6	4.35	35.7	92.8	3.4	3.7	3.5
	11.0	2.2	5.1	1480	56.1	32.2	2.83	68.8	19.8			1660	52.0	4.65	36.6	99.0	3.3	4.2	4.0
	11.0	2.2	5.1	1825	61.0	36.0	2.98	71.1	20.5			2050	53.2	4.42	38.1	94.0	3.5	3.6	3.4
	15.0	4.5	10.4	1480	55.6	31.5	2.76	68.0	20.1			1660	53.3	4.69	37.7	99.7	3.3	4.1	3.9
	15.0	4.5	10.4	1825	60.3	35.2	2.91	70.3	20.7			2050	54.5	4.45	39.4	94.6	3.6	3.6	3.4
50	7.0	0.4	0.9	1480	57.1	34.7	3.26	71.4	17.5	2.0	1.9	1660	55.9	4.77	40.1	101.2	3.4	4.5	4.3
	7.0	0.4	0.9	1825	62.0	38.8	3.43	73.7	18.1	2.1	2.0	2050	57.2	4.53	41.8	95.8	3.7	3.9	3.7
	11.0	2.1	4.9	1480	57.1	33.9	3.05	70.6	18.7	1.8	1.7	1660	58.9	4.85	42.7	102.9	3.6	4.4	4.2
	11.0	2.1	4.9	1825	62.0	37.8	3.21	72.9	19.3	1.8	1.7	2050	60.3	4.61	44.6	97.2	3.8	3.8	3.6
	15.0	4.3	9.9	1480	56.9	33.4	2.96	70.1	19.2	1.5	1.4	1660	60.4	4.90	44.1	103.7	3.6	4.3	4.1
	15.0	4.3	9.9	1825	61.8	37.3	3.12	72.4	19.8	1.5	1.4	2050	61.8	4.65	46.0	97.9	3.9	3.8	3.6
60	7.0	0.4	0.9	1480	56.3	35.2	3.60	71.6	15.6	2.9	2.8	1660	62.3	4.95	45.7	104.7	3.7	4.8	4.6
	7.0	0.4	0.9	1825	61.1	39.3	3.79	74.0	16.1	3.0	2.9	2050	63.7	4.70	47.7	98.8	4.0	4.2	4.0
	11.0	2.1	4.9	1480	57.0	34.9	3.33	71.5	17.1	2.5	2.4	1660	65.3	5.03	48.5	106.4	3.8	4.7	4.5
	11.0	2.1	4.9	1825	61.9	39.0	3.51	73.8	17.6	2.5	2.4	2050	66.9	4.78	50.6	100.2	4.1	4.1	3.9
	15.0	4.1	9.5	1480	57.1	34.6	3.23	71.3	17.7	2.1	2.0	1660	66.8	5.08	49.8	107.3	3.9	4.7	4.5
	15.0	4.1	9.5	1825	62.0	38.6	3.40	73.6	18.2	2.1	2.0	2050	68.4	4.82	51.9	100.9	4.2	4.0	3.8
70	7.0	0.3	0.7	1480	54.6	35.1	4.00	71.2	13.6	4.0	3.8	1660	67.9	5.11	50.8	107.9	3.9	5.3	5.0
	7.0	0.3	0.7	1825	59.3	39.2	4.21	73.6	14.1	4.0	3.8	2050	69.5	4.85	52.9	101.4	4.2	4.6	4.4
	11.0	2.0	4.6	1480	55.9	35.2	3.69	71.6	15.2	3.4	3.2	1660	70.5	5.18	53.1	109.3	4.0	5.2	4.9
	11.0	2.0	4.6	1825	60.7	39.4	3.88	74.0	15.7	3.4	3.2	2050	72.2	4.92	55.4	102.6	4.3	4.5	4.3
	15.0	3.9	9.0	1480	56.4	35.2	3.55	71.6	15.9	2.8	2.7	1660	71.6	5.21	54.1	109.9	4.0	5.1	4.8
	15.0	3.9	9.0	1825	61.3	39.3	3.74	74.0	16.4	2.9	2.8	2050	73.3	4.95	56.4	103.1	4.3	4.4	4.2
80	7.0	0.2	0.5	1480	52.1	34.4	4.46	70.3	11.7	5.2	4.9	1660	72.1	5.22	54.5	110.2	4.0	5.8	5.5
	7.0	0.2	0.5	1825	56.6	38.5	4.69	72.6	12.1	5.3	5.0	2050	73.8	4.96	56.8	103.3	4.4	5.1	4.8
	11.0	2.0	4.6	1480	54.1	35.0	4.10	71.1	13.2	4.4	4.2	1660	73.5	5.25	55.8	111.0	4.1	5.7	5.4
	11.0	2.0	4.6	1825	58.7	39.1	4.32	73.4	13.6	4.5	4.3	2050	75.2	4.99	58.2	104.0	4.4	5.0	4.8
	15.0	3.7	8.5	1480	54.8	35.2	3.94	71.3	13.9	3.6	3.4	1660	73.7	5.25	56.0	111.1	4.1	5.6	5.3
	15.0	3.7	8.5	1825	59.5	39.3	4.15	73.7	14.3	3.7	3.5	2050	75.4	4.99	58.4	104.1	4.4	4.9	4.7
85	7.0	0.2	0.5	1480	50.6	33.8	4.72	69.6	10.8	5.9	5.6	1660	72.9	5.24	55.3	110.7	4.1	6.2	5.9
	7.0	0.2	0.5	1825	54.9	37.8	4.97	71.9	11.1	6.0	5.7	2050	74.6	4.98	57.6	103.7	4.4	5.4	5.1
	11.0	1.95	4.5	1480	52.7	34.6	4.34	70.5	12.2	5.0	4.8	1660	73.1	5.23	55.5	110.8	4.1	6.1	5.8
	11.0	1.95	4.5	1825	57.3	38.7	4.57	72.9	12.6	5.1	4.8	2050	74.8	4.97	57.9	103.8	4.4	5.5	5.2
	15.0	3.6	8.3	1480	53.6	34.8	4.18	70.9	12.9	4.1	3.9	1660	72.7	5.21	55.2	110.6	4.1	6.0	5.7
	15.0	3.6	8.3	1825	58.2	38.9	4.40	73.2	13.3	4.2	4.0	2050	74.4	4.95	57.5	103.6	4.4	5.2	4.9
90	7.0	0.2	0.5	1480	49.0	33.2	4.99	68.9	9.8	6.5	6.2	1660	73.7	5.25	56.0	111.1	4.1	6.5	6.2
	7.0	0.2	0.5	1825	53.2	37.1	5.25	71.2	10.1	6.6	6.3	2050	75.5	4.99	58.4	104.1	4.4	5.6	5.3
	11.0	1.9	4.4	1480	51.4	34.2	4.58	70.0	11.2	5.5	5.2	1660	72.8	5.21	55.3	110.6	4.1	6.4	6.1
	11.0	1.9	4.4	1825	55.8	38.2	4.82	72.3	11.6	5.6	5.3	2050	74.5	4.95	57.6	103.6	4.4	5.5	5.2
	15.0	3.5	8.1	1480	52.4	34.5	4.41	70.4	11.9	4.6	4.4	1660	71.7	5.17	54.3	110.0	4.1	6.3	6.0
	15.0	3.5	8.1	1825	56.9	38.6	4.64	72.8	12.3	4.6	4.4	2050	73.4	4.91	56.6	103.1	4.4	5.4	5.1
100	7.0	0.1	0.2	1480	45.4	31.5	5.58	67.1	8.1	8.0	7.6	1660	Operation Not Recommended						
	7.0	0.1	0.2	1825	49.2	35.2	5.87	69.3	8.4	8.2	7.8	2050							
	11.0	1.8	4.2	1480	48.1	32.8	5.14	68.4	9.4	6.8	6.5	1660							
	11.0	1.8	4.2	1825	52.2	36.7	5.41	70.7	9.7	6.9	6.6	2050							
	15.0	3.3	7.6	1480	49.3	33.4	4.94	69.0	10.0	5.6	5.3	1660							
	15.0	3.3	7.6	1825	53.6	37.3	5.20	71.3	10.3	5.7	5.4	2050							
110	7.0	0.1	0.2	1480	41.1	29.3	6.24	65.0	6.6	9.7	9.2	1660							
	7.0	0.1	0.2	1825	44.7	32.8	6.57	67.1	6.8	9.9	9.4	2050							
	11.0	1.8	4.2	1480	44.2	30.9	5.77	66.5	7.7	8.2	7.8	1660							
	11.0	1.8	4.2	1825	48.0	34.6	6.07	68.7	7.9	8.4	8.0	2050							
	15.0	3.1	7.2	1480	45.6	31.6	5.55	67.2	8.2	6.7	6.4	1660							
	15.0	3.1	7.2	1825	49.5	35.3	5.84	69.4	8.5	6.9	6.6	2050							
120	7.0	0.1	0.2	1480	36.5	26.6	6.98	62.6	5.2	11.5	10.9	1660							
	7.0	0.1	0.2	1825	39.6	29.8	7.35	64.7	5.4	11.7	11.1	2050							
	11.0	1.7	3.9	1480	39.7	28.5	6.47	64.3	6.1	9.8	9.3	1660							
	11.0	1.7	3.9	1825	43.2	31.9	6.81	66.4	6.3	9.9	9.4	2050							
	15.0	2.9	6.7	1480	41.2	29.4	6.23	65.0	6.6	8.0	7.6	1660							
	15.0	2.9	6.7	1825	44.8	32.8	6.56	67.2	6.8	8.1	7.7	2050							

Interpolation is permissible; extrapolation is not.
All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.
AHRI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.
Table does not reflect fan or pump power corrections for AHRI/ISO conditions.
All performance is based upon the lower voltage of dual voltage rated units.
Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.
Operation below 60°F EWT requires optional insulated water/refrigerant circuit.
See performance correction tables for operating conditions other than those listed above.
For operation in the shaded areas, please see the Performance Data Selection Notes.

Physical Data

Physical Data

	TTS				TTP			
Model	**026**	**038**	**049**	**064**	**026**	**038**	**049**	**064**
Compressor [1 Each)	Copeland UltraTech Two-Stage Scroll				Copeland UltraTech Two-Stage Scroll			
Factory Charge HFC-410A (oz) [kg]	92 [2.61]	120 [3.40]	142 [4.02]	204 [5.78]	92 [2.61]	120 [3.40]	142 [4.02]	204 [5.78]
Water Connection Size								
(In)	1 (Swivel)				3/4 (Swivel)		1 (Swivel)	
HWG Connection Size								
(In)	1 (Swivel)				5/8 (O.D. Sweat)			
Line Set Connection Size								
Vapor Line Sweat Connection (in.)	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8
Liquid Line Sweat Connection (in.)	3/8	3/8	1/2	1/2	3/8	3/8	1/2	1/2
Weight - Operating, (lbs) [kg]	203 [92]	221 [100]	250 [113]	265 [120]	223 [101]	241 [109]	250 [113]	265 [120]
Weight - Packaged, (lbs) [kg]	218 [99]	236 [107]	265 [120]	280 [127]	238 [108]	256 [116]	285 [129]	300 [136]
Maximum Working Water Press (psi) [kPa]	500 [3,445]	500 [3,445]	500 [3,445]	500 [3,445]	100 [689]	100 [689]	100 [689]	100 [689]

Units have grommet compressor mountings, TXV expansion devices, and 1/2" [12.2mm] & 3/4" [19.1mm] electrical knockouts.

	TAC						
Model	**026-17**	**026-21**	**038-21**	**038-24**	**049-21**	**049-24**	**064-24**
Connections - Sweat (in.)							
Liquid I.D.	3/8	3/8	3/8	3/8	3/8	3/8	3/8
Suction I.D.	3/4	3/4	7/8	7/8	7/8	7/8	7/8
Cased Coil Dimensions (in.)							
A - Width	17 1/2	21	21	24 1/2	21	24 1/2	24 1/2
B - Coil Height	14 1/2	17 1/2	25 7/8	25 3/8	25 7/8	25 3/8	30 1/4
C- Height	20	20	28	32	28	32	32
Weight							
Coil Weight (lbs.)	46	54	76	89	76	89	108
Shipping Weight (lbs.)	51	60	83	99	83	99	118

	TAH						
Model	**026-A**	**026-B**	**038-B**	**038-C**	**049-B**	**049-C**	**064-C**
Emerson ECM Fan Motor & Blower							
Liquid I.D.	3/8	3/8	3/8	3/8	3/8	3/8	3/8
Suction I.D.	3/4	3/4	7/8	7/8	7/8	7/8	7/8
Fan Motor Type/Speeds	ECM Variable						
Fan Motor (hp)	1/2				1		
Blower Wheel Size (Dia x W)	9 x 7		12 x 10				
Air Coil Dimensions (H x W)	3 - 2 Row 14 x 17		3 - 2 Row 24 x 17				3 - 3 Row 24x17
Filter Standard - 1" Throwaway	16 x 20	20 x 20		20 x 24	20 x 20	20 x 24	
Weight - Operating (lbs.)	80	163	173	181	180	188	198
Weight - Packaged (lbs.)	96	179	198	206	218	226	236

Electrical Data (TTS)

Model	Compressor			HWG Pump FLA	External Pump FLA	Total Unit FLA	Min Circuit Amps	Max Fuse/ HACR (2)
	RLA	LRA	Qty					
026	10.3	52.0	1	0.4	4.0	14.7	17.3	25
038	16.7	82.0	1	0.4	4.0	21.1	25.3	40
049	21.2	96.0	1	0.4	4.0	25.6	30.9	50
064	25.6	118.0	1	0.4	4.0	30.0	36.4	60

Rated Voltage of 208/230/60/1
HACR circuit breaker in USA only

Min/Max Voltage of 197/254
All fuses Class RK-5

Electrical Data (TTP)

Model	Compressor			Internal Loop Pump FLA	Total Unit FLA	Min Circuit Amps	Max Fuse/ HACR
	RLA	LRA	Qty				
026	10.3	52.0	1	0.8	11.1	13.7	20
036	16.7	82.0	1	0.8	17.5	21.7	35
048	21.2	96.0	1	1.6	22.8	28.1	45
062	25.6	118.0	1	1.6	27.2	33.6	50

Rated Voltage of 208/230/60/1
HACR circuit breaker in USA only

Min/Max Voltage of 197/254
All fuses Class RK-5

HWG Module	Voltage	Pump FLA	Total FLA	Min Circuit Amps
AHWG1AARS	115/60/1	0.52	0.52	1.20
AHWG1AGRS	208/230/60/1	0.40	0.40	0.90

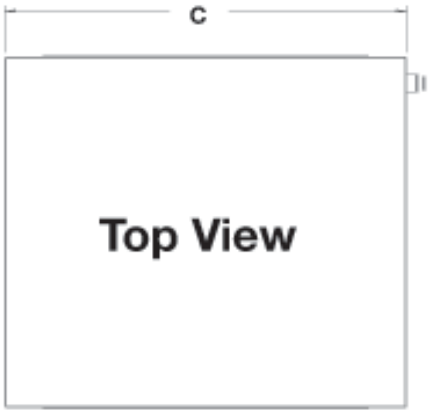
Electrical Data (TAH)

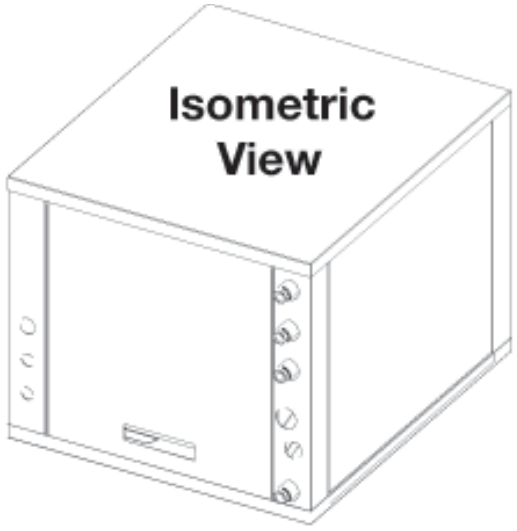
Model	Volt Code Dual Rated (115) 208/230	Rated Voltage Dual Rated (115) 208/230	Voltage Min/ Max Dual Rated (115) 208/230	Fan Motor FLA	Fan Motor HP	Max Fan ESP	Min Circ Amp (120) 208/230	Total Unit FLA	Max Fuse/ HACR (120) 208/230
026	(A) G	(120) 208/230	(114/132) 197/254	(7.7) 4.3	1/2	0.5	(7.8) 4.9	(7.7) 4.3	(15) 15
038	(A) G	(120) 208/230	(114/132) 197/254	(7.7) 4.3	1/2	0.5	(7.8) 4.9	(7.7) 4.3	(15) 15
049	(A) G	(120) 208/230	(114/132) 197/254	(12.8) 7	1	1	(14.4) 8.6	(12.8) 7	(25) 15
064	(A) G	(120) 208/230	(114/132) 197/254	(12.8) 7	1	1	(14.4) 8.6	(12.8) 7	(25) 15

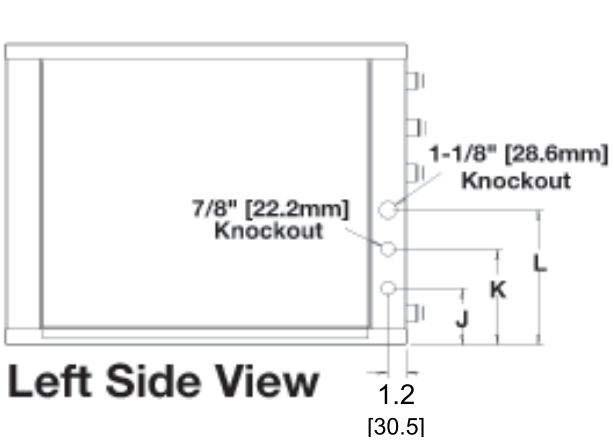
Rated Voltage of 208/230/60/1

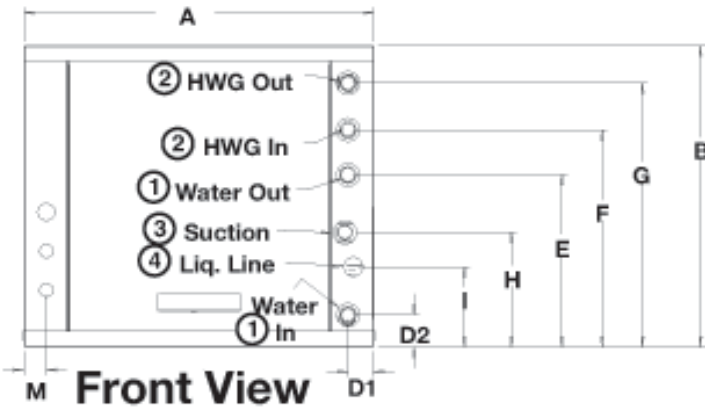
Tranquility Indoor (TTS) Dimensional Data

Model		Overall Cabinet			Water Connections							Refrigerant Connection				Electrical Knockouts			
		A Width	B Height	C Depth	1 Water In/Out Swivel	2 HWG In/Out Swivel	D1 Water In	D2 Water In	E Water Out	F HWG In	G HWG Out	3 Suction	4 Liquid	H	I	J	K	L	M
026	in	22.4	19.3	25.6	1”	1”	1.6	2.1	11.0	13.9	16.9	7/8”	3/8”	7.3	5.1	3.6	6.1	8.6	1.4
	cm	56.9	49.0	65.0			4.1	5.3	27.9	35.3	42.9			18.5	13.0	9.1	15.5	21.8	3.6
038	in	25.4	21.3	30.6	1”	1”	1.7	3.4	12.1	15.6	18.9	7/8”	3/8”	8.4	6.1	3.6	6.1	8.6	1.7
	cm	64.5	54.1	77.7			4.3	8.6	30.7	39.6	48.0			21.3	15.5	9.1	15.5	21.8	4.3
049	in	25.4	21.3	30.6	1”	1”	1.7	3.4	12.1	15.6	18.9	7/8”	1/2”	8.4	6.1	3.6	6.1	8.6	1.7
	cm	64.5	54.1	77.7			4.3	8.6	30.7	39.6	48.0			21.3	15.5	9.1	15.5	21.8	4.3
064	in	25.4	21.3	30.6	1”	1”	1.7	3.4	12.1	15.6	18.9	7/8”	1/2”	8.4	6.1	3.6	6.1	8.6	1.7
	cm	64.5	54.1	77.7			4.3	8.6	30.7	39.6	48.0			21.3	15.5	9.1	15.5	21.8	4.3



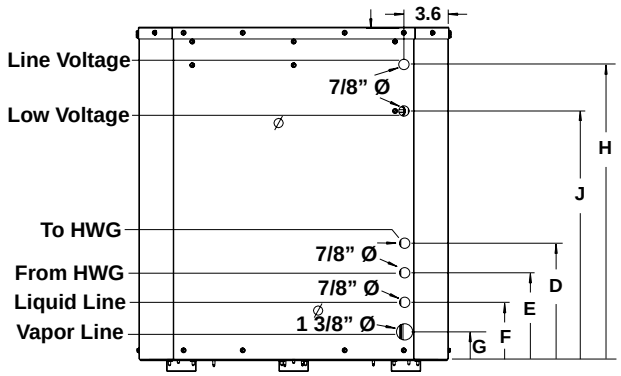




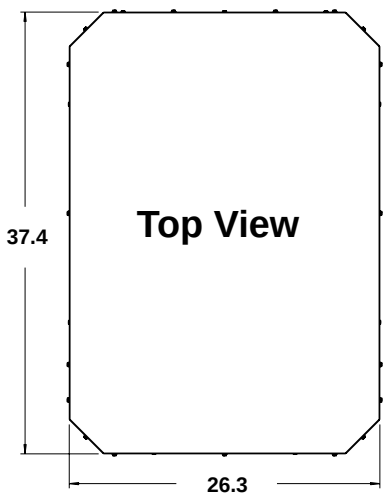


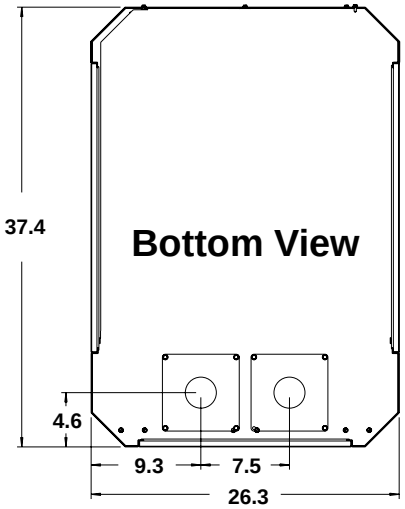
Tranquility Outdoor (TTP) Dimensional Data

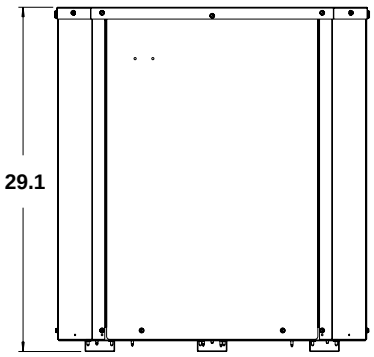
Model		Overall Cabinet			Refrigerant Line Connections								Electrical Knockouts			
		A Width	B Height	C Depth	1 To HWG	2 From HWG	D	E	3 Liquid Line	4 Vapor Line	F	G	Line Voltage	Low Voltage	H	J
026	in	26.3	29.1	37.4	5/8"	5/8"	13.0	10.0	3/8"	7/8"	7.0	4.0	7/8"	7/8"	26.1	22.1
038	in	26.3	29.1	37.4	5/8"	5/8"	13.0	10.0	3/8"	7/8"	7.0	4.0	7/8"	7/8"	26.1	22.1
049	in	26.3	29.1	37.4	5/8"	5/8"	13.0	10.0	1/2"	7/8"	7.0	4.0	7/8"	7/8"	26.1	22.1
064	in	26.3	29.1	37.4	5/8"	5/8"	13.0	10.0	1/2"	7/8"	7.0	4.0	7/8"	7/8"	26.1	22.1



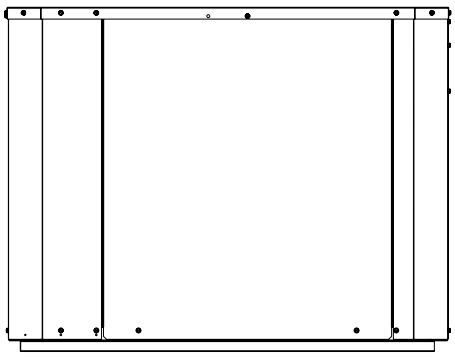
Back View







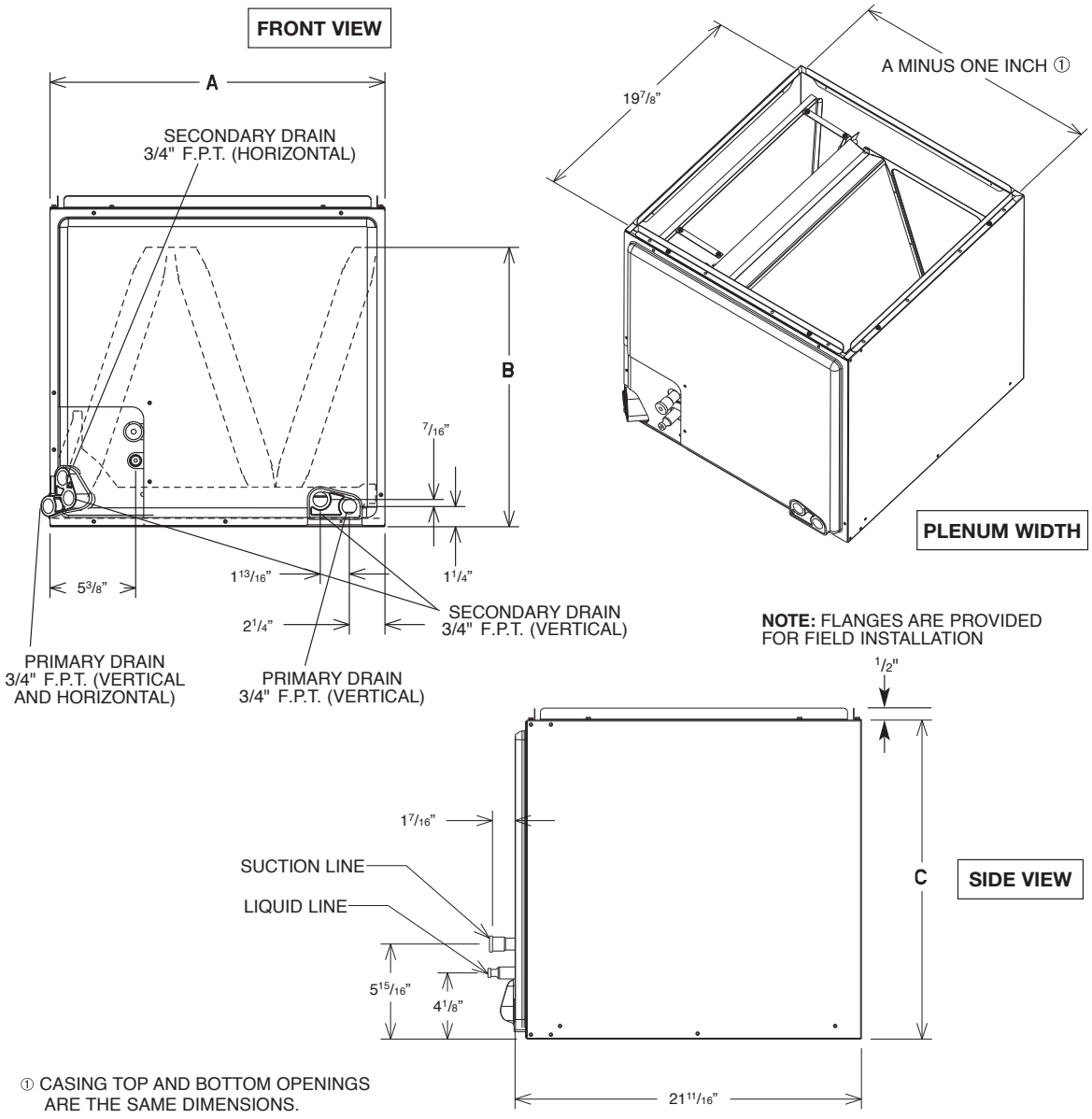
Front View



Side View

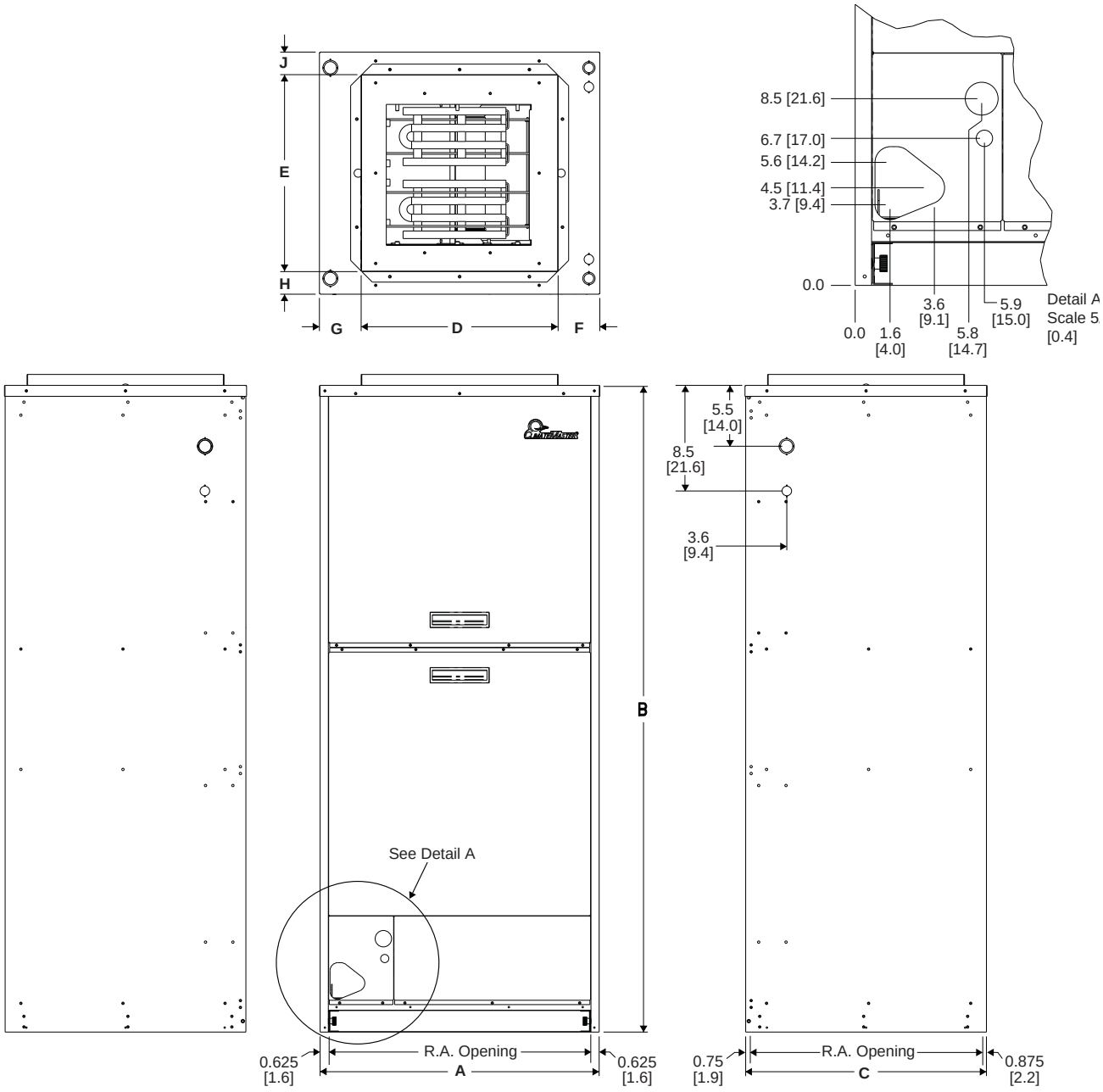
Tranquility Cased Coil (TAC) Dimensional Data

Model	026-17	026-21	038-21	038-24	049-21	049-24	064-24
Connections - Sweat (in.)							
Liquid I.D.	3/8	3/8	3/8	3/8	3/8	3/8	3/8
Suction I.D.	3/4	3/4	7/8	7/8	7/8	7/8	7/8
Cased Coil Dimensions (in.)							
A - Width	17 1/2	21	21	24 1/2	21	24 1/2	24 1/2
B - Coil Height	14 1/2	17 1/2	25 7/8	25 3/8	25 7/8	25 3/8	30 1/4
C- Height	20	20	28	32	28	32	32
Weight							
Coil Weight (lbs.)	46	54	76	89	76	89	108
Shipping Weight (lbs.)	51	60	83	99	83	99	118

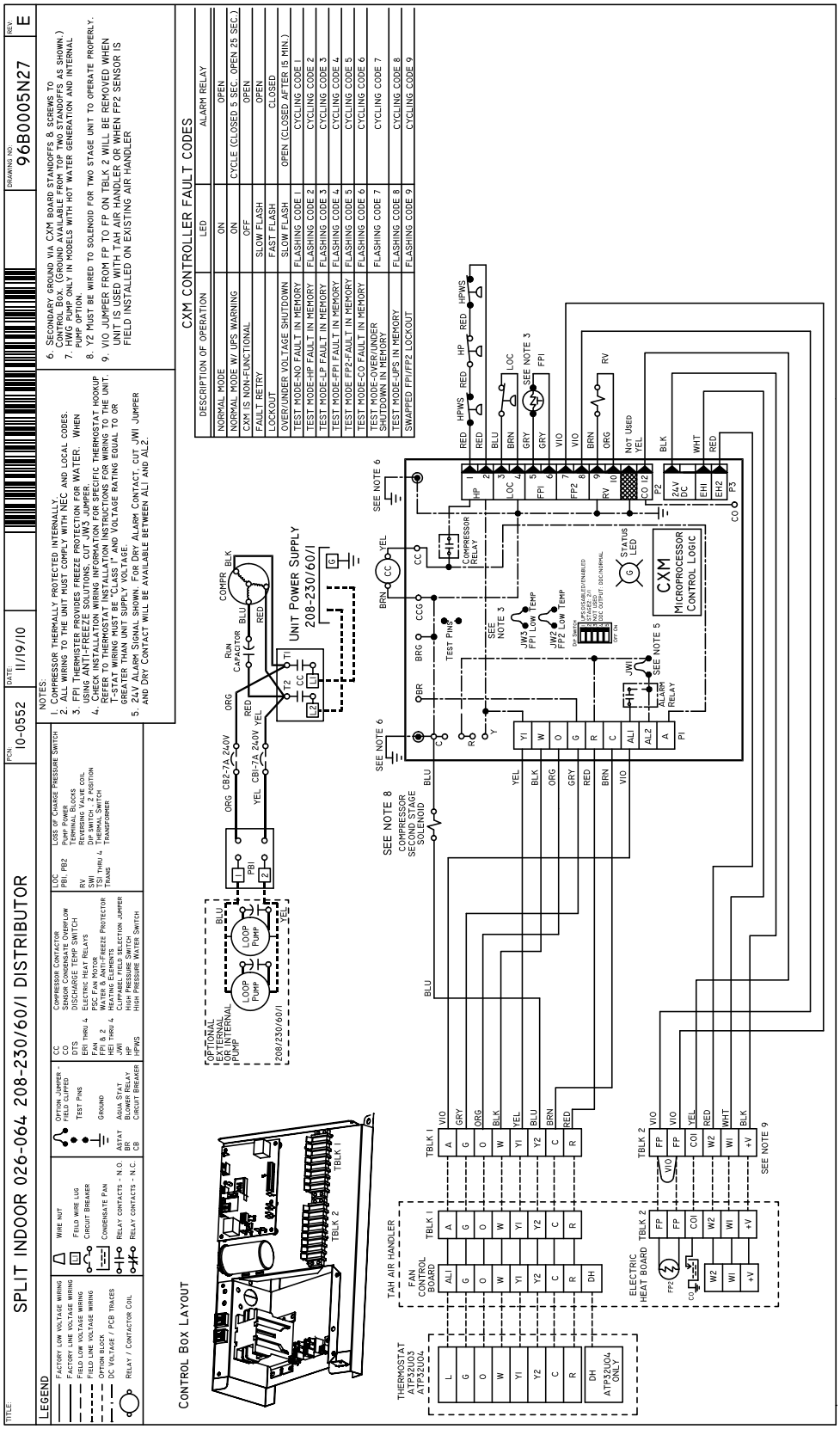


Tranquility Air Handler (TAH) Dimensional Data

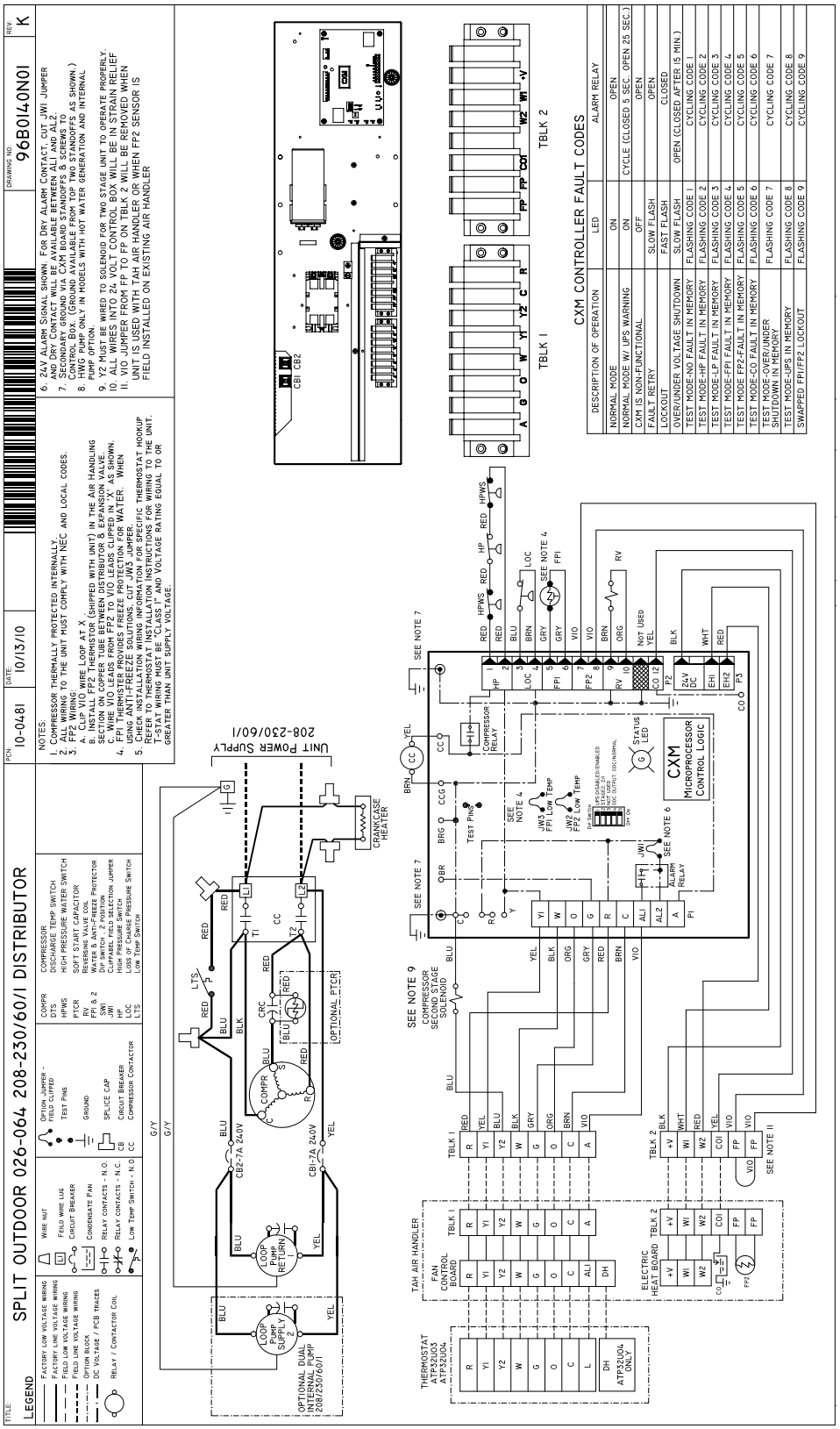
Cabinet Size		Overall Cabinet A Width	Overall Cabinet B Height	Overall Cabinet C Depth	1 D	2 E	3 F	4 G	5 H	6 J
A - Cabinet	in.	18.5	44.0	22.0	14.0	14.0	2.3	2.3	4.1	4.1
	cm.	47.0	111.8	55.9	35.6	35.5	5.8	5.8	10.3	10.3
B - Cabinet	in.	22.0	55.0	22.0	18.0	18.0	2.1	2.1	2.1	2.1
	cm.	55.9	139.7	55.9	45.7	45.7	5.2	5.2	5.2	5.2
C - Cabinet	in.	25.5	59.0	22.0	18.0	18.0	3.8	3.8	2.1	2.1
	cm.	64.8	149.9	55.9	45.7	45.7	9.9	9.9	5.2	5.2



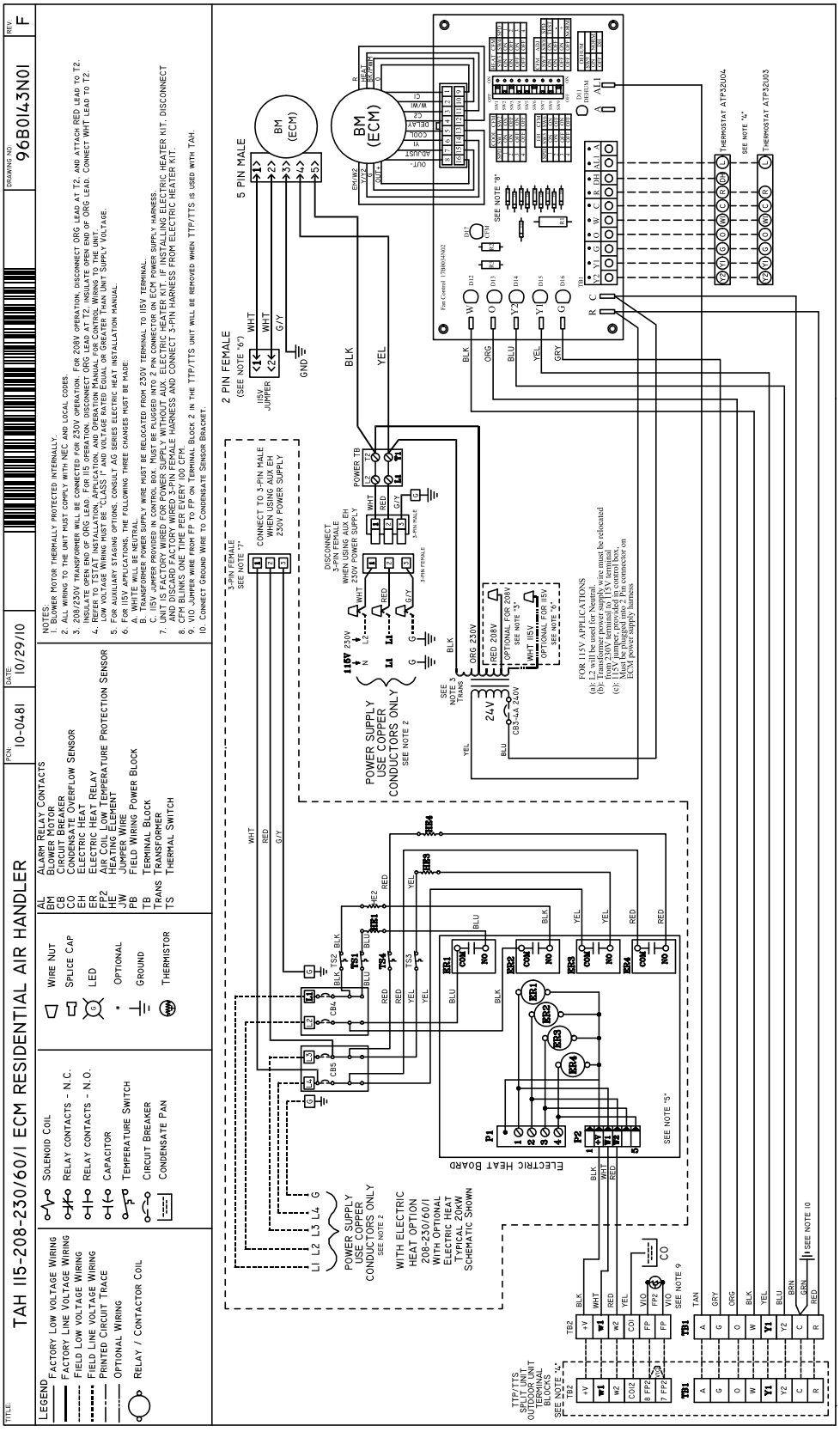
Tranquility Indoor Split (TTS) Electrical Wiring Diagram - 96B0005N27



Tranquility 27® Outdoor Split (TTP) Electrical Wiring Diagram - 96B0140N01



Tranquility Air Handler (TAH) Electrical Wiring Diagram - 96B0143N01



Engineering Guide Specifications

General

The liquid source heating/cooling split condensing units shall be AHRI/ISO/ASHRAE 13256-1 (ground-source closed-loop) performance certified and listed by a nationally recognized safety-testing laboratory or agency. Each unit shall be water run-tested at the factory. Each unit shall be pallet mounted and shipped with appropriate protective packaging to help avoid damage in transportation.

Units shall be warranted by the manufacturer against defects in materials and workmanship for a period ten years on parts and a service labor allowance for the first five years parts. An optional extended labor warranty is available which extends the service labor allowance to ten.

The water source units shall be designed to operate with entering fluid temperature between 20°F and 120°F.

Casing & Cabinet

The cabinet shall be fabricated from heavy-gauge galvanized steel and painted with an epoxy powder coating. The interior shall be insulated with 1/2" thick, multi-density, coated glass fiber. Three service access panels shall be provided and shall be removable with linesets and water piping in place. The internal component layout shall provide for major service with the unit in-place for restricted access installations.

Refrigerant Circuit

All units shall contain EarthPure® (HFC-410A) sealed refrigerant circuit employing a hermetic motor compressor, bidirectional thermal expansion valve, reversing valve, coaxial tube water-to-refrigerant heat exchanger and service ports. An optional Hot Water Generator (desuperheater) coil shall be provided. Compressors shall be Copeland UltraTech™ Two-Stage scroll type designed for heat pump duty and mounted on vibration isolators. Compressor motors shall be single phase PSC with internal over load protection. A factory provided bidirectional filter drier shall be included in all models. The coaxial water-to-refrigerant heat exchangers shall be designed for close approach temperatures and be constructed of a convoluted copper (optional cupro-nickel) inner tube and a steel outer tube. The thermal expansion valve shall provide proper superheat over the entire fluid temperature range with minimal "hunting". The valve shall operate only in the heating mode with the use of an internal check valve. The water-to-refrigerant heat exchanger, optional desuperheater coil and refrigerant suction lines shall be insulated to prevent condensation at low liquid temperatures.

Electrical

CXM Control - A microprocessor-based compressor controller shall be provided to monitor and control unit operation. The control shall provide compressor sequencing, high and low pressure monitoring, field selectable low water temperature sensing, over/under voltage monitoring, and unit performance sentinel (UPS). The control shall also provide for water valve connection, a test mode, short cycle protection, random start-up, as well as fault LED, fault memory, and intelligent fault retry.

The control shall employ quick attach harness assemblies for low voltage connections to the control board to aid in troubleshooting or replacement. An integral terminal block with screw terminals shall be provided on the control for field low voltage connections. A circuit breaker protected 75VA transformer shall be employed. Line voltage box lugs shall be provided for unit wiring. Units shall have knockouts for entrance of low and line voltage wiring. The control box shall be harness plug-connected for easy removal. Residential models shall have a dual circut-breaker protected power block for the connection of external Flow Controller pump module.

Piping (Indoor Compressor Section Only)

Supply and return water connections, as well as Hot Water Generator (desuperheater) connections shall be 1" FPT brass swivel fittings which provide a union and eliminate the need for pipe wrenches and sealants when making field connections. A thread by sweat fitting shall be provided for connection to the water heater. All water piping shall be insulated to prevent condensation at low liquid temperatures.

Internal Flow Controller (Outdoor Compressor Section only)

The unit shall include a factory-installed Flow Controller. The internal Flow Controller shall include the loop circulating pump(s), flushing/fill valves, and an expansion tank to reduce loop pressure variation. The circulating pump head shall be removable from the volute for easy replacement and the circulating pump shall be multi-speed.

Tranquility® Split (TTS/TTP/TAC/TAH) Series Submittal Data

Models 026 - 064
60Hz - HFC-410A

Residential

CLIMATEMASTER®
Geothermal Heat Pump Systems

SUBMITTAL DATA - I-P UNITS

Unit Designation: _____

Job Name: _____

Architect: _____

Engineer: _____

Contractor: _____

PERFORMANCE DATA

Cooling Capacity: _____ Btuh

EER: _____

Heating Capacity: _____ Btuh

COP: _____

Ambient Air Temp: _____ °F

Entering Water Temp (Clg): _____ °F

Entering Air Temp (Clg): _____ °F

Entering Water Temp (Htg): _____ °F

Entering Air Temp (Htg): _____ °F

Airflow: _____ CFM

Fan Speed or Motor/RPM/Turns: _____

Operating Weight: _____ (lb)

ELECTRICAL DATA

Power Supply: 208/230 Volts Single Phase 60 Hz

Minimum Circuit Ampacity: _____

Maximum Overcurrent Protection: _____

Accessories & Options

Hot Water Generator
(Indoor Compressor Section Only)
An optional heat reclaiming desuperheater coil of vented double-wall copper construction suitable for potable water shall be provided. The coil and hot water circulating pump shall be factory mounted inside the unit. A high limit and low compressor discharge line temperature switch shall be provided to disable the pump when these conditions occur.

Hot Water Generator
(Outdoor Compressor Section Only)
An optional external heat reclaiming desuperheater module including a vented double-wall heat cupro-nickel exchanger suitable for potable water use shall be provided. The heat exchanger, hot water circulating pump, and a microprocessor control shall be factory installed in an external cabinet. A sensor shall be provided to monitor the entering potable water temperature. A second sensor shall be used to monitor the compressor discharge temperature. A microprocessor shall be provided to control the desuperheater based on the sensor inputs. The Hot Water Generator module shall be 115 vac and listed by a nationally recognized safety-testing laboratory or agency.

Cupro-Nickel Heat Exchanger
An optional corrosion resistant CuNi coaxial heat exchanger shall be factory installed in lieu of standard copper construction.

Thermostat (field installed)
A multistage auto-changeover electronic digital thermostat shall be provided. The thermostat shall offer 3 heating and 2 cooling stages with precise temperature control. An OFF-HEAT-AUTO-COOL-EMERG system switch, OFF-AUTO fan switch, and indicating LED's shall be provided. The thermostat shall read out in °F or °C and be calibratable.

Flow Controller
(Field Installed Indoor Compressor Section Only)
A self-contained module shall provide all fluid pumping, fill and connection requirements for ground-source closed loop systems up to 20 GPM. The Flow Controller shall provide 1" pump isolation valves and 3-way service valves. Pump heads shall be removable from the volute for easy replacement. The Flow Controller shall be enclosed in a polystyrene case and fully insulated with urethane foam to prevent condensation.

Hose Kits (field installed)
A rubber hose kit shall provide connections between the unit and Flow Controller. Rubber 1" hose allows flexible connection and absorbs vibration transmission between unit and Flow Controller. Brass elbows with MPT fittings for unit connection, barbed fittings for hose connection and FPT fittings for Pressure/Temperature ports shall be included to allow service and troubleshooting of the unit. Hose clamps shall be used to connect the hose to the brass elbows and Flow Controller.

Warranty Information

The 2010 standard warranty applies to units ordered on or after May 1, 2010. See ClimateMaster's 2010 Limited Express Residential Warranty Certificate RP851 for specific coverage and limitation.

ClimateMaster residential class heat pumps are backed by a ten-year limited warranty on all unit parts, including the following accessories when installed with ClimateMaster units: Flow Controllers, Thermostats & Electric Heaters.

ClimateMaster goes even further to back up its commitment to quality by including a service labor allowance for the first five years on unit parts and thermostats, auxiliary electric heaters and geothermal pumping modules.

The Optional Extended Factory Service Labor Allowance Warranty offers additional length of term protection to the consumer by offsetting service labor costs for 10 years.

To order this warranty, contact your ClimateMaster distributor. This coverage must be purchased within 90 days of unit installation. See Limited Express Extended Labor Warranty Certificate RP852 for details.


CLIMATE MASTER, INC.
LIMITED EXPRESS WARRANTY/LIMITATION OF REMEDIES AND LIABILITY FOR RESIDENTIAL CLASS PRODUCTS WITH EXTENDED LABOR ALLOWANCE

CLIMATE MASTER, INC.
LIMITED EXPRESS WARRANTY/LIMITATION OF REMEDIES AND LIABILITY FOR RESIDENTIAL CLASS PRODUCTS WITH LABOR ALLOWANCE

Revision History

Date	Page #	Description
2 May, 12	167	'Return Air Opening' Added to Dimensional Drawing
23 April, 12	172	Submittal Page Added
23 April, 12	147, 162	TAC 026-B Dimensions Corrected
31 Jan., 10	162	Refrigerant Charge Information Updated
29 Sept., 10	163	Electrical Data Updated
26 July, 10	Wire Diagram Pages	Wire Diagram revision: water-side high pressure switches added
15 July, 10	123	Compressor isolation upgrade from Springs to grommets
17 June, 10	All	TAC/TAH Information Added
03 Aug, 09	All	TTP Information Added
05 June, 08	All	Reformatted Document Size
03 Mar, 08	Various	Various Minor Corrections
01 Mar, 07	20	Added New Notes to Electrical Data
01 Oct, 06	All	First Published