

Tranquility® 30 Digital (TE) Series

Submittal Data

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



LC991

Rev.: November 18, 2022



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TE Premier Efficiency Series



| | | |
|---|-----------------------------------|----|
| | Introduction | 4 |
| | Features, Options and Accessories | 5 |
| iGate® 2 Communicating Controls Powered by DXM2.5 | | 6 |
| iGate® 2 Communicating (AWC) Thermostat | | 7 |
| myUplink – Web and Mobile Interface | | 8 |
| Constant Volume (CV) ECM | | 9 |
| vFlow® Internal Variable Water Flow Control | | 10 |
| Selection Procedure | | 11 |
| TE Series Nomenclature | | 13 |
| Performance Data – AHRI/ASHRAE/ISO 13256-1 | | 14 |
| Performance Data – Selection Notes | | 15 |
| Performance Data – TE H/V/D 026 (Part Load), No vFlow® | | 16 |
| Performance Data – TE H/V/D 026 (Full Load), No vFlow® | | 17 |
| Performance Data – TE H/V/D 038 (Part Load), No vFlow® | | 18 |
| Performance Data – TE H/V/D 038 (Full Load), No vFlow® | | 19 |
| Performance Data – TE H/V/D 049 (Part Load), No vFlow® | | 20 |
| Performance Data – TE H/V/D 049 (Full Load), No vFlow® | | 21 |
| Performance Data – TE H/V/D 064 (Part Load), No vFlow® | | 22 |
| Performance Data – TE H/V/D 064 (Full Load), No vFlow® | | 23 |
| Performance Data – TE H/V/D 072 (Part Load), No vFlow® | | 24 |
| Performance Data – TE H/V/D 072 (Full Load), No vFlow® | | 25 |
| Performance Data – TE H/V/D 026 (Part Load), With vFlow® | | 26 |
| Performance Data – TE H/V/D 026 (Full Load), With vFlow® | | 27 |
| Performance Data – TE H/V/D 038 (Part Load), With vFlow® | | 28 |
| Performance Data – TE H/V/D 038 (Full Load), With vFlow® | | 29 |
| Performance Data – TE H/V/D 049 (Part Load), With vFlow® | | 30 |
| Performance Data – TE H/V/D 049 (Full Load), With vFlow® | | 31 |
| Performance Data – TE H/V/D 064 (Part Load), With vFlow® | | 32 |
| Performance Data – TE H/V/D 064 (Full Load), With vFlow® | | 33 |
| Performance Data – TE H/V/D 072 (Part Load), With vFlow® | | 34 |
| Performance Data – TE H/V/D 072 (Full Load), With vFlow® | | 35 |
| Correction Tables – Part Load Performance Data | | 36 |
| Correction Tables – Full Load Performance Data | | 37 |
| Correction Tables – Water Pressure Drop Adder for Options | | 38 |
| Antifreeze Correction Table | | 39 |

Document page number is shown next to part number (e.g. LC991 - 3 = page 3). Since not all pages are typically used in the submittals process, the page number in the lower right corner can still be used (page ____ of ____).

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TE Premier Efficiency Series

| | |
|---|----|
| Variable Pump Performance | 41 |
| Blower Performance Data | 42 |
| ClimaDry® II – General Information | 43 |
| ClimaDry® II – Sequence of Operation | 45 |
| Physical Data | 47 |
| TE Horizontal – Dimensional Data | 48 |
| TE Horizontal – Service Access | 50 |
| TE Vertical Upflow – Dimensional Data | 51 |
| TE Vertical – Service Access | 53 |
| TE Vertical Downflow – Dimensional Data | 54 |
| Corner Weights | 56 |
| Electrical Data | 57 |
| TE Series Wiring Diagram Matrix | 59 |
| Engineering Specifications | 60 |
| Performance Sheet | 70 |
| Revision History | 72 |



THE TRANQUILITY® 30 DIGITAL (TE) SERIES

As one of the highest efficiency water-source heat pumps on the planet, the Tranquility® 30 Digital Series raises the bar for water-source heat pump efficiencies, features and application flexibility. Not only does the Tranquility 30 Digital Series far exceed ASHRAE 90.1 efficiencies, but it also uses EarthPure® (HFC-410A) zero ozone depletion refrigerant, making it an extremely environmentally-friendly option. Tranquility 30 Digital is eligible for additional LEED® (Leadership in Energy and Environmental Design) points because of its “green” technology design.

Available in sizes 2 tons (7.0 kW) through 6 tons (19.3 kW) with multiple cabinet options (vertical upflow, vertical downflow and horizontal) the Tranquility 30 Digital offers a wide range of units for most installations. The Tranquility 30 Digital has an extended range refrigerant circuit, capable of ground loop (geothermal) applications as well as water loop (boiler-tower) applications. Some of the features of the innovative Tranquility 30 Digital include: Copeland UltraTech™ two-stage unloading scroll compressor, ECM variable communicating fan motor, communicating microprocessor controls, galvanized steel cabinet, polyester powder coat paint, stainless steel drain pan and foil-backed air handler insulation.

ClimateMaster’s exclusive double isolation compressor mounting system makes the Tranquility 30 Digital one of the quietest units on the market. Compressors are mounted on specially engineered sound tested EPDM grommets to a heavy gauge mounting plate, which is then isolated from the cabinet base with rubber grommets for maximized vibration/sound attenuation. Multiple removable access panels and an easily accessible control box make installation and maintenance user friendly. Options such as DDC controls, internal variable speed pumps, modulating water valves, and high efficiency MERV rated air filters allow for customizable design solutions.

iGate® 2 technology provides technicians an interface into the operation of the system in real time without the need for hard tooling. On board advanced controls communicate the key operating system temperatures enabling technicians to start-up, commission, and service the equipment remotely by smart phone or website via the cloud. Communication can also be done at the unit via a communicating thermostat or handheld service tool. Not only does iGate 2 monitor current performance, it also allows the functionality to make system adjustments and captures operating conditions at time of fault. All this information is displayed in an easy to read format maximizing the usability of the experience.

ClimateMaster’s patented ClimaDry® II Dehumidification option is an innovative means of providing modulating reheat without the complication of refrigeration controls. ClimaDry II is hot gas generated reheat, which utilizes one of the biggest advantages of a Water-Source Heat Pump (WSHP), the transfer of energy through the water piping system. ClimaDry II simply diverts condenser water through a water-to-air coil that is placed after the evaporator coil. ClimaDry II is the simplified leading reheat solution for commercial buildings. Hybrid hydronic heating combines the benefits of water source heat pumps and hydronic fan coils into one system. In cooling mode the system performs as normal using a compressor and refrigerant coil. In the heating mode the system uses a second hydronic coil for heating. By design, the system reduces compressor cycling, consumes less power at the unit in heating mode, and does not require a reversing valve to be used. Hybrid systems are an ideal fit for applications where hot water is provided as a domestic utility or can be generated high efficiently.

vFlow® is ClimateMaster’s variable water flow technology. It represents a major advancement in geothermal system performance - made possible through the iGate 2 system. vFlow not only builds the major water circulation components into the unit for a clean installation, it also intelligently varies the water flow to minimize pump energy consumption and improve system reliability.

The heart of vFlow is either a variable-speed pump (for ground loops) or modulating water valve (for ground water or central variable speed pumps) directly linked into the iGate 2 system. Water flow is automatically varied based on changes in unit capacity level (stage) and source water temperature to maintain optimum system performance. vFlow allows the use of direct return piping, while eliminating external two-way valves and automatic flow regulators - making vFlow systems inherently self-balancing.

vFlow systems provide reduced water pumping power compared to traditional fixed-speed pumping systems. They also protect the unit against extreme operating conditions, thus extending the life of the compressor and air coil. Since vFlow is built inside the unit, it also saves on installation time and makes for a very clean and compact installation. The Tranquility 30 Digital Series water-source heat pumps are designed to meet the challenges of today’s HVAC demands with one of the most innovative products available on the market.

Features, Options and Accessories

FEATURES

- Sizes 026 (2 ton, 7.0 kW) through 072 (6 tons, 19.3 kW)
- EarthPure® (HFC-410A) refrigerant
- Copeland UltraTech™ two-stage unloading scroll compressors
- ECM variable speed communicating fan motor with soft start
- Exceeds ASHRAE 90.1 efficiencies
- Part load operation significantly lowers annual operating costs
- Galvanized steel construction with attractive black matte polyester powder coat paint
- Stainless steel drain pan
- Foil-backed insulation in air handler section
- Unique double isolation compressor mounting with vibration isolation for quiet operation
- Insulated divider and separate compressor/air handler compartments
- TXV metering device
- Available extended range (20°F to 120°F, -6.7°C to 48.9°C) operation
- Advanced Controls - iGate® 2 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
- Field convertible discharge air arrangement for horizontal units
- Easy access control box
- Flush securely-mounted corner post water connections (no backup wrench required)
- Unit Performance Sentinel (UPS) monitoring system
- Eight Safeties Standard

OPTIONS

- iGate® 2 Communicating Controls Powered by DXM2.5 controls including cloud-based connectivity via iGate 2 Wi-Fi communicating color touch screen thermostat for remote monitoring, access, and diagnosis
 - Provides direct control over intelligent Constant Volume (CV) ECM fan motor
 - Controls ClimaDry® II hydronic modulating reheat
 - Allows operation of domestic Hot Water Generator (HWG)
- BACnet, Modbus and Johnson N2 compatibility options for DDC controls

ACCESSORIES

- Wi-Fi communicating color touch screen thermostat
- Wide variety of thermostat options to meet your application needs
- Various length braided hose kits with optional water valves, PT plugs, blowdown valve, flow limiting, and strainer options
- Externally mounted manual and motorized water valves
- 1" Merv 8 filter
- 2" Merv 8 or 13 filters
- Architecturally pleasing wall sensors for connection to
- DDC (MPC) controls
- Electric emergency duct heaters

iGate® 2 Communicating Controls Powered by DXM2.5

iGate® 2 Communication – Cloud connected, web-enabled information gateway to monitor, control, and diagnose your system



Tranquility® 30 Digital (TE) Series is equipped with industry-first, iGate® 2 communication information gateway that allows users to interact with their water-source system in easy to read clear language AND delivers improved reliability/efficiency by precisely controlling smart components.

Monitor/Configure – Installers can configure from the myUplink PRO website, mobile app, iGate 2 Communicating AWC Thermostat, or diagnostic tool, including: Airflow, unit family, size, 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.

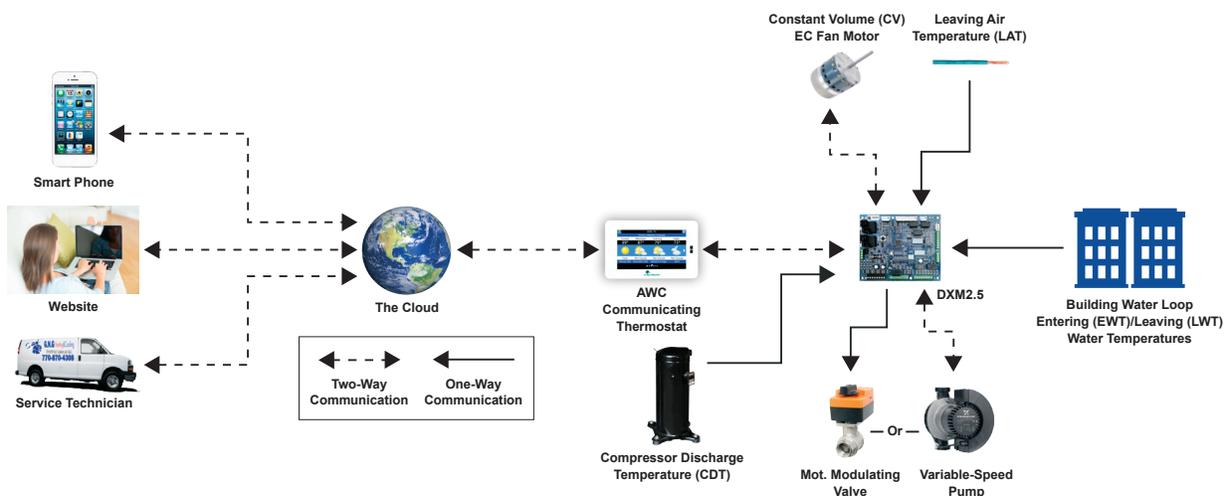
Precise Control – The new DXM2.5 board enables intelligent, 2-way communication between the DXM2.5 board and smart components like the communicating thermostat/diagnostic tool and constant volume (CV) EC fan motor. The advanced DXM2.5 board uses information received from the smart components and temperature sensors to precisely control operation of the variable speed CV EC fan motor to deliver higher efficiency, reliability and increased comfort.

Diagnostics – iGate 2 takes diagnosing water source heat pump units to a next level of simplicity, by providing a dashboard of system and fault information, in clear language, on the AWC Communicating Thermostat, handheld service tool and the web portal/mobile app on the internet.

iGate 2 Thermostat Service Warnings notify the homeowner and contractor of a fault and displays fault descriptions by app notifications/email with possible causes. Additionally, the current system status can be viewed graphically on the web portal and mobile app.

In iGate 2 Service Mode, the service personnel can access fault description, possible causes and most importantly, the conditions (temp, flow, i/o conditions, configuration) at the time of the fault. Manual Operation mode allows the service personnel to manually command operation for any of the thermostat outputs, blower speed, to help troubleshoot specific components. This operation can either be conducted at the unit with a communicating thermostat/diagnostic tool or remotely with mobile app/website when the AWC Communicating Thermostat controls are used.

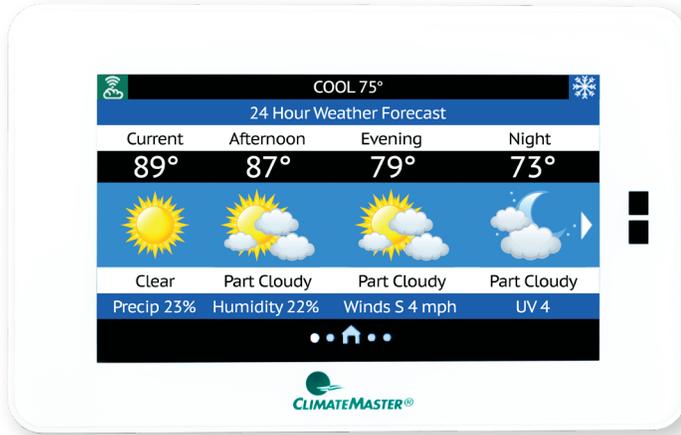
With an iGate 2 communicating system, users and contractors have a web-enabled gateway to system information never before available and exclusive to ClimateMaster products.



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iGate® 2 Communicating (AWC) Thermostat

iGate® 2 Communication – Cloud connected, web-enabled information gateway to monitor, control, and diagnose your system



The iGate® 2 Communicating (AWC) Thermostat is innovating the future of comfort technology, one building at a time. The inspired design of the touch screen interface allows you to see real-time data for the efficiency and health of your system, with early warnings for potential system faults. The cloud based information gateway allows technicians to remotely diagnose system issues before occupants even know there is a problem. Control and monitor the system in your home or business from anywhere in the world with an easy to use app on your phone.

Features with Efficiency in Mind



Touch Screen Interface

A brilliantly customizable touch screen monitor for simple control.



Seamless Integration

Between your iGate® 2 Communicating (AWC) Thermostat and Tranquility comfort system.



(Mobile) Remote System Control

Control temperature and schedule from anywhere in the world.



Early Fault Warnings

Alerts you and your contractor of potential system faults in the future.



Remote Diagnostics

Enable the contractor to remotely diagnose system issues, adjust system settings, and reset faults.



Real-Time Operations Data & System Schematics

Access simply via the myUplink Pro Account and web portal to view system diagrams with current operating temperatures.

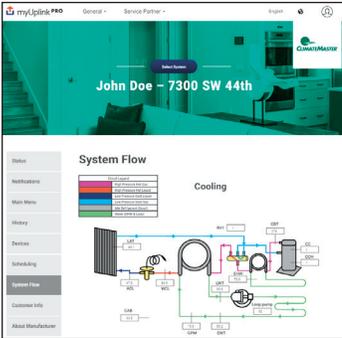


Revenue Stream

HVAC professionals can offer owners service contracts with remote monitoring and diagnosis capabilities without the large expense of a building management system.



HVAC Professional | User Experience



The iGate® 2 is more than just a smart thermostat for your residential or commercial customer, it's a business opportunity. Our new thermostat works with your customers' Tranquility comfort systems to provide the most efficient link between their system and

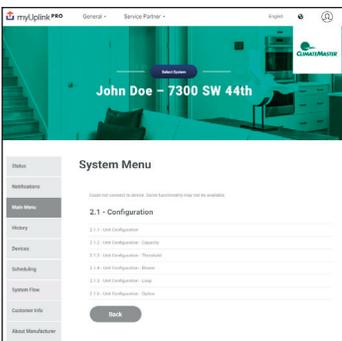
your services. The customization of monitoring from the myUplink PRO web portal or phone app account allows for continuous system monitoring, analysis, repair recognition, and early warnings for potential system faults that are sent to you and your customer.



Benefits

- Remote login from anywhere, anytime from any internet connected device
- View system fault history with possible root causes
- Information is available for contractors to troubleshoot and diagnosis systems remotely
- Secure internet connection keeps homeowner information private
- Access thermostat(s) through Android and iPhone mobile apps

Homeowner | User Experience



The iGate® 2 combines a Wi-Fi thermostat and advanced unit controls to communicate the systems operation information to the cloud. From any internet connected device or smart phone, homeowners can control and monitor their systems from anywhere in the

world. iGate 2 offers homeowners peace of mind their systems are operating at peak performance with advanced operational performance issue notifications. HVAC professionals get notifications when systems are operating out of range. They can log in remotely to check system faults, review current operating conditions, and diagnosis issues remotely. This gives the HVAC technician the upper hand when showing up to perform service, saving time which in turn saves money.



Benefits

- Communicates personal settings and reminders through the iGate 2 communication system
- Easy-to-use, full-color, high-resolution interface
- Sleek, intuitive button control
- Secure internet connection keeps your information private
- Contains unit model, serial number and your HVAC professionals contact information
- System monitoring automatically contacts HVAC system providers when service is needed

Constant Volume (CV) ECM

The Intelligent Constant Volume (CV) ECM blower motor provides unmatched functionality that saves installing and service technicians time while also providing increased comfort levels to occupants.

CV ECM's are programed to maintain a constant CFM across a wide range of external static pressures (ESP). This functionality differs from traditional PSC or even Constant Torque (CT) ECM's. With traditional PSC and CT ECM fan motors, as ESP is increased CFM is reduced. To increase or decrease the speed of the fan motor requires a fan motor switch or a technician to wire into a different motor tap. CT ECM's provide increased efficiency over PSC motors but with no additional functionality. With a CV ECM, as changes in ESP occur the fan motor will adjust its speed to deliver the desired CFM (within its operating range). This ensures the system is delivering the airflow and capacity it was designed for.

A major benefit of the CV ECM over other fan motor types its ability to adjust airflow remotely through the iGate® 2 web portal/mobile app or directly at the unit with a communicating diagnostic service tool or thermostat. Airflow levels can be adjusted in increments of 25 CFM from the units minimum and maximum CFM range (see CV ECM configuration table for details). This functionality allows technicians to dial in airflow during start-up and commissioning via an easy to use service tool. During operation occupants may have a desire for airflow adjustments. Reducing CFM can reduce airflow sound levels and increase cooling dehumidification (latent capacity). Technicians can easily make these adjustments without making wiring changes reducing service time with minimal disruption to the occupants.

The fan motor operating modes include:

- First Stage Cooling (Y1 & O)
- Second Stage Cooling (Y1, Y2, & O)
- First Stage Heating (Y1)
- Second Stage Heating (Y1 & Y2)
- Fan (G with no Y1, Y2, or W)

The CV ECM motor includes **“soft start”** and **“ramp down”** features. The soft start feature gently increases the motors rpm at blower start up resulting quieter blower start cycles. Likewise, the ramp down feature allows the blower to slowly decrease rpm to a full stop resulting in a quieter end to each blower cycle. The ramp down feature (also known as the heating or cooling “Off Delay”) also has the functionality to be field selected by the technician in the allowable range of 0 to 255 seconds.



Airflow Configuration Screen on Mobile App

vFlow® Internal Variable Water Flow Control

vFlow® Internal Variable Water Flow

Industry-first, built-in vFlow® provide an ultra-high-efficient, variable speed, internal water flow system. It saves installers time and labor by avoiding installing bulky external pumps, valves, 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® 2, which facilitates intelligent communication between the thermostat, DXM2.5 control, sensors, and internal water pump/valve to make true variable water flow a reality.

vFlow® is available in four variations:

1. Low System Pressure Drop Modulating Valve – High CV motorized valve for central pumping.
2. High System Pressure Drop Modulating Valve – Motorized valve for higher pressure water system such as water well pumps.
3. Standard Head Variable Pump – multi unit/central pumping.
4. High Head Variable Pump – multi/individual unit pumping.

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. Increased cost savings by varying the flow (and pump watt consumption) to match the unit's mode of operation.

Internal components

Tranquility® 30 Digital 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 DXM2.5 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.

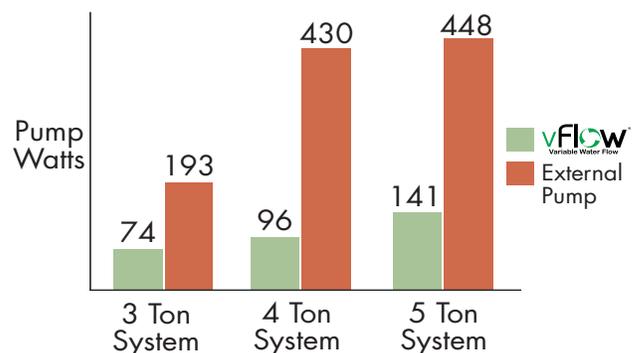


Energy Savings with water circulation control

Units with vFlow® deliver greater 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 (=greater cost savings) in vFlow units.

In applications using vFlow with internal variable speed (ECM) pump, 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. The ECM pump can operate with independent flow rates for both heating and cooling operations allowing for more energy savings.

In applications that use vFlow with a modulating valve, the motorized modulating valve slows down the water flow during part load operation. The external pump consumes fewer watts, thus saving more energy.



Selection Procedure

Reference Calculations

| HEATING | |
|--|--|
| $LWT = EWT - \frac{HE}{GPM \times 500}$ | |
| $LAT = EAT + \frac{HC}{CFM \times 1.08}$ | |

| COOLING | |
|--|-----------------------|
| $LWT = EWT + \frac{HR}{GPM \times 500}$ | $LC = TC - SC$ |
| $LAT (DB) = EAT (DB) - \frac{SC}{CFM \times 1.08}$ | $S/T = \frac{SC}{TC}$ |

Conversion Table - to convert inch-pound (English) to S-I (Metric)

| Airflow | Water Flow | Est Static Pressure | Water Pressure Drop |
|-----------------------------|---------------------------------|---------------------------------|---------------------------------|
| Airflow (L/s) = CFM x 0.472 | Water Flow (L/s) = gpm x 0.0631 | ESP (Pa) = ESP (in of wg) x 249 | PD (kPa) = PD (ft of hd) x 2.99 |

Legend and Glossary of Abbreviations

| Abbreviations | Descriptions |
|---------------|---|
| BTUH | BTU (British Thermal Unit) per hour |
| CDT | Compressor discharge temperature |
| CFM | Airflow, cubic feet per minute |
| COP | Coefficient of performance = BTUH output/BTUH input |
| CT ECM | Electronic commutated constant torque fan motor |
| CV ECM | Electronic commutated constant volume fan motor |
| DB | Dry bulb temperature, °F |
| EAT | Entering air temperature |
| EER | Energy efficient ratio = BTUH output/Watt input |
| ESP | External static pressure, inches w.g. |
| EWT | Entering water temperature |
| FPT | Female pipe thread |
| GPM | Water flow in U.S., gallons per minute |
| HC | Air heating capacity, BTUH |
| HE | Total heat of extraction, BTUH |
| HR | Total heat of rejection, BTUH |
| HWC | Hot water generator (desuperheater) capacity, Mbtuh |
| KW | Total power unit input, kilowatts |
| LAT | Leaving air temperature, °F |
| LC | Latent cooling capacity, BTUH |
| LOC | Loss of charge |
| LWT | Leaving water temperature, °F |
| MBTUH | 1,000 BTU per hour |
| MPT | Male pipe thread |
| MWV | Motorized water valve |
| PSC | Permanent split capacitor |
| SC | Sensible cooling capacity, BTUH |
| S/T | Sensible to total cooling ratio |
| TC | Total cooling capacity, BTUH |
| TD or delta T | Temperature differential |
| VFD | Variable frequency drive |
| WB | Wet bulb temperature, °F |
| WPD | Waterside pressure drop, psi or feet of head |
| WSE | Waterside economizer |

Selection Procedure

- Step 1** Determine the actual heating and cooling loads at the desired dry bulb and wet bulb conditions.
- Step 2** Obtain the following design parameters: Entering water temperature, water flow rate in GPM, air flow in CFM, water flow pressure drop and design wet and dry bulb temperatures. Air flow CFM should be between 300 and 450 CFM per ton. Unit water pressure drop should be kept as close as possible to each other to make water balancing easier. Go to the appropriate tables and find the proper indicated water flow and water temperature.
- Step 3** Select a unit based on total and sensible cooling conditions. Select a unit which is closest to, but no larger than, the actual cooling load.
- Step 4** Enter tables at the design water flow and water temperature. Read the total and sensible cooling capacities (**Note: interpolation is permissible, extrapolation is not**).
- Step 5** Read the heating capacity. If it exceeds the design criteria it is acceptable. It is quite normal for Water-Source Heat Pumps to be selected on cooling capacity only since the heating output is usually greater than the cooling capacity.
- Step 6** Determine the correction factors associated with the variable factors of dry bulb and wet bulb.

 Corrected Total Cooling =
 tabulated total cooling x wet bulb correction.

 Corrected Sensible Cooling =
 tabulated sensible cooling x wet/dry bulb correction.
- Step 7** Compare the corrected capacities to the load requirements. Normally if the capacities are within 10% of the loads, the equipment is acceptable. It is better to undersize than oversize, as undersizing improves humidity control, reduces sound levels and extends the life of the equipment.
- Step 8** When completed, calculate water temperature rise and assess the selection. If the units selected are not within 10% of the load calculations, then review what effect changing the GPM, water temperature and/or air flow and air temperature would have on the corrected capacities. If the desired capacity cannot be achieved, select the next larger or smaller unit and repeat the procedure. Remember, when in doubt, undersize slightly for best performance.

Example Equipment Selection For Cooling Step 1 Load Determination:

Assume we have determined that the appropriate cooling load at the desired dry bulb 80°F and wet bulb 65°F conditions is as follows:

| | |
|------------------------|-------------------------------|
| Total Cooling | 22,100 BTUH |
| Sensible Cooling..... | 16,500 BTUH |
| Entering Air Temp..... | 80°F Dry Bulb / 65°F Wet Bulb |

Step 2 Design Conditions:

Similarly, we have also obtained the following design parameters:

| | |
|---|---------|
| Entering Water Temp | 90°F |
| Water Flow (Based upon 10°F rise in temp.)..... | 6.0 GPM |
| Airflow | 730 CFM |

Steps 3, 4 & 5 HP Selection:

After making our preliminary selection (TEH026 - Full Load), we enter the tables at design water flow and water temperature and read Total Cooling, Sens. Cooling and Heat of Rej. capacities:

| | |
|------------------------|-------------|
| Total Cooling | 24,200 BTUH |
| Sensible Cooling..... | 16,300 BTUH |
| Heat of Rejection..... | 29,900 BTUH |

Steps 6 & 7 Entering Air and Airflow Corrections:

Next, we determine our correction factors.

| | Table | Ent Air | Air Flow | Corrected |
|----------------------------|--------|------------|-------------|-----------|
| Corrected Total Cooling = | 24,200 | x 0.975 | x 0.978 | = 23,076 |
| Corrected Sens Cooling = | 16,300 | x 1.096 | x 0.926 | = 16,543 |
| Corrected Heat of Reject = | 29,900 | x 0.979 | x 0.978 | = 28,628 |

Step 8 Water Temperature Rise Calculation and Assessment:

| | |
|------------------------------|-------|
| Actual Temperature Rise..... | 9.5°F |
|------------------------------|-------|

When we compare the Corrected Total Cooling and Corrected Sensible Cooling figures with our load requirements stated in Step 1, we discover that our selection is within +/- 10% of our sensible load requirement. Furthermore, we see that our Corrected Total Cooling figure is within 1,000 Btuh of the actual indicated load.

TE Series Nomenclature

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

TE **V** **026** **B** **G** **D** **1** **0** **B** **L** **T** **S**

SERIES
TE = Tranquility® 30 Digital

CONFIGURATION
V = Vertical Up
H = Horizontal
D = Downflow

UNIT SIZE
026 E, F, G, H
038 E, F, G, H
049 E, F, G, H
064 E, F, G, H
072 F, G, H

REVISION LEVEL
B = Current Revision

VOLTAGE
G = 208/230/60/1
E = 265/60/1
F = 460/60/3
H = 208/230/60/3

CONTROLS
D = DXM2.5
P = DXM2.5 w/MPC
B = DXM2.5
S = DXM2.5 w/MPC } With Disconnect

STANDARD
S = Standard

SUPPLY AIR FLOW & MOTOR CONFIGURATION

| | Supply | Configuration | Motor |
|---|----------|---------------|-------|
| T | Top | TEV | ECM |
| B | Back | TEH | ECM |
| S | Straight | TEH | ECM |
| D | Down | TED | ECM |

RETURN AIR FLOW CONFIGURATION
L = Left Return, Stainless Steel Drain Pan
R = Right Return, Stainless Steel Drain Pan

HEAT EXCHANGER OPTIONS

| | Uncoated Copper Air Coil | | Tin Plated Copper/Micro-Channel Aluminum Air Coil | |
|--------------------------------|--------------------------|--------------|---|--------------|
| | Copper | Cupro-Nickel | Copper | Cupro-Nickel |
| Standard | B | G | A | J |
| HWG (Coil Only) | T | V | U | W |
| ClimaDry® II | E | P | D | F |
| ClimaDry® II + HWG (Coil Only) | H | K | 0 | 9 |

Sizes 026 to 049 always have an all-aluminum microchannel air coil.
Sizes 064 and 072 have an aluminum fin copper tube air coil with an option for tin plated copper tubes for added corrosion protection.
ClimaDry® II reheat coil is not tin-plated

WATER CIRCUIT OPTIONS
0 = None
3 = Internal Pump Standard Head with Check Valve (Variable)
4 = Internal Pump High Head with Check Valve (Variable)
5 = Motorized Valve (Modulating) Closed Loop Applications, Low System Pressure Drop
6 = Motorized Valve (Modulating) Open Loop Applications, High System Pressure Drop
7 = Internal Secondary Pump - Single Speed
C = Internal Pump Standard Head Without Check Valve (Variable)
D = Internal Pump High Head Without Check Valve (Variable)

CABINET

| OPTION | RANGE | ULTRA QUIET | 1" FILTER RACK | 2" FILTER RACK | 1" FILTER FRAME | 2" FILTER FRAME | |
|--------|----------------|-------------|----------------|----------------|-----------------|-----------------|-----|
| 1 | EXTENDED RANGE | NO | YES | NO | | YES | |
| A | | | NO | YES | NO | YES | |
| J | | | NO | YES | NO | NO | |
| K | | | NO | YES | YES | NO | |
| 2 | | | YES | NO | NO | | YES |
| C | STANDARD RANGE | NO | NO | YES | NO | NO | |
| L | | | NO | YES | YES | NO | |
| M | | | NO | YES | NO | NO | |
| 3 | | | YES | NO | NO | | YES |
| E | | | NO | YES | NO | YES | |
| N | STANDARD RANGE | YES | NO | YES | NO | NO | |
| P | | | NO | YES | NO | NO | |
| 4 | | | YES | NO | NO | | YES |
| G | | | NO | YES | NO | YES | |
| R | | | NO | YES | NO | NO | |
| S | NO | YES | YES | NO | | | |

Note: Above model nomenclature is a general reference. Not all configurations are available on all models. Consult selection software for detailed information.

ClimaDry® II Option Notes:

Unit minimum entering air temperature when in dehumidification or cooling mode is 65°F DB. Operation below this minimum may result in nuisance faults.
A thermostat with dehumidification mode or a thermostat and separate humidistat or dehumidistat is required for activation and control of ClimaDry® II.

Performance Data – AHRI/ASHRAE/ISO 13256-1

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

| Model | Water Loop Heat Pump | | | | Ground Water Heat Pump | | | | Ground Loop Heat Pump | | | |
|------------|----------------------|---------------|------------------|-----|------------------------|---------------|------------------|-----|----------------------------------|---------------|----------------------------------|-----|
| | Cooling 86°F | | Heating 68°F | | Cooling 59°F | | Heating 50°F | | Full Cool 77°F Part Cool 68°F | | Full Heat 32°F Part Heat 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 | 19,200 | 19.8 | 23,600 | 7.0 | 22,000 | 34.1 | 19,000 | 5.8 | 20,800 | 28.0 | 16,800 | 5.0 |
| TE026 Full | 25,000 | 17.4 | 31,400 | 6.0 | 28,500 | 26.4 | 25,800 | 5.3 | 26,000 | 19.9 | 20,200 | 4.1 |
| TE038 Part | 27,400 | 20.1 | 32,600 | 6.5 | 30,700 | 34.4 | 27,300 | 5.5 | 29,700 | 29.6 | 23,800 | 4.8 |
| TE038 Full | 37,700 | 17.9 | 45,700 | 5.8 | 42,100 | 26.1 | 37,900 | 5.2 | 39,000 | 20.3 | 29,700 | 4.4 |
| TE049 Part | 36,300 | 18.8 | 42,200 | 6.1 | 41,800 | 32.9 | 34,800 | 5.0 | 39,100 | 27.4 | 29,800 | 4.4 |
| TE049 Full | 48,600 | 16.8 | 56,700 | 5.1 | 55,000 | 25.3 | 46,800 | 4.6 | 49,600 | 19.3 | 36,400 | 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 |
| TE064 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 |
| TE072 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 |

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% antifreeze solution
 All ratings based upon operation at lower voltage of dual voltage rated models

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

| Model | Water Loop Heat Pump | | | | Ground Water Heat Pump | | | | Ground Loop Heat Pump | | | |
|------------|----------------------|------------|----------------|-----|------------------------|------------|----------------|-----|----------------------------------|------------|--------------------------------|-----|
| | Cooling 30°C | | Heating 20°C | | Cooling 15°C | | Heating 10°C | | Full Cool 25°C Part Cool 20°C | | Full Heat 0°C Part Heat 5°C | |
| | Capacity kW | EER W/W | Capacity kW | COP | Capacity kW | EER W/W | Capacity kW | COP | Capacity kW | EER W/W | Capacity kW | COP |
| TE026 Part | 5.63 | 5.8 | 6.91 | 7.0 | 6.45 | 10 | 5.57 | 5.8 | 6.09 | 8.2 | 4.92 | 5.0 |
| TE026 Full | 7.32 | 5.1 | 9.20 | 6.0 | 8.35 | 7.7 | 7.56 | 5.3 | 7.62 | 5.8 | 5.92 | 4.1 |
| TE038 Part | 8.03 | 5.9 | 9.55 | 6.5 | 9.00 | 10.1 | 8.00 | 5.5 | 8.70 | 8.7 | 6.97 | 4.8 |
| TE038 Full | 11.05 | 5.2 | 13.39 | 5.8 | 12.34 | 7.7 | 11.10 | 5.2 | 11.43 | 5.9 | 8.70 | 4.4 |
| TE049 Part | 10.64 | 5.5 | 12.36 | 6.1 | 12.25 | 9.6 | 10.20 | 5.0 | 11.46 | 8.0 | 8.73 | 4.4 |
| TE049 Full | 14.24 | 4.9 | 16.61 | 5.1 | 16.11 | 7.4 | 13.71 | 4.6 | 14.53 | 5.7 | 10.67 | 4.0 |
| TE064 Part | 13.57 | 5.5 | 16.03 | 6.0 | 15.56 | 9.5 | 12.90 | 5.0 | 15.01 | 7.8 | 11.17 | 4.4 |
| TE064 Full | 18.02 | 4.7 | 22.68 | 5.4 | 20.96 | 7.2 | 18.52 | 4.8 | 19.40 | 5.5 | 14.27 | 3.9 |
| TE072 Part | 15.53 | 4.9 | 18.93 | 5.2 | 17.82 | 8.4 | 15.59 | 4.5 | 17.03 | 6.8 | 13.48 | 3.9 |
| TE072 Full | 20.02 | 4.4 | 25.00 | 4.8 | 22.77 | 6.6 | 20.93 | 4.4 | 21.01 | 5.0 | 16.35 | 3.7 |

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% antifreeze solution
 All ratings based upon operation at lower voltage of dual voltage rated models

Performance Data – Selection Notes, vFlow® Models

Operation in Shaded Area: Closed Loop Application

For operation in the shaded area, appropriate levels of a proper antifreeze 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 DXM2.5) should be set such that the LWT (=EWT - ΔT) doesn't drop below 40°F. JW3 should NEVER be clipped for systems without antifreeze.

Amended in this range. Also Clip JW3 on DXM2.5

Heating - EAT 70°F

| TD | CFM | HC | kW | COP | HE | LAT | LWT | HWC | |
|-----|-----|-----|------|-----|-----|------|-----|------|-----|
| 5.5 | 5.8 | 725 | 11.3 | 1.1 | 2.9 | 7.4 | 84 | 16.7 | 1.2 |
| 5.5 | 5.8 | 850 | 11.5 | 1.1 | 3.1 | 7.7 | 82 | 16.6 | 1.2 |
| 5.7 | 1.7 | 725 | 12.5 | 1.1 | 3.2 | 8.6 | 86 | 22.4 | 1.4 |
| 5.7 | 1.7 | 850 | 12.7 | 1.1 | 3.4 | 8.9 | 84 | 22.1 | 1.3 |
| 5.3 | 3.0 | 725 | 13.1 | 1.1 | 3.3 | 9.1 | 87 | 24.6 | 1.4 |
| 5.3 | 3.0 | 850 | 13.2 | 1.1 | 3.5 | 9.5 | 84 | 24.4 | 1.4 |
| 5.0 | 4.6 | 725 | 13.4 | 1.1 | 3.4 | 9.4 | 87 | 25.8 | 1.4 |
| 5.0 | 4.6 | 850 | 13.5 | 1.1 | 3.6 | 9.8 | 85 | 25.7 | 1.4 |
| 4.2 | 1.2 | 725 | 14.5 | 1.2 | 3.7 | 10.6 | 89 | 30.6 | 1.6 |
| 4.2 | 1.2 | 850 | 14.7 | 1.1 | 3.9 | 10.9 | 86 | 30.3 | 1.5 |
| 4.4 | 2.4 | 725 | 15.2 | 1.2 | 3.9 | 11.3 | 89 | 33.4 | 1.6 |
| 4.4 | 2.4 | 850 | 15.4 | 1.1 | 4.1 | 11.7 | 87 | 33.1 | 1.5 |
| 4.3 | 3.0 | 725 | 15.6 | 1.2 | 4.0 | 11.7 | 90 | 34.8 | 1.6 |
| 4.3 | 3.0 | 850 | 15.8 | 1.1 | 4.2 | 12.1 | 87 | 34.6 | 1.5 |
| 4.2 | 4.6 | 725 | 16.6 | 1.2 | 4.2 | 12.6 | 91 | 38.9 | 1.7 |
| 4.2 | 4.6 | 850 | 16.8 | 1.1 | 4.4 | 13.0 | 88 | 38.7 | 1.6 |
| 4.1 | 7.5 | 725 | 17.5 | 1.2 | 4.4 | 13.5 | 92 | 41.5 | 1.7 |
| 4.1 | 7.5 | 850 | 17.7 | 1.1 | 4.7 | 14.0 | 89 | 41.3 | 1.6 |

Performance Data Selection Notes - Models without vFlow®

For operation in the shaded area when water is used in lieu of an antifreeze 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 antifreeze solution should be used in systems with leaving water temperatures of 40°F [4.4°C] 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.

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.

$$TD = HE / (GPM \times 500)$$

$$TD = 22,500 / (4.5 \times 500)$$

$$TD = 10^\circ\text{F}$$

$$\text{LWT} = \text{EWT} - \text{TD}$$

$$\text{LWT} = 50 - 10 = 40^\circ\text{F}$$

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).

Heating - EAT 70°F

| HE | Airflow CFM | HC | kW | HE | LAT | COP |
|------|-------------|------|------|------|------|------|
| | 825 | 11.7 | 1.02 | 8.4 | 83.2 | 3.38 |
| | 710 | 13.6 | 1.09 | 10.1 | 87.8 | 3.66 |
| 38.3 | 825 | 13.8 | 1.06 | 10.3 | 85.5 | 3.81 |
| 39.2 | 710 | 14.2 | 1.09 | 10.7 | 88.5 | 3.81 |
| 39.2 | 825 | 14.4 | 1.06 | 10.9 | 86.1 | 3.97 |
| 39.8 | 710 | 14.4 | 1.09 | 10.9 | 88.8 | 3.86 |
| 39.8 | 825 | 14.6 | 1.06 | 11.1 | 86.3 | 4.02 |
| 35.3 | 710 | 16.1 | 1.15 | 12.3 | 90.9 | 4.08 |
| 35.3 | 825 | 16.2 | 1.12 | 12.6 | 88.2 | 4.25 |
| 37.9 | 710 | 16.7 | 1.15 | 13.0 | 91.8 | 4.25 |
| 37.9 | 825 | 16.9 | 1.12 | 13.3 | 89.0 | 4.42 |
| 38.3 | 710 | 16.9 | 1.16 | 13.2 | 92.1 | 4.30 |
| 38.3 | 825 | 17.1 | 1.12 | 13.5 | 89.2 | 4.47 |
| 30.7 | 710 | 18.3 | 1.18 | 14.5 | 93.9 | 4.56 |
| 30.7 | 825 | 18.5 | 1.14 | 14.8 | 90.8 | 4.75 |
| 34.4 | 710 | 19.1 | 1.18 | 15.2 | 94.8 | 4.73 |
| 34.4 | 825 | 19.3 | 1.15 | 15.5 | 91.6 | 4.93 |
| 34.4 | 710 | 19.3 | 1.18 | 15.4 | 95.1 | 4.78 |
| 34.4 | 825 | 19.5 | 1.15 | 15.7 | 91.9 | 4.98 |
| 34.4 | 710 | 20.4 | 1.21 | 16.5 | 96.6 | 4.98 |
| 34.4 | 825 | 20.6 | 1.18 | 16.8 | 93.2 | 5.18 |
| 34.4 | 710 | 21.2 | 1.22 | 17.3 | 97.7 | 5.18 |
| 34.4 | 825 | 21.4 | 1.19 | 17.6 | 94.8 | 5.38 |

Performance Data – TE H/V/D 026 (Part Load), No vFlow®

850 CFM Nominal (Rated) Airflow Heating, 750 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | HEATING - EAT 70°F | | | | | | |
|--------|-----|-----|-----|------------------------|------|------|------|------|------|--------------------|------|------|-------|-------|-----|-----|
| | | PSI | FT | TC | SC | kW | HR | EER | HWC | HC | kW | HE | LAT | COP | HWC | |
| 20 | 4.5 | 1.2 | 2.9 | | | | | | | 11.7 | 1.20 | 7.6 | 82.7 | 2.9 | 1.2 | |
| | 30 | 2.3 | 0.5 | 1.1 | 23.6 | 15.6 | 0.61 | 25.6 | 38.8 | 0.7 | 13.2 | 1.18 | 9.2 | 84.3 | 3.3 | 1.3 |
| | | 3.4 | 0.8 | 1.8 | 23.2 | 14.9 | 0.56 | 25.2 | 41.2 | 0.7 | 13.8 | 1.17 | 9.8 | 85.0 | 3.5 | 1.4 |
| 40 | 4.5 | 1.1 | 2.6 | 22.9 | 14.5 | 0.55 | 24.8 | 41.9 | 0.7 | 14.1 | 1.16 | 10.2 | 85.4 | 3.6 | 1.4 | |
| | 50 | 2.3 | 0.4 | 1.0 | 23.5 | 15.3 | 0.68 | 25.8 | 34.4 | 0.8 | 15.4 | 1.15 | 11.5 | 86.7 | 3.9 | 1.5 |
| | | 3.4 | 0.7 | 1.7 | 23.5 | 15.8 | 0.63 | 25.7 | 37.6 | 0.7 | 16.2 | 1.14 | 12.3 | 87.6 | 4.2 | 1.6 |
| 60 | 4.5 | 1.1 | 2.5 | 23.5 | 15.9 | 0.60 | 25.6 | 39.2 | 0.7 | 16.6 | 1.13 | 12.8 | 88.1 | 4.3 | 1.6 | |
| | 70 | 2.3 | 0.4 | 1.0 | 22.9 | 15.9 | 0.77 | 25.5 | 29.6 | 1.1 | 17.7 | 1.12 | 13.8 | 89.2 | 4.6 | 1.7 |
| | | 3.4 | 0.7 | 1.6 | 23.3 | 16.0 | 0.70 | 25.7 | 33.1 | 0.9 | 18.6 | 1.11 | 14.8 | 90.2 | 4.9 | 1.8 |
| 80 | 4.5 | 1.0 | 2.3 | 23.5 | 16.0 | 0.67 | 25.8 | 34.9 | 0.8 | 19.1 | 1.11 | 15.4 | 90.8 | 5.1 | 1.8 | |
| | 90 | 2.3 | 0.4 | 1.0 | 21.9 | 15.5 | 0.88 | 24.9 | 24.9 | 1.5 | 19.9 | 1.10 | 16.2 | 91.7 | 5.3 | 1.9 |
| | | 3.4 | 0.7 | 1.6 | 22.6 | 15.8 | 0.80 | 25.3 | 28.3 | 1.2 | 21.1 | 1.09 | 17.3 | 92.9 | 5.6 | 1.9 |
| 100 | 4.5 | 1.0 | 2.3 | 22.9 | 15.9 | 0.76 | 25.5 | 30.0 | 1.1 | 21.7 | 1.09 | 18.0 | 93.6 | 5.8 | 2.0 | |
| | 110 | 2.3 | 0.4 | 1.0 | 20.7 | 15.0 | 1.00 | 24.1 | 20.7 | 2.0 | 22.2 | 1.09 | 18.5 | 94.2 | 6.0 | 2.0 |
| | | 3.4 | 0.7 | 1.6 | 21.5 | 15.4 | 0.91 | 24.6 | 23.6 | 1.6 | 23.6 | 1.09 | 19.9 | 95.6 | 6.4 | 2.1 |
| 120 | 4.5 | 1.0 | 2.2 | 21.9 | 15.6 | 0.87 | 24.9 | 25.2 | 1.4 | 24.3 | 1.09 | 20.6 | 96.4 | 6.6 | 2.2 | |
| | 130 | 2.3 | 0.4 | 1.0 | 19.3 | 14.3 | 1.14 | 23.2 | 16.9 | 2.6 | 24.6 | 1.09 | 20.9 | 96.8 | 6.6 | 2.2 |
| | | 3.4 | 0.7 | 1.5 | 20.2 | 14.8 | 1.04 | 23.8 | 19.4 | 2.2 | 26.2 | 1.09 | 22.4 | 98.4 | 7.0 | 2.3 |
| 140 | 4.5 | 0.9 | 2.2 | 20.7 | 15.0 | 1.00 | 24.1 | 20.8 | 2.0 | 27.1 | 1.10 | 23.3 | 99.4 | 7.2 | 2.3 | |
| | 150 | 2.3 | 0.4 | 1.0 | 17.8 | 13.6 | 1.30 | 22.2 | 13.7 | 3.4 | 27.1 | 1.10 | 23.3 | 99.4 | 7.2 | 2.3 |
| | | 3.4 | 0.7 | 1.5 | 18.7 | 14.1 | 1.19 | 22.8 | 15.7 | 2.9 | 28.9 | 1.11 | 25.1 | 101.4 | 7.6 | 2.4 |
| 160 | 4.5 | 0.9 | 2.2 | 19.2 | 14.3 | 1.14 | 23.1 | 16.9 | 2.7 | 29.9 | 1.12 | 26.1 | 102.5 | 7.8 | 2.5 | |
| | 170 | 2.3 | 0.4 | 1.0 | 16.3 | 13.0 | 1.48 | 21.4 | 11.1 | 4.3 | | | | | | |
| | | 3.4 | 0.7 | 1.5 | 17.2 | 13.4 | 1.36 | 21.9 | 12.6 | 3.8 | | | | | | |
| 180 | 4.5 | 0.9 | 2.1 | 17.7 | 13.6 | 1.31 | 22.2 | 13.6 | 3.5 | | | | | | | |
| | 190 | 2.3 | 0.4 | 0.9 | 14.9 | 12.4 | 1.68 | 20.6 | 8.9 | 5.4 | | | | | | |
| | | 3.4 | 0.7 | 1.5 | 15.7 | 12.7 | 1.56 | 21.0 | 10.1 | 4.8 | | | | | | |
| 200 | 4.5 | 0.9 | 2.1 | 16.2 | 12.9 | 1.49 | 21.3 | 10.8 | 4.4 | | | | | | | |
| | 210 | 2.3 | 0.4 | 0.9 | 13.7 | 12.1 | 1.91 | 20.2 | 7.2 | 6.6 | | | | | | |
| | | 3.4 | 0.6 | 1.4 | 14.4 | 12.3 | 1.77 | 20.4 | 8.1 | 5.9 | | | | | | |
| 220 | 4.5 | 0.9 | 2.0 | 14.7 | 12.4 | 1.71 | 20.6 | 8.6 | 5.5 | | | | | | | |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.
 Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.
 Table is with entering air of 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.
 See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.
 Operation below 40°F EWT is based on a 15% methanol antifreeze solution.
 Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 026 (Full Load), No vFlow®

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

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | HEATING - EAT 70°F | | | | | |
|--------|-----|-----|-----|------------------------|------|------|------|------|-----|--------------------|------|------|-------|-----|-----|
| | | PSI | FT | TC | SC | kW | HR | EER | HWC | HC | kW | HE | LAT | COP | HWC |
| 20 | 6.0 | 1.9 | 4.4 | | | | | | | 16.8 | 1.68 | 11.0 | 86.3 | 2.9 | 1.5 |
| | 3.0 | 0.7 | 1.6 | 30.6 | 19.4 | 1.03 | 34.1 | 29.7 | 0.8 | 18.5 | 1.64 | 12.9 | 88.0 | 3.3 | 1.8 |
| | 4.5 | 1.1 | 2.6 | 30.3 | 18.9 | 0.96 | 33.6 | 31.5 | 0.7 | 19.4 | 1.63 | 13.8 | 88.8 | 3.5 | 1.9 |
| 30 | 6.0 | 1.8 | 4.0 | 29.9 | 18.6 | 0.93 | 33.1 | 32.2 | 0.7 | 19.8 | 1.62 | 14.3 | 89.3 | 3.6 | 1.9 |
| | 3.0 | 0.6 | 1.5 | 30.4 | 19.3 | 1.12 | 34.2 | 27.0 | 1.1 | 21.3 | 1.61 | 15.8 | 90.7 | 3.9 | 2.1 |
| | 4.5 | 1.1 | 2.5 | 30.5 | 19.5 | 1.05 | 34.1 | 29.0 | 0.9 | 22.4 | 1.60 | 16.9 | 91.7 | 4.1 | 2.3 |
| 40 | 6.0 | 1.6 | 3.8 | 30.6 | 19.6 | 1.02 | 34.0 | 30.1 | 0.8 | 23.0 | 1.59 | 17.5 | 92.3 | 4.2 | 2.3 |
| | 3.0 | 0.6 | 1.4 | 29.6 | 19.4 | 1.23 | 33.8 | 24.1 | 1.5 | 24.1 | 1.59 | 18.7 | 93.5 | 4.5 | 2.5 |
| | 4.5 | 1.0 | 2.3 | 30.2 | 19.6 | 1.15 | 34.1 | 26.3 | 1.2 | 25.4 | 1.59 | 20.0 | 94.7 | 4.7 | 2.6 |
| 50 | 6.0 | 1.6 | 3.6 | 30.4 | 19.6 | 1.11 | 34.2 | 27.4 | 1.1 | 26.2 | 1.59 | 20.7 | 95.4 | 4.8 | 2.7 |
| | 3.0 | 0.6 | 1.3 | 28.4 | 18.9 | 1.35 | 33.0 | 21.1 | 1.9 | 27.1 | 1.59 | 21.6 | 96.3 | 5.0 | 2.8 |
| | 4.5 | 1.0 | 2.3 | 29.3 | 19.3 | 1.26 | 33.6 | 23.3 | 1.6 | 28.6 | 1.60 | 23.1 | 97.8 | 5.2 | 3.0 |
| 60 | 6.0 | 1.5 | 3.5 | 29.7 | 19.4 | 1.22 | 33.8 | 24.4 | 1.4 | 29.4 | 1.61 | 24.0 | 98.6 | 5.4 | 3.1 |
| | 3.0 | 0.6 | 1.3 | 26.9 | 18.3 | 1.48 | 32.0 | 18.2 | 2.4 | 30.1 | 1.61 | 24.6 | 99.2 | 5.5 | 3.2 |
| | 4.5 | 1.0 | 2.2 | 28.0 | 18.8 | 1.38 | 32.7 | 20.3 | 2.1 | 31.8 | 1.64 | 26.2 | 101.0 | 5.7 | 3.3 |
| 70 | 6.0 | 1.5 | 3.4 | 28.5 | 19.0 | 1.33 | 33.1 | 21.4 | 1.9 | 32.8 | 1.66 | 27.2 | 101.9 | 5.8 | 3.4 |
| | 3.0 | 0.6 | 1.3 | 25.2 | 17.5 | 1.64 | 30.8 | 15.4 | 3.0 | 33.1 | 1.66 | 27.5 | 102.2 | 5.8 | 3.5 |
| | 4.5 | 0.9 | 2.2 | 26.0 | 17.9 | 1.56 | 31.3 | 16.6 | 2.6 | 34.4 | 1.69 | 28.7 | 103.5 | 6.0 | 3.7 |
| 80 | 6.0 | 1.4 | 3.3 | 26.7 | 18.2 | 1.50 | 31.8 | 17.7 | 2.4 | 35.6 | 1.72 | 29.8 | 104.7 | 6.1 | 3.8 |
| | 3.0 | 0.6 | 1.3 | 23.5 | 16.7 | 1.81 | 29.7 | 12.9 | 3.7 | 36.3 | 1.74 | 30.4 | 105.3 | 6.1 | 3.8 |
| | 4.5 | 0.9 | 2.2 | 24.7 | 17.3 | 1.69 | 30.4 | 14.6 | 3.3 | 38.7 | 1.81 | 32.5 | 107.6 | 6.2 | 4.0 |
| 90 | 6.0 | 1.4 | 3.2 | 25.3 | 17.5 | 1.63 | 30.9 | 15.5 | 3.0 | 40.0 | 1.86 | 33.6 | 108.9 | 6.3 | 4.1 |
| | 3.0 | 0.6 | 1.3 | 21.7 | 15.9 | 2.02 | 28.6 | 10.7 | 4.5 | | | | | | |
| | 4.5 | 0.9 | 2.1 | 22.9 | 16.4 | 1.88 | 29.3 | 12.1 | 4.0 | | | | | | |
| 100 | 6.0 | 1.4 | 3.2 | 23.5 | 16.7 | 1.82 | 29.7 | 12.9 | 3.7 | | | | | | |
| | 3.0 | 0.6 | 1.3 | 20.0 | 15.2 | 2.26 | 27.7 | 8.8 | 5.4 | | | | | | |
| | 4.5 | 0.9 | 2.1 | 21.1 | 15.7 | 2.11 | 28.2 | 10.0 | 4.8 | | | | | | |
| 110 | 6.0 | 1.4 | 3.1 | 21.6 | 15.9 | 2.03 | 28.6 | 10.6 | 4.5 | | | | | | |
| | 3.0 | 0.5 | 1.2 | 18.5 | 14.7 | 2.55 | 27.2 | 7.3 | 6.4 | | | | | | |
| | 4.5 | 0.9 | 2.0 | 19.4 | 15.0 | 2.37 | 27.5 | 8.2 | 5.8 | | | | | | |
| 120 | 6.0 | 1.3 | 3.1 | 19.9 | 15.2 | 2.28 | 27.7 | 8.7 | 5.5 | | | | | | |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.
 Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.
 Table is with entering air of 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.
 See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.
 Operation below 40°F EWT is based on a 15% methanol antifreeze solution.
 Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 038 (Part Load), No vFlow®

1,000 CFM Nominal (Rated) Airflow Heating, 1,000 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btuh

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | HEATING - EAT 70°F | | | | | |
|--------|-----|-----|-----|------------------------|------|------|------|------|-----|--------------------|------|------|-------|-----|-----|
| | | PSI | FT | TC | SC | kW | HR | EER | HWC | HC | kW | HE | LAT | COP | HWC |
| 20 | 6.0 | 2.5 | 5.7 | | | | | | | 17.2 | 1.58 | 11.8 | 85.9 | 3.2 | 1.7 |
| 30 | 3.0 | 0.9 | 2.1 | 33.3 | 21.3 | 0.84 | 36.2 | 39.8 | 0.9 | 19.1 | 1.58 | 13.7 | 87.7 | 3.6 | 1.8 |
| | 4.5 | 1.5 | 3.5 | 31.6 | 19.6 | 0.75 | 34.1 | 41.9 | 1.0 | 20.2 | 1.57 | 14.8 | 88.6 | 3.8 | 1.9 |
| | 6.0 | 2.2 | 5.1 | 30.2 | 18.5 | 0.72 | 32.7 | 42.0 | 1.1 | 20.7 | 1.57 | 15.4 | 89.2 | 3.9 | 2.0 |
| 40 | 3.0 | 0.8 | 1.9 | 33.8 | 22.2 | 0.96 | 37.1 | 35.2 | 0.9 | 22.2 | 1.57 | 16.9 | 90.5 | 4.1 | 2.1 |
| | 4.5 | 1.4 | 3.2 | 33.6 | 21.5 | 0.86 | 36.5 | 39.1 | 0.8 | 23.5 | 1.57 | 18.1 | 91.7 | 4.4 | 2.2 |
| | 6.0 | 2.0 | 4.7 | 33.0 | 20.9 | 0.81 | 35.8 | 40.6 | 0.9 | 24.1 | 1.57 | 18.8 | 92.3 | 4.5 | 2.3 |
| 50 | 3.0 | 0.8 | 1.8 | 33.0 | 22.2 | 1.10 | 36.7 | 29.9 | 1.1 | 25.3 | 1.57 | 19.9 | 93.3 | 4.7 | 2.4 |
| | 4.5 | 1.3 | 3.0 | 33.7 | 22.2 | 0.98 | 37.1 | 34.2 | 0.9 | 26.7 | 1.57 | 21.3 | 94.7 | 5.0 | 2.5 |
| | 6.0 | 1.9 | 4.4 | 33.8 | 22.2 | 0.93 | 37.0 | 36.3 | 0.9 | 27.5 | 1.57 | 22.1 | 95.4 | 5.1 | 2.6 |
| 60 | 3.0 | 0.8 | 1.8 | 31.4 | 21.6 | 1.26 | 35.7 | 24.9 | 1.5 | 28.3 | 1.58 | 22.9 | 96.1 | 5.3 | 2.6 |
| | 4.5 | 1.3 | 2.9 | 32.7 | 22.1 | 1.13 | 36.6 | 29.0 | 1.3 | 29.9 | 1.58 | 24.5 | 97.6 | 5.5 | 2.8 |
| | 6.0 | 1.8 | 4.2 | 33.2 | 22.2 | 1.07 | 36.9 | 31.1 | 1.2 | 30.8 | 1.58 | 25.4 | 98.5 | 5.7 | 2.8 |
| 70 | 3.0 | 1.2 | 2.7 | 29.4 | 20.7 | 1.44 | 34.3 | 20.4 | 2.2 | 31.3 | 1.59 | 25.9 | 98.9 | 5.8 | 2.9 |
| | 4.5 | 1.9 | 4.4 | 31.0 | 21.4 | 1.30 | 35.4 | 23.9 | 1.8 | 33.2 | 1.60 | 27.7 | 100.6 | 6.1 | 3.0 |
| | 6.0 | 2.9 | 6.6 | 31.7 | 21.7 | 1.23 | 35.9 | 25.9 | 1.6 | 34.2 | 1.60 | 28.7 | 101.6 | 6.3 | 3.1 |
| 80 | 3.0 | 1.2 | 2.7 | 27.1 | 19.7 | 1.64 | 32.7 | 16.6 | 3.0 | 34.3 | 1.60 | 28.9 | 101.7 | 6.3 | 3.1 |
| | 4.5 | 1.9 | 4.3 | 28.8 | 20.5 | 1.49 | 33.9 | 19.4 | 2.6 | 36.5 | 1.62 | 31.0 | 103.7 | 6.6 | 3.2 |
| | 6.0 | 2.8 | 6.5 | 29.7 | 20.9 | 1.41 | 34.5 | 21.0 | 2.3 | 37.8 | 1.63 | 32.2 | 104.9 | 6.8 | 3.3 |
| 90 | 3.0 | 1.2 | 2.7 | 24.9 | 18.7 | 1.87 | 31.3 | 13.3 | 4.1 | 37.5 | 1.63 | 32.0 | 104.7 | 6.8 | 3.3 |
| | 4.5 | 1.9 | 4.3 | 26.5 | 19.4 | 1.70 | 32.3 | 15.6 | 3.5 | 40.1 | 1.65 | 34.4 | 107.0 | 7.1 | 3.5 |
| | 6.0 | 2.8 | 6.3 | 27.3 | 19.8 | 1.62 | 32.9 | 16.9 | 3.2 | 41.5 | 1.67 | 35.8 | 108.4 | 7.3 | 3.6 |
| 100 | 3.0 | 1.2 | 2.7 | 22.9 | 17.8 | 2.13 | 30.1 | 10.8 | 5.3 | | | | | | |
| | 4.5 | 1.8 | 4.2 | 24.2 | 18.4 | 1.94 | 30.9 | 12.5 | 4.7 | | | | | | |
| | 6.0 | 2.7 | 6.3 | 25.0 | 18.7 | 1.86 | 31.3 | 13.5 | 4.4 | | | | | | |
| 110 | 3.0 | 1.1 | 2.6 | 21.4 | 17.4 | 2.43 | 29.7 | 8.8 | 6.8 | | | | | | |
| | 4.5 | 1.8 | 4.2 | 22.3 | 17.6 | 2.23 | 29.9 | 10.0 | 6.1 | | | | | | |
| | 6.0 | 2.7 | 6.2 | 22.9 | 17.8 | 2.13 | 30.2 | 10.8 | 5.7 | | | | | | |
| 120 | 3.0 | 1.1 | 2.5 | 20.8 | 17.9 | 2.80 | 30.4 | 7.4 | 8.6 | | | | | | |
| | 4.5 | 1.7 | 4.0 | 21.1 | 17.5 | 2.55 | 29.8 | 8.3 | 7.7 | | | | | | |
| | 6.0 | 2.6 | 6.0 | 21.4 | 17.4 | 2.44 | 29.7 | 8.8 | 7.3 | | | | | | |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.

Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.

Table is with entering air of 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.

See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.

Operation below 40°F EWT is based on a 15% methanol antifreeze solution.

Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 038 (Full Load), No vFlow®

1,250 CFM Nominal (Rated) Airflow Heating, 1,250 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | HEATING - EAT 70°F | | | | | |
|--------|-----|-----|-----|------------------------|------|------|------|------|-----|--------------------|------|------|-------|-----|-----|
| | | PSI | FT | TC | SC | kW | HR | EER | HWC | HC | kW | HE | LAT | COP | HWC |
| 20 | 9.0 | 4.3 | 9.9 | | | | | | | 25.6 | 2.16 | 18.2 | 88.9 | 3.5 | 2.1 |
| | 4.5 | 1.5 | 3.5 | 46.1 | 28.4 | 1.52 | 51.3 | 30.4 | 1.1 | 28.1 | 2.18 | 20.7 | 90.8 | 3.8 | 2.4 |
| | 6.8 | 2.6 | 6.0 | 45.9 | 27.8 | 1.41 | 50.7 | 32.6 | 0.9 | 29.5 | 2.19 | 22.0 | 91.8 | 3.9 | 2.5 |
| 30 | 9.0 | 3.9 | 9.1 | 45.6 | 27.4 | 1.36 | 50.2 | 33.6 | 0.8 | 30.2 | 2.19 | 22.7 | 92.3 | 4.0 | 2.6 |
| | 4.5 | 1.4 | 3.2 | 45.7 | 28.4 | 1.66 | 51.4 | 27.6 | 1.5 | 32.2 | 2.21 | 24.7 | 93.8 | 4.3 | 2.9 |
| | 6.8 | 2.4 | 5.5 | 46.1 | 28.5 | 1.55 | 51.4 | 29.8 | 1.2 | 33.8 | 2.23 | 26.2 | 95.0 | 4.4 | 3.1 |
| 40 | 9.0 | 3.6 | 8.4 | 46.1 | 28.6 | 1.50 | 51.2 | 30.8 | 1.0 | 34.7 | 2.24 | 27.1 | 95.6 | 4.5 | 3.2 |
| | 4.5 | 1.3 | 3.0 | 44.6 | 28.6 | 1.80 | 50.8 | 24.7 | 2.0 | 36.3 | 2.26 | 28.6 | 96.8 | 4.7 | 3.4 |
| | 6.8 | 2.2 | 5.1 | 45.5 | 28.7 | 1.69 | 51.3 | 26.9 | 1.6 | 38.2 | 2.29 | 30.3 | 98.2 | 4.9 | 3.6 |
| 50 | 9.0 | 3.4 | 7.9 | 45.6 | 28.7 | 1.64 | 51.1 | 27.8 | 1.4 | 37.0 | 2.27 | 29.2 | 97.3 | 4.8 | 3.7 |
| | 4.5 | 1.3 | 2.9 | 43.0 | 28.1 | 1.97 | 49.8 | 21.9 | 2.7 | 40.4 | 2.33 | 32.5 | 99.9 | 5.1 | 3.8 |
| | 6.8 | 2.1 | 4.9 | 44.3 | 28.5 | 1.84 | 50.6 | 24.0 | 2.2 | 42.5 | 2.37 | 34.4 | 101.4 | 5.3 | 4.1 |
| 60 | 9.0 | 3.3 | 7.5 | 44.8 | 28.6 | 1.78 | 50.9 | 25.1 | 1.9 | 43.7 | 2.39 | 35.5 | 102.3 | 5.4 | 4.2 |
| | 4.5 | 1.2 | 2.9 | 41.1 | 27.4 | 2.15 | 48.4 | 19.1 | 3.5 | 44.5 | 2.41 | 36.3 | 102.9 | 5.4 | 4.3 |
| | 6.8 | 2.1 | 4.8 | 42.6 | 27.9 | 2.02 | 49.4 | 21.1 | 2.9 | 46.9 | 2.47 | 38.5 | 104.7 | 5.6 | 4.6 |
| 70 | 9.0 | 3.1 | 7.2 | 43.2 | 28.2 | 1.95 | 49.9 | 22.2 | 2.6 | 48.3 | 2.50 | 39.7 | 105.7 | 5.7 | 4.7 |
| | 4.5 | 1.2 | 2.9 | 38.8 | 26.4 | 2.37 | 46.9 | 16.4 | 4.4 | 48.8 | 2.51 | 40.2 | 106.0 | 5.7 | 4.7 |
| | 6.8 | 2.0 | 4.7 | 40.5 | 27.1 | 2.21 | 48.0 | 18.3 | 3.7 | 51.5 | 2.59 | 42.7 | 108.1 | 5.8 | 5.0 |
| 80 | 9.0 | 3.1 | 7.1 | 41.2 | 27.4 | 2.14 | 48.5 | 19.3 | 4.0 | 53.1 | 2.64 | 44.1 | 109.2 | 5.9 | 5.2 |
| | 4.5 | 1.2 | 2.9 | 36.4 | 25.4 | 2.63 | 45.4 | 13.9 | 5.5 | 53.2 | 2.64 | 44.2 | 109.3 | 5.9 | 5.2 |
| | 6.8 | 2.0 | 4.6 | 38.1 | 26.1 | 2.45 | 46.4 | 15.6 | 4.7 | 56.3 | 2.75 | 47.0 | 111.6 | 6.0 | 5.5 |
| 90 | 9.0 | 3.0 | 6.9 | 38.9 | 26.5 | 2.36 | 47.0 | 16.5 | 4.3 | 58.1 | 2.81 | 48.5 | 113.0 | 6.1 | 5.6 |
| | 4.5 | 1.2 | 2.8 | 33.9 | 24.2 | 2.93 | 43.9 | 11.6 | 6.7 | | | | | | |
| | 6.8 | 2.0 | 4.5 | 35.6 | 25.0 | 2.72 | 44.9 | 13.1 | 5.9 | | | | | | |
| 100 | 9.0 | 3.0 | 6.8 | 36.4 | 25.4 | 2.63 | 45.4 | 13.9 | 5.5 | | | | | | |
| | 4.5 | 1.2 | 2.8 | 31.4 | 23.0 | 3.29 | 42.6 | 9.5 | 8.0 | | | | | | |
| | 6.8 | 1.9 | 4.5 | 33.0 | 23.8 | 3.05 | 43.4 | 10.8 | 7.1 | | | | | | |
| 110 | 9.0 | 2.9 | 6.7 | 33.8 | 24.2 | 2.94 | 43.9 | 11.5 | 6.7 | | | | | | |
| | 4.5 | 1.1 | 2.6 | 29.0 | 21.9 | 3.72 | 41.7 | 7.8 | 9.6 | | | | | | |
| | 6.8 | 1.9 | 4.3 | 30.5 | 22.6 | 3.44 | 42.2 | 8.8 | 8.6 | | | | | | |
| 120 | 9.0 | 2.9 | 6.6 | 31.3 | 23.0 | 3.31 | 42.6 | 9.4 | 8.1 | | | | | | |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.

Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.

Table is with entering air of 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.

See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.

Operation below 40°F EWT is based on a 15% methanol antifreeze solution.

Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 049 (Part Load), No vFlow®

1,350 CFM Nominal (Rated) Airflow Heating, 1,350 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | HEATING - EAT 70°F | | | | | |
|--------|-----|-----|-----|------------------------|------|------|------|------|-----|--------------------|------|------|-------|-----|-----|
| | | PSI | FT | TC | SC | kW | HR | EER | HWC | HC | kW | HE | LAT | COP | HWC |
| 20 | 9.0 | 2.3 | 5.4 | | | | | | | 23.1 | 2.28 | 15.3 | 85.2 | 3.0 | 2.5 |
| | 4.5 | 0.2 | 0.6 | 41.7 | 26.7 | 1.13 | 45.6 | 37.0 | 1.0 | 25.3 | 2.25 | 17.6 | 86.7 | 3.3 | 2.6 |
| | 6.8 | 1.2 | 2.8 | 40.3 | 24.2 | 1.04 | 43.8 | 38.6 | 1.1 | 26.3 | 2.24 | 18.6 | 87.3 | 3.4 | 2.6 |
| 30 | 9.0 | 2.1 | 4.9 | 39.3 | 22.7 | 1.01 | 42.7 | 38.9 | 1.1 | 26.8 | 2.24 | 19.2 | 87.7 | 3.5 | 2.6 |
| | 4.5 | 0.2 | 0.4 | 42.5 | 29.1 | 1.28 | 46.9 | 33.1 | 1.2 | 28.9 | 2.23 | 21.3 | 89.1 | 3.8 | 2.7 |
| | 6.8 | 1.1 | 2.5 | 42.1 | 27.6 | 1.17 | 46.2 | 35.9 | 1.0 | 30.2 | 2.23 | 22.6 | 89.9 | 4.0 | 2.7 |
| 40 | 9.0 | 2.0 | 4.6 | 41.7 | 26.7 | 1.13 | 45.6 | 37.0 | 1.0 | 30.9 | 2.22 | 23.3 | 90.4 | 4.1 | 2.7 |
| | 4.5 | 0.1 | 0.3 | 42.0 | 29.9 | 1.47 | 47.0 | 28.6 | 1.5 | 32.8 | 2.22 | 25.2 | 91.6 | 4.3 | 2.8 |
| | 6.8 | 1.0 | 2.3 | 42.1 | 29.9 | 1.46 | 47.0 | 28.8 | 1.2 | 34.4 | 2.23 | 26.8 | 92.7 | 4.5 | 2.9 |
| 50 | 9.0 | 1.9 | 4.3 | 42.1 | 29.9 | 1.45 | 47.1 | 29.0 | 1.1 | 33.0 | 2.22 | 25.4 | 91.8 | 4.3 | 2.9 |
| | 4.5 | 0.1 | 0.2 | 40.6 | 29.8 | 1.69 | 46.4 | 24.1 | 2.1 | 36.8 | 2.23 | 29.2 | 94.3 | 4.8 | 3.0 |
| | 6.8 | 1.0 | 2.2 | 41.7 | 30.0 | 1.53 | 46.9 | 27.2 | 1.7 | 38.7 | 2.24 | 31.1 | 95.6 | 5.1 | 3.1 |
| 60 | 9.0 | 1.8 | 4.2 | 42.1 | 29.9 | 1.46 | 47.0 | 28.8 | 1.5 | 39.8 | 2.25 | 32.1 | 96.3 | 5.2 | 3.1 |
| | 4.5 | 0.1 | 0.2 | 38.6 | 29.0 | 1.94 | 45.2 | 19.9 | 2.5 | 41.0 | 2.25 | 33.3 | 97.0 | 5.3 | 3.2 |
| | 6.8 | 0.9 | 2.1 | 40.0 | 29.6 | 1.76 | 46.1 | 22.7 | 2.1 | 43.2 | 2.26 | 35.5 | 98.5 | 5.6 | 3.3 |
| 70 | 9.0 | 1.8 | 4.0 | 40.7 | 29.8 | 1.68 | 46.4 | 24.2 | 1.9 | 44.4 | 2.27 | 36.7 | 99.3 | 5.7 | 3.4 |
| | 4.5 | 0.1 | 0.3 | 36.2 | 27.8 | 2.22 | 43.7 | 16.3 | 3.4 | 45.2 | 2.27 | 37.4 | 99.8 | 5.8 | 3.4 |
| | 6.8 | 0.9 | 2.1 | 37.8 | 28.6 | 2.03 | 44.7 | 18.6 | 2.9 | 46.0 | 2.28 | 38.3 | 100.4 | 5.9 | 3.6 |
| 80 | 9.0 | 1.7 | 4.0 | 38.6 | 29.0 | 1.94 | 45.2 | 19.9 | 2.7 | 49.0 | 2.29 | 41.2 | 102.3 | 6.3 | 3.9 |
| | 4.5 | 0.1 | 0.3 | 33.5 | 26.5 | 2.54 | 42.2 | 13.2 | 4.4 | 49.4 | 2.30 | 41.5 | 102.6 | 6.3 | 3.7 |
| | 6.8 | 0.9 | 2.1 | 35.2 | 27.3 | 2.33 | 43.2 | 15.1 | 3.9 | 52.1 | 2.31 | 44.2 | 104.4 | 6.6 | 3.9 |
| 90 | 9.0 | 1.7 | 3.9 | 36.1 | 27.8 | 2.23 | 43.7 | 16.2 | 3.6 | 53.6 | 2.31 | 45.7 | 105.3 | 6.8 | 4.0 |
| | 4.5 | 0.1 | 0.3 | 30.8 | 25.2 | 2.89 | 40.7 | 10.6 | 5.7 | | | | | | |
| | 6.8 | 0.9 | 2.1 | 32.5 | 26.0 | 2.67 | 41.6 | 12.2 | 5.1 | | | | | | |
| 100 | 9.0 | 1.7 | 3.8 | 33.3 | 26.4 | 2.56 | 42.1 | 13.0 | 4.7 | | | | | | |
| | 4.5 | 0.1 | 0.2 | 28.2 | 24.2 | 3.30 | 39.5 | 8.6 | 7.2 | | | | | | |
| | 6.8 | 0.9 | 2.0 | 29.7 | 24.7 | 3.05 | 40.1 | 9.7 | 6.5 | | | | | | |
| 110 | 9.0 | 1.6 | 3.7 | 30.5 | 25.1 | 2.93 | 40.5 | 10.4 | 6.1 | | | | | | |
| | 4.5 | 0.1 | 0.1 | 25.9 | 23.6 | 3.75 | 38.7 | 6.9 | 8.9 | | | | | | |
| | 6.8 | 0.8 | 1.9 | 27.2 | 23.9 | 3.48 | 39.1 | 7.8 | 8.1 | | | | | | |
| 120 | 9.0 | 1.6 | 3.6 | 27.9 | 24.1 | 3.35 | 39.3 | 8.3 | 7.7 | | | | | | |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.
 Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.
 Table is with entering air of 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.
 See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.
 Operation below 40°F EWT is based on a 15% methanol antifreeze solution.
 Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 049 (Full Load), No vFlow®

1,650 CFM Nominal (Rated) Airflow Heating, 1,550 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | HEATING - EAT 70°F | | | | | |
|--------|------|-----|-----|------------------------|------|------|------|------|------|--------------------|------|------|-------|-----|-----|
| | | PSI | FT | TC | SC | kW | HR | EER | HWC | HC | kW | HE | LAT | COP | HWC |
| 20 | 12.0 | 4.1 | 9.4 | | | | | | | 31.9 | 3.07 | 21.4 | 88.4 | 3.0 | 3.3 |
| 30 | 6.0 | 0.9 | 2.1 | 49.6 | 29.1 | 1.87 | 56.0 | 26.6 | 1.8 | 35.3 | 3.06 | 24.8 | 90.4 | 3.4 | 3.5 |
| | 9.0 | 2.1 | 4.9 | 44.9 | 25.0 | 1.70 | 50.7 | 26.3 | 1.9 | 36.8 | 3.06 | 26.3 | 91.2 | 3.5 | 3.5 |
| | 12.0 | 3.8 | 8.8 | 42.2 | 22.9 | 1.63 | 47.8 | 25.9 | 1.9 | 37.6 | 3.06 | 27.2 | 91.7 | 3.6 | 3.6 |
| 40 | 6.0 | 0.8 | 1.8 | 53.9 | 33.6 | 2.12 | 61.1 | 25.4 | 2.0 | 40.5 | 3.08 | 30.0 | 93.4 | 3.8 | 3.7 |
| | 9.0 | 2.0 | 4.6 | 51.6 | 31.0 | 1.96 | 58.3 | 26.3 | 1.8 | 42.3 | 3.11 | 31.7 | 94.4 | 4.0 | 3.8 |
| | 12.0 | 3.6 | 8.4 | 50.0 | 29.4 | 1.88 | 56.4 | 26.5 | 1.8 | 43.3 | 3.12 | 32.7 | 95.0 | 4.1 | 3.9 |
| 50 | 6.0 | 0.7 | 1.7 | 54.9 | 35.5 | 2.36 | 63.0 | 23.3 | 2.2 | 45.7 | 3.16 | 34.9 | 96.4 | 4.2 | 4.0 |
| | 9.0 | 1.9 | 4.3 | 54.9 | 35.5 | 2.35 | 62.9 | 23.4 | 2.1 | 47.9 | 3.20 | 37.0 | 97.6 | 4.4 | 4.1 |
| | 12.0 | 3.5 | 8.0 | 54.9 | 35.6 | 2.34 | 62.9 | 23.5 | 2.0 | 49.1 | 3.16 | 35.2 | 94.6 | 4.3 | 4.2 |
| 60 | 6.0 | 0.7 | 1.6 | 54.0 | 35.6 | 2.61 | 62.9 | 20.7 | 2.9 | 51.0 | 3.27 | 39.8 | 99.4 | 4.6 | 4.4 |
| | 9.0 | 1.8 | 4.2 | 54.8 | 35.6 | 2.44 | 63.1 | 22.5 | 2.5 | 53.5 | 3.33 | 42.1 | 100.9 | 4.7 | 4.5 |
| | 12.0 | 3.4 | 7.8 | 54.9 | 35.6 | 2.35 | 63.0 | 23.3 | 2.3 | 54.8 | 3.37 | 43.3 | 101.7 | 4.8 | 4.6 |
| 70 | 6.0 | 0.7 | 1.5 | 51.9 | 35.5 | 2.88 | 61.7 | 18.0 | 3.7 | 56.3 | 3.41 | 44.7 | 102.5 | 4.8 | 4.7 |
| | 9.0 | 1.8 | 4.0 | 53.5 | 36.0 | 2.69 | 62.7 | 19.9 | 3.1 | 59.1 | 3.49 | 47.2 | 104.1 | 5.0 | 5.0 |
| | 12.0 | 3.3 | 7.6 | 54.1 | 36.1 | 2.60 | 63.0 | 20.8 | 2.9 | 60.6 | 3.53 | 48.6 | 105.0 | 5.0 | 5.1 |
| 80 | 6.0 | 0.7 | 1.5 | 49.0 | 34.2 | 3.18 | 59.8 | 15.4 | 4.6 | 61.6 | 3.56 | 49.5 | 105.6 | 5.1 | 5.2 |
| | 9.0 | 1.7 | 4.0 | 51.0 | 35.1 | 2.97 | 61.1 | 17.2 | 3.9 | 62.6 | 3.59 | 50.3 | 104.1 | 5.1 | 5.5 |
| | 12.0 | 3.2 | 7.5 | 51.9 | 35.5 | 2.87 | 61.7 | 18.1 | 3.6 | 66.5 | 3.70 | 53.8 | 108.4 | 5.3 | 6.0 |
| 90 | 6.0 | 0.7 | 1.5 | 45.7 | 32.5 | 3.52 | 57.7 | 13.0 | 5.6 | 67.0 | 3.72 | 54.3 | 108.7 | 5.3 | 5.7 |
| | 9.0 | 1.7 | 3.9 | 47.9 | 33.6 | 3.29 | 59.1 | 14.6 | 4.9 | 70.5 | 3.81 | 57.5 | 110.7 | 5.4 | 6.0 |
| | 12.0 | 3.2 | 7.4 | 49.0 | 34.2 | 3.18 | 59.8 | 15.4 | 4.6 | 72.4 | 3.86 | 59.2 | 111.8 | 5.5 | 6.2 |
| 100 | 6.0 | 0.6 | 1.5 | 42.5 | 30.8 | 3.91 | 55.8 | 10.8 | 6.9 | | | | | | |
| | 9.0 | 1.7 | 3.8 | 44.5 | 31.8 | 3.65 | 57.0 | 12.2 | 6.1 | | | | | | |
| | 12.0 | 3.2 | 7.3 | 45.6 | 32.4 | 3.53 | 57.6 | 12.9 | 5.7 | | | | | | |
| 110 | 6.0 | 0.6 | 1.4 | 39.5 | 29.3 | 4.38 | 54.5 | 9.0 | 8.4 | | | | | | |
| | 9.0 | 1.6 | 3.7 | 41.3 | 30.2 | 4.09 | 55.2 | 10.1 | 7.4 | | | | | | |
| | 12.0 | 3.1 | 7.2 | 42.2 | 30.6 | 3.94 | 55.7 | 10.7 | 7.0 | | | | | | |
| 120 | 6.0 | 0.6 | 1.3 | 37.4 | 28.6 | 4.96 | 54.3 | 7.6 | 10.1 | | | | | | |
| | 9.0 | 1.6 | 3.6 | 38.6 | 28.9 | 4.60 | 54.3 | 8.4 | 9.0 | | | | | | |
| | 12.0 | 3.0 | 7.0 | 39.3 | 29.2 | 4.43 | 54.4 | 8.9 | 8.5 | | | | | | |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.
 Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.
 Table is with entering air of 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.
 See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.
 Operation below 40°F EWT is based on a 15% methanol antifreeze solution.
 Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 064 (Part Load), No vFlow®

1,650 CFM Nominal (Rated) Airflow Heating, 1,500 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | HEATING - EAT 70°F | | | | | |
|--------|------|-----|------|------------------------|------|------|------|------|------|--------------------|------|------|-------|-----|-----|
| | | PSI | FT | TC | SC | kW | HR | EER | HWC | HC | kW | HE | LAT | COP | HWC |
| 20 | 12.0 | 5.2 | 11.9 | | | | | | | 28.6 | 2.75 | 19.3 | 86.0 | 3.1 | 3.1 |
| | 6.0 | 0.9 | 2.1 | 57.1 | 41.6 | 1.50 | 62.2 | 38.1 | 1.1 | 32.2 | 2.76 | 22.7 | 88.0 | 3.4 | 3.2 |
| | 9.0 | 2.5 | 5.7 | 56.9 | 42.3 | 1.45 | 61.8 | 39.2 | 1.0 | 33.6 | 2.77 | 24.1 | 88.8 | 3.6 | 3.2 |
| 30 | 12.0 | 4.2 | 9.6 | 56.5 | 42.6 | 1.44 | 61.4 | 39.1 | 1.0 | 34.4 | 2.77 | 24.9 | 89.2 | 3.6 | 3.2 |
| | 6.0 | 0.5 | 1.1 | 56.4 | 40.7 | 1.64 | 62.0 | 34.4 | 1.3 | 37.6 | 2.79 | 28.0 | 91.0 | 3.9 | 3.3 |
| | 9.0 | 1.9 | 4.4 | 57.0 | 41.3 | 1.54 | 62.3 | 37.1 | 1.1 | 39.4 | 2.80 | 29.8 | 92.0 | 4.1 | 3.4 |
| 40 | 12.0 | 3.4 | 7.9 | 57.1 | 41.7 | 1.50 | 62.2 | 38.1 | 1.1 | 40.4 | 2.81 | 30.8 | 92.6 | 4.2 | 3.4 |
| | 6.0 | 0.2 | 0.6 | 54.8 | 39.8 | 1.85 | 61.1 | 29.7 | 1.8 | 43.1 | 2.82 | 33.5 | 94.1 | 4.5 | 3.5 |
| | 9.0 | 1.5 | 3.5 | 56.0 | 40.4 | 1.70 | 61.8 | 33.0 | 1.5 | 45.3 | 2.84 | 35.7 | 95.4 | 4.7 | 3.5 |
| 50 | 12.0 | 3.0 | 6.9 | 56.5 | 40.8 | 1.63 | 62.0 | 34.6 | 1.3 | 46.6 | 2.85 | 36.9 | 96.1 | 4.8 | 3.6 |
| | 6.0 | 0.2 | 0.4 | 52.4 | 38.9 | 2.11 | 59.6 | 24.8 | 2.5 | 48.8 | 2.86 | 39.0 | 97.3 | 5.0 | 3.7 |
| | 9.0 | 1.4 | 3.2 | 54.1 | 39.5 | 1.93 | 60.6 | 28.1 | 2.0 | 51.4 | 2.89 | 41.5 | 98.8 | 5.2 | 3.8 |
| 60 | 12.0 | 2.7 | 6.3 | 54.8 | 39.9 | 1.84 | 61.1 | 29.8 | 1.8 | 52.8 | 2.90 | 42.9 | 99.6 | 5.3 | 3.8 |
| | 6.0 | 0.2 | 0.4 | 49.6 | 37.9 | 2.42 | 57.8 | 20.4 | 3.3 | 54.4 | 2.91 | 44.5 | 100.5 | 5.5 | 3.9 |
| | 9.0 | 1.3 | 3.0 | 51.5 | 38.6 | 2.21 | 59.0 | 23.3 | 2.7 | 57.3 | 2.94 | 47.3 | 102.1 | 5.7 | 4.1 |
| 70 | 12.0 | 2.6 | 6.0 | 52.4 | 38.9 | 2.11 | 59.6 | 24.8 | 2.5 | 58.9 | 2.96 | 48.8 | 103.0 | 5.8 | 4.2 |
| | 6.0 | 0.3 | 0.6 | 46.5 | 36.7 | 2.78 | 56.0 | 16.7 | 4.4 | 59.9 | 2.97 | 49.8 | 103.6 | 5.9 | 4.2 |
| | 9.0 | 1.3 | 3.1 | 48.5 | 37.5 | 2.55 | 57.2 | 19.0 | 3.7 | 63.1 | 3.00 | 52.9 | 105.3 | 6.2 | 4.4 |
| 80 | 12.0 | 2.6 | 5.9 | 49.5 | 37.8 | 2.44 | 57.8 | 20.3 | 3.4 | 64.8 | 3.03 | 54.5 | 106.3 | 6.3 | 4.5 |
| | 6.0 | 0.3 | 0.7 | 43.3 | 35.3 | 3.18 | 54.1 | 13.6 | 5.6 | 65.3 | 3.03 | 55.0 | 106.6 | 6.3 | 4.6 |
| | 9.0 | 1.4 | 3.2 | 45.2 | 36.2 | 2.93 | 55.2 | 15.4 | 4.8 | 68.7 | 3.08 | 58.2 | 108.4 | 6.5 | 4.8 |
| 90 | 12.0 | 2.6 | 6.0 | 46.2 | 36.6 | 2.81 | 55.8 | 16.5 | 4.4 | 70.4 | 3.11 | 59.8 | 109.4 | 6.6 | 4.9 |
| | 6.0 | 0.3 | 0.8 | 40.2 | 33.9 | 3.62 | 52.5 | 11.1 | 7.0 | | | | | | |
| | 9.0 | 1.4 | 3.2 | 42.0 | 34.7 | 3.36 | 53.4 | 12.5 | 6.1 | | | | | | |
| 100 | 12.0 | 2.6 | 6.0 | 43.0 | 35.2 | 3.23 | 54.0 | 13.3 | 5.7 | | | | | | |
| | 6.0 | 0.3 | 0.6 | 37.4 | 32.4 | 4.09 | 51.3 | 9.1 | 8.7 | | | | | | |
| | 9.0 | 1.3 | 3.1 | 38.9 | 33.2 | 3.81 | 52.0 | 10.2 | 7.7 | | | | | | |
| 110 | 12.0 | 2.5 | 5.8 | 39.8 | 33.7 | 3.68 | 52.3 | 10.8 | 7.2 | | | | | | |
| | 6.0 | 0.0 | 0.0 | 35.1 | 31.0 | 4.59 | 50.8 | 7.6 | 10.5 | | | | | | |
| | 9.0 | 1.1 | 2.6 | 36.3 | 31.7 | 4.30 | 51.0 | 8.4 | 9.4 | | | | | | |
| 120 | 12.0 | 2.4 | 5.4 | 37.0 | 32.2 | 4.16 | 51.2 | 8.9 | 8.9 | | | | | | |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.

Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.

Table is with entering air of 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.

See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.

Operation below 40°F EWT is based on a 15% methanol antifreeze solution.

Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 064 (Full Load), No vFlow®

2,050 CFM Nominal (Rated) Airflow Heating, 1,850 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | HEATING - EAT 70°F | | | | | |
|--------|------|-----|------|------------------------|------|------|------|------|------|--------------------|------|------|-------|-----|-----|
| | | PSI | FT | TC | SC | kW | HR | EER | HWC | HC | kW | HE | LAT | COP | HWC |
| 20 | 15.0 | 7.3 | 16.8 | | | | | | | 43.5 | 3.77 | 30.6 | 89.6 | 3.4 | 3.8 |
| | 7.5 | 1.7 | 3.9 | 76.6 | 53.4 | 2.78 | 86.1 | 27.5 | 2.0 | 47.6 | 3.82 | 34.5 | 91.4 | 3.6 | 4.0 |
| | 11.3 | 3.7 | 8.6 | 76.2 | 54.0 | 2.67 | 85.3 | 28.5 | 1.8 | 49.9 | 3.86 | 36.7 | 92.5 | 3.8 | 4.1 |
| 30 | 15.0 | 6.1 | 14.1 | 75.5 | 54.3 | 2.62 | 84.5 | 28.8 | 1.8 | 51.2 | 3.88 | 37.9 | 93.1 | 3.9 | 4.1 |
| | 7.5 | 1.2 | 2.7 | 75.7 | 52.5 | 2.97 | 85.8 | 25.5 | 2.3 | 54.7 | 3.94 | 41.3 | 94.7 | 4.1 | 4.2 |
| | 11.3 | 3.0 | 7.0 | 76.5 | 53.2 | 2.82 | 86.1 | 27.1 | 2.1 | 57.6 | 3.99 | 44.0 | 96.0 | 4.2 | 4.4 |
| 40 | 15.0 | 5.3 | 12.2 | 76.6 | 53.6 | 2.76 | 86.0 | 27.8 | 1.9 | 59.2 | 4.02 | 45.5 | 96.7 | 4.3 | 4.4 |
| | 7.5 | 0.9 | 2.0 | 73.6 | 51.4 | 3.20 | 84.5 | 23.0 | 2.9 | 62.1 | 4.08 | 48.2 | 98.0 | 4.5 | 4.6 |
| | 11.3 | 2.6 | 6.0 | 75.3 | 52.2 | 3.02 | 85.6 | 25.0 | 2.5 | 65.5 | 4.15 | 51.3 | 99.5 | 4.6 | 4.7 |
| 50 | 15.0 | 4.7 | 10.8 | 75.9 | 52.6 | 2.94 | 85.9 | 25.9 | 2.3 | 67.3 | 4.19 | 53.0 | 100.3 | 4.7 | 4.8 |
| | 7.5 | 0.8 | 1.7 | 70.7 | 50.3 | 3.47 | 82.6 | 20.4 | 3.6 | 69.5 | 4.24 | 55.1 | 101.3 | 4.8 | 5.0 |
| | 11.3 | 2.4 | 5.4 | 73.0 | 51.1 | 3.26 | 84.1 | 22.4 | 3.1 | 73.4 | 4.33 | 58.6 | 103.1 | 5.0 | 5.2 |
| 60 | 15.0 | 4.3 | 10.0 | 74.0 | 51.6 | 3.16 | 84.8 | 23.4 | 2.8 | 75.5 | 4.38 | 60.6 | 104.0 | 5.1 | 5.3 |
| | 7.5 | 0.7 | 1.7 | 67.3 | 48.9 | 3.81 | 80.3 | 17.7 | 4.5 | 77.0 | 4.41 | 61.9 | 104.7 | 5.1 | 5.4 |
| | 11.3 | 2.3 | 5.2 | 69.8 | 49.9 | 3.56 | 82.0 | 19.6 | 3.8 | 81.3 | 4.52 | 65.9 | 106.6 | 5.3 | 5.7 |
| 70 | 15.0 | 4.1 | 9.6 | 71.1 | 50.4 | 3.44 | 82.8 | 20.6 | 3.5 | 83.7 | 4.59 | 68.0 | 107.7 | 5.3 | 5.8 |
| | 7.5 | 0.8 | 1.8 | 63.5 | 47.5 | 4.19 | 77.8 | 15.1 | 5.6 | 84.4 | 4.61 | 68.7 | 108.0 | 5.4 | 5.9 |
| | 11.3 | 2.2 | 5.2 | 66.2 | 48.5 | 3.91 | 79.6 | 16.9 | 4.8 | 89.1 | 4.74 | 73.0 | 110.2 | 5.5 | 6.2 |
| 80 | 15.0 | 4.1 | 9.4 | 67.5 | 49.0 | 3.78 | 80.4 | 17.9 | 4.4 | 91.7 | 4.81 | 75.3 | 111.3 | 5.6 | 6.9 |
| | 7.5 | 0.3 | 0.7 | 59.8 | 45.8 | 4.65 | 75.6 | 12.9 | 6.8 | 91.7 | 4.81 | 75.2 | 111.3 | 5.6 | 6.4 |
| | 11.3 | 1.4 | 3.2 | 62.3 | 47.0 | 4.33 | 77.1 | 14.4 | 6.0 | 96.7 | 4.96 | 79.7 | 113.6 | 5.7 | 6.9 |
| 90 | 15.0 | 2.6 | 6.0 | 63.7 | 47.5 | 4.18 | 77.9 | 15.2 | 5.5 | 99.4 | 5.05 | 82.1 | 114.8 | 5.8 | 7.1 |
| | 7.5 | 0.3 | 0.8 | 56.2 | 44.2 | 5.18 | 73.9 | 10.8 | 8.3 | | | | | | |
| | 11.3 | 1.4 | 3.2 | 58.5 | 45.3 | 4.82 | 75.0 | 12.1 | 7.3 | | | | | | |
| 100 | 15.0 | 2.6 | 6.0 | 59.8 | 45.9 | 4.65 | 75.6 | 12.9 | 6.8 | | | | | | |
| | 7.5 | 0.3 | 0.6 | 53.1 | 42.6 | 5.80 | 72.9 | 9.2 | 10.0 | | | | | | |
| | 11.3 | 1.3 | 3.1 | 55.0 | 43.6 | 5.39 | 73.4 | 10.2 | 8.9 | | | | | | |
| 110 | 15.0 | 2.5 | 5.8 | 56.1 | 44.2 | 5.19 | 73.8 | 10.8 | 8.3 | | | | | | |
| | 7.5 | 0.0 | 0.0 | 50.8 | 41.4 | 6.53 | 73.1 | 7.8 | 11.9 | | | | | | |
| | 11.3 | 1.1 | 2.6 | 52.2 | 42.1 | 6.04 | 72.8 | 8.6 | 10.6 | | | | | | |
| 120 | 15.0 | 2.4 | 5.4 | 53.0 | 42.6 | 5.82 | 72.9 | 9.1 | 10.0 | | | | | | |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.
 Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.
 Table is with entering air of 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.
 See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.
 Operation below 40°F EWT is based on a 15% methanol antifreeze solution.
 Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 072 (Part Load), No vFlow®

1,650 CFM Nominal (Rated) Airflow Heating, 1,550 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | HEATING - EAT 70°F | | | | | |
|--------|------|-----|------|------------------------|------|------|------|------|------|--------------------|------|------|-------|-----|-----|
| | | PSI | FT | TC | SC | kW | HR | EER | HWC | HC | kW | HE | LAT | COP | HWC |
| 20 | 14.0 | 6.5 | 15.1 | | | | | | | 33.4 | 3.51 | 21.4 | 88.7 | 2.8 | 4.1 |
| 30 | 7.0 | 1.4 | 3.3 | 66.4 | 43.8 | 1.85 | 72.7 | 35.9 | 2.2 | 37.7 | 3.57 | 25.5 | 91.1 | 3.1 | 4.3 |
| | 10.5 | 3.3 | 7.6 | 66.7 | 44.2 | 1.75 | 72.7 | 38.1 | 2.2 | 39.3 | 3.59 | 27.0 | 92.0 | 3.2 | 4.3 |
| | 14.0 | 5.4 | 12.5 | 66.7 | 44.4 | 1.71 | 72.6 | 38.9 | 2.3 | 40.1 | 3.60 | 27.8 | 92.5 | 3.3 | 4.3 |
| 40 | 7.0 | 0.9 | 2.2 | 65.0 | 43.0 | 2.05 | 72.0 | 31.7 | 2.4 | 43.9 | 3.65 | 31.4 | 94.6 | 3.5 | 4.5 |
| | 10.5 | 2.6 | 6.1 | 66.0 | 43.6 | 1.91 | 72.5 | 34.6 | 2.2 | 45.8 | 3.68 | 33.3 | 95.7 | 3.7 | 4.5 |
| | 14.0 | 4.6 | 10.7 | 66.4 | 43.8 | 1.84 | 72.7 | 36.0 | 2.2 | 46.9 | 3.69 | 34.3 | 96.3 | 3.7 | 4.5 |
| 50 | 7.0 | 0.7 | 1.5 | 62.9 | 41.9 | 2.32 | 70.8 | 27.1 | 2.7 | 50.1 | 3.74 | 37.4 | 98.1 | 3.9 | 4.8 |
| | 10.5 | 2.2 | 5.1 | 64.4 | 42.7 | 2.13 | 71.7 | 30.2 | 2.5 | 52.5 | 3.77 | 39.6 | 99.4 | 4.1 | 4.9 |
| | 14.0 | 4.1 | 9.4 | 65.1 | 43.0 | 2.05 | 72.1 | 31.8 | 2.5 | 53.8 | 3.78 | 40.8 | 100.1 | 4.2 | 4.9 |
| 60 | 7.0 | 0.5 | 1.3 | 60.2 | 40.8 | 2.65 | 69.3 | 22.7 | 3.2 | 56.4 | 3.82 | 43.3 | 101.6 | 4.3 | 5.2 |
| | 10.5 | 2.0 | 4.6 | 62.1 | 41.6 | 2.42 | 70.4 | 25.6 | 2.9 | 59.1 | 3.86 | 46.0 | 103.1 | 4.5 | 5.3 |
| | 14.0 | 3.8 | 8.7 | 63.0 | 42.0 | 2.32 | 70.9 | 27.2 | 2.7 | 60.6 | 3.88 | 47.4 | 103.9 | 4.6 | 5.4 |
| 70 | 7.0 | 0.5 | 1.3 | 57.1 | 39.5 | 3.04 | 67.5 | 18.8 | 4.3 | 62.6 | 3.90 | 49.3 | 105.1 | 4.7 | 5.6 |
| | 10.5 | 1.9 | 4.5 | 59.2 | 40.3 | 2.78 | 68.7 | 21.3 | 3.7 | 65.8 | 3.95 | 52.3 | 106.8 | 4.9 | 5.8 |
| | 14.0 | 3.6 | 8.3 | 60.2 | 40.7 | 2.65 | 69.3 | 22.7 | 3.5 | 67.5 | 3.97 | 53.9 | 107.8 | 5.0 | 5.9 |
| 80 | 7.0 | 0.6 | 1.4 | 53.7 | 38.1 | 3.48 | 65.6 | 15.4 | 5.8 | 68.9 | 3.99 | 55.3 | 108.6 | 5.1 | 6.1 |
| | 10.5 | 1.9 | 4.5 | 55.9 | 39.0 | 3.19 | 66.8 | 17.5 | 5.0 | 72.4 | 4.05 | 58.6 | 110.5 | 5.2 | 6.3 |
| | 14.0 | 3.5 | 8.1 | 57.0 | 39.4 | 3.05 | 67.4 | 18.7 | 4.6 | 74.3 | 4.08 | 60.4 | 111.6 | 5.3 | 6.5 |
| 90 | 7.0 | 0.7 | 1.5 | 50.1 | 36.6 | 3.98 | 63.7 | 12.6 | 7.6 | 75.2 | 4.09 | 61.2 | 112.1 | 5.4 | 6.6 |
| | 10.5 | 2.0 | 4.5 | 52.3 | 37.5 | 3.67 | 64.8 | 14.3 | 6.7 | 79.1 | 4.15 | 64.9 | 114.3 | 5.6 | 7.0 |
| | 14.0 | 3.5 | 8.1 | 53.5 | 38.0 | 3.51 | 65.4 | 15.2 | 6.2 | 81.2 | 4.19 | 66.9 | 115.5 | 5.7 | 7.1 |
| 100 | 7.0 | 0.7 | 1.6 | 46.4 | 35.2 | 4.54 | 61.9 | 10.2 | 9.9 | | | | | | |
| | 10.5 | 2.0 | 4.5 | 48.6 | 36.0 | 4.20 | 62.9 | 11.6 | 8.8 | | | | | | |
| | 14.0 | 3.5 | 8.1 | 49.7 | 36.5 | 4.03 | 63.5 | 12.3 | 8.2 | | | | | | |
| 110 | 7.0 | 0.6 | 1.4 | 42.9 | 33.8 | 5.15 | 60.4 | 8.3 | 12.6 | | | | | | |
| | 10.5 | 1.9 | 4.4 | 44.9 | 34.6 | 4.78 | 61.2 | 9.4 | 11.3 | | | | | | |
| | 14.0 | 3.5 | 8.0 | 46.0 | 35.0 | 4.61 | 61.7 | 10.0 | 10.7 | | | | | | |
| 120 | 7.0 | 0.4 | 0.9 | 39.5 | 32.5 | 5.82 | 59.4 | 6.8 | 15.7 | | | | | | |
| | 10.5 | 1.7 | 3.9 | 41.4 | 33.2 | 5.43 | 59.9 | 7.6 | 14.3 | | | | | | |
| | 14.0 | 3.3 | 7.6 | 42.4 | 33.6 | 5.24 | 60.2 | 8.1 | 13.6 | | | | | | |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.
 Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.
 Table is with entering air of 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.
 See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.
 Operation below 40°F EWT is based on a 15% methanol antifreeze solution.
 Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 072 (Full Load), No vFlow®

2,050 CFM Nominal (Rated) Airflow Heating, 1,850 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | HEATING - EAT 70°F | | | | | |
|--------|------|-----|------|------------------------|------|------|------|------|------|--------------------|------|------|-------|-----|-----|
| | | PSI | FT | TC | SC | kW | HR | EER | HWC | HC | kW | HE | LAT | COP | HWC |
| 20 | 17.0 | 8.9 | 20.6 | | | | | | | 47.3 | 4.52 | 31.9 | 91.3 | 3.1 | 4.1 |
| 30 | 8.5 | 2.2 | 5.1 | 83.8 | 53.9 | 3.15 | 94.6 | 26.6 | 2.2 | 52.4 | 4.63 | 36.6 | 93.6 | 3.3 | 4.3 |
| | 12.8 | 4.6 | 10.6 | 83.7 | 53.8 | 3.00 | 93.9 | 27.9 | 2.2 | 54.8 | 4.68 | 38.8 | 94.7 | 3.4 | 4.2 |
| | 17.0 | 7.6 | 17.6 | 83.3 | 53.5 | 2.94 | 93.3 | 28.3 | 2.3 | 56.1 | 4.71 | 40.1 | 95.3 | 3.5 | 4.2 |
| 40 | 8.5 | 1.6 | 3.8 | 82.7 | 53.5 | 3.39 | 94.3 | 24.4 | 2.4 | 60.3 | 4.80 | 43.9 | 97.2 | 3.7 | 4.4 |
| | 12.8 | 3.9 | 8.9 | 83.6 | 53.9 | 3.21 | 94.6 | 26.1 | 2.2 | 63.1 | 4.87 | 46.5 | 98.4 | 3.8 | 4.5 |
| | 17.0 | 6.7 | 15.5 | 83.8 | 53.9 | 3.13 | 94.5 | 26.8 | 2.2 | 64.6 | 4.90 | 47.9 | 99.1 | 3.9 | 4.5 |
| 50 | 8.5 | 1.3 | 3.0 | 80.5 | 52.6 | 3.67 | 93.0 | 21.9 | 2.8 | 67.9 | 4.99 | 50.9 | 100.6 | 4.0 | 4.7 |
| | 12.8 | 3.4 | 7.8 | 82.2 | 53.3 | 3.46 | 94.0 | 23.8 | 2.5 | 71.2 | 5.07 | 53.9 | 102.1 | 4.1 | 4.8 |
| | 17.0 | 6.0 | 13.9 | 82.9 | 53.6 | 3.36 | 94.3 | 24.7 | 2.5 | 72.9 | 5.11 | 55.5 | 102.9 | 4.2 | 4.9 |
| 60 | 8.5 | 1.2 | 2.7 | 77.4 | 51.4 | 4.01 | 91.1 | 19.3 | 3.3 | 75.5 | 5.18 | 57.9 | 104.0 | 4.3 | 5.1 |
| | 12.8 | 3.1 | 7.1 | 79.7 | 52.3 | 3.76 | 92.5 | 21.2 | 2.9 | 79.2 | 5.28 | 61.2 | 105.7 | 4.4 | 5.2 |
| | 17.0 | 5.6 | 13.0 | 80.7 | 52.7 | 3.64 | 93.1 | 22.2 | 2.8 | 81.2 | 5.33 | 63.0 | 106.6 | 4.5 | 5.3 |
| 70 | 8.5 | 1.1 | 2.6 | 73.7 | 49.8 | 4.42 | 88.7 | 16.7 | 4.5 | 83.2 | 5.38 | 64.8 | 107.5 | 4.5 | 5.5 |
| | 12.8 | 3.0 | 6.8 | 76.3 | 50.9 | 4.12 | 90.4 | 18.5 | 3.8 | 87.3 | 5.50 | 68.5 | 109.3 | 4.6 | 5.7 |
| | 17.0 | 5.4 | 12.4 | 77.6 | 51.5 | 3.99 | 91.2 | 19.5 | 3.5 | 89.5 | 5.57 | 70.5 | 110.3 | 4.7 | 5.8 |
| 80 | 8.5 | 1.2 | 2.7 | 69.5 | 48.1 | 4.89 | 86.2 | 14.2 | 6.0 | 90.9 | 5.61 | 71.7 | 110.9 | 4.7 | 6.0 |
| | 12.8 | 2.9 | 6.7 | 72.4 | 49.3 | 4.56 | 88.0 | 15.9 | 5.1 | 95.5 | 5.75 | 75.9 | 113.1 | 4.9 | 6.3 |
| | 17.0 | 5.2 | 12.1 | 73.8 | 49.9 | 4.40 | 88.8 | 16.8 | 4.7 | 98.1 | 5.83 | 78.2 | 114.2 | 4.9 | 6.4 |
| 90 | 8.5 | 1.2 | 2.8 | 65.2 | 46.2 | 5.45 | 83.8 | 12.0 | 7.9 | 98.8 | 5.85 | 78.8 | 114.5 | 4.9 | 6.5 |
| | 12.8 | 2.9 | 6.7 | 68.1 | 47.4 | 5.07 | 85.4 | 13.4 | 6.8 | 104.1 | 6.03 | 83.6 | 116.9 | 5.1 | 6.9 |
| | 17.0 | 5.2 | 12.0 | 69.6 | 48.1 | 4.88 | 86.3 | 14.2 | 6.3 | 107.1 | 6.12 | 86.2 | 118.3 | 5.1 | 7.1 |
| 100 | 8.5 | 1.2 | 2.8 | 60.9 | 44.3 | 6.09 | 81.6 | 10.0 | 10.2 | | | | | | |
| | 12.8 | 2.9 | 6.7 | 63.7 | 45.5 | 5.66 | 83.0 | 11.2 | 9.0 | | | | | | |
| | 17.0 | 5.2 | 12.0 | 65.1 | 46.2 | 5.46 | 83.8 | 11.9 | 8.4 | | | | | | |
| 110 | 8.5 | 1.1 | 2.6 | 56.7 | 42.5 | 6.85 | 80.0 | 8.3 | 13.0 | | | | | | |
| | 12.8 | 2.9 | 6.6 | 59.3 | 43.6 | 6.36 | 81.0 | 9.3 | 11.5 | | | | | | |
| | 17.0 | 5.1 | 11.8 | 60.7 | 44.2 | 6.12 | 81.6 | 9.9 | 10.8 | | | | | | |
| 120 | 8.5 | 0.9 | 2.1 | 52.9 | 41.0 | 7.72 | 79.2 | 6.8 | 16.2 | | | | | | |
| | 12.8 | 2.7 | 6.2 | 55.2 | 41.9 | 7.16 | 79.6 | 7.7 | 14.6 | | | | | | |
| | 17.0 | 5.0 | 11.5 | 56.4 | 42.4 | 6.90 | 80.0 | 8.2 | 13.8 | | | | | | |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.
 Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.
 Table is with entering air of 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.
 See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.
 Operation below 40°F EWT is based on a 15% methanol antifreeze solution.
 Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 026 (Part Load), With vFlow®

850 CFM Nominal (Rated) Airflow Heating, 750 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | | GPM | HEATING - EAT 70°F | | | | | | | | |
|-----------|-----|-----|-----|------------------------|------|------|------|------|-------|-----|-----|--------------------|-----|------|------|------|-----|------|------|-----|
| | | PSI | FT | TC | SC | KW | HR | EER | LWT | HWC | | PSI | FT | HC | KW | HE | COP | LAT | LWT | HWC |
| 20 | 1.0 | 0.2 | 0.3 | 23.0 | 16.0 | 0.75 | 25.6 | 30.7 | 70.0 | 1.0 | 4.5 | 1.2 | 2.9 | 11.7 | 1.20 | 7.6 | 2.9 | 82.7 | 16.6 | 1.2 |
| 30 | 1.3 | 0.2 | 0.5 | 23.0 | 16.0 | 0.75 | 25.6 | 30.7 | 70.0 | 1.0 | 2.3 | 0.5 | 1.1 | 13.2 | 1.18 | 9.2 | 3.3 | 84.3 | 22.0 | 1.3 |
| | 1.3 | 0.2 | 0.5 | 23.0 | 16.0 | 0.75 | 25.6 | 30.7 | 70.0 | 1.0 | 3.4 | 0.8 | 1.8 | 13.8 | 1.17 | 9.8 | 3.5 | 85.0 | 24.2 | 1.4 |
| | 1.3 | 0.2 | 0.5 | 23.0 | 16.0 | 0.75 | 25.6 | 30.7 | 70.0 | 1.0 | 4.5 | 1.1 | 2.6 | 14.1 | 1.16 | 10.2 | 3.6 | 85.4 | 25.5 | 1.4 |
| 40 | 1.7 | 0.3 | 0.7 | 23.0 | 16.0 | 0.75 | 25.6 | 30.7 | 70.0 | 1.0 | 2.3 | 0.4 | 1.0 | 15.4 | 1.15 | 11.5 | 3.9 | 86.7 | 30.0 | 1.5 |
| | 1.7 | 0.3 | 0.7 | 23.0 | 16.0 | 0.75 | 25.6 | 30.7 | 70.0 | 1.0 | 3.4 | 0.7 | 1.7 | 16.2 | 1.14 | 12.3 | 4.2 | 87.6 | 32.8 | 1.6 |
| | 1.7 | 0.3 | 0.7 | 23.0 | 16.0 | 0.75 | 25.6 | 30.7 | 70.0 | 1.0 | 4.5 | 1.1 | 2.5 | 16.6 | 1.13 | 12.8 | 4.3 | 88.1 | 34.3 | 1.6 |
| 50 | 2.3 | 0.4 | 1.0 | 22.9 | 15.9 | 0.77 | 25.5 | 29.6 | 72.2 | 1.1 | 2.3 | 0.4 | 1.0 | 17.7 | 1.12 | 13.8 | 4.6 | 89.2 | 38.0 | 1.7 |
| | 2.6 | 0.5 | 1.1 | 23.0 | 16.0 | 0.75 | 25.6 | 30.7 | 70.0 | 1.0 | 3.4 | 0.7 | 1.6 | 18.6 | 1.11 | 14.8 | 4.9 | 90.2 | 41.3 | 1.8 |
| | 2.6 | 0.5 | 1.1 | 23.0 | 16.0 | 0.75 | 25.6 | 30.7 | 70.0 | 1.0 | 4.5 | 1.0 | 2.3 | 19.1 | 1.11 | 15.4 | 5.1 | 90.8 | 43.2 | 1.8 |
| 60 | 2.3 | 0.4 | 1.0 | 21.9 | 15.5 | 0.88 | 24.9 | 24.9 | 81.6 | 1.5 | 2.3 | 0.4 | 1.0 | 19.9 | 1.10 | 16.2 | 5.3 | 91.7 | 45.9 | 1.9 |
| | 3.4 | 0.7 | 1.6 | 22.6 | 15.8 | 0.80 | 25.3 | 28.3 | 74.9 | 1.2 | 3.4 | 0.7 | 1.6 | 21.1 | 1.09 | 17.3 | 5.6 | 92.9 | 49.8 | 1.9 |
| | 4.5 | 1.0 | 2.3 | 22.9 | 15.9 | 0.76 | 25.5 | 30.0 | 71.3 | 1.1 | 4.5 | 1.0 | 2.3 | 21.7 | 1.09 | 18.0 | 5.8 | 93.6 | 52.0 | 2.0 |
| 70 | 2.3 | 0.4 | 1.0 | 20.7 | 15.0 | 1.00 | 24.1 | 20.7 | 90.9 | 2.0 | 2.3 | 0.4 | 1.0 | 22.3 | 1.09 | 18.5 | 6.0 | 94.2 | 53.9 | 2.0 |
| | 3.4 | 0.7 | 1.6 | 21.5 | 15.4 | 0.91 | 24.6 | 23.6 | 84.5 | 1.6 | 3.4 | 0.7 | 1.6 | 23.6 | 1.09 | 19.9 | 6.4 | 95.6 | 58.3 | 2.1 |
| | 4.5 | 1.0 | 2.2 | 21.9 | 15.6 | 0.87 | 24.9 | 25.2 | 81.1 | 1.4 | 4.5 | 1.0 | 2.2 | 24.3 | 1.09 | 20.6 | 6.6 | 96.4 | 60.8 | 2.2 |
| 80 | 2.3 | 0.4 | 1.0 | 19.3 | 14.3 | 1.14 | 23.2 | 16.9 | 100.1 | 2.6 | 2.3 | 0.4 | 1.0 | 24.6 | 1.09 | 20.9 | 6.6 | 96.8 | 61.8 | 2.2 |
| | 3.4 | 0.7 | 1.5 | 20.2 | 14.8 | 1.04 | 23.8 | 19.4 | 94.0 | 2.2 | 2.9 | 0.6 | 1.3 | 25.6 | 1.09 | 21.9 | 6.9 | 97.8 | 65.0 | 2.2 |
| | 4.5 | 0.9 | 2.2 | 20.7 | 15.0 | 1.00 | 24.1 | 20.8 | 90.7 | 2.0 | 2.9 | 0.6 | 1.3 | 25.6 | 1.09 | 21.9 | 6.9 | 97.8 | 65.0 | 2.2 |
| 90 | 2.3 | 0.4 | 1.0 | 17.8 | 13.6 | 1.30 | 22.2 | 13.7 | 109.3 | 3.4 | 1.7 | 0.3 | 0.6 | 25.6 | 1.09 | 21.9 | 6.9 | 97.8 | 65.0 | 2.2 |
| | 3.4 | 0.7 | 1.5 | 18.7 | 14.1 | 1.19 | 22.8 | 15.7 | 103.4 | 2.9 | 1.7 | 0.3 | 0.6 | 25.6 | 1.09 | 21.9 | 6.9 | 97.8 | 65.0 | 2.2 |
| | 4.5 | 0.9 | 2.2 | 19.2 | 14.3 | 1.14 | 23.1 | 16.9 | 100.3 | 2.7 | 1.7 | 0.3 | 0.6 | 25.6 | 1.09 | 21.9 | 6.9 | 97.8 | 65.0 | 2.2 |
| 100 | 2.3 | 0.4 | 1.0 | 16.3 | 13.0 | 1.48 | 21.4 | 11.1 | 118.6 | 4.3 | 1.2 | 0.1 | 0.3 | 25.6 | 1.09 | 21.9 | 6.9 | 97.8 | 65.0 | 2.2 |
| | 3.4 | 0.7 | 1.5 | 17.2 | 13.4 | 1.36 | 21.9 | 12.6 | 112.9 | 3.8 | 1.2 | 0.1 | 0.3 | 25.6 | 1.09 | 21.9 | 6.9 | 97.8 | 65.0 | 2.2 |
| | 4.5 | 0.9 | 2.1 | 17.7 | 13.6 | 1.31 | 22.2 | 13.6 | 109.9 | 3.5 | 1.2 | 0.1 | 0.3 | 25.6 | 1.09 | 21.9 | 6.9 | 97.8 | 65.0 | 2.2 |
| 110 | 2.3 | 0.4 | 0.9 | 14.9 | 12.4 | 1.68 | 20.6 | 8.9 | 128.0 | 5.4 | 1.0 | 0.1 | 0.2 | 25.6 | 1.09 | 21.9 | 6.9 | 97.8 | 65.0 | 2.2 |
| | 3.4 | 0.7 | 1.5 | 15.7 | 12.7 | 1.56 | 21.0 | 10.1 | 122.4 | 4.8 | 1.0 | 0.1 | 0.2 | 25.6 | 1.09 | 21.9 | 6.9 | 97.8 | 65.0 | 2.2 |
| | 4.5 | 0.9 | 2.1 | 16.2 | 12.9 | 1.49 | 21.3 | 10.8 | 119.5 | 4.4 | 1.0 | 0.1 | 0.2 | 25.6 | 1.09 | 21.9 | 6.9 | 97.8 | 65.0 | 2.2 |
| 120 | 2.3 | 0.4 | 0.9 | 13.7 | 12.1 | 1.91 | 20.2 | 7.2 | 137.6 | 6.6 | 0.8 | 0.1 | 0.2 | 25.6 | 1.09 | 21.9 | 6.9 | 97.8 | 65.0 | 2.2 |
| | 3.4 | 0.6 | 1.4 | 14.4 | 12.3 | 1.77 | 20.4 | 8.1 | 132.0 | 5.9 | 0.8 | 0.1 | 0.2 | 25.6 | 1.09 | 21.9 | 6.9 | 97.8 | 65.0 | 2.2 |
| | 4.5 | 0.9 | 2.0 | 14.8 | 12.4 | 1.71 | 20.6 | 8.6 | 129.1 | 5.5 | 0.8 | 0.1 | 0.2 | 25.6 | 1.09 | 21.9 | 6.9 | 97.8 | 65.0 | 2.2 |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.

Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.

Table is with entering air of 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.

See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.

Operation below 40°F EWT is based on a 15% methanol antifreeze solution.

Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 026 (Full Load), With vFlow®

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

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | | GPM | HEATING - EAT 70°F | | | | | | | | |
|-----------|-----|-----|-----|------------------------|------|------|------|------|-------|-----|-----|--------------------|-----|------|------|------|-----|-------|------|-----|
| | | PSI | FT | TC | SC | KW | HR | EER | LWT | HWC | | PSI | FT | HC | KW | HE | COP | LAT | LWT | HWC |
| 20 | 1.4 | 0.3 | 0.6 | 29.8 | 19.5 | 1.20 | 33.9 | 24.8 | 70.0 | 1.4 | 6.0 | 1.9 | 4.4 | 16.8 | 1.68 | 11.0 | 2.9 | 86.3 | 16.3 | 1.5 |
| | 1.7 | 0.3 | 0.7 | 29.8 | 19.5 | 1.20 | 33.9 | 24.8 | 70.0 | 1.4 | 3.0 | 0.7 | 1.6 | 18.5 | 1.64 | 12.9 | 3.3 | 88.0 | 21.4 | 1.8 |
| 30 | 1.7 | 0.3 | 0.7 | 29.8 | 19.5 | 1.20 | 33.9 | 24.8 | 70.0 | 1.4 | 4.5 | 1.1 | 2.6 | 19.4 | 1.63 | 13.8 | 3.5 | 88.8 | 23.9 | 1.9 |
| | 1.7 | 0.3 | 0.7 | 29.8 | 19.5 | 1.20 | 33.9 | 24.8 | 70.0 | 1.4 | 6.0 | 1.8 | 4.0 | 19.8 | 1.62 | 14.3 | 3.6 | 89.3 | 25.2 | 1.9 |
| 40 | 2.3 | 0.4 | 1.0 | 29.8 | 19.5 | 1.20 | 33.9 | 24.8 | 70.0 | 1.4 | 3.0 | 0.6 | 1.5 | 21.3 | 1.61 | 15.8 | 3.9 | 90.7 | 29.5 | 2.1 |
| | 2.3 | 0.4 | 1.0 | 29.8 | 19.5 | 1.20 | 33.9 | 24.8 | 70.0 | 1.4 | 4.5 | 1.1 | 2.5 | 22.4 | 1.60 | 16.9 | 4.1 | 91.7 | 32.5 | 2.3 |
| | 2.3 | 0.4 | 1.0 | 29.8 | 19.5 | 1.20 | 33.9 | 24.8 | 70.0 | 1.4 | 6.0 | 1.6 | 3.8 | 23.0 | 1.59 | 17.5 | 4.2 | 92.3 | 34.2 | 2.3 |
| 50 | 3.0 | 0.6 | 1.4 | 29.6 | 19.4 | 1.23 | 33.8 | 24.1 | 72.5 | 1.5 | 3.0 | 0.6 | 1.4 | 24.1 | 1.59 | 18.7 | 4.5 | 93.5 | 37.5 | 2.5 |
| | 3.4 | 0.7 | 1.6 | 29.8 | 19.5 | 1.20 | 33.9 | 24.8 | 70.0 | 1.4 | 4.5 | 1.0 | 2.3 | 25.4 | 1.59 | 20.0 | 4.7 | 94.7 | 41.1 | 2.6 |
| | 3.4 | 0.7 | 1.6 | 29.8 | 19.5 | 1.20 | 33.9 | 24.8 | 70.0 | 1.4 | 6.0 | 1.6 | 3.6 | 26.2 | 1.59 | 20.7 | 4.8 | 95.4 | 43.1 | 2.7 |
| 60 | 3.0 | 0.6 | 1.3 | 28.4 | 18.9 | 1.35 | 33.0 | 21.1 | 82.0 | 1.9 | 3.0 | 0.6 | 1.3 | 27.1 | 1.59 | 21.6 | 5.0 | 96.3 | 45.6 | 2.8 |
| | 4.5 | 1.0 | 2.3 | 29.3 | 19.3 | 1.26 | 33.6 | 23.3 | 74.9 | 1.6 | 4.5 | 1.0 | 2.3 | 28.6 | 1.60 | 23.1 | 5.2 | 97.8 | 49.7 | 3.0 |
| | 6.0 | 1.5 | 3.5 | 29.7 | 19.4 | 1.22 | 33.8 | 24.4 | 71.3 | 1.4 | 6.0 | 1.5 | 3.5 | 29.4 | 1.61 | 24.0 | 5.4 | 98.6 | 52.0 | 3.1 |
| 70 | 3.0 | 0.6 | 1.3 | 26.9 | 18.3 | 1.48 | 32.0 | 18.2 | 91.3 | 2.4 | 3.0 | 0.6 | 1.3 | 30.1 | 1.61 | 24.6 | 5.5 | 99.2 | 53.6 | 3.2 |
| | 4.5 | 1.0 | 2.2 | 28.0 | 18.8 | 1.38 | 32.7 | 20.3 | 84.5 | 2.1 | 4.5 | 1.0 | 2.2 | 31.8 | 1.64 | 26.2 | 5.7 | 101.0 | 58.3 | 3.3 |
| | 6.0 | 1.5 | 3.4 | 28.5 | 19.0 | 1.33 | 33.1 | 21.4 | 81.0 | 1.9 | 6.0 | 1.5 | 3.4 | 32.8 | 1.66 | 27.2 | 5.8 | 101.9 | 60.9 | 3.4 |
| 80 | 3.0 | 0.6 | 1.3 | 25.2 | 17.5 | 1.64 | 30.8 | 15.4 | 100.5 | 3.0 | 3.0 | 0.6 | 1.3 | 33.1 | 1.66 | 27.5 | 5.8 | 102.2 | 61.7 | 3.5 |
| | 4.5 | 0.9 | 2.2 | 26.4 | 18.1 | 1.53 | 31.6 | 17.3 | 94.1 | 2.6 | 3.8 | 0.8 | 1.8 | 34.4 | 1.69 | 28.7 | 6.0 | 103.5 | 65.0 | 3.6 |
| | 6.0 | 1.4 | 3.3 | 26.7 | 18.2 | 1.50 | 31.8 | 17.7 | 92.7 | 2.4 | 3.8 | 0.8 | 1.8 | 34.4 | 1.69 | 28.7 | 6.0 | 103.5 | 65.0 | 3.6 |
| 90 | 3.0 | 0.6 | 1.3 | 23.5 | 16.7 | 1.81 | 29.7 | 12.9 | 109.8 | 3.7 | 2.3 | 0.4 | 1.0 | 34.4 | 1.69 | 28.7 | 6.0 | 103.5 | 65.0 | 3.6 |
| | 4.5 | 0.9 | 2.2 | 24.7 | 17.3 | 1.69 | 30.4 | 14.6 | 103.5 | 3.3 | 2.3 | 0.4 | 1.0 | 34.4 | 1.69 | 28.7 | 6.0 | 103.5 | 65.0 | 3.6 |
| | 6.0 | 1.4 | 3.2 | 25.3 | 17.5 | 1.63 | 30.9 | 15.5 | 100.3 | 3.0 | 2.3 | 0.4 | 1.0 | 34.4 | 1.69 | 28.7 | 6.0 | 103.5 | 65.0 | 3.6 |
| 100 | 3.0 | 0.6 | 1.3 | 21.7 | 15.9 | 2.02 | 28.6 | 10.7 | 119.1 | 4.5 | 1.6 | 0.2 | 0.6 | 34.4 | 1.69 | 28.7 | 6.0 | 103.5 | 65.0 | 3.6 |
| | 4.5 | 0.9 | 2.1 | 22.9 | 16.4 | 1.88 | 29.3 | 12.1 | 113.0 | 4.0 | 1.6 | 0.2 | 0.6 | 34.4 | 1.69 | 28.7 | 6.0 | 103.5 | 65.0 | 3.6 |
| | 6.0 | 1.4 | 3.2 | 23.5 | 16.7 | 1.82 | 29.7 | 12.9 | 109.9 | 3.7 | 1.6 | 0.2 | 0.6 | 34.4 | 1.69 | 28.7 | 6.0 | 103.5 | 65.0 | 3.6 |
| 110 | 3.0 | 0.6 | 1.3 | 20.0 | 15.2 | 2.26 | 27.7 | 8.8 | 128.5 | 5.4 | 1.3 | 0.2 | 0.3 | 34.4 | 1.69 | 28.7 | 6.0 | 103.5 | 65.0 | 3.6 |
| | 4.5 | 0.9 | 2.1 | 21.1 | 15.7 | 2.11 | 28.2 | 10.0 | 122.6 | 4.8 | 1.3 | 0.2 | 0.3 | 34.4 | 1.69 | 28.7 | 6.0 | 103.5 | 65.0 | 3.6 |
| | 6.0 | 1.4 | 3.1 | 21.6 | 15.9 | 2.03 | 28.6 | 10.6 | 119.5 | 4.5 | 1.3 | 0.2 | 0.3 | 34.4 | 1.69 | 28.7 | 6.0 | 103.5 | 65.0 | 3.6 |
| 120 | 3.0 | 0.5 | 1.2 | 18.5 | 14.7 | 2.55 | 27.2 | 7.3 | 138.1 | 6.4 | 1.0 | 0.1 | 0.2 | 34.4 | 1.69 | 28.7 | 6.0 | 103.5 | 65.0 | 3.6 |
| | 4.5 | 0.9 | 2.0 | 19.4 | 15.0 | 2.37 | 27.5 | 8.2 | 132.2 | 5.8 | 1.0 | 0.1 | 0.2 | 34.4 | 1.69 | 28.7 | 6.0 | 103.5 | 65.0 | 3.6 |
| | 6.0 | 1.3 | 3.1 | 19.9 | 15.2 | 2.28 | 27.7 | 8.7 | 129.2 | 5.5 | 1.0 | 0.1 | 0.2 | 34.4 | 1.69 | 28.7 | 6.0 | 103.5 | 65.0 | 3.6 |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.

Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.

Table is with entering air of 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.

See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.

Operation below 40°F EWT is based on a 15% methanol antifreeze solution.

Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 038 (Part Load), With vFlow®

1,000 CFM Nominal (Rated) Airflow Heating, 1,000 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | | GPM | HEATING - EAT 70°F | | | | | | | | |
|-----------|-----|-----|-----|------------------------|------|------|------|------|-------|-----|-----|--------------------|-----|------|------|------|-----|-------|------|-----|
| | | PSI | FT | TC | SC | KW | HR | EER | LWT | HWC | | PSI | FT | HC | KW | HE | COP | LAT | LWT | HWC |
| 20 | 1.5 | 0.4 | 1.0 | 33.5 | 22.2 | 1.03 | 37.0 | 32.4 | 70.0 | 1.2 | 6.0 | 2.5 | 5.7 | 17.2 | 1.58 | 11.8 | 3.2 | 85.9 | 16.1 | 1.7 |
| 30 | 1.8 | 0.5 | 1.1 | 33.5 | 22.2 | 1.03 | 37.0 | 32.4 | 70.0 | 1.3 | 3.0 | 0.9 | 2.1 | 19.1 | 1.58 | 13.7 | 3.6 | 87.7 | 20.8 | 1.8 |
| | 1.8 | 0.5 | 1.1 | 33.5 | 22.2 | 1.03 | 37.0 | 32.4 | 70.0 | 1.3 | 4.5 | 1.5 | 3.5 | 20.2 | 1.57 | 14.8 | 3.8 | 88.6 | 23.4 | 1.9 |
| | 1.8 | 0.5 | 1.1 | 33.5 | 22.2 | 1.03 | 37.0 | 32.4 | 70.0 | 1.3 | 6.0 | 2.2 | 5.1 | 20.7 | 1.57 | 15.4 | 3.9 | 89.2 | 24.9 | 2.0 |
| 40 | 2.5 | 0.7 | 1.5 | 33.5 | 22.2 | 1.03 | 37.0 | 32.4 | 70.0 | 1.2 | 3.0 | 0.8 | 1.9 | 22.2 | 1.57 | 16.9 | 4.1 | 90.5 | 28.7 | 2.1 |
| | 2.5 | 0.7 | 1.5 | 33.5 | 22.2 | 1.03 | 37.0 | 32.4 | 70.0 | 1.2 | 4.5 | 1.4 | 3.2 | 23.5 | 1.57 | 18.1 | 4.4 | 91.7 | 32.0 | 2.2 |
| | 2.5 | 0.7 | 1.5 | 33.5 | 22.2 | 1.03 | 37.0 | 32.4 | 70.0 | 1.2 | 6.0 | 2.0 | 4.7 | 24.1 | 1.57 | 18.8 | 4.5 | 92.3 | 33.7 | 2.3 |
| 50 | 3.0 | 0.8 | 1.8 | 33.0 | 22.2 | 1.10 | 36.7 | 29.9 | 74.5 | 1.4 | 3.0 | 0.8 | 1.8 | 25.3 | 1.57 | 19.9 | 4.7 | 93.3 | 36.7 | 2.4 |
| | 3.7 | 1.0 | 2.4 | 33.5 | 22.2 | 1.03 | 37.0 | 32.4 | 70.0 | 1.2 | 4.5 | 1.3 | 3.0 | 26.7 | 1.57 | 21.3 | 5.0 | 94.7 | 40.5 | 2.5 |
| | 3.7 | 1.0 | 2.4 | 33.5 | 22.2 | 1.03 | 37.0 | 32.4 | 70.0 | 1.2 | 6.0 | 1.9 | 4.4 | 27.5 | 1.57 | 22.1 | 5.1 | 95.4 | 42.6 | 2.6 |
| 60 | 3.0 | 0.8 | 1.8 | 31.4 | 21.6 | 1.26 | 35.7 | 24.9 | 83.8 | 2.0 | 3.0 | 0.8 | 1.8 | 28.3 | 1.58 | 22.9 | 5.3 | 96.1 | 44.7 | 2.6 |
| | 4.5 | 1.3 | 2.9 | 32.7 | 22.1 | 1.13 | 36.6 | 29.0 | 76.3 | 1.5 | 4.5 | 1.3 | 2.9 | 29.9 | 1.58 | 24.5 | 5.5 | 97.6 | 49.1 | 2.8 |
| | 6.0 | 1.8 | 4.2 | 33.2 | 22.2 | 1.07 | 36.9 | 31.1 | 72.3 | 1.3 | 6.0 | 1.8 | 4.2 | 30.8 | 1.58 | 25.4 | 5.7 | 98.5 | 51.5 | 2.8 |
| 70 | 3.0 | 0.8 | 1.8 | 29.4 | 20.7 | 1.44 | 34.3 | 20.4 | 92.8 | 2.7 | 3.0 | 0.8 | 1.8 | 31.3 | 1.59 | 25.9 | 5.8 | 98.9 | 52.8 | 2.9 |
| | 4.5 | 1.2 | 2.9 | 31.0 | 21.4 | 1.30 | 35.4 | 23.9 | 85.7 | 2.1 | 4.5 | 1.2 | 2.9 | 33.2 | 1.60 | 27.7 | 6.1 | 100.6 | 57.7 | 3.0 |
| | 6.0 | 1.8 | 4.1 | 31.7 | 21.7 | 1.23 | 35.9 | 25.9 | 82.0 | 1.9 | 6.0 | 1.8 | 4.1 | 34.2 | 1.60 | 28.7 | 6.3 | 101.6 | 60.4 | 3.1 |
| 80 | 3.0 | 0.8 | 1.9 | 27.1 | 19.7 | 1.64 | 32.7 | 16.6 | 101.8 | 3.7 | 3.0 | 0.8 | 1.9 | 34.3 | 1.60 | 28.9 | 6.3 | 101.7 | 60.8 | 3.1 |
| | 4.5 | 1.2 | 2.9 | 28.8 | 20.5 | 1.49 | 33.9 | 19.4 | 95.1 | 3.0 | 4.1 | 1.1 | 2.6 | 36.0 | 1.62 | 30.5 | 6.5 | 103.3 | 65.0 | 3.2 |
| | 6.0 | 1.7 | 4.0 | 29.7 | 20.9 | 1.41 | 34.5 | 21.0 | 91.5 | 2.6 | 4.1 | 1.1 | 2.6 | 36.0 | 1.62 | 30.5 | 6.5 | 103.3 | 65.0 | 3.2 |
| 90 | 3.0 | 0.8 | 1.9 | 24.9 | 18.7 | 1.87 | 31.3 | 13.3 | 110.8 | 4.8 | 2.4 | 0.7 | 1.6 | 36.0 | 1.62 | 30.5 | 6.5 | 103.3 | 65.0 | 3.2 |
| | 4.5 | 1.2 | 2.9 | 26.5 | 19.4 | 1.70 | 32.3 | 15.6 | 104.3 | 4.0 | 2.4 | 0.7 | 1.6 | 36.0 | 1.62 | 30.5 | 6.5 | 103.3 | 65.0 | 3.2 |
| | 6.0 | 1.7 | 4.0 | 27.3 | 19.8 | 1.62 | 32.9 | 16.9 | 101.0 | 3.6 | 2.4 | 0.7 | 1.6 | 36.0 | 1.62 | 30.5 | 6.5 | 103.3 | 65.0 | 3.2 |
| 100 | 3.0 | 0.8 | 1.9 | 22.9 | 17.8 | 2.13 | 30.1 | 10.8 | 120.1 | 6.2 | 1.7 | 0.5 | 1.2 | 36.0 | 1.62 | 30.5 | 6.5 | 103.3 | 65.0 | 3.2 |
| | 4.5 | 1.2 | 2.8 | 24.2 | 18.4 | 1.94 | 30.9 | 12.5 | 113.7 | 5.2 | 1.7 | 0.5 | 1.2 | 36.0 | 1.62 | 30.5 | 6.5 | 103.3 | 65.0 | 3.2 |
| | 6.0 | 1.7 | 3.9 | 25.0 | 18.7 | 1.86 | 31.3 | 13.5 | 110.4 | 4.7 | 1.7 | 0.5 | 1.2 | 36.0 | 1.62 | 30.5 | 6.5 | 103.3 | 65.0 | 3.2 |
| 110 | 3.0 | 0.8 | 1.8 | 21.4 | 17.4 | 2.43 | 29.7 | 8.8 | 129.8 | 7.8 | 1.4 | 0.4 | 1.0 | 36.0 | 1.62 | 30.5 | 6.5 | 103.3 | 65.0 | 3.2 |
| | 4.5 | 1.2 | 2.8 | 22.3 | 17.6 | 2.23 | 29.9 | 10.0 | 123.3 | 6.7 | 1.4 | 0.4 | 1.0 | 36.0 | 1.62 | 30.5 | 6.5 | 103.3 | 65.0 | 3.2 |
| | 6.0 | 1.7 | 3.8 | 22.9 | 17.8 | 2.13 | 30.2 | 10.8 | 120.1 | 6.1 | 1.4 | 0.4 | 1.0 | 36.0 | 1.62 | 30.5 | 6.5 | 103.3 | 65.0 | 3.2 |
| 120 | 3.0 | 0.7 | 1.7 | 20.8 | 17.9 | 2.80 | 30.4 | 7.4 | 140.2 | 9.8 | 1.1 | 0.3 | 0.6 | 36.0 | 1.62 | 30.5 | 6.5 | 103.3 | 65.0 | 3.2 |
| | 4.5 | 1.1 | 2.6 | 21.1 | 17.5 | 2.55 | 29.8 | 8.3 | 133.2 | 8.4 | 1.1 | 0.3 | 0.6 | 36.0 | 1.62 | 30.5 | 6.5 | 103.3 | 65.0 | 3.2 |
| | 6.0 | 1.6 | 3.7 | 21.4 | 17.4 | 2.44 | 29.7 | 8.8 | 129.9 | 7.8 | 1.1 | 0.3 | 0.6 | 36.0 | 1.62 | 30.5 | 6.5 | 103.3 | 65.0 | 3.2 |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.

Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.

Table is with entering air of 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.

See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.

Operation below 40°F EWT is based on a 15% methanol antifreeze solution.

Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 038 (Full Load), With vFlow®

1,250 CFM Nominal (Rated) Airflow Heating, 1,250 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | | GPM | HEATING - EAT 70°F | | | | | | | | |
|-----------|-----|-----|-----|------------------------|------|------|------|------|-------|-----|-----|--------------------|-----|------|------|------|-----|-------|------|-----|
| | | PSI | FT | TC | SC | KW | HR | EER | LWT | HWC | | PSI | FT | HC | KW | HE | COP | LAT | LWT | HWC |
| 20 | 2.0 | 0.7 | 1.5 | 45.0 | 28.6 | 1.76 | 51.0 | 25.5 | 70.0 | 1.8 | 9.0 | 4.3 | 9.9 | 25.6 | 2.16 | 18.2 | 3.5 | 88.9 | 15.9 | 2.1 |
| 30 | 2.5 | 0.7 | 1.7 | 45.0 | 28.6 | 1.76 | 51.0 | 25.5 | 70.0 | 1.8 | 4.5 | 1.5 | 3.5 | 28.1 | 2.18 | 20.7 | 3.8 | 90.8 | 20.8 | 2.4 |
| | 2.5 | 0.7 | 1.7 | 45.0 | 28.6 | 1.76 | 51.0 | 25.5 | 70.0 | 1.8 | 6.8 | 2.6 | 6.1 | 29.5 | 2.19 | 22.0 | 3.9 | 91.8 | 23.5 | 2.5 |
| | 2.5 | 0.7 | 1.7 | 45.0 | 28.6 | 1.76 | 51.0 | 25.5 | 70.0 | 1.8 | 9.0 | 3.9 | 9.1 | 30.2 | 2.19 | 22.7 | 4.0 | 92.3 | 25.0 | 2.6 |
| 40 | 3.4 | 1.0 | 2.2 | 45.0 | 28.6 | 1.76 | 51.0 | 25.5 | 70.0 | 1.8 | 4.5 | 1.4 | 3.2 | 32.2 | 2.21 | 24.7 | 4.3 | 93.8 | 29.0 | 2.9 |
| | 3.4 | 1.0 | 2.2 | 45.0 | 28.6 | 1.76 | 51.0 | 25.5 | 70.0 | 1.8 | 6.8 | 2.4 | 5.6 | 33.8 | 2.23 | 26.2 | 4.4 | 95.0 | 32.2 | 3.1 |
| | 3.4 | 1.0 | 2.2 | 45.0 | 28.6 | 1.76 | 51.0 | 25.5 | 70.0 | 1.8 | 9.0 | 3.6 | 8.4 | 34.7 | 2.24 | 27.1 | 4.5 | 95.6 | 34.0 | 3.2 |
| 50 | 4.5 | 1.3 | 3.0 | 44.6 | 28.6 | 1.80 | 50.8 | 24.7 | 72.6 | 2.0 | 4.5 | 1.3 | 3.0 | 36.3 | 2.26 | 28.6 | 4.7 | 96.8 | 37.3 | 3.4 |
| | 5.1 | 1.5 | 3.5 | 45.0 | 28.6 | 1.76 | 51.0 | 25.5 | 70.0 | 1.8 | 6.8 | 2.3 | 5.2 | 38.2 | 2.29 | 30.3 | 4.9 | 98.2 | 41.0 | 3.6 |
| | 5.1 | 1.5 | 3.5 | 45.0 | 28.6 | 1.76 | 51.0 | 25.5 | 70.0 | 1.8 | 9.0 | 3.4 | 7.9 | 39.2 | 2.31 | 31.3 | 5.0 | 98.9 | 43.0 | 3.7 |
| 60 | 4.5 | 1.3 | 2.9 | 43.0 | 28.1 | 1.97 | 49.8 | 21.9 | 82.1 | 2.7 | 4.5 | 1.3 | 2.9 | 40.4 | 2.33 | 32.5 | 5.1 | 99.9 | 45.6 | 3.8 |
| | 6.8 | 2.1 | 4.9 | 44.3 | 28.5 | 1.84 | 50.6 | 24.0 | 75.0 | 2.2 | 6.8 | 2.2 | 5.0 | 42.5 | 2.37 | 34.4 | 5.3 | 101.4 | 49.8 | 4.1 |
| | 9.0 | 3.3 | 7.5 | 44.8 | 28.6 | 1.78 | 50.9 | 25.1 | 71.3 | 1.9 | 9.0 | 3.3 | 7.5 | 43.7 | 2.39 | 35.5 | 5.4 | 102.3 | 52.1 | 4.2 |
| 70 | 4.5 | 1.2 | 2.9 | 41.1 | 27.4 | 2.15 | 48.4 | 19.1 | 91.5 | 3.5 | 4.5 | 1.2 | 2.9 | 44.5 | 2.41 | 36.3 | 5.4 | 102.9 | 53.9 | 4.3 |
| | 6.8 | 2.1 | 4.8 | 42.6 | 27.9 | 2.02 | 49.4 | 21.1 | 84.6 | 2.9 | 6.8 | 2.1 | 4.8 | 46.9 | 2.47 | 38.5 | 5.6 | 104.7 | 58.6 | 4.6 |
| | 9.0 | 3.1 | 7.2 | 43.2 | 28.2 | 1.95 | 49.9 | 22.2 | 81.1 | 2.6 | 9.0 | 3.1 | 7.2 | 48.3 | 2.50 | 39.8 | 5.7 | 105.7 | 61.2 | 4.7 |
| 80 | 4.5 | 1.2 | 2.9 | 38.8 | 26.4 | 2.37 | 46.9 | 16.4 | 100.9 | 4.4 | 4.5 | 1.2 | 2.9 | 48.8 | 2.51 | 40.2 | 5.7 | 106.0 | 62.1 | 4.7 |
| | 6.8 | 2.0 | 4.7 | 40.5 | 27.1 | 2.21 | 48.0 | 18.3 | 94.2 | 3.7 | 5.5 | 1.6 | 3.6 | 50.3 | 2.55 | 41.6 | 5.8 | 107.2 | 65.0 | 4.9 |
| | 9.0 | 3.1 | 7.1 | 41.2 | 27.4 | 2.14 | 48.5 | 19.3 | 90.8 | 3.4 | 5.5 | 1.6 | 3.6 | 50.3 | 2.55 | 41.6 | 5.8 | 107.2 | 65.0 | 4.9 |
| 90 | 4.5 | 1.2 | 2.9 | 36.4 | 25.4 | 2.63 | 45.4 | 13.9 | 110.2 | 5.5 | 3.3 | 0.9 | 2.1 | 50.3 | 2.55 | 41.6 | 5.8 | 107.2 | 65.0 | 4.9 |
| | 6.8 | 2.0 | 4.6 | 38.1 | 26.1 | 2.45 | 46.4 | 15.6 | 103.8 | 4.7 | 3.3 | 0.9 | 2.1 | 50.3 | 2.55 | 41.6 | 5.8 | 107.2 | 65.0 | 4.9 |
| | 9.0 | 3.0 | 6.9 | 38.9 | 26.5 | 2.36 | 47.0 | 16.5 | 100.4 | 4.3 | 3.3 | 0.9 | 2.1 | 50.3 | 2.55 | 41.6 | 5.8 | 107.2 | 65.0 | 4.9 |
| 100 | 4.5 | 1.2 | 2.8 | 33.9 | 24.2 | 2.93 | 43.9 | 11.6 | 119.5 | 6.7 | 2.4 | 0.7 | 1.6 | 50.3 | 2.55 | 41.6 | 5.8 | 107.2 | 65.0 | 4.9 |
| | 6.8 | 2.0 | 4.5 | 35.6 | 25.0 | 2.72 | 44.9 | 13.1 | 113.3 | 5.9 | 2.4 | 0.7 | 1.6 | 50.3 | 2.55 | 41.6 | 5.8 | 107.2 | 65.0 | 4.9 |
| | 9.0 | 3.0 | 6.8 | 36.4 | 25.4 | 2.63 | 45.4 | 13.9 | 110.1 | 5.5 | 2.4 | 0.7 | 1.6 | 50.3 | 2.55 | 41.6 | 5.8 | 107.2 | 65.0 | 4.9 |
| 110 | 4.5 | 1.2 | 2.8 | 31.4 | 23.0 | 3.29 | 42.6 | 9.5 | 128.9 | 8.0 | 1.8 | 0.5 | 1.2 | 50.3 | 2.55 | 41.6 | 5.8 | 107.2 | 65.0 | 4.9 |
| | 6.8 | 1.9 | 4.5 | 33.0 | 23.8 | 3.05 | 43.4 | 10.8 | 122.9 | 7.1 | 1.8 | 0.5 | 1.2 | 50.3 | 2.55 | 41.6 | 5.8 | 107.2 | 65.0 | 4.9 |
| | 9.0 | 2.9 | 6.7 | 33.8 | 24.2 | 2.94 | 43.9 | 11.5 | 119.7 | 6.7 | 1.8 | 0.5 | 1.2 | 50.3 | 2.55 | 41.6 | 5.8 | 107.2 | 65.0 | 4.9 |
| 120 | 4.5 | 1.1 | 2.6 | 29.0 | 21.9 | 3.72 | 41.7 | 7.8 | 138.5 | 9.6 | 1.5 | 0.4 | 0.8 | 50.3 | 2.55 | 41.6 | 5.8 | 107.2 | 65.0 | 4.9 |
| | 6.8 | 1.9 | 4.3 | 30.5 | 22.6 | 3.44 | 42.2 | 8.8 | 132.5 | 8.6 | 1.5 | 0.4 | 0.8 | 50.3 | 2.55 | 41.6 | 5.8 | 107.2 | 65.0 | 4.9 |
| | 9.0 | 2.9 | 6.6 | 31.3 | 23.0 | 3.31 | 42.6 | 9.4 | 129.5 | 8.1 | 1.5 | 0.4 | 0.8 | 50.3 | 2.55 | 41.6 | 5.8 | 107.2 | 65.0 | 4.9 |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.

Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.

Table is with entering air of 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.

See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.

Operation below 40°F EWT is based on a 15% methanol antifreeze solution.

Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 049 (Part Load), With vFlow®

1,350 CFM Nominal (Rated) Airflow Heating, 1,350 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | | GPM | HEATING - EAT 70°F | | | | | | | | |
|-----------|-----|-----|-----|------------------------|------|------|------|------|-------|-----|-----|--------------------|-----|------|------|------|-----|-------|------|-----|
| | | PSI | FT | TC | SC | KW | HR | EER | LWT | HWC | | PSI | FT | HC | KW | HE | COP | LAT | LWT | HWC |
| 20 | 1.9 | 0.1 | 0.1 | 42.1 | 29.9 | 1.45 | 47.1 | 29.0 | 70.0 | 1.5 | 9.0 | 2.3 | 5.4 | 23.1 | 2.28 | 15.3 | 3.0 | 85.2 | 16.6 | 2.5 |
| | 2.4 | 0.1 | 0.1 | 42.1 | 29.9 | 1.45 | 47.1 | 29.0 | 70.0 | 1.4 | 4.5 | 0.2 | 0.6 | 25.3 | 2.25 | 17.6 | 3.3 | 86.7 | 22.2 | 2.6 |
| 30 | 2.4 | 0.1 | 0.1 | 42.1 | 29.9 | 1.45 | 47.1 | 29.0 | 70.0 | 1.4 | 6.8 | 1.2 | 2.8 | 26.3 | 2.24 | 18.6 | 3.4 | 87.3 | 24.5 | 2.6 |
| | 2.4 | 0.1 | 0.1 | 42.1 | 29.9 | 1.45 | 47.1 | 29.0 | 70.0 | 1.4 | 9.0 | 2.1 | 4.9 | 26.8 | 2.24 | 19.2 | 3.5 | 87.7 | 25.7 | 2.6 |
| 40 | 3.1 | 0.1 | 0.1 | 42.1 | 29.9 | 1.45 | 47.1 | 29.0 | 70.0 | 1.5 | 4.5 | 0.2 | 0.4 | 28.9 | 2.23 | 21.3 | 3.8 | 89.1 | 30.5 | 2.7 |
| | 3.1 | 0.1 | 0.1 | 42.1 | 29.9 | 1.45 | 47.1 | 29.0 | 70.0 | 1.5 | 6.8 | 1.1 | 2.5 | 30.2 | 2.23 | 22.6 | 4.0 | 89.9 | 33.3 | 2.7 |
| | 3.1 | 0.1 | 0.1 | 42.1 | 29.9 | 1.45 | 47.1 | 29.0 | 70.0 | 1.5 | 9.0 | 2.0 | 4.6 | 30.9 | 2.22 | 23.3 | 4.1 | 90.4 | 34.8 | 2.7 |
| 50 | 4.5 | 0.1 | 0.3 | 42.0 | 30.0 | 1.47 | 47.0 | 28.6 | 70.9 | 1.5 | 4.5 | 0.1 | 0.3 | 32.8 | 2.22 | 25.2 | 4.3 | 91.6 | 38.8 | 2.8 |
| | 4.7 | 0.2 | 0.5 | 42.1 | 29.9 | 1.45 | 47.1 | 29.0 | 70.0 | 1.5 | 6.8 | 1.0 | 2.4 | 34.4 | 2.23 | 26.8 | 4.5 | 92.7 | 42.1 | 2.9 |
| | 4.7 | 0.2 | 0.5 | 42.1 | 29.9 | 1.45 | 47.1 | 29.0 | 70.0 | 1.5 | 9.0 | 1.9 | 4.3 | 35.3 | 2.23 | 27.7 | 4.6 | 93.3 | 43.9 | 2.9 |
| 60 | 4.5 | 0.1 | 0.2 | 40.6 | 29.8 | 1.69 | 46.4 | 24.1 | 80.6 | 2.1 | 4.5 | 0.1 | 0.2 | 36.8 | 2.23 | 29.2 | 4.8 | 94.3 | 47.0 | 3.0 |
| | 6.8 | 1.0 | 2.2 | 41.7 | 30.0 | 1.53 | 46.9 | 27.2 | 73.9 | 1.7 | 6.8 | 1.0 | 2.2 | 38.7 | 2.24 | 31.1 | 5.1 | 95.6 | 50.8 | 3.1 |
| | 9.0 | 1.8 | 4.2 | 42.1 | 29.9 | 1.46 | 47.0 | 28.8 | 70.5 | 1.5 | 9.0 | 1.8 | 4.2 | 39.8 | 2.25 | 32.1 | 5.2 | 96.3 | 52.9 | 3.1 |
| 70 | 4.5 | 0.1 | 0.2 | 38.6 | 29.0 | 1.94 | 45.2 | 19.9 | 90.1 | 2.8 | 4.5 | 0.1 | 0.2 | 41.0 | 2.25 | 33.3 | 5.3 | 97.0 | 55.2 | 3.2 |
| | 6.8 | 0.9 | 2.1 | 40.0 | 29.6 | 1.76 | 46.1 | 22.7 | 83.6 | 2.3 | 6.8 | 0.9 | 2.2 | 43.2 | 2.26 | 35.5 | 5.6 | 98.5 | 59.5 | 3.3 |
| | 9.0 | 1.8 | 4.0 | 40.7 | 29.8 | 1.68 | 46.4 | 24.2 | 80.3 | 2.1 | 9.0 | 1.8 | 4.0 | 44.4 | 2.27 | 36.7 | 5.7 | 99.3 | 61.9 | 3.4 |
| 80 | 4.5 | 0.1 | 0.3 | 36.2 | 27.8 | 2.22 | 43.7 | 16.3 | 99.4 | 3.8 | 4.5 | 0.1 | 0.3 | 45.2 | 2.27 | 37.4 | 5.8 | 99.8 | 63.4 | 3.4 |
| | 6.8 | 0.9 | 2.1 | 37.8 | 28.6 | 2.03 | 44.7 | 18.6 | 93.3 | 3.1 | 5.1 | 0.3 | 0.8 | 46.0 | 2.28 | 38.3 | 5.9 | 100.4 | 65.0 | 3.5 |
| | 9.0 | 1.7 | 3.9 | 38.6 | 29.0 | 1.94 | 45.2 | 19.9 | 90.0 | 3.4 | 5.1 | 0.3 | 0.8 | 46.0 | 2.28 | 38.3 | 5.9 | 100.4 | 65.0 | 3.7 |
| 90 | 4.5 | 0.1 | 0.3 | 33.5 | 26.5 | 2.54 | 42.2 | 13.2 | 108.7 | 4.9 | 3.1 | 0.1 | 0.1 | 46.0 | 2.28 | 38.3 | 5.9 | 100.4 | 65.0 | 3.5 |
| | 6.8 | 0.9 | 2.1 | 35.2 | 27.3 | 2.33 | 43.2 | 15.1 | 102.8 | 4.1 | 3.1 | 0.1 | 0.1 | 46.0 | 2.28 | 38.3 | 5.9 | 100.4 | 65.0 | 3.5 |
| | 9.0 | 1.7 | 3.9 | 36.1 | 27.8 | 2.23 | 43.7 | 16.2 | 99.7 | 3.8 | 3.1 | 0.1 | 0.1 | 46.0 | 2.28 | 38.3 | 5.9 | 100.4 | 65.0 | 3.5 |
| 100 | 4.5 | 0.1 | 0.3 | 30.8 | 25.2 | 2.89 | 40.7 | 10.6 | 118.1 | 6.2 | 2.2 | 0.1 | 0.1 | 46.0 | 2.28 | 38.3 | 5.9 | 100.4 | 65.0 | 3.5 |
| | 6.8 | 0.9 | 2.1 | 32.5 | 26.0 | 2.67 | 41.6 | 12.2 | 112.3 | 5.4 | 2.2 | 0.1 | 0.1 | 46.0 | 2.28 | 38.3 | 5.9 | 100.4 | 65.0 | 3.5 |
| | 9.0 | 1.7 | 3.8 | 33.3 | 26.4 | 2.56 | 42.1 | 13.0 | 109.3 | 5.0 | 2.2 | 0.1 | 0.1 | 46.0 | 2.28 | 38.3 | 5.9 | 100.4 | 65.0 | 3.5 |
| 110 | 4.5 | 0.1 | 0.2 | 28.2 | 24.2 | 3.30 | 39.5 | 8.6 | 127.5 | 7.7 | 1.7 | 0.1 | 0.1 | 46.0 | 2.28 | 38.3 | 5.9 | 100.4 | 65.0 | 3.5 |
| | 6.8 | 0.9 | 2.0 | 29.7 | 24.7 | 3.05 | 40.1 | 9.7 | 121.9 | 6.8 | 1.7 | 0.1 | 0.1 | 46.0 | 2.28 | 38.3 | 5.9 | 100.4 | 65.0 | 3.5 |
| | 9.0 | 1.6 | 3.7 | 30.5 | 25.1 | 2.93 | 40.5 | 10.4 | 119.0 | 6.3 | 1.7 | 0.1 | 0.1 | 46.0 | 2.28 | 38.3 | 5.9 | 100.4 | 65.0 | 3.5 |
| 120 | 4.5 | 0.1 | 0.1 | 25.9 | 23.6 | 3.75 | 38.7 | 6.9 | 137.2 | 9.5 | 1.4 | 0.1 | 0.1 | 46.0 | 2.28 | 38.3 | 5.9 | 100.4 | 65.0 | 3.5 |
| | 6.8 | 0.8 | 1.9 | 27.2 | 23.9 | 3.48 | 39.1 | 7.8 | 131.6 | 8.4 | 1.4 | 0.1 | 0.1 | 46.0 | 2.28 | 38.3 | 5.9 | 100.4 | 65.0 | 3.5 |
| | 9.0 | 1.6 | 3.6 | 27.9 | 24.1 | 3.35 | 39.3 | 8.3 | 128.7 | 7.9 | 1.4 | 0.1 | 0.1 | 46.0 | 2.28 | 38.3 | 5.9 | 100.4 | 65.0 | 3.5 |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.

Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.

Table is with entering air of 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.

See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.

Operation below 40°F EWT is based on a 15% methanol antifreeze solution.

Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 049 (Full Load), With vFlow®

1,650 CFM Nominal (Rated) Airflow Heating, 1,550 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | | GPM | HEATING - EAT 70°F | | | | | | | | |
|--------|------|-----|-----|------------------------|------|------|------|------|-------|-----|------|--------------------|-----|------|------|------|-----|-------|------|-----|
| | | PSI | FT | TC | SC | KW | HR | EER | LWT | HWC | | PSI | FT | HC | KW | HE | COP | LAT | LWT | HWC |
| 20 | 2.5 | 0.1 | 0.2 | 54.9 | 35.6 | 2.34 | 62.9 | 23.5 | 70.0 | 2.3 | 12.0 | 4.1 | 9.4 | 31.9 | 3.07 | 21.4 | 3.0 | 88.4 | 16.4 | 3.3 |
| | 3.1 | 0.1 | 0.2 | 54.9 | 35.6 | 2.34 | 62.9 | 23.5 | 70.0 | 2.3 | 6.0 | 0.9 | 2.1 | 35.3 | 3.06 | 24.8 | 3.4 | 90.4 | 21.7 | 3.5 |
| 30 | 3.1 | 0.1 | 0.2 | 54.9 | 35.6 | 2.34 | 62.9 | 23.5 | 70.0 | 2.3 | 9.0 | 2.1 | 4.9 | 36.8 | 3.06 | 26.3 | 3.5 | 91.2 | 24.1 | 3.5 |
| | 3.1 | 0.1 | 0.2 | 54.9 | 35.6 | 2.34 | 62.9 | 23.5 | 70.0 | 2.3 | 12.0 | 3.8 | 8.8 | 37.6 | 3.06 | 27.2 | 3.6 | 91.7 | 25.5 | 3.6 |
| 40 | 4.2 | 0.2 | 0.5 | 54.9 | 35.6 | 2.34 | 62.9 | 23.5 | 70.0 | 2.3 | 6.0 | 0.8 | 1.8 | 40.5 | 3.08 | 30.0 | 3.8 | 93.4 | 30.0 | 3.7 |
| | 4.2 | 0.2 | 0.5 | 54.9 | 35.6 | 2.34 | 62.9 | 23.5 | 70.0 | 2.3 | 9.0 | 2.0 | 4.6 | 42.3 | 3.11 | 31.7 | 4.0 | 94.4 | 32.9 | 3.8 |
| | 4.2 | 0.2 | 0.5 | 54.9 | 35.6 | 2.34 | 62.9 | 23.5 | 70.0 | 2.3 | 12.0 | 3.6 | 8.4 | 43.3 | 3.12 | 32.7 | 4.1 | 95.0 | 34.6 | 3.9 |
| 50 | 6.0 | 0.7 | 1.7 | 54.9 | 35.7 | 2.37 | 63.0 | 23.2 | 71.0 | 2.3 | 6.0 | 0.7 | 1.7 | 45.7 | 3.16 | 34.9 | 4.2 | 96.4 | 38.4 | 4.0 |
| | 6.3 | 0.8 | 1.9 | 54.9 | 35.6 | 2.34 | 62.9 | 23.5 | 70.0 | 2.3 | 9.0 | 1.9 | 4.3 | 47.9 | 3.20 | 37.0 | 4.4 | 97.6 | 41.8 | 4.1 |
| | 6.3 | 0.8 | 1.9 | 54.9 | 35.6 | 2.34 | 62.9 | 23.5 | 70.0 | 2.3 | 12.0 | 3.5 | 8.0 | 49.1 | 3.23 | 38.1 | 4.5 | 98.3 | 43.7 | 4.2 |
| 60 | 6.0 | 0.7 | 1.6 | 54.0 | 35.6 | 2.61 | 62.9 | 20.7 | 81.0 | 2.9 | 6.0 | 0.7 | 1.6 | 51.0 | 3.27 | 39.8 | 4.6 | 99.4 | 46.7 | 4.4 |
| | 9.0 | 1.8 | 4.2 | 54.8 | 35.6 | 2.44 | 63.1 | 22.5 | 74.0 | 2.5 | 9.0 | 1.8 | 4.2 | 53.5 | 3.33 | 42.1 | 4.7 | 100.9 | 50.6 | 4.5 |
| | 12.0 | 3.4 | 7.8 | 54.9 | 35.6 | 2.35 | 63.0 | 23.3 | 70.5 | 2.3 | 12.0 | 3.4 | 7.8 | 54.8 | 3.37 | 43.3 | 4.8 | 101.7 | 52.8 | 4.6 |
| 70 | 6.0 | 0.7 | 1.5 | 51.9 | 35.5 | 2.88 | 61.7 | 18.0 | 90.6 | 3.7 | 6.0 | 0.7 | 1.5 | 56.3 | 3.41 | 44.7 | 4.8 | 102.5 | 55.1 | 4.7 |
| | 9.0 | 1.8 | 4.0 | 53.5 | 36.0 | 2.69 | 62.7 | 19.9 | 83.9 | 3.1 | 9.0 | 1.8 | 4.0 | 59.1 | 3.49 | 47.2 | 5.0 | 104.1 | 59.5 | 5.0 |
| | 12.0 | 3.3 | 7.6 | 54.1 | 36.1 | 2.60 | 63.0 | 20.8 | 80.5 | 2.9 | 12.0 | 3.3 | 7.6 | 60.6 | 3.53 | 48.6 | 5.0 | 105.0 | 61.9 | 5.1 |
| 80 | 6.0 | 0.7 | 1.5 | 49.0 | 34.2 | 3.18 | 59.8 | 15.4 | 99.9 | 4.6 | 6.0 | 0.7 | 1.5 | 61.6 | 3.56 | 49.5 | 5.1 | 105.6 | 63.5 | 5.2 |
| | 9.0 | 1.7 | 4.0 | 51.0 | 35.1 | 2.97 | 61.1 | 17.2 | 93.6 | 3.9 | 6.7 | 0.9 | 2.1 | 62.6 | 3.59 | 50.3 | 5.1 | 106.1 | 65.0 | 5.3 |
| | 12.0 | 3.2 | 7.5 | 51.9 | 35.5 | 2.87 | 61.7 | 18.1 | 90.3 | 3.6 | 6.7 | 0.9 | 2.1 | 62.6 | 3.59 | 50.3 | 5.1 | 106.1 | 65.0 | 5.3 |
| 90 | 6.0 | 0.7 | 1.5 | 45.7 | 32.5 | 3.52 | 57.7 | 13.0 | 109.2 | 4.9 | 4.0 | 0.1 | 0.2 | 62.6 | 3.59 | 50.3 | 5.1 | 106.1 | 65.0 | 5.3 |
| | 9.0 | 1.7 | 3.9 | 47.9 | 33.6 | 3.29 | 59.1 | 14.6 | 103.1 | 4.6 | 4.0 | 0.1 | 0.2 | 62.6 | 3.59 | 50.3 | 5.1 | 106.1 | 65.0 | 5.3 |
| | 12.0 | 3.2 | 7.4 | 49.0 | 34.2 | 3.18 | 59.8 | 15.4 | 100.0 | 5.7 | 4.0 | 0.1 | 0.2 | 62.6 | 3.59 | 50.3 | 5.1 | 106.1 | 65.0 | 5.3 |
| 100 | 6.0 | 0.6 | 1.5 | 42.5 | 30.8 | 3.91 | 55.8 | 10.8 | 118.6 | 6.0 | 2.9 | 0.1 | 0.2 | 62.6 | 3.59 | 50.3 | 5.1 | 106.1 | 65.0 | 5.3 |
| | 9.0 | 1.7 | 3.8 | 44.5 | 31.8 | 3.65 | 57.0 | 12.2 | 112.7 | 5.7 | 2.9 | 0.1 | 0.2 | 62.6 | 3.59 | 50.3 | 5.1 | 106.1 | 65.0 | 5.3 |
| | 12.0 | 3.2 | 7.3 | 45.6 | 32.4 | 3.53 | 57.6 | 12.9 | 109.6 | 7.0 | 2.9 | 0.1 | 0.2 | 62.6 | 3.59 | 50.3 | 5.1 | 106.1 | 65.0 | 5.3 |
| 110 | 6.0 | 0.6 | 1.4 | 39.5 | 29.3 | 4.38 | 54.5 | 9.0 | 128.2 | 7.4 | 2.2 | 0.1 | 0.2 | 62.6 | 3.59 | 50.3 | 5.1 | 106.1 | 65.0 | 5.3 |
| | 9.0 | 1.6 | 3.7 | 41.3 | 30.2 | 4.09 | 55.2 | 10.1 | 122.3 | 7.0 | 2.2 | 0.1 | 0.2 | 62.6 | 3.59 | 50.3 | 5.1 | 106.1 | 65.0 | 5.3 |
| | 12.0 | 3.1 | 7.2 | 42.2 | 30.6 | 3.94 | 55.7 | 10.7 | 119.3 | 8.4 | 2.2 | 0.1 | 0.2 | 62.6 | 3.59 | 50.3 | 5.1 | 106.1 | 65.0 | 5.3 |
| 120 | 6.0 | 0.6 | 1.3 | 37.4 | 28.6 | 4.96 | 54.3 | 7.6 | 138.1 | 9.0 | 1.8 | 0.1 | 0.2 | 62.6 | 3.59 | 50.3 | 5.1 | 106.1 | 65.0 | 5.3 |
| | 9.0 | 1.6 | 3.6 | 38.6 | 28.9 | 4.60 | 54.3 | 8.4 | 132.1 | 8.5 | 1.8 | 0.1 | 0.2 | 62.6 | 3.59 | 50.3 | 5.1 | 106.1 | 65.0 | 5.3 |
| | 12.0 | 3.0 | 7.0 | 39.3 | 29.2 | 4.43 | 54.4 | 8.9 | 129.1 | 8.5 | 1.8 | 0.1 | 0.2 | 62.6 | 3.59 | 50.3 | 5.1 | 106.1 | 65.0 | 5.3 |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.

Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.

Table is with entering air of 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.

See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.

Operation below 40°F EWT is based on a 15% methanol antifreeze solution.

Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 064 (Part Load), With vFlow®

1,650 CFM Nominal (Rated) Airflow Heating, 1,500 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | | GPM | HEATING - EAT 70°F | | | | | | | | |
|-----------|------|-----|-----|------------------------|------|------|------|------|-------|------|------|--------------------|------|------|------|------|-----|-------|------|-----|
| | | PSI | FT | TC | SC | KW | HR | EER | LWT | HWC | | PSI | FT | HC | KW | HE | COP | LAT | LWT | HWC |
| 20 | 2.4 | 0.1 | 0.1 | 54.8 | 39.9 | 1.84 | 61.1 | 29.9 | 70.0 | 1.8 | 12.0 | 5.2 | 11.9 | 28.6 | 2.75 | 19.3 | 3.1 | 84.0 | 16.8 | 3.1 |
| | 3.1 | 0.1 | 0.1 | 54.8 | 39.9 | 1.84 | 61.1 | 29.9 | 70.0 | 1.8 | 6.0 | 0.9 | 2.1 | 32.2 | 2.76 | 22.7 | 3.4 | 86.0 | 22.4 | 3.2 |
| 30 | 3.1 | 0.1 | 0.1 | 54.8 | 39.9 | 1.84 | 61.1 | 29.9 | 70.0 | 1.8 | 9.0 | 2.5 | 5.7 | 33.6 | 2.77 | 24.1 | 3.6 | 86.8 | 24.6 | 3.2 |
| | 3.1 | 0.1 | 0.1 | 54.8 | 39.9 | 1.84 | 61.1 | 29.9 | 70.0 | 1.8 | 12.0 | 4.1 | 9.6 | 34.4 | 2.77 | 24.9 | 3.6 | 87.2 | 25.8 | 3.2 |
| 40 | 4.1 | 0.1 | 0.2 | 54.8 | 39.9 | 1.84 | 61.1 | 29.9 | 70.0 | 1.8 | 6.0 | 0.5 | 1.1 | 37.6 | 2.79 | 28.0 | 3.9 | 89.0 | 30.7 | 3.3 |
| | 4.1 | 0.1 | 0.2 | 54.8 | 39.9 | 1.84 | 61.1 | 29.9 | 70.0 | 1.8 | 9.0 | 1.9 | 4.3 | 39.4 | 2.80 | 29.8 | 4.1 | 90.0 | 33.4 | 3.4 |
| | 4.1 | 0.1 | 0.2 | 54.8 | 39.9 | 1.84 | 61.1 | 29.9 | 70.0 | 1.8 | 12.0 | 3.4 | 7.9 | 40.4 | 2.81 | 30.8 | 4.2 | 90.6 | 34.9 | 3.4 |
| 50 | 6.0 | 0.2 | 0.6 | 54.8 | 39.8 | 1.85 | 61.1 | 29.7 | 70.4 | 1.8 | 6.0 | 0.2 | 0.6 | 43.1 | 2.82 | 33.5 | 4.5 | 92.1 | 38.8 | 3.5 |
| | 6.1 | 0.3 | 0.7 | 54.8 | 39.9 | 1.84 | 61.1 | 29.9 | 70.0 | 1.8 | 9.0 | 1.5 | 3.5 | 45.3 | 2.84 | 35.7 | 4.7 | 93.4 | 42.1 | 3.5 |
| | 6.1 | 0.3 | 0.7 | 54.8 | 39.9 | 1.84 | 61.1 | 29.9 | 70.0 | 1.8 | 12.0 | 3.0 | 6.9 | 46.6 | 2.85 | 36.9 | 4.8 | 94.1 | 43.9 | 3.6 |
| 60 | 6.0 | 0.2 | 0.4 | 52.4 | 38.9 | 2.11 | 59.6 | 24.8 | 79.9 | 2.5 | 6.0 | 0.2 | 0.4 | 48.8 | 2.86 | 39.0 | 5.0 | 95.3 | 47.0 | 3.7 |
| | 9.0 | 1.4 | 3.1 | 54.1 | 39.5 | 1.93 | 60.6 | 28.1 | 73.5 | 2.0 | 9.0 | 1.4 | 3.1 | 51.4 | 2.89 | 41.5 | 5.2 | 96.8 | 50.8 | 3.8 |
| | 12.0 | 2.7 | 6.3 | 54.8 | 39.9 | 1.84 | 61.1 | 29.8 | 70.2 | 1.8 | 12.0 | 2.7 | 6.3 | 52.8 | 2.90 | 42.9 | 5.3 | 97.6 | 52.8 | 3.8 |
| 70 | 6.0 | 0.2 | 0.4 | 49.6 | 37.9 | 2.42 | 57.8 | 20.4 | 89.3 | 3.3 | 6.0 | 0.2 | 0.4 | 54.4 | 2.91 | 44.5 | 5.5 | 98.5 | 55.2 | 3.9 |
| | 9.0 | 1.3 | 3.0 | 51.5 | 38.6 | 2.21 | 59.0 | 23.3 | 83.1 | 2.7 | 9.0 | 1.3 | 3.0 | 57.3 | 2.94 | 47.3 | 5.7 | 100.1 | 59.5 | 4.1 |
| | 12.0 | 2.6 | 6.0 | 52.4 | 38.9 | 2.11 | 59.6 | 24.8 | 79.9 | 2.5 | 12.0 | 2.6 | 6.0 | 58.9 | 2.96 | 48.8 | 5.8 | 101.0 | 61.9 | 4.2 |
| 80 | 6.0 | 0.2 | 0.6 | 46.5 | 36.7 | 2.78 | 56.0 | 16.7 | 98.7 | 4.4 | 6.0 | 0.2 | 0.6 | 59.9 | 2.97 | 49.8 | 5.9 | 101.6 | 63.4 | 4.2 |
| | 9.0 | 1.3 | 3.1 | 48.5 | 37.5 | 2.55 | 57.2 | 19.0 | 92.7 | 3.7 | 6.8 | 0.5 | 1.2 | 61.0 | 2.98 | 50.8 | 6.0 | 102.2 | 65.0 | 4.3 |
| | 12.0 | 2.6 | 5.9 | 49.5 | 37.8 | 2.44 | 57.8 | 20.3 | 89.6 | 3.4 | 6.8 | 0.5 | 1.2 | 61.0 | 2.98 | 50.8 | 6.0 | 102.2 | 65.0 | 4.3 |
| 90 | 6.0 | 0.3 | 0.7 | 43.3 | 35.3 | 3.18 | 54.1 | 13.6 | 108.0 | 5.6 | 4.1 | 0.2 | 0.5 | 61.0 | 2.98 | 50.8 | 6.0 | 102.2 | 65.0 | 4.3 |
| | 9.0 | 1.4 | 3.2 | 45.2 | 36.2 | 2.93 | 55.2 | 15.4 | 102.3 | 4.8 | 4.1 | 0.2 | 0.5 | 61.0 | 2.98 | 50.8 | 6.0 | 102.2 | 65.0 | 4.3 |
| | 12.0 | 2.6 | 6.0 | 46.2 | 36.6 | 2.81 | 55.8 | 16.5 | 99.3 | 4.4 | 4.1 | 0.2 | 0.5 | 61.0 | 2.98 | 50.8 | 6.0 | 102.2 | 65.0 | 4.3 |
| 100 | 6.0 | 0.3 | 0.8 | 40.2 | 33.9 | 3.62 | 52.5 | 11.1 | 117.5 | 7.0 | 2.9 | 0.1 | 0.2 | 61.0 | 2.98 | 50.8 | 6.0 | 102.2 | 65.0 | 4.3 |
| | 9.0 | 1.4 | 3.2 | 42.0 | 34.7 | 3.36 | 53.4 | 12.5 | 111.9 | 6.1 | 2.9 | 0.1 | 0.2 | 61.0 | 2.98 | 50.8 | 6.0 | 102.2 | 65.0 | 4.3 |
| | 12.0 | 2.6 | 6.0 | 43.0 | 35.2 | 3.23 | 54.0 | 13.3 | 109.0 | 5.7 | 2.9 | 0.1 | 0.2 | 61.0 | 2.98 | 50.8 | 6.0 | 102.2 | 65.0 | 4.3 |
| 110 | 6.0 | 0.3 | 0.6 | 37.4 | 32.4 | 4.09 | 51.3 | 9.1 | 127.1 | 8.7 | 2.3 | 0.1 | 0.1 | 61.0 | 2.98 | 50.8 | 6.0 | 102.2 | 65.0 | 4.3 |
| | 9.0 | 1.3 | 3.1 | 38.9 | 33.2 | 3.81 | 52.0 | 10.2 | 121.5 | 7.7 | 2.3 | 0.1 | 0.1 | 61.0 | 2.98 | 50.8 | 6.0 | 102.2 | 65.0 | 4.3 |
| | 12.0 | 2.5 | 5.8 | 39.8 | 33.7 | 3.68 | 52.3 | 10.8 | 118.7 | 7.2 | 2.3 | 0.1 | 0.1 | 61.0 | 2.98 | 50.8 | 6.0 | 102.2 | 65.0 | 4.3 |
| 120 | 6.0 | 0.0 | 0.0 | 35.1 | 31.0 | 4.59 | 50.8 | 7.6 | 136.9 | 10.5 | 1.8 | 0.1 | 0.1 | 61.0 | 2.98 | 50.8 | 6.0 | 102.2 | 65.0 | 4.3 |
| | 9.0 | 1.1 | 2.6 | 36.3 | 31.7 | 4.30 | 51.0 | 8.4 | 131.3 | 9.4 | 1.8 | 0.1 | 0.1 | 61.0 | 2.98 | 50.8 | 6.0 | 102.2 | 65.0 | 4.3 |
| | 12.0 | 2.3 | 5.4 | 37.0 | 32.2 | 4.16 | 51.2 | 8.9 | 128.5 | 8.9 | 1.8 | 0.1 | 0.1 | 61.0 | 2.98 | 50.8 | 6.0 | 102.2 | 65.0 | 4.3 |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.

Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.

Table is with entering air of 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.

See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.

Operation below 40°F EWT is based on a 15% methanol antifreeze solution.

Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 064 (Full Load), With vFlow®

2,050 CFM Nominal (Rated) Airflow Heating, 1,850 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | | GPM | HEATING - EAT 70°F | | | | | | | | |
|-----------|------|-----|------|------------------------|------|------|------|------|-------|------|------|--------------------|------|------|------|------|-----|-------|------|-----|
| | | PSI | FT | TC | SC | KW | HR | EER | LWT | HWC | | PSI | FT | HC | KW | HE | COP | LAT | LWT | HWC |
| 20 | 3.4 | 0.1 | 0.2 | 74.3 | 51.7 | 3.13 | 85.0 | 23.7 | 70.0 | 2.8 | 15.0 | 7.3 | 16.8 | 43.4 | 3.77 | 30.6 | 3.4 | 87.6 | 15.9 | 3.8 |
| | 4.2 | 0.1 | 0.2 | 74.3 | 51.7 | 3.13 | 85.0 | 23.7 | 70.0 | 2.8 | 7.5 | 1.7 | 3.9 | 47.6 | 3.82 | 34.5 | 3.6 | 89.4 | 20.8 | 4.0 |
| 30 | 4.2 | 0.1 | 0.1 | 74.3 | 51.7 | 3.13 | 85.0 | 23.7 | 70.0 | 2.8 | 11.3 | 3.7 | 8.6 | 49.9 | 3.86 | 36.7 | 3.8 | 90.5 | 23.5 | 4.1 |
| | 4.2 | 0.1 | 0.2 | 74.3 | 51.7 | 3.13 | 85.0 | 23.7 | 70.0 | 2.8 | 15.0 | 6.1 | 14.1 | 51.2 | 3.88 | 37.9 | 3.9 | 91.1 | 24.9 | 4.1 |
| 40 | 5.7 | 0.3 | 0.2 | 74.3 | 51.7 | 3.13 | 85.0 | 23.7 | 70.0 | 2.8 | 7.5 | 1.2 | 2.7 | 54.7 | 3.94 | 41.3 | 4.1 | 92.7 | 29.0 | 4.2 |
| | 5.7 | 0.3 | 0.8 | 74.3 | 51.7 | 3.13 | 85.0 | 23.7 | 70.0 | 2.8 | 11.3 | 3.0 | 7.0 | 57.6 | 3.99 | 44.0 | 4.2 | 94.0 | 32.2 | 4.4 |
| | 5.7 | 0.3 | 0.8 | 74.3 | 51.7 | 3.13 | 85.0 | 23.7 | 70.0 | 2.8 | 15.0 | 5.3 | 12.2 | 59.2 | 4.02 | 45.5 | 4.3 | 94.7 | 33.9 | 4.4 |
| 50 | 7.5 | 0.9 | 2.0 | 73.6 | 51.4 | 3.20 | 84.5 | 23.0 | 72.5 | 2.9 | 7.5 | 0.9 | 2.0 | 62.1 | 4.08 | 48.2 | 4.5 | 96.0 | 37.2 | 4.6 |
| | 8.5 | 1.3 | 3.0 | 74.3 | 51.7 | 3.13 | 85.0 | 23.7 | 70.0 | 2.8 | 11.3 | 2.6 | 6.0 | 65.5 | 4.15 | 51.3 | 4.6 | 97.5 | 40.9 | 4.7 |
| | 8.5 | 1.3 | 3.0 | 74.3 | 51.7 | 3.13 | 85.0 | 23.7 | 70.0 | 2.8 | 15.0 | 4.7 | 10.8 | 67.3 | 4.19 | 53.0 | 4.7 | 98.3 | 42.9 | 4.8 |
| 60 | 7.5 | 0.7 | 1.7 | 70.7 | 50.3 | 3.47 | 82.6 | 20.4 | 82.0 | 3.6 | 7.5 | 0.7 | 1.7 | 69.5 | 4.24 | 55.1 | 4.8 | 99.3 | 45.3 | 5.0 |
| | 11.3 | 2.4 | 5.4 | 73.0 | 51.1 | 3.26 | 84.1 | 22.4 | 75.0 | 3.1 | 11.3 | 2.4 | 5.4 | 73.4 | 4.33 | 58.6 | 5.0 | 101.1 | 49.6 | 5.2 |
| | 15.0 | 4.3 | 10.0 | 74.0 | 51.6 | 3.16 | 84.8 | 23.4 | 71.3 | 2.8 | 15.0 | 4.3 | 10.0 | 75.5 | 4.38 | 60.6 | 5.1 | 102.0 | 51.9 | 5.3 |
| 70 | 7.5 | 0.7 | 1.7 | 67.3 | 48.9 | 3.81 | 80.3 | 17.7 | 91.4 | 4.5 | 7.5 | 0.7 | 1.7 | 77.0 | 4.41 | 61.9 | 5.1 | 102.7 | 53.5 | 5.4 |
| | 11.3 | 2.3 | 5.2 | 69.8 | 49.9 | 3.56 | 82.0 | 19.6 | 84.6 | 3.8 | 11.3 | 2.3 | 5.2 | 81.3 | 4.52 | 65.9 | 5.3 | 104.6 | 58.3 | 5.7 |
| | 15.0 | 4.1 | 9.5 | 71.1 | 50.4 | 3.44 | 82.8 | 20.6 | 81.0 | 3.5 | 15.0 | 4.1 | 9.5 | 83.7 | 4.59 | 68.0 | 5.3 | 105.7 | 60.9 | 5.8 |
| 80 | 7.5 | 0.8 | 1.8 | 63.5 | 47.5 | 4.19 | 77.8 | 15.1 | 100.8 | 5.6 | 7.5 | 0.8 | 1.8 | 84.4 | 4.61 | 68.7 | 5.4 | 106.0 | 61.7 | 5.9 |
| | 11.3 | 2.2 | 5.2 | 66.2 | 48.5 | 3.91 | 79.6 | 16.9 | 94.1 | 4.8 | 9.5 | 1.5 | 3.6 | 87.3 | 4.69 | 71.3 | 5.5 | 107.4 | 65.0 | 6.1 |
| | 15.0 | 4.1 | 9.4 | 67.5 | 49.0 | 3.78 | 80.4 | 17.9 | 90.7 | 4.4 | 9.5 | 1.5 | 3.6 | 87.3 | 4.69 | 71.3 | 5.5 | 107.4 | 65.0 | 6.1 |
| 90 | 7.5 | 0.8 | 2.0 | 59.8 | 45.8 | 4.65 | 75.6 | 12.9 | 110.2 | 6.8 | 5.7 | 0.2 | 0.5 | 87.3 | 4.69 | 71.3 | 5.5 | 107.4 | 65.0 | 6.1 |
| | 11.3 | 2.3 | 5.2 | 62.3 | 47.0 | 4.33 | 77.1 | 14.4 | 103.7 | 5.9 | 5.7 | 0.2 | 0.5 | 87.3 | 4.69 | 71.3 | 5.5 | 107.4 | 65.0 | 6.1 |
| | 15.0 | 4.0 | 9.3 | 63.7 | 47.5 | 4.18 | 77.9 | 15.2 | 100.4 | 5.5 | 5.7 | 0.2 | 0.5 | 87.3 | 4.69 | 71.3 | 5.5 | 107.4 | 65.0 | 6.1 |
| 100 | 7.5 | 0.9 | 2.0 | 56.2 | 44.2 | 5.18 | 73.9 | 10.8 | 119.7 | 8.3 | 4.1 | 0.1 | 0.2 | 87.3 | 4.69 | 71.3 | 5.5 | 107.4 | 65.0 | 6.1 |
| | 11.3 | 2.3 | 5.2 | 58.5 | 45.3 | 4.82 | 75.0 | 12.1 | 113.3 | 7.3 | 4.1 | 0.1 | 0.2 | 87.3 | 4.69 | 71.3 | 5.5 | 107.4 | 65.0 | 6.1 |
| | 15.0 | 4.0 | 9.3 | 59.8 | 45.9 | 4.65 | 75.6 | 12.9 | 110.1 | 6.8 | 4.1 | 0.1 | 0.2 | 87.3 | 4.69 | 71.3 | 5.5 | 107.4 | 65.0 | 6.1 |
| 110 | 7.5 | 0.8 | 1.8 | 53.1 | 42.6 | 5.80 | 72.9 | 9.2 | 129.4 | 10.0 | 3.2 | 0.1 | 0.1 | 87.3 | 4.69 | 71.3 | 5.5 | 107.4 | 65.0 | 6.1 |
| | 11.3 | 2.2 | 5.1 | 55.0 | 43.6 | 5.39 | 73.4 | 10.2 | 123.1 | 8.8 | 3.2 | 0.1 | 0.1 | 87.3 | 4.69 | 71.3 | 5.5 | 107.4 | 65.0 | 6.1 |
| | 15.0 | 4.0 | 9.2 | 56.1 | 44.2 | 5.19 | 73.8 | 10.8 | 119.8 | 8.3 | 3.2 | 0.1 | 0.1 | 87.3 | 4.69 | 71.3 | 5.5 | 107.4 | 65.0 | 6.1 |
| 120 | 7.5 | 0.6 | 1.3 | 50.8 | 41.4 | 6.53 | 73.1 | 7.8 | 139.5 | 11.9 | 2.6 | 0.1 | 0.1 | 87.3 | 4.69 | 71.3 | 5.5 | 107.4 | 65.0 | 6.1 |
| | 11.3 | 2.0 | 4.7 | 52.2 | 42.1 | 6.04 | 72.8 | 8.6 | 132.9 | 10.6 | 2.6 | 0.1 | 0.1 | 87.3 | 4.69 | 71.3 | 5.5 | 107.4 | 65.0 | 6.1 |
| | 15.0 | 3.8 | 8.8 | 53.0 | 42.6 | 5.82 | 72.9 | 9.1 | 129.7 | 10.0 | 2.6 | 0.1 | 0.1 | 87.3 | 4.69 | 71.3 | 5.5 | 107.4 | 65.0 | 6.1 |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.

Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.

Table is with entering air of 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.

See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.

Operation below 40°F EWT is based on a 15% methanol antifreeze solution.

Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 072 (Part Load), With vFlow®

1,650 CFM Nominal (Rated) Airflow Heating, 1,550 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | | GPM | HEATING - EAT 70°F | | | | | | | | |
|-----------|------|-----|-----|------------------------|------|------|------|------|-------|------|------|--------------------|------|------|------|------|-----|-------|------|-----|
| | | PSI | FT | TC | SC | KW | HR | EER | LWT | HWC | | PSI | FT | HC | KW | HE | COP | LAT | LWT | HWC |
| 20 | 2.8 | 0.1 | 0.2 | 63.0 | 42.0 | 2.31 | 70.9 | 27.2 | 70.0 | 2.7 | 14.0 | 6.5 | 15.1 | 33.4 | 3.51 | 21.4 | 2.8 | 86.7 | 16.9 | 4.1 |
| | 3.5 | 0.1 | 0.2 | 63.0 | 42.0 | 2.31 | 70.9 | 27.2 | 70.0 | 2.7 | 7.0 | 1.4 | 3.3 | 37.7 | 3.57 | 25.5 | 3.1 | 89.1 | 22.7 | 4.3 |
| 30 | 3.5 | 0.1 | 0.2 | 63.0 | 42.0 | 2.31 | 70.9 | 27.2 | 70.0 | 2.7 | 10.5 | 3.3 | 7.6 | 39.3 | 3.59 | 27.0 | 3.2 | 90.0 | 24.9 | 4.3 |
| | 3.5 | 0.1 | 0.2 | 63.0 | 42.0 | 2.31 | 70.9 | 27.2 | 70.0 | 2.7 | 14.0 | 5.4 | 12.5 | 40.1 | 3.60 | 27.8 | 3.3 | 90.5 | 26.0 | 4.3 |
| 40 | 4.7 | 0.2 | 0.4 | 63.0 | 42.0 | 2.31 | 70.9 | 27.2 | 70.0 | 2.7 | 7.0 | 0.9 | 2.2 | 43.9 | 3.65 | 31.4 | 3.5 | 92.6 | 31.0 | 4.5 |
| | 4.7 | 0.2 | 0.4 | 63.0 | 42.0 | 2.31 | 70.9 | 27.2 | 70.0 | 2.7 | 10.5 | 2.6 | 6.1 | 45.8 | 3.68 | 33.3 | 3.7 | 93.7 | 33.7 | 4.5 |
| | 4.7 | 0.2 | 0.4 | 63.0 | 42.0 | 2.31 | 70.9 | 27.2 | 70.0 | 2.7 | 14.0 | 4.6 | 10.7 | 46.9 | 3.69 | 34.3 | 3.7 | 94.3 | 35.1 | 4.5 |
| 50 | 7.0 | 0.7 | 1.5 | 62.9 | 41.9 | 2.32 | 70.8 | 27.1 | 70.2 | 2.7 | 7.0 | 0.7 | 1.5 | 50.1 | 3.74 | 37.4 | 3.9 | 96.1 | 39.3 | 4.8 |
| | 7.1 | 0.7 | 1.6 | 63.0 | 42.0 | 2.31 | 70.9 | 27.2 | 70.0 | 2.7 | 10.5 | 2.2 | 5.1 | 52.5 | 3.77 | 39.6 | 4.1 | 97.4 | 42.5 | 4.9 |
| | 7.1 | 0.7 | 1.6 | 63.0 | 42.0 | 2.31 | 70.9 | 27.2 | 70.0 | 2.7 | 14.0 | 4.1 | 9.4 | 53.8 | 3.78 | 40.8 | 4.2 | 98.1 | 44.2 | 4.9 |
| 60 | 7.0 | 0.5 | 1.3 | 60.2 | 40.8 | 2.65 | 69.3 | 22.7 | 79.8 | 3.2 | 7.0 | 0.5 | 1.3 | 56.4 | 3.82 | 43.3 | 4.3 | 99.6 | 47.6 | 5.2 |
| | 10.5 | 2.0 | 4.6 | 62.1 | 41.6 | 2.42 | 70.4 | 25.6 | 73.4 | 2.9 | 10.5 | 2.0 | 4.6 | 59.1 | 3.86 | 46.0 | 4.5 | 101.1 | 51.2 | 5.3 |
| | 14.0 | 3.8 | 8.7 | 63.0 | 42.0 | 2.32 | 70.9 | 27.2 | 70.1 | 2.7 | 14.0 | 3.8 | 8.7 | 60.6 | 3.88 | 47.4 | 4.6 | 101.9 | 53.2 | 5.4 |
| 70 | 7.0 | 0.5 | 1.3 | 57.1 | 39.5 | 3.04 | 67.5 | 18.8 | 89.3 | 4.3 | 7.0 | 0.5 | 1.3 | 62.6 | 3.90 | 49.3 | 4.7 | 103.1 | 55.9 | 5.6 |
| | 10.5 | 1.9 | 4.5 | 59.2 | 40.3 | 2.78 | 68.7 | 21.3 | 83.1 | 3.7 | 10.5 | 1.9 | 4.5 | 65.8 | 3.95 | 52.3 | 4.9 | 104.8 | 60.0 | 5.8 |
| | 14.0 | 3.6 | 8.3 | 60.2 | 40.7 | 2.65 | 69.3 | 22.7 | 79.9 | 3.5 | 14.0 | 3.6 | 8.3 | 67.5 | 3.97 | 53.9 | 5.0 | 105.8 | 62.3 | 5.9 |
| 80 | 7.0 | 0.6 | 1.4 | 53.7 | 38.1 | 3.48 | 65.6 | 15.4 | 98.7 | 5.8 | 7.0 | 0.6 | 1.4 | 68.9 | 3.99 | 55.3 | 5.1 | 106.6 | 64.2 | 6.1 |
| | 10.5 | 1.9 | 4.5 | 55.9 | 39.0 | 3.19 | 66.8 | 17.5 | 92.7 | 5.0 | 7.4 | 0.8 | 1.8 | 69.5 | 4.00 | 55.8 | 5.1 | 106.9 | 65.0 | 6.1 |
| | 14.0 | 3.5 | 8.1 | 57.0 | 39.4 | 3.05 | 67.4 | 18.7 | 89.6 | 4.6 | 7.4 | 0.8 | 1.8 | 69.5 | 4.00 | 55.8 | 5.1 | 106.9 | 65.0 | 6.1 |
| 90 | 7.0 | 0.7 | 1.5 | 50.1 | 36.6 | 3.98 | 63.7 | 12.6 | 108.2 | 7.6 | 4.5 | 0.3 | 0.6 | 69.5 | 4.00 | 55.8 | 5.1 | 106.9 | 65.0 | 6.1 |
| | 10.5 | 2.0 | 4.5 | 52.3 | 37.5 | 3.67 | 64.8 | 14.3 | 102.3 | 6.7 | 4.5 | 0.3 | 0.6 | 69.5 | 4.00 | 55.8 | 5.1 | 106.9 | 65.0 | 6.1 |
| | 14.0 | 3.5 | 8.1 | 53.5 | 38.0 | 3.51 | 65.4 | 15.2 | 99.3 | 6.2 | 4.5 | 0.3 | 0.6 | 69.5 | 4.00 | 55.8 | 5.1 | 106.9 | 65.0 | 6.1 |
| 100 | 7.0 | 0.7 | 1.6 | 46.4 | 35.2 | 4.54 | 61.9 | 10.2 | 117.7 | 9.9 | 3.2 | 0.2 | 0.4 | 69.5 | 4.00 | 55.8 | 5.1 | 106.9 | 65.0 | 6.1 |
| | 10.5 | 2.0 | 4.5 | 48.6 | 36.0 | 4.20 | 62.9 | 11.6 | 112.0 | 8.8 | 3.2 | 0.2 | 0.4 | 69.5 | 4.00 | 55.8 | 5.1 | 106.9 | 65.0 | 6.1 |
| | 14.0 | 3.5 | 8.1 | 49.7 | 36.5 | 4.03 | 63.5 | 12.3 | 109.1 | 8.2 | 3.2 | 0.2 | 0.4 | 69.5 | 4.00 | 55.8 | 5.1 | 106.9 | 65.0 | 6.1 |
| 110 | 7.0 | 0.6 | 1.4 | 42.9 | 33.8 | 5.15 | 60.4 | 8.3 | 127.3 | 12.6 | 2.5 | 0.1 | 0.2 | 69.5 | 4.00 | 55.8 | 5.1 | 106.9 | 65.0 | 6.1 |
| | 10.5 | 1.9 | 4.4 | 44.9 | 34.6 | 4.78 | 61.2 | 9.4 | 121.7 | 11.3 | 2.5 | 0.1 | 0.2 | 69.5 | 4.00 | 55.8 | 5.1 | 106.9 | 65.0 | 6.1 |
| | 14.0 | 3.5 | 8.0 | 46.0 | 35.0 | 4.61 | 61.7 | 10.0 | 118.8 | 10.7 | 2.5 | 0.1 | 0.2 | 69.5 | 4.00 | 55.8 | 5.1 | 106.9 | 65.0 | 6.1 |
| 120 | 7.0 | 0.4 | 0.9 | 39.5 | 32.5 | 5.82 | 59.4 | 6.8 | 137.0 | 15.7 | 2.0 | 0.1 | 0.1 | 69.5 | 4.00 | 55.8 | 5.1 | 106.9 | 65.0 | 6.1 |
| | 10.5 | 1.7 | 3.9 | 41.4 | 33.2 | 5.43 | 59.9 | 7.6 | 131.4 | 14.3 | 2.0 | 0.1 | 0.1 | 69.5 | 4.00 | 55.8 | 5.1 | 106.9 | 65.0 | 6.1 |
| | 14.0 | 3.3 | 7.6 | 42.4 | 33.6 | 5.24 | 60.2 | 8.1 | 128.6 | 13.6 | 2.0 | 0.1 | 0.1 | 69.5 | 4.00 | 55.8 | 5.1 | 106.9 | 65.0 | 6.1 |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.

Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.

Table is with entering air of 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.

See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.

Operation below 40°F EWT is based on a 15% methanol antifreeze solution.

Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Performance Data – TE H/V/D 072 (Full Load), With vFlow®

2,050 CFM Nominal (Rated) Airflow Heating, 1,850 CFM Nominal (Rated) Airflow Cooling

Performance capacities shown in thousands of Btu/h

| EWT °F | GPM | WPD | | COOLING - EAT 80/67 °F | | | | | | | GPM | HEATING - EAT 70°F | | | | | | | | |
|-----------|------|-----|------|------------------------|------|------|------|------|-------|------|------|--------------------|------|------|------|------|-----|-------|------|-----|
| | | PSI | FT | TC | SC | KW | HR | EER | LWT | HWC | | PSI | FT | HC | KW | HE | COP | LAT | LWT | HWC |
| 20 | 3.7 | 0.3 | 0.6 | 81.0 | 52.8 | 3.61 | 93.3 | 22.4 | 70.0 | 4.5 | 17.0 | 8.9 | 20.6 | 47.3 | 4.52 | 31.9 | 3.1 | 89.3 | 16.2 | 5.0 |
| 30 | 4.7 | 0.3 | 0.6 | 81.0 | 52.8 | 3.61 | 93.3 | 22.4 | 70.0 | 4.5 | 8.5 | 2.2 | 5.1 | 52.4 | 4.63 | 36.6 | 3.3 | 91.6 | 21.4 | 5.2 |
| | 4.7 | 0.3 | 0.6 | 81.0 | 52.8 | 3.61 | 93.3 | 22.4 | 70.0 | 4.5 | 12.8 | 4.6 | 10.6 | 54.8 | 4.68 | 38.8 | 3.4 | 92.7 | 23.9 | 5.4 |
| | 4.7 | 0.3 | 0.6 | 81.0 | 52.8 | 3.61 | 93.3 | 22.4 | 70.0 | 4.5 | 17.0 | 7.6 | 17.6 | 56.1 | 4.71 | 40.1 | 3.5 | 93.3 | 25.3 | 5.5 |
| 40 | 6.2 | 0.6 | 1.3 | 81.0 | 52.8 | 3.61 | 93.3 | 22.4 | 70.0 | 4.5 | 8.5 | 1.6 | 3.8 | 60.3 | 4.80 | 43.9 | 3.7 | 95.2 | 29.7 | 5.7 |
| | 6.2 | 0.6 | 1.3 | 81.0 | 52.8 | 3.61 | 93.3 | 22.4 | 70.0 | 4.5 | 12.8 | 3.9 | 8.9 | 63.1 | 4.87 | 46.5 | 3.8 | 96.4 | 32.7 | 5.9 |
| | 6.2 | 0.6 | 1.3 | 81.0 | 52.8 | 3.61 | 93.3 | 22.4 | 70.0 | 4.5 | 17.0 | 6.7 | 15.5 | 64.6 | 4.90 | 47.9 | 3.9 | 97.1 | 34.4 | 6.1 |
| 50 | 8.5 | 1.3 | 3.0 | 80.5 | 52.6 | 3.67 | 93.0 | 21.9 | 71.9 | 4.6 | 8.5 | 1.3 | 3.0 | 67.9 | 4.99 | 50.9 | 4.0 | 98.6 | 38.0 | 6.3 |
| | 9.3 | 1.7 | 3.9 | 81.0 | 52.8 | 3.61 | 93.3 | 22.4 | 70.0 | 4.5 | 12.8 | 3.4 | 7.8 | 71.2 | 5.07 | 53.9 | 4.1 | 100.1 | 41.5 | 6.6 |
| | 9.3 | 1.7 | 3.9 | 81.0 | 52.8 | 3.61 | 93.3 | 22.4 | 70.0 | 4.5 | 17.0 | 6.0 | 13.9 | 72.9 | 5.11 | 55.5 | 4.2 | 100.9 | 43.5 | 6.8 |
| 60 | 8.5 | 1.2 | 2.7 | 77.4 | 51.4 | 4.01 | 91.1 | 19.3 | 81.4 | 5.6 | 8.5 | 1.2 | 2.7 | 75.5 | 5.18 | 57.9 | 4.3 | 102.0 | 46.4 | 7.1 |
| | 12.8 | 3.1 | 7.1 | 79.7 | 52.3 | 3.76 | 92.5 | 21.2 | 74.5 | 4.8 | 12.8 | 3.1 | 7.1 | 79.2 | 5.28 | 61.2 | 4.4 | 103.7 | 50.4 | 7.4 |
| | 17.0 | 5.6 | 13.0 | 80.7 | 52.7 | 3.64 | 93.1 | 22.2 | 71.0 | 4.5 | 17.0 | 5.6 | 13.0 | 81.2 | 5.33 | 63.0 | 4.5 | 104.6 | 52.6 | 7.7 |
| 70 | 8.5 | 1.1 | 2.6 | 73.7 | 49.8 | 4.42 | 88.7 | 16.7 | 90.9 | 6.8 | 8.5 | 1.1 | 2.6 | 83.2 | 5.38 | 64.8 | 4.5 | 105.5 | 54.8 | 7.9 |
| | 12.8 | 3.0 | 6.8 | 76.3 | 50.9 | 4.12 | 90.4 | 18.5 | 84.2 | 5.9 | 12.8 | 3.0 | 6.8 | 87.3 | 5.50 | 68.5 | 4.6 | 107.3 | 59.3 | 8.4 |
| | 17.0 | 5.4 | 12.4 | 77.6 | 51.5 | 3.99 | 91.2 | 19.5 | 80.7 | 5.5 | 17.0 | 5.4 | 12.4 | 89.5 | 5.57 | 70.5 | 4.7 | 108.3 | 61.7 | 8.7 |
| 80 | 8.5 | 1.2 | 2.7 | 69.5 | 48.1 | 4.89 | 86.2 | 14.2 | 100.3 | 8.4 | 8.5 | 1.2 | 2.7 | 90.9 | 5.61 | 71.7 | 4.7 | 108.9 | 63.1 | 8.8 |
| | 12.8 | 2.9 | 6.7 | 72.4 | 49.3 | 4.56 | 88.0 | 15.9 | 93.8 | 7.3 | 9.8 | 1.6 | 3.8 | 92.6 | 5.66 | 73.3 | 4.8 | 109.7 | 65.0 | 9.2 |
| | 17.0 | 5.2 | 12.1 | 73.8 | 49.9 | 4.40 | 88.8 | 16.8 | 90.5 | 6.7 | 9.8 | 1.6 | 3.8 | 92.6 | 5.66 | 73.3 | 4.8 | 109.7 | 65.0 | 9.2 |
| 90 | 8.5 | 1.2 | 2.8 | 65.2 | 46.2 | 5.45 | 83.8 | 12.0 | 109.7 | 10.3 | 5.9 | 0.3 | 0.6 | 92.6 | 5.66 | 73.3 | 4.8 | 109.7 | 65.0 | 9.2 |
| | 12.8 | 2.9 | 6.7 | 68.1 | 47.4 | 5.07 | 85.4 | 13.4 | 103.4 | 9.0 | 5.9 | 0.3 | 0.6 | 92.6 | 5.66 | 73.3 | 4.8 | 109.7 | 65.0 | 9.2 |
| | 17.0 | 5.2 | 12.0 | 69.6 | 48.1 | 4.88 | 86.3 | 14.2 | 100.1 | 8.4 | 5.9 | 0.3 | 0.6 | 92.6 | 5.66 | 73.3 | 4.8 | 109.7 | 65.0 | 9.2 |
| 100 | 8.5 | 1.2 | 2.8 | 60.9 | 44.3 | 6.09 | 81.6 | 10.0 | 119.2 | 12.5 | 4.2 | 0.1 | 0.2 | 92.6 | 5.66 | 73.3 | 4.8 | 109.7 | 65.0 | 9.2 |
| | 12.8 | 2.9 | 6.7 | 63.7 | 45.5 | 5.66 | 83.0 | 11.2 | 113.0 | 11.0 | 4.2 | 0.1 | 0.2 | 92.6 | 5.66 | 73.3 | 4.8 | 109.7 | 65.0 | 9.2 |
| | 17.0 | 5.2 | 12.0 | 65.1 | 46.2 | 5.46 | 83.8 | 11.9 | 109.9 | 10.3 | 4.2 | 0.1 | 0.2 | 92.6 | 5.66 | 73.3 | 4.8 | 109.7 | 65.0 | 9.2 |
| 110 | 8.5 | 1.1 | 2.6 | 56.7 | 42.5 | 6.85 | 80.0 | 8.3 | 128.8 | 15.0 | 3.3 | 0.1 | 0.1 | 92.6 | 5.66 | 73.3 | 4.8 | 109.7 | 65.0 | 9.2 |
| | 12.8 | 2.9 | 6.6 | 59.3 | 43.6 | 6.36 | 81.0 | 9.3 | 122.7 | 13.4 | 3.3 | 0.1 | 0.1 | 92.6 | 5.66 | 73.3 | 4.8 | 109.7 | 65.0 | 9.2 |
| | 17.0 | 5.1 | 11.8 | 60.7 | 44.2 | 6.12 | 81.6 | 9.9 | 119.6 | 12.6 | 3.3 | 0.1 | 0.1 | 92.6 | 5.66 | 73.3 | 4.8 | 109.7 | 65.0 | 9.2 |
| 120 | 8.5 | 0.9 | 2.1 | 52.9 | 41.0 | 7.72 | 79.2 | 6.8 | 138.6 | 18.0 | 2.7 | 0.1 | 0.1 | 92.6 | 5.66 | 73.3 | 4.8 | 109.7 | 65.0 | 9.2 |
| | 12.8 | 2.7 | 6.2 | 55.2 | 41.9 | 7.16 | 79.6 | 7.7 | 132.5 | 16.1 | 2.7 | 0.1 | 0.1 | 92.6 | 5.66 | 73.3 | 4.8 | 109.7 | 65.0 | 9.2 |
| | 17.0 | 5.0 | 11.5 | 56.4 | 42.4 | 6.90 | 80.0 | 8.2 | 129.4 | 15.2 | 2.7 | 0.1 | 0.1 | 92.6 | 5.66 | 73.3 | 4.8 | 109.7 | 65.0 | 9.2 |

Interpolation is permissible, extrapolation is not. All performance data is based on the lower voltage of dual voltage units.

Performance stated is at the rated power supply, performance may vary as the power supply varies from the rated.

Table is with entering air of 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.

See performance correction tables for operating conditions other than those listed above. See performance data selection notes for operation in the shaded areas.

Operation below 40°F EWT is based on a 15% methanol antifreeze solution.

Operation below 60°F EWT requires optional extended range insulated water and refrigerant circuits to avoid condensation within the unit cabinet.

Correction Tables – Part Load Performance Data

Airflow Correction Table

| Airflow | Cooling | | | | Heating | | |
|---------|----------------|-------------------|-------|-------------------|------------------|-------|--------------------|
| | 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 Tables

| 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 |

ClimaDry® II Option Notes:

Unit minimum entering air temperature when in dehumidification or cooling mode is 65°F DB. Operation below this minimum may result in nuisance faults.

* = 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 |

Correction Tables – Full Load Performance Data

Airflow Correction Table

| Airflow | Cooling | | | | Heating | | |
|---------|----------------|-------------------|-------|-------------------|------------------|-------|--------------------|
| | 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 Tables

| 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 |

ClimaDry® II Option Notes:

Unit minimum entering air temperature when in dehumidification or cooling mode is 65°F DB. Operation below this minimum may result in nuisance faults.

* = 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 | * | * | * | * | * | * | * | * | * | * | 0.946 | 0.853 |
| 50 | 0.850 | 1.004 | 1.174 | * | * | * | * | * | * | * | * | 0.953 | 0.870 |
| 55 | 0.880 | 0.694 | 0.902 | 1.115 | * | * | * | * | * | * | * | 0.964 | 0.896 |
| 60 | 0.922 | | 0.646 | 0.875 | 1.103 | 1.329 | * | * | * | * | * | 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 | * | * | * | 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 | * | * | 1.011 | 1.035 |
| 75 | 1.117 | | | | | 0.601 | 0.627 | 0.821 | 1.046 | 1.275 | 1.510 | 1.033 | 1.101 |

Correction Tables – Water Pressure Drop Adder for Options

Modulating Valves for Closed Loop Applications, Low System Pressure Drop

| Model | CV | Close Off | MOPD | WPD Adders | | |
|-------|-----|-----------|------|------------|------|------|
| | | | | GPM | PSI | FT |
| 026 | 4.7 | 200 | 30 | 3 | 0.41 | 0.94 |
| | 4.7 | 200 | 30 | 4.5 | 0.92 | 2.12 |
| | 4.7 | 200 | 30 | 6 | 1.63 | 3.76 |
| 038 | 7.4 | 200 | 30 | 4.5 | 0.37 | 0.85 |
| | 7.4 | 200 | 30 | 6.8 | 0.84 | 1.95 |
| | 7.4 | 200 | 30 | 9 | 1.48 | 3.42 |
| 049 | 10 | 200 | 30 | 6 | 0.36 | 0.83 |
| | 10 | 200 | 30 | 9 | 0.81 | 1.87 |
| | 10 | 200 | 30 | 12 | 1.44 | 3.33 |
| 064 | 19 | 200 | 30 | 7.5 | 0.16 | 0.36 |
| | 19 | 200 | 30 | 11.3 | 0.35 | 0.82 |
| | 19 | 200 | 30 | 15 | 0.62 | 1.44 |
| 072 | 19 | 200 | 30 | 8.5 | 0.20 | 0.46 |
| | 19 | 200 | 30 | 12.8 | 0.45 | 1.05 |
| | 19 | 200 | 30 | 17 | 0.80 | 1.85 |

Modulating Valves for Closed Loop Applications, High System Pressure Drop

| Model | CV | Close Off | MOPD | WPD Adders | | |
|-------|-----|-----------|------|------------|------|-------|
| | | | | GPM | PSI | FT |
| 026 | 4.7 | 200 | 30 | 3 | 0.41 | 0.94 |
| | 4.7 | 200 | 30 | 4.5 | 0.92 | 2.12 |
| | 4.7 | 200 | 30 | 6 | 1.63 | 3.76 |
| 038 | 4.7 | 200 | 30 | 4.5 | 0.92 | 2.12 |
| | 4.7 | 200 | 30 | 6.8 | 2.09 | 4.84 |
| | 4.7 | 200 | 30 | 9 | 3.67 | 8.47 |
| 049 | 4.7 | 200 | 30 | 6 | 1.63 | 3.76 |
| | 4.7 | 200 | 30 | 9 | 3.67 | 8.47 |
| | 4.7 | 200 | 30 | 12 | 6.52 | 15.06 |
| 064 | 7.4 | 200 | 30 | 7.5 | 1.03 | 2.37 |
| | 7.4 | 200 | 30 | 11.3 | 2.33 | 5.39 |
| | 7.4 | 200 | 30 | 15 | 4.11 | 9.49 |
| 072 | 7.4 | 200 | 30 | 8.5 | 1.32 | 3.05 |
| | 7.4 | 200 | 30 | 12.8 | 2.99 | 6.91 |
| | 7.4 | 200 | 30 | 17 | 5.28 | 12.19 |

ClimaDry® II Additional Pressure Drop (When Operating in Non-ClimaDry II Mode)

| Model | WPD Adders (Part Load) | | | WPD Adders (Full Load) | | |
|-------|------------------------|-------|-------|------------------------|-------|--------|
| | GPM | PSI | FT | GPM | PSI | FT |
| 026 | 3.5 | 1.200 | 2.771 | 4.0 | 1.567 | 3.620 |
| | 5.8 | 3.294 | 7.610 | 6.0 | 3.526 | 8.144 |
| 038 | 4.0 | 0.689 | 1.592 | 4.5 | 0.872 | 2.015 |
| | 6.0 | 1.551 | 3.583 | 6.8 | 1.992 | 4.602 |
| 049 | 5.5 | 1.303 | 3.011 | 6.0 | 1.551 | 3.583 |
| | 8.3 | 2.968 | 6.856 | 9.0 | 3.490 | 8.062 |
| 064 | 7.0 | 1.299 | 3.001 | 7.5 | 1.491 | 3.445 |
| | 10.5 | 2.923 | 6.752 | 11.3 | 3.385 | 7.820 |
| 072 | 7.5 | 1.491 | 3.445 | 8.5 | 1.915 | 4.425 |
| | 11.3 | 3.385 | 7.820 | 12.8 | 4.344 | 10.034 |

Antifreeze Correction Table

| EWT | Antifreeze Type | Antifreeze % | Cooling | | | Heating | | WPD |
|-----|------------------|--------------|-----------|--------------|-------|-----------|-------|-------|
| | | | Total Cap | Sensible Cap | Watts | Total Cap | Watts | |
| 90 | Water | 0% | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | Ethanol | 5% | 0.998 | 0.998 | 1.002 | 0.996 | 0.999 | 1.025 |
| | | 10% | 0.996 | 0.996 | 1.003 | 0.991 | 0.997 | 1.048 |
| | | 15% | 0.994 | 0.994 | 1.005 | 0.987 | 0.996 | 1.098 |
| | | 20% | 0.991 | 0.991 | 1.006 | 0.982 | 0.994 | 1.142 |
| | | 25% | 0.986 | 0.986 | 1.009 | 0.972 | 0.991 | 1.207 |
| | | 30% | 0.981 | 0.981 | 1.012 | 0.962 | 0.988 | 1.265 |
| | | 35% | 0.977 | 0.977 | 1.015 | 0.953 | 0.985 | 1.312 |
| | | 40% | 0.972 | 0.972 | 1.018 | 0.943 | 0.982 | 1.370 |
| | | 45% | 0.966 | 0.966 | 1.023 | 0.931 | 0.978 | 1.431 |
| | 50% | 0.959 | 0.959 | 1.027 | 0.918 | 0.974 | 1.494 | |
| | Ethylene Glycol | 5% | 0.998 | 0.998 | 1.002 | 0.996 | 0.999 | 1.021 |
| | | 10% | 0.996 | 0.996 | 1.003 | 0.991 | 0.997 | 1.040 |
| | | 15% | 0.994 | 0.994 | 1.004 | 0.987 | 0.996 | 1.079 |
| | | 20% | 0.991 | 0.991 | 1.005 | 0.982 | 0.995 | 1.114 |
| | | 25% | 0.988 | 0.988 | 1.008 | 0.976 | 0.993 | 1.146 |
| | | 30% | 0.985 | 0.985 | 1.010 | 0.969 | 0.990 | 1.175 |
| | | 35% | 0.982 | 0.982 | 1.012 | 0.963 | 0.988 | 1.208 |
| | | 40% | 0.979 | 0.979 | 1.014 | 0.956 | 0.986 | 1.243 |
| | | 45% | 0.976 | 0.976 | 1.016 | 0.950 | 0.984 | 1.278 |
| | 50% | 0.972 | 0.972 | 1.018 | 0.943 | 0.982 | 1.314 | |
| | Methanol | 5% | 0.997 | 0.997 | 1.002 | 0.993 | 0.998 | 1.039 |
| | | 10% | 0.993 | 0.993 | 1.004 | 0.986 | 0.996 | 1.075 |
| | | 15% | 0.990 | 0.990 | 1.007 | 0.979 | 0.994 | 1.116 |
| | | 20% | 0.986 | 0.986 | 1.009 | 0.972 | 0.991 | 1.154 |
| | | 25% | 0.982 | 0.982 | 1.012 | 0.964 | 0.989 | 1.189 |
| | | 30% | 0.978 | 0.978 | 1.014 | 0.955 | 0.986 | 1.221 |
| | | 35% | 0.974 | 0.974 | 1.017 | 0.947 | 0.984 | 1.267 |
| | | 40% | 0.970 | 0.970 | 1.020 | 0.939 | 0.981 | 1.310 |
| | | 45% | 0.966 | 0.966 | 1.023 | 0.930 | 0.978 | 1.353 |
| | 50% | 0.961 | 0.961 | 1.026 | 0.920 | 0.975 | 1.398 | |
| | Propylene Glycol | 5% | 0.995 | 0.995 | 1.003 | 0.990 | 0.997 | 1.065 |
| | | 10% | 0.990 | 0.990 | 1.006 | 0.980 | 0.994 | 1.119 |
| | | 15% | 0.986 | 0.986 | 1.009 | 0.971 | 0.991 | 1.152 |
| | | 20% | 0.981 | 0.981 | 1.012 | 0.962 | 0.988 | 1.182 |
| | | 25% | 0.978 | 0.978 | 1.014 | 0.956 | 0.986 | 1.227 |
| | | 30% | 0.975 | 0.975 | 1.016 | 0.950 | 0.984 | 1.267 |
| | | 35% | 0.972 | 0.972 | 1.018 | 0.944 | 0.982 | 1.312 |
| | | 40% | 0.969 | 0.969 | 1.020 | 0.938 | 0.980 | 1.356 |
| | | 45% | 0.965 | 0.965 | 1.023 | 0.929 | 0.977 | 1.402 |
| 50% | 0.960 | 0.960 | 1.026 | 0.919 | 0.974 | 1.450 | | |

Table Continued on Next Page

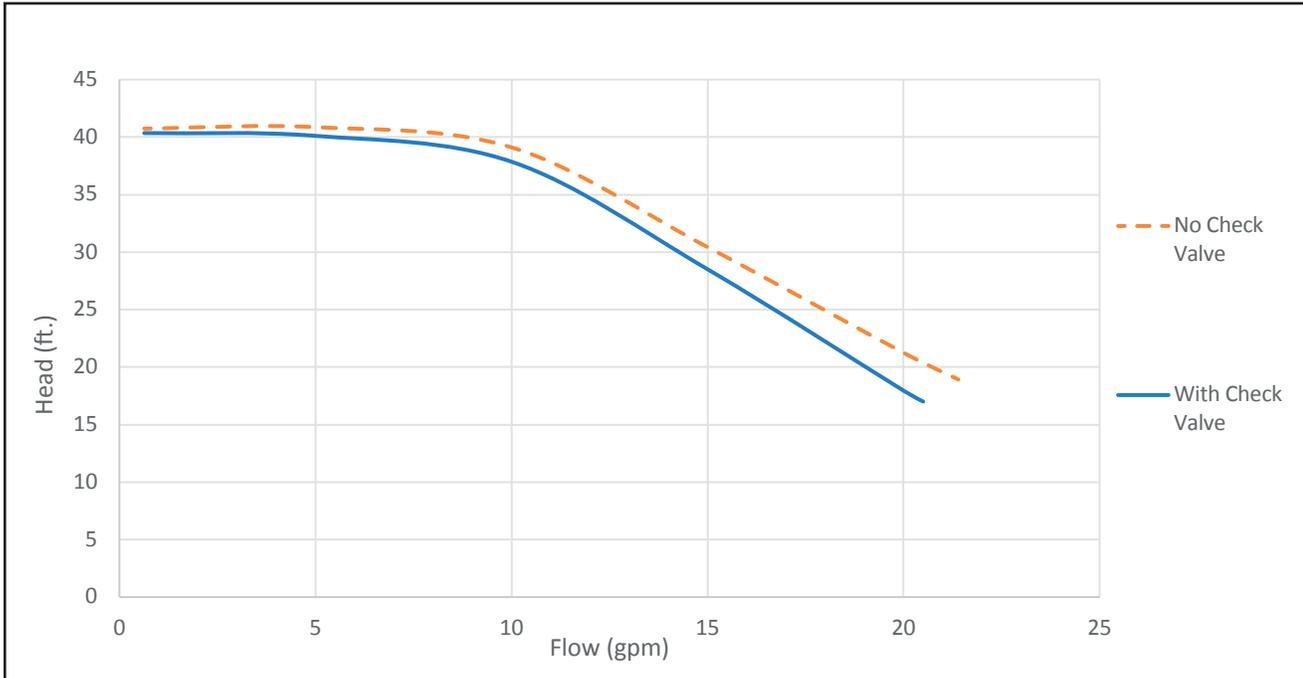
Antifreeze Correction Table

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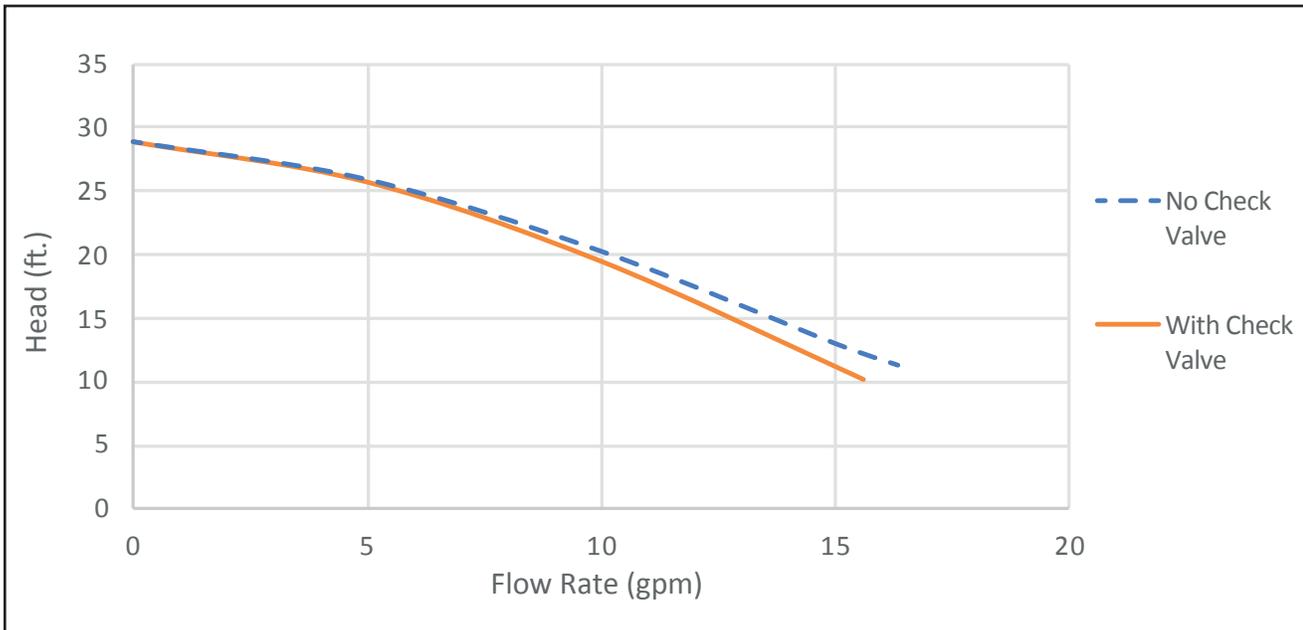
| EWT | Antifreeze Type | Antifreeze % | Cooling | | | Heating | | WPD |
|-----|------------------|--------------|-----------|--------------|-------|-----------|-------|-------|
| | | | Total Cap | Sensible Cap | Watts | Total Cap | Watts | |
| 30 | Water | 0% | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | Ethanol | 5% | 0.991 | 0.991 | 1.006 | 0.981 | 0.994 | 1.140 |
| | | 10% | 0.981 | 0.981 | 1.012 | 0.961 | 0.988 | 1.242 |
| | | 15% | 0.973 | 0.973 | 1.018 | 0.944 | 0.983 | 1.295 |
| | | 20% | 0.964 | 0.964 | 1.024 | 0.927 | 0.977 | 1.343 |
| | | 25% | 0.959 | 0.959 | 1.028 | 0.917 | 0.974 | 1.363 |
| | | 30% | 0.954 | 0.954 | 1.031 | 0.907 | 0.970 | 1.383 |
| | | 35% | 0.949 | 0.949 | 1.035 | 0.897 | 0.967 | 1.468 |
| | | 40% | 0.944 | 0.944 | 1.038 | 0.887 | 0.964 | 1.523 |
| | | 45% | 0.940 | 0.940 | 1.041 | 0.880 | 0.962 | 1.580 |
| | 50% | 0.936 | 0.936 | 1.043 | 0.872 | 0.959 | 1.639 | |
| | Ethylene Glycol | 5% | 0.997 | 0.997 | 1.002 | 0.993 | 0.998 | 1.040 |
| | | 10% | 0.993 | 0.993 | 1.004 | 0.986 | 0.996 | 1.075 |
| | | 15% | 0.990 | 0.990 | 1.006 | 0.980 | 0.994 | 1.122 |
| | | 20% | 0.987 | 0.987 | 1.008 | 0.973 | 0.992 | 1.163 |
| | | 25% | 0.983 | 0.983 | 1.011 | 0.966 | 0.990 | 1.195 |
| | | 30% | 0.979 | 0.979 | 1.013 | 0.958 | 0.987 | 1.225 |
| | | 35% | 0.976 | 0.976 | 1.016 | 0.951 | 0.985 | 1.279 |
| | | 40% | 0.972 | 0.972 | 1.018 | 0.943 | 0.982 | 1.324 |
| | | 45% | 0.969 | 0.969 | 1.021 | 0.937 | 0.980 | 1.371 |
| | 50% | 0.966 | 0.966 | 1.023 | 0.930 | 0.978 | 1.419 | |
| | Methanol | 5% | 0.995 | 0.995 | 1.004 | 0.989 | 0.997 | 1.069 |
| | | 10% | 0.989 | 0.989 | 1.007 | 0.978 | 0.993 | 1.127 |
| | | 15% | 0.984 | 0.984 | 1.011 | 0.968 | 0.990 | 1.164 |
| | | 20% | 0.979 | 0.979 | 1.014 | 0.957 | 0.986 | 1.197 |
| | | 25% | 0.975 | 0.975 | 1.017 | 0.949 | 0.984 | 1.216 |
| | | 30% | 0.971 | 0.971 | 1.019 | 0.941 | 0.981 | 1.235 |
| | | 35% | 0.967 | 0.967 | 1.022 | 0.933 | 0.979 | 1.286 |
| | | 40% | 0.963 | 0.963 | 1.025 | 0.924 | 0.976 | 1.323 |
| | | 45% | 0.959 | 0.959 | 1.028 | 0.917 | 0.974 | 1.360 |
| | 50% | 0.955 | 0.955 | 1.030 | 0.910 | 0.971 | 1.399 | |
| | Propylene Glycol | 5% | 0.995 | 0.995 | 1.004 | 0.989 | 0.997 | 1.071 |
| | | 10% | 0.989 | 0.989 | 1.007 | 0.978 | 0.993 | 1.130 |
| | | 15% | 0.985 | 0.985 | 1.010 | 0.968 | 0.990 | 1.206 |
| | | 20% | 0.980 | 0.980 | 1.013 | 0.958 | 0.987 | 1.270 |
| | | 25% | 0.974 | 0.974 | 1.017 | 0.947 | 0.983 | 1.359 |
| | | 30% | 0.968 | 0.968 | 1.021 | 0.935 | 0.979 | 1.433 |
| | | 35% | 0.963 | 0.963 | 1.025 | 0.924 | 0.976 | 1.522 |
| | | 40% | 0.957 | 0.957 | 1.029 | 0.913 | 0.972 | 1.614 |
| | | 45% | 0.949 | 0.949 | 1.034 | 0.898 | 0.967 | 1.712 |
| | 50% | 0.941 | 0.941 | 1.039 | 0.882 | 0.962 | 1.816 | |

Variable Pump Performance

High Head Variable Pump Performance



Standard Head Variable Pump Performance



Blower Performance Data

Standard Unit (ECM)

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 |
|-------|-----------------|----------------|---------|--------------|-------|--------------|-------|--------------|-------|---------------|
| | | | | 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 |
| | | | Maximum | 1000 | 800 | 800 | 600 | 1000 | 850 | 1000 |
| | | | Minimum | 600 | 450 | 550 | 400 | 600 | 450 | 300 |
| 038 | 0.9 | 1/2 | Default | 1050 | 800 | 850 | 650 | 1100 | 850 | 550 |
| | | | Maximum | 1500 | 1100 | 1200 | 900 | 1500 | 1100 | 1500 |
| | | | Minimum | 900 | 600 | 825 | 550 | 900 | 600 | 450 |
| 049 | 1.0 | 1 | Default | 1400 | 1050 | 1100 | 850 | 1500 | 1150 | 700 |
| | | | Maximum | 2000 | 1500 | 1600 | 1200 | 2000 | 1500 | 2000 |
| | | | Minimum | 1200 | 900 | 1100 | 825 | 1200 | 900 | 600 |
| 064 | 0.7 | 1 | Default | 1750 | 1300 | 1400 | 1050 | 1875 | 1450 | 875 |
| | | | Maximum | 2300 | 1900 | 2000 | 1500 | 2300 | 1900 | 2300 |
| | | | Minimum | 1500 | 1100 | 1375 | 1000 | 1500 | 1100 | 750 |
| 072 | 0.7 | 1 | Default | 1900 | 1450 | 1650 | 1250 | 2000 | 1650 | 950 |
| | | | Maximum | 2300 | 2200 | 2000 | 1800 | 2300 | 2200 | 2300 |
| | | | Minimum | 1800 | 1350 | 1650 | 1250 | 1800 | 1350 | 900 |

Airflow is controlled within +/- 5% up to Max ESP shown with wet coil and standard 1" fiberglass filter. ClimaDry® II equipped units are factory set to operate in stage 2 airflow.

TRANQUILITY® 30 DIGITAL (TE) SERIES WITH CLIMADRY® II

All Tranquility® 30 Digital (TE) units have an ECM fan motor. The small amount of additional pressure drop of the ClimaDry® II coil causes the ECM motor to slightly increase RPM to overcome the added pressure drop and maintain selected CFM up to the maximum ESP.

ClimaDry® II – General Information

ClimaDry® II Modulating Reheat Option

ClimateMaster's patented ClimaDry® II Dehumidification option is an innovative means of providing modulating reheat without the complication of refrigeration controls. ClimaDry II is hot gas generated reheat, which utilizes one of the biggest advantages of a Water-Source Heat Pump (WSHP), the transfer of energy through the water piping system. ClimaDry II simply diverts condenser water through a water-to-air coil that is placed after the evaporator coil. If condenser water is not warm enough, the internal "run-around" loop increases the water temperature with each pass through the condenser coil (see Figure 1, below).

ClimaDry® II Benefits

ClimaDry II is like no other reheat option on the market. Proportional reheat is controlled to the desired leaving air temperature set point (factory set point of 69°F, 20.5°C), no matter what the water loop temperature is. Since dehumidification operation will occur under less than full load cooling conditions a good percentage of the time, it is important to have a reheat function that provides 100% reheat in the spring and fall when the water loop is cool. Supply air temperature is field adjustable to +/- 3°F [+/- 1.7°C] for even greater flexibility with the optional potentiometer. It is recommended that the ClimaDry II supply air temperature be set to match the space cooling setpoint so that ClimaDry II does not impact room temperature. Competitors without ClimaDry II typically use an on/off (non-modulating) refrigeration based reheat circuit, typically referred to as "Hot gas reheat" (HGR). HGR needs higher condensing temperatures to work well, typically

85°F [29°C] entering water temperature (EWT). With HGR, cooler water temperatures produce cooler supply air temperatures, which could over cool the space, requiring additional space heating from another source or a special auto-change-over relay to allow the unit to switch back and forth between reheat and heating. Rarely does HGR provide 100% reheat, like ClimaDry II. ClimaDry II has a simple and easy to troubleshoot refrigerant circuit. No switching valves or hard to diagnose leaky check valves are utilized. No unusual refrigerant pressures occur during the reheat mode. The ClimaDry II refrigerant circuit is like every other ClimateMaster unit (without reheat), so everything the technician already knows applies to troubleshooting the ClimaDry II refrigeration circuit. Plus, the water loop portion of the ClimaDry II option is easy to understand and diagnose.

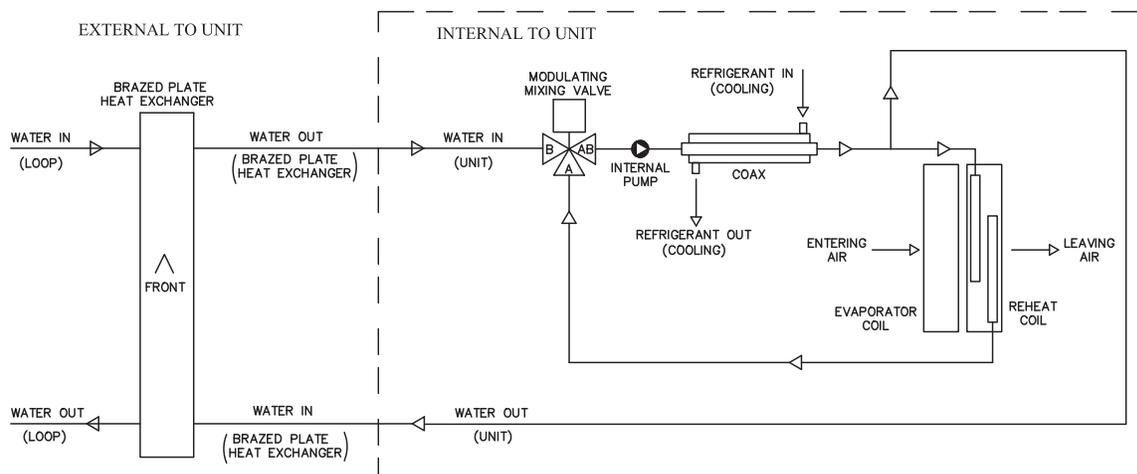
ClimaDry® II Applications

ClimaDry II can be applied to a number of common applications, such as:

- Classrooms
- Condominiums
- Apartments
- Computer rooms
- Spaces with high latent loads like auditoriums, theaters, convention centers, etc.
- Most applications where humidity is a problem

(Note: ClimaDry II is not for use in high fraction outdoor air applications or in applications with corrosive atmospheres, such as pool rooms.)

Figure 1: ClimaDry® II Schematic



NOTE:
Braze plate heat exchanger is used when connecting to a loop with no antifreeze.

ClimaDry® II – General Information

With the ClimaDry® II, return air from the space is cooled by the air-to-refrigerant (evaporator) coil, and then reheated by the water-to-air (reheat) coil to dehumidify the air, but maintain the same space temperature (thus operating as a dehumidifier).

The moisture removal capability of the heat pump is determined by the unit's latent capacity rating. Latent capacity equals Total capacity minus Sensible capacity. Using unit performance data from submittals (climatemaster.com) select the correct model, use your maximum entering water temperature (EWT) and flow rate to select TC and SC. For example, at 80° F [26.7° C] EWT and 6.8 GPM, the moisture removal capability (latent capacity) of a ClimateMaster unit is 11.8 Mbtuh [3.5 kW] as shown below.

Dividing the latent capacity by 1,069 BTU/LB of water vapor at 80° F DB and 67° F WB [26.7° C DB and 19.4° C WB] moist air enthalpy, converts the amount of moisture removal to pounds per hour (multiply pounds per hour by 0.4536 to obtain kg/hr). Calculations are shown below.

Most ClimateMaster water source heat pumps have a sensible-to-total (S/T) ratio of 0.72 to 0.82. Therefore, approximately, 25% of the cooling capacity is dedicated to latent cooling capacity (moisture removal). When selecting a unit with ClimaDry II, the space sensible and latent loads should be calculated. If the unit will be used for space cooling, a unit with at least enough capacity to satisfy the building sensible load should be selected. If the latent cooling load is not satisfied by the selection, a larger unit with enough latent capacity will be required. If the unit will be used for dehumidification purposes only, the latent capacity is the only consideration necessary. In this case, sensible load is immaterial.

$$LC = TC - SC = 37.2 - 25.4 = 11.8 \text{ Mbtuh}$$

$$11,800 \text{ Btuh} \div 1069 = 11.0 \text{ lbs/hr}$$

Example Performance

| EWT °F | GPM | WPD | | Cooling - EAT 80/67°F | | | | | | | Heating - EAT 70°F | | | | | |
|-----------|-----|-----|-----|-----------------------|------|------|-------------------------|------|------|------|--------------------|------|------|------|-------|------|
| | | PSI | FT | Airflow CFM | TC | SC | Sens/ Total Ratio | kW | HR | EER | Airflow CFM | HC | kW | HE | LAT | COP |
| 70 | 4.5 | 1.1 | 2.5 | 1080 | 37.8 | 25.7 | 0.68 | 2.22 | 45.3 | 17.0 | 1080 | 44.0 | 2.71 | 34.8 | 107.7 | 4.75 |
| | 4.5 | 1.1 | 2.5 | 1250 | 38.7 | 28.2 | 0.73 | 2.32 | 46.6 | 16.7 | 1250 | 44.8 | 2.60 | 36.0 | 103.2 | 5.05 |
| | 6.8 | 2.9 | 6.7 | 1080 | 39.1 | 26.2 | 0.67 | 2.08 | 46.1 | 18.8 | 1080 | 46.4 | 2.79 | 36.9 | 109.8 | 4.88 |
| | 6.8 | 2.9 | 6.7 | 1250 | 40.0 | 28.8 | 0.72 | 2.17 | 47.4 | 18.4 | 1250 | 47.3 | 2.67 | 38.2 | 105.0 | 5.19 |
| 80 | 4.5 | 1.0 | 2.3 | 1080 | 35.8 | 24.8 | 0.69 | 2.44 | 44.2 | 14.7 | 1080 | 48.3 | 2.84 | 38.6 | 111.4 | 4.98 |
| | 4.5 | 1.0 | 2.3 | 1250 | 36.7 | 27.2 | 0.74 | 2.55 | 45.4 | 14.4 | 1250 | 49.2 | 2.73 | 39.9 | 106.5 | 5.29 |
| | 6.8 | 2.8 | 6.6 | 1080 | 37.2 | 25.4 | 0.68 | 2.29 | 45.0 | 16.3 | 1080 | 51.1 | 2.93 | 41.1 | 113.8 | 5.10 |
| | 6.8 | 2.8 | 6.6 | 1250 | 38.0 | 27.9 | 0.73 | 2.39 | 46.2 | 15.9 | 1250 | 52.1 | 2.81 | 42.5 | 108.6 | 5.43 |
| 85 | 4.5 | 1.0 | 2.2 | 1080 | 34.8 | 24.3 | 0.70 | 2.57 | 43.6 | 13.6 | 1080 | 50.5 | 2.92 | 40.6 | 113.3 | 5.08 |
| | 4.5 | 1.0 | 2.2 | 1250 | 35.6 | 26.7 | 0.75 | 2.68 | 44.8 | 13.3 | 1250 | 51.5 | 2.80 | 41.9 | 108.1 | 5.40 |
| | 6.8 | 2.8 | 6.4 | 1080 | 36.2 | 25.0 | 0.69 | 2.40 | 44.4 | 15.0 | 1080 | 53.5 | 3.02 | 43.2 | 115.9 | 5.20 |
| | 6.8 | 2.8 | 6.4 | 1250 | 37.0 | 27.4 | 0.74 | 2.51 | 45.6 | 14.7 | 1250 | 54.5 | 2.89 | 44.7 | 110.4 | 5.53 |
| 90 | 4.5 | 0.9 | 2.1 | 1080 | 33.8 | 23.9 | 0.71 | 2.70 | 43.0 | 12.5 | 1080 | 52.7 | 2.99 | 42.5 | 115.2 | 5.17 |
| | 4.5 | 0.9 | 2.1 | 1250 | 34.6 | 26.2 | 0.76 | 2.81 | 44.2 | 12.3 | 1250 | 53.7 | 2.86 | 44.0 | 109.8 | 5.50 |
| | 6.8 | 2.7 | 6.2 | 1080 | 35.1 | 24.5 | 0.70 | 2.52 | 43.8 | 13.9 | 1080 | 55.9 | 3.10 | 45.3 | 117.9 | 5.29 |
| | 6.8 | 2.7 | 6.2 | 1250 | 36.0 | 26.9 | 0.75 | 2.63 | 45.0 | 13.7 | 1250 | 57.0 | 2.97 | 46.9 | 112.2 | 5.62 |

Dividing the latent capacity by 1,069 BTU/LB of water vapor at 80° F DB and 67° F WB [26.7° C DB and 19.4° C WB] moist air enthalpy, converts the amount of moisture removal to pounds per hour (multiply pounds per hour by 0.4536 to obtain kg/hr).

ClimaDry® II – Sequence of Operation

ClimaDry® II Sequence of Operation

A heat pump equipped with ClimaDry® II can operate in three modes; cooling, cooling with reheat (dehumidification), and heating. The cooling/heating modes are like any other ClimateMaster® WSHP. The reversing valve (“O” signal) is energized in cooling, along with the compressor contactor(s) and blower relay. In the heating mode the reversing valve is de-energized. Almost any thermostat will activate the heat pump in heating or cooling modes. The DXM2.5 microprocessor board, which is required with the ClimaDry II option, will accept either heat pump (Y,O) thermostats or non-heat pump (Y,W) thermostats.

The reheat mode requires either a separate humidistat/dehumidistat or a thermostat that has an integrated dehumidification function for activation. The DXM2.5 board is configured to work with either a humidistat or dehumidistat input to terminal “H” (DIP switch settings for the DXM2.5 board are shown below in table 2). Upon receiving an “H” input, the DXM2.5 board will activate the cooling mode and engage reheat. Tables 1 and 2 show the relationship between thermostat input signals and unit operation.

There are four operational inputs for single stage units and six operational inputs for dual stage units:

- Fan Only
- 1st Stage Cooling
- 2nd Stage Cooling
- 1st Stage Heating
- 2nd Stage Heating
- Reheat Mode

Fan Only: A (G) call from the thermostat to the (G) terminal of the DXM2.5 control board will bring the unit on in fan only mode.

1st Stage Cooling: A simultaneous call from (G), (Y1), and (O) to the (G), (Y1), (O/W2) terminals of the DXM2.5 control board will bring the unit on in 1st Stage Cooling.

2nd Stage Cooling: A simultaneous call from (G), (Y1), (Y2), and (O) to the (G), (Y1), (Y2), and (O/W2) terminals of the DXM2.5 control board will bring the unit on in 2nd Stage Cooling. When the call is satisfied at the thermostat the unit will continue to run in 1st Stage Cooling until the 1st Stage Cooling call is removed or satisfied, shutting down the unit.

Table 1: Humidistat/Dehumidistat Logic and DXM2.5 (2.1, 2.2., 2.3) DIP settings

| Sensor | 2.1 | 2.2 | 2.3 | Logic | Reheat (ON)–H | Reheat (OFF)–H |
|--------------|-----|-----|-----|----------|---------------|----------------|
| Humidistat | OFF | OFF | OFF | Reverse | 0 VAC | 24 VAC |
| Dehumidistat | OFF | ON | OFF | Standard | 24 VAC | 0 VAC |

Table 2: ClimaDry® II Operating Modes

| Mode | Input | | | | | Output | | | | |
|-------------------------------------|--------|-----|-----|-----------------|-----|--------|-----|-------------------------|--------------------------------------|--------|
| | O | G | Y1 | Y2 ³ | H | RV | Fan | 1 st stg H/C | 2 nd stg H/C ³ | Reheat |
| No Demand | ON/OFF | OFF | OFF | OFF | OFF | ON/OFF | OFF | OFF | OFF | OFF |
| Fan Only | ON/OFF | ON | OFF | OFF | OFF | ON/OFF | ON | OFF | OFF | OFF |
| Cooling 1st Stage | ON | ON | ON | OFF | OFF | ON | ON | ON | OFF | OFF |
| Cooling 2nd Stage | ON | ON | ON | ON | OFF | ON | ON | ON | ON | OFF |
| Cooling & Dehumidistat ¹ | ON | ON | ON | ON/OFF | ON | ON | ON | ON | ON/OFF | OFF |
| Dehumidistat Only | ON/OFF | OFF | OFF | OFF | ON | ON | ON | ON | ON | ON |
| Heating 1st Stage | OFF | ON | ON | OFF | OFF | OFF | ON | ON | OFF | OFF |
| Heating 2nd Stage | OFF | ON | ON | ON | OFF | OFF | ON | ON | ON | OFF |
| Heating & Dehumidistat ² | OFF | ON | ON | ON/OFF | ON | OFF | ON | ON | ON/OFF | OFF |

¹Cooling input takes priority over dehumidify input.

²DXM2.5 is programmed to ignore the H demand when the unit is in heating mode.

³N/A for single stage units; Full load operation for dual capacity units.

⁴ON/OFF = Either ON or OFF.

ClimaDry® II – Sequence of Operation

1st Stage Heating: A simultaneous call from (G) and (Y1) to the (G) and (Y1) terminals of the DXM2.5 control board will bring the unit on in 1st Stage Heating.

2nd Stage Heating: A simultaneous call from (G), (Y1), and (Y2) to the (G), (Y1), and (Y2) terminals of the DXM2.5 control board will bring the unit on in 2nd Stage Heating. When the call is satisfied at the thermostat the unit will continue to run in 1st Stage Heating until the call is removed or satisfied, shutting down the unit.

Reheat Mode: A call from the Humidistat/Dehumidistat to the (H) terminal of the DXM2.5 control board will bring the unit on in Reheat Mode if there is no call for cooling at the thermostat. When the Humidistat/Dehumidification call is removed or satisfied the unit will shut down. **NOTE: Cooling always overrides Reheat Mode.** In the Cooling mode, the unit cools and dehumidifies. If the cooling thermostat is satisfied but there is still a call for dehumidification, the unit will continue to operate in Reheat Mode.

NOTE: Care must be taken when using a humidistat to operate ClimaDry II. When the DIP switch on the DXM2.5 controller is set for 'humidistat' it reverses the control logic so that an "open" control circuit initiates a ClimaDry II run cycle. If a humidistat is not connected, or if a manual switch on the humidistat is set to "off", ClimaDry II will see the open circuit and call for dehumidification.

ClimaDry® II Component Functions

The ClimaDry II option consists of the following components:

- Intelligent DXM2.5 Controller
- Motorized Modulating Water Valve
- Supply Air Sensor
- Loop Pump
- Hydronic Coil
- Low Pressure Switch

The DXM2.5 Controller operates on 24 VAC power supply and automatically adjusts the water valve based upon the Supply Air Sensor. The Supply Air Sensor senses supply air temperature at the blower inlet providing the input signal necessary for the DXM2.5 control to drive the motorized modulating water valve during the reheat mode of operation.

The Motorized Modulating Water Valve is a proportional actuator/three-way valve combination used to divert the condenser water from the coax to the hydronic reheat coil during the reheat mode of operation. The proportional controller signals the valve based on the supply air temperature sensor.

The Loop Pump circulates condenser water through the hydronic reheat coil during the reheat mode of operation. In this application, the loop pump is only energized during the reheat mode of operation. The Hydronic Coil is utilized during the reheat mode of operation to reheat the air to the setpoint of the DXM2.5 controller. Condenser water is diverted by the motorized modulating water valve and pumped through the hydronic coil by the loop pump in proportion to the control setpoint. The amount of reheating is dependent on the setpoint and how far from setpoint the supply air temperature is. The factory setpoint is 69°F [20.5°C], generally considered "neutral" air.

ClimaDry® II Application Considerations

The reheat coil adds a small amount of resistance to the air stream. In some cases the high static option may be required for applications with higher static ductwork. Consult the submittal data or the Installation/Operation/Maintenance (IOM) manual for the specific heat pump to review blower tables.

Unlike most hot gas reheat options, the ClimaDry II option will operate over a wide range of EWTs. Special flow regulation (water regulating valve) is not required for low EWT conditions.

Units with the ClimaDry II option shall have an antifreeze solution to protect the coil in low ambient conditions. ASHRAE minimums for the region shall be considered during the calculation of the antifreeze solution.

In applications where antifreeze is not specified, a secondary heat exchanger can be used to isolate the unit from the water loop, thus requiring less antifreeze to be used with the a Secondary brazed plate heat exchanger. Figure 1 shows the heat exchanger connections.

Water-source heat pumps with ClimaDry II should not be used as make-up air units. These applications should use equipment specifically designed for make-up air.

Physical Data

| Model | 026 | 038 | 049 | 064 | 072 |
|---|-------------------------|--|--|--|--|
| Compressor (1 Each) | Two-Stage Scroll | | | | |
| Factory Charge (HFC-410A) (oz) [kg] | 44 [1.25] | 52 [1.47] | 69 [1.96] | 142 [4.03] | 140 [3.97] |
| ECM Fan 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] |
| Water Connection Size | | | | | |
| FPT (in) | 3/4 | 3/4 | 1 | 1 | 1 |
| HWG Connection Size | | | | | |
| FPT (in) | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| Coax Volume | | | | | |
| Volume (US Gallons) [liters] | 0.76 [2.88] | 0.92 [3.48] | 1.24 [4.69] | 1.56 [5.91] | 1.56 [5.91] |
| Vertical Upflow/Downflow | | | | | |
| Air Coil Dimensions (h x w) - (in) [mm] | 28 x 20 [711 x 508] | 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 - 1" [25.4mm] | 1 - 28 x 24 [711 x 610] | 1 - 28 x 30 [712 x 762] | 2 - 16 x 30 [406 x 762] | 1 - 16 x 30 [406 x 762] 1 - 20 x 30 [508 x 762] | 1 - 16 x 30 [406 x 762] 1 - 20 x 30 [508 x 762] |
| Throwaway, qty (in) [mm] | | | | | |
| 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] |
| Weight - ClimaDry® II, (lbs) [kg] | 38 [17] | 41 [19] | 44 [20] | 49 [22] | 49 [22] |
| 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 1016] | 20 x 45 [508 x 1143] | 20 x 45 [508 x 1143] |
| Standard Filter - 1" [25.4mm] | 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] |
| Throwaway, qty (in) [mm] | | | | | |
| 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] |
| Weight - ClimaDry® II (lbs) [kg] | 38 [17] | 41 [19] | 44 [20] | 49 [22] | 49 [22] |

NOTE: All units have TXV expansion device and 1/2" & 3/4" electrical knockouts.

| Unit Maximum Working Water Pressure | |
|--|-------------------------|
| Options | Max Pressure PSIG [kPa] |
| Base Unit | 500 [3447] |
| Unit with Internal Modulation Water Valve Option | 300 [2,068] |
| Unit with Internal Water Pump Option | 145 [999] |
| Unit with ClimaDry® II | 145 [999] |

TE Horizontal – Dimensional Data

| Horizontal Model | | Overall Cabinet | | |
|------------------|----|-----------------|----------|----------|
| | | *A Width | B Length | 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 & 072 | in | 25.4 | 81.2 | 21.3 |
| | cm | 64.5 | 206.2 | 54.0 |

*Does not include air filter supports. Add 2" (5.1 cm) when a 1" (25.4 mm) filter is used, add 3" (7.6 cm) when a 2" (50.8 mm) filter is used.

| Horizontal Model | | Water Connections | | | | | | |
|------------------|----|-------------------|------------|----------|-----------|---------|----------------|---------|
| | | 1 | 2 | 3 | 4 | 5 | | |
| | | Loop In D | Loop Out E | HWG In F | HWG Out G | Cond. H | Water Loop FPT | HWG FPT |
| 026 | in | 3.9 | 8.4 | 13.9 | 16.9 | 3.5 | 3/4" | 1/2" |
| | cm | 9.9 | 21.3 | 35.2 | 42.9 | 8.9 | | |
| 038 | in | 3.9 | 8.4 | 15.6 | 18.9 | 3.4 | 3/4" | 1/2" |
| | cm | 9.9 | 21.3 | 39.7 | 47.9 | 8.6 | | |
| 049 | in | 3.9 | 8.4 | 15.6 | 18.9 | 3.4 | 1" | 1/2" |
| | cm | 9.9 | 21.3 | 39.7 | 47.9 | 8.6 | | |
| 064 & 072 | in | 3.9 | 8.4 | 15.6 | 18.9 | 3.4 | 1" | 1/2" |
| | cm | 9.9 | 21.3 | 39.7 | 47.9 | 8.6 | | |

| Water Connections - Units with ClimaDry® II | |
|---|--------------|
| 1 | 2 |
| Loop In D | Loop Out E |
| 2.1 5.2 | 10.0 25.4 |
| 6.01 15.1 | 13.1 33.4 |
| 6.01 15.1 | 13.1 33.4 |
| 6.01 15.1 | 13.1 33.4 |

| 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 | 3.6 | 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 & 072 | in | 3.6 | 6.1 | 8.6 |
| | cm | 9.2 | 15.6 | 21.9 |

Notes:

- While clear access to all removable panels is not required, installer should take care to comply with all building codes and allow adequate clearance for future field service.
- Horizontal units shipped with filter bracket only. This bracket should be removed for return duct connection
- Discharge flange and hanger brackets are factory installed.
- Condensate is 3/4" FPT.
- CCP and BSP requires 2' service access.
- Blower service access is through back panel on straight discharge units or through panel opposite air coil on back discharge units.

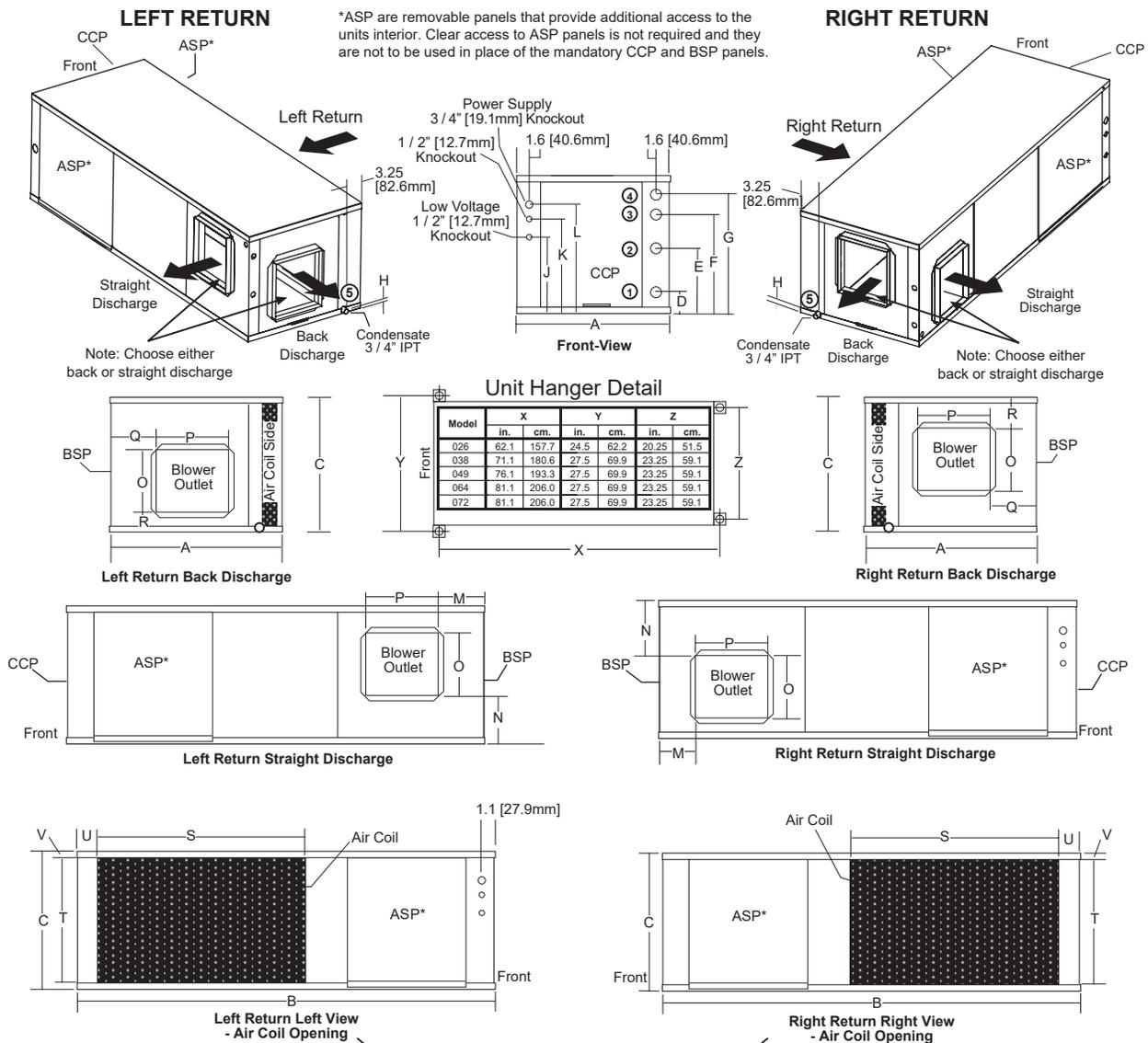
Legend:

CCP = Control/Compressor Access Panel
 BSP = Blower Service Panel
 ASP = (Optional) Additional Service Panel

TE Horizontal – Dimensional Data

| Horizontal Model | | Discharge Connection Duct Flange Installed | | | | | | Return Connection Using Return Air Opening | | | | Return Connection Using Optional Air Filter Frame | | | |
|------------------|----|--|-----|-----------------|----------------|-----|-----|--|-----------------|-----|-----|---|-----------------|-----|-----|
| | | M | N | O Supply Height | P Supply Width | Q | R | S Return Width | T Return Height | U | V | S Return Width | T Return Height | U | V |
| 026 | in | 3.6 | 2.0 | 15.5 | 12.5 | 3.6 | 2.0 | 32.1 | 17.3 | 2.3 | 1.0 | 33.8 | 16.2 | 2.3 | 1.7 |
| | cm | 9.3 | 5.1 | 39.4 | 31.8 | 9.2 | 5.2 | 81.5 | 43.9 | 5.8 | 2.5 | 85.8 | 41.0 | 5.8 | 4.3 |
| 038 | in | 3.1 | 1.2 | 19.0 | 17.5 | 3.1 | 1.0 | 36.1 | 19.3 | 2.3 | 1.0 | 34.8 | 18.2 | 3.1 | 1.7 |
| | cm | 7.9 | 3.1 | 48.3 | 44.5 | 7.9 | 2.6 | 91.7 | 49.0 | 5.7 | 2.5 | 88.3 | 46.1 | 7.8 | 4.3 |
| 049 | in | 3.1 | 1.2 | 19.0 | 17.5 | 3.1 | 1.0 | 41.1 | 19.3 | 2.3 | 1.0 | 39.8 | 18.2 | 3.1 | 1.7 |
| | cm | 7.9 | 3.1 | 48.3 | 44.5 | 7.9 | 2.6 | 104.4 | 49.0 | 5.7 | 2.5 | 101.0 | 46.1 | 7.8 | 4.3 |
| 064 & 072 | in | 3.1 | 1.2 | 19.0 | 17.5 | 3.1 | 1.0 | 46.1 | 19.3 | 2.3 | 1.0 | 44.8 | 18.2 | 3.1 | 1.7 |
| | cm | 7.9 | 3.1 | 48.3 | 44.5 | 7.9 | 2.6 | 117.1 | 49.0 | 5.7 | 2.5 | 113.7 | 46.1 | 7.8 | 4.3 |

All dimensions are +/- 0.20 in. (+/- 5.1 mm).



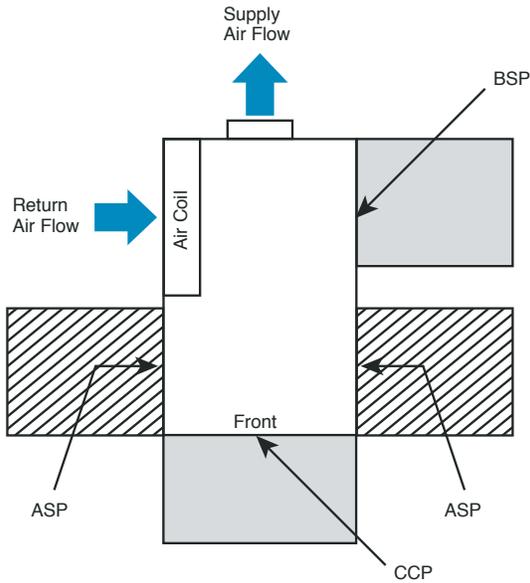
Filter Rails Removed

Units come standard with air filter rails. For duct connections, optional filter frames should be ordered. See product options decoder for details. Filter rails can be converted in the field with an accessory air filter frame kit. Please see the accessory submittal for details.

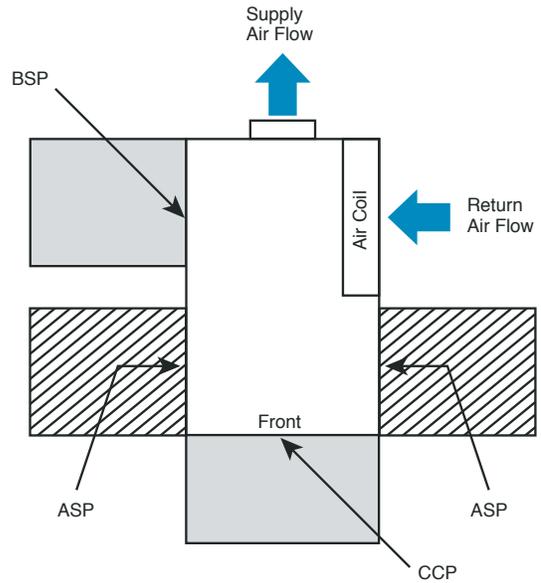
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TE Horizontal – Service Access

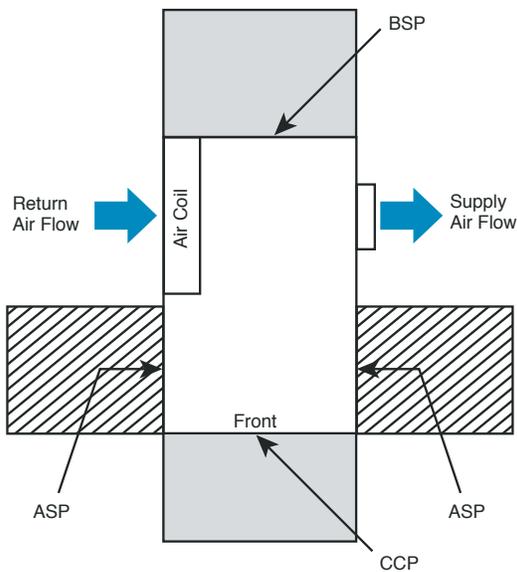
Left Return Back Discharge



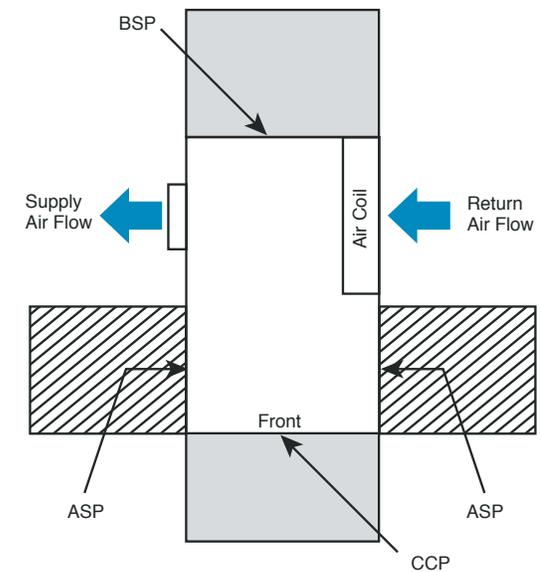
Right Return Back Discharge



Left Return Straight Discharge



Right Return Straight Discharge



- = mandatory 2' service access
- = (optional) additional 2' service access

Notes:

1. While clear access to all removable panels is not required, installer should take care to comply with all building codes and allow adequate clearance for future field service.
2. CCP and BSP requires 2' service access.
3. Blower service access is through back panel on straight discharge units or through panel opposite air coil on back discharge units.
4. ASP are removable panels that provide additional access to the units interior. Clear access to ASP panels is not required and they are not to be used in place of the mandatory CCP and BSP panels.

Legend:

- CCP = Control/Compressor Access Panel
- BSP = Blower Service Panel
- ASP = (Optional) Additional Service Panel

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TE Vertical Upflow – Dimensional Data

| Vertical Upflow Model | | Overall Cabinet | | |
|-----------------------|----|-----------------|---------|----------|
| | | *A Width | B Depth | C Height |
| 026 | in | 22.4 | 25.6 | 48.5 |
| | cm | 56.8 | 65.1 | 123.2 |
| 038 | in | 25.4 | 30.6 | 50.5 |
| | cm | 64.5 | 77.8 | 128.3 |
| 049 | in | 25.4 | 30.6 | 54.5 |
| | cm | 64.5 | 77.8 | 138.4 |
| 064 & 072 | in | 25.4 | 30.6 | 58.5 |
| | cm | 64.5 | 77.8 | 148.6 |

*Does not include air filter supports. Add 2" (5.1 cm) when a 1" (25.4 mm) filter is used, add 3" (7.6 cm) when a 2" (50.8 mm) filter is used.

| 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 & 072 | in | 3.6 | 6.1 | 8.6 |
| | cm | 9.2 | 15.6 | 21.9 |

| Vertical Upflow Model | | Water Connections | | | | | | |
|-----------------------|----|-------------------|------------|----------|-----------|---------|----------------|---------|
| | | 1 | 2 | 3 | 4 | 5 | | |
| | | Loop In D | Loop Out E | HWG In F | HWG Out G | Cond. H | Water Loop FPT | HWG FPT |
| 026 | in | 3.9 | 8.4 | 13.9 | 16.9 | 6.3 | 3/4" | 1/2" |
| | cm | 9.9 | 21.3 | 35.2 | 42.9 | 16.0 | | |
| 038 | in | 3.9 | 8.4 | 15.6 | 18.9 | 6.3 | 3/4" | 1/2" |
| | cm | 9.9 | 21.3 | 39.7 | 47.9 | 16.0 | | |
| 049 | in | 3.9 | 8.4 | 15.6 | 18.9 | 6.3 | 1" | 1/2" |
| | cm | 9.9 | 21.3 | 39.7 | 47.9 | 16.0 | | |
| 064 & 072 | in | 3.9 | 8.4 | 15.6 | 18.9 | 6.3 | 1" | 1/2" |
| | cm | 9.9 | 21.3 | 39.7 | 47.9 | 16.0 | | |

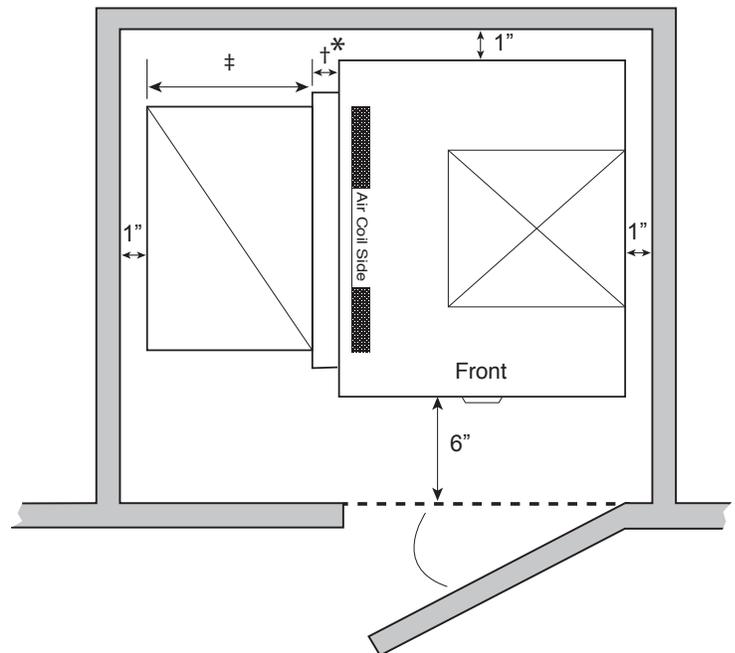
| Water Connections - Units with ClimaDry® II | |
|---|------------|
| 1 | 2 |
| Loop In D | Loop Out E |
| 2.1 | 10.0 |
| 5.2 | 25.4 |
| 6.0 | 13.1 |
| 15.1 | 33.4 |
| 6.0 | 13.1 |
| 15.1 | 33.4 |
| 6.0 | 13.1 |
| 15.1 | 33.4 |

| Recommended Minimum Installation Clearances for Vertical Units* | |
|---|---|
| 1" | Back of unit |
| | Side opposite return air |
| 6" | Front if hard piped |
| | Return Air Side |
| 1" | Ducted return |
| | - ± *Add for duct width |
| | - † Add 2" for 1" filter frame/rail or 3" for 2" filter frame/rail |
| | Free (open) return - calculate required dimension for a maximum velocity of 600 fpm |

* Field installed accessories (hoses, air cleaners, etc.) and factory WSE option will require additional space. Top supply air is shown, the same clearances apply to bottom supply air units.

Notes:

1. While clear access to all removable panels is not required, installer should take care to comply with all building codes and allow adequate clearance for future field service.
2. Front & Side access is preferred for service access. However, all components may be serviced from the front access panel if side access is not available.
3. Discharge flange is field installed.
4. Condensate is 3/4" FPT PVC and is switchable from front to side.



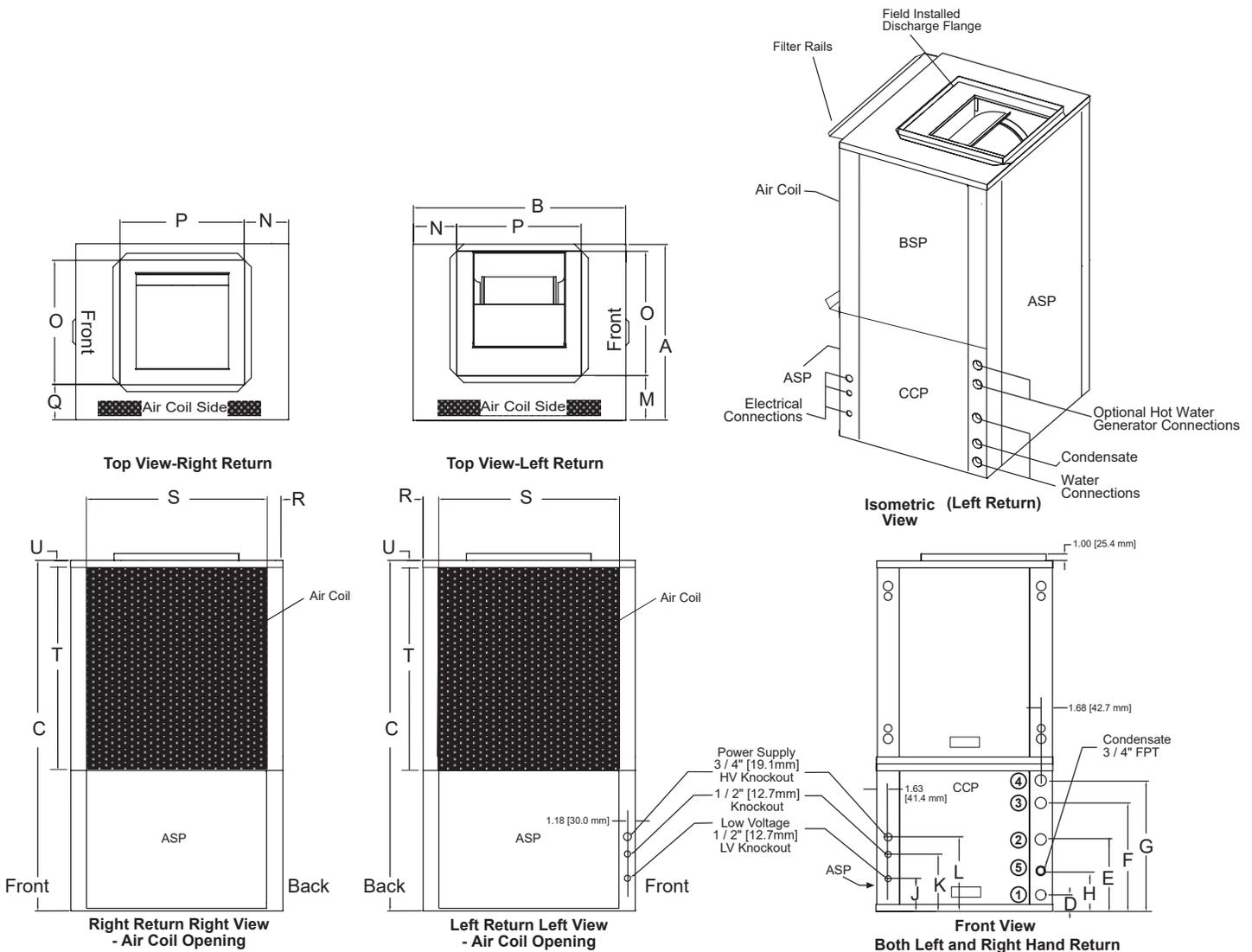
Legend:

CCP = Control/Compressor Access Panel
 BSP = Blower Service Panel
 ASP = (optional) Additional Service Panel

TE Vertical Upflow – Dimensional Data

| Vertical Upflow Model | | Discharge Connection Duct Flange Installed | | | | | Return Connection Using Return Air Opening | | | | Return Connection Using Optional Air Filter Frame | | | |
|-----------------------|----|--|------|-------------------|-------------------|------|--|-------------------|--------------------|-----|---|-------------------|--------------------|-----|
| | | M | N | O Supply Width | P Supply Depth | Q | R | S Return Depth | T Return Height | U | R | S Return Depth | T Return Height | U |
| 026 | in | 7.2 | 5.8 | 14.0 | 14.0 | 4.9 | 2.3 | 21.1 | 27.7 | 1.0 | 1.7 | 22.2 | 26.2 | 1.7 |
| | cm | 18.3 | 14.8 | 35.6 | 35.6 | 12.4 | 5.8 | 53.6 | 70.4 | 2.5 | 4.3 | 56.4 | 66.5 | 4.3 |
| 038 | in | 6.4 | 6.3 | 18.0 | 18.0 | 5.3 | 2.3 | 26.1 | 27.7 | 1.0 | 1.7 | 27.2 | 26.2 | 1.7 |
| | cm | 16.1 | 16.0 | 45.7 | 45.7 | 13.5 | 5.8 | 66.3 | 70.4 | 2.5 | 4.3 | 69.1 | 66.5 | 4.3 |
| 049 | in | 6.4 | 6.3 | 18.0 | 18.0 | 5.3 | 2.3 | 26.1 | 31.7 | 1.0 | 1.7 | 27.2 | 30.2 | 1.7 |
| | cm | 16.1 | 16.0 | 45.7 | 45.7 | 13.5 | 5.8 | 66.3 | 80.5 | 2.5 | 4.3 | 69.1 | 76.7 | 4.3 |
| 064 & 072 | in | 6.4 | 6.3 | 18.0 | 18.0 | 5.3 | 2.3 | 26.1 | 35.7 | 1.0 | 1.7 | 27.2 | 34.2 | 1.7 |
| | cm | 16.1 | 16.0 | 45.7 | 45.7 | 13.5 | 5.8 | 66.3 | 90.7 | 2.5 | 4.3 | 69.1 | 86.9 | 4.3 |

All dimensions are +/- 0.20 in, (+/-5.1 mm).



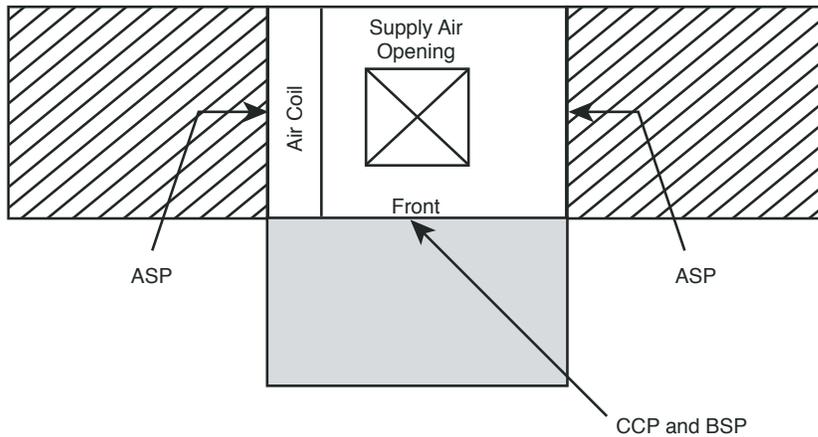
Filter Rails Removed

Units come standard with air filter rails. For duct connections, optional filter frames should be ordered. See product options decoder for details. Filter rails can be converted in the field with an accessory air filter frame kit. Please see the accessory submittal for details.

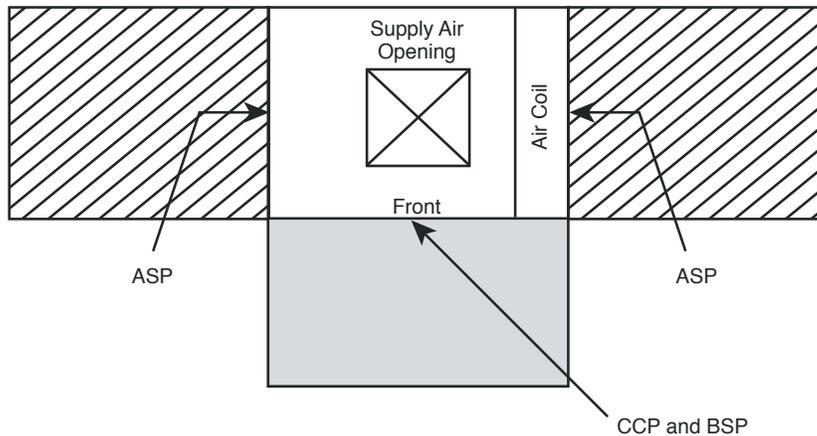
*ASP are removable panels that provide additional access to the units interior. Clear access to ASP panels is not required and they are not to be used in place of the mandatory CCP and BSP panels.

Vertical Units

Left Return



Right Return



 = mandatory 2' service access

 = (optional) additional 2' service access

Notes:

1. While clear access to all removable panels is not required, installer should take care to comply with all building codes and allow adequate clearance for future field service.
2. Front & Side access is preferred for service access. However, all components may be serviced from the front access panel if side access is not available.
3. ASP are removable panels that provide additional access to the units interior. Clear access to ASP panels is not required and they are not to be used in place of the mandatory CCP and BSP panels.
4. Top supply air is shown, the same clearances apply to bottom supply air units.

Legend:

CCP = Control/Compressor Access Panel

BSP = Blower Service Panel

ASP = (optional) Additional Service Panel

TE Vertical Downflow – Dimensional Data

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

*Does not include air filter supports. Add 2" (5.1 cm) when a 1" (25.4 mm) filter is used, add 3" (7.6 cm) when a 2" (50.8 mm) filter is used.

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

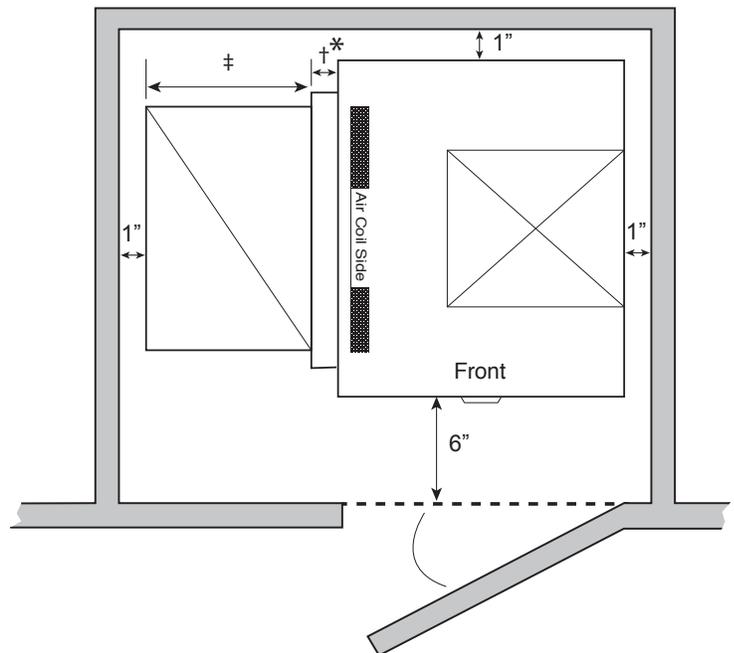
| Vertical Downflow Model | | Water Connections | | | | | | |
|-------------------------|----------|-------------------|--------------|-------------|------------|-------------|----------------|---------|
| | | 1 | 2 | 3 | 4 | 5 | | |
| | | Loop In D | Loop Out E | HWG In F | HWG Out G | Cond. H | Water Loop FPT | HWG FPT |
| 026 | in cm | 15.4 39.1 | 10.9 27.7 | 5.4 13.7 | 2.4 6.1 | 4.7 11.9 | 3/4" | 1/2" |
| 038 | in cm | 17.4 44.2 | 12.9 32.8 | 5.7 14.5 | 2.4 6.1 | 4.7 11.9 | 3/4" | 1/2" |
| 049 | in cm | 17.4 44.2 | 12.9 32.8 | 5.7 14.5 | 2.4 6.1 | 4.7 11.9 | 1" | 1/2" |
| 064 & 072 | in cm | 17.4 44.2 | 12.9 32.8 | 5.7 14.5 | 2.4 6.1 | 4.7 11.9 | 1" | 1/2" |

| Recommended Minimum Installation Clearances for Vertical Units* | |
|---|---|
| 1" | Back of unit |
| | Side opposite return air |
| 6" | Front if hard piped |
| Return Air Side | |
| 1" | Ducted return |
| | - \ddagger *Add for duct width |
| | - \dagger Add 2" for 1" filter frame/rail or 3" for 2" filter frame/rail |
| | Free (open) return - calculate required dimension for a maximum velocity of 600 fpm |

* Field installed accessories (hoses, air cleaners, etc.) and factory WSE option will require additional space. Top supply air is shown, the same clearances apply to bottom supply air units.

Notes:

1. While clear access to all removable panels is not required, installer should take care to comply with all building codes and allow adequate clearance for future field service.
2. Front & Side access is preferred for service access. However, all components may be serviced from the front access panel of a standard unit if side access is not available.
3. Condensate is 3/4" FPT PVC and is switchable from front to side.
4. Top supply air is shown, the same clearances apply to bottom supply air units.



Legend:

CCP = Control/Compressor Access Panel
 BSP = Blower Service Panel
 ASP = (optional) Additional Service Panel

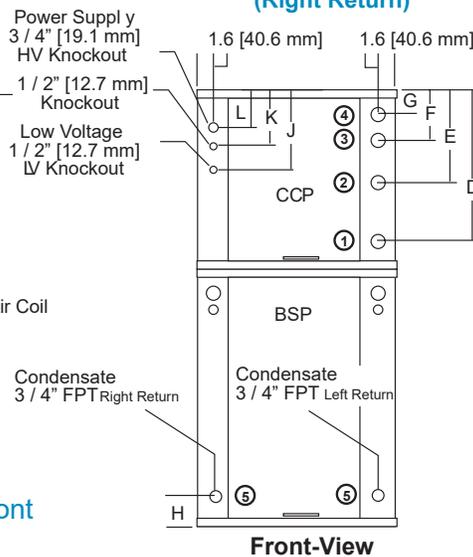
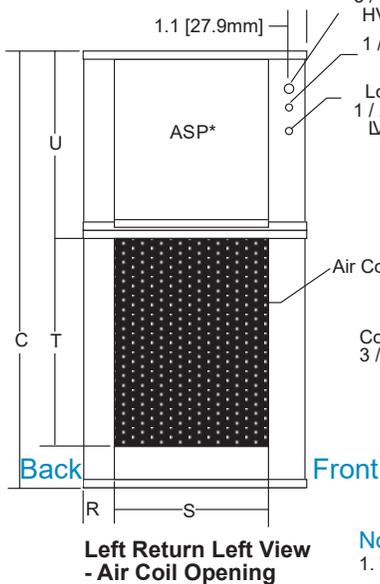
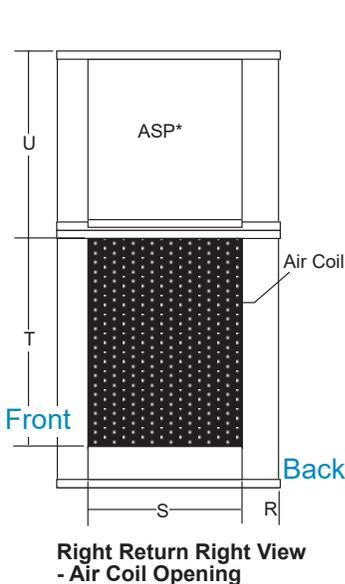
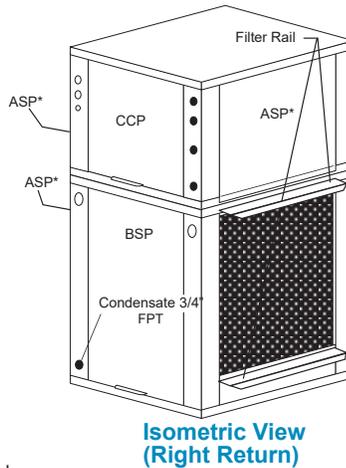
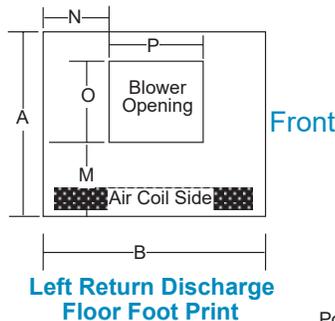
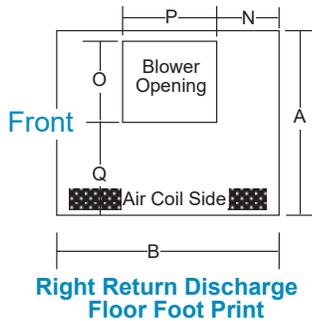
TE Vertical Downflow – Dimensional Data

| Vertical Downflow Model | | Discharge Connection Duct Flange Installed | | | | | Return Connection Using Return Air Opening | | | | Return Connection Using Optional Air Filter Frame | | | |
|-------------------------|----------|--|-------------|-------------------|-------------------|--------------|--|-------------------|--------------------|--------------|---|-------------------|--------------------|--------------|
| | | M | N | O Supply Width | P Supply Depth | Q | R | S Return Depth | T Return Height | U | R | S Return Depth | T Return Height | U |
| 026 | in cm | 6.7 17.1 | 8.4 21.4 | 10.1 25.7 | 9.1 23.0 | 10.8 27.4 | 2.2 5.6 | 21.1 53.6 | 27.7 70.4 | 21.2 53.8 | 1.7 4.3 | 22.2 56.4 | 26.2 66.5 | 21.9 55.6 |
| 038 | in cm | 7.2 18.3 | 9.0 22.9 | 13.4 34.0 | 12.9 32.7 | 10.4 26.5 | 2.2 5.6 | 26.1 66.3 | 27.7 70.4 | 23.2 58.9 | 1.7 4.3 | 27.2 69.1 | 26.2 66.5 | 23.9 60.7 |
| 049 | in cm | 7.2 18.3 | 9.0 22.9 | 13.4 34.0 | 12.9 32.7 | 10.4 26.5 | 2.2 5.6 | 26.1 66.3 | 31.7 80.5 | 23.2 58.9 | 1.7 4.3 | 27.2 69.1 | 30.2 76.7 | 23.9 60.7 |
| 064 & 072 | in cm | 7.2 18.3 | 9.0 22.9 | 13.4 34.0 | 12.9 32.7 | 10.4 26.5 | 2.2 5.6 | 26.1 66.3 | 35.7 90.7 | 23.2 58.9 | 1.7 4.3 | 27.2 69.1 | 34.2 86.9 | 23.9 60.7 |

All dimensions are +/- 0.20 in, (+/-5.1 mm).

Legend:

CCP = Control/Compressor Access Panel
 BSP = Blower Service Panel
 ASP = Additional Service Panel (not required)



Notes:

1. While clear access to all removable panels is not required, installer should take care to comply with all building codes and allow adequate clearance for future field service.
2. Front & Side access is preferred for service access. However, all components may be serviced from the front access panel if side access is not available.
3. Condensate is 3/4" FPT PVC.
4. ASP are removable panels that provide additional access to the units interior. Clear access to ASP panels is not required and they are not to be used in place of the mandatory CCP and BSP panels.

Filter Rails Removed

Units come standard with air filter rails.
 For duct connections, optional filter frames should be ordered.
 See product options decoder for details.
 Filter rails can be converted in the field with an accessory air filter frame kit.
 Please see the accessory submittal for details.

Corner Weights

Corner Weights for TE Series Horizontal Units

| Model | | Total | Left-Front* | Right-Front* | Left-Back** | Right-Back** |
|-------|-----|-------|-------------|--------------|-------------|--------------|
| 026 | Lbs | 298 | 88 | 75 | 78 | 57 |
| | kg | 135 | 40 | 34 | 35 | 26 |
| 038 | Lbs | 359 | 115 | 82 | 92 | 70 |
| | kg | 163 | 52 | 37 | 42 | 32 |
| 049 | Lbs | 448 | 156 | 100 | 106 | 86 |
| | kg | 203 | 71 | 45 | 48 | 39 |
| 064 | Lbs | 475 | 196 | 78 | 85 | 116 |
| | kg | 215 | 89 | 35 | 39 | 53 |
| 072 | Lbs | 475 | 196 | 78 | 85 | 116 |
| | kg | 215 | 89 | 35 | 39 | 53 |

*Front is control box end.

+ Weights shown are for units with left hand return air. Reverse these for a right hand return air unit.

Electrical Data

Standard Units

| Model | Voltage Code | Voltage | Min/Max Voltage | Compressor | | | Fan Motor FLA | Total Unit FLA | Min Circ Amp | Max Fuse/HACR |
|-------|--------------|--------------|-----------------|------------|-------|-----|---------------|----------------|--------------|---------------|
| | | | | RLA | LRA | Qty | | | | |
| 026 | G | 208/230/60/1 | 197/252 | 11.7 | 58.3 | 1 | 3.9 | 15.6 | 18.5 | 30 |
| | E | 265/60/1 | 239/292 | 9.1 | 54.0 | 1 | 3.2 | 12.3 | 14.6 | 20 |
| | H | 208/230/60/3 | 197/252 | 6.5 | 55.4 | 1 | 3.9 | 10.4 | 12.0 | 15 |
| | *F | *460/60/3 | 414/506 | 3.5 | 28.0 | 1 | 3.2 | 6.7 | 7.6 | 15 |
| 038 | G | 208/230/60/1 | 197/252 | 15.3 | 83.0 | 1 | 3.9 | 19.2 | 23.0 | 35 |
| | E | 265/60/1 | 239/292 | 13.0 | 72.0 | 1 | 3.2 | 16.2 | 19.5 | 30 |
| | H | 208/230/60/3 | 197/252 | 11.6 | 73.0 | 1 | 3.9 | 15.5 | 18.4 | 30 |
| | *F | *460/60/3 | 414/506 | 5.7 | 38.0 | 1 | 3.2 | 8.9 | 10.3 | 15 |
| 049 | G | 208/230/60/1 | 197/252 | 21.2 | 104.0 | 1 | 6.9 | 28.1 | 33.4 | 50 |
| | E | 265/60/1 | 239/292 | 16.0 | 109.7 | 1 | 6.0 | 22.0 | 26.0 | 40 |
| | H | 208/230/60/3 | 197/252 | 14.0 | 83.1 | 1 | 6.9 | 20.9 | 24.4 | 35 |
| | *F | *460/60/3 | 414/506 | 6.4 | 41.0 | 1 | 6.0 | 12.4 | 14.0 | 20 |
| 064 | G | 208/230/60/1 | 197/252 | 27.1 | 152.9 | 1 | 6.9 | 34.0 | 40.8 | 60 |
| | E | 265/60/1 | 239/292 | 22.4 | 130.0 | 1 | 6.0 | 28.4 | 34.0 | 50 |
| | H | 208/230/60/3 | 197/252 | 16.5 | 110.0 | 1 | 6.9 | 23.4 | 27.5 | 40 |
| | *F | *460/60/3 | 414/506 | 7.2 | 52.0 | 1 | 6.0 | 13.2 | 15.0 | 20 |
| 072 | G | 208/230/60/1 | 197/252 | 29.7 | 179.2 | 1 | 6.9 | 36.6 | 44.0 | 70 |
| | H | 208/230/60/3 | 197/252 | 17.6 | 136.0 | 1 | 6.9 | 24.5 | 28.9 | 45 |
| | *F | *460/60/3 | 414/506 | 8.5 | 66.1 | 1 | 6.0 | 14.5 | 16.6 | 25 |

Wire length based on one way measurement with 2% voltage drop

Wire size based on 60°C copper conductor

All fuses Class RK-5

*** NEUTRAL CONNECTION REQUIRED! All F Voltage (460 vac) units with ECM motors require a four wire power supply with neutral. ECM motor is rated 265 vac and is wired between one hot leg and neutral.**

Unit with Secondary Pump or ClimaDry® II

| Model | Voltage Code | Voltage | Min/Max Voltage | Compressor | | | Internal Pump FLA | Fan Motor FLA | Total Unit FLA | Min Circ Amp | Max Fuse/HACR |
|-------|--------------|--------------|-----------------|------------|-------|-----|-------------------|---------------|----------------|--------------|---------------|
| | | | | RLA | LRA | Qty | | | | | |
| 026 | G | 208/230/60/1 | 197/252 | 11.7 | 58.3 | 1 | 0.8 | 3.9 | 16.4 | 19.3 | 30 |
| | E | 265/60/1 | 239/292 | 9.1 | 54.0 | 1 | 0.7 | 3.2 | 13.0 | 15.3 | 20 |
| | H | 208/230/60/3 | 197/252 | 6.5 | 55.4 | 1 | 0.8 | 3.9 | 11.2 | 12.8 | 15 |
| | *F | *460/60/3 | 414/506 | 3.5 | 28.0 | 1 | 0.7 | 3.2 | 7.4 | 8.3 | 15 |
| 038 | G | 208/230/60/1 | 197/252 | 15.3 | 83.0 | 1 | 0.8 | 3.9 | 20.0 | 23.8 | 35 |
| | E | 265/60/1 | 239/292 | 13.0 | 72.0 | 1 | 0.7 | 3.2 | 16.9 | 20.2 | 30 |
| | H | 208/230/60/3 | 197/252 | 11.6 | 73.0 | 1 | 0.8 | 3.9 | 16.3 | 19.2 | 30 |
| | *F | *460/60/3 | 414/506 | 5.7 | 38.0 | 1 | 0.7 | 3.2 | 9.6 | 11.0 | 15 |
| 049 | G | 208/230/60/1 | 197/252 | 21.2 | 104.0 | 1 | 0.8 | 6.9 | 28.9 | 34.2 | 50 |
| | E | 265/60/1 | 239/292 | 16.0 | 109.7 | 1 | 0.7 | 6.0 | 22.7 | 26.7 | 40 |
| | H | 208/230/60/3 | 197/252 | 14.0 | 83.1 | 1 | 0.8 | 6.9 | 21.7 | 25.2 | 35 |
| | *F | *460/60/3 | 414/506 | 6.4 | 41.0 | 1 | 0.7 | 6.0 | 13.1 | 14.7 | 20 |
| 064 | G | 208/230/60/1 | 197/252 | 27.1 | 152.9 | 1 | 1.1 | 6.9 | 35.1 | 41.8 | 60 |
| | E | 265/60/1 | 239/292 | 22.4 | 130.0 | 1 | 1.1 | 6.0 | 29.5 | 35.1 | 50 |
| | H | 208/230/60/3 | 197/252 | 16.5 | 110.0 | 1 | 1.1 | 6.9 | 24.5 | 28.6 | 45 |
| | *F | *460/60/3 | 414/506 | 7.2 | 52.0 | 1 | 1.1 | 6.0 | 14.3 | 16.1 | 20 |
| 072 | G | 208/230/60/1 | 197/252 | 29.7 | 179.2 | 1 | 1.1 | 6.9 | 37.7 | 45.1 | 70 |
| | H | 208/230/60/3 | 197/252 | 17.6 | 136.0 | 1 | 1.1 | 6.9 | 25.6 | 30.0 | 45 |
| | *F | *460/60/3 | 414/506 | 8.5 | 66.1 | 1 | 1.1 | 6.0 | 15.6 | 17.7 | 25 |

Wire length based on one way measurement with 2% voltage drop

Wire size based on 60°C copper conductor

All fuses Class RK-5

*** NEUTRAL CONNECTION REQUIRED! All F Voltage (460 vac) units with ECM motors/internal secondary circulators require a four wire power supply with neutral. ECM motors/ClimaDry® II pump/internal secondary circulators are rated 265 vac and are wired between one hot leg and neutral.**

Electrical Data

Units with Variable Pump High Head

| Model | Voltage Code | Voltage | Min/Max Voltage | Compressor | | | Pump FLA | Fan Motor FLA | Total Unit FLA | Min Circ Amp | Max Fuse/HACR |
|-------|--------------|--------------|-----------------|------------|-------|-----|----------|---------------|----------------|--------------|---------------|
| | | | | RLA | LRA | Qty | | | | | |
| 026 | G | 208/230/60/1 | 197/252 | 11.7 | 58.3 | 1 | 1.44 | 3.9 | 17.0 | 20.0 | 30 |
| | E | 265/60/1 | 239/292 | 9.1 | 54.0 | 1 | 1.25 | 3.2 | 13.6 | 15.8 | 25 |
| | H | 208/230/60/3 | 197/252 | 6.5 | 55.4 | 1 | 1.44 | 3.9 | 11.8 | 13.5 | 20 |
| | *F | *460/60/3 | 414/506 | 3.5 | 28.0 | 1 | 1.25 | 3.2 | 8.0 | 8.8 | 15 |
| 038 | G | 208/230/60/1 | 197/252 | 15.3 | 83.0 | 1 | 1.44 | 3.9 | 20.6 | 24.5 | 40 |
| | E | 265/60/1 | 239/292 | 13.0 | 72.0 | 1 | 1.25 | 3.2 | 17.5 | 20.7 | 30 |
| | H | 208/230/60/3 | 197/252 | 11.6 | 73.0 | 1 | 1.44 | 3.9 | 16.9 | 19.8 | 30 |
| | *F | *460/60/3 | 414/506 | 5.7 | 38.0 | 1 | 1.25 | 3.2 | 10.2 | 11.6 | 15 |
| 049 | G | 208/230/60/1 | 197/252 | 21.2 | 104.0 | 1 | 1.44 | 6.9 | 29.5 | 34.8 | 50 |
| | E | 265/60/1 | 239/292 | 16.0 | 109.7 | 1 | 1.25 | 6.0 | 23.3 | 27.3 | 40 |
| | H | 208/230/60/3 | 197/252 | 14.0 | 83.1 | 1 | 1.44 | 6.9 | 22.3 | 25.8 | 40 |
| | *F | *460/60/3 | 414/506 | 6.4 | 41.0 | 1 | 1.25 | 6.0 | 13.7 | 15.3 | 20 |
| 064 | G | 208/230/60/1 | 197/252 | 27.1 | 152.9 | 1 | 1.44 | 6.9 | 35.4 | 42.2 | 60 |
| | E | 265/60/1 | 239/292 | 22.4 | 130.0 | 1 | 1.25 | 6.0 | 29.7 | 35.3 | 50 |
| | H | 208/230/60/3 | 197/252 | 16.5 | 110.0 | 1 | 1.44 | 6.9 | 24.8 | 29.0 | 45 |
| | *F | *460/60/3 | 414/506 | 7.2 | 52.0 | 1 | 1.25 | 6.0 | 14.5 | 16.3 | 20 |
| 072 | G | 208/230/60/1 | 197/252 | 29.7 | 179.2 | 1 | 1.44 | 6.9 | 38.0 | 45.5 | 70 |
| | H | 208/230/60/3 | 197/252 | 17.6 | 136.0 | 1 | 1.44 | 6.9 | 25.9 | 30.3 | 45 |
| | *F | *460/60/3 | 414/506 | 8.5 | 66.1 | 1 | 1.25 | 6.0 | 15.8 | 17.9 | 25 |

Wire length based on one way measurement with 2% voltage drop

Wire size based on 60°C copper conductor

All fuses Class RK-5

*** NEUTRAL CONNECTION REQUIRED! All F Voltage (460 vac) units with ECM motors/internal pumps require a four wire power supply with neutral. ECM motors/internal pumps are rated 265 vac and are wired between one hot leg and neutral.**

Unit with Variable Pump Standard Head

| Model | Voltage Code | Voltage | Min/Max Voltage | Compressor | | | Pump FLA | Fan Motor FLA | Total Unit FLA | Min Circ Amp | Max Fuse/HACR |
|-------|--------------|--------------|-----------------|------------|-------|-----|----------|---------------|----------------|--------------|---------------|
| | | | | RLA | LRA | Qty | | | | | |
| 026 | G | 208/230/60/1 | 197/252 | 11.7 | 58.3 | 1 | 0.7 | 3.9 | 16.3 | 19.2 | 30 |
| | E | 265/60/1 | 239/292 | 9.1 | 54.0 | 1 | 0.6 | 3.2 | 12.9 | 15.2 | 20 |
| | H | 208/230/60/3 | 197/252 | 6.5 | 55.4 | 1 | 0.7 | 3.9 | 11.1 | 12.7 | 15 |
| | *F | *460/60/3 | 414/506 | 3.5 | 28.0 | 1 | 0.6 | 3.2 | 7.3 | 8.2 | 15 |
| 038 | G | 208/230/60/1 | 197/252 | 15.3 | 83.0 | 1 | 0.7 | 3.9 | 19.9 | 23.7 | 35 |
| | E | 265/60/1 | 239/292 | 13.0 | 72.0 | 1 | 0.6 | 3.2 | 16.8 | 20.1 | 30 |
| | H | 208/230/60/3 | 197/252 | 11.6 | 73.0 | 1 | 0.7 | 3.9 | 16.2 | 19.1 | 30 |
| | *F | *460/60/3 | 414/506 | 5.7 | 38.0 | 1 | 0.6 | 3.2 | 9.5 | 10.9 | 15 |
| 049 | G | 208/230/60/1 | 197/252 | 21.2 | 104.0 | 1 | 0.7 | 6.9 | 28.8 | 34.1 | 50 |
| | E | 265/60/1 | 239/292 | 16.0 | 109.7 | 1 | 0.6 | 6.0 | 22.6 | 26.6 | 40 |
| | H | 208/230/60/3 | 197/252 | 14.0 | 83.1 | 1 | 0.7 | 6.9 | 21.6 | 25.1 | 35 |
| | *F | *460/60/3 | 414/506 | 6.4 | 41.0 | 1 | 0.6 | 6.0 | 13.0 | 14.6 | 20 |
| 064 | G | 208/230/60/1 | 197/252 | 27.1 | 152.9 | 1 | 0.7 | 6.9 | 34.7 | 41.5 | 60 |
| | E | 265/60/1 | 239/292 | 22.4 | 130.0 | 1 | 0.6 | 6.0 | 29.0 | 34.6 | 50 |
| | H | 208/230/60/3 | 197/252 | 16.5 | 110.0 | 1 | 0.7 | 6.9 | 24.1 | 28.2 | 40 |
| | *F | *460/60/3 | 414/506 | 7.2 | 52.0 | 1 | 0.6 | 6.0 | 13.8 | 15.6 | 20 |
| 072 | G | 208/230/60/1 | 197/252 | 29.7 | 179.2 | 1 | 0.7 | 6.9 | 37.3 | 44.7 | 70 |
| | H | 208/230/60/3 | 197/252 | 17.6 | 136.0 | 1 | 0.7 | 6.9 | 25.2 | 29.6 | 45 |
| | *F | *460/60/3 | 414/506 | 8.5 | 66.1 | 1 | 0.6 | 6.0 | 15.1 | 17.2 | 25 |

Wire length based on one way measurement with 2% voltage drop

Wire size based on 60°C copper conductor

All fuses Class RK-5

*** NEUTRAL CONNECTION REQUIRED! All F Voltage (460 vac) units with ECM motors/internal pumps require a four wire power supply with neutral. ECM motors/internal pumps are rated 265 vac and are wired between one hot leg and neutral.**

TE Series Wiring Diagram Matrix

All current diagrams can be located online at climatemaster.com.
Click 'Commercial Professional'.

1. Click 'Products' in the main navigation
2. Select 'Small Packaged Units'
3. Select the TE product series
4. Click the Wire Diagrams tab in the middle of the page
5. Select your voltage and controls

| Model | Refrigerant | Wiring Diagram Part Number | Electrical (Voltage Code) | Control | DDC | Unit Options |
|-----------|------------------------|----------------------------|----------------------------------|---------|-----|------------------------------|
| TE Series | EarthPure® HFC-410A | 96B0242N01 | (G) 208-230/60/1 (E) 265/60/1 | DXM2.5 | - | MOD VALVE |
| | | 96B0242N03 | | | MPC | MOD VALVE |
| | | 96B0242N05* | | | - | INTERNAL SECONDARY PUMP* |
| | | 96B0242N07* | | | MPC | INTERNAL SECONDARY PUMP* |
| | | 96B0242N08 | | | - | CLIMADRY® II |
| | | 96B0242N20 | | | MPC | CLIMADRY® II |
| | | 96B0242N09 | | | - | VARIABLE PUMP (265 Volt) |
| | | 96B0242N12 | | | - | VARIABLE PUMP (208-230 Volt) |
| TE Series | EarthPure® HFC-410A | 96B0243N01 | (H) 208-230/60/3 | DXM2.5 | - | MOD VALVE |
| | | 96B0243N03 | | | MPC | MOD VALVE |
| | | 96B0243N05* | | | - | INTERNAL SECONDARY PUMP* |
| | | 96B0243N07* | | | MPC | INTERNAL SECONDARY PUMP* |
| | | 96B0243N08 | | | - | CLIMADRY® II |
| | | 96B0243N12 | | | MPC | CLIMADRY® II |
| | | 96B0243N09 | | | - | VARIABLE PUMP |
| TE Series | EarthPure® HFC-410A | 96B0244N01 | (F) 460/60/3 | DXM2.5 | - | MOD VALVE |
| | | 96B0244N03 | | | MPC | MOD VALVE |
| | | 96B0244N05* | | | - | INTERNAL SECONDARY PUMP* |
| | | 96B0244N07* | | | MPC | INTERNAL SECONDARY PUMP* |
| | | 96B0244N08 | | | - | CLIMADRY® II |
| | | 96B0244N11 | | | MPC | CLIMADRY® II |
| | | 96B0244N09 | | | - | VARIABLE PUMP |

* A base unit utilizes the same WD as a unit with an Internal Secondary Pump.

Tranquility® 30 (TE) Series 60 Hz Engineering Specifications – Page 1

General:

Furnish and install ClimateMaster Tranquility® “TE” Water Source Heat Pumps, as indicated on the plans. Equipment shall be completely assembled, piped, and internally wired. Capacities and characteristics as listed in the schedule and the specifications that follow.

Units shall be supplied completely factory built capable of operating over an entering water temperature range from 20° to 120° F (-6.7° to 48.9° C) as standard. Equivalent units from other manufacturers may be proposed provided approval to bid is given 10 days prior to bid closing. All equipment listed in this section must be rated and certified in accordance with Air-Conditioning, Heating and Refrigeration Institute/International Standards Organization (AHRI/ISO 13256-1). All equipment must be tested, investigated, and determined to comply with the requirements of the standards for Heating and Cooling Equipment UL-1995 for the United States and CAN/CSA-C22.2 NO.236 for Canada, by Intertek Testing Laboratories (ETL). The units shall have AHRI/ISO and ETL-US-C labels.

All units shall pass a factory acceptance test. The quality control system shall automatically perform the factory acceptance test via computer. A detailed report card from the factory acceptance test shall ship with each unit. **(Note: If unit fails the factory acceptance test it shall not be allowed to ship. Unit serial number will be recorded by factory acceptance test and furnished on report card for ease of unit warranty status.)**

Basic Construction:

Horizontal units shall have one of the following air flow arrangements: Left Inlet/Straight (Right) Discharge; Right Inlet/Straight (Left) Discharge; Left Inlet/Back Discharge; or Right Inlet/Back Discharge as shown on the plans. Units must have the ability to be field convertible from straight to back or back to straight discharge with no additional parts or unit structure modification. Horizontal units will have factory installed hanger brackets with rubber isolation grommets packaged separately.

Vertical Units shall have one of the following air flow arrangements: Left Return/Top Discharge, Right Return/Top Discharge, Left Return/Bottom Discharge, Right Return/Bottom Discharge as shown on the plans.

If units with these arrangements are not used, the contractor is responsible for any extra costs incurred by other trades. All units (horizontal and vertical) must have a minimum of three access panels for serviceability of compressor compartment. **Units having only one access panel to compressor/heat exchangers/expansion device/refrigerant piping shall not be acceptable.**

Compressor section interior surfaces shall be lined with 1/2 inch (12.7 mm) thick, 1-1/2 lb/ft³ (24 kg/m³) acoustic type glass fiber insulation. Air handling section interior surfaces shall be lined with 1/2 inch (12.7 mm) thick, 1-1/2 lb/ft³ (24 kg/m³) foil-faced fiber insulation for ease of cleaning. Insulation placement shall be designed in a manner that will eliminate any exposed edges to prevent the introduction of glass fibers into the air stream. **Units without foil-faced insulation in the air handling section will not be accepted.**

The heat pumps shall be fabricated from heavy gauge galvanized steel with powder coat paint finish. Both sides of the steel shall be painted for added protection.

Standard insulation must meet NFPA Fire Hazard Classification requirements 25/50 per ASTM E84, UL 723, CAN/ULC S102-M88 and NFPA 90A requirements; air erosion and mold growth limits of UL-181; stringent fungal resistance test per ASTM-C1071 and ASTM G21; and shall meet zero level bacteria growth per ASTM G22. **Unit insulation must meet these stringent requirements or unit(s) will not be accepted.**

All horizontal units to have factory installed 1 inch (25.4 mm) discharge air duct collars, 1 inch (25.4 mm) filter rails with 1 inch (25.4 mm) filters factory installed, and factory installed unit-mounting brackets. Vertical units to have field installed discharge air duct collar, shipped loose and 1 inch (25.4 mm) filter rails with 1 inch (25.4 mm) filters factory installed. **If units with these factory-installed provisions are not used, the contractor is responsible for any extra costs to field install these provisions, and/or the extra costs for his sub-contractor to install these provisions.**

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Tranquility® 30 (TE) Series 60 Hz Engineering Specifications – Page 2

All units must have an insulated panel separating the fan compartment from the compressor compartment. Units with the compressor in the air stream are not acceptable. Units shall have a factory installed 1 inch (25.4 mm) wide filter bracket for filter removal from either side. Units shall have a 1 inch (25.4 mm) thick throwaway type glass fiber filter. The contractor shall purchase one spare set of filters and replace factory shipped filters on completion of start-up. Filters shall be standard sizes. If units utilize non-standard filter sizes then the contractor shall provide 12 spare filters for each unit.

Cabinets shall have separate holes and knockouts for entrance of line voltage and low voltage control wiring. All factory-installed wiring passing through factory knockouts and openings shall be protected from sheet metal edges at openings by plastic ferrules. Supply and return water connections shall be copper FPT fittings, and shall be securely mounted flush to the cabinet corner post allowing for connection to a flexible hose without the use of a back-up wrench. Water connections that protrude through the cabinet or require the use of a backup wrench shall not be allowed. All water connections and electrical knockouts must be in the compressor compartment corner post as to not interfere with the serviceability of unit. Contractor shall be responsible for any extra costs involved in the installation of units that do not have this feature. Contractor must ensure that units can be easily removed for servicing and coordinate locations of electrical conduit and lights with the electrical contractor.

Option: The unit will be supplied with optional field or factory installed 2 inch air filter rails (typically used for free return installation) or 1 inch or 2 inch air filter frames with filter access door and return air duct flanges (typically used for ducted return installation). A corresponding 1 inch or 2 inch throwaway type glass fiber filter will ship with the factory installed filter rails or frame.

Option: The contractor shall install 1 inch or 2 inch MERV rated pleated media disposable air filters on all units.

Option: UltraQuiet package shall consist of high technology sound attenuating material that is strategically applied to the compressor and air handling compartment casings and fan scroll in addition to the standard ClimaQuiet system design, to further dampen and attenuate sound transmissions.

Option: The unit will be supplied with internally factory mounted modulating water valve with ΔT control. The factory built-in valve shall modulate water flow through unit based on a field adjustable water temperature difference between the entering and leaving water. For two-stage units, the modulating valve will automatically reduce the water flow through the unit during part load operation to maintain the configured temperature difference. The valve shall automatically adjust for operating mode, stage of capacity, source water temperature and variations in external head pressure. The valve will also act as a shut-off valve to prevent water flow through the unit when the unit is not activated and will have a minimum position capability. Externally mounted modulating water valves will not be accepted.

Option: The unit will be supplied with internally factory mounted variable speed water circulating pump with internal check valve. The variable speed pump shall modulate water flow through the unit based on a field adjustable temperature difference between the entering and leaving water. For two-stage units, the modulating valve will automatically reduce the water flow through the unit during part load operation to maintain the configured temperature difference. The variable speed pump shall automatically adjust for operating mode, stage of capacity, source water temperature, and variations in external head pressure. Externally mounted circulating pumps will not be accepted.

Tranquility® 30 (TE) Series 60 Hz Engineering Specifications – Page 3

Option: The unit will be supplied with internally mounted secondary pump for primary/secondary applications, including one-pipe systems. Externally mounted secondary pump will not be accepted.

Option: The unit shall be supplied with extended range insulation option, which adds closed cell insulation to internal water lines, and provides insulation on suction side refrigeration tubing including refrigerant to water heat exchanger.

Option: Unit shall include ClimaDry® II reheat option. Only modulating reheat that will adjust capacity based upon supply air temperature to provide “neutral” (72° F, 22.2° C) constant air temperature will be accepted. “Neutral” supply air temperature shall be provided regardless of entering loop water temperatures (above 55° F, 12.8° C) or refrigerant condensing pressures. Control of reheat must be accomplished via a humidistat or dehumidistat contact closure. Refrigerant circuit must be AHRI certified. Approved equal manufacturers may provide pre-engineered integrated modulating hot gas reheat within the unit cabinet, or the installing contractor in conjunction with the “approved equal” unit manufacturer can provide for approval (during the submittal phase) an engineered system consisting of: a duct mounted hot water coil, small circulating pump, modulating control valve, and associated piping using the discharge condenser water off of the unit as the heating medium. All design costs and costs of field installed items including additional power wiring to pump, and control wiring to and from pump and control valve to unit shall be borne by mechanical contractor. Refrigerant circuits that are not AHRI certified when the reheat option is applied will not be accepted.

Fan and Motor Assembly:

Blower shall have inlet rings to allow removal of wheel and motor from one side without removing housing. Units shall have a direct-drive centrifugal fan. The fan motor shall be an ECM variable speed ball bearing type motor. The ECM fan motor shall provide soft starting, maintain constant CFM over its static operating range and provide airflow adjustment in 25 CFM 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. A special dehumidification mode shall be provided to allow lower airflows in cooling for better dehumidification. The dehumidification mode may be constant or automatic (humidistat controlled). Airflow/Static pressure rating of the unit shall be based on a wet coil and a clean filter in place. **Ratings based on a dry coil, and/or no air filter, shall NOT be acceptable.**

Refrigerant Circuit:

All units shall contain an EarthPure® (HFC-410A) sealed refrigerant circuit including a high efficiency two-stage scroll compressor designed for heat pump operation, a thermostatic expansion valve for refrigerant metering, an enhanced corrugated aluminum lanced fin and rifled copper tube or all aluminum micro channel refrigerant to air heat exchanger, reversing valve, coaxial (tube in tube) refrigerant to water heat exchanger, and safety controls including a high pressure switch, low pressure switch (loss of charge), water coil low temperature sensor, and air coil low temperature sensor. Access fittings shall be factory installed on high and low pressure refrigerant lines to facilitate field service. Activation of any safety device shall prevent compressor operation via a microprocessor lockout circuit. The lockout circuit shall be reset at the thermostat or at the contractor supplied disconnect switch. **Units that cannot be reset at the thermostat shall not be acceptable.**

Hermetic compressors shall be internally sprung. The compressor shall have a dual level vibration isolation system. The compressor will be mounted on specially engineered sound-tested EPDM vibration isolation grommets to a large heavy gauge compressor mounting plate, which is then isolated from the cabinet base with rubber grommets for maximized vibration attenuation. All units shall include a discharge muffler to further enhance sound attenuation. Compressor shall have thermal overload protection. Compressor shall be located in an insulated compartment away from air stream to minimize sound transmission.

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Tranquility® 30 (TE) Series 60 Hz Engineering Specifications – Page 4

Refrigerant to air heat exchangers shall utilize enhanced corrugated lanced aluminum fins and rifled copper tube or all aluminum microchannel construction rated to withstand 625 PSIG (4309 kPa) refrigerant working pressure. Refrigerant to water heat exchangers shall be of copper inner water tube and steel refrigerant outer tube design, rated to withstand 625 PSIG (4309 kPa) working refrigerant pressure and 500 PSIG (3445 kPa) working water pressure. The refrigerant to water heat exchanger shall be “electro-coated” with a low cure cathodic epoxy material a minimum of 0.4 mils thick (0.4 – 1.5 mils range) on all surfaces. The black colored coating shall provide a minimum of 1,000 hours salt spray protection per ASTM B117-97 on all external steel and copper tubing. The material shall be formulated without the inclusion of any heavy metals and shall exhibit a pencil hardness of 2H (ASTM D3363-92A), crosshatch adhesion of 4B-5B (ASTM D3359-95), and impact resistance of 160 in-lbs (184 kg-cm) direct (ASTM D2794-93).

Refrigerant metering shall be accomplished by thermostatic expansion valve only. Expansion valves shall be dual port balanced types with external equalizer for optimum refrigerant metering. Units shall be designed and tested for operating ranges of entering water temperatures from 20° to 120° F (-6.7° to 48.9° C). Reversing valve shall be four-way solenoid activated refrigerant valve, which shall default to heating mode should the solenoid fail to function. If the reversing valve solenoid defaults to cooling mode, an additional low temperature thermostat must be provided to prevent over-cooling an already cold room.

Option: The unit will be supplied with a cupro-nickel coaxial water to refrigerant heat exchanger.

Option: The unit shall be supplied with a hot water generator (desuperheater).

Drain Pan:

The drain pan shall be constructed of 304 Stainless Steel to inhibit corrosion. This corrosion protection system shall meet the stringent 1,000 hour salt spray test per ASTM B117. If plastic type material is used, it must be HDPE (High Density Polyethylene) to avoid thermal cycling shock stress failure over the lifetime of the unit. Drain pan shall be fully insulated. Drain outlet shall be located at pan as to allow unobstructed drainage of condensate. Drain outlet for horizontal units shall be connected from pan directly to MPT fitting. **No hidden internal tubing extensions from pan outlet extending to unit casing (that can create drainage problems) will be accepted.** The unit as standard will be supplied with solid-state electronic condensate overflow protection. **Mechanical float switches will NOT be accepted.**

Vertical units shall be furnished with a PVC FPT condensate drain connection and an internal factory installed condensate trap. If units without an internal trap are used, the contractor is responsible for any extra costs to field install these provisions, and/or the extra costs for his sub-contractor to install these provisions.

Electrical:

A control box shall be located within the unit compressor compartment and shall contain a 75 VA transformer, 24 Volt activated, 2 or 3 pole compressor contactor, terminal block for thermostat wiring and solid-state controller for complete unit operation. Reversing valve and fan motor wiring shall be routed through this electronic controller. Units shall be name-plated for use with time delay fuses or HACR circuit breakers. Unit controls shall be 24 Volt and provide heating or cooling as required by the remote thermostat/sensor.

Option: Disconnect Switch, Non-Fused, classified as motor disconnect.

Solid State Control System (DXM2.5):

Units shall have a solid-state control system. **Units utilizing electro-mechanical control shall not be acceptable.** The control system microprocessor board shall be specifically designed to protect against building electrical system noise contamination, EMI, and RFI interference. The control system shall have the following features:

Tranquility® 30 (TE) Series 60 Hz Engineering Specifications – Page 5

- Anti-short cycle time delay on compressor operation.
- Random start on power up mode.
- Low voltage protection.
- High voltage protection.
- Unit shutdown on high or low refrigerant pressures (loss of charge).
- Unit shutdown on low water temperature.
- Condensate overflow electronic protection.
- Option to reset unit at thermostat or disconnect.
- Automatic intelligent reset. Unit shall automatically reset the unit 5 minutes after trip if the fault has cleared. If a fault occurs 3 times sequentially without thermostat meeting temperature, then lockout requiring manual reset will occur.
- Ability to defeat time delays for servicing.
- Light emitting diode (LED) on circuit board to indicate high pressure, low pressure (loss of charge), low voltage, high voltage, low water/air temperature cut-out, condensate overflow, and control voltage status.
- The low-pressure (loss of charge) switch shall not be monitored for the first 120 seconds after a compressor start command to prevent nuisance safety trips.
- 24 V output to cycle a motorized water valve or other device with compressor contactor.
- Unit Performance Sentinel (UPS). The UPS warns when the heat pump is running inefficiently.
- Water coil low temperature sensing (selectable for water or antifreeze).
- Air coil low temperature sensing.
- Removable thermostat connector.
- Night setback control.
- Random start on return from night setback.
- Minimized reversing valve operation (Unit control logic shall only switch the reversing valve when cooling is demanded for the first time. The reversing valve shall be held in this position until the first call for heating, ensuring quiet operation and increased valve life.).
- Override temperature control with 2-hour timer for room occupant to override setback temperature at the thermostat.
- Dry contact night setback output for digital night setback thermostats.
- Ability to work with heat pump (Y, O) or heat/cool (Y, W) type thermostats.
- Ability to work with heat pump thermostats using O or B reversing valve control.
- Emergency shutdown contacts.
- Boilerless system heat control at low loop water temperature.
- Ability to allow up to 3 units to be controlled by one thermostat.
- Relay to operate an external damper.
- Ability to automatically change fan speed from multistage thermostat.
- Relay to start system pump.
- 75 VA control transformer. Control transformer shall have load side short circuit and overload protection via a built in circuit breaker.

NOTE: Units not providing the 8 safety protections of anti-short cycle, low voltage, high voltage, high refrigerant pressure, low pressure (loss of charge), air coil low temperature cut-out, water coil low temperature cut-out, and condensate overflow protections will not be accepted.

NOTE: To achieve full benefit of the two-stage compressor and ECM fan, a 2 Heat/2 Cool thermostat (or a 3 Heat/2 Cool thermostat when electric backup heat is required) should be employed.

This control system coupled with a multi-stage thermostat will better dehumidify room air by automatically running the heat pump's fan at lower speed on the first stage of cooling thereby implementing low sensible heat ratio cooling. On the need for higher cooling performance the system will activate the second stage of cooling and automatically switch the fan to the higher fan speed setting. This

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Tranquility® 30 (TE) Series 60 Hz Engineering Specifications – Page 6

system may be further enhanced with a humidistat. **Units not having automatic low sensible heat ratio cooling will not be accepted; as an alternate a hot gas reheat coil may be provided with control system for automatic activation.**

When DXM2.5 is connected to either ACDU service tool or AWC99U01 thermostat the installer/service technician can; check and set CFM; check dip switch S1, S2, and S3 settings; run operation modes manually; check all physical inputs from thermostat and refrigerant pressure switches status, (Y1, Y2, W, O, G, H, ESD, NSB, OR, HP switch, and LOC switch); current or at time of fault the following temperatures -LT1, LT2, compressor discharge, leaving air, leaving water, entering water and control voltage; record last five faults, list possible reasons, and clear faults.

Digital Night Setback with Pump Restart (DXM2.5 w/ ATP32U03C/04C, AWC99U01):

The unit will be provided with a Digital Night Setback feature using an accessory relay on the DXM2.5 controller with an ATP32U03C/04C or AWC99U01 thermostat and an external, field-provided time clock. The external time clock will initiate and terminate the night setback period. The thermostat will have a night setback override feature with a programmable override time period. An additional accessory relay on the unit DXM2.5 controller will energize the building loop pump control for the duration of the override period. **(Note: This feature requires additional low voltage wiring. Consult Application Drawings for details.)**

Remote Service Sentinel:

Solid state control system shall communicate with thermostat to display (at the thermostat) the unit status, fault status, and specific fault condition, as well as retrieve previously stored fault that caused unit shutdown. The Remote Service Sentinel allows building maintenance personnel or service personnel to diagnose unit from the wall thermostat. The control board shall provide a signal to the thermostat fault light, indicating a lockout. Upon cycling the G (fan) input 3 times within a 60 second time period, the fault light shall display the specific code as indicated by a sequence of flashes. A detailed flashing code shall be provided at the thermostat LED to display unit status and specific fault status such as over/under voltage fault, high pressure fault, low pressure fault, low water temperature fault, condensate overflow fault, etc. **Units that do not provide this remote service sentinel shall not be acceptable.**

Option: MPC (Multiple Protocol Control) Interface System

Units shall have all the features listed above and the control board will be supplied with a Multiple Protocol interface board. Available protocols are BACnet MS/TP, Modbus, or Johnson Controls N2. The choice of protocol shall be field selectable/changeable via the use of a simple selector switch. **Protocol selection shall not require any additional programming or special external hardware or software tools.** This will permit all units to be daisy chain connected by a 2-wire twisted pair shielded cable. The following points must be available at a central or remote computer location:

- a. space temperature
- b. leaving water temperature
- c. discharge air temperature
- d. command of space temperature setpoint
- e. cooling status
- f. heating status
- g. low temperature sensor alarm
- h. low pressure sensor alarm
- i. high pressure switch alarm
- j. condensate overflow alarm
- k. hi/low voltage alarm
- l. fan "ON/AUTO" position of space thermostat as specified above
- m. unoccupied/occupied command
- n. cooling command

Tranquility® 30 (TE) Series 60 Hz Engineering Specifications – Page 7

- o. heating command
- p. fan “ON/AUTO” command
- q. fault reset command
- r. itemized fault code revealing reason for specific shutdown fault (any one of 7)

Warranty:

ClimateMaster shall warranty equipment for a period of 12 months from start up or 18 months from shipping (which ever occurs first).

Option: Extended 4-year compressor warranty covers compressor for a total of 5 years.

Option: Extended 4-year refrigeration circuit warranty covers coils, reversing valve, expansion valve and compressor for a total of 5 years.

Option: Extended 4-year control board warranty covers the DXM2.5 control board for a total of 5 years.

FIELD INSTALLED OPTIONS

Hose Kits:

All units shall be connected with hoses. The hoses shall be 2 feet (61 cm) long, braided stainless steel; fire rated hoses complete with adapters. Only fire rated hoses will be accepted.

Valves:

The following valves are available and will be shipped loose:

- a. Ball valve; bronze material, standard port full flow design, FPT connections.
- b. Ball valve with memory stop and PT port.
- c. “Y” strainer with blowdown valve; bronze material, FPT connections.
- d. Motorized water valve; slow acting, 24 V, FPT connections.

Hose Kit Assemblies:

The following assemblies ship with the valves already assembled to the hose described:

- a. Supply and return hoses having ball valve with PT port.
- b. Supply hose having ball valve with PT port; return hose having automatic flow regulator valve with PT ports, and ball valve.
- c. Supply hose having “Y” strainer with blowdown valve, and ball valve with PT port; return hose having automatic flow regulator with PT ports, and ball valve.
- d. Supply hose having “Y” strainer with blowdown valve, and ball valve with PT port; return hose having ball valve with PT port.

Thermostats:

The thermostat shall be a ClimateMaster mechanical or electronic type thermostat as selected below with the described features:

a. Thermostat (Communicating) (AWC99U01)

An electronic communicating web-enabled touchscreen 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.

Tranquility® 30 (TE) Series 60 Hz Engineering Specifications – Page 8

The thermostat shall provide access to via the web portal or mobile application to include temperature adjustment, schedule adjustment including occupied/unoccupied, entering water temperature, leaving water temperature, water coil temperature, air coil temperature, leaving air temperature, and compressor discharge temperature. A graphical system layout to be provided with real-time operating mode information of the temperature sensors for easy diagnostics.

The thermostat shall display system faults with probable cause and troubleshooting guidance. The system shall provide in clear language last five faults, time of faults, operating temps at time of fault, and possible reasons for the fault. The thermostat shall provide access for immediate manual control of all outputs via the web portal/mobile application for rapid troubleshooting.

b. CM500 – Color Touchscreen Display, Multi-stage, Automatic or Manual Changeover, 7-day Programmable with Wi-Fi and Humidity Control (AVB32V03C/R)

Thermostat shall have color resistive touchscreen display with space temperature, relative humidity, setpoints, mode, status indication and local weather (if connected to Wi-Fi). Residential version shall be 7 day programmable with up to 4 setpoints per day. Commercial version shall be 7 day programmable with 4 occupied/unoccupied periods per day with up to 4-hour override. Multi-stage (3H/2C), automatic or manual changeover with HEAT-OFF-COOL-AUTO-EM HEAT system settings and fan ON-AUTO settings, Wi-Fi, pre-occupancy purge fan option, customizable screen saver and background displays, indicator on display indicates a heating or cooling demand, set-point lock, title 24 compliant, openADR2.0b certified with Skyport web portal. Compatible with condensate overflow warning systems – lockout compressor with message on the display. Capable of being monitored by 3rd party software. Compatible with AST014 Wi-Fi remote sensor. Configurator mobile app or web portal for easy setup. Separate dehumidification and humidification setpoints shall be configurable for discreet outputs to a dehumidification option and/or an external humidifier. The temperature indication shall be selectable for °F or °C. Time display shall be selectable for 12- or 24-hour clock. The thermostat shall provide permanent memory of setpoints without batteries. Thermostat shall provide heating setpoint range limit, cooling setpoint range limit, temperature display offset, dead-band range setting, and inter-stage differential settings. Thermostat shall provide progressive recovery to anticipate time required to bring space temperature to the next programmed event. Thermostat shall provide access to a web portal and mobile app for installer setup for configuring options. Thermostat shall have menu-driven selections for ease of use and programming.

c. CM300 – Multi-stage, Automatic or Manual Changeover, 7-day Programmable with Wi-Fi and Humidity Control (AVB32V02C/R)

Residential version shall be 7 day programmable with up to 4 setpoints per day. Commercial version shall be 7 day programmable with 4 occupied/unoccupied periods per day with up to 4-hour override. Multi-stage (3H/2C), automatic or manual changeover with HEAT-OFF-COOL-AUTO-EM HEAT system settings and fan ON-AUTO settings, Wi-Fi, pre-occupancy purge fan option, night time control of display backlight, bi-color LED indicates a heating or cooling demand, keypad lock, title 24 compliant, openADR2.0b certified with Skyport web portal. Compatible with condensate overflow warning systems – lockout compressor with message on

d. CM100 - Multi-stage Automatic or Manual Changeover digital thermostat (ATA32V01)

Multi-stage (3H/2C), automatic or manual changeover with HEAT-OFF-COOL-AUTO-EM HEAT system settings and fan ON-AUTO settings. Thermostat shall have a green backlit LED display with temperature, setpoints, mode, and status indication via a green (cooling) or red(heating) LED. The temperature indication shall be selectable for °F or °C. Time display shall be selectable for 12 or 24 hour clock. The thermostat shall provide permanent memory of setpoints without batteries. Thermostat shall provide heating setpoint range limit, cooling setpoint range limit, temperature display offset, keypad lockout, dead-band range setting, and inter-stage differential settings. Thermostat shall provide progressive recovery to anticipate time required to bring space temperature to the next programmed event. Thermostat shall provide an installer setup for configuring. Thermostat navigation shall be accomplished via four buttons (Mode/fan/down/up) with menu-driven selections for ease of use and programming.

Tranquility® 30 (TE) Series 60 Hz Engineering Specifications – Page 9

e. Multi-stage Digital Automatic Changeover (ATA22U01)

Thermostat shall be multi-stage (2H/2C), manual or automatic changeover with HEAT-OFF-COOL-AUTO-EM HEAT system settings and fan ON-AUTO settings. Thermostat shall have an LCD display with temperature, setpoint(s), mode, and status indication. The temperature indication shall be selectable for °F or °C. The thermostat shall provide permanent memory of setpoint(s) without batteries. A fault LED shall be provided to indicate specific fault condition(s). Thermostat shall provide temperature display offset for custom applications. Thermostat shall allow unit to provide better dehumidification by automatically using lower fan speed on stage 1 cooling (higher latent cooling) as main cooling mode, and automatically shifting to high speed fan on stage 2 cooling.

f. Multi-stage Automatic or Manual Changeover Programmable 7-Day (ATP32U03C)

Thermostat shall be 7-day programmable (with up to 4 setpoints per day), multi-stage (3H/2C), automatic or manual changeover with HEAT-OFF-COOL-AUTO-EM HEAT system settings and fan ON-AUTO settings. Thermostat shall have a blue backlit dot matrix LCD display with temperature, setpoints, mode, and status indication. The temperature indication shall be selectable for °F or °C. Time display shall be selectable for 12 or 24 hour clock. Fault identification shall be provided to simplify troubleshooting by providing specific unit fault at the thermostat with red backlit LCD during unit lockout. The thermostat shall provide permanent memory of setpoints without batteries. Thermostat shall provide heating setpoint range limit, cooling setpoint range limit, temperature display offset, keypad lockout, dead-band range setting, and inter-stage differential settings. Thermostat shall provide progressive recovery to anticipate time required to bring space temperature to the next programmed event. Thermostat shall provide an installer setup for configuring options and for setup of servicing contractor name and contact information. Thermostat shall allow the use of an accessory remote and/or outdoor temperature sensor (AST008C). Thermostat navigation shall be accomplished via five buttons (up/down/right/left/select) with menu-driven selections for ease of use and programming.

g. Multi-stage Automatic or Manual Changeover Programmable 7-Day with Humidity Control (ATP32U04C)

Thermostat shall be 7-day programmable (with up to 4 setpoints per day), multi-stage (3H/2C), automatic or manual changeover with HEAT-OFF-COOL-AUTO-EM HEAT system settings and fan ON-AUTO settings. Separate dehumidification and humidification setpoints shall be configurable for discreet outputs to a dehumidification option and/or an external humidifier. Installer configuration mode shall allow thermostat to operate with ECM fan dehumidification mode via settings changes. Thermostat shall have a blue backlit dot matrix LCD display with temperature, relative humidity, setpoints, mode, and status indication. The temperature indication shall be selectable for °F or °C. Time display shall be selectable for 12 or 24 hour clock. Fault identification shall be provided to simplify troubleshooting by providing specific unit fault at the thermostat with red backlit LCD during unit lockout. The thermostat shall provide permanent memory of setpoints without batteries. Thermostat shall provide heating setpoint range limit, cooling setpoint range limit, temperature display offset, keypad lockout, dead-band range setting, and inter-stage differential settings. Thermostat shall provide progressive recovery to anticipate time required to bring space temperature to the next programmed event. Thermostat shall provide an installer setup for configuring options and for setup of servicing contractor name and contact information. Thermostat shall allow the use of an accessory remote and/or outdoor temperature sensor (AST008C). Thermostat navigation shall be accomplished via five buttons (up/down/right/left/select) with menu-driven selections for ease of use and programming.

DDC Sensors:

ClimateMaster wall mounted DDC sensor to monitor room temperature and interfaces with optional interface system described above. Several types as described below:

- a. Sensor only with no display (MPC).
- b. Sensor with setpoint adjustment and override (MPC only).
- c. Sensor with setpoint adjustment and override, LCD display, status/fault indication (MPC).

Tranquility® 30 (TE) Series 60 Hz Engineering Specifications – Page 10

Accessory: Hand Held Communication/Diagnostic Service Tool ACDU02C

- Allows installation and service personnel to access the configuration and service modes of the DXM2.5 control board without installing the AWC99U01 communicating thermostat.
- Configure the airflow, pump, or modulating valve operation etc.
- Diagnose by viewing fault history and operating conditions at the time of fault and manually operating the unit.

NOTICE! This product specification document is furnished as a means to copy and paste ClimateMaster product information into project specification. It is not intended to be a complete list of product requirements. This document is an excerpt from the product submittal and must not be used without consulting the complete product submittal. For complete product installation and application requirements, please consult the complete product submittal. ClimateMaster is not responsible for misuse of this document or a failure to adequately review specific requirements in the product submittal.

Performance Sheet

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: _____ Volts

_____ Phase _____ Hz

Minimum Circuit Ampacity: _____

Maximum Overcurrent Protection: _____

SUBMITTAL DATA - S-I UNITS

Unit Designation: _____

Job Name: _____

Architect: _____

Engineer: _____

Contractor: _____

PERFORMANCE DATA

Cooling Capacity: _____ kW

EER: _____

Heating Capacity: _____ kW

COP: _____

Ambient Air Temp: _____ °C

Entering Water Temp (Clg): _____ °C

Entering Air Temp (Clg): _____ °C

Entering Water Temp (Htg): _____ °C

Entering Air Temp (Htg): _____ °C

Airflow: _____ l/s

Fan Speed or Motor/RPM/Turns: _____

Operating Weight: _____ (kg)

ELECTRICAL DATA

Power Supply: _____ Volts

_____ Phase _____ Hz

Minimum Circuit Ampacity: _____

Maximum Overcurrent Protection: _____

Revision History

| Date: | Item: | Action: |
|----------|--|--|
| 11/18/22 | All | Transitioned from DXM2 to DXM2.5 unit controls. Introduced new communicating Wi-Fi color touch screen iGate thermostat |
| 09/24/21 | All | Removed LON Controls |
| 04/13/20 | All | Updated format |
| 02/12/20 | Pages 4-72 | Updated |
| 07/25/19 | Pages 66, 68, 69 | Updated ATC32U02C thermostat to ATC32U03C |
| 01/30/19 | Page 36, 54 | Updated variable pump data |
| 11/7/18 | Decoder | Updated water circuit options |
| 07/14/17 | ClimaDry | Added |
| 06/7/17 | Dimension H Page 43 | Updated |
| 05/03/17 | Vertical Upflow Models Dimensional Drawing | Updated |
| 05/03/17 | Vertical Upflow Models Water Connections Table | Updated |
| 11/1/16 | Update Design Document | Updated |
| 03/12/16 | Page 57 and 58 | Update run test and vflow text |
| 11/09/15 | Unit Features and Engineering Specifications - Page 58 | Update UltraQuiet Option Description |
| 07/31/15 | Unit Features and Engineering Specifications | Edit Compressor Mount Text |
| 07/09/15 | WPD - Page 16, 17, 18 | Updated |
| 01/30/15 | Table edit - Page 39 | Updated |
| 11/21/14 | Text edit - Page 7 | Updated |
| 10/20/14 | TE026 Full Load Data | Updated |
| 09/30/14 | Decoder - Page 10; Text Edit - Page 59 | Updated |
| 09/10/14 | Added Performance Data Selection Notes - Page 12 Updated Performance Data Notes - Pages 13-32 | Added/Updated |
| 07/28/14 | Created | |



A **NIBE** GROUP MEMBER

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