



Product Catalog

Split System Air Conditioners Odyssey™ with Symbio™ Controls

Heat Pump Condenser, 5 to 16.7 Tons, 50 Hz
Air Handler, 4.6 to 16.7 Tons, 50 Hz





Introduction



Odyssey™ Split Systems offer a wide range of options, allowing you to easily match unit tonnage with the right load requirements.

When a project calls for the convenience and cost efficiency of a unitary product, where a rooftop unit isn't right, Odyssey may be the answer. It provides heating and cooling in a split configuration that's unique in its versatility while staying true to our standards for efficiency and reliability. And with the Symbio® digital controller on board, Odyssey introduces smart building capabilities that take service, comfort and sustainability beyond the expected.

With wide network availability, flexible applications, installation ease, built-in reliability and easy servicing, Odyssey will meet any number of customer applications. Add to that Trane's outstanding customer service and you have the formula to make Odyssey the clear choice for continued customer satisfaction.

Wide network availability

A broad distribution network provides owners, maintenance personnel, contractors, etc., the means to get their hands on equipment when they need it. Whether it's an emergency replacement or a new construction project in its infancy stages, Odyssey products meet an array of needs at the right time and right price.

Flexible applications

No matter what the application, Odyssey provides the solution. A broad array of models and tonnages are available with single or dual compressors, single or dual circuits and numerous accessories. Condensing units can be installed on the ground or on a rooftop along with extended piping runs, while air handlers can be free discharge on the ground or horizontally suspended with long duct runs from a ceiling. Should application challenges arise, Odyssey delivers.

Easy to install

Small footprints and low weights combined with factory installed components like TXVs, filter driers, etc., reduce installation time and cost. Colored connectors and wiring, as well as factory-tested units make Odyssey the right choice.

Built-in reliability

Keeping in mind that productivity only occurs when equipment is operational, Trane has taken the steps to ensure that Odyssey is up and running. Early indicators such as phase/reversal monitors and loss of charge protection provide diagnostics which prevent failure and provide years of worry-free service and operation.

Easy to service

When preventive maintenance or service is required, technicians will find efficient access to both air handlers and condensers. Panels provide complete, easy access coupled with standardized cabinets in which all components are located in proximity. Odyssey's improved design results in minimum service times and costs.

With these capabilities, Odyssey provides customers high efficiency and superior performance for the best all-around value in the market today.

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Revision History

- Updated Symbio™ jobsite connections
- Minor edits included



Table of Contents

Features	6
Split System Overview	6
Standard and Optional Features	7
Standard Controls	10
Additional Controls	11
Accessories	12
Heat Pump Condenser	12
Air Handler	13
Electric Heaters	15
Application Considerations	16
Clearance Requirements	16
180° Blower Rotation	16
Low Ambient Cooling	16
Selection Procedure	18
Cooling Capacity	18
Heating Capacity	18
Air Delivery	19
Model Number Description	20
Heat Pump Condenser	20
Air Handler	21
General Data	22
Performance Data	26
Gross Cooling Capacities	26
Gross Heating Capacities	50
Fan Performance	58
Zone Controls	76
Zone Sensors	76
Conventional Thermostats	76
Electrical Data	77
Heat Pump Condenser	77
Air Handler	77
Jobsite Connections	80
Symbio™ Controls	80

Dimensional Data.....	82
Heat Pump	82
Air Handler	87
Accessories	93
Weights.....	100
Heat Pump Condenser	100
Air Handler	101
Mechanical Specifications	104
Condensing Units.....	104
Air Handlers.....	106



Features

Split System Overview

Unlike typical split systems on the market, Odyssey offers easy servicing, built-in reliability, ease of installation and outstanding customer service. And because today's owners are very cost-conscious when it comes to service and maintenance, the Odyssey Split System was designed with direct input from service contractors. This valuable information helped to design a product that would get the service person off the job quicker and save the owner money.

Flexible Applications

Odyssey offers outstanding standard features enhanced by a variety of factory and field installed options, multiple control options, rigorously tested proven designs and superior product and technical support. Because of this, Odyssey offers ultimate flexibility. Units are built to order in our standard "shortest in the industry" ship cycle time. Odyssey is available with single, dual and manifolded compressor options. Single compressor outdoor units feature a single refrigeration circuitry, lowering job installation costs by requiring only one set of refrigerant lines.

Equally important, Odyssey offers single refrigerant circuit/capacity unloading models. The unloading units feature dual manifolded scroll compressors with two stages of capacity modulation and a single refrigeration circuit. Dual compressor/dual circuit models give true stand-by protection - if one compressor fails, the second will automatically start-up. Also, the first compressor can be serviced without shutting down the unit since the refrigerant circuits are independent. Dual compressor models also save on energy costs. During light load conditions, only one compressor will operate to save energy.

Unmatched Product Support

One of our finest assets, Trane Sales Representatives are a support group that can assist you with:

- Product
- Application
- Service
- Training
- Special Applications
- Specifications
- Computer Programs and much more

Rigorous Testing

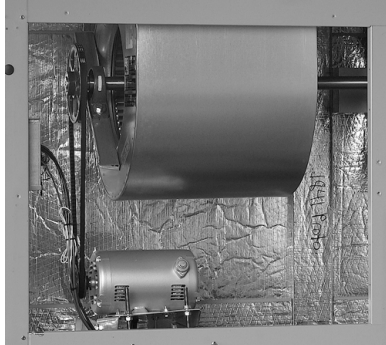
Our units are rigorously rain tested to ensure water integrity. Actual shipping tests are performed to determine packaging requirements. Units are test shipped around the country to determine the best packaging. Factory shake and drop tests are used as part of the package design process to help assure that the unit arrives at the job site in top condition. Rigging tests include lifting a unit into the air and letting it drop one foot, assuring that the lifting lugs and rails hold up under stress. A 100% coil leak test is performed at the factory. The condenser coils are leak tested at 660 psig and evaporators to 450 psig. All parts are inspected at the point of final assembly. Sub-standard parts are identified and rejected immediately. Every unit receives a 100% unit run test before leaving the production line to ensure it lives up to rigorous Trane requirements.

Standard and Optional Features

Figure 1. Compressors



Figure 2. Belt drive motor



Airflow Distribution — Odyssey can replace an older machine with old ductwork and, in many cases, improve the comfort through better air distribution.

Anti-Short Cycle Timing — The Symbio™ 700 controller provides a 3 minute minimum “ON” time and 3 minute “OFF” time for compressors to enhance compressor reliability by assuring proper oil return.

Belt Drive Motors — For additional static requirements, Odyssey Split Systems offer standard belt drive motors to meet and exceed a wide range of airflow needs.

Black Epoxy Pre-Coated Condenser Coils — The pre-coated coils are an economical option for protection in mildly corrosive environments.

Colored Connectors and Wiring — Interconnecting wiring between components is standardized using colored and keyed connectors and colored wires, helping to save time and money tracing wires and diagnosing the unit.

Compressors — Odyssey Split Systems contain the best compressor technology available to achieve the highest possible performance. Dual compressors perform very well under part load cooling conditions and system back-up applications. Dual compressors are available on 4.6-20.9 ton models and allow for efficient cooling utilizing 2-stages of compressor operation.

Convertible Units — The air handlers ship in a horizontal configuration. They can be easily converted to vertical by simply repositioning the drain pan.

Crankcase Heaters — These band heaters provide improved compressor reliability by warming the oil to prevent migration during off-cycles or low ambient conditions.

Dual Sloped Drain Pans — Every Odyssey unit has a non-corrosive, removable, double sloped drain pan that’s easy to clean and reversible to allow installation of drain trap in two positions on either side of the unit.

Duct flanges — An optional field installed kit that can save time and money.

Easy Access Low Voltage Connections — Thermostat and other low voltage control wiring connections are made directly to the Symbio 700 and other boards in the system. Screw-type pressure connectors are detachable from the boards for easy connection of control wires – saving cost and time.

Electric Heaters — Electric heat modules are available in a variety of voltages and capacities.

Foil Faced Insulation — All internal air handler surfaces have cleanable foil-faced insulation. All edges are either captured or sealed to ensure insulation fibers do not get into the airstream.

Hail/Vandal Guards — These coil guards shall be either factory or field installed for condenser coil protection. This feature protects the condenser coil from vandalism and/or hail damage. When ordered factory installed, it also adds additional shipping protection.

High Static Motor — Available on many models, this high static motor accessory extends the capability of the standard unit.



Features

High and Low Voltage Control Panel — High voltage components and connections are isolated from low voltage and covered with a sheet metal panel. This allows setup and test parameters at the Symbio™ 700 display and the VFD keypad display to be safely viewed and adjusted in the low voltage section of the control panel.

High Pressure Control — All units include High Pressure Control as standard.

Low Ambient Cooling — All Odyssey units have cooling capabilities down to 0°F as standard. At temperatures below 50°F, some reduction in cooling capacity can be expected. When the optional Low Ambient Accessory kit is field installed, the full capacity of the unit is available down to 0°F.

Low Voltage Connections — Low voltage wiring connects directly to the control boards in the unit via detachable connectors. This makes it easy for the installer to attach the wires and then snap the connectors into place.

Phase Monitor/Reversal Protection — Phase monitor shall provide 100% protection for motors and compressors against problems caused by phase loss, phase imbalance, and phase reversal. Phase monitors are equipped with an LED that provides an ON or FAULT indicator.

Quick-Access Panels — Remove a few screws for access to the standardized internal components and wiring.

Single Point Power — A single electrical connection powers the unit.

Single Side Service — Single side service is standard on all units.

Standardized Components — Components are placed in the same location on all Odyssey units. Because of these standardized components throughout the Odyssey line, contractors/owners can stock fewer parts.

Symbio™ 700 — Standard on Odyssey condensers, the Symbio™ 700 controller provides exceptional machine control with a focus on system reliability and application flexibility. The Symbio controller provides direct access to the Symbio Service and Installation mobile application for easy setup and troubleshooting with no special tools. A wide range of system integration options (Non-communicating, BACnet®, LonTalk®, etc.) provide options to meet the needs of your application.

Thermal Expansion Valve with Bypass Check Valves — This feature is standard on all indoor units.

Unit Cabinet — The compact cabinet takes up less room and is less costly to ship. The design also ensures water integrity.

Table 1. Odyssey features – standard and optional

	Standard Features	Options ^(a)	
		Factory Installed	Field Installed
1-year Limited Parts Warranty	X		
5-year Limited Compressor Warranty	X		
Belt Drive Motors	X		
Black Epoxy Pre-Coated Coils		X	
Colored Connectors and Wiring	X		
Compressor Discharge Temperature Limit (DTL)	X		
Convertible Airflow	X		
Crankcase Heaters	X		
Easy Access Low Voltage Connections	X		
Electric Heaters			X
Filters	X		
Filters – 2" MERV 13			X
Foil-Faced and Edge Captured Insulation	X		
Hail/Vandal Guards		X	X
High Pressure Control	X		
High Static Motor Kit ^(b)			X
IAQ Dual Sloped and Removable Drain Pans	X		
Low Ambient Cooling			X
Liquid Line Refrigerant Drier	X		
Low Pressure Control	X		
Low Static Motor Kit ^(b)			X
Low Voltage Circuit Protection	X		
Phase Loss/Reversal Monitor	X		
Quick Access Panels	X		
Scroll Compressors	X		
Single Point Power	X		
Single Side Service	X		
Standardized Components	X		
Symbio™ Controls	X		
Thermal Expansion Valve	X		
Vibration Isolators			X

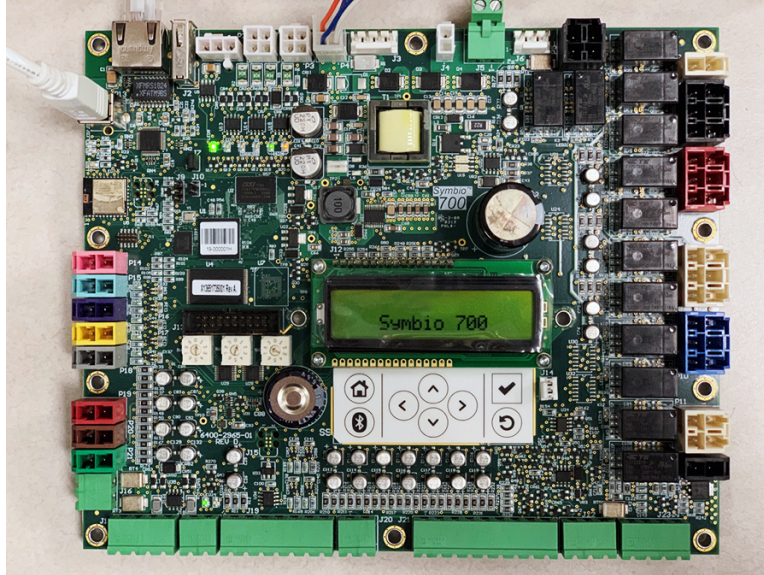
^(a) Refer to model number description for option availability or contact Product Support.

^(b) Available on constant volume units only. See Accessories chapter for more information.

Standard Controls

Symbio™ 700 Controls

Figure 3. Symbio 700 board



Symbio 700 controls provide unit control for heating, cooling, and ventilating, utilizing input from sensors that measure outdoor and indoor temperature. Symbio also provides outputs for building automation systems and expanded diagnostics. Quality and reliability are enhanced through Symbio control and logic:

- Prevents the unit from short cycling, considerably improving compressor life.
- Ensures the compressor will run for a specific amount of time which allows oil to return for better lubrication, enhancing the reliability of the compressor.
- Reduces the number of components required to operate the unit, reducing possibilities for component failure.

Installation and Service

The Symbio™ 700 control platform provides a user-friendly, onboard interface that makes setup and continued operation easy – or users can take advantage of the Symbio™ Service and Installation Mobile App for setup, troubleshooting, and operation. Both the Symbio onboard user interface and mobile app simplify troubleshooting by displaying active alarms. Symbio eliminates the need for field-installed, anti-short cycle timer and time delay relays. The wiring of the low voltage connections to the unit and zone sensors is simple, making installation easy.

Testing

Symbio™ 700 requires no special tools to run the unit through its paces. Simply navigate to the 'Service' section of the user interface or the 'Utilities' section of the Symbio™ Service and Installation Mobile App and enter the test section. Here the unit can be placed in the desired operating condition for a pre-determined amount of time supporting troubleshooting efforts in the field. The Symbio 700 will return to normal control when the user exits test mode or when the pre-determined, user-selected Service Test time has expired.

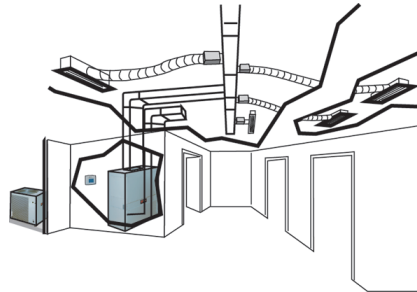
Other Benefits

- Symbio™ 700 built-in anti-shortcycle timer, time delay relay and minimum "on" time control functions are factory tested to assure proper operation.
- Symbio 700 softens electrical "spikes" by staging on fans, compressors and heaters.
- Intelligent Fallback is a benefit to the building occupant. If a component goes astray, the unit will continue to operate at predetermined temperature setpoint.

- Intelligent Anticipation is a standard feature. It functions continuously as Symbio 700 and zone sensor(s) work together in harmony to provide much tighter comfort control than conventional electromechanical thermostats.
- The Symbio 700 design is standardized across the board, ensuring a lower cost to owners.

Additional Controls

VariTrac® Building Automation System — When Trane’s changeover VAV System for light commercial applications is coupled with the unit, it provides the latest in technological advances for comfort management systems and can allow thermostat control in every zone served by VariTrac.



Froststat™ — This control (a standard feature on all air handlers) utilizes a capillary bulb embedded in the face of the evaporator coil which monitors coil temperature to inhibit evaporator icing and protect the compressor. Useful for applications with low leaving air temperatures, low airflow and/or high latent load applications.

LonTalk® Communications Interface — The LonTalk communications interface allows the unit to communicate as a Tracer LON® device or directly with generic LonTalk Network Building Automation System Controls.

BACnet® Communication Interface (BCI) — The BACnet Communication Interface allows the unit to communicate directly with a generic open protocol BACnet MS/TP or IP Network Building Automation Control System.

Zone Sensors/Thermostats— Available in programmable, automatic and manual styles.

Table 2. Odyssey control options – standard and optional

	Standard Features	Options ^(a)	
		Factory Installed	Field Installed
BACnet® Communication Interface (BCI)		X	
Froststat™ - Evaporator Defrost Control (EDC)	X		
LonTalk® Communications Interface (LCI)		X	
Symbio™ 700 Microprocessor Controls	X		
Thermostat			X
Zone Sensor			X

^(a) Refer to model number description for option availability or contact Product Support.



Accessories

Heat Pump Condenser

Table 3. TWA Accessories

Model	Used With
Coil (Hail/Vandal) Guard	
BAYGARD063*	TWA0604*A, TWA0764*A
BAYGARD064*	TWA060**D, TWA076**D
BAYGARD065*	TWA101
BAYGARD066*	TWA156, TWA201
Rubber Isolators	
BAYISLT005* (black)	TWA060, TWA076, TWA101
BAYISLT009* (red)	TWA156
BAYISLT010* (green)	TWA201
Steel Spring Isolators	
BAYISLT023* (red)	TWA060, TWA076, TWA101
BAYISLT024* (black)	TWA156
BAYISLT025* (yellow)	TWA201
Service Valve Kit	
BAYVALV001*	TWA0604*A, TWA1014*A
BAYVALV002*	TWA0764*A
BAYVALV003*	TWA0604*D, TWA0764*D, TWA1014*D
BAYVALV006*	TWA1564*D, TWA2014*D
Low Ambient – On/Off Fan Control^{(a) (b)}	
BAYLOAMS10* (External Mount, small cabinets) ^(c)	TWA060**A, TWA076**A
BAYLOAMS20* (Internal mount, large cabinets)	TWA101, TWA156, TWA201
Transducer Kit for Head Pressure Control (BAYLOAM435, 436, 437)	
BAYLOTR001* ^(d)	TWA060**D, TWA076**D, TWA101**D
LonTalk Communications Interface^(e)	
BAYLTCI005*	All Models
Expansion Module Kit	
BAYMODU002* (XM30)	All Models
BAYMODU004* (XM32)	All Models

^(a) Cycles fan on/off (no modulating).

^(b) When BAYLOAM is used, the Evaporator Defrost Control (EDC) must be disabled in the Symbio 700 controller configuration.

^(c) Kit mounts external to the outdoor unit and operates by sensing ambient temperature and discharge pressure.

^(d) BAYLOTR001* required when BAYLOAMS10* kits are used with units that have 2 compressors (dual circuit) and 1 condenser fan.

^(e) Field installed LonTalk interface requires installation of Symbio control board with Advanced Diagnostics (not included).

Air Handler

Table 4. TWE Accessories

Model	Used With
Base (Subbase)	
BAYBASE009*	TWE051
BAYBASE0010*	TWE072, TWE076
BAYBASE0011*	TWE101
BAYBASE0012*	TWE126, TWE156
BAYBASE0013*	TWE201, TWE251
Drip Kit	
BAYDRKT006*	TWE051
BAYDRKT007*	TWE072, TWE076
BAYDRKT008*	TWE101
BAYDRKT009*	TWE126, TWE156
BAYDRKT010*	TWE201, TWE251
Duct Flange Kit	
BAYDUCT010*	TWE051, TWE060, TWE072, TWE076, TWE090, TWE101, TWE120
BAYDUCT020*	TWE126, TWE150, TWE156, TWE180, TWE201, TWE240, TWE251, TWE300
Filters – 2" MERV 13	
BAYFILT001*	TWE051
BAYFILT002*	TWE072, TWE076
BAYFILT003*	TWE101
BAYFILT004*	TWE126, TWE156
BAYFILT005*	TWE201, TWE251
High Static Motor Kits^(a)	
BAYHSMT105* – 1.0HP (50Hz) with Motor Sheave, Fan Sheave and Belt	TWE051*DA
BAYHSMT108* – 1.5HP (50Hz) with Motor Sheave, Fan Sheave and Belt	TWE072*DB, TWE076*DA/B
BAYHSMT110* – 2.0HP (50Hz) with Motor Sheave, Fan Sheave and Belt	TWE072*DB, TWE076*DA/B
BAYHSMT112* – 2.0HP (50Hz) with Motor Sheave, Fan Sheave and Belt	TWE101*DA/B
BAYHSMT114* – 2.0HP (50Hz) with Motor Sheave, Fan Sheave and Belt	TWE126*DB
BAYHSMT117* – 3.0HP (50Hz) with Motor Sheave, Fan Sheave and Belt	TWE126*DB
BAYHSMT120* – 3.0HP (50Hz) with Motor Sheave and Fan Sheave (Stock Belt used)	TWE156*DB
BAYHSMT126* – 5.0 HP (50Hz) with Motor Sheave, Fan Sheave and Belt	TWE201*DB
Rubber Isolators^{(b) (c) (d)}	
BAYISLT004* (Floor – Blue)	TWE051, TWE072, TWE076, TWE101
BAYISLT009* (Floor – Red) ^(e)	TWE126, TWE156
BAYISLT010* (Floor – Green) ^{(e)(b)}	TWE201, TWE251
BAYISLT012* (Suspended – Red/Green)	TWE126, TWE156
BAYISLT013* (Suspended – Red/Green) ^(d)	TWE051
BAYISLT014* (Suspended – Green) ^(d)	TWE072, TWE076
BAYISLT015* (Suspended – Green/Black) ^(d)	TWE101
BAYISLT016* (Suspended – Red/Green)	TWE201
Steel Spring Isolators^(c)	
BAYISLT019* (Floor – Red) ^{(e)(b)}	TWE051, TWE072, TWE076, TWE101
BAYISLT021* (Floor – Black) ^{(e)(b)}	TWE126, TWE156
BAYISLT032* (Floor – Black/Yellow) ^{(e)(b)}	TWE201, TWE251
BAYISLT028* (Suspended – Tan)	TWE051
BAYISLT029* (Suspended – Red)	TWE072, TWE076, TWE101
BAYISLT030* (Suspended – Black)	TWE126, TWE156
BAYISLT031* (Suspended – Black/Yellow)	TWE201, TWE251



Accessories

Table 4. TWE Accessories (continued)

Model	Used With
Low Static Drive Kit^(a)	
BAYLSMT001*	TWE201
Plenum^(f)	
BAYPLNM015* (Discharge Plenum & Grille) ^(f)	TWE051
BAYPLNM016* (Discharge Plenum & Grille) ^(f)	TWE072, TWE076
BAYPLNM017* (Discharge Plenum & Grille) ^(f)	TWE101
BAYPLNM018* (Discharge Plenum/Hydronic Coil Plenum & Grille) ^(f)	TWE126, TWE156
BAYPLNM019* (Discharge Plenum/Hydronic Coil Plenum & Grille) ^(f)	TWE201, TWE251
BAYPLNM020* (Hydronic Coil Discharge Plenum & Grille) ^(f)	TWE051
BAYPLNM021* (Hydronic Coil Discharge Plenum & Grille) ^(f)	TWE072, TWE076
BAYPLNM022* (Hydronic Coil Discharge Plenum & Grille) ^(f)	TWE101
BAYPLNM030* (Electric Heat Discharge Plenum & Grille) ^(f)	TWE051
BAYPLNM031* (Electric Heat Discharge Plenum & Grille) ^(f)	TWE072, TWE076
BAYPLNM032* (Electric Heat Discharge Plenum & Grille) ^(f)	TWE101
BAYPLNM033* (Electric Heat Discharge Plenum & Grille) ^(f)	TWE126, TWE156
BAYPLNM034* (Electric Heat Discharge Plenum & Grille) ^(f)	TWE201, TWE251
Return Air Grille	
BAYGRLE001*	TWE051
BAYGRLE002*	TWE072, TWE076
BAYGRLE003*	TWE101
BAYGRLE004*	TWE126, TWE156
BAYGRLE005*	TWE201, TWE251
Symbio™ Options Module Kit	
BAYMODU001*	All TWE units with Digit 15 = 1 and Electric heater installed
Transformer	
BAYTFMR017* - 100 VA Transformer (400 V)	All TWE072 – TWE201380-415V Hz unit
Water Kits	
BAYWATR022* (Steam Coil Enclosure) ^(f)	TWE051
BAYWATR023* (Steam Coil Enclosure) ^(f)	TWE072, TWE076
BAYWATR024* (Steam Coil Enclosure) ^(f)	TWE101
BAYWATR025* (Steam Coil Enclosure) ^(f)	TWE126, TWE156
BAYWATR026* (Steam Coil Enclosure) ^(f)	TWE201, TWE251
BAYWATR027* (Hot Water Coil Enclosure) ^(f)	TWE051
BAYWATR028* (Hot Water Coil Enclosure) ^(f)	TWE072, TWE076
BAYWATR029* (Hot Water Coil Enclosure) ^(f)	TWE101
BAYWATR030* (Hot Water Coil Enclosure) ^(f)	TWE126, TWE156
BAYWATR031* (Hot Water Coil Enclosure) ^(f)	TWE201, TWE251
Wire Kit – 180° Blower Discharge Reversal Kit^(g)	
BAYWRKT002*	TWE051, TWE072, TWE076, TWE101

(a) Used on constant volume air handlers only.

(b) Requires use of subbase accessory.

(c) In units with steam or hot water coils applied vertically or horizontally, check IOM for proper Isolator Kit selection.

(d) Do not use if blower will operate less than 600 RPM.

(e) When the air handler is in the vertical position and close proximity trapping of condensate is required, use of subbase is required.

(f) When installed horizontally, plenum/water coil must be self-supported. When adding vibration isolators, see Isolator Installation Guide (ACC-SVN92*-EN) for isolator and location matrix.

(g) Cannot be used on TWE126–201, due to motor mount location.

Electric Heaters

Table 5. Electric heaters

Model	Used With
4.6–8.33 Ton Electric Heater Selection	
BAYHTRN405* — 3.13/3.74 kW Heater 380/415 / 3 Phase	TWE051, TWE072*D, TWE076, TWE101
BAYHTRR410* — 6.25/7.46 kW Heater 380/415 / 3 Phase	TWE051, TWE072*D, TWE076, TWE101
BAYHTRR415* — 9.37/11.17 kW Heater 380/415 / 3 Phase	TWE051, TWE072*D, TWE076, TWE101
BAYHTRN425* — 15.63/18.64 kW Heater 380/415 / 3 Phase	TWE051, TWE072*D, TWE076, TWE101
BAYHTRN435* — 21.86/26.08 kW Heater 380/415 / 3 Phase	TWE101
10.4–16.7 Ton Electric Heater Selection	
BAYHTRP410* — 6.25/7.46 kW Heater 380/415 / 3 Phase	TWE126, TWE156, TWE201
BAYHTRP420* — 12.50/14.92 kW Heater 380/415 / 3 Phase	TWE126, TWE156, TWE201
BAYHTRP430* — 18.76/22.38 kW Heater 380/415 / 3 Phase	TWE126, TWE156, TWE201
BAYHTRP450* — 31.26/37.29 kW Heater 380/415 / 3 Phase	TWE126, TWE156, TWE201



Application Considerations

Application of this product should be within the cataloged airflow and performance considerations.

Clearance Requirements

The recommended clearances identified with unit dimensions should be maintained to assure adequate serviceability, maximum capacity and peak operating efficiency. Actual clearances which appear inadequate should be reviewed with the local representative.

180° Blower Rotation

The 4.6, 6.25, and 8.33 ton standard air handler blower section can be rotated 180° to change the discharge pattern. This modification must be done in the field and requires an additional kit. See unit installation guide.

Low Ambient Cooling

As manufactured, all Odyssey units have cooling capabilities down to 0°F. At temperatures below 50°F, some reduction in cooling capacity can be expected. When the optional Low Ambient Accessory kit is field installed, the full capacity of the unit is available down to 0°F. When using these units with control systems such as bypass changeover Variable Air Volume, make sure to consider the requirement for a head pressure control to allow low ambient cooling.

Figure 4. Typical split system application

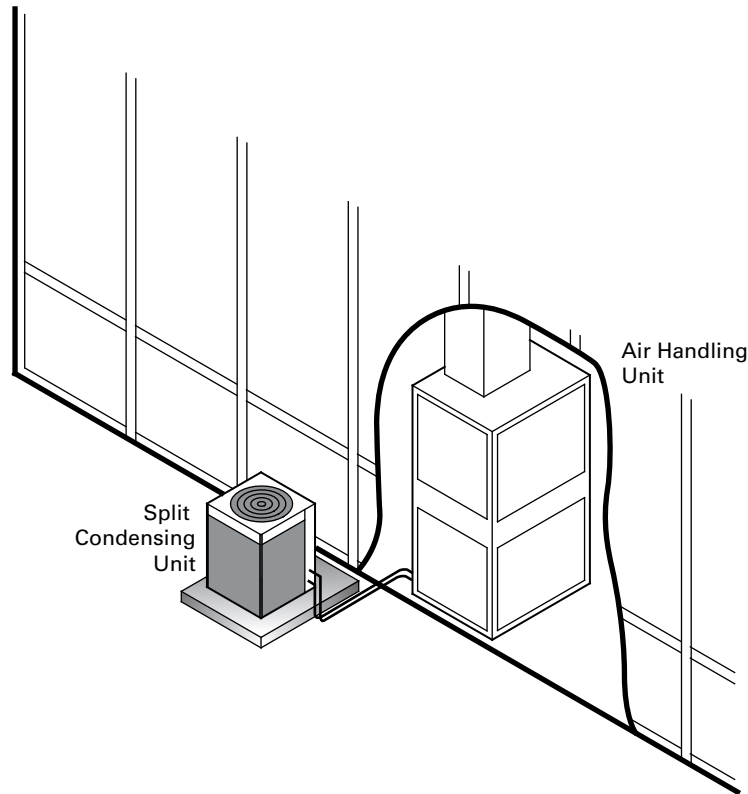


Figure 5. Typical horizontal air handler application

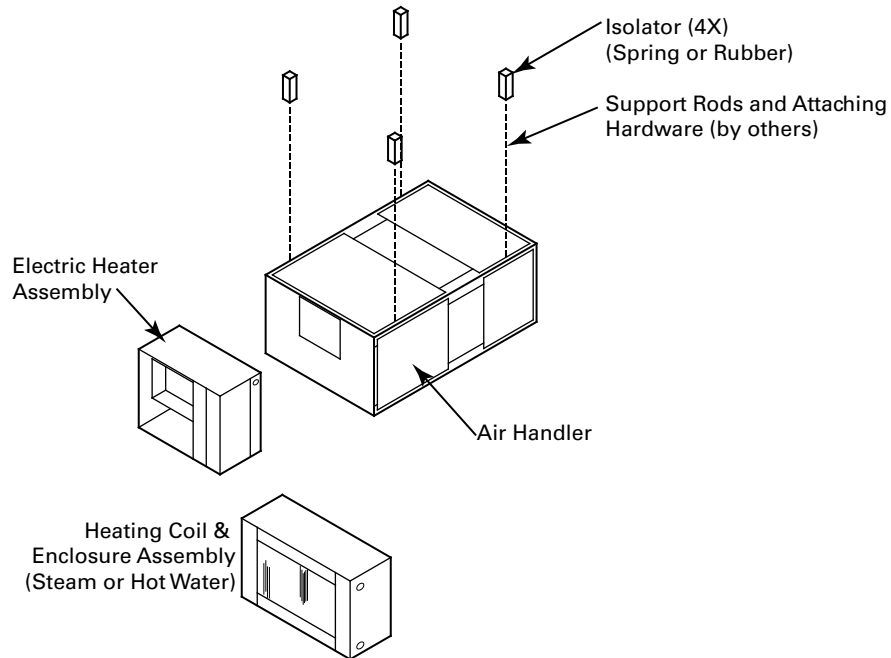
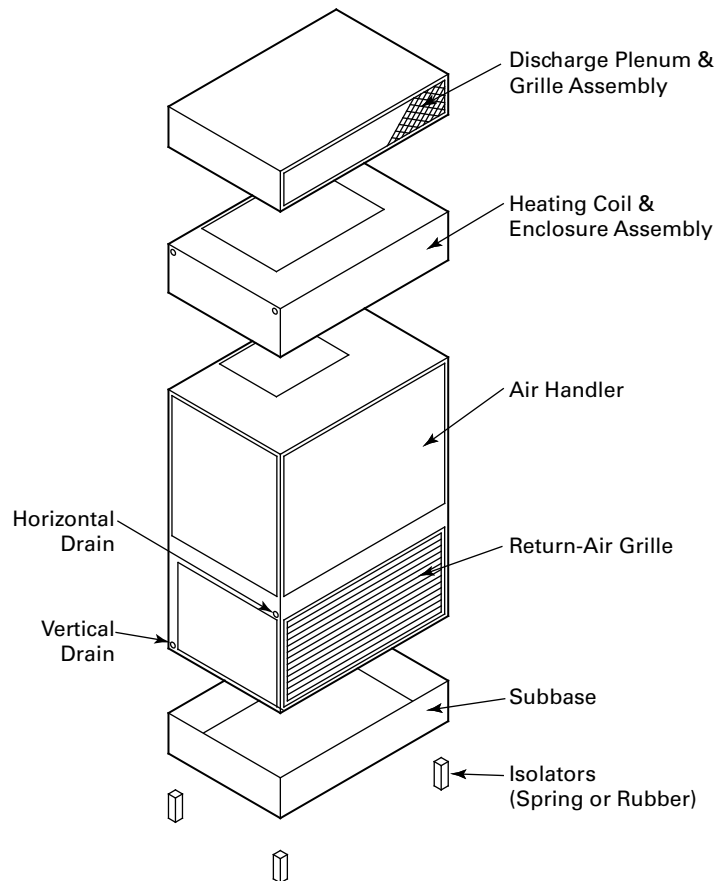


Figure 6. Typical vertical air handler application





Selection Procedure

Cooling Capacity

1. Calculate the building's total and sensible cooling loads at design conditions, using standardized calculation methods.
2. Size the equipment using the gross cooling capacity tables. Match the cooling loads at design conditions. For example, if the following specifies the building cooling requirements:
Electrical Characteristics: 415/50/3
Summer Design Conditions: Entering Evap Coil—80°F DB/67°F WB (27°C DB/19°C WB),
Outdoor Ambient—95°F (35°C)
Total Cooling Load: 75 MBh (22 kW)
Sensible Cooling Load: 56 MBh (16.4 kW)
Airflow: 2500 cfm (4248 m³/h)
External Static Pressure: .74 inches of water gauge
3. Use [Table 14, p. 30](#) to determine that TWA076**A with TWE076**A has a gross cooling capacity of 80.0 MBh (23.4 kW) and 63.9 MBh (18.7 kW) sensible capacity at 95°F DB (35°C) ambient and 2500 cfm (4248 m³/h) with 80°F DB/67° F WB (27°C DB/19°C WB) air entering the evaporator.
4. To find the net cooling capacities, fan motor heat must be subtracted. Determine the total unit static pressure:
External Static Duct System: 0.74 (191.8 Pa)
Standard Filter: 0.10 in. (25 Pa)
Supplementary Electric Heat: 0.16 in. (40.6 Pa)
Total Static Pressure: 1 in. (249.09 Pa)

Notes:

- *The Evaporator Fan Performance Table has included the effect of a 1 in. (249 Pa) filter already. Therefore, the actual Total Static Pressure is 1 - 0.1 = 0.9 in. (233.2 Pa). With 2500 cfm (4248 m³/h) and 0.93 in. (231.6 Pa), [Table 62, p. 61](#) shows 1.51 Bhp (ultra high static drive kit required).*
- *This formula can be used to calculate Fan Motor Heat:*
$$3.15 \times \text{Bhp} = \text{MBh}$$
$$3.15 \times 1.51 = 4.75 \text{ MBh}$$
$$\text{Net Total Cooling Capacity} = 80.0 \text{ MBh} - 4.75 \text{ MBh} = 75.25 \text{ MBh} (22.1 \text{ kW})$$
$$\text{Net Sensible Cooling Capacity} = 63.9 \text{ MBh} - 4.75 \text{ MBh} = 59.15 \text{ MBh} (17.3 \text{ kW})$$

Heating Capacity

1. Calculate the building heating load using the Trane calculation form or any other standard accepted method.
2. Size the equipment to match the heating loads at design conditions. For example, if the following specifies the building heating requirements:
Total Heating Load: 85.0 MBh (24.9 kW)
Outdoor Ambient (Winter): 17°F DB (-8.3°C)
Indoor Return Temperature: 70°F DB (21.1°C)
Airflow: 2500 cfm (4248 m³/h)
3. [Table 46, p. 52](#) indicates the mechanical heating portion of the heat pump will provide 44.6 MBh for the winter design conditions. Full heat load must be carried by the supplementary heater in the unlikely event the heat pump malfunctions. From [Table 78, p. 75](#), the 24.92 kW heater at 460V gas a capacity of 85,051 MBh. From [Table 82, p. 78](#), the 24.92 kW heater at 460V indicates the heater model is BAYHTRN425.

Air Delivery

1. The external static pressure drop through the air distribution system is 0.74 inches of water gauge, use [Table 77, p. 74](#) to determine that the static pressure drop through the electric heater is 0.08 inches of water ($0.74 + 0.12 = 0.86$ in.).
2. Enter [Table 62, p. 61](#) for TWE0764DA at 2500 cfm (4248 m³/h) and 0.9 in. (249 Pa) static pressure. The ultra high static motor at 944 RPM gives the desired airflow.



Model Number Description

Heat Pump Condenser

Digit 1, 2, 3— Unit Function

TWA = Split System Heat Pump

Digit 4, 5, 6 — Tonnage

060 = 5 Tons (50Hz)
076 = 6.25 Tons (50Hz)
101 = 8.33 Tons (50Hz)
156 = 13.0 Tons (50Hz)
201 = 16.7 Tons (50Hz)

Digit 7 — Refrigerant

4 = R-410A

Digit 8 — Voltage

D = 380–415 Vac- 3 PH (50Hz)

Digit 9 — Refrigeration Circuit/Stage

A = 1 Compressor/1 Line/1 Stage (Single)
D = 2 Compressors/2 Line/2 Stage (Dual)

Digit 10 — Major Design Sequence

A = Rev A

Digit 11 — Minor Design Sequence

A = Rev A

Digit 12, 13 — Service Digits

Digit 14 — Efficiency Generation

A = Generation A

Digit 15 — Controls

S = Symbio™

Digit 16 — None

0 = None

Digit 17 — Coil Protection

0 = Standard Coil
1 = Standard Coil w/ Hail Guard
2 = Black Epoxy Pre-Coated Condenser Coil (FIN/TUBE)
3 = Black Epoxy Pre-Coated Condenser Coil with Hail Guard (FIN/TUBE)

Digit 18, 19, 20 — None

0 = None

Digit 21 — Communications Options

0 = No Option
1 = Advanced Diagnostics and BACnet® BAS
2 = Advanced Diagnostics and LonTalk® Communications Interface (LCI)

Digit 22 to 40 — None

0 = None

Air Handler

Digit 1, 2, 3 — Unit Function

TWE = Air Handler

Digit 4, 5, 6— Tonnage

051 = 4.6 Tons (50Hz)

072 = 6 Tons (50Hz)

076 = 6.25 Tons (50Hz)

101 = 8.33 Tons (50Hz)

126 = 10.4 Tons (50Hz)

156 = 13.0 Tons (50Hz)

201 = 16.7 Tons (50Hz)

251 = 20.9 Tons (50Hz)

Digit 7 — Refrigerant

4 = R-410A

Digit 8 — Voltage

D = 380–415 Vac - 3 PH (50 Hz)

Digit 9 — Refrigeration Circuit/Stage

A = Single Circuit

B = Dual Circuit

Digit 10 — Major Design Sequence

A = Rev A

Digit 11 — Minor Design Sequence

A = Rev A

Digit 12, 13 — Service Digits

**

Digit 14 — Efficiency Generation

A = Generation A (2018 DOE)

Digit 15 — Controls

1 = Constant Volume

C = 2 Stage Airflow (Electromechanical Cond Only)

D = 2 Stage Airflow/Single Zone VAV (Symbio Cond Only)

Digit 16 — Indoor Fan Sizes

0 = Standard Motor

4 = High Static - (Oversized Motor for VFD Units)

Digit 17 to 40 — None

0 = None



General Data

Table 6. General data for 5 - 6.25 ton (TWA0604DA* - TWA0764DD*) heat pump, 50 Hz

	5 Tons	5 Tons	6.25 Tons	6.25 Tons
	Single Compressor	Dual Compressor	Single Compressor	Dual Compressor
	TWA0604DA*	TWA0604DD*	TWA0764DA*	TWA0764DD*
Cooling Performance - Gross Cooling Capacity				
Matched Air Handler	TWE0764DA*	TWE0724DB*	TWE0764DA*	TWE0764DB*
AHRI Rated Airflow - (m ³ /hr)	2,000 (3,398)	2,000 (3,398)	2,500 (4,248)	2,500 (4,248)
Matched Air Handler - Btu (kW)	69,000 (20.2)	65,000 (19.0)	75,000 (22)	80,000 (23.4)
Condensing Unit Only - Btu (kW)	63,500 (18.6)	57,500 (16.9)	70,000 (20.5)	72,000 (21.1)
AHRI Net Cooling Capacity - Btu (kW)	68,000 (19.9)	64,500 (18.9)	74,000 (21.7)	79,000 (23.2)
Efficiency				
Matched Air Handler/Condensing Unit Only	11.8 / 13.2	11.8 / 12.9	11.8 / 12.7	11.8 / 13.1
System Power/Condensing Unit Power (kW)	5.3 / 4.8	4.9 / 4.5	6.2 / 5.5	6.1 / 5.5
Heating Performance - AHRI Htg/Matched AH				
High Temperature Capacity	62,000 (18.2)	52,000 (15.2)	66,000 (19.3)	65,000 (19)
System kW/COP	4.7 / 3.4	4 / 3.4	4.9 / 3.4	4.9 / 3.4
Low Temperature Capacity	38,500 (11.3)	29,800 (8.7)	41,000 (12)	38,000 (11.1)
System kW/COP	4.2 / 2.3	3.7 / 2.3	4.5 / 2.3	4.5 / 2.3
Compressor				
Type	Scroll	Scroll	Scroll	Scroll
No.	1	2	1	2
System Data				
No. Refrigerant Circuits ^(a)	1	2	1	2
Suction Line Connection - in. (mm) OD ^(a)	1-3/8 (34.90)	7/8 (22.23)	1-3/8 (34.90)	1-1/8 (28.60)
Liquid Line Connection - in. (mm) OD ^(a)	1/2 (12.70)	1/2 (12.70)	1/2 (12.70)	1/2 (12.70)
Outdoor Coil				
Type	Lanced	Lanced	Lanced	Lanced
Tube Size - in. (mm) OD	3/8 (9.50)	3/8 (9.50)	3/8 (9.50)	3/8 (9.50)
Face Area, sq ft (m ²)	19.24 (1.79)	19.24 (1.79)	19.24 (1.79)	23.96 (2.23)
Rows/FPI (Fins per inch)	2/18	2/18	2/18	2/18
Outdoor Fan				
Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter - in. (mm)	1/26 (660.40)	1/26 (660.40)	1/26 (660.40)	1/26 (660.40)
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM (m ³ /h)	5,525 (9,387)	5,525 (9,387)	5,525 (9,387)	5,525 (9,387)
No. Motor/HP (kW)	1/0.33 (0.25)	1/0.33 (0.25)	1/0.33 (0.25)	1/0.33 (0.25)
Motor RPM	925	925	925	925
Refrigerant Charge (Field Supplied)				
lbs (kg) of R-410A	16.6 (7.5)	11.4/12.4 (5.2 / 5.6)	22.2 (10.1)	11.7/11.7 (5.3 / 5.3)
Shipping Dimensions				
HxWxD - in. (mm)	45" x 45" x 38" (1143 x 1143 x 965)	45" x 55" x 42" (1143 x 1397 x 1067)	45" x 45" x 38" (1143 x 1143 x 965)	45" x 55" x 42" (1143 x 1397 x 1067)

Note: Units are tested in accordance with AHRI Standard 340-360 (I-P)-2007. Rating conditions are 95°F outdoor air temperature, 80°F entering dry bulb, 67°F entering wet bulb with 25ft of interconnecting refrigerant piping with minimum external static pressure as determined by rating standard.

^(a) Refer to refrigerant piping applications manual for line sizing and line length.

Table 7. General data for 8.33 - 16.7 ton (TWA1014DA* - TWA2014DD*) heat pump, 50 Hz

	8.33 Tons	8.33 Tons	13 Tons	16.7 Tons
	Single Compressor	Dual Compressor	Dual Compressor	Dual Compressor
	TWA1014DA*	TWA1014DD*	TWA1564DD*	TWA2014DD*
Cooling Performance - Gross Cooling Capacity				
Matched Air Handler	TWE1014DA*	TWE1014DB*	TWE1564DB*	TWE2014DB*
AHRI Rated Airflow - (m ³ /hr)	3,333 (5,663)	3,333 (5,663)	5,000 (8,495)	6,667 (11,327)
Matched Air Handler - Btu (kW)	106,000 (31.0)	102,000 (29.9)	158,000 (46.3)	220,000 (64.5)
Condensing Unit Only - Btu (kW)	96,000 (28.1)	93,000 (27.3)	154,000 (45.1)	230,000 (67.4)
AHRI Net Cooling Capacity - Btu (kW)	103,000 (30.2)	99,000 (29.0)	156,000 (45.7)	214,000 (62.7)
Efficiency				
Matched Air Handler/Condensing Unit Only	11.8 / 12.9	11.8 / 13.0	11.6 / 12.8	10.7 / 13.2
System Power/Condensing Unit Power (kW)	8.3 / 7.4	7.9 / 7.1	13.5 / 12.2	19.2 / 17.4
Heating Performance - AHRI Htg/Matched AH				
High Temperature Capacity	90,000 (26.4)	88,000 (25.8)	158,000 (46.3)	194,000 (56.9)
System kW/COP	7 / 3.4	6.6 / 3.4	12.4 / 3.3	16.3 / 3.3
Low Temperature Capacity	59,000 (17.3)	54,500 (16)	91,000 (26.7)	118,000 (34.6)
System kW/COP	6.6 / 2.3	6.1 / 2.3	10.8 / 2.2	14.6 / 2.2
Compressor				
Type	Scroll	Scroll	Scroll	Scroll
No.	1	2	2	2
System Data				
No. Refrigerant Circuits ^(a)	1	2	2	2
Suction Line Connection - in. (mm) OD ^(a)	1-3/8 (34.90)	1-1/8 (28.60)	1-1/8 (28.60)	1-3/8 (34.90)
Liquid Line Connection - in. (mm) OD ^(a)	1/2 (12.70)	1/2 (12.70)	1/2 (12.70)	5/8 (15.88)
Outdoor Coil				
Type	Lanced	Lanced	Lanced	Lanced
Tube Size - in. (mm) OD	3/8 (9.50)	3/8 (9.50)	3/8 (9.50)	3/8 (9.50)
Face Area, sq ft (m ²)	29.02 (2.70)	29.02 (2.70)	52.6 (4.89)	52.6 (4.89)
Rows/FPI (Fins per inch)	2/18	2/18	2/18	2/18
Outdoor Fan				
Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter - in. (mm)	1/28 (711.20)	1/28 (711.20)	2/28 (711.20)	2/28 (711.20)
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM (m ³ /h)	8,250 (14,017)	8,250 (14,017)	16,354 (27,786)	16,354 (27,786)
No. Motor/HP (kW)	1/.75 (0.56)	1/.75 (0.56)	1/.75 (0.56)	1/.75 (0.56)
Motor RPM	950	950	950	950
Refrigerant Charge (Field Supplied)				
lbs (kg) of R-410A	34.7 (15.7)	14/14 (6.4 / 6.4)	19.2/19.9 (8.7 / 9.0)	18.6/18.4 (8.4 / 8.3)
Shipping Dimensions				
HxWxD - in. (mm)	52.1" x 55" x 42" (1323 x 1397 x 1067)	52.1" x 55" x 42" (1323 x 1397 x 1067)	51.1" x 96" x 48" (1298 x 2438 x 1219)	51.1" x 96" x 48" (1298 x 2438 x 1219)

Note: Units are tested in accordance with AHRI Standard 340-360 (I-P)-2007. Rating conditions are 95°F outdoor air temperature, 80°F entering dry bulb, 67°F entering wet bulb with 25ft of interconnecting refrigerant piping with minimum external static pressure as determined by rating standard.

^(a) Refer to refrigerant piping applications manual for line sizing and line length.



General Data

Table 8. General data for 4.6 - 6.25 ton (TWE0514DA* - TWE0764DB*) air handler, 50 Hz

	4.6 Tons Single Circuit TWE0514DA*	6 Tons Dual Circuit TWE0724DB*	6.25 Tons Single Circuit TWE0764DA*	6.25 Tons Dual Circuit TWE0764DB*
System Data				
No. Refrigerant Circuits	1	2	1	2
Suction Line Connection, in. (mm) OD	1 1/8 (28.58)	1 1/8 (25.60)	1 3/8 (34.90)	1 1/8 (25.60)
Liquid Line Connection, in. (mm) OD	1/2 (12.70)	1/2 (12.70)	1/2 (12.70)	1/2 (12.70)
Indoor Coil				
Type	Lanced/Intertwined	Lanced/Intertwined	Lanced/Intertwined	Lanced/Intertwined
Tube Size, in. (mm)	3/8 (9.50)	3/8 (9.50)	3/8 (9.50)	3/8 (9.50)
Face Area, sq. ft. (m ²)	5.0 (0.46)	8.1 (0.75)	8.1 (0.75)	8.1 (0.75)
Rows/FPI	4/14	4/14	4/14	4/14
Refrigerant Control	Expansion Valve	Expansion Valve	Expansion Valve	Expansion Valve
Drain Connection Size, in. (mm)	1.0 (25.40) PVC	1.0 (25.40) PVC	1.0 (25.40) PVC	1.0 (25.40) PVC
Indoor Fan				
Type	Centrifugal	Centrifugal	Centrifugal	Centrifugal
No. Used/Diameter x Width, in. (mm)	1/12 x 12 (304.8 x 304.8)	1/15 x 15 (381.0 x 381.0)	1/15 x 15 (381.0 x 381.0)	1/15 x 15 (381.0 x 381.0)
Drive Type/No. Speeds	Belt/Adjustable	Belt/Adjustable	Belt/Adjustable	Belt/Adjustable
CFM (m ³ /h) (Nominal)	2,000 (3,398)	2,000 (3,398)	2,500 (4,248)	2,500 (4,248)
No. Motors	1	1	1	1
Motor HP - Standard/Oversized (kw)	0.75/1.0 (0.56/0.75)	1.5/2.0/3.0 (1.10/1.50/2.2)	1.5/2.0/3.0 (1.10/1.50/2.2)	1.5/2.0/3.0 (1.10/1.50/2.2)
Motor RPM	1450	1450	1450	1450
Motor Frame Size	56	56H	56H	56H
Filters				
Type/Furnished	Throwaway/Yes	Throwaway/Yes	Throwaway/Yes	Throwaway/Yes
(No.)/Size Recommended	(1) 16 x 20 x 1; (1) 20 x 20 x 1	(3) 16 x 25 x 1	(3) 16 x 25 x 1	(3) 16 x 25 x 1
MERV 13 (No.)/Size Recommended	(1) 16 x 20 x 2 (1) 20 x 20 x 2	(3) 16 x 25 x 2	(3) 16 x 25 x 2	(3) 16 x 25 x 2
Shipping Dimensions				
HxWxD - in. (mm)	55.1" x 27.5" x 43.5" (1399.5 x 698.5 x 1104.9)	61.2" x 30.5" x 53" (1554.5 x 774.7 x 1346.2)	61.2" x 30.5" x 53" (1554.5 x 774.7 x 1346.2)	61.2" x 30.5" x 53" (1554.5 x 774.7 x 1346.2)

Table 9. General data for 8.33 - 16.7 ton (TWE1014DA* - TWE2014DB*) air handler, 50 Hz

	8.33 Tons Single Circuit TWE1014DA*	8.33 Tons Dual Circuit TWE1014DB*	10.4 Tons Dual Circuit TWE1264DB*	13 Tons Dual Circuit TWE1564DB*	16.7 Tons Dual Circuit TWE2014DB*
System Data					
No. Refrigerant Circuits	1	2	2	2	2
Suction Line Connection, in. (mm) OD	1 3/8 (34.90)	1 1/8 (25.60)	1 3/8 (34.90)	1 3/8 (34.90)	1 3/8 (34.90)
Liquid Line Connection, in. (mm) OD	1/2 (12.70)	1/2 (12.70)	1/2 (12.70)	1/2 (12.70)	5/8 (15.88)
Indoor Coil					
Type	Lanced/Intertwined	Lanced/Intertwined	Lanced/Intertwined	Lanced/Intertwined	Lanced/Intertwined
Tube Size, in. (mm)	3/8 (9.50)	3/8 (9.50)	3/8 (9.50)	3/8 (9.50)	3/8 (9.50)
Face Area, sq. ft. (m ²)	11.2 (1.04)	11.2 (1.04)	16.3 (1.51)	16.3 (1.51)	21.7 (2.01)
Rows/FPI	4/14	4/14	4/14	4/14	3/14
Refrigerant Control	Expansion Valve	Expansion Valve	Expansion Valve	Expansion Valve	Expansion Valve
Drain Connection Size, in. (mm)	1.0 (25.40) PVC	1.0 (25.40) PVC	1.0 (25.40) PVC	1.0 (25.40) PVC	1.0 (25.40) PVC
Indoor Fan					
Type	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal
No. Used/Diameter x Width, in. (mm)	1/15 x 15 (381.0 x 381.0)	1/15 x 15 (381.0 x 381.0)	2/15 x 15 (381.0 x 381.0)	2/15 x 15 (381.0 x 381.0)	2/15 x 15 (381.0 x 381.0)
Drive Type/No. Speeds	Belt/Adjustable	Belt/Adjustable	Belt/Adjustable	Belt/Adjustable	Belt/Adjustable
CFM (m ³ /h) (Nominal)	3,350 (5,692)	3,350 (5,692)	4,200 (7,136)	5,000 (8,495)	6,675 (11,341)
No. Motors	1	1	1	1	1
Motor HP - Standard/Oversized (kw)	2.0 (1.50)	2.0/3.0 (1.50/2.20)	2.0/3.0/5.0 (1.50/2.20/3.70)	3.0/5.0 (2.20/3.70)	3.0/5.0/7.5 (2.20/ 3.70/5.60)
Motor RPM	1500	1500	1500	1,450/1,500	1,500/2,930
Motor Frame Size	56HZ	56HZ	145T	56HZ	184T
Filters					
Type/Furnished	Throwaway/Yes	Throwaway/Yes	Throwaway/Yes	Throwaway/Yes	Throwaway/Yes
(No.)/Size Recommended	(4) 16 X 25 X 1	(4) 16 X 25 X 1	(8) 15 X 20 X 2	(8) 15 X 20 X 2	(4) 16 X 25 X 2; (4) 16 X 20 X 2
MERV 13 (No.)/Size Recommended	(4) 16 x 25 x 2	(4) 16 x 25 x 2	(8) 15 x 20 x 2	(8) 15 x 20 x 2	(4) 16 x 25 x 2 (4) 16 x 20 x 2
Shipping Dimensions					
HxWxD - in. (mm)	61.2" x 30.5" x 69" (1554.5 x 774.7 x 1752.6)	61.2" x 30.5" x 69" (1554.5 x 774.7 x 1752.6)	76.3" x 33.8" x 85" (1938 x 850.9 x 2159)	76.3" x 33.8" x 85" (1938 x 850.9 x 2159)	79.1" x 35.8" x 95" (2009.1 x 909.3 x 2413)



Performance Data

Gross Cooling Capacities

Table 10. Gross cooling capacities (MBH) TWA0604*A condensing unit with TWE0764*A air handler (IP)

CFM	Ent DB (°F)	Ambient Temperature (°F)						Ambient Temperature (°F)						Ambient Temperature (°F)					
		85						95						105					
		Entering Wet Bulb (°F)						Entering Wet Bulb (°F)						Entering Wet Bulb (°F)					
		61		67		73		61		67		73		61		67		73	
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC
1800	75	64.6	53.9	72.1	42.1	80.2	29.7	61.5	52.4	68.7	40.7	76.5	28.3	58.2	50.9	65.1	39.2	72.5	26.9
	80	64.7	63.6	71.9	51.9	80.3	39.7	61.6	61.6	68.5	50.5	76.6	38.3	58.3	58.3	65.2	49.1	72.6	36.9
	85	64.7	64.7	72.3	61.7	80.4	49.7	61.7	61.7	68.9	60.3	76.7	48.3	58.4	58.4	65.3	58.8	72.7	46.9
	90	64.8	64.8	72.4	71.4	80.2	59.6	61.7	61.7	69.0	69.0	76.7	58.3	58.4	58.4	65.4	65.4	72.8	56.8
2000	75	65.8	57.1	73.4	44.0	81.5	30.2	62.7	55.6	69.9	42.6	77.6	28.8	59.2	54.0	66.2	41.1	73.5	27.4
	80	65.9	65.9	73.5	55.0	81.7	41.4	62.7	62.7	70.0	53.5	77.8	40.0	59.3	59.3	66.3	52.0	73.7	38.6
	85	66.0	66.0	73.6	65.7	81.8	52.5	62.8	62.8	70.1	64.3	77.9	51.1	59.4	59.4	66.4	62.8	73.4	49.6
	90	66.0	66.0	73.7	73.7	81.8	63.4	62.8	62.8	70.2	70.2	78.0	62.0	59.4	59.4	66.5	66.5	73.9	60.5
2200	75	66.9	60.2	74.5	45.9	82.6	30.7	63.6	58.7	70.9	44.5	78.6	29.3	60.1	57.1	67.0	43.0	74.4	27.9
	80	66.9	66.9	74.6	57.8	82.7	43.0	63.7	63.7	71.0	56.4	78.8	41.6	60.2	60.2	67.2	54.8	74.6	40.2
	85	67.0	67.0	74.7	69.7	82.5	55.1	63.7	63.7	71.1	68.2	78.5	53.8	60.2	60.2	67.3	66.7	74.3	52.3
	90	67.0	67.0	74.8	74.8	82.9	67.1	63.7	63.7	71.2	71.2	79.0	65.7	60.2	60.2	67.3	67.3	74.8	64.2
2400	75	67.7	63.3	75.4	47.7	83.5	31.2	64.4	61.7	71.7	46.3	79.4	29.8	60.8	60.1	67.8	44.8	75.1	28.4
	80	67.8	67.8	75.5	60.7	83.7	44.6	64.5	64.5	71.8	59.2	79.6	43.2	60.9	60.9	67.9	57.6	75.3	41.8
	85	67.9	67.9	75.6	73.6	83.4	57.9	64.5	64.5	71.9	71.9	79.7	56.4	60.9	60.9	68.0	68.0	75.4	54.9
	90	67.9	67.9	75.7	75.7	83.9	70.8	64.5	64.5	72.0	72.0	79.8	69.4	60.9	60.9	68.1	68.1	75.6	67.9
CFM	Ent DB (°F)	Ambient Temperature (°F)						Ambient Temperature (°F)											
		115						125											
		Entering Wet Bulb (°F)						Entering Wet Bulb (°F)											
		61		67		73		61		67		73							
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC						
1800	75	54.7	49.2	61.2	37.7	68.2	25.4	50.8	47.5	57.1	36.0	63.6	23.8						
	80	54.8	54.8	61.3	47.5	68.4	35.4	50.9	50.9	57.2	45.8	63.8	33.8						
	85	54.8	54.8	61.4	57.2	68.1	45.4	51.0	51.0	57.3	55.5	63.6	43.8						
	90	54.8	54.8	61.5	61.5	68.6	55.2	51.0	51.0	57.4	57.4	64.0	53.6						
2000	75	55.6	52.3	62.2	39.5	69.1	25.9	51.6	50.6	57.9	37.9	64.4	24.3						
	80	55.7	55.7	62.3	50.4	69.3	37.1	51.7	51.7	58.0	48.6	64.7	35.5						
	85	55.7	55.7	62.4	61.1	69.1	48.1	51.8	51.8	58.2	58.2	64.8	46.5						
	90	55.7	55.7	62.5	62.5	69.6	58.9	51.8	51.8	58.2	58.2	64.9	57.3						
2200	75	56.3	55.4	63.0	41.4	69.9	26.4	52.3	52.3	58.6	39.7	65.1	24.8						
	80	56.4	56.4	63.1	53.2	70.1	38.7	52.4	52.4	58.7	51.5	65.4	37.1						
	85	56.5	56.5	63.2	63.2	70.3	50.7	52.4	52.4	58.9	58.9	65.5	49.1						
	90	56.5	56.5	63.3	63.3	70.4	62.6	52.5	52.5	58.9	58.9	65.7	61.0						
2400	75	57.0	57.0	63.6	43.2	70.5	26.9	52.9	52.9	59.2	41.6	65.6	25.3						
	80	57.1	57.1	63.8	56.0	70.8	40.3	53.0	53.0	59.3	54.2	66.0	38.7						
	85	57.1	57.1	63.9	63.9	71.0	53.3	53.0	53.0	59.4	59.4	66.1	51.6						
	90	57.1	57.1	63.9	63.9	71.1	66.3	53.0	53.0	59.5	59.5	66.3	64.6						

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. MBH = Total Gross Capacity, SHC = Sensible Heat Capacity

Table 11. Gross cooling capacities (kW) TWA0604*A condensing unit with TWE0764*A air handler (SI)

Airflow m ³ /hr	Ent DB (°C)	Ambient Temperature (°C)						Ambient Temperature (°C)						Ambient Temperature (°C)					
		30						35						40					
		Entering Wet Bulb (°C)						Entering Wet Bulb (°C)						Entering Wet Bulb (°C)					
		16		19		22		16		19		22		16		19		22	
		kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC
3058	24	18.5	15.5	20.7	12.1	22.9	8.5	17.6	15.1	19.7	11.7	21.9	8.1	16.7	14.6	18.6	11.2	20.7	7.7
	27	18.5	18.3	20.6	14.9	23.0	11.4	17.7	17.7	19.6	14.5	21.9	11.0	16.7	16.7	18.7	14.1	20.7	10.6
	30	18.6	18.6	20.7	17.7	22.9	14.2	17.7	17.7	19.7	17.3	21.9	13.9	16.7	16.7	18.7	16.9	20.8	13.5
	33	18.6	18.6	20.7	20.5	22.9	17.1	17.7	17.7	19.8	19.8	21.9	16.7	16.7	16.7	18.7	18.7	20.8	16.3
3398	24	18.9	16.4	21.0	12.6	23.3	8.6	18.0	16.0	20.0	12.2	22.2	8.2	17.0	15.5	18.9	11.8	21.0	7.8
	27	18.9	18.9	21.0	15.8	23.3	11.8	18.0	18.0	20.0	15.4	22.2	11.5	17.0	17.0	19.0	14.9	21.0	11.0
	30	18.9	18.9	21.1	18.9	23.4	15.0	18.0	18.0	20.1	18.5	22.2	14.6	17.0	17.0	19.0	18.0	21.1	14.2
	33	18.9	18.9	21.1	21.1	23.4	18.2	18.0	18.0	20.1	20.1	22.3	17.8	17.0	17.0	19.0	19.0	21.1	17.4
3738	24	19.2	17.3	21.3	13.2	23.6	8.8	18.2	16.9	20.3	12.7	22.4	8.4	17.2	16.4	19.2	12.3	21.2	8.0
	27	19.2	19.2	21.3	16.6	23.6	12.3	18.2	18.2	20.3	16.2	22.5	11.9	17.2	17.2	19.2	15.7	21.3	11.5
	30	19.2	19.2	21.4	20.0	23.7	15.8	18.3	18.3	20.3	19.6	22.5	15.4	17.2	17.2	19.2	19.1	21.3	15.0
	33	19.2	19.2	21.4	21.4	23.7	19.3	18.3	18.3	20.4	20.4	22.5	18.8	17.2	17.2	19.3	19.3	21.4	18.4
4078	24	19.4	18.2	21.6	13.7	23.8	8.9	18.4	17.7	20.5	13.3	22.7	8.5	17.4	17.3	19.4	12.8	21.4	8.1
	27	19.4	19.4	21.6	17.4	23.9	12.8	18.5	18.5	20.5	17.0	22.7	12.4	17.4	17.4	19.4	16.5	21.5	12.0
	30	19.4	19.4	21.6	21.1	23.9	16.6	18.5	18.5	20.6	20.6	22.8	16.2	17.4	17.4	19.5	19.5	21.5	15.8
	33	19.4	19.4	21.6	21.6	23.9	20.3	18.5	18.5	20.6	20.6	22.8	19.9	17.4	17.4	19.5	19.5	21.6	19.5
Airflow m ³ /hr	Ent DB (°C)	Ambient Temperature (°C)						Ambient Temperature (°C)											
		45						52											
		Entering Wet Bulb (°C)						Entering Wet Bulb (°C)											
		16		19		22		16		19		22							
		kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC						
3058	24	15.7	14.1	17.5	10.8	19.5	7.2	14.5	13.6	16.3	10.3	18.2	6.8						
	27	15.7	15.7	17.5	13.6	19.5	10.1	14.6	14.6	16.3	13.1	18.2	9.7						
	30	15.7	15.7	17.6	16.4	19.6	13.0	14.6	14.6	16.4	15.9	18.3	12.6						
	33	15.7	15.7	17.6	17.6	19.6	15.8	14.6	14.6	16.4	16.4	18.3	15.4						
3398	24	15.9	15.0	17.8	11.3	19.7	7.4	14.8	14.5	16.6	10.9	18.4	6.9						
	27	15.9	15.9	17.8	14.5	19.8	10.6	14.8	14.8	16.6	14.0	18.5	10.2						
	30	16.0	16.0	17.9	17.6	19.8	13.8	14.8	14.8	16.6	16.6	18.5	13.4						
	33	16.0	16.0	17.9	17.9	19.9	16.9	14.8	14.8	16.6	16.6	18.5	16.4						
3738	24	16.1	15.9	18.0	11.9	20.0	7.5	15.0	15.0	16.7	11.4	18.6	7.1						
	27	16.2	16.2	18.0	15.3	20.0	11.1	15.0	15.0	16.8	14.8	18.7	10.6						
	30	16.2	16.2	18.1	18.1	20.1	14.6	15.0	15.0	16.8	16.8	18.7	14.1						
	33	16.2	16.2	18.1	18.1	20.1	18.0	15.0	15.0	16.8	16.8	18.7	17.5						
4078	24	16.3	16.3	18.2	12.4	20.1	7.7	15.1	15.1	16.9	11.9	18.7	7.2						
	27	16.3	16.3	18.2	16.1	20.2	11.5	15.1	15.1	17.0	15.6	18.8	11.1						
	30	16.3	16.3	18.3	18.3	20.2	15.3	15.2	15.2	17.0	17.0	18.9	14.8						
	33	16.3	16.3	18.3	18.3	20.3	19.0	15.2	15.2	17.0	17.0	18.9	18.5						

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. kW = Total Gross Capacity, SHC = Sensible Heat Capacity



Performance Data

Table 12. Gross cooling capacities (MBH) TWA0604*D condensing unit with TWE0724*B air handler (IP)

CFM	Ent DB (°F)	Ambient Temperature (°F)						Ambient Temperature (°F)						Ambient Temperature (°F)					
		85						95						105					
		Entering Wet Bulb (°F)						Entering Wet Bulb (°F)						Entering Wet Bulb (°F)					
		61		67		73		61		67		73		61		67		73	
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC
1800	75	61.0	49.5	68.3	38.4	72.9	26.9	55.6	48.2	62.2	37.2	69.5	25.7	52.8	46.9	59.0	35.9	66.0	24.5
	80	58.6	58.6	64.9	47.5	72.6	36.2	56.4	56.4	61.9	46.3	69.2	35.0	54.1	54.1	58.7	45.0	65.6	33.7
	85	64.9	64.9	64.9	56.6	72.3	45.4	59.7	59.7	61.9	55.4	68.8	44.1	57.2	57.2	58.8	54.1	65.3	42.9
	90	65.4	65.4	65.5	65.5	72.0	54.6	62.9	62.9	63.0	63.0	71.9	55.9	60.4	60.4	60.5	60.5	65.1	52.1
2000	75	59.5	52.4	66.4	40.1	74.1	27.5	56.7	51.1	63.3	38.9	70.6	26.2	53.8	49.8	60.0	37.6	66.9	24.9
	80	60.8	60.8	66.1	50.2	73.8	37.7	58.4	58.4	63.0	49.0	70.3	36.4	55.9	55.9	59.7	47.7	66.6	35.2
	85	64.3	64.3	66.2	60.3	73.5	47.9	61.8	61.8	63.2	59.0	69.9	46.6	59.0	59.0	60.0	57.7	66.3	45.4
	90	67.8	67.8	68.0	68.0	73.2	58.0	65.2	65.2	65.4	65.4	69.7	56.7	62.6	62.6	62.7	62.7	66.2	55.4
2200	75	60.5	55.2	67.4	41.8	75.1	27.9	57.7	53.9	64.1	40.6	71.5	26.7	54.7	52.5	63.7	41.1	67.7	25.4
	80	62.6	62.6	67.1	52.9	74.8	39.1	63.0	63.0	63.9	51.7	71.2	37.9	57.5	57.5	60.6	50.2	67.4	36.6
	85	66.3	66.3	67.4	63.9	74.5	50.3	63.7	63.7	64.4	62.6	70.8	49.0	61.0	61.0	61.3	60.3	67.1	47.8
	90	70.0	70.0	70.1	70.1	74.4	61.3	67.3	67.3	70.6	70.6	70.8	60.0	64.5	64.5	64.6	64.6	67.1	58.7
2400	75	61.2	58.6	68.2	43.5	76.0	28.4	58.6	56.7	64.9	42.2	72.3	27.2	55.5	55.5	61.5	40.9	68.4	25.9
	80	64.3	64.3	68.0	55.4	75.7	40.6	61.7	61.7	64.8	54.1	71.8	39.3	58.9	58.9	64.3	55.2	68.1	38.0
	85	68.1	68.1	68.6	67.5	75.4	52.7	65.4	65.4	65.7	65.0	71.6	51.4	62.5	62.5	62.6	62.6	67.8	50.1
	90	71.9	71.9	72.1	72.1	75.3	64.6	69.1	69.1	69.2	69.2	71.7	63.3	66.1	66.1	66.2	66.2	68.0	62.0
CFM	Ent DB (°F)	Ambient Temperature (°F)						Ambient Temperature (°F)											
		115						125											
		Entering Wet Bulb (°F)						Entering Wet Bulb (°F)											
		61		67		73		61		67		73							
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC						
1800	75	49.9	45.6	55.7	34.6	62.3	23.2	46.9	44.2	52.3	33.3	58.5	21.9						
	80	51.6	51.6	55.5	43.8	61.9	32.4	49.0	49.0	52.1	42.4	58.1	31.1						
	85	54.7	54.7	55.6	52.8	61.6	41.6	52.0	52.0	52.5	50.7	57.7	40.3						
	90	57.7	57.7	57.8	57.8	61.4	50.7	54.9	54.9	55.0	55.0	57.7	49.4						
2000	75	53.2	50.7	56.6	36.3	63.1	23.7	47.9	46.3	53.1	34.9	59.2	22.3						
	80	53.3	53.3	56.4	46.4	62.8	33.9	50.6	50.6	52.9	44.9	58.9	32.6						
	85	56.5	56.5	56.9	55.5	62.5	44.1	53.7	53.7	53.8	53.6	58.6	42.7						
	90	59.7	59.7	59.8	59.8	62.4	54.1	56.7	56.7	56.8	56.8	58.6	52.7						
2200	75	51.9	50.5	57.3	37.9	63.9	24.1	48.9	48.9	53.7	36.6	59.8	22.8						
	80	54.9	54.9	57.2	48.9	66.6	37.0	52.0	52.0	53.7	47.5	59.5	34.0						
	85	58.1	58.1	58.2	58.2	63.2	46.4	55.2	55.2	55.2	55.2	59.3	45.0						
	90	61.5	61.5	61.6	61.6	63.3	57.4	58.3	58.3	58.4	58.4	59.3	56.0						
2400	75	52.8	52.8	57.9	39.5	64.4	24.5	50.0	50.0	54.2	38.1	60.3	23.2						
	80	56.2	56.2	57.9	51.4	64.2	36.7	53.2	53.2	54.1	50.4	60.1	35.4						
	85	59.6	59.6	59.7	59.7	63.9	48.7	56.5	56.5	56.5	56.5	59.8	47.3						
	90	63.0	63.0	63.1	63.1	64.0	60.7	59.7	59.7	59.8	59.8	59.9	59.9						

Notes:

- All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
- MBH = Total Gross Capacity, SHC = Sensible Heat Capacity

Table 13. Gross cooling capacities (kW) TWA0604*D condensing unit with TWE0724*B air handler (SI)

Airflow m ³ /hr	Ent DB (°C)	Ambient Temperature (°C)						Ambient Temperature (°C)						Ambient Temperature (°C)					
		30						35						40					
		Entering Wet Bulb (°C)						Entering Wet Bulb (°C)						Entering Wet Bulb (°C)					
		16		19		22		16		19		22		16		19		22	
		kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC
3058	24	17.9	14.5	20.0	11.3	21.4	7.9	16.3	14.1	18.2	10.9	20.4	7.5	15.5	13.7	17.3	10.5	19.3	7.2
	27	17.2	17.2	19.0	13.9	21.3	10.6	16.5	16.5	18.1	13.6	20.3	10.2	15.8	15.8	17.2	13.2	19.2	9.9
	30	19.0	19.0	19.0	16.6	21.2	13.3	17.5	17.5	18.1	16.2	20.2	12.9	16.8	16.8	17.2	15.9	19.1	12.6
	33	19.2	19.2	19.2	19.2	21.1	16.0	18.4	18.4	18.5	18.5	21.1	16.4	17.7	17.7	17.7	17.7	19.1	15.3
3398	24	17.4	15.3	19.5	11.8	21.7	8.0	16.6	15.0	18.5	11.4	20.7	7.7	15.8	14.6	17.6	11.0	19.6	7.3
	27	17.8	17.8	19.4	14.7	21.6	11.0	17.1	17.1	18.5	14.4	20.6	10.7	16.4	16.4	17.5	14.0	19.5	10.3
	30	18.8	18.8	19.4	17.7	21.5	14.0	18.1	18.1	18.5	17.3	20.5	13.7	17.3	17.3	17.6	16.9	19.4	13.3
	33	19.9	19.9	19.9	19.9	21.5	17.0	19.1	19.1	19.2	19.2	20.4	16.6	18.3	18.3	18.4	18.4	19.4	16.2
3738	24	17.7	16.2	19.8	12.3	22.0	8.2	16.9	15.8	18.8	11.9	21.0	7.8	16.0	15.4	18.7	12.1	19.9	7.4
	27	18.3	18.3	19.7	15.5	21.9	11.5	18.5	18.5	18.7	15.1	20.9	11.1	16.9	16.9	17.8	14.7	19.8	10.7
	30	19.4	19.4	19.8	18.7	21.8	14.7	18.7	18.7	18.9	18.4	20.8	14.4	17.9	17.9	18.0	17.7	19.7	14.0
	33	20.5	20.5	20.6	20.6	21.8	18.0	19.7	19.7	20.7	20.7	20.7	17.6	18.9	18.9	18.9	18.9	19.7	17.2
4078	24	17.9	17.2	20.0	12.7	22.3	8.3	17.2	16.6	19.0	12.4	21.2	8.0	16.3	16.3	18.0	12.0	20.0	7.6
	27	18.8	18.8	19.9	16.2	22.2	11.9	18.1	18.1	19.0	15.9	21.1	11.5	17.3	17.3	18.8	16.2	20.0	11.1
	30	20.0	20.0	20.1	19.8	22.1	15.4	19.2	19.2	19.2	19.1	21.0	15.1	18.3	18.3	18.4	18.4	19.9	14.7
	33	21.1	21.1	21.1	21.1	22.1	18.9	20.2	20.2	20.3	20.3	21.0	18.6	19.4	19.4	19.4	19.4	19.9	18.2
Airflow m ³ /hr	Ent DB (°C)	Ambient Temperature (°C)						Ambient Temperature (°C)											
		45						52											
		Entering Wet Bulb (°C)						Entering Wet Bulb (°C)											
		16		19		22		16		19		22							
		kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC						
3058	24	14.6	13.4	16.3	10.1	18.3	6.8	13.7	13.0	15.3	9.7	17.1	6.4						
	27	15.1	15.1	16.3	12.8	18.2	9.5	14.4	14.4	15.3	12.4	17.0	9.1						
	30	16.0	16.0	16.3	15.5	18.1	12.2	15.2	15.2	15.4	14.9	16.9	11.8						
	33	16.9	16.9	16.9	16.9	18.0	14.9	16.1	16.1	16.1	16.1	16.9	14.5						
3398	24	15.6	14.9	16.6	10.6	18.5	6.9	14.0	13.6	15.6	10.2	17.4	6.5						
	27	15.6	15.6	16.5	13.6	18.4	9.9	14.8	14.8	15.5	13.2	17.3	9.5						
	30	16.6	16.6	16.7	16.3	18.3	12.9	15.7	15.7	15.8	15.7	17.2	12.5						
	33	17.5	17.5	17.5	17.5	18.3	15.9	16.6	16.6	16.7	16.7	17.2	15.5						
3738	24	15.2	14.8	16.8	11.1	18.7	7.1	14.3	14.3	15.7	10.7	17.5	6.7						
	27	16.1	16.1	16.8	14.3	19.5	10.8	15.2	15.2	15.7	13.9	17.4	10.0						
	30	17.0	17.0	17.1	17.1	18.5	13.6	16.2	16.2	16.2	16.2	17.4	13.2						
	33	18.0	18.0	18.0	18.0	18.6	16.8	17.1	17.1	17.1	17.1	17.4	16.4						
4078	24	15.5	15.5	17.0	11.6	18.9	7.2	14.6	14.6	15.9	11.2	17.7	6.8						
	27	16.5	16.5	17.0	15.1	18.8	10.8	15.6	15.6	15.9	14.8	17.6	10.4						
	30	17.5	17.5	17.5	17.5	18.7	14.3	16.5	16.5	16.6	16.6	17.5	13.9						
	33	18.5	18.5	18.5	18.5	18.8	17.8	17.5	17.5	17.5	17.5	17.6	17.6						

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. kW = Total Gross Capacity, SHC = Sensible Heat Capacity



Performance Data

Table 14. Gross cooling capacities (MBH) TWA0764*A condensing unit with TWE0764*A air handler (IP)

CFM	Ent DB (°F)	Ambient Temperature (°F)						Ambient Temperature (°F)						Ambient Temperature (°F)					
		85						95						105					
		Entering Wet Bulb (°F)						Entering Wet Bulb (°F)						Entering Wet Bulb (°F)					
		61		67		73		61		67		73		61		67		73	
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC
2250	75	74.8	64.6	82.7	49.3	91.3	33.5	71.2	63.0	78.7	47.7	86.7	31.9	67.4	61.0	74.4	46.0	81.9	30.3
	80	75.9	75.9	82.8	61.8	91.3	46.1	72.7	72.7	78.8	60.1	86.7	44.5	69.5	69.5	74.5	58.5	82.0	42.8
	85	80.0	80.0	83.2	74.3	91.4	58.6	76.8	76.8	79.2	72.4	86.8	57.0	73.5	73.5	75.1	70.6	82.1	55.4
	90	84.3	84.3	84.5	84.5	91.5	71.1	81.0	81.0	81.1	81.1	87.0	69.5	77.4	77.4	77.6	77.6	82.3	67.9
2500	75	76.2	68.7	84.0	51.7	92.6	34.1	72.5	66.7	79.8	50.0	87.8	32.5	68.6	64.9	75.4	48.3	82.9	30.8
	80	78.2	78.2	84.1	65.5	92.6	48.1	75.0	75.0	80.0	63.9	87.9	46.5	71.6	71.6	75.6	62.2	83.0	44.8
	85	82.7	82.7	84.7	79.1	92.7	62.0	79.3	79.3	80.7	77.4	88.0	60.4	75.7	75.7	76.4	75.6	83.1	58.7
	90	87.1	87.1	87.3	87.3	92.9	76.0	83.6	83.6	83.7	83.7	88.2	74.3	79.8	79.8	80.0	80.0	83.4	72.7
2750	75	77.4	72.3	85.1	54.0	93.6	34.7	73.6	70.6	80.8	52.3	88.7	33.1	69.7	68.8	76.3	50.6	83.7	31.4
	80	80.4	80.4	85.3	69.2	93.6	50.1	77.0	77.0	81.0	67.6	88.8	48.5	73.4	73.4	76.5	65.9	83.8	46.8
	85	85.0	85.0	86.1	84.1	93.7	65.4	81.4	81.4	82.0	82.0	88.9	63.8	77.6	77.6	77.8	77.8	83.9	62.1
	90	89.6	89.6	89.7	89.7	94.1	80.7	85.8	85.8	85.9	85.9	89.3	79.1	81.9	81.9	82.0	82.0	84.4	76.9
3000	75	78.5	76.2	86.0	56.2	94.4	35.3	74.7	74.5	81.6	54.6	89.5	33.7	70.8	70.8	77.0	52.8	84.4	32.0
	80	82.2	82.2	86.3	72.9	94.5	52.1	78.7	78.7	81.9	71.2	89.6	50.4	75.0	75.0	77.4	69.0	84.5	48.8
	85	87.0	87.0	87.5	87.5	94.6	68.8	83.2	83.2	83.4	83.4	89.7	67.1	79.3	79.3	79.4	79.4	84.7	65.5
	90	91.7	91.7	91.8	91.8	95.1	85.0	87.8	87.8	87.9	87.9	90.3	83.3	83.7	83.7	83.8	83.8	85.3	81.5
CFM	Ent DB (°F)	Ambient Temperature (°F)						Ambient Temperature (°F)											
		115						125											
		Entering Wet Bulb (°F)						Entering Wet Bulb (°F)											
		61		67		73		61		67		73							
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC						
2250	75	63.4	59.2	69.8	44.2	76.9	28.5	59.1	57.2	64.9	42.3	71.3	26.7						
	80	66.0	66.0	70.0	56.7	76.9	41.1	62.1	62.1	65.1	54.8	71.4	39.2						
	85	69.8	69.8	70.7	68.8	77.0	53.6	65.7	65.7	66.0	66.0	71.5	51.8						
	90	73.6	73.6	73.7	73.7	77.3	66.2	69.4	69.4	69.5	69.5	71.9	63.9						
2500	75	64.5	63.1	70.8	46.5	77.7	29.1	60.2	60.2	65.7	44.6	72.0	27.2						
	80	67.9	67.9	71.0	60.4	77.8	43.1	63.8	63.8	66.0	58.1	72.2	41.2						
	85	71.8	71.8	72.0	72.0	77.9	57.0	67.6	67.6	67.6	67.6	72.3	55.1						
	90	75.8	75.8	75.9	75.9	78.3	70.5	71.3	71.3	71.4	71.4	72.8	68.5						
2750	75	65.6	65.6	71.5	48.8	78.4	29.7	61.4	61.4	66.3	46.9	72.6	27.8						
	80	69.5	69.5	71.8	63.6	78.5	45.0	65.3	65.3	66.8	61.6	72.8	43.2						
	85	73.6	73.6	73.7	73.7	78.7	60.4	69.1	69.1	69.2	69.2	73.0	58.5						
	90	77.6	77.6	77.7	77.7	79.3	75.1	72.9	72.9	73.0	73.0	73.7	73.1						
3000	75	66.8	66.8	72.1	51.0	79.0	30.2	62.6	62.6	66.9	49.1	73.1	28.3						
	80	71.0	71.0	72.6	67.1	79.1	47.0	66.5	66.5	67.5	65.1	73.3	45.1						
	85	75.1	75.1	75.2	75.2	79.3	63.7	70.5	70.5	70.5	70.5	73.5	61.9						
	90	79.2	79.2	79.3	79.3	80.1	79.7	74.3	74.3	69.2	69.2	74.6	74.6						

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. MBH = Total Gross Capacity, SHC = Sensible Heat Capacity

Table 15. Gross cooling capacities (kW) TWA0764*A condensing unit with TWE0764*A air handler (SI)

Airflow m ³ /hr	Ent DB (°C)	Ambient Temperature (°C)						Ambient Temperature (°C)						Ambient Temperature (°C)					
		30						35						40					
		Entering Wet Bulb (°C)						Entering Wet Bulb (°C)						Entering Wet Bulb (°C)					
		16		19		22		16		19		22		16		19		22	
		kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC
3823	24	21.9	18.9	24.3	14.5	26.8	9.8	20.9	18.5	23.1	14.0	25.4	9.4	19.8	17.9	21.8	13.5	24.0	8.9
	27	22.2	22.2	24.3	18.1	26.8	13.5	21.3	21.3	23.1	17.6	25.4	13.0	20.4	20.4	21.8	17.1	24.0	12.6
	30	23.5	23.5	24.4	21.8	26.8	17.2	22.5	22.5	23.2	21.2	25.4	16.7	21.5	21.5	22.0	20.7	24.1	16.2
	33	24.7	24.7	24.8	24.8	26.8	20.8	23.7	23.7	23.8	23.8	25.5	20.4	22.7	22.7	22.7	22.7	24.1	19.9
4248	24	22.3	20.1	24.6	15.1	27.1	10.0	21.2	19.6	23.4	14.7	25.7	9.5	20.1	19.0	22.1	14.2	24.3	9.0
	27	22.9	22.9	24.7	19.2	27.1	14.1	22.0	22.0	23.4	18.7	25.8	13.6	21.0	21.0	22.2	18.2	24.3	13.1
	30	24.2	24.2	24.8	23.2	27.2	18.2	23.2	23.2	23.6	22.7	25.8	17.7	22.2	22.2	22.4	22.2	24.4	17.2
	33	25.5	25.5	25.6	25.6	27.2	22.3	24.5	24.5	24.5	24.5	25.9	21.8	23.4	23.4	23.4	23.4	24.4	21.3
4672	24	22.7	21.2	24.9	15.8	27.4	10.2	21.6	20.7	23.7	15.3	26.0	9.7	20.4	20.2	22.4	14.8	24.5	9.2
	27	23.6	23.6	25.0	20.3	27.4	14.7	22.6	22.6	23.7	19.8	26.0	14.2	21.5	21.5	22.4	19.3	24.6	13.7
	30	24.9	24.9	25.2	24.6	27.5	19.2	23.9	23.9	24.0	24.0	26.1	18.7	22.8	22.8	22.8	22.8	24.6	18.2
	33	26.2	26.2	26.3	26.3	27.6	23.7	25.2	25.2	25.2	25.2	26.2	23.2	24.0	24.0	24.0	24.0	24.7	22.5
5097	24	23.0	22.3	25.2	16.5	27.7	10.3	21.9	21.8	23.9	16.0	26.2	9.9	20.7	20.7	22.6	15.5	24.7	9.4
	27	24.1	24.1	25.3	21.4	27.7	15.3	23.1	23.1	24.0	20.9	26.3	14.8	22.0	22.0	22.7	20.2	24.8	14.3
	30	25.5	25.5	25.6	25.6	27.7	20.2	24.4	24.4	24.4	24.4	26.3	19.7	23.3	23.3	23.3	23.3	24.8	19.2
	33	26.9	26.9	26.9	26.9	27.9	24.9	25.7	25.7	25.8	25.8	26.5	24.4	24.5	24.5	24.6	24.6	25.0	23.9
Airflow m ³ /hr		Ambient Temperature (°C)						Ambient Temperature (°C)											
		45						52											
		Entering Wet Bulb (°C)						Entering Wet Bulb (°C)											
		16		19		22		16		19		22							
		kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC						
3823	18.6	17.3	20.5	13.0	22.5	8.4	17.3	16.8	19.0	12.4	20.9	7.8							
	19.3	19.3	20.5	16.6	22.5	12.0	18.2	18.2	19.1	16.1	20.9	11.5							
	20.5	20.5	20.7	20.2	22.6	15.7	19.3	19.3	19.3	19.3	21.0	15.2							
	21.6	21.6	21.6	21.6	22.7	19.4	20.3	20.3	20.4	20.4	21.1	18.7							
4248	18.9	18.5	20.7	13.6	22.8	8.5	17.6	17.6	19.3	13.1	21.1	8.0							
	19.9	19.9	20.8	17.7	22.8	12.6	18.7	18.7	19.3	17.0	21.2	12.1							
	21.1	21.1	21.1	21.1	22.8	16.7	19.8	19.8	19.8	19.8	21.2	16.2							
	22.2	22.2	22.2	22.2	23.0	20.7	20.9	20.9	20.9	20.9	21.3	20.1							
4672	19.2	19.2	21.0	14.3	23.0	8.7	18.0	18.0	19.4	13.7	21.3	8.1							
	20.4	20.4	21.1	18.6	23.0	13.2	19.1	19.1	19.6	18.0	21.3	12.7							
	21.6	21.6	21.6	21.6	23.1	17.7	20.3	20.3	20.3	20.3	21.4	17.1							
	22.8	22.8	22.8	22.8	23.2	22.0	21.4	21.4	21.4	21.4	21.6	21.4							
5097	19.6	19.6	21.1	15.0	23.2	8.9	18.3	18.3	19.6	14.4	21.4	8.3							
	20.8	20.8	21.3	19.7	23.2	13.8	19.5	19.5	19.8	19.1	21.5	13.2							
	22.0	22.0	22.0	22.0	23.2	18.7	20.7	20.7	20.7	20.7	21.6	18.1							
	23.2	23.2	23.2	23.2	23.5	23.4	21.8	21.8	20.3	20.3	21.9	21.9							

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. kW = Total Gross Capacity, SHC = Sensible Heat Capacity



Performance Data

Table 16. Gross cooling capacities (MBH) TWA0764*D condensing unit with TWE0764*B air handler (IP)

CFM	Ent DB (°F)	Ambient Temperature (°F)						Ambient Temperature (°F)						Ambient Temperature (°F)					
		85						95						105					
		Entering Wet Bulb (°F)						Entering Wet Bulb (°F)						Entering Wet Bulb (°F)					
		61		67		73		61		67		73		61		67		73	
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC
2250	75	74.9	61.3	83.7	47.5	89.5	33.0	69.3	60.0	77.3	46.1	86.0	31.8	66.3	58.7	73.9	44.8	82.0	30.4
	80	72.6	72.6	80.0	58.7	89.0	44.5	70.2	70.2	76.7	57.4	85.3	43.1	67.7	67.7	73.3	56.0	81.4	41.7
	85	79.5	79.5	79.8	70.0	88.4	55.8	74.0	74.0	76.6	68.7	84.5	54.4	71.3	71.3	73.1	67.3	80.8	53.1
	90	80.5	80.5	80.7	80.7	87.9	67.1	77.8	77.8	77.9	77.9	87.3	68.3	75.0	75.0	75.1	75.1	80.3	64.4
2500	75	73.6	64.9	82.0	49.6	90.9	33.6	70.6	63.6	78.5	48.2	87.2	32.3	67.5	62.2	75.0	46.8	83.1	30.9
	80	75.1	75.1	81.3	62.0	90.4	46.3	72.6	72.6	78.0	60.7	86.6	44.9	69.9	69.9	74.5	59.3	82.5	43.5
	85	79.2	79.2	81.3	74.6	89.8	58.8	76.5	76.5	78.0	73.2	85.8	57.4	73.7	73.7	74.6	71.8	81.9	56.0
	90	83.4	83.4	83.5	83.5	89.3	71.3	80.4	80.4	80.6	80.6	85.4	70.0	77.5	77.5	77.6	77.6	81.5	68.6
2750	75	74.8	68.4	83.1	51.6	92.1	34.2	71.5	67.8	79.6	50.2	88.2	32.9	68.5	65.7	78.9	50.7	84.1	31.5
	80	77.3	77.3	82.5	65.2	91.5	48.0	77.5	77.5	79.1	63.8	87.6	46.6	71.8	71.8	75.4	62.4	83.4	45.2
	85	81.6	81.6	82.8	79.0	90.9	61.7	78.7	78.7	79.4	77.7	86.8	60.3	75.7	75.7	76.1	74.8	82.8	58.9
	90	85.8	85.8	85.9	85.9	90.5	75.4	82.7	82.7	86.1	86.1	86.5	74.0	79.6	79.6	79.7	79.7	82.5	72.6
3000	75	75.7	72.4	84.1	53.5	93.0	34.7	72.8	70.3	80.4	52.1	89.1	33.4	69.5	69.5	76.7	50.7	84.8	32.0
	80	79.2	79.2	83.5	68.3	92.4	49.7	76.5	76.5	80.0	66.9	88.4	48.3	73.5	73.5	79.2	68.0	84.2	46.9
	85	83.6	83.6	84.1	83.3	91.8	64.5	80.7	80.7	80.9	80.3	87.6	63.1	77.5	77.5	77.6	77.6	83.5	61.8
	90	88.0	88.0	88.1	88.1	91.6	79.4	84.8	84.8	84.9	84.9	87.5	78.0	81.5	81.5	81.6	81.6	83.0	77.5
CFM	Ent DB (°F)	Ambient Temperature (°F)						Ambient Temperature (°F)											
		115						125											
		Entering Wet Bulb (°F)						Entering Wet Bulb (°F)											
		61		67		73		61		67		73							
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC						
2250	75	63.1	57.2	70.3	43.3	77.9	28.9	59.8	55.8	66.5	41.9	73.8	27.5						
	80	65.0	65.0	69.7	54.6	77.3	40.3	62.1	62.1	66.0	53.1	73.1	38.9						
	85	68.5	68.5	69.7	66.0	76.7	51.7	65.5	65.5	66.1	64.0	75.0	52.1						
	90	72.0	72.0	72.1	72.1	76.2	63.0	68.7	68.7	68.8	68.8	71.9	61.5						
2500	75	66.6	63.3	71.3	45.4	78.9	29.5	61.0	58.7	67.4	43.9	74.6	28.0						
	80	67.1	67.1	70.8	57.8	78.3	42.1	64.0	64.0	67.0	56.4	73.8	40.6						
	85	70.7	70.7	71.2	69.3	77.6	54.6	67.5	67.5	67.6	67.6	73.2	53.1						
	90	74.3	74.3	74.4	74.4	77.3	67.2	70.8	70.8	70.9	70.9	72.5	66.5						
2750	75	65.1	65.1	72.2	47.3	79.7	30.0	62.1	62.1	68.2	45.8	75.1	28.5						
	80	68.8	68.8	71.7	61.0	82.1	45.5	65.7	65.7	67.8	59.5	74.5	42.2						
	85	72.5	72.5	72.6	72.6	78.5	57.5	69.2	69.2	69.3	69.3	73.9	56.0						
	90	76.2	76.2	76.3	76.3	77.9	72.1	75.2	75.2	72.7	72.7	73.7	69.3						
3000	75	66.6	66.6	72.9	49.3	80.4	30.5	63.4	63.4	68.8	47.7	75.8	29.0						
	80	70.4	70.4	72.5	64.1	79.8	45.4	67.1	67.1	68.2	63.3	75.1	43.9						
	85	74.2	74.2	74.2	74.2	79.1	60.3	70.7	70.7	70.8	70.8	74.5	58.8						
	90	77.9	77.9	78.0	78.0	79.0	74.8	74.1	74.1	74.2	74.2	74.3	74.3						

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. MBH = Total Gross Capacity, SHC = Sensible Heat Capacity

Table 17. Gross cooling capacities (kW) TWA0764*D condensing unit with TWE0764*B air handler (SI)

Airflow m ³ /hr	Ent DB (°C)	Ambient Temperature (°C)						Ambient Temperature (°C)						Ambient Temperature (°C)					
		30						35						40					
		Entering Wet Bulb (°C)						Entering Wet Bulb (°C)						Entering Wet Bulb (°C)					
		16		19		22		16		19		22		16		19		22	
		kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC
3823	24	22.0	18.0	24.5	13.9	26.2	9.7	20.3	17.6	22.6	13.5	25.2	9.3	19.4	17.2	21.7	13.1	24.0	8.9
	27	21.3	21.3	23.4	17.2	26.1	13.0	20.6	20.6	22.5	16.8	25.0	12.6	19.8	19.8	21.5	16.4	23.9	12.2
	30	23.3	23.3	23.4	20.5	25.9	16.4	21.7	21.7	22.4	20.1	24.8	15.9	20.9	20.9	21.4	19.7	23.7	15.6
	33	23.6	23.6	23.6	23.6	25.8	19.7	22.8	22.8	22.8	22.8	25.6	20.0	22.0	22.0	22.0	22.0	23.5	18.9
4248	24	21.6	19.0	24.0	14.5	26.6	9.9	20.7	18.6	23.0	14.1	25.6	9.5	19.8	18.2	22.0	13.7	24.4	9.1
	27	22.0	22.0	23.8	18.2	26.5	13.6	21.3	21.3	22.9	17.8	25.4	13.2	20.5	20.5	21.8	17.4	24.2	12.8
	30	23.2	23.2	23.8	21.8	26.3	17.2	22.4	22.4	22.9	21.5	25.1	16.8	21.6	21.6	21.9	21.1	24.0	16.4
	33	24.4	24.4	24.5	24.5	26.2	20.9	23.6	23.6	23.6	23.6	25.0	20.5	22.7	22.7	22.7	22.7	23.9	20.1
4672	24	21.9	20.1	24.4	15.1	27.0	10.0	21.0	19.9	23.3	14.7	25.9	9.6	20.1	19.2	23.1	14.8	24.6	9.2
	27	22.6	22.6	24.2	19.1	26.8	14.1	22.7	22.7	23.2	18.7	25.7	13.7	21.1	21.1	22.1	18.3	24.4	13.3
	30	23.9	23.9	24.3	23.1	26.6	18.1	23.1	23.1	23.3	22.8	25.4	17.7	22.2	22.2	22.3	21.9	24.3	17.3
	33	25.1	25.1	25.2	25.2	26.5	22.1	24.3	24.3	25.2	25.2	25.4	21.7	23.3	23.3	23.4	23.4	24.2	21.3
5097	24	22.2	21.2	24.6	15.7	27.3	10.2	21.3	20.6	23.6	15.3	26.1	9.8	20.4	20.4	22.5	14.9	24.9	9.4
	27	23.2	23.2	24.5	20.0	27.1	14.6	22.4	22.4	23.5	19.6	25.9	14.2	21.5	21.5	23.2	19.9	24.7	13.7
	30	24.5	24.5	24.7	24.4	26.9	18.9	23.6	23.6	23.7	23.5	25.7	18.5	22.7	22.7	22.7	22.7	24.5	18.1
	33	25.8	25.8	25.8	25.8	26.8	23.3	24.8	24.8	24.9	24.9	25.6	22.9	23.9	23.9	23.9	23.9	24.3	22.7
Airflow m ³ /hr	Ent DB (°C)	Ambient Temperature (°C)						Ambient Temperature (°C)											
		45						52											
		Entering Wet Bulb (°C)						Entering Wet Bulb (°C)											
		16		19		22		16		19		22							
		kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC						
3823	24	18.5	16.8	20.6	12.7	22.8	8.5	17.5	16.3	19.5	12.3	21.6	8.1						
	27	19.0	19.0	20.4	16.0	22.6	11.8	18.2	18.2	19.3	15.6	21.4	11.4						
	30	20.1	20.1	20.4	19.3	22.5	15.1	19.2	19.2	19.4	18.8	22.0	15.3						
	33	21.1	21.1	21.1	21.1	22.3	18.5	20.1	20.1	20.2	20.2	21.1	18.0						
4248	24	19.5	18.5	20.9	13.3	23.1	8.6	17.9	17.2	19.8	12.9	21.9	8.2						
	27	19.7	19.7	20.8	17.0	22.9	12.3	18.8	18.8	19.6	16.5	21.6	11.9						
	30	20.7	20.7	20.9	20.3	22.8	16.0	19.8	19.8	19.8	19.8	21.5	15.6						
	33	21.8	21.8	21.8	21.8	22.7	19.7	20.8	20.8	20.8	20.8	21.3	19.5						
4672	24	19.1	19.1	21.1	13.9	23.4	8.8	18.2	18.2	20.0	13.4	22.0	8.3						
	27	20.2	20.2	21.0	17.9	24.1	13.3	19.2	19.2	19.9	17.4	21.8	12.4						
	30	21.2	21.2	21.3	21.3	23.0	16.8	20.3	20.3	20.3	20.3	21.7	16.4						
	33	22.3	22.3	22.4	22.4	22.8	21.1	22.1	22.1	21.3	21.3	21.6	20.3						
5097	24	19.5	19.5	21.4	14.4	23.6	8.9	18.6	18.6	20.2	14.0	22.2	8.5						
	27	20.6	20.6	21.3	18.8	23.4	13.3	19.7	19.7	20.0	18.5	22.0	12.9						
	30	21.7	21.7	21.8	21.8	23.2	17.7	20.7	20.7	20.7	20.7	21.8	17.2						
	33	22.8	22.8	22.9	22.9	23.2	21.9	21.7	21.7	21.7	21.7	21.8	21.8						

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. kW = Total Gross Capacity, SHC = Sensible Heat Capacity



Performance Data

Table 18. Gross cooling capacities (MBH) TWA1014*A condensing unit with TWE1014*A air handler (IP)

CFM	Ent DB (°F)	Ambient Temperature (°F)						Ambient Temperature (°F)						Ambient Temperature (°F)					
		85						95						105					
		Entering Wet Bulb (°F)						Entering Wet Bulb (°F)						Entering Wet Bulb (°F)					
		61		67		73		61		67		73		61		67		73	
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC
3025	75	98.6	84.4	109.4	64.9	121.1	44.7	94.5	82.5	104.7	63.0	115.7	42.8	90.1	80.4	99.7	61.0	110.0	40.8
	80	99.7	99.7	109.1	80.7	120.7	60.7	96.2	96.2	104.4	78.8	115.3	58.8	92.5	92.5	99.4	76.8	109.7	56.8
	85	105.1	105.1	109.3	96.5	120.4	76.6	101.5	101.5	104.6	94.6	115.0	74.7	97.5	97.5	99.7	92.5	109.3	72.7
	90	110.6	110.6	110.8	110.8	120.1	92.5	106.8	106.8	107.0	107.0	114.8	90.6	102.6	102.6	102.8	102.8	109.2	88.5
3350	75	100.5	89.3	111.1	67.7	122.8	45.5	96.3	87.3	106.3	65.8	117.3	43.6	91.7	85.3	101.1	63.8	111.4	41.6
	80	103.0	103.0	110.8	85.2	122.4	63.2	99.3	99.3	106.0	83.3	116.9	61.2	95.3	95.3	100.9	81.2	111.0	59.2
	85	108.7	108.7	111.3	102.7	122.1	80.8	104.8	104.8	106.6	100.8	116.5	78.8	100.6	100.6	101.6	98.7	110.7	76.8
	90	114.4	114.4	114.6	114.6	122.0	98.3	110.3	110.3	110.5	110.5	116.5	96.3	105.9	105.9	106.0	106.0	110.7	94.3
3675	75	102.1	94.1	112.6	70.5	124.2	46.3	97.8	92.2	107.6	68.6	118.5	44.3	93.2	90.1	102.3	66.6	112.6	42.3
	80	105.9	105.9	112.4	89.6	123.8	65.6	102.0	102.0	107.4	87.7	118.2	63.6	97.8	97.8	102.2	85.6	112.2	61.6
	85	111.8	111.8	113.2	108.8	123.5	84.8	107.7	107.7	108.4	106.9	117.8	82.9	103.2	103.2	103.5	103.5	111.9	80.9
	90	117.7	117.7	117.9	117.9	123.6	103.9	113.3	113.3	113.5	113.5	118.0	102.0	108.7	108.7	108.8	108.8	112.1	99.9
4000	75	103.6	98.8	113.8	73.3	125.4	47.0	98.6	98.6	108.7	71.3	119.6	45.1	94.5	94.5	103.2	69.3	113.5	43.0
	80	108.4	108.4	113.7	93.9	125.0	68.0	104.4	104.4	108.7	91.9	119.2	66.0	100.0	100.0	103.3	89.9	113.1	64.0
	85	114.5	114.5	115.0	114.9	124.7	88.8	110.2	110.2	110.3	110.3	118.9	86.9	105.6	105.6	105.7	105.7	112.9	84.8
	90	120.6	120.6	120.7	120.7	125.0	109.5	116.0	116.0	116.2	116.2	119.3	107.5	111.1	111.1	111.2	111.2	113.3	105.4
CFM	Ent DB (°F)	Ambient Temperature (°F)						Ambient Temperature (°F)											
		115						125											
		Entering Wet Bulb (°F)						Entering Wet Bulb (°F)											
		61		67		73		61		67		73							
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC						
3025	75	85.4	78.3	94.3	58.8	104.0	38.7	80.2	76.0	88.4	56.6	97.4	36.5						
	80	88.3	88.3	94.0	74.6	103.6	54.7	83.7	83.7	88.2	72.3	97.1	52.4						
	85	93.2	93.2	94.5	90.4	103.3	70.6	88.4	88.4	88.9	88.2	96.7	68.3						
	90	98.1	98.1	98.2	98.2	103.2	86.4	93.0	93.0	93.2	93.2	96.7	84.1						
3350	75	86.9	83.1	95.5	61.7	105.2	39.5	81.4	81.4	89.5	59.4	98.5	37.2						
	80	91.0	91.0	95.4	79.1	104.8	57.1	86.2	86.2	89.4	76.7	98.1	54.9						
	85	96.0	96.0	96.4	96.4	104.5	74.7	90.9	90.9	91.1	91.1	97.8	72.5						
	90	101.1	101.1	101.2	101.2	104.6	92.1	95.7	95.7	95.8	95.8	98.1	89.8						
3675	75	88.1	88.1	96.6	64.4	106.2	40.2	83.3	83.3	90.4	62.1	99.4	37.9						
	80	93.3	93.3	96.6	83.4	105.8	59.5	88.2	88.2	90.5	81.0	99.0	57.2						
	85	98.5	98.5	98.6	98.6	105.6	78.8	93.1	93.1	93.2	93.2	98.8	76.4						
	90	103.6	103.6	103.7	103.7	105.9	97.7	98.0	98.0	98.2	98.2	99.3	95.5						
4000	75	89.9	89.9	97.5	67.1	107.1	40.9	85.0	85.0	91.2	64.8	100.1	38.6						
	80	95.2	95.2	97.6	87.6	106.7	61.8	90.0	90.0	91.5	85.3	99.8	59.6						
	85	100.6	100.6	100.7	100.7	106.5	82.6	95.0	95.0	95.1	95.1	99.6	80.2						
	90	105.8	105.8	106.0	106.0	107.1	103.3	100.1	100.1	100.2	100.2	100.6	100.6						

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. MBH = Total Gross Capacity, SHC = Sensible Heat Capacity

Table 19. Gross cooling capacities (kW) TWA1014*A condensing unit with TWE1014*A air handler (SI)

Airflow m ³ /hr	Ent DB (°C)	Ambient Temperature (°C)						Ambient Temperature (°C)						Ambient Temperature (°C)					
		30						35						40					
		Entering Wet Bulb (°C)						Entering Wet Bulb (°C)						Entering Wet Bulb (°C)					
		16		19		22		16		19		22		16		19		22	
		kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC
5148	24	28.9	24.7	32.1	19.0	35.5	13.1	27.7	24.2	30.7	18.5	33.9	12.5	26.4	23.6	29.2	17.9	32.3	12.0
	27	29.2	29.2	32.0	23.6	35.4	17.8	28.2	28.2	30.6	23.1	33.8	17.2	27.1	27.1	29.1	22.5	32.1	16.6
	30	30.8	30.8	32.0	28.3	35.3	22.4	29.7	29.7	30.7	27.7	33.7	21.9	28.6	28.6	29.2	27.1	32.0	21.3
	33	32.4	32.4	32.5	32.5	35.2	27.1	31.3	31.3	31.3	31.3	33.6	26.5	30.1	30.1	30.1	30.1	32.0	25.9
5692	24	29.5	26.2	32.6	19.9	36.0	13.3	28.2	25.6	31.1	19.3	34.4	12.8	26.9	25.0	29.6	18.7	32.7	12.2
	27	30.2	30.2	32.5	25.0	35.9	18.5	29.1	29.1	31.1	24.4	34.3	17.9	27.9	27.9	29.6	23.8	32.5	17.4
	30	31.8	31.8	32.6	30.1	35.8	23.7	30.7	30.7	31.2	29.5	34.2	23.1	29.5	29.5	29.8	28.9	32.4	22.5
	33	33.5	33.5	33.6	33.6	35.7	28.8	32.3	32.3	32.4	32.4	34.1	28.2	31.0	31.0	31.1	31.1	32.5	27.6
6252	24	29.9	27.6	33.0	20.7	36.4	13.6	28.7	27.0	31.5	20.1	34.7	13.0	27.3	26.4	30.0	19.5	33.0	12.4
	27	31.0	31.0	32.9	26.3	36.3	19.2	29.9	29.9	31.5	25.7	34.6	18.7	28.7	28.7	29.9	25.1	32.9	18.1
	30	32.8	32.8	33.2	31.9	36.2	24.9	31.6	31.6	31.8	31.3	34.5	24.3	30.3	30.3	30.3	30.3	32.8	23.7
	33	34.5	34.5	34.5	34.5	36.2	30.5	33.2	33.2	33.3	33.3	34.6	29.9	31.8	31.8	31.9	31.9	32.9	29.3
6796	24	30.4	29.0	33.3	21.5	36.8	13.8	28.9	28.9	31.8	20.9	35.0	13.2	27.7	27.7	30.3	20.3	33.3	12.6
	27	31.8	31.8	33.3	27.5	36.6	19.9	30.6	30.6	31.8	26.9	34.9	19.3	29.3	29.3	30.3	26.3	33.2	18.7
	30	33.6	33.6	33.7	33.7	36.6	26.0	32.3	32.3	32.3	32.3	34.9	25.5	30.9	30.9	31.0	31.0	33.1	24.9
	33	35.3	35.3	35.4	35.4	36.6	32.1	34.0	34.0	34.0	34.0	35.0	31.5	32.6	32.6	32.6	32.6	33.2	30.9
Airflow m ³ /hr	Ent DB (°C)	Ambient Temperature (°C)						Ambient Temperature (°C)											
		45						52											
		Entering Wet Bulb (°C)						Entering Wet Bulb (°C)											
		16		19		22		16		19		22							
		kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC						
5148	24	25.0	22.9	27.6	17.2	30.5	11.4	23.5	22.3	25.9	16.6	28.6	10.7						
	27	25.9	25.9	27.6	21.9	30.4	16.0	24.5	24.5	25.8	21.2	28.4	15.4						
	30	27.3	27.3	27.7	26.5	30.3	20.7	25.9	25.9	26.0	25.8	28.3	20.0						
	33	28.7	28.7	28.8	28.8	30.2	25.3	27.3	27.3	27.3	27.3	28.3	24.7						
5692	24	25.5	24.4	28.0	18.1	30.8	11.6	23.8	23.8	26.2	17.4	28.9	10.9						
	27	26.7	26.7	28.0	23.2	30.7	16.7	25.2	25.2	26.2	22.5	28.8	16.1						
	30	28.1	28.1	28.2	28.2	30.6	21.9	26.7	26.7	26.7	26.7	28.7	21.2						
	33	29.6	29.6	29.7	29.7	30.7	27.0	28.0	28.0	28.1	28.1	28.7	26.3						
6252	24	25.8	25.8	28.3	18.9	31.1	11.8	24.4	24.4	26.5	18.2	29.1	11.1						
	27	27.3	27.3	28.3	24.4	31.0	17.4	25.9	25.9	26.5	23.7	29.0	16.8						
	30	28.9	28.9	28.9	28.9	30.9	23.1	27.3	27.3	27.3	27.3	28.9	22.4						
	33	30.4	30.4	30.4	30.4	31.0	28.6	28.7	28.7	28.8	28.8	29.1	28.0						
6796	24	26.4	26.4	28.6	19.7	31.4	12.0	24.9	24.9	26.7	19.0	29.3	11.3						
	27	27.9	27.9	28.6	25.7	31.3	18.1	26.4	26.4	26.8	25.0	29.2	17.5						
	30	29.5	29.5	29.5	29.5	31.2	24.2	27.8	27.8	27.9	27.9	29.2	23.5						
	33	31.0	31.0	31.1	31.1	31.4	30.3	29.3	29.3	29.4	29.4	29.5	29.5						

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. kW = Total Gross Capacity, SHC = Sensible Heat Capacity



Performance Data

Table 20. Gross cooling capacities (MBH) TWA1014*D condensing unit with TWE1014*B air handler (IP)

CFM	Ent DB (°F)	Ambient Temperature (°F)						Ambient Temperature (°F)						Ambient Temperature (°F)					
		85						95						105					
		Entering Wet Bulb (°F)						Entering Wet Bulb (°F)						Entering Wet Bulb (°F)					
		61		67		73		61		67		73		61		67		73	
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC
3025	75	95.8	83.2	106.0	63.5	117.0	43.3	91.1	81.0	100.7	61.4	111.1	41.2	86.2	78.8	95.3	59.2	105.1	39.1
	80	97.5	97.5	105.8	79.4	116.8	59.3	93.4	93.4	100.5	77.3	110.8	57.2	89.2	89.2	95.1	75.1	104.9	55.1
	85	102.8	102.8	106.2	95.3	116.5	75.3	98.6	98.6	100.9	93.2	110.6	73.2	94.3	94.3	95.7	91.1	104.7	71.1
	90	108.2	108.2	108.4	108.4	116.5	91.3	103.8	103.8	104.0	104.0	110.6	89.2	99.3	99.3	99.5	99.5	104.7	87.1
3350	75	97.6	88.1	107.6	66.4	118.6	44.0	92.7	85.9	102.1	64.2	112.5	41.9	87.6	83.8	96.5	62.1	106.4	39.8
	80	100.6	100.6	107.5	83.9	118.3	61.8	96.3	96.3	102.0	81.8	112.2	59.6	91.9	91.9	96.5	79.6	106.2	57.6
	85	106.1	106.1	108.1	101.6	118.1	79.4	101.7	101.7	102.8	99.5	112.0	77.3	97.1	97.1	97.6	96.2	105.9	75.2
	90	111.7	111.7	111.9	111.9	118.2	97.0	107.1	107.1	107.2	107.2	112.2	94.9	102.3	102.3	102.5	102.5	106.2	92.8
3675	75	99.1	92.9	108.9	69.2	119.9	44.8	94.1	90.6	103.3	67.0	113.6	42.7	88.9	88.9	97.6	64.8	107.4	40.6
	80	103.3	103.3	108.9	88.4	119.6	64.2	98.8	98.8	103.3	86.2	113.4	62.0	94.2	94.2	97.7	84.0	107.2	60.0
	85	109.0	109.0	109.9	107.7	119.4	83.5	104.3	104.3	104.8	103.7	113.1	81.4	99.6	99.6	99.7	99.7	107.0	79.3
	90	114.8	114.8	115.0	115.0	119.7	102.7	109.9	109.9	110.1	110.1	113.5	100.6	105.0	105.0	105.1	105.1	107.5	98.5
4000	75	100.5	97.4	110.0	71.9	120.9	45.5	95.4	95.4	104.3	69.7	114.6	43.4	90.8	90.8	98.5	67.5	108.3	41.3
	80	105.7	105.7	110.1	92.7	120.7	66.5	101.0	101.0	104.4	90.5	114.3	64.4	96.3	96.3	98.8	88.3	108.0	62.3
	85	111.6	111.6	111.9	111.5	120.5	87.5	106.7	106.7	106.8	106.8	114.2	85.3	101.8	101.8	101.9	101.9	107.9	83.2
	90	117.5	117.5	117.6	117.6	121.0	108.3	112.4	112.4	112.5	112.5	114.8	106.2	107.2	107.2	107.4	107.4	108.5	103.9
CFM	Ent DB (°F)	Ambient Temperature (°F)						Ambient Temperature (°F)											
		115						125											
		Entering Wet Bulb (°F)						Entering Wet Bulb (°F)											
		61		67		73		61		67		73							
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC						
3025	75	80.9	76.4	89.5	57.0	98.9	36.9	75.2	73.0	83.0	54.5	92.0	34.6						
	80	84.7	84.7	89.4	72.9	98.7	53.0	79.5	79.5	83.0	70.4	91.7	50.6						
	85	89.6	89.6	90.2	88.6	98.5	69.0	84.3	84.3	84.5	84.5	91.5	66.7						
	90	94.5	94.5	94.7	94.7	98.6	84.9	89.1	89.1	89.2	89.2	91.8	82.6						
3350	75	82.1	82.1	90.6	59.8	100.0	37.7	76.9	76.9	84.1	57.3	92.9	35.3						
	80	87.2	87.2	90.7	77.3	99.8	55.4	81.8	81.8	84.2	74.8	92.7	53.1						
	85	92.2	92.2	92.4	92.4	99.6	73.1	86.7	86.7	86.9	86.9	92.6	70.7						
	90	97.3	97.3	97.5	97.5	100.0	90.7	91.6	91.6	91.7	91.7	93.0	88.3						
3675	75	84.1	84.1	91.6	62.5	100.9	38.4	78.7	78.7	84.9	60.1	93.7	36.1						
	80	89.3	89.3	91.8	81.7	100.7	57.8	83.8	83.8	85.3	79.2	93.5	55.5						
	85	94.5	94.5	94.7	94.7	100.6	77.1	88.8	88.8	88.9	88.9	93.5	74.7						
	90	99.7	99.7	99.8	99.8	101.0	96.3	93.8	93.8	93.9	93.9	94.0	94.0						
4000	75	85.8	85.8	92.4	65.2	101.7	39.1	80.3	80.3	85.6	62.7	94.4	36.7						
	80	91.2	91.2	92.8	86.0	101.5	60.1	85.5	85.5	86.2	83.0	94.2	57.8						
	85	96.5	96.5	96.6	96.6	101.4	81.0	90.6	90.6	90.7	90.7	94.2	78.6						
	90	101.8	101.8	101.9	101.9	102.0	102.0	95.7	95.7	95.8	95.8	95.9	95.9						

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. MBH = Total Gross Capacity, SHC = Sensible Heat Capacity

Table 21. Gross cooling capacities (kW) TWA1014*D condensing unit with TWE1014*B air handler (SI)

Airflow m ³ /hr	Ent DB (°C)	Ambient Temperature (°C)						Ambient Temperature (°C)						Ambient Temperature (°C)					
		30						35						40					
		Entering Wet Bulb (°C)						Entering Wet Bulb (°C)						Entering Wet Bulb (°C)					
		16		19		22		16		19		22		16		19		22	
		kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC
5148	24	28.1	24.4	31.1	18.6	34.3	12.7	26.7	23.7	29.5	18.0	32.5	12.1	25.3	23.1	27.9	17.4	30.8	11.5
	27	28.6	28.6	31.0	23.3	34.2	17.4	27.4	27.4	29.5	22.7	32.5	16.8	26.1	26.1	27.9	22.0	30.7	16.2
	30	30.1	30.1	31.1	27.9	34.2	22.1	28.9	28.9	29.6	27.3	32.4	21.4	27.6	27.6	28.0	26.7	30.7	20.8
	33	31.7	31.7	31.8	31.8	34.1	26.7	30.4	30.4	30.5	30.5	32.4	26.1	29.1	29.1	29.2	29.2	30.7	25.5
5692	24	28.6	25.8	31.5	19.5	34.8	12.9	27.2	25.2	29.9	18.8	33.0	12.3	25.7	24.6	28.3	18.2	31.2	11.7
	27	29.5	29.5	31.5	24.6	34.7	18.1	28.2	28.2	29.9	24.0	32.9	17.5	26.9	26.9	28.3	23.3	31.1	16.9
	30	31.1	31.1	31.7	29.8	34.6	23.3	29.8	29.8	30.1	29.1	32.8	22.7	28.5	28.5	28.6	28.2	31.1	22.1
	33	32.7	32.7	32.8	32.8	34.6	28.4	31.4	31.4	31.4	31.4	32.9	27.8	30.0	30.0	30.0	30.0	31.1	27.2
6252	24	29.1	27.2	31.9	20.3	35.1	13.1	27.6	26.6	30.3	19.6	33.3	12.5	26.1	26.1	28.6	19.0	31.5	11.9
	27	30.3	30.3	31.9	25.9	35.1	18.8	29.0	29.0	30.3	25.3	33.2	18.2	27.6	27.6	28.6	24.6	31.4	17.6
	30	32.0	32.0	32.2	31.6	35.0	24.5	30.6	30.6	30.7	30.4	33.2	23.8	29.2	29.2	29.2	29.2	31.4	23.2
	33	33.6	33.6	33.7	33.7	35.1	30.1	32.2	32.2	32.3	32.3	33.3	29.5	30.8	30.8	30.8	30.8	31.5	28.9
6796	24	29.4	28.5	32.2	21.1	35.4	13.3	27.9	27.9	30.6	20.4	33.6	12.7	26.6	26.6	28.9	19.8	31.7	12.1
	27	31.0	31.0	32.3	27.2	35.4	19.5	29.6	29.6	30.6	26.5	33.5	18.9	28.2	28.2	28.9	25.9	31.7	18.3
	30	32.7	32.7	32.8	32.7	35.3	25.6	31.3	31.3	31.3	31.3	33.5	25.0	29.8	29.8	29.9	29.9	31.6	24.4
	33	34.4	34.4	34.5	34.5	35.5	31.7	32.9	32.9	33.0	33.0	33.6	31.1	31.4	31.4	31.5	31.5	31.8	30.4
Airflow m ³ /hr	Ent DB (°C)	Ambient Temperature (°C)						Ambient Temperature (°C)											
		45						52											
		Entering Wet Bulb (°C)						Entering Wet Bulb (°C)											
		16		19		22		16		19		22							
		kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC						
5148	24	23.7	22.4	26.2	16.7	29.0	10.8	22.0	21.4	24.3	16.0	27.0	10.1						
	27	24.8	24.8	26.2	21.4	28.9	15.5	23.3	23.3	24.3	20.6	26.9	14.8						
	30	26.3	26.3	26.4	26.0	28.9	20.2	24.7	24.7	24.8	24.8	26.8	19.5						
	33	27.7	27.7	27.7	27.7	28.9	24.9	26.1	26.1	26.1	26.1	26.9	24.2						
5692	24	24.1	24.1	26.6	17.5	29.3	11.0	22.5	22.5	24.6	16.8	27.2	10.4						
	27	25.5	25.5	26.6	22.7	29.2	16.2	24.0	24.0	24.7	21.9	27.2	15.6						
	30	27.0	27.0	27.1	27.1	29.2	21.4	25.4	25.4	25.5	25.5	27.1	20.7						
	33	28.5	28.5	28.6	28.6	29.3	26.6	26.9	26.9	26.9	26.9	27.2	25.9						
6252	24	24.6	24.6	26.8	18.3	29.6	11.3	23.1	23.1	24.9	17.6	27.5	10.6						
	27	26.2	26.2	26.9	23.9	29.5	16.9	24.6	24.6	25.0	23.2	27.4	16.3						
	30	27.7	27.7	27.7	27.7	29.5	22.6	26.0	26.0	26.1	26.1	27.4	21.9						
	33	29.2	29.2	29.3	29.3	29.6	28.2	27.5	27.5	27.5	27.5	27.6	27.6						
6796	24	25.2	25.2	27.1	19.1	29.8	11.5	23.5	23.5	25.1	18.4	27.7	10.8						
	27	26.7	26.7	27.2	25.2	29.7	17.6	25.1	25.1	25.3	24.3	27.6	16.9						
	30	28.3	28.3	28.3	28.3	29.7	23.7	26.6	26.6	26.6	26.6	27.6	23.0						
	33	29.8	29.8	29.9	29.9	29.9	29.9	28.0	28.0	28.1	28.1	28.1	28.1						

Notes:

- All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
- kW = Total Gross Capacity, SHC = Sensible Heat Capacity



Performance Data

Table 22. Gross cooling capacities (MBH) TWA1564*D condensing unit with TWE1564*B air handler (IP)

CFM	Ent DB (°F)	Ambient Temperature (°F)						Ambient Temperature (°F)						Ambient Temperature (°F)					
		85						95						105					
		Entering Wet Bulb (°F)						Entering Wet Bulb (°F)						Entering Wet Bulb (°F)					
		61		67		73		61		67		73		61		67		73	
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC
4500	75	146.8	127.5	163.9	97.9	182.5	67.4	141.1	124.9	157.7	95.4	175.6	65.0	135.0	122.2	150.9	92.7	168.1	62.3
	80	146.8	146.8	163.9	122.4	182.5	92.1	141.1	141.1	157.6	119.9	175.6	89.7	135.0	135.0	150.9	117.2	168.0	87.1
	85	146.8	146.8	163.9	146.8	182.4	116.8	141.1	141.1	157.7	144.2	175.5	114.3	135.0	135.0	150.9	141.5	168.0	111.7
	90	146.8	146.8	164.0	164.0	182.4	141.3	141.1	141.1	157.7	157.7	175.5	138.9	135.0	135.0	150.9	150.9	168.0	136.2
5000	75	149.2	135.2	166.4	102.4	185.1	68.7	143.4	132.6	160.0	99.9	178.0	66.2	137.0	129.8	153.0	97.2	170.3	63.6
	80	149.2	149.2	166.4	129.6	185.1	96.1	143.4	143.4	160.0	127.0	178.0	93.6	137.0	137.0	153.0	124.3	170.2	90.9
	85	149.2	149.2	166.4	156.5	185.1	123.3	143.3	143.3	160.0	153.9	178.0	120.9	137.0	137.0	153.0	151.2	170.2	118.2
	90	149.2	149.2	166.5	166.5	185.0	150.5	143.4	143.4	160.0	160.0	178.0	148.0	137.0	137.0	153.0	153.0	170.2	145.4
5500	75	151.2	142.7	168.5	106.9	187.3	69.9	145.2	140.1	161.9	104.3	180.0	67.4	138.7	137.3	154.8	101.6	172.1	64.7
	80	151.2	151.2	168.5	136.6	187.2	99.9	145.2	145.2	161.9	134.0	180.0	97.4	138.7	138.7	154.8	131.2	172.1	94.7
	85	151.2	151.2	168.5	166.0	187.2	129.8	145.2	145.2	161.9	161.9	179.9	127.3	138.7	138.7	154.8	154.8	172.1	124.7
	90	151.2	151.2	168.5	168.5	187.2	159.5	145.2	145.2	161.9	161.9	180.0	157.0	138.7	138.7	154.8	154.8	172.1	154.4
6000	75	152.9	150.1	170.3	111.2	189.1	71.0	146.7	146.5	163.5	108.6	181.7	68.6	140.1	140.1	156.3	105.9	173.7	65.9
	80	152.9	152.9	170.3	143.4	189.0	103.7	146.7	146.7	163.5	140.9	181.6	101.2	140.1	140.1	156.3	138.1	173.6	98.5
	85	152.8	152.8	170.3	170.3	189.0	136.2	146.7	146.7	163.5	163.5	181.6	133.7	140.1	140.1	156.3	156.3	173.6	131.0
	90	152.8	152.8	170.2	170.2	189.0	168.4	146.7	146.7	163.5	163.5	181.6	165.9	140.1	140.1	156.2	156.2	173.6	163.2
CFM	Ent DB (°F)	Ambient Temperature (°F)						Ambient Temperature (°F)											
		115						125											
		Entering Wet Bulb (°F)						Entering Wet Bulb (°F)											
		61		67		73		61		67		73							
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC						
4500	75	128.5	119.3	143.7	89.9	160.1	59.6	121.7	116.3	136.1	87.0	151.6	56.6						
	80	128.6	128.6	143.7	114.4	160.1	84.3	121.7	121.7	136.1	111.4	151.5	81.4						
	85	128.5	128.5	143.7	138.7	160.1	108.9	121.7	121.7	136.1	134.8	151.5	106.0						
	90	128.5	128.5	143.8	143.8	160.1	133.5	121.7	121.7	136.1	136.1	151.5	130.5						
5000	75	130.4	126.9	145.6	94.4	162.1	60.8	123.4	122.6	137.8	91.4	153.4	57.8						
	80	130.4	130.4	145.7	121.5	162.1	88.2	123.4	123.4	137.8	118.4	153.3	85.2						
	85	130.4	130.4	145.7	145.7	162.1	115.4	123.4	123.4	137.8	137.8	153.3	112.5						
	90	130.4	130.4	145.7	145.7	162.1	142.6	123.4	123.4	137.8	137.8	153.3	139.6						
5500	75	131.9	131.9	147.2	98.7	163.8	61.9	124.7	124.7	139.2	95.7	154.9	59.0						
	80	131.9	131.9	147.2	128.4	163.7	92.0	124.7	124.7	139.2	125.3	154.8	89.0						
	85	131.9	131.9	147.3	147.3	163.7	121.9	124.7	124.7	139.2	139.2	154.8	118.9						
	90	131.9	131.9	147.2	147.2	163.7	151.5	124.7	124.7	139.2	139.2	154.8	148.6						
6000	75	133.2	133.2	148.6	103.0	165.2	63.1	125.9	125.9	140.4	100.0	156.1	60.1						
	80	133.2	133.2	148.6	135.2	165.1	95.7	125.9	125.9	140.4	132.2	156.0	92.7						
	85	133.2	133.2	148.6	148.6	165.1	128.2	125.9	125.9	140.4	140.4	156.0	125.2						
	90	133.2	133.2	148.6	148.6	165.1	160.4	125.8	125.8	140.4	140.4	156.0	155.2						

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. MBH = Total Gross Capacity, SHC = Sensible Heat Capacity

Table 23. Gross cooling capacities (kW) TWA1564*D heat pump with TWE1564*B air handler (SI)

Airflow m ³ /hr	Ent DB (°C)	Ambient Temperature (°C)						Ambient Temperature (°C)						Ambient Temperature (°C)					
		30						35						40					
		Entering Wet Bulb (°C)						Entering Wet Bulb (°C)						Entering Wet Bulb (°C)					
		16		19		22		16		19		22		16		19		22	
kW SHC		kW SHC		kW SHC		kW SHC		kW SHC		kW SHC		kW SHC		kW SHC		kW SHC			
7646	24	43.1	37.5	48.2	28.8	53.6	19.8	41.5	36.8	46.3	28.1	51.5	19.1	39.6	35.9	44.3	27.3	49.3	18.3
	27	43.1	43.1	48.1	36.0	53.6	27.1	41.5	41.5	46.3	35.3	51.5	26.3	39.6	39.6	44.3	34.5	49.3	25.6
	30	43.1	43.1	48.2	43.2	53.6	34.3	41.5	41.5	46.3	42.4	51.5	33.6	39.6	39.6	44.3	41.6	49.3	32.8
	33	43.1	43.1	48.2	48.2	53.5	41.6	41.5	41.5	46.3	46.3	51.5	40.8	39.6	39.6	44.3	44.3	49.3	40.1
8495	24	43.8	39.8	48.9	30.1	54.3	20.2	42.1	39.0	47.0	29.4	52.2	19.4	40.2	38.2	44.9	28.6	49.9	18.6
	27	43.8	43.8	48.9	38.1	54.3	28.2	42.1	42.1	47.0	37.4	52.2	27.5	40.2	40.2	44.9	36.6	49.9	26.7
	30	43.8	43.8	48.9	46.1	54.3	36.3	42.1	42.1	47.0	45.3	52.2	35.5	40.2	40.2	44.9	44.4	49.9	34.8
	33	43.8	43.8	48.9	48.9	54.3	44.3	42.1	42.1	47.0	47.0	52.2	43.5	40.2	40.2	44.9	44.9	49.9	42.7
9345	24	44.4	42.0	49.5	31.4	55.0	20.5	42.6	41.2	47.5	30.7	52.8	19.8	40.7	40.3	45.4	29.9	50.5	19.0
	27	44.4	44.4	49.5	40.2	54.9	29.4	42.6	42.6	47.5	39.4	52.8	28.6	40.7	40.7	45.4	38.6	50.4	27.8
	30	44.4	44.4	49.5	48.9	54.9	38.2	42.6	42.6	47.5	47.5	52.8	37.4	40.7	40.7	45.4	45.4	50.4	36.6
	33	44.4	44.4	49.5	49.5	54.9	46.9	42.6	42.6	47.5	47.5	52.8	46.2	40.7	40.7	45.4	45.4	50.4	45.4
10194	24	44.9	44.2	50.0	32.7	55.5	20.9	43.1	43.1	48.0	31.9	53.3	20.1	41.1	41.1	45.8	31.1	50.9	19.3
	27	44.9	44.9	50.0	42.2	55.5	30.5	43.1	43.1	48.0	41.4	53.3	29.7	41.1	41.1	45.8	40.6	50.9	28.9
	30	44.9	44.9	50.0	50.0	55.5	40.0	43.1	43.1	48.0	48.0	53.2	39.3	41.1	41.1	45.8	45.8	50.9	38.5
	33	44.9	44.9	50.0	50.0	55.5	49.6	43.1	43.1	48.0	48.0	53.2	48.8	41.1	41.1	45.8	45.8	50.9	48.0
Airflow m ³ /hr	Ent DB (°C)	Ambient Temperature (°C)						Ambient Temperature (°C)											
		45						52											
		Entering Wet Bulb (°C)						Entering Wet Bulb (°C)											
		16		19		22		16		19		22							
kW SHC		kW SHC		kW SHC		kW SHC		kW SHC		kW SHC									
7646	24	37.7	35.1	42.2	26.4	46.9	17.5	35.7	34.2	39.9	25.6	44.4	16.6						
	27	37.7	37.7	42.2	33.7	46.9	24.8	35.7	35.7	39.9	32.8	44.4	23.9						
	30	37.7	37.7	42.2	40.8	46.9	32.0	35.7	35.7	39.9	39.6	44.4	31.2						
	33	37.7	37.7	42.2	42.2	46.9	39.2	35.7	35.7	39.9	39.9	44.4	38.4						
8495	24	38.3	37.3	42.7	27.7	47.5	17.8	36.2	36.0	40.4	26.9	44.9	17.0						
	27	38.3	38.3	42.7	35.7	47.5	25.9	36.2	36.2	40.4	34.8	44.9	25.0						
	30	38.3	38.3	42.7	42.7	47.5	33.9	36.2	36.2	40.4	40.4	44.9	33.1						
	33	38.3	38.3	42.7	42.7	47.5	41.9	36.2	36.2	40.4	40.4	44.9	41.1						
9345	24	38.7	38.7	43.2	29.0	48.0	18.2	36.6	36.6	40.8	28.1	45.4	17.3						
	27	38.7	38.7	43.2	37.8	48.0	27.0	36.6	36.6	40.8	36.9	45.3	26.1						
	30	38.7	38.7	43.2	43.2	48.0	35.8	36.6	36.6	40.8	40.8	45.3	35.0						
	33	38.7	38.7	43.2	43.2	48.0	44.6	36.6	36.6	40.8	40.8	45.3	43.7						
10194	24	39.1	39.1	43.6	30.3	48.4	18.5	36.9	36.9	41.2	29.4	45.7	17.6						
	27	39.1	39.1	43.6	39.8	48.4	28.1	36.9	36.9	41.2	38.9	45.7	27.2						
	30	39.1	39.1	43.6	43.6	48.4	37.7	36.9	36.9	41.2	41.2	45.7	36.8						
	33	39.1	39.1	43.6	43.6	48.4	47.2	36.9	36.9	41.2	41.2	45.7	45.5						

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. kW = Total Gross Capacity, SHC = Sensible Heat Capacity



Performance Data

Table 24. Gross cooling capacities (MBH) TWA2014*D heat pump with TWE2014*B air handler (IP)

CFM	Ent DB (°F)	Ambient Temperature (°F)						Ambient Temperature (°F)						Ambient Temperature (°F)					
		85						95						105					
		Entering Wet Bulb (°F)						Entering Wet Bulb (°F)						Entering Wet Bulb (°F)					
		61		67		73		61		67		73		61		67		73	
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC
6000	75	201.8	168.5	224.9	131.1	250.0	92.3	195.2	165.3	217.5	128.1	241.7	89.3	187.5	161.8	208.9	124.6	232.2	85.8
	80	202.0	198.8	224.9	162.2	249.9	123.5	195.3	195.0	217.5	159.1	241.6	120.5	187.7	187.7	209.0	155.5	232.1	117.1
	85	202.1	202.1	225.2	192.6	250.0	154.7	195.4	195.4	217.7	189.5	241.7	151.7	187.8	187.8	209.2	185.9	232.2	148.3
	90	202.2	202.2	225.3	223.0	250.0	185.7	195.5	195.5	217.9	217.9	241.8	182.6	187.8	187.8	209.3	209.3	232.3	179.1
6680	75	205.4	177.5	228.6	136.6	253.8	93.9	198.4	174.4	220.9	133.5	245.3	90.8	190.6	170.8	212.1	130.0	235.5	87.4
	80	205.5	205.5	228.7	170.6	253.7	128.2	198.6	198.6	221.0	167.4	245.2	125.2	190.7	190.7	212.2	163.8	235.4	121.7
	85	205.6	205.6	228.9	204.0	253.8	162.5	198.7	198.7	221.2	200.9	245.2	159.4	190.8	190.8	212.4	197.3	235.5	156.0
	90	205.7	205.7	229.0	229.0	253.9	196.4	198.7	198.7	221.3	221.3	245.3	193.3	190.9	190.9	212.5	212.5	235.6	189.8
7350	75	208.3	186.3	231.7	141.8	257.0	95.4	201.2	183.1	223.8	138.7	248.2	92.3	193.1	179.5	214.7	135.1	238.2	88.8
	80	208.4	208.4	231.8	178.7	256.9	132.8	201.3	201.3	223.9	175.5	248.1	129.7	193.3	193.3	214.9	171.9	238.1	126.2
	85	208.5	208.5	232.0	215.1	257.0	170.1	201.4	201.4	224.1	211.9	248.2	167.0	193.3	193.3	215.1	208.3	238.2	163.5
	90	208.6	208.6	232.1	232.1	257.1	206.8	201.5	201.5	224.2	224.2	248.3	203.7	193.4	193.4	215.2	215.2	238.3	200.1
8030	75	210.8	194.8	234.3	146.9	259.7	96.8	203.5	191.6	226.2	143.7	250.7	93.7	195.3	187.9	217.0	140.2	240.5	90.2
	80	211.0	211.0	234.4	186.5	259.6	137.2	203.7	203.7	226.4	183.3	250.6	134.1	195.4	195.4	217.2	179.7	240.4	130.6
	85	211.0	211.0	234.6	225.9	259.7	177.5	203.8	203.8	226.6	222.7	250.7	174.4	195.5	195.5	217.3	217.3	240.5	170.9
	90	211.1	211.1	234.7	234.7	259.9	217.0	203.8	203.8	226.6	226.6	250.9	213.8	195.5	195.5	217.4	217.4	240.7	210.2
CFM	Ent DB (°F)	Ambient Temperature (°F)						Ambient Temperature (°F)											
		115						125											
		Entering Wet Bulb (°F)						Entering Wet Bulb (°F)											
		61		67		73		61		67		73							
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC						
6000	75	179.2	157.9	199.7	120.9	221.8	82.2	170.0	153.8	189.4	116.8	210.2	78.1						
	80	179.3	179.3	199.8	151.8	221.8	113.4	170.2	170.2	189.5	147.6	210.2	109.3						
	85	179.4	179.4	200.0	182.1	221.8	144.6	170.3	170.3	189.7	178.0	210.3	140.5						
	90	179.5	179.5	200.1	200.1	221.9	175.3	170.3	170.3	189.8	189.8	210.4	171.2						
6680	75	181.9	166.9	202.6	126.2	224.8	83.6	172.5	162.6	192.0	122.1	212.9	79.5						
	80	182.1	182.1	202.7	160.0	224.7	118.0	172.7	172.7	192.2	155.8	212.8	113.9						
	85	182.2	182.2	202.9	193.4	224.8	152.3	172.7	172.7	192.3	189.2	212.9	148.2						
	90	182.2	182.2	203.0	203.0	224.9	185.9	172.8	172.8	192.4	192.4	213.1	181.7						
7350	75	184.3	175.5	205.0	131.3	227.2	85.1	174.6	171.2	194.2	127.2	215.0	80.9						
	80	184.4	184.4	205.1	168.0	227.1	122.5	174.7	174.7	194.3	163.7	214.9	118.3						
	85	184.5	184.5	205.3	204.4	227.3	159.8	174.8	174.8	194.5	194.5	215.1	155.7						
	90	184.5	184.5	205.4	205.4	227.4	196.3	174.8	174.8	194.6	194.6	215.3	192.0						
8030	75	186.2	183.9	207.0	136.3	229.3	86.4	176.4	176.4	196.0	132.2	216.9	82.3						
	80	186.4	186.4	207.2	175.8	229.2	126.8	176.5	176.5	196.2	171.5	216.8	122.6						
	85	186.4	186.4	207.4	207.4	229.4	167.1	176.6	176.6	196.3	196.3	217.0	163.0						
	90	186.5	186.5	207.4	207.4	229.5	206.3	176.6	176.6	196.4	196.4	217.1	202.1						

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. MBH = Total Gross Capacity, SHC = Sensible Heat Capacity

Table 25. Gross cooling capacities (kW) TWA2014*D heat pump with TWE2014*B air handler (SI)

Airflow m ³ /hr	Ent DB (°C)	Ambient Temperature (°C)						Ambient Temperature (°C)						Ambient Temperature (°C)					
		30						35						40					
		Entering Wet Bulb (°C)						Entering Wet Bulb (°C)						Entering Wet Bulb (°C)					
		16		19		22		16		19		22		16		19		22	
		kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC
10194	24	59.2	49.5	65.9	38.5	73.2	27.0	57.2	48.6	63.6	37.6	70.6	26.1	54.9	47.5	61.1	36.5	67.8	25.1
	27	59.3	58.5	65.9	47.6	73.1	36.2	57.2	57.2	63.7	46.7	70.6	35.3	54.9	54.9	61.1	45.6	67.7	34.3
	30	59.3	59.3	66.0	56.6	73.2	45.4	57.3	57.3	63.7	55.7	70.6	44.5	54.9	54.9	61.2	54.6	67.8	43.4
	33	59.3	59.3	66.0	65.6	73.2	54.5	57.3	57.3	63.8	63.8	70.7	53.6	55.0	55.0	61.2	61.2	67.8	52.5
11349	24	60.2	52.2	67.0	40.1	74.3	27.5	58.1	51.2	64.6	39.1	71.6	26.5	55.7	50.1	62.0	38.1	68.7	25.5
	27	60.3	60.3	67.0	50.1	74.2	37.6	58.2	58.2	64.7	49.1	71.6	36.7	55.8	55.8	62.0	48.1	68.7	35.6
	30	60.3	60.3	67.0	60.0	74.2	47.7	58.2	58.2	64.7	59.0	71.6	46.8	55.8	55.8	62.1	57.9	68.7	45.7
	33	60.3	60.3	67.1	67.1	74.3	57.7	58.2	58.2	64.8	64.8	71.6	56.7	55.8	55.8	62.1	62.1	68.7	55.7
12488	24	61.1	54.8	67.9	41.6	75.2	27.9	58.9	53.8	65.5	40.7	72.5	27.0	56.5	52.7	62.7	39.6	69.4	25.9
	27	61.1	61.1	67.9	52.5	75.1	38.9	59.0	59.0	65.5	51.5	72.4	38.0	56.5	56.5	62.8	50.4	69.4	36.9
	30	61.1	61.1	67.9	63.2	75.2	49.9	59.0	59.0	65.5	62.2	72.5	49.0	56.5	56.5	62.8	61.2	69.5	47.9
	33	61.2	61.2	68.0	68.0	75.2	60.7	59.0	59.0	65.6	65.6	72.5	59.8	56.5	56.5	62.9	62.9	69.5	58.7
13643	24	61.8	57.3	68.6	43.1	75.9	28.3	59.6	56.3	66.2	42.2	73.2	27.4	57.1	55.2	63.4	41.1	70.1	26.3
	27	61.8	61.8	68.7	54.8	75.9	40.2	59.6	59.6	66.2	53.8	73.1	39.3	57.1	57.1	63.4	52.7	70.1	38.2
	30	61.9	61.9	68.7	66.4	75.9	52.1	59.7	59.7	66.2	65.4	73.2	51.1	57.2	57.2	63.5	63.5	70.1	50.1
	33	61.9	61.9	68.7	68.7	76.0	63.7	59.7	59.7	66.3	66.3	73.2	62.8	57.2	57.2	63.5	63.5	70.2	61.7
Airflow m ³ /hr	Ent DB (°C)	Ambient Temperature (°C)						Ambient Temperature (°C)											
		45						52											
		Entering Wet Bulb (°C)						Entering Wet Bulb (°C)											
		16		19		22		16		19		22							
		kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC	kW	SHC
10194	24	52.4	46.4	58.3	35.4	64.6	24.0	49.7	45.1	55.2	34.2	61.2	22.7						
	27	52.4	52.4	58.3	44.5	64.6	33.2	49.7	49.7	55.3	43.3	61.2	32.0						
	30	52.5	52.5	58.4	53.5	64.6	42.3	49.8	49.8	55.3	52.2	61.2	41.1						
	33	52.5	52.5	58.4	58.4	64.7	51.4	49.8	49.8	55.4	55.4	61.2	50.2						
11349	24	53.2	49.0	59.1	37.0	65.5	24.4	50.4	47.7	56.0	35.7	61.9	23.2						
	27	53.2	53.2	59.2	46.9	65.4	34.5	50.4	50.4	56.0	45.7	61.9	33.3						
	30	53.3	53.3	59.2	56.8	65.5	44.6	50.5	50.5	56.1	55.5	61.9	43.4						
	33	53.3	53.3	59.2	59.2	65.5	54.5	50.5	50.5	56.1	56.1	62.0	53.3						
12488	24	53.9	51.5	59.8	38.5	66.2	24.8	51.0	50.3	56.6	37.2	62.5	23.6						
	27	53.9	53.9	59.9	49.3	66.1	35.8	51.0	51.0	56.6	48.0	62.5	34.6						
	30	53.9	53.9	59.9	59.9	66.2	46.8	51.0	51.0	56.7	56.7	62.5	45.6						
	33	53.9	53.9	59.9	59.9	66.2	57.6	51.1	51.1	56.7	56.7	62.6	56.3						
13643	24	54.4	54.0	60.4	39.9	66.7	25.2	51.5	51.5	57.1	38.7	63.0	23.9						
	27	54.5	54.5	60.4	51.6	66.7	37.1	51.5	51.5	57.2	50.3	63.0	35.8						
	30	54.5	54.5	60.5	60.5	66.8	49.0	51.5	51.5	57.2	57.2	63.1	47.7						
	33	54.5	54.5	60.5	60.5	66.8	60.5	51.5	51.5	57.2	57.2	63.1	59.2						

Notes:

1. All capacities shown are gross and have not considered indoor fan heat. To obtain net cooling, subtract indoor fan heat.
2. kW = Total Gross Capacity, SHC = Sensible Heat Capacity



Performance Data

Table 26. Gross cooling capacities (MBH) TWA0604*A condensing unit only (IP)

Outdoor Temp (°F)		Suction Temperature (°F)					
		30	35	40	45	50	55
65	Head Press (psig)	246.0	251.5	257.4	263.6	270.3	277.2
	Capacity (Btuh/1000)	56.9	62.7	68.9	75.5	82.6	90.0
	Unit Power (kW)	3.4	3.5	3.5	3.6	3.7	3.8
75	Head Press (psig)	283.6	289.5	295.7	302.3	309.3	316.5
	Capacity (Btuh/1000)	54.0	59.5	65.4	71.7	78.4	85.5
	Unit Power (kW)	3.8	3.8	3.9	4.0	4.0	4.1
85	Head Press (psig)	324.9	331.1	337.7	344.6	351.8	359.4
	Capacity (Btuh/1000)	50.8	56.1	61.7	67.7	74.1	80.8
	Unit Power (kW)	4.2	4.2	4.3	4.4	4.4	4.5
95	Head Press (psig)	369.8	376.4	383.3	390.5	398.0	405.9
	Capacity (Btuh/1000)	47.4	52.4	57.8	63.5	69.6	75.9
	Unit Power (kW)	4.6	4.7	4.7	4.8	4.9	5.0
105	Head Press (psig)	418.6	425.5	432.7	440.3	448.1	456.2
	Capacity (Btuh/1000)	43.7	48.5	53.6	59.1	64.8	70.9
	Unit Power (kW)	5.1	5.2	5.2	5.3	5.4	5.5
115	Head Press (psig)	471.6	478.8	486.3	494.0	502.0	510.2
	Capacity (Btuh/1000)	39.8	44.4	49.3	54.5	59.9	65.6
	Unit Power (kW)	5.7	5.7	5.8	5.9	6.0	6.1
125	Head Press (psig)	529.0	536.3	543.8	551.5	559.4	567.4
	Capacity (Btuh/1000)	35.7	40.1	44.7	49.6	54.8	60.2
	Unit Power (kW)	6.3	6.3	6.4	6.5	6.6	6.7

Note: Performance data calculated at 15°F subcooling and 15°F superheat and does not include capacity loss due to refrigerant lines.

Table 27. Gross cooling capacities (kW) TWA0604*A condensing unit only (SI)

Outdoor Temp (°C)		Suction Temperature (°C)					
		-1.1	1.7	4.4	7.2	10	12.8
18.3	Head Press (kPa)	1695.8	1734.1	1774.7	1817.8	1863.5	1911.3
	Capacity (kW)	16.7	18.4	20.2	22.1	24.2	26.4
	Unit Power (kW)	3.4	3.5	3.5	3.6	3.7	3.8
23.9	Head Press (kPa)	1955.5	1996.1	2039.1	2084.5	2132.2	2182.3
	Capacity (kW)	15.8	17.4	19.2	21.0	23.0	25.0
	Unit Power (kW)	3.8	3.8	3.9	4.0	4.0	4.1
29.4	Head Press (kPa)	2239.8	2282.8	2328.2	2375.6	2425.5	2478.0
	Capacity (kW)	14.9	16.4	18.1	19.8	21.7	23.7
	Unit Power (kW)	4.2	4.2	4.3	4.4	4.4	4.5
35	Head Press (kPa)	2549.8	2595.0	2642.6	2692.3	2744.2	2798.6
	Capacity (kW)	13.9	15.4	16.9	18.6	20.4	22.3
	Unit Power (kW)	4.6	4.7	4.7	4.8	4.9	5.0
40.6	Head Press (kPa)	2886.5	2933.8	2983.6	3035.5	3089.3	3145.4
	Capacity (kW)	12.8	14.2	15.7	17.3	19.0	20.8
	Unit Power (kW)	5.1	5.2	5.2	5.3	5.4	5.5
46.1	Head Press (kPa)	3251.7	3301.3	3352.8	3406.1	3461.3	3517.8
	Capacity (kW)	11.7	13.0	14.4	16.0	17.6	19.2
	Unit Power (kW)	5.7	5.7	5.8	5.9	6.0	6.1
51.7	Head Press (kPa)	3647.1	3697.4	3749.1	3802.6	3857.1	3912.2
	Capacity (kW)	10.5	11.8	13.1	14.5	16.0	17.6
	Unit Power (kW)	6.3	6.3	6.4	6.5	6.6	6.7

Note: Performance data calculated at 8.3°C subcooling and 8.3°C superheat and does not include capacity loss due to refrigerant lines.

Table 28. Gross cooling capacities (kW) TWA0604*D condensing unit only (IP)

Outdoor Temp (°F)		Suction Temperature (°F)					
		30	35	40	45	50	55
65	Head Press (psig)	243.4	248.8	254.6	260.8	267.4	274.3
	Capacity (Btuh/1000)	52.2	57.8	63.8	70.2	77.1	84.4
	Unit Power (kW)	3.1	3.2	3.2	3.2	3.2	3.2
75	Head Press (psig)	280.2	285.9	292.0	298.4	305.2	312.4
	Capacity (Btuh/1000)	49.3	54.6	60.3	66.4	72.9	79.8
	Unit Power (kW)	3.5	3.5	3.6	3.6	3.6	3.7
85	Head Press (psig)	320.4	326.4	332.7	339.4	346.5	353.9
	Capacity (Btuh/1000)	46.1	51.2	56.6	62.3	68.4	74.8
	Unit Power (kW)	3.9	4.0	4.0	4.0	4.1	4.1
95	Head Press (psig)	364.1	370.4	377.0	383.9	391.1	398.7
	Capacity (Btuh/1000)	42.7	47.5	52.6	58.0	63.7	69.8
	Unit Power (kW)	4.4	4.5	4.5	4.5	4.6	4.6
105	Head Press (psig)	411.5	418.1	424.9	432.1	439.5	447.2
	Capacity (Btuh/1000)	39.0	43.6	48.4	53.6	59.0	64.6
	Unit Power (kW)	5.0	5.0	5.0	5.1	5.1	5.2
115	Head Press (psig)	463.1	469.9	476.9	484.2	491.7	499.4
	Capacity (Btuh/1000)	35.3	39.6	44.2	49.0	54.1	59.4
	Unit Power (kW)	5.6	5.6	5.7	5.7	5.7	5.8
125	Head Press (psig)	518.9	525.7	532.8	540.0	547.4	554.9
	Capacity (Btuh/1000)	31.5	35.6	39.9	44.4	49.1	54.0
	Unit Power (kW)	6.2	6.3	6.3	6.4	6.4	6.5

Note: Performance data calculated at 15°F subcooling and 15°F superheat and does not include capacity loss due to refrigerant lines.

Table 29. Gross cooling capacities (kW) TWA0604*D condensing unit only (SI)

Outdoor Temp (°C)		Suction Temperature (°C)					
		-1.1	1.7	4.4	7.2	10	12.8
18.3	Head Press (kPa)	1678.2	1715.5	1755.4	1798.0	1843.4	1891.5
	Capacity (kW)	15.3	16.9	18.7	20.6	22.6	24.7
	Unit Power (kW)	3.1	3.2	3.2	3.2	3.2	3.2
23.9	Head Press (kPa)	1932.0	1971.4	2013.2	2057.5	2104.5	2154.2
	Capacity (kW)	14.5	16.0	17.7	19.5	21.4	23.4
	Unit Power (kW)	3.5	3.5	3.6	3.6	3.6	3.7
29.4	Head Press (kPa)	2208.9	2250.4	2294.1	2340.2	2388.8	2439.8
	Capacity (kW)	13.5	15.0	16.6	18.3	20.0	21.9
	Unit Power (kW)	3.9	4.0	4.0	4.0	4.1	4.1
35	Head Press (kPa)	2510.3	2553.8	2599.3	2646.9	2696.9	2749.0
	Capacity (kW)	12.5	13.9	15.4	17.0	18.7	20.5
	Unit Power (kW)	4.4	4.5	4.5	4.5	4.6	4.6
40.6	Head Press (kPa)	2837.5	2882.8	2929.8	2979.0	3030.2	3083.4
	Capacity (kW)	11.4	12.8	14.2	15.7	17.3	18.9
	Unit Power (kW)	5.0	5.0	5.0	5.1	5.1	5.2
46.1	Head Press (kPa)	3193.0	3239.7	3288.1	3338.2	3389.9	3443.2
	Capacity (kW)	10.3	11.6	13.0	14.4	15.9	17.4
	Unit Power (kW)	5.6	5.6	5.7	5.7	5.7	5.8
51.7	Head Press (kPa)	3577.7	3624.8	3673.3	3723.0	3774.0	3825.9
	Capacity (kW)	9.2	10.4	11.7	13.0	14.4	15.8
	Unit Power (kW)	6.2	6.3	6.3	6.4	6.4	6.5

Note: Performance data calculated at 8.3°C subcooling and 8.3°C superheat and does not include capacity loss due to refrigerant lines.



Performance Data

Table 30. Gross cooling capacities (MBH) TWA0764*A condensing unit only (IP)

Outdoor Temp (°F)		Suction Temperature (°F)					
		30	35	40	45	50	55
65	Head Press (psig)	263.1	270.0	277.2	284.9	292.9	301.3
	Capacity (Btuh/1000)	65.3	72.0	79.1	86.6	94.5	102.9
	Unit Power (kW)	3.9	4.0	4.0	4.0	4.0	4.0
75	Head Press (psig)	301.9	309.1	316.7	324.7	333.1	341.8
	Capacity (Btuh/1000)	61.7	68.0	74.8	81.9	89.3	97.2
	Unit Power (kW)	4.5	4.5	4.5	4.6	4.6	4.6
85	Head Press (psig)	344.4	351.9	359.8	368.2	376.8	385.8
	Capacity (Btuh/1000)	58.1	64.0	70.3	77.0	84.0	91.4
	Unit Power (kW)	5.1	5.1	5.2	5.2	5.2	5.2
95	Head Press (psig)	390.7	398.6	406.8	415.4	424.2	433.4
	Capacity (Btuh/1000)	54.2	59.8	65.7	72.0	78.6	85.5
	Unit Power (kW)	5.8	5.8	5.9	5.9	5.9	6.0
105	Head Press (psig)	441.2	449.3	457.8	466.6	475.7	485.0
	Capacity (Btuh/1000)	50.1	55.4	61.0	66.9	73.0	79.4
	Unit Power (kW)	6.6	6.6	6.7	6.7	6.7	6.8
115	Head Press (psig)	496.0	504.2	512.8	521.6	530.8	540.1
	Capacity (Btuh/1000)	45.9	50.8	56.0	61.5	67.3	73.2
	Unit Power (kW)	7.5	7.5	7.6	7.6	7.6	7.7
125	Head Press (psig)	555.1	563.2	571.5	580.1	589.0	597.9
	Capacity (Btuh/1000)	41.4	46.0	50.8	55.9	61.2	66.7
	Unit Power (kW)	8.5	8.5	8.6	8.6	8.6	8.6

Note: Performance data calculated at 15°F subcooling and 15°F superheat and does not include capacity loss due to refrigerant lines.

Table 31. Gross cooling capacities (kW) TWA0764*A condensing unit only (SI)

Outdoor Temp (°C)		Suction Temperature (°C)					
		-1.1	1.7	4.4	7.2	10	12.8
18.3	Head Press (kPa)	1814.1	1861.3	1911.3	1964.1	2019.5	2077.6
	Capacity (kW)	19.1	21.1	23.2	25.4	27.7	30.1
	Unit Power (kW)	3.9	4.0	4.0	4.0	4.0	4.0
23.9	Head Press (kPa)	2081.4	2131.0	2183.4	2238.6	2296.4	2356.6
	Capacity (kW)	18.1	19.9	21.9	24.0	26.2	28.5
	Unit Power (kW)	4.5	4.5	4.5	4.6	4.6	4.6
29.4	Head Press (kPa)	2374.4	2426.4	2481.0	2538.4	2598.1	2660.0
	Capacity (kW)	17.0	18.8	20.6	22.6	24.6	26.8
	Unit Power (kW)	5.1	5.1	5.2	5.2	5.2	5.2
35	Head Press (kPa)	2694.1	2748.1	2804.7	2863.8	2925.1	2988.5
	Capacity (kW)	15.9	17.5	19.3	21.1	23.0	25.0
	Unit Power (kW)	5.8	5.8	5.9	5.9	5.9	6.0
40.6	Head Press (kPa)	3042.1	3097.8	3156.2	3216.9	3279.6	3344.1
	Capacity (kW)	14.7	16.2	17.9	19.6	21.4	23.3
	Unit Power (kW)	6.6	6.6	6.7	6.7	6.7	6.8
46.1	Head Press (kPa)	3419.9	3476.4	3535.4	3596.5	3659.6	3723.7
	Capacity (kW)	13.5	14.9	16.4	18.0	19.7	21.5
	Unit Power (kW)	7.5	7.5	7.6	7.6	7.6	7.7
51.7	Head Press (kPa)	3827.2	3882.8	3940.6	3999.9	4060.7	4122.1
	Capacity (kW)	12.1	13.5	14.9	16.4	17.9	19.5
	Unit Power (kW)	8.5	8.5	8.6	8.6	8.6	8.6

Note: Performance data calculated at 8.3°C subcooling and 8.3°C superheat and does not include capacity loss due to refrigerant lines.

Table 32. Gross cooling capacities (MBH) TWA0764*D condensing unit only (IP)

Outdoor Temp (°F)		Suction Temperature (°F)					
		30	35	40	45	50	55
65	Head Press (psig)	250.9	257.3	264.0	271.0	278.3	286.0
	Capacity (Btuh/1000)	64.7	71.9	79.5	87.5	95.9	104.5
	Unit Power (kW)	3.8	3.8	3.9	3.9	4.0	4.0
75	Head Press (psig)	287.9	294.6	301.6	308.8	316.3	324.5
	Capacity (Btuh/1000)	61.0	67.8	75.0	82.5	90.4	98.5
	Unit Power (kW)	4.2	4.3	4.3	4.4	4.4	4.5
85	Head Press (psig)	328.2	335.2	342.4	349.9	357.6	366.2
	Capacity (Btuh/1000)	57.0	63.4	70.2	77.4	84.7	92.3
	Unit Power (kW)	4.8	4.8	4.9	4.9	4.9	5.0
95	Head Press (psig)	372.0	379.2	386.7	394.4	402.2	411.2
	Capacity (Btuh/1000)	52.8	58.9	65.3	72.0	78.9	86.0
	Unit Power (kW)	5.4	5.4	5.5	5.5	5.5	5.6
105	Head Press (psig)	419.4	426.8	434.5	442.3	450.3	459.4
	Capacity (Btuh/1000)	48.4	54.1	60.2	66.5	73.0	79.7
	Unit Power (kW)	6.1	6.1	6.1	6.2	6.2	6.3
115	Head Press (psig)	470.7	478.3	486.0	493.9	501.9	510.7
	Capacity (Btuh/1000)	43.8	49.3	55.0	60.9	67.0	73.2
	Unit Power (kW)	6.9	6.9	6.9	7.0	7.0	7.0
125	Head Press (psig)	525.8	533.3	540.9	548.6	556.3	564.1
	Capacity (Btuh/1000)	39.2	44.3	49.6	55.2	60.8	66.5
	Unit Power (kW)	7.8	7.8	7.9	7.9	7.9	7.9

Note: Performance data calculated at 15°F subcooling and 15°F superheat and does not include capacity loss due to refrigerant lines.

Table 33. Gross cooling capacities (kW) TWA0764*D condensing unit only (SI)

Outdoor Temp (°C)		Suction Temperature (°C)					
		-1.1	1.7	4.4	7.2	10	12.8
18.3	Head Press (kPa)	1729.6	1773.8	1820.3	1868.6	1918.6	1972.0
	Capacity (kW)	19.0	21.1	23.3	25.6	28.1	30.6
	Unit Power (kW)	3.8	3.8	3.9	3.9	4.0	4.0
23.9	Head Press (kPa)	1984.8	2031.0	2079.2	2129.2	2180.8	2237.4
	Capacity (kW)	17.9	19.9	22.0	24.2	26.5	28.9
	Unit Power (kW)	4.2	4.3	4.3	4.4	4.4	4.5
29.4	Head Press (kPa)	2262.7	2310.9	2360.9	2412.6	2465.5	2524.7
	Capacity (kW)	16.7	18.6	20.6	22.7	24.8	27.1
	Unit Power (kW)	4.8	4.8	4.9	4.9	4.9	5.0
35	Head Press (kPa)	2564.7	2614.6	2666.1	2719.0	2773.0	2834.8
	Capacity (kW)	15.5	17.3	19.1	21.1	23.1	25.2
	Unit Power (kW)	5.4	5.4	5.5	5.5	5.5	5.6
40.6	Head Press (kPa)	2891.6	2942.8	2995.7	3049.9	3104.8	3167.5
	Capacity (kW)	14.2	15.9	17.6	19.5	21.4	23.3
	Unit Power (kW)	6.1	6.1	6.1	6.2	6.2	6.3
46.1	Head Press (kPa)	3245.2	3297.4	3351.1	3405.5	3460.2	3521.0
	Capacity (kW)	12.8	14.4	16.1	17.9	19.6	21.4
	Unit Power (kW)	6.9	6.9	6.9	7.0	7.0	7.0
51.7	Head Press (kPa)	3625.4	3677.1	3729.7	3782.7	3835.6	3889.1
	Capacity (kW)	11.5	13.0	14.5	16.2	17.8	19.5
	Unit Power (kW)	7.8	7.8	7.9	7.9	7.9	7.9

Note: Performance data calculated at 8.3°C subcooling and 8.3°C superheat and does not include capacity loss due to refrigerant lines.



Performance Data

Table 34. Gross cooling capacities (MBH) TWA1014*A condensing unit only (IP)

Outdoor Temp (°F)		Suction Temperature (°F)					
		30	35	40	45	50	55
65	Head Press (psig)	260.5	266.2	271.8	277.6	283.3	288.9
	Capacity (Btuh/1000)	86.3	95.0	104.4	114.4	124.9	135.9
	Unit Power (kW)	5.4	5.5	5.5	5.6	5.7	5.7
75	Head Press (psig)	298.8	304.6	310.4	316.3	322.0	327.6
	Capacity (Btuh/1000)	81.8	90.1	99.0	108.5	118.4	128.7
	Unit Power (kW)	5.9	6.0	6.1	6.2	6.2	6.3
85	Head Press (psig)	340.8	346.8	352.7	358.7	364.4	369.9
	Capacity (Btuh/1000)	77.2	85.1	93.5	102.4	111.7	121.4
	Unit Power (kW)	6.6	6.6	6.7	6.8	6.8	6.9
95	Head Press (psig)	386.6	392.7	398.8	404.7	410.4	415.9
	Capacity (Btuh/1000)	72.2	79.7	87.6	96.0	104.8	113.9
	Unit Power (kW)	7.2	7.3	7.4	7.4	7.5	7.6
105	Head Press (psig)	436.5	442.7	448.8	454.7	460.3	465.5
	Capacity (Btuh/1000)	66.9	74.0	81.5	89.4	97.6	106.1
	Unit Power (kW)	8.0	8.0	8.1	8.2	8.3	8.3
115	Head Press (psig)	490.6	496.8	502.8	508.6	513.9	518.8
	Capacity (Btuh/1000)	61.3	68.0	75.0	82.4	90.1	98.0
	Unit Power (kW)	8.8	8.9	9.0	9.0	9.1	9.1
125	Head Press (psig)	549.0	555.0	560.7	566.0	570.9	575.1
	Capacity (Btuh/1000)	55.3	61.5	68.1	75.0	82.2	89.5
	Unit Power (kW)	9.7	9.8	9.9	9.9	10.0	10.0

Note: Performance data calculated at 15°F subcooling and 15°F superheat and does not include capacity loss due to refrigerant lines.

Table 35. Gross cooling capacities (kW) TWA1014*A condensing unit only (SI)

Outdoor Temp (°C)		Suction Temperature (°C)					
		-1.1	1.7	4.4	7.2	10	12.8
18.3	Head Press (kPa)	1796.2	1835.1	1874.3	1913.9	1953.2	1991.6
	Capacity (kW)	25.3	27.9	30.6	33.5	36.6	39.8
	Unit Power (kW)	5.4	5.5	5.5	5.6	5.7	5.7
23.9	Head Press (kPa)	2060.3	2100.2	2140.4	2180.6	2220.3	2258.8
	Capacity (kW)	24.0	26.4	29.0	31.8	34.7	37.7
	Unit Power (kW)	5.9	6.0	6.1	6.2	6.2	6.3
29.4	Head Press (kPa)	2349.9	2390.9	2432.0	2472.8	2512.7	2550.7
	Capacity (kW)	22.6	24.9	27.4	30.0	32.7	35.6
	Unit Power (kW)	6.6	6.6	6.7	6.8	6.8	6.9
35	Head Press (kPa)	2665.8	2707.7	2749.5	2790.4	2829.9	2867.3
	Capacity (kW)	21.2	23.4	25.7	28.1	30.7	33.4
	Unit Power (kW)	7.2	7.3	7.4	7.4	7.5	7.6
40.6	Head Press (kPa)	3009.4	3052.2	3094.2	3135.0	3173.9	3209.8
	Capacity (kW)	19.6	21.7	23.9	26.2	28.6	31.1
	Unit Power (kW)	8.0	8.0	8.1	8.2	8.3	8.3
46.1	Head Press (kPa)	3382.9	3425.6	3467.0	3506.5	3543.4	3576.9
	Capacity (kW)	18.0	19.9	22.0	24.2	26.4	28.7
	Unit Power (kW)	8.8	8.9	9.0	9.0	9.1	9.1
51.7	Head Press (kPa)	3785.4	3826.7	3866.0	3902.7	3936.0	3965.1
	Capacity (kW)	16.2	18.0	20.0	22.0	24.1	26.2
	Unit Power (kW)	9.7	9.8	9.9	9.9	10.0	10.0

Note: Performance data calculated at 8.3°C subcooling and 8.3°C superheat and does not include capacity loss due to refrigerant lines.

Table 36. Gross cooling capacities (MBH) TWA1014*D condensing unit only (IP)

Outdoor Temp (°F)		Suction Temperature (°F)					
		30	35	40	45	50	55
65	Head Press (psig)	249.0	254.7	260.7	266.9	273.4	280.2
	Capacity (Btuh/1000)	86.6	95.3	104.5	114.2	124.4	135.0
	Unit Power (kW)	4.9	5.0	5.0	5.1	5.2	5.2
75	Head Press (psig)	285.4	291.2	297.3	303.8	310.5	317.4
	Capacity (Btuh/1000)	80.7	88.8	97.4	106.5	116.0	126.0
	Unit Power (kW)	5.5	5.5	5.6	5.7	5.7	5.8
85	Head Press (psig)	325.9	331.9	338.3	344.9	351.8	358.9
	Capacity (Btuh/1000)	75.3	83.0	91.0	99.6	108.6	118.0
	Unit Power (kW)	6.2	6.2	6.3	6.4	6.4	6.5
95	Head Press (psig)	370.2	376.5	383.2	390.1	397.2	404.6
	Capacity (Btuh/1000)	70.0	77.2	84.9	93.0	101.5	110.3
	Unit Power (kW)	7.0	7.0	7.1	7.2	7.2	7.3
105	Head Press (psig)	418.1	424.8	431.8	439.0	446.5	454.1
	Capacity (Btuh/1000)	64.2	71.2	78.5	86.3	94.4	102.8
	Unit Power (kW)	7.8	7.9	8.0	8.0	8.1	8.1
115	Head Press (psig)	469.3	476.4	483.8	491.4	499.2	507.0
	Capacity (Btuh/1000)	57.7	64.5	71.6	79.1	86.8	94.8
	Unit Power (kW)	8.7	8.8	8.9	8.9	9.0	9.0
125	Head Press (psig)	523.4	530.9	538.7	546.6	554.6	562.6
	Capacity (Btuh/1000)	50.3	56.9	63.9	71.1	78.5	86.2
	Unit Power (kW)	9.6	9.7	9.8	9.9	9.9	10.0

Note: Performance data calculated at 15°F subcooling and 15°F superheat and does not include capacity loss due to refrigerant lines.

Table 37. Gross cooling capacities (kW) TWA1014*D condensing unit only (SI)

Outdoor Temp (°C)		Suction Temperature (°C)					
		-1.1	1.7	4.4	7.2	10	12.8
18.3	Head Press (kPa)	1716.9	1756.1	1797.2	1840.2	1885.3	1932.2
	Capacity (kW)	25.4	27.9	30.6	33.5	36.5	39.6
	Unit Power (kW)	4.9	5.0	5.0	5.1	5.2	5.2
23.9	Head Press (kPa)	1967.7	2007.8	2050.1	2094.4	2140.6	2188.6
	Capacity (kW)	23.6	26.0	28.5	31.2	34.0	36.9
	Unit Power (kW)	5.5	5.5	5.6	5.7	5.7	5.8
29.4	Head Press (kPa)	2246.7	2288.4	2332.2	2378.0	2425.6	2474.9
	Capacity (kW)	22.1	24.3	26.7	29.2	31.8	34.6
	Unit Power (kW)	6.2	6.2	6.3	6.4	6.4	6.5
35	Head Press (kPa)	2552.4	2596.2	2641.9	2689.4	2738.7	2789.3
	Capacity (kW)	20.5	22.6	24.9	27.3	29.7	32.3
	Unit Power (kW)	7.0	7.0	7.1	7.2	7.2	7.3
40.6	Head Press (kPa)	2882.4	2928.8	2976.9	3027.0	3078.3	3130.8
	Capacity (kW)	18.8	20.9	23.0	25.3	27.7	30.1
	Unit Power (kW)	7.8	7.9	8.0	8.0	8.1	8.1
46.1	Head Press (kPa)	3235.4	3284.8	3335.9	3388.3	3441.8	3495.9
	Capacity (kW)	16.9	18.9	21.0	23.2	25.4	27.8
	Unit Power (kW)	8.7	8.8	8.9	8.9	9.0	9.0
51.7	Head Press (kPa)	3608.4	3660.7	3714.2	3768.7	3823.8	3878.9
	Capacity (kW)	14.8	16.7	18.7	20.8	23.0	25.3
	Unit Power (kW)	9.6	9.7	9.8	9.9	9.9	10.0

Note: Performance data calculated at 8.3°C subcooling and 8.3°C superheat and does not include capacity loss due to refrigerant lines.



Performance Data

Table 38. Gross cooling capacities (MBH) TWA1564*D condensing unit only (IP)

Outdoor Temp (°F)		Suction Temperature (°F)					
		30	35	40	45	50	55
65	Head Press (psig)	230.1	234.1	238.4	243.1	248.1	253.5
	Capacity (Btuh/1000)	137.9	151.4	166.0	181.6	198.4	216.3
	Unit Power (kW)	8.7	8.9	9.1	9.3	9.5	9.8
75	Head Press (psig)	266.3	270.7	275.4	280.5	285.8	291.5
	Capacity (Btuh/1000)	130.8	144.0	158.1	173.2	189.5	206.9
	Unit Power (kW)	9.5	9.7	9.9	10.1	10.3	10.6
85	Head Press (psig)	306.2	310.9	315.9	321.2	326.9	333.0
	Capacity (Btuh/1000)	123.1	135.8	149.4	164.0	179.6	196.4
	Unit Power (kW)	10.5	10.6	10.8	11.0	11.2	11.5
95	Head Press (psig)	349.8	354.8	360.0	365.6	371.6	378.0
	Capacity (Btuh/1000)	114.9	127.0	140.0	154.0	169.0	185.1
	Unit Power (kW)	11.5	11.7	11.8	12.0	12.2	12.5
105	Head Press (psig)	397.4	402.6	408.1	413.9	420.1	426.6
	Capacity (Btuh/1000)	106.3	117.8	130.2	143.5	157.8	173.1
	Unit Power (kW)	12.7	12.8	13.0	13.2	13.4	13.6
115	Head Press (psig)	449.3	454.6	460.3	466.2	472.6	479.3
	Capacity (Btuh/1000)	97.6	108.4	120.1	132.7	146.2	160.6
	Unit Power (kW)	14.0	14.2	14.4	14.5	14.7	15.0
125	Head Press (psig)	505.8	511.1	516.7	522.7	529.0	535.7
	Capacity (Btuh/1000)	88.7	98.9	109.8	121.5	134.2	147.7
	Unit Power (kW)	15.6	15.7	15.9	16.1	16.2	16.5

Note: Performance data calculated at 15°F subcooling and 15°F superheat and does not include capacity loss due to refrigerant lines.

Table 39. Gross cooling capacities (kW) TWA1564*D condensing unit only (SI)

Outdoor Temp (°C)		Suction Temperature (°C)					
		-1.1	1.7	4.4	7.2	10	12.8
18.3	Head Press (kPa)	1586.2	1614.0	1644.1	1676.3	1710.8	1747.8
	Capacity (kW)	40.4	44.4	48.6	53.2	58.1	63.4
	Unit Power (kW)	8.7	8.9	9.1	9.3	9.5	9.8
23.9	Head Press (kPa)	1836.4	1866.7	1899.1	1933.7	1970.7	2010.2
	Capacity (kW)	38.3	42.2	46.3	50.8	55.5	60.6
	Unit Power (kW)	9.5	9.7	9.9	10.1	10.3	10.6
29.4	Head Press (kPa)	2111.2	2143.5	2178.0	2214.8	2254.0	2295.9
	Capacity (kW)	36.1	39.8	43.8	48.1	52.6	57.6
	Unit Power (kW)	10.5	10.6	10.8	11.0	11.2	11.5
35	Head Press (kPa)	2411.8	2445.9	2482.3	2521.0	2562.3	2606.0
	Capacity (kW)	33.7	37.2	41.0	45.1	49.5	54.2
	Unit Power (kW)	11.5	11.7	11.8	12.0	12.2	12.5
40.6	Head Press (kPa)	2740.0	2775.6	2813.4	2853.6	2896.4	2941.6
	Capacity (kW)	31.2	34.5	38.2	42.1	46.2	50.7
	Unit Power (kW)	12.7	12.8	13.0	13.2	13.4	13.6
46.1	Head Press (kPa)	3098.0	3134.5	3173.4	3214.6	3258.4	3304.9
	Capacity (kW)	28.6	31.8	35.2	38.9	42.8	47.1
	Unit Power (kW)	14.0	14.2	14.4	14.5	14.7	15.0
51.7	Head Press (kPa)	3487.4	3523.8	3562.5	3603.8	3647.4	3693.5
	Capacity (kW)	26.0	29.0	32.2	35.6	39.3	43.3
	Unit Power (kW)	15.6	15.7	15.9	16.1	16.2	16.5

Note: Performance data calculated at 8.3°C subcooling and 8.3°C superheat and does not include capacity loss due to refrigerant lines.

Table 40. Gross cooling capacities (MBH) TWA2014*D condensing unit only (IP)

Outdoor Temp (°F)		Suction Temperature (°F)					
		30	35	40	45	50	55
65	Head Press (psig)	252.9	259.0	265.6	272.5	279.9	287.8
	Capacity (Btuh/1000)	208.6	228.8	250.3	273.1	297.2	322.7
	Unit Power (kW)	12.6	12.8	13.1	13.4	13.7	14.1
75	Head Press (psig)	289.6	296.0	302.8	310.1	317.8	326.0
	Capacity (Btuh/1000)	197.9	217.5	238.3	260.3	283.5	307.9
	Unit Power (kW)	13.8	14.0	14.3	14.6	14.9	15.3
85	Head Press (psig)	329.5	336.2	343.3	350.8	358.8	367.3
	Capacity (Btuh/1000)	186.0	204.8	224.8	245.8	268.0	291.3
	Unit Power (kW)	15.1	15.4	15.6	15.9	16.2	16.6
95	Head Press (psig)	372.8	379.8	387.1	394.9	403.0	411.7
	Capacity (Btuh/1000)	173.0	190.9	210.0	230.0	251.1	273.1
	Unit Power (kW)	16.7	16.9	17.2	17.4	17.7	18.1
105	Head Press (psig)	419.7	426.8	434.3	442.2	450.6	459.3
	Capacity (Btuh/1000)	159.2	176.2	194.1	213.1	233.0	253.8
	Unit Power (kW)	18.5	18.7	18.9	19.2	19.4	19.8
115	Head Press (psig)	470.4	477.6	485.2	493.1	501.4	510.2
	Capacity (Btuh/1000)	144.7	160.7	177.6	195.4	214.0	233.4
	Unit Power (kW)	20.5	20.7	20.9	21.1	21.4	21.7
125	Head Press (psig)	524.9	531.9	539.3	547.1	555.1	563.6
	Capacity (Btuh/1000)	129.8	144.6	160.3	176.7	193.9	211.8
	Unit Power (kW)	22.7	22.9	23.1	23.3	23.6	23.8

Note: Performance data calculated at 15°F subcooling and 15°F superheat and does not include capacity loss due to refrigerant lines.

Table 41. Gross cooling capacities (kW) TWA2014*D condensing unit only (SI)

Outdoor Temp (°C)		Suction Temperature (°C)					
		-1.1	1.7	4.4	7.2	10	12.8
18.3	Head Press (kPa)	1744.0	1786.0	1830.9	1878.8	1929.9	1984.5
	Capacity (kW)	61.1	67.1	73.4	80.0	87.1	94.6
	Unit Power (kW)	12.6	12.8	13.1	13.4	13.7	14.1
23.9	Head Press (kPa)	1996.5	2040.8	2087.9	2137.9	2191.1	2247.6
	Capacity (kW)	58.0	63.7	69.8	76.3	83.1	90.2
	Unit Power (kW)	13.8	14.0	14.3	14.6	14.9	15.3
29.4	Head Press (kPa)	2271.6	2317.9	2367.0	2419.0	2474.0	2532.2
	Capacity (kW)	54.5	60.0	65.9	72.0	78.5	85.4
	Unit Power (kW)	15.1	15.4	15.6	15.9	16.2	16.6
35	Head Press (kPa)	2570.4	2618.3	2668.9	2722.4	2778.8	2838.3
	Capacity (kW)	50.7	56.0	61.5	67.4	73.6	80.0
	Unit Power (kW)	16.7	16.9	17.2	17.4	17.7	18.1
40.6	Head Press (kPa)	2893.7	2942.7	2994.5	3049.1	3106.6	3167.1
	Capacity (kW)	46.6	51.6	56.9	62.5	68.3	74.4
	Unit Power (kW)	18.5	18.7	18.9	19.2	19.4	19.8
46.1	Head Press (kPa)	3243.4	3292.8	3345.0	3399.8	3457.3	3517.4
	Capacity (kW)	42.4	47.1	52.0	57.3	62.7	68.4
	Unit Power (kW)	20.5	20.7	20.9	21.1	21.4	21.7
51.7	Head Press (kPa)	3618.7	3667.3	3718.3	3771.8	3827.6	3885.7
	Capacity (kW)	38.0	42.4	47.0	51.8	56.8	62.1
	Unit Power (kW)	22.7	22.9	23.1	23.3	23.6	23.8

Note: Performance data calculated at 8.3°C subcooling and 8.3°C superheat and does not include capacity loss due to refrigerant lines.



Performance Data

Gross Heating Capacities

Table 42. Gross heating capacities (MBH) - TWA0604*A heat pump with TWE0764*A air handler at 2000 CFM (IP)

Outdoor Temp (°F)	Integrated Heating Capacity (MBH) at Indicated Indoor Dry Bulb Temp (°F)				Total Power (kW) at Indicated Indoor Dry Bulb Temp (°F)			
	60	70	75	80	60	70	75	80
-18	20.1	18.4	17.6	16.7	3.9	4.3	4.5	4.7
-13	22.0	20.5	19.7	18.8	4.0	4.4	4.5	4.7
-8	24.3	22.8	22.0	21.1	4.1	4.4	4.6	4.8
-3	26.8	25.3	24.5	23.6	4.1	4.5	4.7	4.9
2	29.5	28.0	27.2	26.4	4.2	4.6	4.8	5.0
7	32.4	31.0	30.1	29.3	4.3	4.6	4.9	5.1
12	35.6	34.1	33.3	32.4	4.3	4.7	4.9	5.2
17	38.9	37.4	36.5	35.7	4.4	4.8	5.0	5.2
22	42.4	40.8	39.9	39.0	4.5	4.9	5.1	5.3
27	46.2	44.5	43.6	42.6	4.6	5.0	5.2	5.4
32	50.3	48.4	47.4	46.4	4.7	5.1	5.3	5.5
37	54.3	52.3	51.3	50.3	4.7	5.2	5.4	5.6
42	58.6	56.4	55.3	54.3	4.8	5.3	5.5	5.7
47	63.0	60.8	59.6	58.5	4.9	5.4	5.6	5.8
52	67.7	65.3	64.1	62.8	5.0	5.5	5.7	5.9
57	72.6	70.0	68.6	67.3	5.1	5.6	5.8	6.1
62	77.6	74.7	73.3	71.9	5.3	5.7	5.9	6.2
67	82.7	79.6	78.1	76.6	5.4	5.8	6.1	6.3
72	87.8	84.6	83.0	81.4	5.5	6.0	6.2	6.5

Notes:

1. Net heating capacity and power include indoor fan heat at AHRI ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
2. Integrated heating capacities and power include the effects of defrost in the frost region. All heating capacities and power are at 70% outdoor relative humidity and demand defrost cycle.

Table 43. Gross heating capacities (kW) TWA0604*A heat pump with TWE0764*A air handler at 2000 CFM (SI)

Outdoor Temp (°C)	Integrated Heating Capacity (kW) at Indicated Indoor Dry Bulb Temp (°C)				Total Power (kW) at Indicated Indoor Dry Bulb Temp (°C)			
	15	21	24	27	15	21	24	27
-28	5.8	5.4	5.1	4.8	3.7	4.1	4.3	4.5
-25	6.4	5.9	5.7	5.4	3.8	4.2	4.4	4.6
-22	7.0	6.6	6.4	6.1	3.9	4.3	4.5	4.7
-19	7.7	7.3	7.1	6.8	3.9	4.3	4.5	4.8
-17	8.5	8.1	7.8	7.6	4.0	4.4	4.6	4.8
-14	9.3	8.9	8.7	8.4	4.1	4.5	4.7	4.9
-11	10.2	9.8	9.5	9.3	4.2	4.6	4.8	5.0
-8	11.2	10.7	10.5	10.2	4.2	4.7	4.9	5.1
-6	12.2	11.7	11.5	11.2	4.3	4.7	5.0	5.2
-3	13.3	12.8	12.5	12.2	4.4	4.8	5.1	5.3
0	14.5	13.9	13.6	13.4	4.5	4.9	5.2	5.4
3	15.6	15.0	14.8	14.5	4.6	5.0	5.3	5.5
6	16.8	16.2	15.9	15.6	4.7	5.1	5.4	5.6
8	18.1	17.5	17.2	16.8	4.8	5.2	5.5	5.7
11	19.5	18.8	18.5	18.1	4.9	5.4	5.6	5.9
14	20.9	20.2	19.8	19.4	5.0	5.5	5.7	6.0
17	22.4	21.6	21.2	20.8	5.1	5.6	5.9	6.1
19	23.8	23.0	22.6	22.2	5.3	5.8	6.0	6.3
22	25.4	24.5	24.0	23.6	5.4	5.9	6.1	6.4

Notes:

1. Net heating capacity and power include indoor fan heat at AHRI ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
2. Integrated heating capacities and power include the effects of defrost in the frost region. All heating capacities and power are at 70% outdoor relative humidity and demand defrost cycle.

Table 44. Gross heating capacities (MBH) - TWA0604*D heat pump with TWE0724*B air handler at 2000 CFM (IP)

Outdoor Temp (°F)	Integrated Heating Capacity (MBH) at Indicated Indoor Dry Bulb Temp (°F)				Total Power (kW) at Indicated Indoor Dry Bulb Temp (°F)			
	60	70	75	80	60	70	75	80
-18	11.3	9.5	9.8	9.7	3.4	3.6	3.8	4.0
-13	13.7	12.1	11.1	10.1	3.4	3.7	3.9	4.1
-8	16.5	14.9	13.9	12.9	3.5	3.8	4.0	4.2
-3	19.2	17.5	16.5	15.7	3.6	3.9	4.1	4.3
2	21.8	20.2	19.5	18.7	3.7	4.0	4.2	4.4
7	25.2	23.4	22.6	21.9	3.8	4.1	4.3	4.5
12	27.7	26.4	25.7	25.0	3.8	4.2	4.4	4.6
17	31.0	29.7	29.0	28.2	3.9	4.3	4.5	4.7
22	34.5	33.1	32.4	31.6	3.9	4.3	4.5	4.8
27	38.1	36.7	35.9	35.1	4.0	4.4	4.6	4.8
32	41.9	40.3	39.5	38.6	4.0	4.4	4.7	4.9
37	45.7	44.0	43.1	42.2	4.1	4.5	4.7	5.0
42	49.5	47.7	46.8	45.8	4.1	4.5	4.8	5.0
47	53.6	51.7	50.7	49.7	4.2	4.6	4.8	5.1
52	58.0	56.0	54.9	53.8	4.2	4.6	4.9	5.1
57	62.7	60.4	59.3	58.1	4.3	4.7	5.0	5.2
62	67.5	65.0	63.8	62.5	4.3	4.8	5.0	5.3
67	72.5	69.7	68.4	67.1	4.4	4.9	5.1	5.4
72	77.7	74.8	73.3	71.9	4.5	5.0	5.2	5.5

Notes:

1. Net heating capacity and power include indoor fan heat at AHRI ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
2. Integrated heating capacities and power include the effects of defrost in the frost region. All heating capacities and power are at 70% outdoor relative humidity and demand defrost cycle.

Table 45. Gross heating capacities (kW) TWA0604*D heat pump with TWE0724*B air handler at 2000 CFM (SI)

Outdoor Temp (°C)	Integrated Heating Capacity (kW) at Indicated Indoor Dry Bulb Temp (°C)				Total Power (kW) at Indicated Indoor Dry Bulb Temp (°C)			
	15	21	24	27	15	21	24	27
-28	3.3	2.8	2.9	2.8	3.4	3.6	3.8	4.0
-25	4.0	3.5	3.3	2.9	3.4	3.7	3.9	4.1
-22	4.8	4.4	4.1	3.8	3.5	3.8	4.0	4.2
-19	5.6	5.1	4.8	4.6	3.6	3.9	4.1	4.3
-17	6.4	5.9	5.7	5.5	3.7	4.0	4.2	4.4
-14	7.4	6.8	6.6	6.4	3.8	4.1	4.3	4.5
-11	8.1	7.7	7.5	7.3	3.8	4.2	4.4	4.6
-8	9.1	8.7	8.5	8.3	3.9	4.3	4.5	4.7
-6	10.1	9.7	9.5	9.3	3.9	4.3	4.5	4.8
-3	11.2	10.7	10.5	10.3	4.0	4.4	4.6	4.8
0	12.3	11.8	11.6	11.3	4.0	4.4	4.7	4.9
3	13.4	12.9	12.6	12.4	4.1	4.5	4.7	5.0
6	14.5	14.0	13.7	13.4	4.1	4.5	4.8	5.0
8	15.7	15.1	14.9	14.6	4.2	4.6	4.8	5.1
11	17.0	16.4	16.1	15.8	4.2	4.6	4.9	5.1
14	18.4	17.7	17.4	17.0	4.3	4.7	5.0	5.2
17	19.8	19.1	18.7	18.3	4.3	4.8	5.0	5.3
19	21.2	20.4	20.0	19.7	4.4	4.9	5.1	5.4
22	22.8	21.9	21.5	21.1	4.5	5.0	5.2	5.5

Notes:

1. Net heating capacity and power include indoor fan heat at AHRI ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
2. Integrated heating capacities and power include the effects of defrost in the frost region. All heating capacities and power are at 70% outdoor relative humidity and demand defrost cycle.



Performance Data

Table 46. Gross heating capacities (MBH) TWA0764*A heat pump with TWE0764*A air handler at 2500 CFM (IP)

Outdoor Temp (°F)	Integrated Heating Capacity (MBH) at Indicated Indoor Dry Bulb Temp (°F)				Total Power (kW) at Indicated Indoor Dry Bulb Temp (°F)			
	60	70	75	80	60	70	75	80
-18	21.6	21.7	21.8	21.9	5.2	5.8	6.2	6.6
-13	24.5	24.6	24.7	24.8	5.2	5.8	6.2	6.6
-8	27.6	27.7	27.7	27.9	5.2	5.8	6.2	6.6
-3	30.9	30.9	31.0	31.1	5.2	5.8	6.2	6.6
2	34.2	34.2	34.3	34.3	5.2	5.9	6.2	6.6
7	37.5	37.4	37.4	37.4	5.2	5.9	6.2	6.6
12	41.2	40.9	40.9	40.8	5.2	5.9	6.3	6.7
17	45.0	44.6	44.5	44.4	5.3	5.9	6.3	6.7
22	49.0	48.5	48.3	48.2	5.3	6.0	6.4	6.8
27	53.2	52.5	52.3	52.1	5.4	6.0	6.4	6.8
32	57.6	56.8	56.4	56.1	5.4	6.1	6.4	6.8
37	62.0	61.0	60.6	60.2	5.4	6.1	6.5	6.9
42	66.4	65.3	64.8	64.3	5.5	6.2	6.5	6.9
47	71.2	69.8	69.1	68.6	5.5	6.2	6.6	7.0
52	76.1	74.4	73.6	72.9	5.6	6.2	6.6	7.0
57	80.8	78.9	78.0	77.1	5.6	6.3	6.7	7.1
62	86.3	84.0	82.9	81.9	5.7	6.4	6.7	7.1
67	91.8	89.2	87.9	86.6	5.7	6.4	6.8	7.2
72	96.3	94.0	92.1	90.9	6.0	6.5	6.9	7.2

Notes:

1. Net heating capacity and power include indoor fan heat at AHRI ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
2. Integrated heating capacities and power include the effects of defrost in the frost region. All heating capacities and power are at 70% outdoor relative humidity and demand defrost cycle.

Table 47. Gross heating capacities (kW) TWA0764*A heat pump with TWE0764*A air handler at 2500 CFM (SI)

Outdoor Temp (°C)	Integrated Heating Capacity (kW) at Indicated Indoor Dry Bulb Temp (°C)				Total Power (kW) at Indicated Indoor Dry Bulb Temp (°C)			
	15	21	24	27	15	21	24	27
-28	5.0	5.0	4.9	4.7	4.1	4.5	4.7	4.9
-25	6.3	6.0	5.8	5.7	4.2	4.6	4.8	5.0
-22	6.9	6.8	6.7	6.6	4.3	4.7	4.9	5.1
-19	7.7	7.6	7.7	7.5	4.4	4.8	5.0	5.3
-17	8.8	8.7	8.6	8.5	4.4	4.9	5.1	5.4
-14	9.7	9.6	9.4	9.3	4.5	5.0	5.2	5.5
-11	10.7	10.6	10.5	10.3	4.6	5.1	5.3	5.6
-8	11.8	11.6	11.5	11.3	4.7	5.2	5.4	5.6
-6	12.9	12.7	12.6	12.4	4.8	5.2	5.5	5.7
-3	14.1	13.9	13.7	13.5	4.8	5.3	5.6	5.8
0	15.3	15.0	14.9	14.7	4.9	5.4	5.7	5.9
3	16.6	16.2	16.0	15.8	5.0	5.5	5.7	6.0
6	17.8	17.4	17.2	16.9	5.1	5.6	5.8	6.1
8	19.1	18.7	18.4	18.1	5.2	5.7	5.9	6.2
11	20.5	20.0	19.7	19.4	5.3	5.8	6.0	6.3
14	22.0	21.4	21.1	20.8	5.4	5.9	6.2	6.5
17	23.6	23.0	22.6	22.2	5.5	6.0	6.3	6.6
19	25.4	24.6	24.2	23.8	5.7	6.2	6.5	6.7
22	27.1	26.3	25.8	25.3	5.8	6.4	6.6	6.9

Notes:

1. Net heating capacity and power include indoor fan heat at AHRI ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
2. Integrated heating capacities and power include the effects of defrost in the frost region. All heating capacities and power are at 70% outdoor relative humidity and demand defrost cycle.

Table 48. Gross heating capacities (MBH) TWA0764*D heat pump with TWE0764*B air handler at 2500 CFM (IP)

Outdoor Temp (°F)	Integrated Heating Capacity (MBH) at Indicated Indoor Dry Bulb Temp (°F)				Total Power (kW) at Indicated Indoor Dry Bulb Temp (°F)			
	60	70	75	80	60	70	75	80
-18	13.5	12.8	12.3	11.8	4.5	5.1	5.5	5.8
-13	16.5	16.0	15.6	15.2	4.6	5.2	5.5	5.8
-8	19.8	19.3	18.9	18.5	4.6	5.2	5.5	5.8
-3	23.3	22.7	22.4	21.9	4.6	5.2	5.5	5.9
2	26.9	26.4	26.0	25.5	4.7	5.2	5.6	5.9
7	30.7	30.0	29.6	29.1	4.7	5.3	5.6	5.9
12	34.6	33.8	33.3	32.8	4.8	5.3	5.6	6.0
17	38.8	37.8	37.2	36.7	4.8	5.4	5.7	6.0
22	43.2	42.0	41.4	40.8	4.9	5.4	5.7	6.1
27	47.7	46.3	45.6	44.9	4.9	5.5	5.8	6.1
32	52.5	50.9	50.0	49.2	5.0	5.6	5.9	6.2
37	57.2	55.4	54.5	53.5	5.1	5.6	5.9	6.2
42	62.0	59.9	58.9	57.9	5.1	5.7	6.0	6.3
47	67.0	64.6	63.5	62.4	5.2	5.8	6.1	6.4
52	72.2	69.7	68.5	67.3	5.3	5.8	6.1	6.5
57	77.7	74.9	73.5	72.2	5.4	5.9	6.2	6.5
62	83.4	80.4	78.9	77.5	5.4	6.0	6.3	6.6
67	89.4	86.1	84.5	82.9	5.5	6.1	6.4	6.7
72	95.4	91.7	89.8	85.5	5.6	6.2	6.5	7.1

Notes:

1. Net heating capacity and power include indoor fan heat at AHRI ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
2. Integrated heating capacities and power include the effects of defrost in the frost region. All heating capacities and power are at 70% outdoor relative humidity and demand defrost cycle.

Table 49. Gross heating capacities (kW) TWA0764*D heat pump with TWE0764*B air handler at 2500 CFM (SI)

Outdoor Temp (°C)	Integrated Heating Capacity (kW) at Indicated Indoor Dry Bulb Temp (°C)				Total Power (kW) at Indicated Indoor Dry Bulb Temp (°C)			
	15	21	24	27	15	21	24	27
-28	3.9	3.7	3.6	3.4	4.5	5.1	5.5	5.8
-25	4.8	4.7	4.6	4.4	4.6	5.2	5.5	5.8
-22	5.8	5.7	5.5	5.4	4.6	5.2	5.5	5.8
-19	6.8	6.7	6.6	6.4	4.6	5.2	5.5	5.9
-17	7.9	7.7	7.6	7.5	4.7	5.2	5.6	5.9
-14	9.0	8.8	8.7	8.5	4.7	5.3	5.6	5.9
-11	10.1	9.9	9.8	9.6	4.8	5.3	5.6	6.0
-8	11.4	11.1	10.9	10.8	4.8	5.4	5.7	6.0
-6	12.7	12.3	12.1	11.9	4.9	5.4	5.7	6.1
-3	14.0	13.6	13.4	13.2	4.9	5.5	5.8	6.1
0	15.4	14.9	14.7	14.4	5.0	5.6	5.9	6.2
3	16.8	16.2	16.0	15.7	5.1	5.6	5.9	6.2
6	18.2	17.6	17.3	17.0	5.1	5.7	6.0	6.3
8	19.6	18.9	18.6	18.3	5.2	5.8	6.1	6.4
11	21.1	20.4	20.1	19.7	5.3	5.8	6.1	6.5
14	22.8	22.0	21.6	21.2	5.4	5.9	6.2	6.5
17	24.4	23.6	23.1	22.7	5.4	6.0	6.3	6.6
19	26.2	25.2	24.8	24.3	5.5	6.1	6.4	6.7
22	28.0	26.9	26.3	25.1	5.6	6.2	6.5	7.1

Notes:

1. Net heating capacity and power include indoor fan heat at AHRI ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
2. Integrated heating capacities and power include the effects of defrost in the frost region. All heating capacities and power are at 70% outdoor relative humidity and demand defrost cycle.



Performance Data

Table 50. Gross heating capacities (MBH) TWA1014*A heat pump with TWE1014*A air handler at 3350 CFM (IP)

Outdoor Temp (°F)	Integrated Heating Capacity (MBH) at Indicated Indoor Dry Bulb Temp (°F)				Total Power (kW) at Indicated Indoor Dry Bulb Temp (°F)			
	60	70	75	80	60	70	75	80
-18	25.4	25.3	25.3	25.2	6.4	7.0	7.3	7.7
-13	29.8	29.6	29.5	29.3	6.5	7.1	7.5	7.8
-8	34.4	34.1	34.0	33.8	6.6	7.3	7.6	8.0
-3	39.2	38.8	38.6	38.3	6.8	7.4	7.8	8.1
2	44.1	43.6	43.3	43.0	6.9	7.5	7.9	8.3
7	49.2	48.6	48.2	48.0	7.0	7.7	8.0	8.4
12	54.3	53.6	53.2	52.8	7.1	7.8	8.1	8.5
17	59.9	59.1	58.5	58.0	7.2	7.9	8.3	8.6
22	65.8	64.7	64.1	63.5	7.3	8.0	8.4	8.7
27	71.9	70.6	70.0	69.3	7.4	8.1	8.5	8.8
32	78.5	77.0	76.3	75.4	7.5	8.2	8.6	8.9
37	84.9	83.1	82.2	81.3	7.6	8.3	8.6	9.0
42	91.5	89.5	88.5	87.5	7.7	8.4	8.7	9.1
47	98.5	96.1	95.0	93.8	7.8	8.4	8.8	9.2
52	105.6	103.0	101.7	100.3	7.8	8.5	8.9	9.3
57	112.7	109.8	108.3	106.7	7.9	8.6	8.9	9.3
62	119.6	116.2	114.5	112.8	8.0	8.6	9.0	9.4
67	126.9	123.2	121.4	119.5	8.1	8.7	9.1	9.5
72	134.9	130.8	128.8	126.8	8.2	8.9	9.3	9.6

Notes:

1. Net heating capacity and power include indoor fan heat at AHRI ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
2. Integrated heating capacities and power include the effects of defrost in the frost region. All heating capacities and power are at 70% outdoor relative humidity and demand defrost cycle.

Table 51. Gross heating capacities (kW) TWA1014*A heat pump with TWE1014*A air handler at 3350 CFM (SI)

Outdoor Temp (°C)	Integrated Heating Capacity (kW) at Indicated Indoor Dry Bulb Temp (°C)				Total Power (kW) at Indicated Indoor Dry Bulb Temp (°C)			
	15	21	24	27	15	21	24	27
-28	7.4	7.4	7.4	7.4	6.4	7.0	7.3	7.7
-25	8.7	8.7	8.6	8.6	6.5	7.1	7.5	7.8
-22	10.1	10.0	10.0	9.9	6.6	7.3	7.6	8.0
-19	11.5	11.4	11.3	11.2	6.8	7.4	7.8	8.1
-17	12.9	12.8	12.7	12.6	6.9	7.5	7.9	8.3
-14	14.4	14.3	14.1	14.1	7.0	7.7	8.0	8.4
-11	15.9	15.7	15.6	15.5	7.1	7.8	8.1	8.5
-8	17.6	17.3	17.2	17.0	7.2	7.9	8.3	8.6
-6	19.3	19.0	18.8	18.6	7.3	8.0	8.4	8.7
-3	21.1	20.7	20.5	20.3	7.4	8.1	8.5	8.8
0	23.0	22.6	22.4	22.1	7.5	8.2	8.6	8.9
3	24.9	24.4	24.1	23.8	7.6	8.3	8.6	9.0
6	26.8	26.2	25.9	25.6	7.7	8.4	8.7	9.1
8	28.9	28.2	27.8	27.5	7.8	8.4	8.8	9.2
11	31.0	30.2	29.8	29.4	7.8	8.5	8.9	9.3
14	33.0	32.2	31.7	31.3	7.9	8.6	8.9	9.3
17	35.1	34.1	33.6	33.1	8.0	8.6	9.0	9.4
19	37.2	36.1	35.6	35.0	8.1	8.7	9.1	9.5
22	39.5	38.3	37.7	37.1	8.2	8.9	9.3	9.6

Notes:

1. Net heating capacity and power include indoor fan heat at AHRI ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
2. Integrated heating capacities and power include the effects of defrost in the frost region. All heating capacities and power are at 70% outdoor relative humidity and demand defrost cycle.

Table 52. Gross heating capacities (MBH) TWA1014*D heat pump with TWE1014*B air handler at 3350 CFM (IP)

Outdoor Temp (°F)	Integrated Heating Capacity (MBH) at Indicated Indoor Dry Bulb Temp (°F)				Total Power (kW) at Indicated Indoor Dry Bulb Temp (°F)			
	60	70	75	80	60	70	75	80
-18	23.1	22.5	22.2	21.6	5.9	6.4	6.7	7.1
-13	26.7	26.4	26.1	25.5	5.9	6.6	6.9	7.2
-8	31.0	30.6	30.2	29.6	6.1	6.7	7.0	7.4
-3	35.5	34.9	34.4	33.8	6.2	6.8	7.2	7.5
2	40.3	39.4	38.9	38.3	6.3	6.9	7.3	7.7
7	45.3	44.2	43.6	42.8	6.3	7.0	7.4	7.8
12	50.2	48.9	48.4	47.6	6.4	7.1	7.5	7.9
17	55.6	54.0	53.2	52.4	6.5	7.2	7.6	8.0
22	61.2	59.4	58.5	57.6	6.6	7.3	7.7	8.2
27	67.1	65.1	64.1	63.1	6.7	7.4	7.8	8.3
32	73.3	70.9	69.9	68.8	6.8	7.5	7.9	8.4
37	79.5	77.0	75.8	74.6	6.9	7.6	8.0	8.5
42	85.9	83.1	81.8	80.6	7.0	7.7	8.1	8.6
47	92.6	89.5	88.1	86.7	7.1	7.8	8.2	8.7
52	99.7	96.2	94.7	93.2	7.2	7.9	8.3	8.8
57	106.8	103.0	101.3	99.7	7.3	8.0	8.4	8.9
62	114.0	109.9	108.0	106.2	7.4	8.1	8.5	9.0
67	121.0	116.6	114.5	112.6	7.5	8.2	8.6	9.1
72	127.8	122.9	120.7	118.6	7.6	8.3	8.7	9.1

Notes:

1. Net heating capacity and power include indoor fan heat at AHRI ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
2. Integrated heating capacities and power include the effects of defrost in the frost region. All heating capacities and power are at 70% outdoor relative humidity and demand defrost cycle.

Table 53. Gross heating capacities (kW) TWA1014*D heat pump with TWE1014*B air handler at 3350 CFM (SI)

Outdoor Temp (°C)	Integrated Heating Capacity (kW) at Indicated Indoor Dry Bulb Temp (°C)				Total Power (kW) at Indicated Indoor Dry Bulb Temp (°C)			
	15	21	24	27	15	21	24	27
-28	6.8	6.6	6.5	6.3	5.9	6.4	6.7	7.1
-25	7.8	7.7	7.7	7.5	5.9	6.6	6.9	7.2
-22	9.1	9.0	8.8	8.7	6.1	6.7	7.0	7.4
-19	10.4	10.2	10.1	9.9	6.2	6.8	7.2	7.5
-17	11.8	11.6	11.4	11.2	6.3	6.9	7.3	7.7
-14	13.3	12.9	12.8	12.6	6.3	7.0	7.4	7.8
-11	14.7	14.3	14.2	14.0	6.4	7.1	7.5	7.9
-8	16.3	15.8	15.6	15.4	6.5	7.2	7.6	8.0
-6	17.9	17.4	17.2	16.9	6.6	7.3	7.7	8.2
-3	19.7	19.1	18.8	18.5	6.7	7.4	7.8	8.3
0	21.5	20.8	20.5	20.2	6.8	7.5	7.9	8.4
3	23.3	22.6	22.2	21.9	6.9	7.6	8.0	8.5
6	25.2	24.4	24.0	23.6	7.0	7.7	8.1	8.6
8	27.1	26.2	25.8	25.4	7.1	7.8	8.2	8.7
11	29.2	28.2	27.7	27.3	7.2	7.9	8.3	8.8
14	31.3	30.2	29.7	29.2	7.3	8.0	8.4	8.9
17	33.4	32.2	31.7	31.1	7.4	8.1	8.5	9.0
19	35.5	34.2	33.6	33.0	7.5	8.2	8.6	9.1
22	37.5	36.0	35.4	34.8	7.6	8.3	8.7	9.1

Notes:

1. Net heating capacity and power include indoor fan heat at AHRI ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
2. Integrated heating capacities and power include the effects of defrost in the frost region. All heating capacities and power are at 70% outdoor relative humidity and demand defrost cycle.



Performance Data

Table 54. Gross heating capacities (MBH) TWA1564*D heat pump with TWE1564*B air handler at 5000 CFM (IP)

Outdoor Temp (°F)	Integrated Heating Capacity (MBH) at Indicated Indoor Dry Bulb Temp (°F)				Total Power (kW) at Indicated Indoor Dry Bulb Temp (°F)			
	60	70	75	80	60	70	75	80
-18	37.6	35.4	34.6	32.2	11.5	12.1	12.5	13.0
-13	44.0	40.8	39.3	38.2	11.2	12.2	12.7	13.3
-8	50.6	47.0	45.9	45.4	11.4	12.4	13.0	13.7
-3	57.2	54.3	53.6	53.0	11.6	12.7	13.4	14.0
2	64.3	62.3	61.5	60.7	11.8	13.0	13.7	14.3
7	73.3	70.8	69.8	69.0	12.2	13.3	14.0	14.7
12	82.1	79.7	78.6	77.6	12.4	13.6	14.3	15.0
17	92.3	89.1	87.8	86.7	12.7	13.9	14.6	15.3
22	101.9	99.1	97.5	96.3	13.0	14.2	14.9	15.6
27	112.6	109.5	107.8	106.3	13.3	14.5	15.2	15.9
32	124.2	120.4	118.6	116.9	13.6	14.8	15.5	16.2
37	135.3	131.4	129.5	127.6	13.9	15.1	15.8	16.5
42	147.5	143.1	141.0	139.0	14.2	15.4	16.1	16.8
47	160.3	155.7	153.5	151.3	14.5	15.8	16.5	17.2
52	174.0	169.0	166.6	164.2	14.9	16.1	16.8	17.6
57	188.1	182.8	180.2	177.6	15.2	16.5	17.2	17.9
62	202.8	197.1	194.3	191.6	15.6	16.9	17.6	18.3
67	217.3	211.9	208.9	206.0	16.1	17.3	18.0	18.8
72	231.9	227.1	223.9	220.9	16.6	17.8	18.5	19.3

Notes:

1. Net heating capacity and power include indoor fan heat at AHRI ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
2. Integrated heating capacities and power include the effects of defrost in the frost region. All heating capacities and power are at 70% outdoor relative humidity and demand defrost cycle.

Table 55. Gross heating capacities (kW) TWA1564*D heat pump with TWE1564*B air handler at 5000 CFM (SI)

Outdoor Temp (°C)	Integrated Heating Capacity (kW) at Indicated Indoor Dry Bulb Temp (°C)				Total Power (kW) at Indicated Indoor Dry Bulb Temp (°C)			
	15	21	24	27	15	21	24	27
-28	10.6	10.3	9.7	9.3	9.7	10.2	10.7	11.3
-25	12.8	11.9	11.4	11.1	9.5	10.4	11.0	11.6
-22	14.6	13.6	13.2	13.0	9.7	10.7	11.2	11.9
-19	16.5	15.6	15.4	15.2	9.9	11.0	11.6	12.2
-17	18.5	17.9	17.7	17.4	10.1	11.3	11.9	12.5
-14	21.0	20.4	20.1	19.8	10.4	11.6	12.2	12.8
-11	23.6	23.0	22.6	22.3	10.7	11.9	12.5	13.1
-8	26.4	25.6	25.2	24.9	11.0	12.2	12.8	13.5
-6	29.3	28.4	28.0	27.7	11.3	12.5	13.1	13.8
-3	32.5	31.5	31.0	30.6	11.6	12.8	13.4	14.1
0	35.7	34.6	34.1	33.6	11.9	13.1	13.7	14.4
3	39.0	37.8	37.3	36.7	12.2	13.3	14.0	14.7
6	42.4	41.2	40.6	40.0	12.5	13.7	14.3	15.0
8	46.2	44.8	44.2	43.6	12.8	14.0	14.7	15.3
11	50.1	48.7	48.0	47.3	13.1	14.4	15.0	15.7
14	54.2	52.7	51.9	51.2	13.5	14.7	15.4	16.1
17	58.5	56.9	56.0	55.3	13.9	15.1	15.8	16.5
19	62.8	61.2	60.3	59.5	14.2	15.5	16.2	16.9
22	67.1	65.6	64.7	63.8	14.6	15.9	16.6	17.4

Notes:

1. Net heating capacity and power include indoor fan heat at AHRI ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
2. Integrated heating capacities and power include the effects of defrost in the frost region. All heating capacities and power are at 70% outdoor relative humidity and demand defrost cycle.

Table 56. Gross heating capacities (MBH) TWA2014*D heat pump with TWE2014*B air handler at 6675 CFM (IP)

Outdoor Temp (°F)	Integrated Heating Capacity (MBH) at Indicated Indoor Dry Bulb Temp (°F)				Total Power (kW) at Indicated Indoor Dry Bulb Temp (°F)			
	60	70	75	80	60	70	75	80
-18	52.8	47.6	44.0	40.8	13.2	14.3	14.7	15.5
-13	61.0	55.5	52.9	50.4	13.4	14.6	15.3	15.9
-8	70.1	64.4	61.6	59.0	13.6	15.0	15.6	16.4
-3	79.5	73.9	71.3	69.0	14.0	15.3	16.1	16.8
2	89.7	84.6	82.2	79.6	14.4	15.7	16.5	17.2
7	100.9	95.9	93.4	90.9	14.7	16.1	16.9	17.7
12	113.1	107.8	105.2	102.6	15.1	16.5	17.3	18.1
17	125.9	120.4	117.6	114.8	15.4	16.9	17.6	18.5
22	139.4	133.6	130.8	127.8	15.8	17.2	18.0	18.9
27	153.6	147.5	144.5	141.4	16.1	17.6	18.4	19.2
32	168.4	162.1	158.8	155.6	16.5	18.0	18.8	19.6
37	183.3	176.6	173.2	169.7	16.8	18.3	19.2	20.0
42	198.8	191.7	188.1	184.5	17.2	18.7	19.5	20.4
47	215.2	207.7	203.9	200.0	17.6	19.1	20.0	20.9
52	232.5	224.5	220.5	216.5	18.0	19.6	20.4	21.3
57	250.4	242.0	237.7	233.5	18.4	20.0	20.9	21.8
62	268.8	260.0	255.5	251.1	18.9	20.5	21.4	22.3
67	287.4	278.1	273.5	268.9	19.3	21.0	21.9	22.8
72	306.4	296.7	291.9	287.1	19.8	21.5	22.4	23.3

Notes:

1. Net heating capacity and power include indoor fan heat at AHRI ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
2. Integrated heating capacities and power include the effects of defrost in the frost region. All heating capacities and power are at 70% outdoor relative humidity and demand defrost cycle.

Table 57. Gross heating capacities (kW) TWA2014*D heat pump with TWE2014*B air handler at 6675 CFM (SI)

Outdoor Temp (°C)	Integrated Heating Capacity (kW) at Indicated Indoor Dry Bulb Temp (°C)				Total Power (kW) at Indicated Indoor Dry Bulb Temp (°C)			
	15	21	24	27	15	21	24	27
-28	15.3	13.8	13.2	12.3	12.1	13.3	13.8	14.6
-25	17.6	16.0	15.1	14.5	12.4	13.6	14.1	14.9
-22	20.0	18.4	17.6	16.8	12.6	13.8	14.5	15.2
-19	22.6	21.0	20.1	19.5	12.9	14.1	14.8	15.6
-17	25.3	23.7	23.0	22.3	13.1	14.4	15.2	15.9
-14	28.2	26.7	26.0	25.3	13.4	14.8	15.5	16.3
-11	31.3	29.8	29.1	28.3	13.7	15.1	15.8	16.6
-8	34.6	33.1	32.3	31.5	13.9	15.3	16.1	16.9
-6	38.1	36.4	35.6	34.7	14.2	15.6	16.4	17.2
-3	41.7	39.9	39.0	38.1	14.5	15.9	16.7	17.5
0	45.4	43.5	42.6	41.6	14.8	16.2	17.0	17.8
3	49.1	47.1	46.1	45.1	15.1	16.5	17.3	18.1
6	52.9	50.8	49.7	48.6	15.4	16.9	17.6	18.4
8	57.2	55.0	53.8	52.7	15.8	17.2	18.0	18.8
11	61.1	58.7	57.5	56.4	16.1	17.6	18.3	19.2
14	65.5	63.0	61.7	60.5	16.5	18.0	18.7	19.6
17	70.0	67.4	66.0	64.7	16.9	18.4	19.2	20.0
19	74.6	71.8	70.4	69.0	17.4	18.8	19.6	20.4
22	79.2	76.3	74.8	73.4	17.8	19.3	20.1	20.9

Notes:

1. Net heating capacity and power include indoor fan heat at AHRI ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
2. Integrated heating capacities and power include the effects of defrost in the frost region. All heating capacities and power are at 70% outdoor relative humidity and demand defrost cycle.



Performance Data

Fan Performance

Table 58. Evaporator fan performance – TWE051 – air handler (IP)

External Static Pressure (Inches of Water Gauge)																							
0.10"		0.20"		0.30"		0.40"		0.50"		0.60"		0.70"		0.80"		0.90"		1.00"		1.10"			
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
1 HP Standard Motor												1.5 HP High Static Motor											
1600	—	—	—	—	550	0.33	629	0.39	695	0.46	747	0.52	807	0.72	854	0.77	887	0.80	906	0.81	912	0.82	
1700	—	—	—	—	559	0.35	634	0.43	697	0.48	751	0.61	809	0.75	857	0.81	894	0.84	920	0.87	985	1.07	
1800	—	—	—	—	569	0.38	640	0.46	701	0.53	756	0.64	813	0.77	861	0.85	901	0.90	952	1.07	991	1.14	
1900	—	—	—	—	578	0.41	647	0.50	707	0.58	761	0.68	817	0.81	866	0.90	912	1.01	957	1.13	996	1.21	
2000	—	—	522	0.34	590	0.45	654	0.52	711	1	768	0.73	821	0.84	870	0.95	917	1.06	962	1.20	1002	1.27	
2100	—	—	534	0.38	599	0.48	662	0.59	719	0.67	774	0.77	826	0.88	875	1.00	921	1.11	968	1.27	1007	1.35	
2200	474	0.30	547	0.43	610	0.52	671	0.64	727	0.72	781	0.82	832	0.93	881	1.06	926	1.17	973	1.33	1013	1.42	
2300	489	0.35	560	0.47	621	0.56	680	0.69	736	0.77	788	0.87	838	0.98	886	1.12	932	1.23	979	1.40	1018	1.50	
2400	505	0.41	573	0.52	632	0.61	690	0.74	745	0.83	796	0.93	844	1.04	893	1.18	937	1.30	969	1.47	1023	1.57	

External Static Pressure (Inches of Water Gauge)																								
1.20"		1.30"		1.40"		1.50"		1.60"		1.70"														
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
2 HP Ultra High Static Motor																								
1600	1018	1.09	1060	1.21	1094	1.29	—	—	—	—	—	—												
1700	1024	1.16	1065	1.28	1099	1.37	—	—	—	—	—	—												
1800	1029	1.24	1070	1.35	1105	1.45	—	—	—	—	—	—												
1900	1035	1.31	1075	1.42	1110	1.53	—	—	—	—	—	—												
2000	1040	1.38	1080	1.50	1116	1.61	—	—	—	—	—	—												
2100	1046	1.46	1085	1.58	1122	1.69	—	—	—	—	—	—												
2200	1052	1.54	1090	1.66	—	—	—	—	—	—	—	—												
2300	1057	1.62	1095	1.74	—	—	—	—	—	—	—	—												
2400	1063	1.70	1101	1.82	—	—	—	—	—	—	—	—												

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (MBh) = 3.15 x BHP.
3. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

Table 59. Evaporator fan performance – TWE051 – air handler (SI)

External Static Pressure (Pascals)																							
25		50		75		100		125		150		174		199		224		249		274			
m ³ /hr	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	
0.38 kW Standard Motor												.75 kW High Static Motor											
2379	612	0.15	674	0.18	731	0.22	786	0.25	840	0.29	891	0.34	941	0.38	989	0.43	1034	0.48	1077	0.53	1117	0.58	
2549	647	0.18	705	0.21	760	0.25	812	0.29	863	0.33	912	0.37	960	0.42	1006	0.47	1051	0.52	1094	0.58	—	—	
2719	683	0.21	738	0.25	790	0.29	840	0.33	888	0.37	936	0.42	980	0.46	1025	0.51	1070	0.57	1111	0.62	—	—	
2889	719	0.25	771	0.29	821	0.33	869	0.37	914	0.41	959	0.46	1003	0.51	1047	0.56	1089	0.61	—	—	—	—	
3059	756	0.29	804	0.33	853	0.37	898	0.42	942	0.46	985	0.51	1028	0.56	1068	0.61	1109	0.66	—	—	—	—	
3228	792	0.34	838	0.38	884	0.42	928	0.47	971	0.52	1012	0.57	1052	0.62	1092	0.67	—	—	—	—	—	—	
3398	829	0.39	873	0.43	917	0.48	959	0.53	1000	0.58	1040	0.63	1079	0.68	1117	0.73	—	—	—	—	—	—	
3568	866	0.45	908	0.49	950	0.54	991	0.59	1030	0.64	1069	0.69	1106	0.75	1144	0.80	—	—	—	—	—	—	

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (kW) = 1.238 x kW.
3. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

Table 60. Evaporator fan performance – TWE072 – air handler (IP)

External Static Pressure (Inches of Water Gauge)																								
		0.10"		0.20"		0.30"		0.40"		0.50"		0.60"		0.70"		0.80"		0.90"		1.00"		1.10"		
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
											1 HP Standard Motor						1.5 HP High Static Motor							
1600	—	—	—	—	550	0.33	629	0.39	695	0.46	747	0.52	807	0.72	854	0.77	887	0.80	906	0.81	912	0.82		
1700	—	—	—	—	559	0.35	634	0.43	697	0.48	751	0.61	809	0.75	857	0.81	894	0.84	920	0.87	985	1.07		
1800	—	—	—	—	569	0.38	640	0.46	701	0.53	756	0.64	813	0.77	861	0.85	901	0.90	952	1.07	991	1.14		
1900	—	—	—	—	578	0.41	647	0.50	707	0.58	761	0.68	817	0.81	866	0.90	912	1.01	957	1.13	996	1.21		
2000	—	—	522	0.34	590	0.45	654	0.52	711	1	768	0.73	821	0.84	870	0.95	917	1.06	962	1.20	1002	1.27		
2100	—	—	534	0.38	599	0.48	662	0.59	719	0.67	774	0.77	826	0.88	875	1.00	921	1.11	968	1.27	1007	1.35		
2200	474	0.30	547	0.43	610	0.52	671	0.64	727	0.72	781	0.82	832	0.93	881	1.06	926	1.17	973	1.33	1013	1.42		
2300	489	0.35	560	0.47	621	0.56	680	0.69	736	0.77	788	0.87	838	0.98	886	1.12	932	1.23	979	1.40	1018	1.50		
2400	505	0.41	573	0.52	632	0.61	690	0.74	745	0.83	796	0.93	844	1.04	893	1.18	937	1.30	969	1.47	1023	1.57		
External Static Pressure (Inches of Water Gauge)																								
		1.20"		1.30"		1.40"		1.50"		1.60"		1.70"												
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
											2 HP Ultra High Static Motor													
1600	1018	1.09	1060	1.21	1094	1.29	—	—	—	—	—	—	—	—										
1700	1024	1.16	1065	1.28	1099	1.37	—	—	—	—	—	—	—	—										
1800	1029	1.24	1070	1.35	1105	1.45	—	—	—	—	—	—	—	—										
1900	1035	1.31	1075	1.42	1110	1.53	—	—	—	—	—	—	—	—										
2000	1040	1.38	1080	1.50	1116	1.61	—	—	—	—	—	—	—	—										
2100	1046	1.46	1085	1.58	1122	1.69	—	—	—	—	—	—	—	—										
2200	1052	1.54	1090	1.66	—	—	—	—	—	—	—	—	—	—										
2300	1057	1.62	1095	1.74	—	—	—	—	—	—	—	—	—	—										
2400	1063	1.70	1101	1.82	—	—	—	—	—	—	—	—	—	—										

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (MBh) = 3.15 x BHP.
3. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.



Performance Data

Table 61. Evaporator fan performance – TWE072 – air handler (SI)

External Static Pressure (Pascals)																							
		25		50		75		100		125		150		174		199		224		249		274	
m ³ /hr		RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW
		.75 kW Standard Motor						1.12 kW High Static Motor						1.5 kW Ultra High Static Motor									
2718	—	—	—	—	—	550	0.25	629	0.29	695	0.34	747	0.39	807	0.54	854	0.58	887	0.60	906	0.61	912	0.61
2888	—	—	—	—	—	559	0.26	634	0.32	697	0.36	751	0.45	809	0.56	857	0.61	894	0.62	920	0.65	985	0.80
3058	—	—	—	—	—	569	0.29	640	0.34	701	0.39	756	0.48	813	0.58	861	0.64	901	0.67	952	0.80	991	0.85
3228	—	—	—	—	—	578	0.31	647	0.37	707	0.43	761	0.51	817	0.60	866	0.67	912	0.75	957	0.84	996	0.90
3398	—	—	522	0.26	590	0.34	654	0.39	711	0.46	768	0.54	821	0.63	870	0.71	917	0.79	962	0.89	1002	0.95	
3568	—	—	534	0.29	599	0.36	662	0.44	719	0.50	774	0.57	826	0.66	875	0.75	921	0.83	968	0.94	1007	1.01	
3738	474	0.22	547	0.32	610	0.39	671	0.47	727	0.54	781	0.61	832	0.69	881	0.79	926	0.87	973	1.00	1013	1.06	
3908	489	0.26	560	0.35	621	0.42	680	0.51	736	0.58	788	0.65	838	0.73	886	0.83	932	0.92	979	1.05	1018	1.12	
4078	505	0.30	573	0.39	632	0.46	690	0.55	745	0.62	796	0.69	844	0.78	893	0.88	937	0.97	969	1.10	1023	1.17	
External Static Pressure (Pascals)																							
		299		324		349																	
m ³ /hr		RPM	kW	RPM	kW	RPM	kW																
		1.5 kW Ultra High Static Motor																					
2718	1018	0.81	1060	0.90	1094	0.96																	
2888	1024	0.87	1065	0.95	1099	1.02																	
3058	1029	0.92	1070	1.00	1105	1.08																	
3228	1035	0.98	1075	1.06	1110	1.14																	
3398	1040	1.03	1080	1.12	1116	1.20																	
3568	1046	1.09	1085	1.18	1122	1.26																	
3738	1052	1.15	1090	1.24	—	—																	
3908	1057	1.21	1095	1.30	—	—																	
4078	1063	1.27	1101	1.36	—	—																	

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (kW) = 1.238 x kW.
3. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

Table 62. Evaporator fan performance – TWE076 – air handler (IP)

External Static Pressure (Inches of Water Gauge)																							
0.10"		0.20"		0.30"		0.40"		0.50"		0.60"		0.70"		0.80"		0.90"		1.00"		1.10"			
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
1 HP Standard Motor						1.5 HP High Static Motor						2 HP Ultra High Static Motor											
2000	—	—	522	0.34	590	0.44	654	0.52	711	0.62	768	0.73	821	0.84	870	0.95	916	1.06	959	1.16	1001	1.27	
2125	—	—	537	0.39	604	0.48	664	0.58	721	0.68	775	0.78	828	0.90	877	1.01	923	1.13	966	1.25	1009	1.36	
2250	481	0.33	553	0.44	617	0.53	675	0.64	731	0.74	784	0.84	834	0.96	884	1.09	929	1.21	973	1.33	1016	1.46	
2375	501	0.39	569	0.49	631	0.59	688	0.70	742	0.81	794	0.91	842	1.03	891	1.16	937	1.29	981	1.42	1022	1.55	
2500	521	0.47	585	0.55	646	0.65	701	0.77	754	0.89	804	0.99	852	1.11	898	1.23	944	1.37	987	1.51	1028	1.64	
2625	540	0.53	602	0.61	661	0.72	715	0.84	767	0.97	816	1.08	862	1.19	908	1.32	950	1.45	994	1.60	1036	1.74	
2750	559	0.60	619	0.66	677	0.80	729	0.91	780	1.05	827	1.17	872	1.29	916	1.41	960	1.55	1001	1.69	1043	1.84	
2875	579	0.67	636	0.72	692	0.88	744	1.00	793	1.13	840	1.27	885	1.40	928	1.52	969	1.65	1009	1.79	1049	1.94	
3000	599	0.74	654	0.79	709	0.96	760	1.09	807	1.22	852	1.36	896	1.51	939	1.63	980	1.76	1019	1.90	1057	2.05	
External Static Pressure (Inches of Water Gauge)																							
1.20"		1.30"		1.40"		1.50"		1.60"		1.70"													
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP											
2 HP Ultra High Static Motor																							
2000	1040	1.38	1080	1.50	1116	1.61	—	—	—	—	—	—											
2125	1048	1.48	1085	1.59	1123	1.71	—	—	—	—	—	—											
2250	1054	1.58	1093	1.70	—	—	—	—	—	—	—	—											
2375	1062	1.68	1099	1.80	—	—	—	—	—	—	—	—											
2500	1068	1.78	1107	1.92	—	—	—	—	—	—	—	—											
2625	1075	1.88	1113	2.02	—	—	—	—	—	—	—	—											
2750	1083	1.99	—	—	—	—	—	—	—	—	—	—											
2875	1090	2.10	—	—	—	—	—	—	—	—	—	—											
3000	1097	2.21	—	—	—	—	—	—	—	—	—	—											

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (MBh) = 3.15 x BHP.
3. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.



Performance Data

Table 63. Evaporator fan performance – TWE076 – air handler (SI)

External Static Pressure (Pascals)																							
		25		50		75		100		125		150		174		199		224		249		274	
m ³ /hr	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	
		.75 kW Standard Motor						1.12 kW High Static Motor						1.5 kW Ultra High Static Motor									
3398	—	0.18	522	0.25	590	0.33	654	0.39	711	0.46	768	0.54	821	0.62	870	0.71	916	0.79	959	0.87	1001	0.95	
3611	—	0.21	537	0.29	604	0.36	664	0.43	721	0.50	775	0.58	828	0.67	877	0.76	923	0.84	966	0.93	1009	1.02	
3823	481	0.24	553	0.32	617	0.40	675	0.48	731	0.55	784	0.63	834	0.72	884	0.81	929	0.90	973	0.99	1016	1.09	
4036	501	0.29	569	0.36	631	0.44	688	0.53	742	0.60	794	0.68	842	0.77	891	0.87	937	0.96	981	1.06	1022	1.15	
4248	521	0.35	585	0.41	646	0.49	701	0.57	754	0.66	804	0.74	852	0.83	898	0.92	944	1.02	987	1.12	1028	1.22	
4460	540	0.40	602	0.46	661	0.54	715	0.62	767	0.72	816	0.81	862	0.89	908	0.99	950	1.08	994	1.19	1036	1.30	
4673	559	0.45	619	0.50	677	0.59	729	0.68	780	0.78	827	0.88	872	0.96	916	1.05	960	1.15	1001	1.26	1043	1.37	
4885	579	0.50	636	0.54	692	0.65	744	0.74	793	0.84	840	0.95	885	1.04	928	1.13	969	1.23	1009	1.33	1049	1.45	
5098	599	0.55	654	0.59	709	0.72	760	0.81	807	0.91	852	1.02	896	1.12	939	1.22	980	1.32	1019	1.42	1057	1.53	
External Static Pressure (Pascals)																							
		299		324		349																	
m ³ /hr	RPM	kW	RPM	kW	RPM	kW																	
		1.5 kW Ultra High Static Motor																					
3398	1040	1.03	1080	1.12	1116	1.20																	
3611	1048	1.10	1085	1.19	1123	1.28																	
3823	1054	1.18	1093	1.27	—	—																	
4036	1062	1.25	1099	1.35	—	—																	
4248	1068	1.33	1107	1.43	—	—																	
4460	1075	1.40	1113	1.51	—	—																	
4673	1083	1.49	—	—	—	—																	
4885	1090	1.57	—	—	—	—																	
5098	1097	1.65	—	—	—	—																	

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (kW) = 1.238 x kW.
3. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

Table 64. Evaporator fan performance – TWE101 – air handler (IP)

External Static Pressure (Inches of Water Gauge)																						
0.10"		0.20"		0.30"		0.40"		0.50"		0.60"		0.70"		0.80"		0.90"		1.00"		1.10"		
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1.5 HP Standard Motor											2 HP High Static Motor											
2600	-	-	-	-	524	0.46	564	0.52	602	0.59	639	0.66	675	0.73	710	0.81	745	0.90	779	0.98	812	1.07
2775	-	-	497	0.46	542	0.52	581	0.60	618	0.67	653	0.74	687	0.81	721	0.89	754	0.97	787	1.07	819	1.16
2950	-	-	518	0.53	560	0.60	599	0.68	635	0.75	669	0.83	701	0.90	733	0.98	765	1.07	796	1.16	827	1.25
3125	498	0.54	540	0.62	578	0.68	617	0.76	652	0.84	685	0.92	717	1.00	747	1.08	778	1.17	808	1.26	837	1.35
3300	521	0.63	562	0.71	597	0.78	636	0.86	670	0.95	702	1.03	733	1.12	763	1.20	792	1.28	820	1.37	849	1.47
3475	544	0.73	583	0.81	618	0.89	654	0.97	688	1.06	720	1.15	750	1.23	779	1.32	806	1.41	834	1.50	861	1.59
3650	567	0.83	605	0.92	639	1.01	672	1.08	707	1.18	738	1.27	767	1.36	795	1.46	823	1.55	849	1.64	875	1.73
3825	591	0.95	627	1.04	661	1.14	691	1.21	725	1.30	756	1.40	785	1.50	813	1.60	839	1.70	865	1.79	890	1.89
4000	614	1.07	650	1.18	683	1.27	712	1.36	742	1.44	774	1.55	803	1.65	830	1.75	856	1.86	881	1.96	906	2.06
External Static Pressure (Inches of Water Gauge)																						
1.20"		1.30"		1.40"		1.50"		1.60"		1.70"		1.80"		1.90"		2.00"						
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2 HP High Static Motor w/ Field Supplied Sheave & Belt																						
2600	843	1.16	873	1.24	902	1.33	930	1.41	956	1.50	982	1.59	1008	1.67	1032	1.76	1056	1.84				
2775	851	1.25	880	1.34	909	1.44	937	1.53	964	1.62	990	1.71	1015	1.80	1040	1.89	1064	1.99				
2950	858	1.35	888	1.45	917	1.55	944	1.64	971	1.74	997	1.84	1023	1.94	1047	2.04	1071	2.13				
3125	866	1.45	895	1.55	924	1.66	952	1.76	979	1.87	1005	1.97	1030	2.07	1055	2.18	1078	2.28				
3300	876	1.57	904	1.67	932	1.78	959	1.89	986	2.00	1012	2.11	1037	2.22	1062	2.33	-	-				
3475	888	1.69	915	1.80	941	1.90	967	2.01	994	2.13	1020	2.25	1045	2.36	-	-	-	-				
3650	901	1.83	927	1.93	952	2.04	977	2.15	1002	2.27	-	-	-	-	-	-	-	-				
3825	915	1.99	940	2.09	965	2.20	989	2.31	-	-	-	-	-	-	-	-	-	-				
4000	930	2.16	954	2.26	978	2.36	-	-	-	-	-	-	-	-	-	-	-	-				

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (MBh) = 3.15 x BHP.
3. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.



Performance Data

Table 65. Evaporator fan performance – TWE101 – air handler (SI)

External Static Pressure (Pascals)																						
25		50		75		100		125		150		174		199		224		249		274		
m ³ /hr	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW		
1.5 HP Standard Motor										2 HP High Static Motor												
4418	-	-	-	-	524	0.34	564	0.39	602	0.44	639	0.49	675	0.54	710	0.60	745	0.67	779	0.73	812	0.80
4715	-	-	497	0.34	542	0.39	581	0.44	618	0.50	653	0.55	687	0.60	721	0.66	754	0.73	787	0.79	819	0.86
5013	-	-	518	0.40	560	0.45	599	0.50	635	0.56	669	0.62	701	0.67	733	0.73	765	0.79	796	0.86	827	0.93
5310	498	0.41	540	0.46	578	0.51	617	0.57	652	0.63	685	0.69	717	0.75	747	0.81	778	0.87	808	0.94	837	1.01
5607	521	0.47	562	0.53	597	0.58	636	0.64	670	0.70	702	0.77	733	0.83	763	0.89	792	0.96	820	1.02	849	1.09
5905	544	0.54	583	0.61	618	0.66	654	0.72	688	0.79	720	0.85	750	0.92	779	0.99	806	1.05	834	1.12	861	1.19
6202	567	0.62	605	0.69	639	0.75	672	0.81	707	0.88	738	0.95	767	1.02	795	1.09	823	1.15	849	1.22	875	1.29
6499	591	0.71	627	0.78	661	0.85	691	0.90	725	0.97	756	1.05	785	1.12	813	1.19	839	1.27	865	1.34	890	1.41
6797	614	0.80	650	0.88	683	0.95	712	1.01	742	1.08	774	1.15	803	1.23	830	1.31	856	1.38	881	1.46	906	1.53
External Static Pressure (Pascals)																						
299		324		349		374		398		423		448		473		498						
m ³ /hr	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	rpm	kW				
2 HP High Static Motor w/ Field Supplied Sheave & Belt																						
4418	843	0.86	873	0.93	902	0.99	930	1.05	956	1.12	982	1.18	1008	1.25	1032	1.31	1056	1.38				
4715	851	0.93	880	1.00	909	1.07	937	1.14	964	1.21	990	1.28	1015	1.34	1040	1.41	1064	1.48				
5013	858	1.01	888	1.08	917	1.15	944	1.23	971	1.30	997	1.37	1023	1.44	1047	1.52	1071	1.59				
5310	866	1.08	895	1.16	924	1.24	952	1.32	979	1.39	1005	1.47	1030	1.55	1055	1.62	1078	1.70				
5607	876	1.17	904	1.24	932	1.32	959	1.41	986	1.49	1012	1.57	1037	1.65	1062	1.73	-	-				
5905	888	1.26	915	1.34	941	1.42	967	1.50	994	1.59	1020	1.67	1045	1.76	-	-	-	-				
6202	901	1.37	927	1.44	952	1.52	977	1.61	1002	1.69	-	-	-	-	-	-	-	-				
6499	915	1.48	940	1.56	965	1.64	989	1.72	-	-	-	-	-	-	-	-	-	-				
6797	930	1.61	954	1.68	978	1.76	-	-	-	-	-	-	-	-	-	-	-	-				

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (kW) = 1.238 x kW.
3. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

Table 66. Evaporator fan performance – TWE126 – air handler (IP)

External Static Pressure (Inches of Water Gauge)																								
0.10"		0.20"		0.30"		0.40"		0.50"		0.60"		0.70"		0.80"		0.90"		1.00"		1.10"				
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
1.5 HP Standard Motor												1.5 HP Standard Motor w/ Field Supplied Sheave & Belt						2 HP High Static Motor						
3200	—	—	—	—	515	0.51	565	0.63	601	0.71	638	0.81	678	0.93	718	1.06	759	1.21	794	1.35	826	1.49		
3400	—	—	472	0.46	528	0.57	578	0.69	617	0.80	650	0.89	686	1.00	724	1.13	762	1.27	800	1.42	834	1.57		
3600	—	—	486	0.51	541	0.63	590	0.76	633	0.89	666	0.98	697	1.08	732	1.20	767	1.34	804	1.49	840	1.65		
3800	—	—	500	0.57	554	0.70	601	0.82	646	0.97	682	1.09	712	1.19	742	1.29	776	1.43	810	1.57	843	1.72		
4000	—	—	515	0.64	567	0.78	614	0.91	658	1.05	698	1.20	728	1.31	756	1.41	786	1.53	817	1.66	849	1.82		
4200	477	0.58	531	0.71	581	0.85	627	1.00	669	1.13	710	1.29	744	1.43	772	1.55	799	1.65	827	1.78	858	1.93		
4400	494	0.65	546	0.79	595	0.94	640	1.09	682	1.23	722	1.39	758	1.55	789	1.69	814	1.80	840	1.92	867	2.05		
4600	513	0.73	563	0.87	609	1.03	653	1.19	695	1.34	732	1.48	771	1.66	804	1.83	831	1.96	856	2.08	880	2.20		
4800	531	0.82	579	0.96	624	1.13	667	1.29	707	1.45	745	1.60	783	1.77	817	1.96	847	2.12	872	2.25	896	2.37		
External Static Pressure (Inches of Water Gauge)																								
1.20"		1.30"		1.40"		1.50"		1.60"		1.70"														
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
2 HP High Static Motor						3 HP Ultra High Static Motor																		
3200	857	1.63	887	1.78	916	1.93	943	2.08	970	2.23	996	2.39												
3400	865	1.72	895	1.88	924	2.03	952	2.19	978	2.35	1003	2.50												
3600	873	1.81	903	1.97	931	2.13	959	2.29	986	2.46	1012	2.62												
3800	877	1.89	912	2.08	940	2.24	967	2.41	994	2.58	—	—												
4000	882	1.98	915	2.16	947	2.34	976	2.53	1002	2.70	—	—												
4200	888	2.08	919	2.25	950	2.44	980	2.63	1010	2.82	—	—												
4400	896	2.20	925	2.37	955	2.55	985	2.73	1013	2.92	—	—												
4600	906	2.34	934	2.50	961	2.67	989	2.85	—	—	—	—												
4800	918	2.50	944	2.65	970	2.81	996	2.98	—	—	—	—												

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (MBh) = 3.15 x BHP.
3. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.



Performance Data

Table 67. Evaporator fan performance – TWE126 – air handler (SI)

External Static Pressure (Pascals)																						
m ³ /hr	25		50		75		100		125		150		174		199		224		249		274	
	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW
1.12 kW Standard Motor											1.12 kW Standard Motor w/ Field Supplied Sheave & Belt					1.49 kW High Static Motor						
5437	—	—	—	—	515	0.38	565	0.47	601	0.53	638	0.60	678	0.69	718	0.79	759	0.90	794	1.01	826	1.11
5777	—	—	472	0.34	528	0.42	578	0.52	617	0.60	650	0.66	686	0.74	724	0.84	762	0.94	800	1.06	834	1.17
6117	—	—	486	0.38	541	0.47	590	0.56	633	0.66	666	0.73	697	0.81	732	0.90	767	1.00	804	1.11	840	1.23
6457	—	—	500	0.43	554	0.52	601	0.61	646	0.72	682	0.81	712	0.89	742	0.97	776	1.06	810	1.17	843	1.29
6797	—	—	515	0.48	567	0.58	614	0.68	658	0.78	698	0.89	728	0.98	756	1.05	786	1.14	817	1.24	849	1.35
7137	477	0.43	531	0.53	581	0.64	627	0.74	669	0.84	710	0.96	744	1.07	772	1.15	799	1.23	827	1.33	858	1.44
7476	494	0.48	546	0.59	595	0.70	640	0.81	682	0.92	722	1.03	758	1.16	789	1.26	814	1.34	840	1.43	867	1.53
7816	513	0.54	563	0.65	609	0.77	653	0.88	695	1.00	732	1.10	771	1.24	804	1.36	831	1.46	856	1.55	880	1.64
8156	531	0.61	579	0.72	624	0.84	667	0.96	707	1.08	745	1.19	783	1.32	817	1.46	847	1.58	872	1.68	896	1.77
External Static Pressure (Pascals)																						
m ³ /hr	299		324		349		374		398		423											
	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW										
1.49 kW High Static Motor				2.24 kW Ultra High Static Motor																		
5437	857	1.22	887	1.33	916	1.44	943	1.55	970	1.66	996	1.78										
5777	865	1.29	895	1.40	924	1.51	952	1.63	978	1.75	1003	1.87										
6117	873	1.35	903	1.47	931	1.59	959	1.71	986	1.83	1012	1.96										
6457	877	1.41	912	1.55	940	1.67	967	1.80	994	1.92	—	—										
6797	882	1.48	915	1.61	947	1.75	976	1.88	1002	2.01	—	—										
7137	888	1.55	919	1.68	950	1.82	980	1.96	1010	2.11	—	—										
7476	896	1.64	925	1.76	955	1.90	985	2.04	1013	2.18	—	—										
7816	906	1.74	934	1.86	961	1.99	989	2.12	—	—	—	—										
8156	918	1.86	944	1.97	970	2.10	996	2.22	—	—	—	—										

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (kW) = 1.238 x kW.
3. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

Table 68. Evaporator fan performance – TWE156 – air handler (IP)

External Static Pressure (Inches of Water Gauge)																								
		0.10"		0.20"		0.30"		0.40"		0.50"		0.60"		0.70"		0.80"		0.90"		1.00"		1.10"		
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
2 HP Standard Motor w/ Field Supplied Sheave & Belt												1.5 HP Standard Motor w/ Field Supplied Sheave & Belt						2 HP High Static Motor						
4000	428	0.5	482	0.62	531	0.72	576	0.84	621	0.98	663	1.11	701	1.25	737	1.38	771	1.51	803	1.64	833	1.77		
4250	448	0.58	499	0.71	546	0.82	590	0.94	633	1.08	674	1.22	712	1.37	748	1.51	782	1.65	814	1.79	845	1.93		
4500	468	0.68	517	0.81	563	0.93	605	1.05	646	1.19	686	1.34	724	1.50	760	1.65	793	1.80	825	1.95	855	2.09		
4750	488	0.78	535	0.91	579	1.06	621	1.18	660	1.32	698	1.46	735	1.63	772	1.79	805	1.95	837	2.11	867	2.27		
5000	509	0.90	554	1.03	596	1.19	637	1.32	675	1.46	712	1.61	748	1.77	783	1.94	817	2.11	848	2.28	878	2.44		
5250	530	1.02	573	1.16	614	1.32	653	1.47	691	1.61	726	1.76	760	1.92	795	2.10	828	2.28	859	2.45	890	2.64		
5500	551	1.16	593	1.31	632	1.47	670	1.64	706	1.78	741	1.93	774	2.09	807	2.26	840	2.46	871	2.64	902	2.83		
5750	572	1.32	612	1.47	651	1.63	687	1.81	722	1.97	757	2.12	789	2.28	821	2.45	852	2.64	883	2.84	912	3.03		
6000	593	1.48	632	1.64	670	1.81	705	1.99	739	2.17	772	2.32	804	2.48	835	2.66	865	2.84	895	3.04	924	3.24		
External Static Pressure (Inches of Water Gauge)																								
		1.20"		1.30"		1.40"		1.50"		1.60"		1.70"												
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
2 HP High Static Motor												3 HP Ultra High Static Motor												
4000	863	1.9	891	2.03	919	2.15	944	2.28	970	2.40	994	2.53												
4250	874	2.07	902	2.20	928	2.33	955	2.47	981	2.61	1004	2.74												
4500	884	2.24	913	2.38	939	2.53	966	2.68	991	2.82	1015	2.96												
4750	895	2.42	924	2.58	951	2.74	977	2.88	1002	3.04	—	—												
5000	907	2.61	934	2.77	962	2.94	—	—	—	—	—	—												
5250	918	2.81	946	2.98	973	3.16	—	—	—	—	—	—												
5500	931	3.02	958	3.20	—	—	—	—	—	—	—	—												
5750	941	3.23	—	—	—	—	—	—	—	—	—	—												
6000	—	—	—	—	—	—	—	—	—	—	—	—												

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (MBh) = 3.15 x BHP.
3. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.



Performance Data

Table 69. Evaporator fan performance – TWE156 – air handler (SI)

External Static Pressure (Pascals)																						
m ³ /hr	25		50		75		100		125		150		174		199		224		249		274	
	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW
	1.49 kW Standard Motor w/ Field Supplied Sheave & Belt						1.49 kW Standard Motor						2.24 kW High Static Motor									
6797	428	0.37	482	0.46	531	0.54	576	0.63	621	0.73	663	0.83	701	0.93	737	1.03	771	1.13	803	1.22	833	1.32
7222	448	0.43	499	0.53	546	0.61	590	0.70	633	0.80	674	0.91	712	1.02	748	1.13	782	1.23	814	1.33	845	1.44
7646	468	0.50	517	0.60	563	0.70	605	0.79	646	0.89	686	1.00	724	1.12	760	1.23	793	1.34	825	1.45	855	1.56
8071	488	0.58	535	0.68	579	0.79	621	0.88	660	0.98	698	1.09	735	1.21	772	1.34	805	1.46	837	1.57	867	1.69
8496	509	0.67	554	0.77	596	0.88	637	0.99	675	1.09	712	1.20	748	1.32	783	1.45	817	1.58	848	1.70	878	1.82
8921	530	0.76	573	0.87	614	0.99	653	1.10	691	1.20	726	1.31	760	1.43	795	1.57	828	1.70	859	1.83	890	1.97
9346	551	0.87	593	0.97	632	1.10	670	1.22	706	1.33	741	1.44	774	1.56	807	1.69	840	1.83	871	1.97	902	2.11
9770	572	0.98	612	1.09	651	1.22	687	1.35	722	1.47	757	1.58	789	1.70	821	1.83	852	1.97	883	2.11	912	2.26
10195	593	1.11	632	1.22	670	1.35	705	1.49	739	1.61	772	1.73	804	1.85	835	1.98	865	2.12	895	2.27	924	2.42
External Static Pressure (Pascals)																						
m ³ /hr	299		324		349		374		398		423											
	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW										
	2.24 kW High Static Motor w/ Field Supplied Sheave & Belt																					
6797	863	1.42	891	1.51	919	1.61	944	1.70	970	1.79	994	1.88										
7222	874	1.54	902	1.64	928	1.74	955	1.84	981	1.95	1004	2.04										
7646	884	1.67	913	1.78	939	1.88	966	2.00	991	2.10	1015	2.21										
8071	895	1.80	924	1.92	951	2.04	977	2.15	1002	2.26	—	—										
8496	907	1.95	934	2.07	962	2.19	—	—	—	—	—	—										
8921	918	2.09	946	2.22	973	2.35	—	—	—	—	—	—										
9346	931	2.25	958	2.39	—	—	—	—	—	—	—	—										
9770	941	2.41	—	—	—	—	—	—	—	—	—	—										
10195	—	—	—	—	—	—	—	—	—	—	—	—										

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (kW) = 1.238 x kW.
3. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

Table 70. Evaporator fan performance – TWE201 – air handler (IP)

External Static Pressure (Inches of Water Gauge)																												
0.10"		0.20"		0.30"		0.40"		0.50"		0.60"		0.70"		0.80"		0.90"		1.00"		1.10"								
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP						
																			2 HP Low Static Motor				3.5 HP Standard Motor				3.5 HP Standard Motor w/ Field Supplied Sheave & Belt	
5200	—	—	531	0.83	580	0.96	627	1.09	666	1.21	707	1.37	748	1.54	787	1.71	825	1.88	864	2.06	902	2.24						
5525	—	—	551	0.96	599	1.10	644	1.23	684	1.37	722	1.51	760	1.68	799	1.87	834	2.04	872	2.23	909	2.42						
5850	—	—	572	1.10	619	1.25	662	1.39	703	1.54	738	1.68	774	1.84	810	2.02	846	2.22	880	2.40	916	2.60						
6175	543	1.11	593	1.26	638	1.42	680	1.57	720	1.72	757	1.87	790	2.02	824	2.20	859	2.40	893	2.61	926	2.81						
6500	566	1.28	614	1.43	659	1.61	699	1.77	737	1.92	775	2.08	807	2.24	839	2.40	871	2.59	904	2.80	936	3.02						
6825	590	1.47	636	1.62	679	1.80	718	1.98	755	2.14	792	2.31	826	2.48	857	2.64	886	2.81	918	3.02	950	3.25						
7150	614	1.67	658	1.83	700	2.02	738	2.21	774	2.38	809	2.55	844	2.73	875	2.90	903	3.07	932	3.26	962	3.47						
7475	638	1.89	680	2.06	720	2.25	758	2.45	794	2.63	827	2.81	861	2.99	893	3.18	921	3.36	949	3.54	976	3.73						
7800	662	2.13	702	2.31	742	2.50	779	2.71	814	2.91	846	3.09	879	3.28	910	3.48	940	3.67	967	3.86	993	4.04						
External Static Pressure (Inches of Water Gauge)																												
1.20"		1.30"		1.40"		1.50"		1.60"		1.70"		1.80"		1.90"														
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
										5 HP High Static Motor w/ Field Supplied Sheave & Belt																		
5200	937	2.42	972	2.59	1004	2.77	1036	2.95	1066	3.12	1095	3.29	1125	3.46	1152	3.63												
5525	943	2.60	978	2.80	1012	2.99	1042	3.17	1072	3.35	1102	3.54	1132	3.73	1159	3.91												
5850	951	2.80	984	3.00	1018	3.21	1050	3.41	1080	3.60	1109	3.80	1138	4.00	1166	4.19												
6175	958	3.00	992	3.22	1024	3.43	1056	3.64	1086	3.86	1115	4.06	1143	4.27	—	—												
6500	967	3.22	998	3.44	1030	3.65	1063	3.89	1093	4.11	1122	4.33	1151	4.56	—	—												
6825	980	3.47	1010	3.69	1039	3.90	1069	4.13	1098	4.36	1129	4.61	1158	4.85	—	—												
7150	991	3.70	1021	3.94	1051	4.18	1078	4.41	1107	4.65	1135	4.88	1165	5.14	—	—												
7475	1005	3.97	1034	4.21	1062	4.46	1090	4.71	1117	4.94	1144	5.19	—	—	—	—												
7800	1019	4.24	1047	4.49	1074	4.74	1102	5.01	1128	5.25	1154	5.51	—	—	—	—												

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (MBh) = 3.15 x BHP.
3. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.



Performance Data

Table 71. Evaporator fan performance – TWE201 – air handler (SI)

External Static Pressure (Pascals)																						
m ³ /hr	25		50		75		100		125		150		174		199		224		249		274	
	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW
	1.49 kW Low Static Motor										2.24 kW Standard Motor						2.24 kW Standard Motor w/ Field Supplied Sheave & Belt					
8836	—	—	531	0.62	580	0.71	627	0.81	666	0.90	707	1.02	748	1.15	787	1.27	825	1.40	864	1.54	902	1.67
9388	—	—	551	0.72	599	0.82	644	0.92	684	1.02	722	1.12	760	1.25	799	1.39	834	1.52	872	1.66	909	1.80
9940	—	—	572	0.82	619	0.94	662	1.04	703	1.15	738	1.25	774	1.37	810	1.51	846	1.65	880	1.79	916	1.94
10493	543	0.83	593	0.94	638	1.06	680	1.17	720	1.29	757	1.40	790	1.51	824	1.64	859	1.79	893	1.94	926	2.09
11045	566	0.95	614	1.07	659	1.20	699	1.32	737	1.43	775	1.55	807	1.67	839	1.79	871	1.93	904	2.09	936	2.25
11597	590	1.09	636	1.21	679	1.34	718	1.48	755	1.59	792	1.72	826	1.85	857	1.97	886	2.09	918	2.25	950	2.42
12149	614	1.25	658	1.37	700	1.50	738	1.65	774	1.77	809	1.90	844	2.03	875	2.16	903	2.29	932	2.43	962	2.59
12702	638	1.41	680	1.54	720	1.68	758	1.83	794	1.96	827	2.09	861	2.23	893	2.37	921	2.51	949	2.64	976	2.79
13254	662	1.59	702	1.72	742	1.86	779	2.02	814	2.17	846	2.31	879	2.45	910	2.59	940	2.74	967	2.88	993	3.02
External Static Pressure (Pascals)																						
m ³ /hr	299		324		349		374		398		423		448									
	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW								
	3.73 kW Ultra High Static Motor				3.73 kW Ultra High Static Motor w/ Field Supplied Sheave & Belt																	
8836	937	1.80	972	1.94	1004	2.07	1036	2.20	1066	2.33	1095	2.45	1125	2.58								
9388	943	1.94	978	2.09	1012	2.23	1042	2.36	1072	2.50	1102	2.64	1132	2.78								
9940	951	2.09	984	2.24	1018	2.39	1050	2.54	1080	2.69	1109	2.83	—	—								
10493	958	2.24	992	2.40	1024	2.56	1056	2.72	1086	2.88	1115	3.03	—	—								
11045	967	2.40	998	2.56	1030	2.73	1063	2.90	1093	3.07	1122	3.23	—	—								
11597	980	2.59	1010	2.75	1039	2.91	1069	3.08	1098	3.26	1129	3.44	—	—								
12149	991	2.76	1021	2.94	1051	3.12	1078	3.29	1107	3.47	—	—	—	—								
12702	1005	2.96	1034	3.14	1062	3.32	1090	3.51	1117	3.69	—	—	—	—								
13254	1019	3.17	1047	3.35	1074	3.54	1102	3.74	1128	3.92	—	—	—	—								

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (kW) = 1.238 x kW.
3. Factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

Table 72. Low static fan motors - constant volume air handlers

Model	Motor	Motor Sheave Turns Open	Nominal RPM	Required Field Supplied Components		
				Motor Sheave	Blower Sheave	Belt
TWE201	Low Static Motor 2 HP (1.5 kW)	0	712	N/A	N/A	N/A
		1	677			
		2	641			
		3	605			
		4	569			
		5	533			

Table 73. Standard fan motors - constant volume air handlers

Model	Motor	Motor Sheave Turns Open	Nominal RPM	Required Field Supplied Components		
				Motor Sheave	Blower Sheave	Belt
TWE051	Standard Motor .5 HP (.38 kW)	0	892	N/A	N/A	N/A
		1	833			
		2	773			
		3	714			
		4	654			
		5	595			
TWE072	Standard Motor 1 HP (.75 kW)	0	706	N/A	N/A	N/A
		1	659			
		2	612			
		3	565			
		4	518			
		5	471			
TWE076	Standard Motor 1 HP (.75 kW)	0	706	N/A	N/A	N/A
		1	659			
		2	612			
		3	565			
		4	518			
		5	471			
TWE101	Standard Motor 1.5 HP (1.13 kW)	0	682	N/A	N/A	N/A
		1	644			
		2	606			
		3	568			
		4	530			
		5	492			
TWE126	Standard Motor 1.5 HP (1.13 kW)	0	640	N/A	N/A	N/A
		1	604			
		2	569			
		3	533			
		4	498			
		5	462			
TWE126	Standard Motor with Field Supplied Components 1.5 HP (1.13 kW) (high static)	0	761	Variable Pitch (2.4 - 3.4 Inch Pitch Diameter), 0.875 Inch Bore, Single Groove, Browning 1VL40	Fixed Pitch (6.7 Inch Pitch Diameter), 1.4375 Inch Bore, Single Groove, Browning AK71	Browning A55
		1	718			
		2	671			
		3	624			
		4	577			
		5	549			
TWE156	Standard Motor 2 HP (1.49 kW)	0	704	N/A	N/A	N/A
		1	676			
		2	648			
		3	620			
		4	592			
		5	565			
		6	537			



Performance Data

Table 73. Standard fan motors - constant volume air handlers (continued)

Model	Motor	Motor Sheave Turns Open	Nominal RPM	Required Field Supplied Components		
				Motor Sheave	Blower Sheave	Belt
TWE156	Standard Motor with Field Supplied Components 2 HP (1.49 kW) (high static)	0	809	Variable Pitch (3.2 - 4.2 Inch Pitch Diameter), 0.875 Inch Bore, Single Groove, Browning 1VL44	Fixed Pitch (7.4 Inch Pitch Diameter), 1.4375 Inch Bore, Single Groove, Browning BK80	Browning BX58
		1	770			
		2	732			
		3	693			
		4	655			
5	616					
TWE201	Standard Motor 3.5 HP (2.61 kW)	0	814	N/A	N/A	N/A
		1	780			
		2	746			
		3	713			
		4	679			
5	645					
TWE201	Standard Motor with Field Supplied Components 3.5 HP (2.61 kW) (high static)	0	924	Variable Pitch (2.8 - 3.8 Inch Pitch Diameter), 1.125 Inch Bore, Single Groove, Browning 1VP50	Fixed Pitch (10.4 Inch Pitch Diameter), 1.4375 Inch Bore, Single Groove, Browning BK80	Browning BX62
		1	886			
		2	847			
		3	809			
		4	770			
5	732					

Table 74. High static fan motors - constant volume air handlers

Model	Motor	Motor Sheave Turns Open	Nominal RPM	Required Field Supplied Components		
				Motor Sheave	Blower Sheave	Belt
TWE051	High Static Motor 1 HP (.75kW)	0	1122	N/A	N/A	N/A
		1	1066			
		2	1010			
		3	954			
		4	898			
5	842					
TWE072	High Static Motor 1.5 HP (1.13 kW)	0	912	N/A	N/A	N/A
		1	866			
		2	820			
		3	775			
		4	729			
5	683					
TWE076	High Static Motor 1.5 HP (1.13 kW)	0	912	N/A	N/A	N/A
		1	866			
		2	820			
		3	775			
		4	729			
5	683					
TWE101	High Static Motor 2 HP (1.5 kW)	0	810	N/A	N/A	N/A
		1	769			
		2	729			
		3	688			
		4	648			
5	607					
TWE101	High Static Motor with Field Supplied Components 2 HP (1.5 kW)	0	1092	Variable Pitch (2.8 - 3.8 Inch Pitch Diameter), 0.875 Inch Bore, Single Groove, Browning 1VP44	Fixed Pitch (6.0 Inch Pitch Diameter), 1.0 Inch Bore, Single Groove, Browning AK64	Browning A50
		1	1035			
		2	977			
		3	920			
		4	862			
5	805					
TWE126	High Static Motor 2 HP (1.5 kW)	0	912	N/A	N/A	N/A
		1	866			
		2	825			
		3	785			
		4	744			
5	683					

Table 74. High static fan motors - constant volume air handlers (continued)

Model	Motor	Motor Sheave Turns Open	Nominal RPM	Required Field Supplied Components		
				Motor Sheave	Blower Sheave	Belt
TWE156	High Static Motor 3.5 HP (2.6 kW)	0	853	N/A	N/A	N/A
		1	824			
		2	794			
		3	765			
		4	735			
		5	705			
6	676					
TWE156	High Static Motor with Field Supplied Components 3.5 HP (2.6 kW)	0	1014	Variable Pitch (3.4 - 4.4 Inch Pitch Diameter), 1.125 Inch Bore, Single Groove, Browning 1VP50	Fixed Pitch (6.6 Inch Pitch Diameter), 1.4375 Inch Bore, Single Groove, Browning BK72	Browning BX58
		1	979			
		2	932			
		3	885			
		4	838			
		5	803			
6	803					
TWE201	High Static Motor 5 HP (3.75 kW)	0	1078	N/A	N/A	N/A
		1	1036			
		2	993			
		3	950			
		4	907			
		5	864			
6	822					
TWE201	High Static Motor with Field Supplied Components 5 HP (3.75 kW)	0	1096	Variable Pitch (2.8 - 3.8 Inch Pitch Diameter), 1.125 Inch Bore, Single Groove, Browning 1VP44	Fixed Pitch (10.4 Inch Pitch Diameter), 1.4375 Inch Bore, Single Groove, Browning BK110	Browning BX62
		1	1067			
		2	1036			
		3	1004			
		4	973			
		5	941			
6	926					

Table 75. Ultra high static fan motors - constant volume air handlers

Model	Motor	Motor Sheave Turns Open	Nominal RPM	Required Field Supplied Components		
				Motor Sheave	Blower Sheave	Belt
TWE072	Ultra High Static Motor 2 HP (1.5 kW)	0	1122	N/A	N/A	N/A
		1	1034			
		2	946			
		3	859			
		4	771			
		5	683			
—	—					
TWE076	Ultra High Static Motor 2 HP (1.5 kW)	0	1122	N/A	N/A	N/A
		1	1034			
		2	946			
		3	859			
		4	771			
		5	683			
—	—					
TWE126	Ultra High Static Motor 3.5 HP (2.6 kW)	0	1014	N/A	N/A	N/A
		1	979			
		2	944			
		3	909			
		4	874			
		5	838			
6	803					



Performance Data

Table 76. Discharge plenum and grille assembly throw distance – air handler – ft (m)

Unit Model No.	CFM	m ³ /h	Louver angle Deflection Position (ft)				Louver angle Deflection Position (m)			
			Straight	20°	40°	55°	Straight	20°	40°	55°
TWE051	1800	3060	46	37	29	22	14.0	11.3	8.8	6.7
	2000	3395	48	43	33	24	14.6	13.1	10.1	7.3
	2200	3737	51	50	36	25	15.5	15.2	11.0	7.6
	2400	4074	44	58	41	28	13.4	17.7	12.5	8.5
TWE072	1800	3061	47	34	28	24	14.0	10.3	8.3	8.0
	2000	3400	49	37	30	26	14.7	11.2	9.0	8.3
	2200	3739	50	40	32	28	15.3	12.2	9.8	8.5
	2400	4078	52	43	35	29	15.9	13.1	10.6	8.8
TWE076	2250	3823	51	41	33	28	15.4	12.4	10.0	8.6
	2500	4249	53	45	36	30	16.2	13.6	10.9	9.0
	2750	4671	56	49	39	31	16.9	14.9	11.9	9.4
	3000	5098	58	53	42	32	17.7	16.2	12.8	9.9
TWE101	3025	5139	57	44	36	32	17.4	13.4	10.8	9.6
	3350	5692	60	48	39	32	18.3	14.7	12.0	9.7
	3675	6245	63	52	43	33	19.3	16.0	13.2	10.0
	4000	6795	67	57	47	35	20.3	17.3	14.4	10.5
TWE126	3750	6370	44	27	25	38	13.4	8.1	7.5	11.7
	4200	7137	45	31	28	48	13.7	9.5	8.5	14.5
	4650	7902	47	36	31	57	14.3	10.9	9.5	17.4
	5100	8666	50	40	34	67	15.2	12.3	10.5	20.5
TWE156	4500	7644	46	34	30	22	14.1	10.5	9.2	6.6
	5000	8497	49	39	34	25	14.9	12.0	10.3	7.6
	5500	9346	53	45	37	28	16.2	13.6	11.4	8.5
	6000	10195	58	50	41	31	17.7	15.1	12.5	9.3
TWE201	6000	10195	53	43	36	28	16.0	13.1	10.9	8.6
	6680	11348	57	48	40	31	17.5	14.5	12.1	9.4
	7350	12488	62	52	44	33	18.8	16.0	13.3	10.0
	8030	13645	65	57	47	35	19.8	17.4	14.5	10.5

Note: Throw distance values are based on a terminal velocity of 75 fpm (0.38 m/s).

Throw distance values at other terminal velocities may be established by multiplying throw distances in table above by throw factor as follows:
 for 50 FPM (0.25 m/s) terminal velocity, multiply by 1.50 throw factor;
 for 100 FPM (0.51 m/s) terminal velocity, multiply by 0.75 throw factor;
 for 150 FPM (0.76 m/s) terminal velocity, multiply by 0.50 throw factor.

Table 77. Static pressure drop through accessories (inches of water column) – air handler

Unit Model No.	CFM	m ³ /h	Return Grille		2" MERV 13 Filter	Discharge Plenum & Grille ^(b)		Electric Heaters (kW)							
			in. wc	Pascal		in. wc	Pascal	5-10		15-20		25-30		35-50	
									in. wc	Pascal	in. wc	Pascal	in. wc	Pascal	in. wc
TWE051	1400	2379	0.09	23.60	0.19	0.16	41.10	0.06	16.20	0.05	13.70	0.09	23.60	—	—
	1700	2889	0.14	34.90	0.24	0.24	60.60	0.09	23.90	0.08	20.20	0.14	34.90	—	—
	2000	3398	0.18	45.70	0.29	0.33	83.80	0.13	33.00	0.13	33.00	0.19	48.30	—	—
TWE072	1600	2718	0.03	9.51	0.12	0.11	28.91	0.03	7.47	0.03	7.47	0.06	14.94	0.06	14.94
	2000	3398	0.04	14.70	0.15	0.18	45.20	0.03	7.47	0.05	12.45	0.08	19.93	0.10	24.91
	2400	4078	0.06	21.11	0.19	0.26	65.07	0.04	9.96	0.07	17.44	0.11	27.40	0.15	37.36
TWE076	2000	3398	0.06	14.70	0.15	0.18	45.20	0.03	6.80	0.05	13.50	0.08	19.20	0.10	26.00
	2500	4248	0.09	22.90	0.20	0.28	70.60	0.04	10.60	0.08	21.20	0.12	30.00	0.16	40.60
	3000	5098	0.13	33.00	0.25	0.40	101.60	0.06	15.20	0.12	30.50	0.17	43.20	0.23	58.40
TWE101	2600	4418	0.05	11.70	0.15	0.28	72.10	0.04	10.10	0.09	21.80	0.13	31.90	0.17	43.60
	3300	5607	0.07	18.90	0.20	0.46	116.20	0.06	16.20	0.14	35.10	0.20	51.30	0.28	70.20
	4000	6797	0.11	27.80	0.25	0.67	170.70	0.09	23.80	0.20	51.60	0.30	75.40	0.41	103.20

Table 77. Static pressure drop through accessories (inches of water column) – air handler (continued)

Unit Model No.	CFM	m ³ /h	Return Grille		2" MERV 13 Filter	Discharge Plenum & Grille(b)		Electric Heaters (kW)							
								5-10		15-20		25-30		35-50	
			in. wc	Pascal		in. wc	Pascal	in. wc	Pascal	in. wc	Pascal	in. wc	Pascal	in. wc	Pascal
TWE126	3200	5436	0.04	10.20	0.12	0.10	25.60	0.01	2.50	0.02	5.00	0.03	7.50	0.04	10.00
	4000	6797	0.06	15.90	0.15	0.16	39.90	0.02	5.00	0.03	7.50	0.04	10.00	0.06	15.00
	4800	8156	0.09	22.90	0.19	0.23	57.50	0.03	7.50	0.03	7.50	0.06	15.00	0.08	20.00
TWE156	4000	6797	0.07	16.90	0.15	0.15	38.40	0.02	3.80	0.03	6.80	0.05	13.50	0.08	19.20
	5000	8496	0.10	26.50	0.20	0.24	60.00	0.04	10.60	0.04	10.60	0.08	21.20	0.12	30.00
	6000	10195	0.15	38.10	0.25	0.34	86.40	0.06	15.20	0.06	15.20	0.12	30.50	0.17	43.20
TWE201	5200	8836	0.07	18.40	0.17	0.30	73.80	0.04	10.60	0.04	10.60	0.08	21.10	0.13	31.70
	6650	11300	0.12	30.20	0.23	0.46	114.90	0.07	17.30	0.07	17.30	0.14	34.50	0.21	51.80
	7800	13254	0.16	41.50	0.28	0.63	156.10	0.10	23.80	0.10	23.80	0.19	47.50	0.29	71.30

Notes:

- Return air filter ESP included in Fan Performance Table data.
- On discharge plenum and grille - at louver opening angle of 42 degrees. For ESP at other angle openings, see accessory installation instruction.

Table 78. Auxiliary electric heat capacity – air handler

Unit Model No.	Total kW	No. of Stages	Stage 1		Stage 2		Total	
			kW Input	Btu Output	kW Input	Btu Output	kW Input	Btu Output
TWE0514DA, 0724DB, 0764DA/B, 1014DA/B	5.00	1	5.00	17,065	—	—	5.00	17,065
	9.96	1	9.96	33,993	—	—	9.96	33,993
	14.96	1	14.96	51,058	—	—	14.96	51,058
	24.92	2	14.96	51,058	9.96	33993	24.92	85,051
TWE0724DB, 0764DA/B, 1014DA/B	34.88	2	19.92	67,987	14.96	51058	34.88	119,045
TWE1264DB, 1564DB, 2014DB, 2514DB	10.00	1	10.00	34,130	—	—	10.00	34,130
	19.92	1	19.92	67,987	—	—	19.92	67,987
	29.92	2	19.92	67,987	10.00	34130	29.92	102,117
	49.84	2	29.92	102,117	19.92	67987	49.84	170,104

Note: Heaters are rated at 480V. For other than rated voltage, capacity = (Voltage/Related Voltage)² x Rated Capacity



Zone Controls

Zone Sensors

Zone Sensors are the building occupant's comfort control devices. Zone sensors are required for SZVAV applications. The following zone sensor options are available for units with Symbio 700 control.

Manual Changeover	Heat, Cool or Off System Switch. Fan Auto or Off Switch. One temperature setpoint lever.
Manual/Automatic Changeover	Auto, Heat, Cool or Off System Switch. Fan Auto or Off Switch. Two temperature setpoint levers.
Manual/Automatic Changeover	Auto, Heat, Cool or Off System Switch. Fan Auto or Off Switch. Two temperature setpoint levers.
Integrated Comfort™ System	Sensor(s) available with optional temperature adjustment and override buttons to provide central control through a Trane Integrated Comfort™ system.
Remote Sensor	Sensor(s) available for all zone sensors to provide remote sensing capabilities.

Conventional Thermostats

Note: All thermostats may be used with Symbio 700 units.

Non-Programmable Thermostats	
TCONT102* (1H/1C) Common terminal not required	Auto-changeover Backlit Display and Keys Filter Reminder Keypad Lock
TCONT103* (2H/1C) Common terminal required	Auto-changeover Backlit Display & Keys Filter Reminder Keypad Lock Outdoor Temp Sensor Available
TCONT402* (3H/2C) Common terminal required	Auto-changeover Backlit Display & Keys Filter Reminder Keypad Lock Outdoor Temp Sensor Included
Programmable Thermostats	
TCONT202* (1H/1C) Common terminal preferred, not required	5/2 or 5/1/1 Programming Actual and Setpoint temps displayed simultaneously
TCONT203* (4H/2C) Common terminal preferred, not required	5/2 or 5/1/1 Programming Actual and Setpoint temps displayed simultaneously
TCONT302* (4H/2C) Common terminal preferred, not required	Interactive touchscreen Large display Real time clock
TCONT303* (4H/2C) Humidity Sensor Common terminal preferred, not required	Interactive touchscreen Large display Real time clock Built-in humidity sensor



Electrical Data

Heat Pump Condenser

Table 79. Electrical Characteristics – Motors – Heat Pumps – 50Hz

Tons	Unit Model Number	Compressor Motors						Condenser Fan Motor				
		Volts	Phase	Compressor 1		Compressor 2		No.	Volts	Phase	Amps	
				RLA (Amps)	LRA (Amps)	RLA (Amps)	LRA (Amps)				FLA (Ea.)	LRA (Ea.)
5	TWA0604DA	380/415	3	10.6	74.0	N/A	N/A	1	380/415	3	1.3	4.2
	TWA0604DD	380/415	3	5.4	38.0	5.4	38.0	1	380/415	3	1.3	4.2
6.25	TWA0764DA	380/415	3	12.9	98.0	N/A	N/A	1	380/415	3	1.3	4.2
	TWA0764DD	380/415	3	6.0	43.0	6.0	43.0	1	380/415	3	1.3	4.2
8.33	TWA1014DA	380/415	3	17.8	145.0	N/A	N/A	1	380/415	3	2.7	9.5
	TWA1014DD	380/415	3	7.8	52.0	7.8	52.0	1	380/415	3	2.7	9.5
13	TWA1564DD	380/415	3	12.2	101.0	12.2	101.0	1	380/415	3	2.7	9.5
16.7	TWA2014DD	380/415	3	18.5	118.0	18.5	118.0	1	380/415	3	2.7	9.5

Note: Electrical characteristics reflect nameplate values and are calculated in accordance with UL specifications.

Table 80. Unit wiring – heat pumps – 50 Hz

Tons	Unit Model Number	Volts	Minimum Circuit Ampacity	Maximum Fuse or Circuit Breaker Size
5	TWA0604DA	380/415	15	25
5	TWA0604DD	380/415	13	15
6.25	TWA0764DA	380/415	17	30
6.25	TWA0764DD	380/415	15	20
8.33	TWA1014DA	380/415	25	40
8.33	TWA1014DD	380/415	20	25
13	TWA1564DD	380/415	33	45
16.7	TWA2014DD	380/415	47	60

Air Handler

Table 81. Electrical characteristics – standard motor – 50 Hz air handler

Tons	Unit Model Number	Standard Evaporator Fan Motor							
		No.	Volts	Phase	HP	Amps		MCA	MOP
						FLA	LRA		
4.6	TWE0514DA	1	380-415	3	0.75	1.5	8.2	2	15
6	TWE0724DB	1	380-415	3	1.00	2.5	17.0	3	15
6.25	TWE0764DA, B	1	380-415	3	1.00	2.5	17.0	3	15
8.33	TWE1014DA, B	1	380-415	3	1.50	3.5	26.2	4	15
10.4	TWE1264DB	1	380-415	3	2.00	3.2	35.0	4	15
13	TWE1564DB	1	380-415	3	2.00	4.6	39.3	6	15
16.7	TWE2014DB	1	380-415	3	3.50	8.0	43.2	10	15



Electrical Data

Table 82. Unit wiring with electric heat (single point connection) — air handlers

Ton	Used With	Heater Model No.	Heater kW Rating	Unit Power Supply	Control Stages	Min Circuit Ampacity	Max Fuse or Circuit Breaker Size
4.6	TWE0514DA	BAYHTRN405*	3.13	380/3/50	1	8	15
		BAYHTRR410*	6.25	380/3/50	1	14	15
		BAYHTRR415*	9.37	380/3/50	1	20	20
		BAYHTRN425*	15.63	380/3/50	2	32	35
		BAYHTRN405*	3.74	415/3/50	1	8	15
		BAYHTRR410*	7.46	415/3/50	1	15	15
		BAYHTRR415*	11.17	415/3/50	1	21	25
		BAYHTRN425*	18.64	415/3/50	2	34	35
6	TWE0724DB	BAYHTRN405*	3.13	380/3/50	1	9	15
		BAYHTRR410*	6.25	380/3/50	1	15	20
		BAYHTRR415*	9.37	380/3/50	1	21	25
		BAYHTRN425*	15.63	380/3/50	2	33	35
		BAYHTRN405*	3.74	415/3/50	1	10	15
		BAYHTRR410*	7.46	415/3/50	1	16	20
		BAYHTRR415*	11.17	415/3/50	1	23	25
		BAYHTRN425*	18.64	415/3/50	2	36	40
6.25	TWE0764DA, B	BAYHTRN405*	3.13	380/3/50	1	9	15
		BAYHTRR410*	6.25	380/3/50	1	15	20
		BAYHTRR415*	9.37	380/3/50	1	21	25
		BAYHTRN425*	15.63	380/3/50	2	33	35
		BAYHTRN405*	3.74	415/3/50	1	10	15
		BAYHTRR410*	7.46	415/3/50	1	16	20
		BAYHTRR415*	11.17	415/3/50	1	23	25
		BAYHTRN425*	18.64	415/3/50	2	36	40
8.33	TWE1014DA, B	BAYHTRN405*	3.13	380/3/50	1	10	15
		BAYHTRR410*	6.25	380/3/50	1	16	20
		BAYHTRR415*	9.37	380/3/50	1	22	25
		BAYHTRN425*	15.63	380/3/50	2	33	35
		BAYHTRN435*	21.86	380/3/50	2	45	50
		BAYHTRN405*	3.74	415/3/50	1	10	15
		BAYHTRR410*	7.46	415/3/50	1	17	20
		BAYHTRR415*	11.17	415/3/50	1	23	25
		BAYHTRN425*	18.64	415/3/50	2	36	40
		BAYHTRN435*	26.08	415/3/50	2	49	50

Table 82. Unit wiring with electric heat (single point connection) – air handlers (continued)

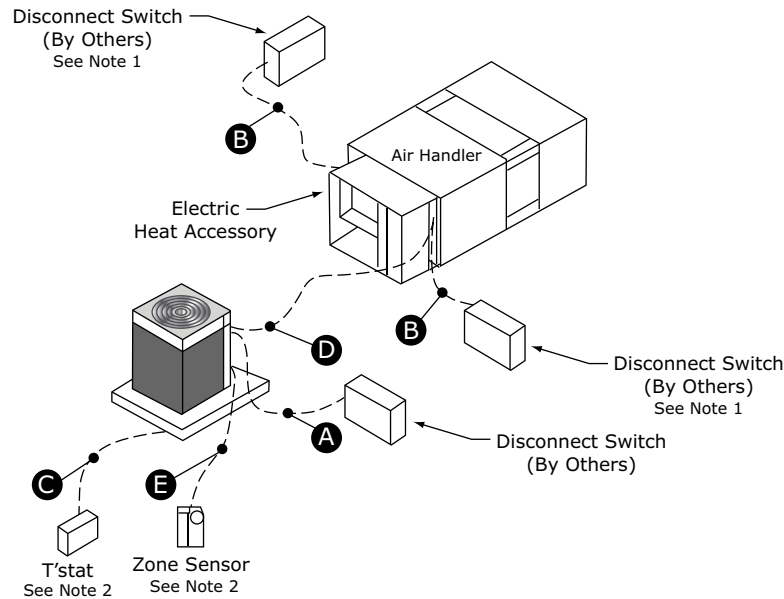
Ton	Used With	Heater Model No.	Heater kW Rating	Unit Power Supply	Control Stages	Min Circuit Ampacity	Max Fuse or Circuit Breaker Size
10.4	TWE1264DB	BAYHTRP410*	6.25	380/3/50	1	16	20
		BAYHTRP420*	12.5	380/3/50	1	28	30
		BAYHTRP430*	18.76	380/3/50	2	40	40
		BAYHTRP450*	31.26	380/3/50	2	63	70
		BAYHTRP410*	7.46	415/3/50	1	17	20
		BAYHTRP420*	14.92	415/3/50	1	30	30
		BAYHTRP430*	22.38	415/3/50	2	43	45
		BAYHTRP450*	37.29	415/3/50	2	69	70
13	TWE1564DB	BAYHTRP410*	6.25	380/3/50	1	18	20
		BAYHTRP420*	12.5	380/3/50	1	30	30
		BAYHTRP430*	18.76	380/3/50	2	41	45
		BAYHTRP450*	31.26	380/3/50	2	65	70
		BAYHTRP410*	7.46	415/3/50	1	19	20
		BAYHTRP420*	14.92	415/3/50	1	32	35
		BAYHTRP430*	22.38	415/3/50	2	45	45
		BAYHTRP450*	37.29	415/3/50	2	71	80
16.7	TWE2014DB	BAYHTRP410*	6.25	380/3/50	1	22	25
		BAYHTRP420*	12.5	380/3/50	1	34	35
		BAYHTRP430*	18.76	380/3/50	2	46	50
		BAYHTRP450*	31.26	380/3/50	2	69	70
		BAYHTRP410*	7.46	415/3/50	1	23	25
		BAYHTRP420*	14.92	415/3/50	1	36	40
		BAYHTRP430*	22.38	415/3/50	2	49	50
		BAYHTRP450*	37.29	415/3/50	2	75	80

Jobsite Connections

Symbio™ Controls

Wiring shown with dashed lines is to be furnished and installed by the customer. All customer supplied wiring must be copper only and must conform to NEC and local electrical codes. Codes may require line of sight between disconnect switch and unit.

Figure 7. Symbio™ jobsite connections



Power Wires

A. 3 wires, line voltage for 3 phase, (2 wires for single phase) 1 grounding wire

B. 3 wires, line voltage for 3 phase, (2 wires for single phase) 1 grounding wire

Control Wires

C. Heat Pump thermostat: 6 to 9 wires depending on T'stat options and stages of cooling and heating

D. Wiring between indoor and outdoor unit: 5 to 11 wires depending on unit control options*

E. Zone Sensor: 4 to 7 wires depending on zone sensor model*

Communication signal wires require shielded twisted pairs.

Use factory-supplied 165 ft. length of Comlink cable with a PVC jacket, 18/1 PR, stranded shield, 25 PF/FT plenum rated for the field communication signal wiring.

Notes:

1. When electric heater accessory is used, single point power entry or dual point power entry is field optional. Single point power entry option is through electric heater only.
2. ***Choose only one of the following; Thermostat, Mechanical Zone Sensor, Programmable Zone Sensor Panel or BAS Zone Sensor.

Important: For the EDC switch to be functional and thereby facilitate reliable unit operation, make the EDC connections from the indoor to the outdoor control boxes.

Table 83. Recommended thermostat wire size

Wire Size	Maximum Wire Length
(Gauge)	Physical distance between Unit & T'stat
22	30 Feet
20	50 Feet
18	75 Feet
16	125 Feet
14	200 Feet

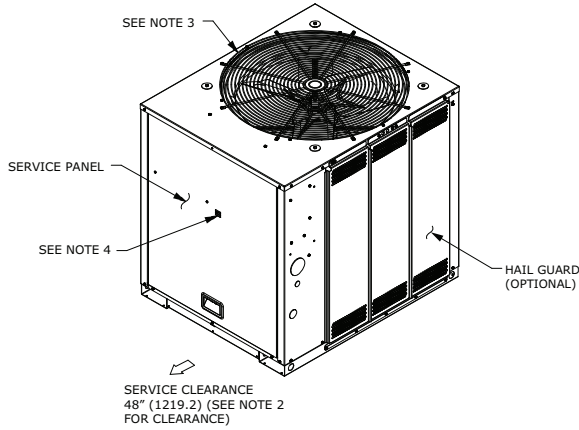
Table 84. Zone sensor module wiring

Distance from Unit to Control	Recommended Wire Size
0-150 feet (0-45.7 m)	22 gauge (0.33 mm ²)
151-240 feet (46-73.1 m)	20 gauge (0.50 mm ²)
241-305 feet (73.5-117.3 m)	18 gauge (0.75 mm ²)
386-610 feet (117.7-185.9 m)	16 gauge (1.31 mm ²)
611-970 feet (186.2-295.7 m)	14 gauge (2.08 mm ²)

Dimensional Data

Heat Pump

Figure 8. 5-6.25 ton heat pump, single compressor – in (mm)



NOTES:

1. ACCESS OPENING IS FOR FIELD INSTALLED BAYLOAM ACCESSORY.
2. MINIMUM CLEARANCE FOR PROPER OPERATION IS 36" (914.4) FROM WALLS, SHRUBBERY, PRIVACY FENCES ETC. MINIMUM CLEARANCE BETWEEN ADJACENT UNITS IS 72" (1828.8). RECOMMENDED SERVICE CLEARANCE 48" (1219.2)
3. TOP DISCHARGE AREA SHOULD BE UNRESTRICTED FOR 100" (2540) MINIMUM. UNIT SHOULD BE PLACED SO ROOF RUN-OFF WATER OR FALLING SNOW FROM ROOF DOES NOT POUR/FALL DIRECTLY ON UNIT
4. OUTDOOR AIR TEMPERATURE SENSOR OPENING (DO NOT BLOCK OPENING)

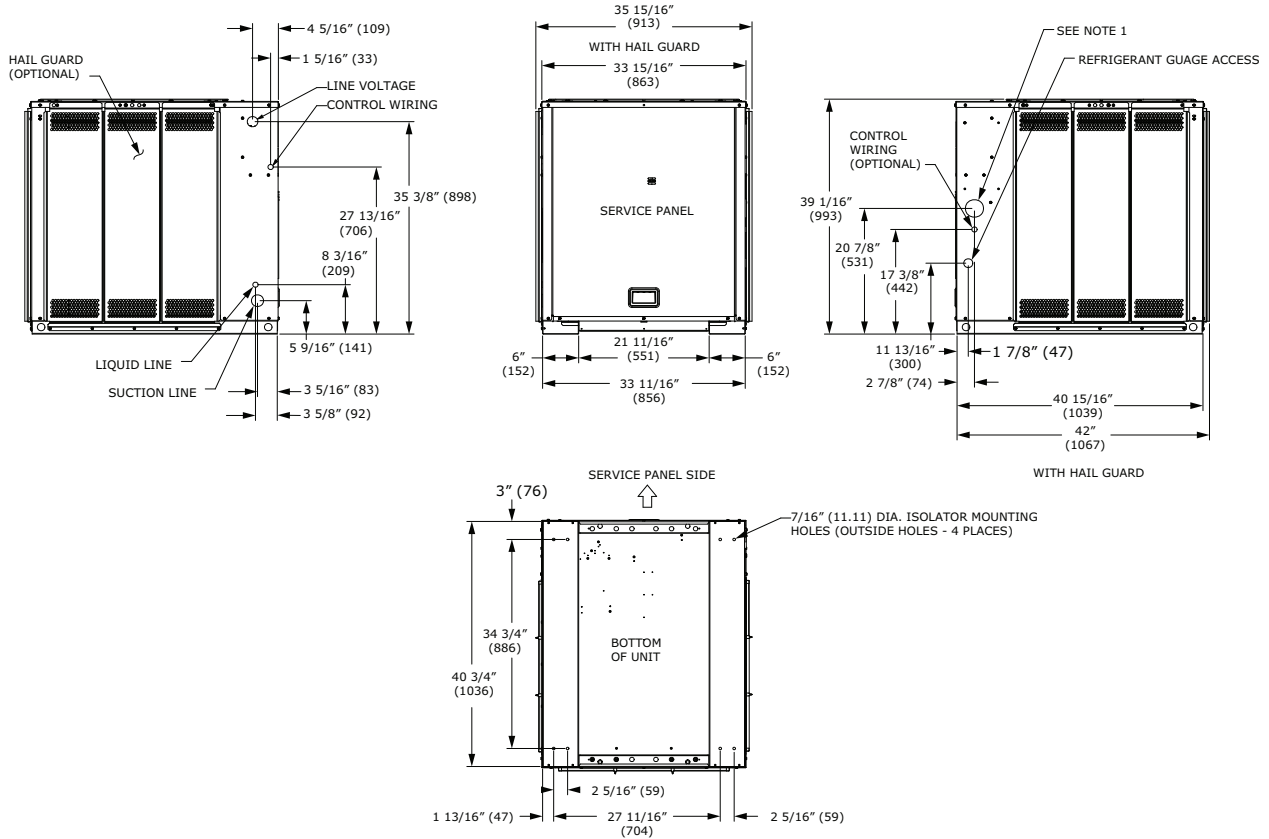
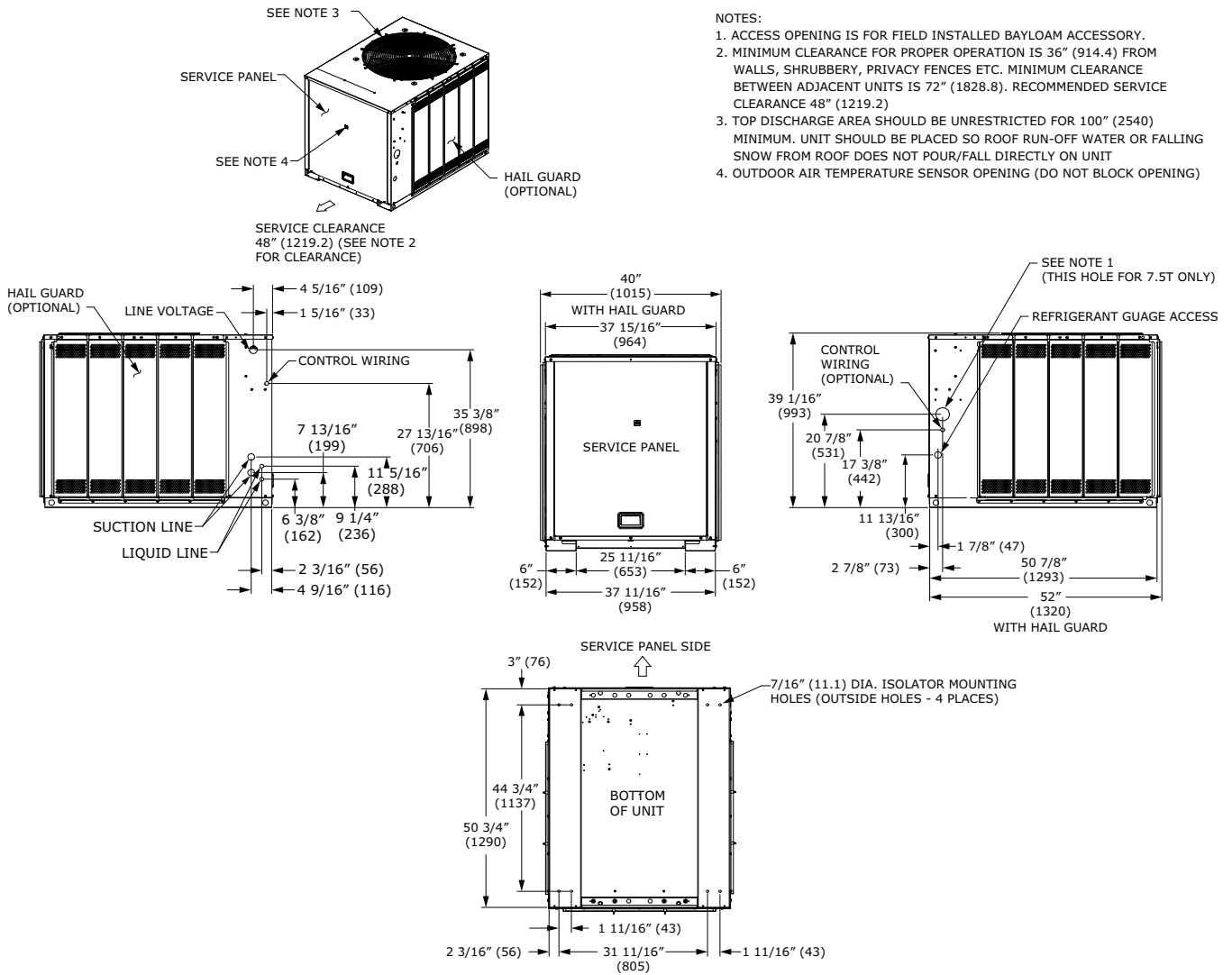


Figure 9. 5-6.25 ton heat pump, dual compressor – in (mm)



NOTES:

1. ACCESS OPENING IS FOR FIELD INSTALLED BAYLOAM ACCESSORY.
2. MINIMUM CLEARANCE FOR PROPER OPERATION IS 36" (914.4) FROM WALLS, SHRUBBERY, PRIVACY FENCES ETC. MINIMUM CLEARANCE BETWEEN ADJACENT UNITS IS 72" (1828.8). RECOMMENDED SERVICE CLEARANCE 48" (1219.2)
3. TOP DISCHARGE AREA SHOULD BE UNRESTRICTED FOR 100" (2540) MINIMUM. UNIT SHOULD BE PLACED SO ROOF RUN-OFF WATER OR FALLING SNOW FROM ROOF DOES NOT POUR/FALL DIRECTLY ON UNIT
4. OUTDOOR AIR TEMPERATURE SENSOR OPENING (DO NOT BLOCK OPENING)

Dimensional Data

Figure 10. 8.33 ton heat pump, single compressor – in (mm)

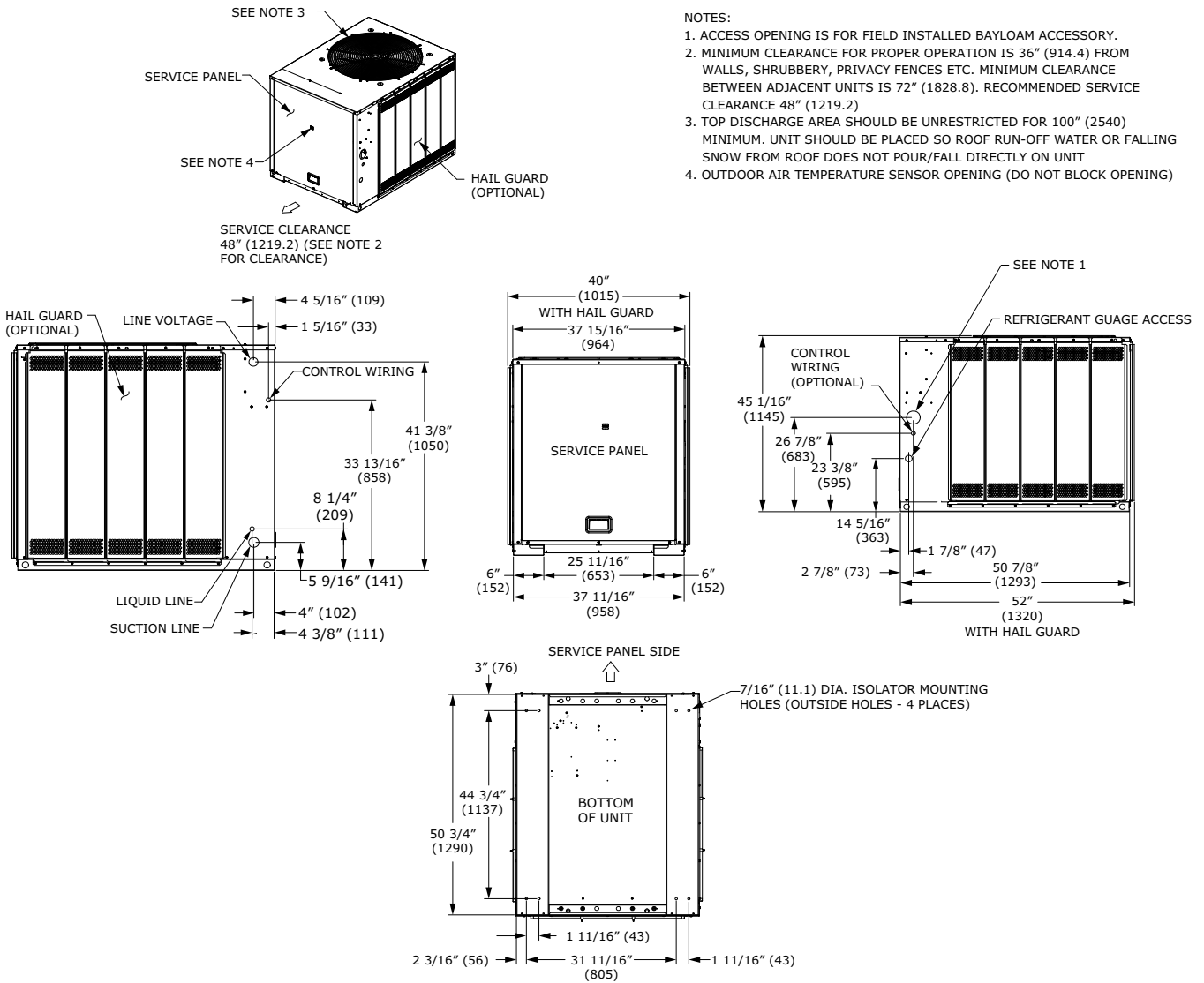


Figure 11. 8.33 ton heat pump, dual compressor – in (mm)

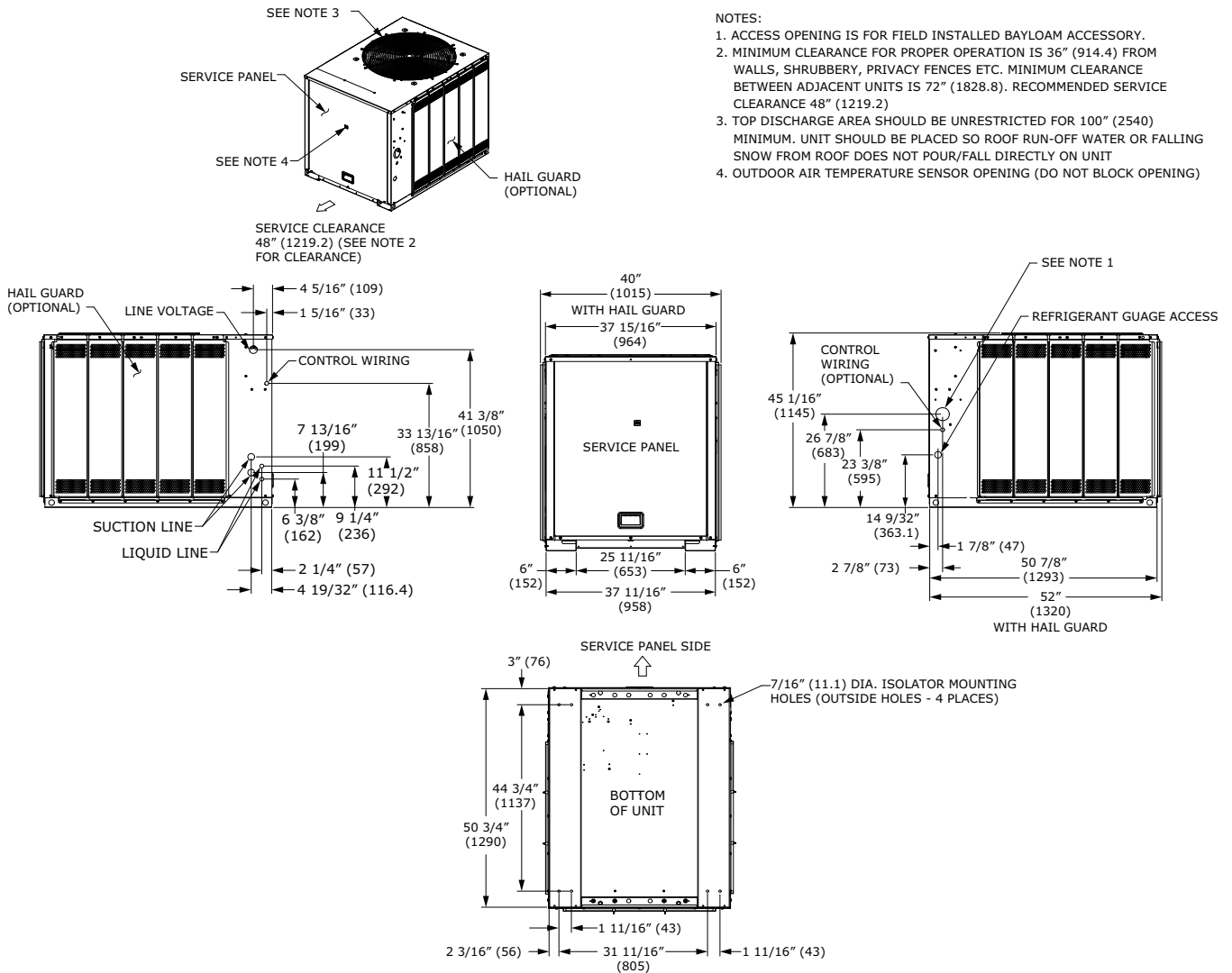
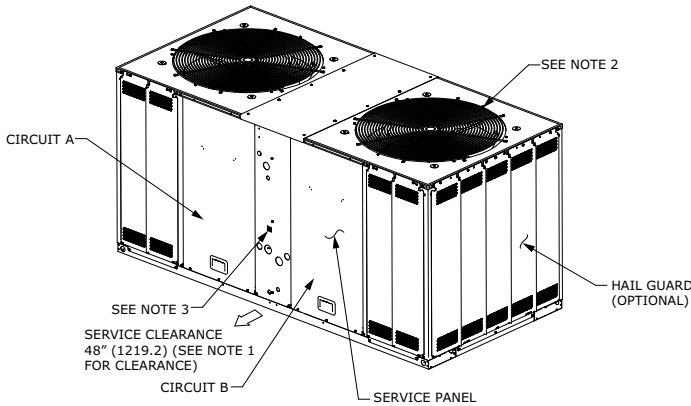
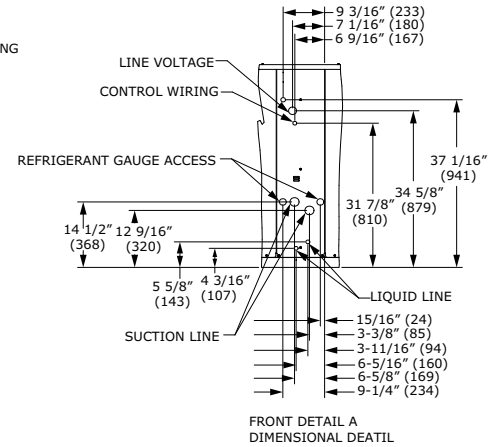
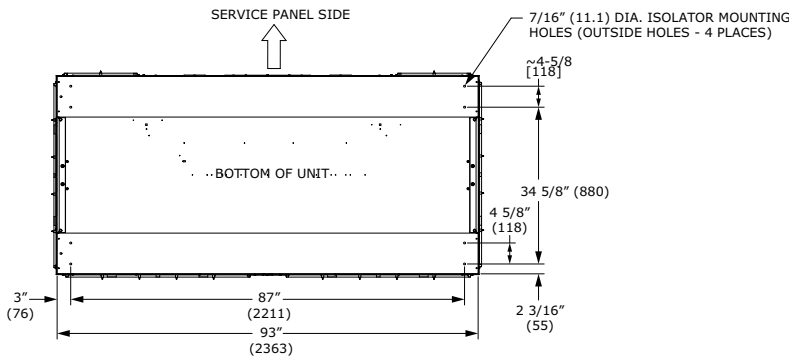
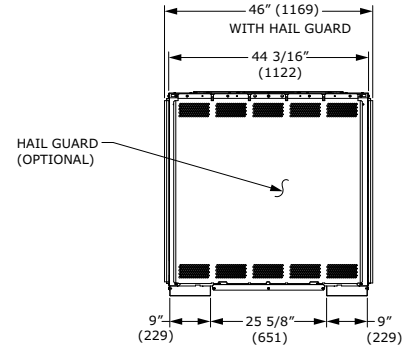
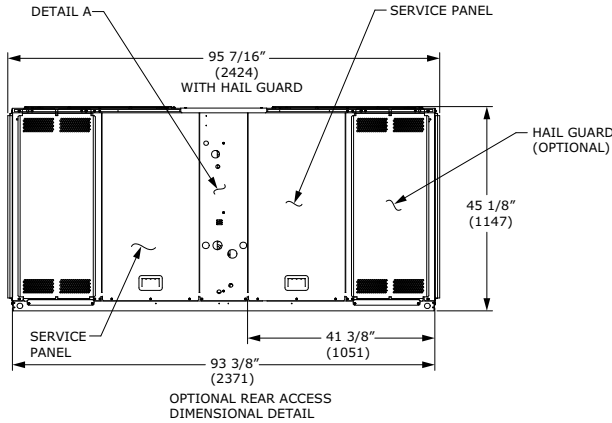


Figure 12. 13, 16.7 ton heat pump, dual compressor – in (mm)



NOTES:

1. MINIMUM CLEARANCE FOR PROPER OPERATION IS 36" (914.4) FROM WALLS, SHRUBBERY, PRIVACY FENCES ETC. MINIMUM CLEARANCE BETWEEN ADJACENT UNITS IS 72" (1828.8). RECOMMENDED SERVICE CLEARANCE 48" (1219.2)
2. TOP DISCHARGE AREA SHOULD BE UNRESTRICTED FOR 100" (2540) MINIMUM. UNIT SHOULD BE PLACED SO ROOF RUN-OFF WATER OR FALLING SNOW FROM ROOF DOES NOT POUR/FALL DIRECTLY ON UNIT
3. OUTDOOR AIR TEMPERATURE SENSOR OPENING (DO NOT BLOCK OPENING)



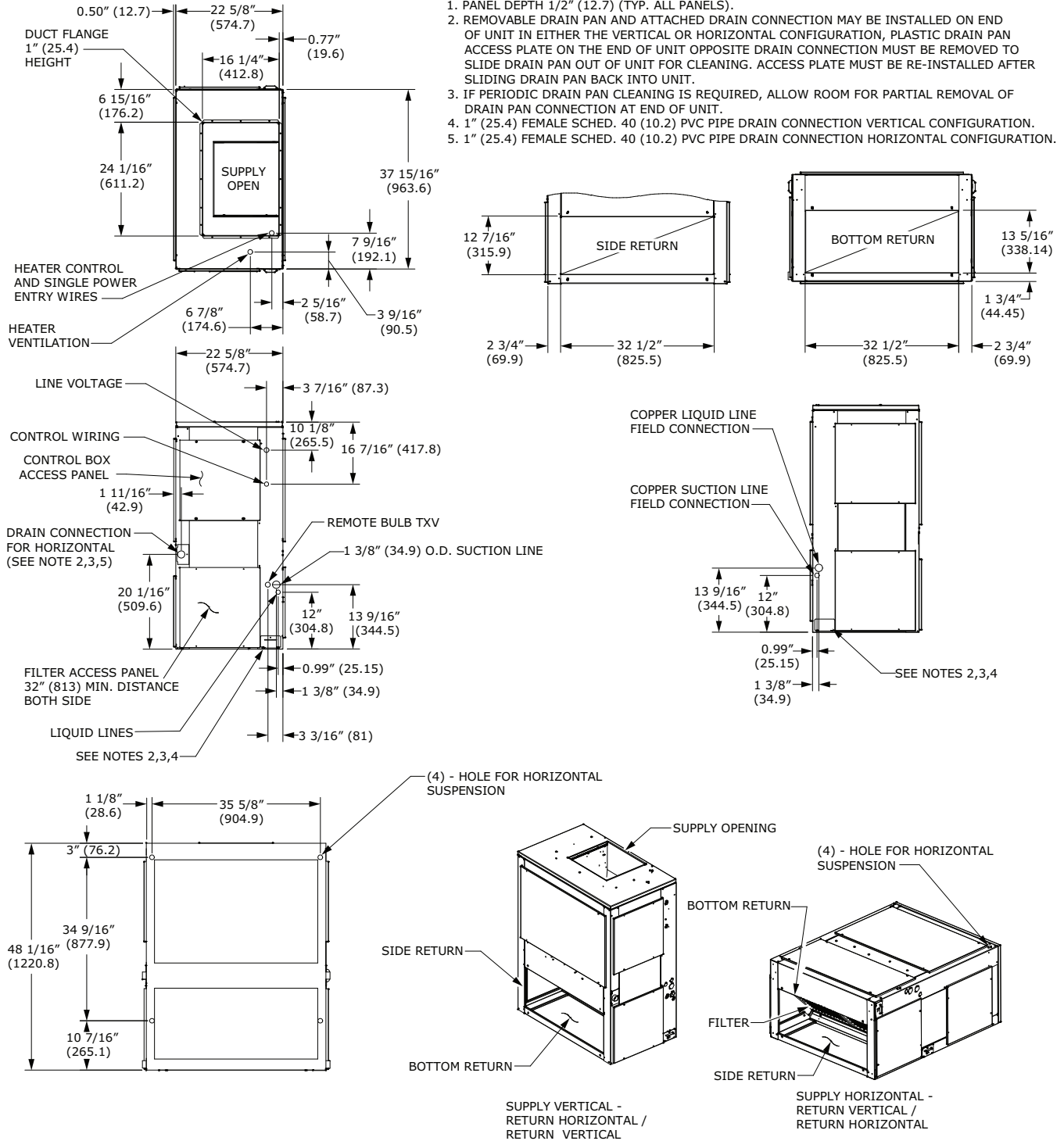
Air Handler

Figure 13. 4.6 ton air handler, single circuit – in (mm)

Note: Duct flange is a field-installed accessory.

NOTES:

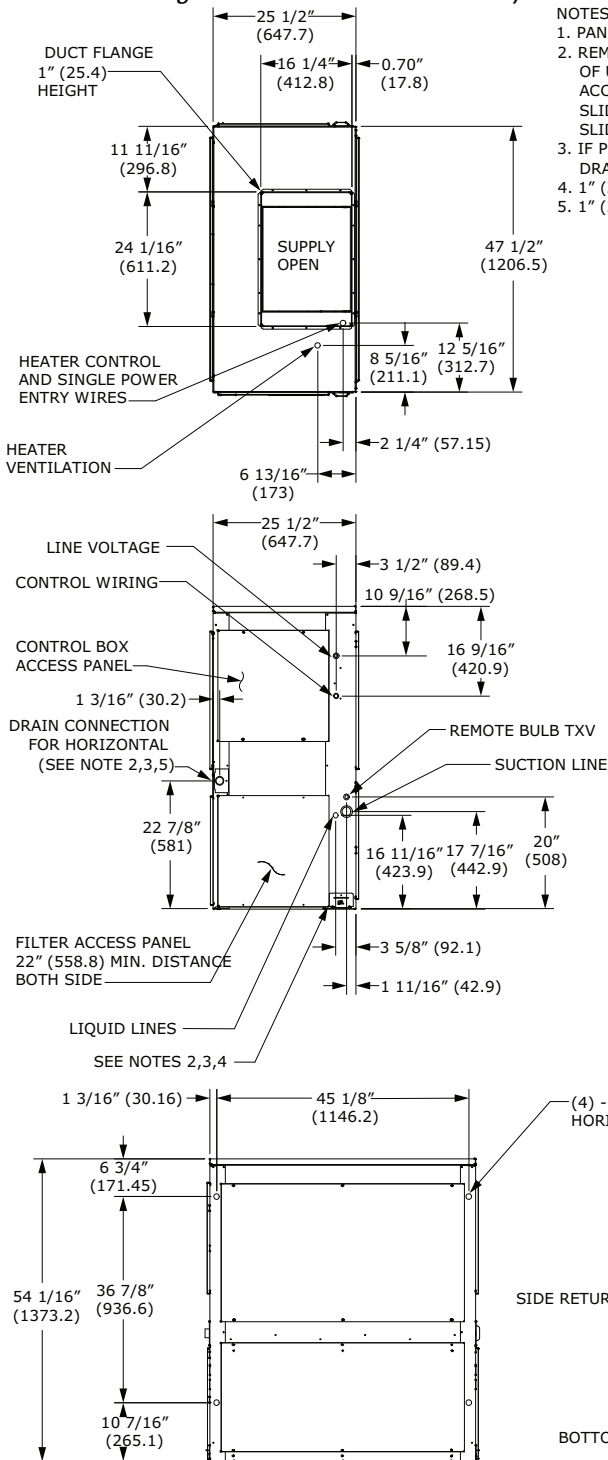
1. PANEL DEPTH 1/2" (12.7) (TYP. ALL PANELS).
2. REMOVABLE DRAIN PAN AND ATTACHED DRAIN CONNECTION MAY BE INSTALLED ON END OF UNIT IN EITHER THE VERTICAL OR HORIZONTAL CONFIGURATION, PLASTIC DRAIN PAN ACCESS PLATE ON THE END OF UNIT OPPOSITE DRAIN CONNECTION MUST BE REMOVED TO SLIDE DRAIN PAN OUT OF UNIT FOR CLEANING. ACCESS PLATE MUST BE RE-INSTALLED AFTER SLIDING DRAIN PAN BACK INTO UNIT.
3. IF PERIODIC DRAIN PAN CLEANING IS REQUIRED, ALLOW ROOM FOR PARTIAL REMOVAL OF DRAIN PAN CONNECTION AT END OF UNIT.
4. 1" (25.4) FEMALE SCHED. 40 (10.2) PVC PIPE DRAIN CONNECTION VERTICAL CONFIGURATION.
5. 1" (25.4) FEMALE SCHED. 40 (10.2) PVC PIPE DRAIN CONNECTION HORIZONTAL CONFIGURATION.



Dimensional Data

Figure 14. 6.25 ton air handler, single circuit – in (mm)

Note: Duct flange is a field-installed accessory.



NOTES:

1. PANEL DEPTH 1/2" (12.7) (TYP. ALL PANELS).
2. REMOVABLE DRAIN PAN AND ATTACHED DRAIN CONNECTION MAY BE INSTALLED ON END OF UNIT IN EITHER THE VERTICAL OR HORIZONTAL CONFIGURATION, PLASTIC DRAIN PAN ACCESS PLATE ON THE END OF UNIT OPPOSITE DRAIN CONNECTION MUST BE REMOVED TO SLIDE DRAIN PAN OUT OF UNIT FOR CLEANING. ACCESS PLATE MUST BE RE-INSTALLED AFTER SLIDING DRAIN PAN BACK INTO UNIT.
3. IF PERIODIC DRAIN PAN CLEANING IS REQUIRED, ALLOW ROOM FOR PARTIAL REMOVAL OF DRAIN PAN CONNECTION AT END OF UNIT.
4. 1" (25.4) FEMALE SCHED. 40 (10.2) PVC PIPE DRAIN CONNECTION VERTICAL CONFIGURATION.
5. 1" (25.4) FEMALE SCHED. 40 (10.2) PVC PIPE DRAIN CONNECTION HORIZONTAL CONFIGURATION.

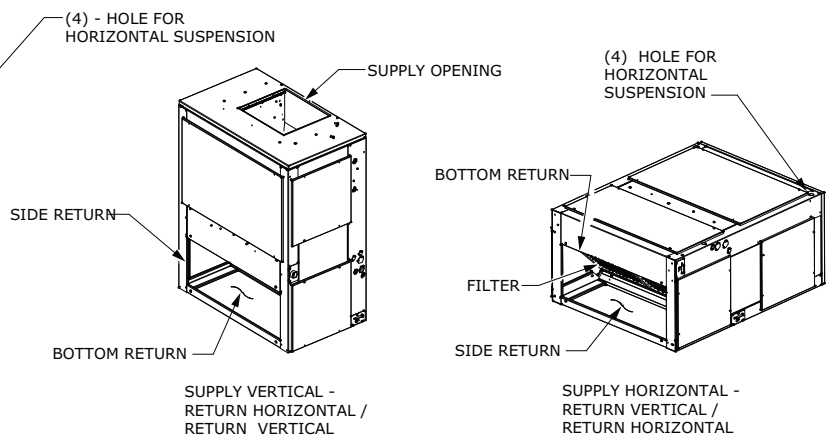
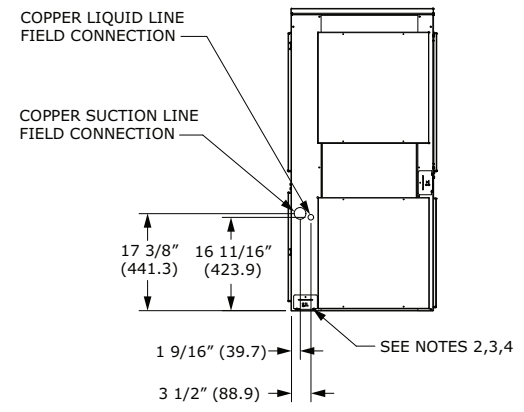
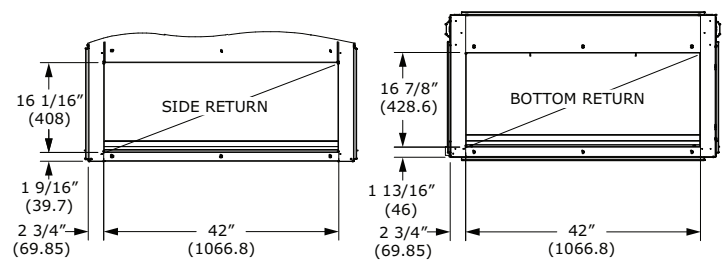
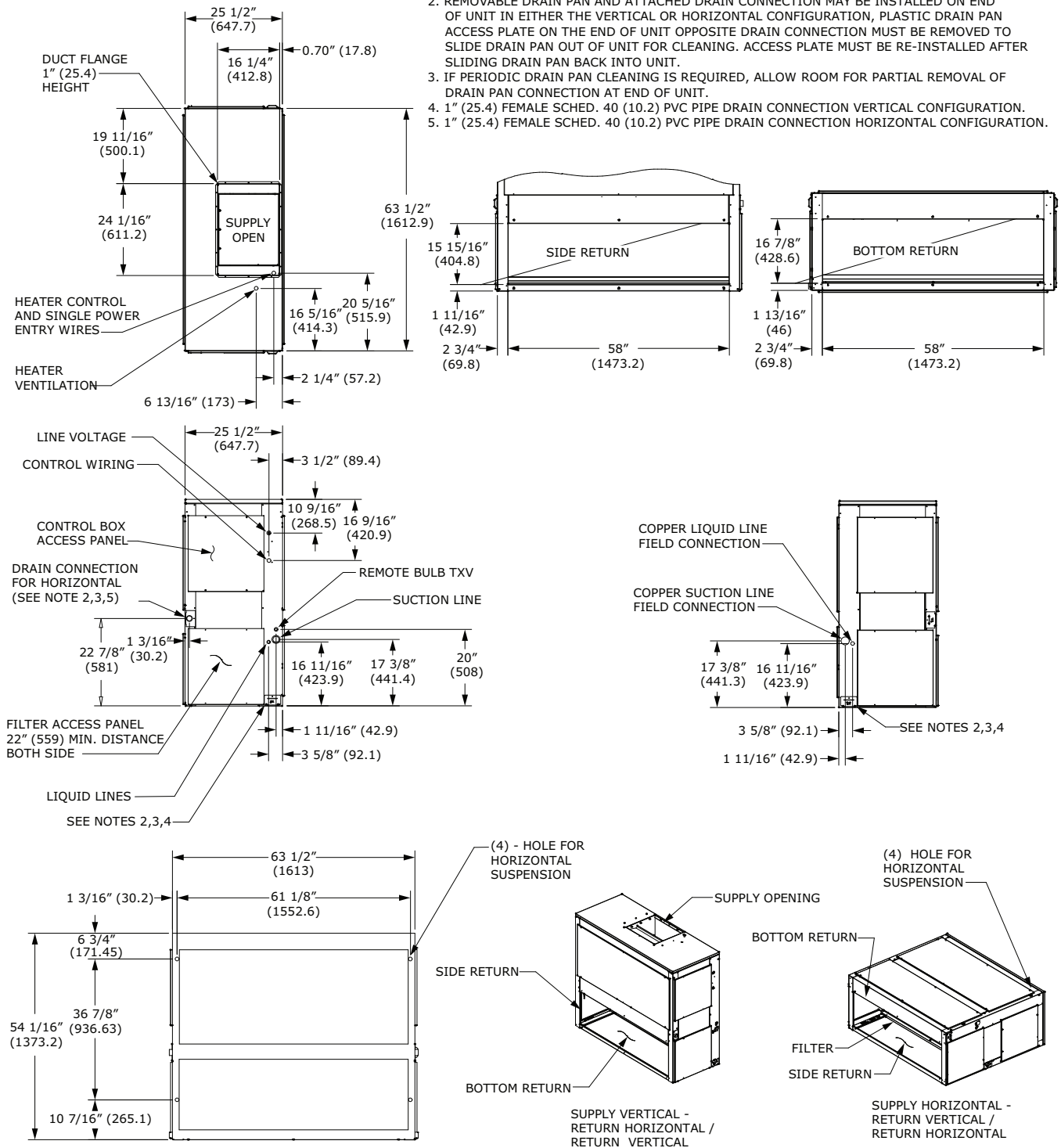


Figure 15. 8.33 ton air handler, single circuit – in (mm)

Note: Duct flange is a field-installed accessory.

NOTES:

1. PANEL DEPTH 1/2" (12.7) (TYP. ALL PANELS).
2. REMOVABLE DRAIN PAN AND ATTACHED DRAIN CONNECTION MAY BE INSTALLED ON END OF UNIT IN EITHER THE VERTICAL OR HORIZONTAL CONFIGURATION, PLASTIC DRAIN PAN ACCESS PLATE ON THE END OF UNIT OPPOSITE DRAIN CONNECTION MUST BE REMOVED TO SLIDE DRAIN PAN OUT OF UNIT FOR CLEANING. ACCESS PLATE MUST BE RE-INSTALLED AFTER SLIDING DRAIN PAN BACK INTO UNIT.
3. IF PERIODIC DRAIN PAN CLEANING IS REQUIRED, ALLOW ROOM FOR PARTIAL REMOVAL OF DRAIN PAN CONNECTION AT END OF UNIT.
4. 1" (25.4) FEMALE SCHED. 40 (10.2) PVC PIPE DRAIN CONNECTION VERTICAL CONFIGURATION.
5. 1" (25.4) FEMALE SCHED. 40 (10.2) PVC PIPE DRAIN CONNECTION HORIZONTAL CONFIGURATION.



Dimensional Data

Figure 16. 8.33 ton air handler, dual circuit – in (mm)

Note: Duct flange is a field-installed accessory.

NOTES:

1. PANEL DEPTH 1/2" (12.7) (TYP. ALL PANELS).
2. REMOVABLE DRAIN PAN AND ATTACHED DRAIN CONNECTION MAY BE INSTALLED ON END OF UNIT IN EITHER THE VERTICAL OR HORIZONTAL CONFIGURATION, PLASTIC DRAIN PAN ACCESS PLATE ON THE END OF UNIT OPPOSITE DRAIN CONNECTION MUST BE REMOVED TO SLIDE DRAIN PAN OUT OF UNIT FOR CLEANING. ACCESS PLATE MUST BE RE-INSTALLED AFTER SLIDING DRAIN PAN BACK INTO UNIT.
3. IF PERIODIC DRAIN PAN CLEANING IS REQUIRED, ALLOW ROOM FOR PARTIAL REMOVAL OF DRAIN PAN CONNECTION AT END OF UNIT.
4. 1" (25.4) FEMALE SCHED. 40 (10.2) PVC PIPE DRAIN CONNECTION VERTICAL CONFIGURATION.
5. 1" (25.4) FEMALE SCHED. 40 (10.2) PVC PIPE DRAIN CONNECTION HORIZONTAL CONFIGURATION.

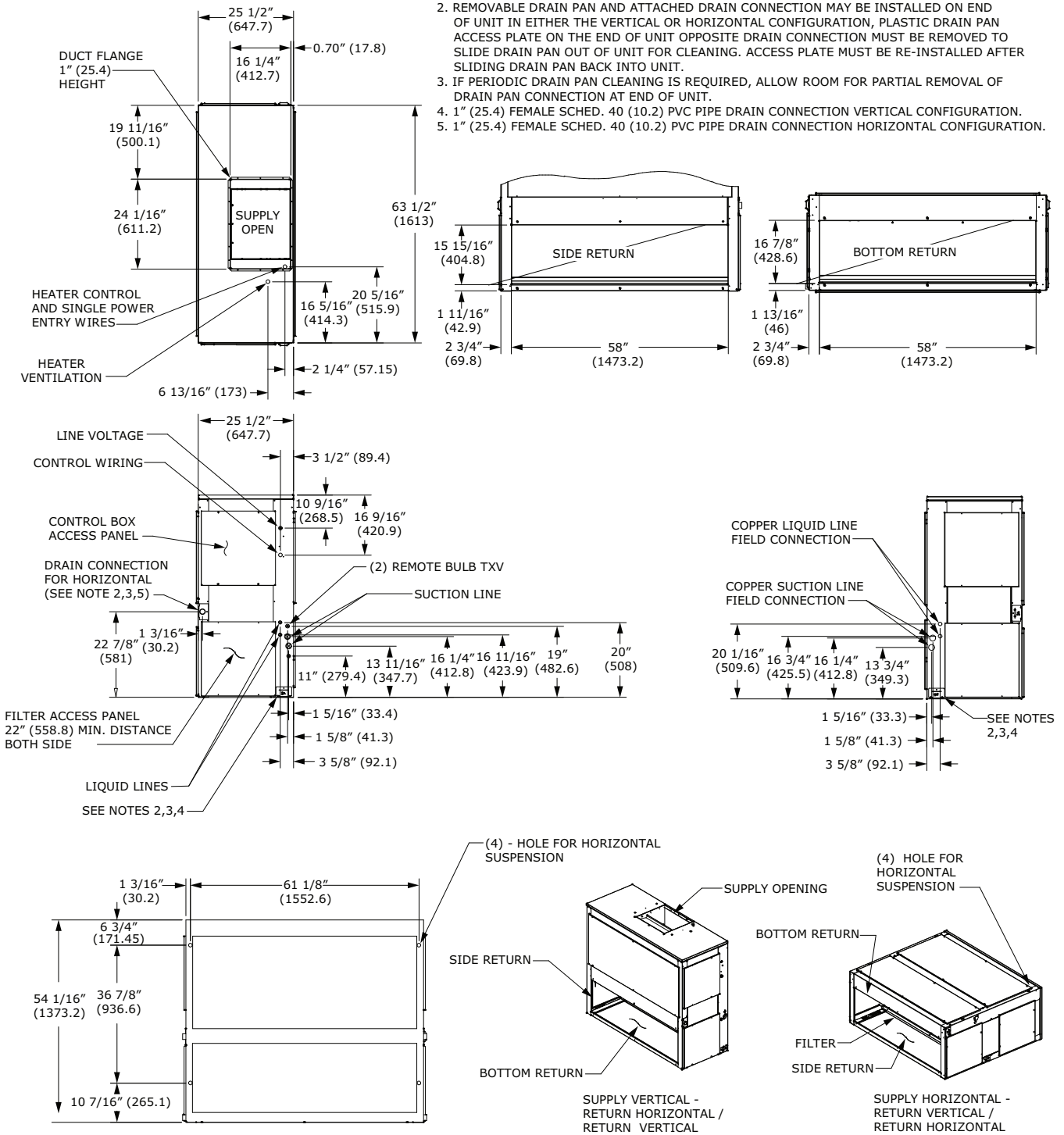
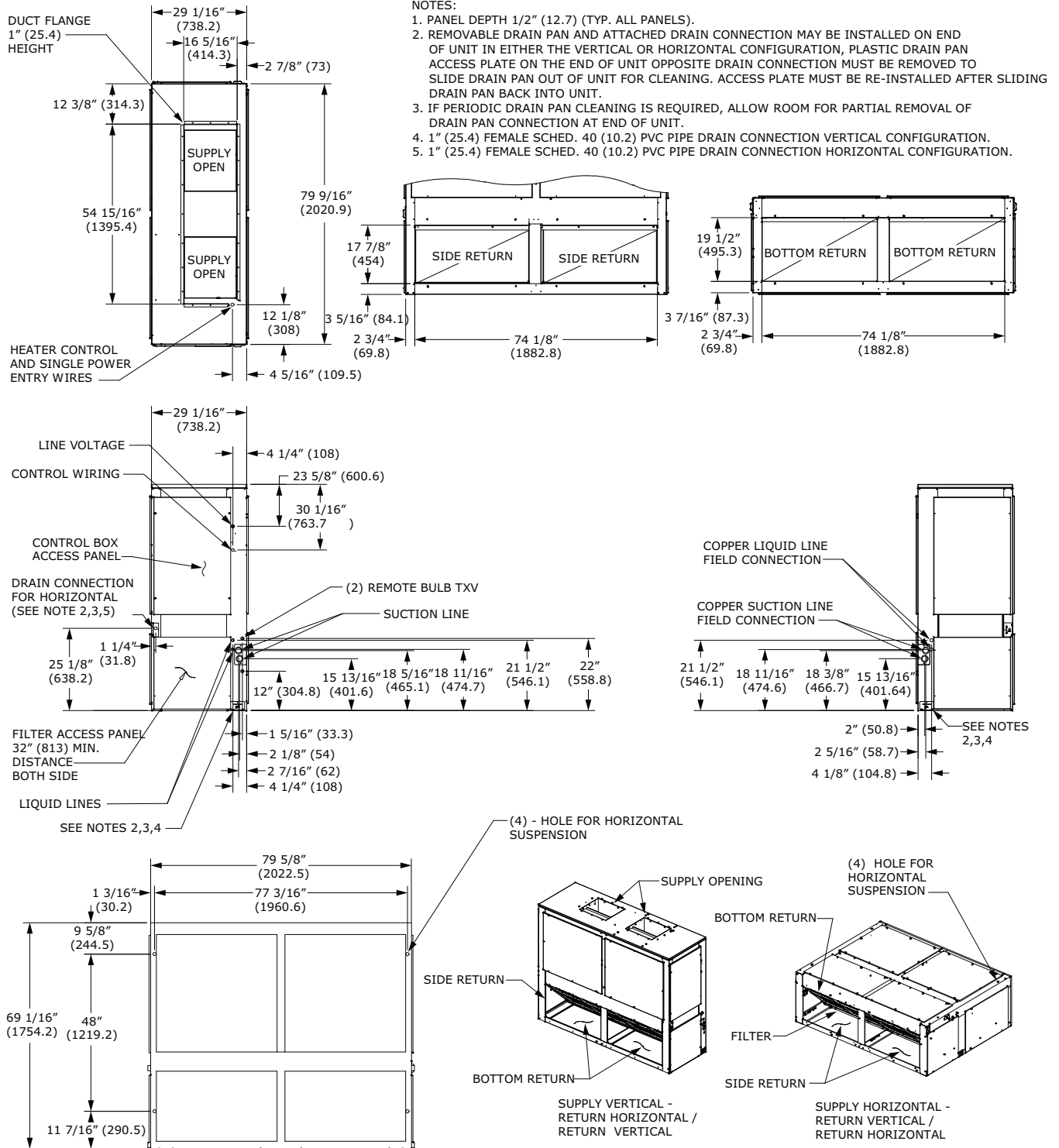


Figure 17. 10.4, 13 ton air handler, dual circuit – in (mm)

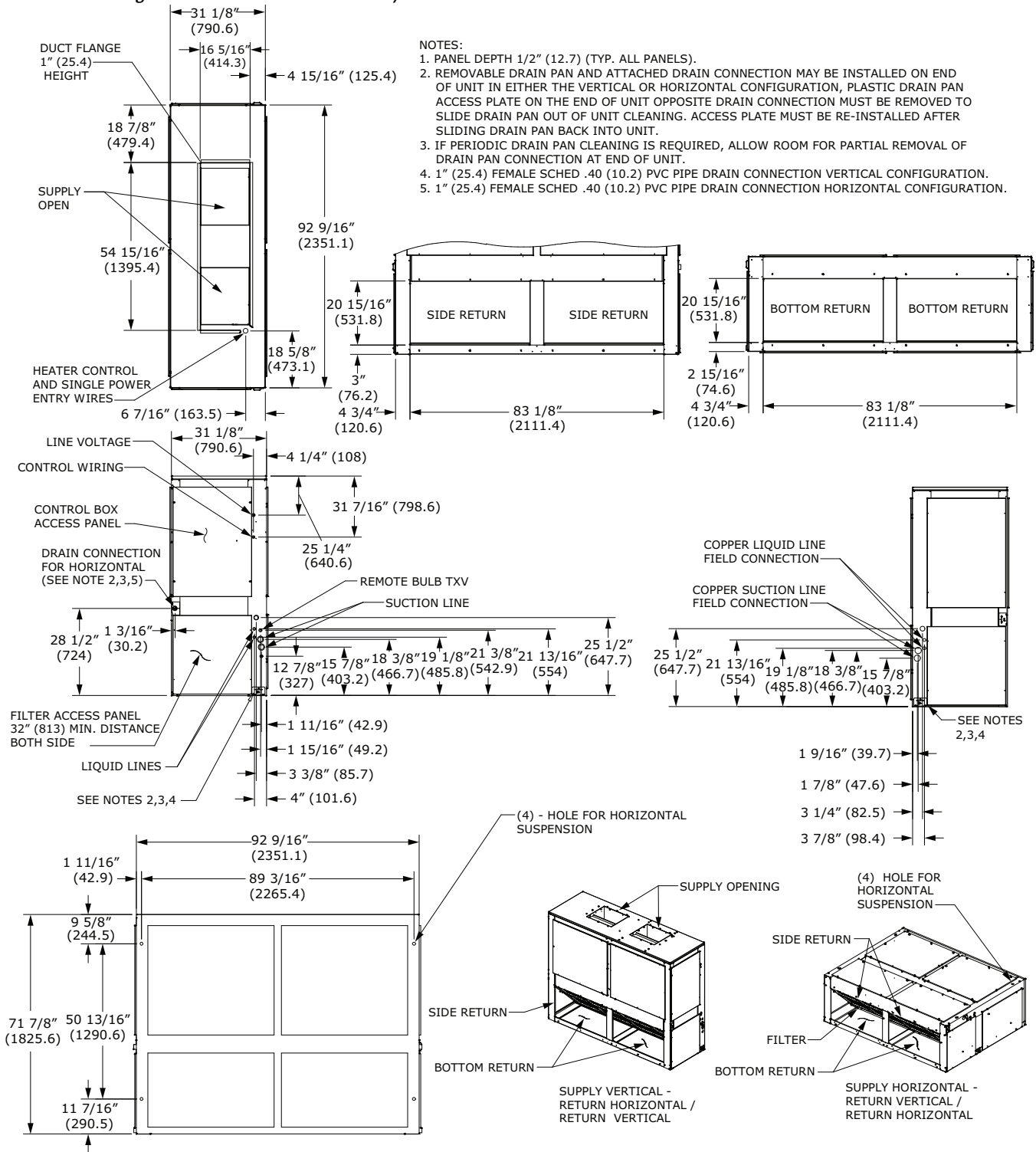
Note: Duct flange is a field-installed accessory.



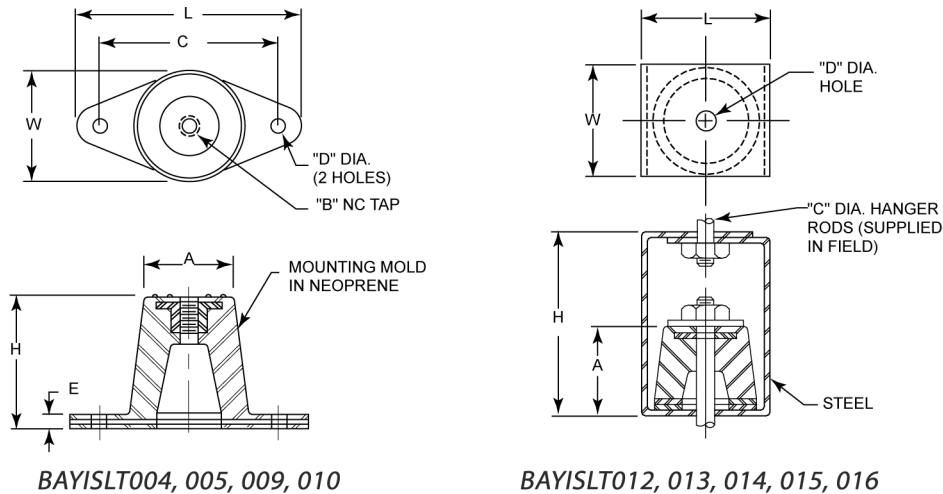
Dimensional Data

Figure 18. 16.7 ton air handler, dual circuit – in (mm)

Note: Duct flange is a field-installed accessory.



Accessories

Figure 19. Rubber isolator accessory dimensions

Table 85. Rubber isolator accessory dimensions – in (mm)

Model No.	L	W	H	A	B	C	D	E
BAYISLT004	3-1/8 (79.375)	1-3/4 (44.45)	1-1/4 (31.75)	1-1/4 (31.75)	3/8 (9.525)	2-3/8 (60.325)	3/8 (9.525)	1/4 (6.35)
BAYISLT005	3-7/8 (98.425)	2-3/8 (60.325)	1-3/4 (44.45)	1-3/4 (44.45)	3/8 (9.525)	3 (76.2)	3/8 (9.525)	1/4 (6.35)
BAYISLT009	3-7/8 (98.425)	2-3/8 (60.325)	1-3/4 (44.45)	1-3/4 (44.45)	3/8 (9.525)	3 (76.2)	3/8 (9.525)	1/4 (6.35)
BAYISLT010	3-7/8 (98.425)	2-3/8 (60.325)	1-3/4 (44.45)	1-3/4 (44.45)	3/8 (9.525)	3 (76.2)	3/8 (9.525)	1/4 (6.35)
BAYISLT013	2-1/4 (57.15)	2 (50.8)	3 (76.2)	1-3/8 (34.925)	3/4 (19.05)	3/8 (9.525)	1/2 (12.7)	—
BAYISLT014	2-1/4 (57.15)	2 (50.8)	3 (76.2)	1-3/8 (34.925)	3/4 (19.05)	3/8 (9.525)	1/2 (12.7)	—
BAYISLT015	2-1/4 (57.15)	2 (50.8)	3 (76.2)	1-3/8 (34.925)	3/4 (19.05)	3/8 (9.525)	1/2 (12.7)	—
BAYISLT012	3 (76.2)	2-1/4 (57.15)	4-1/2 (114.3)	1-7/8 (47.625)	1/4 (6.35)	5/8 (15.875)	3/4 (19.05)	—
BAYISLT015 ^(a)	3 (76.2)	2-1/4 (57.15)	4-1/2 (114.3)	1-7/8 (47.625)	1/4 (6.35)	5/8 (15.875)	3/4 (19.05)	—
BAYISLT016	3 (76.2)	2-1/4 (57.15)	4-1/2 (114.3)	1-7/8 (47.625)	1/4 (6.35)	5/8 (15.875)	3/4 (19.05)	—

Note: BAYISLT015 contains a quantity 2 of the 2-1/4 x 2 x 3 isolators and quantity of 3 of the 3 x 2-1/4 x 4-1/2 isolators.

Dimensional Data

Figure 20. Spring isolator accessory dimensions – in (mm)

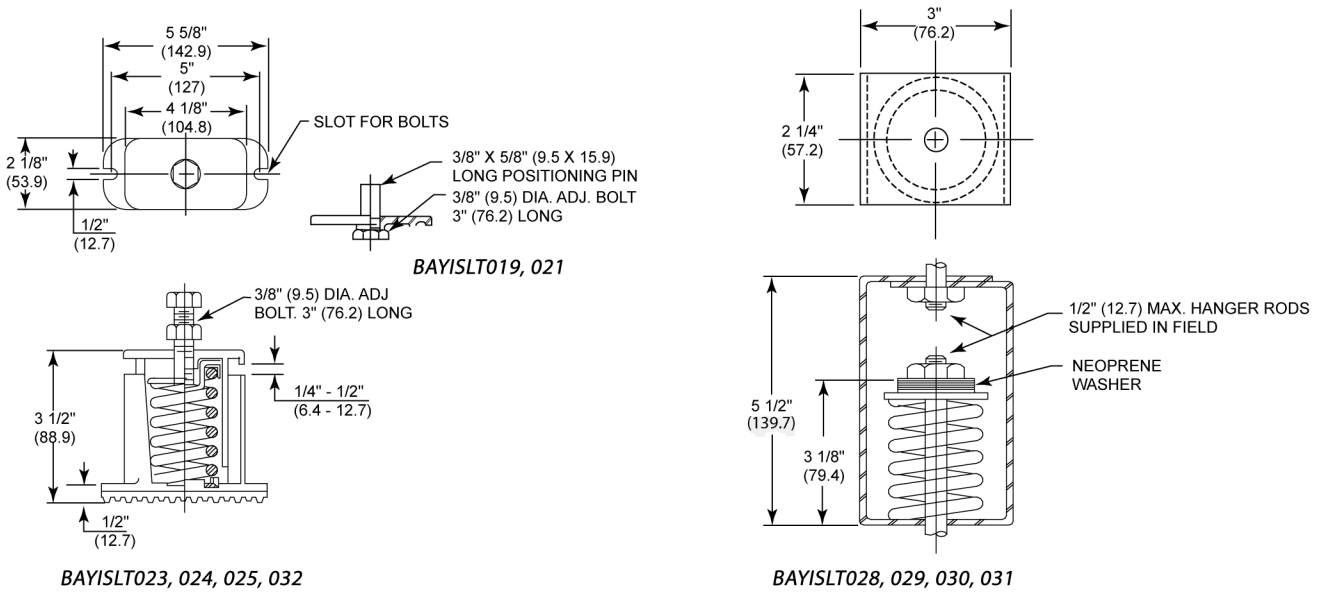


Figure 21. Electric heater accessory for 4.6-8.3 ton air handlers – in (mm)

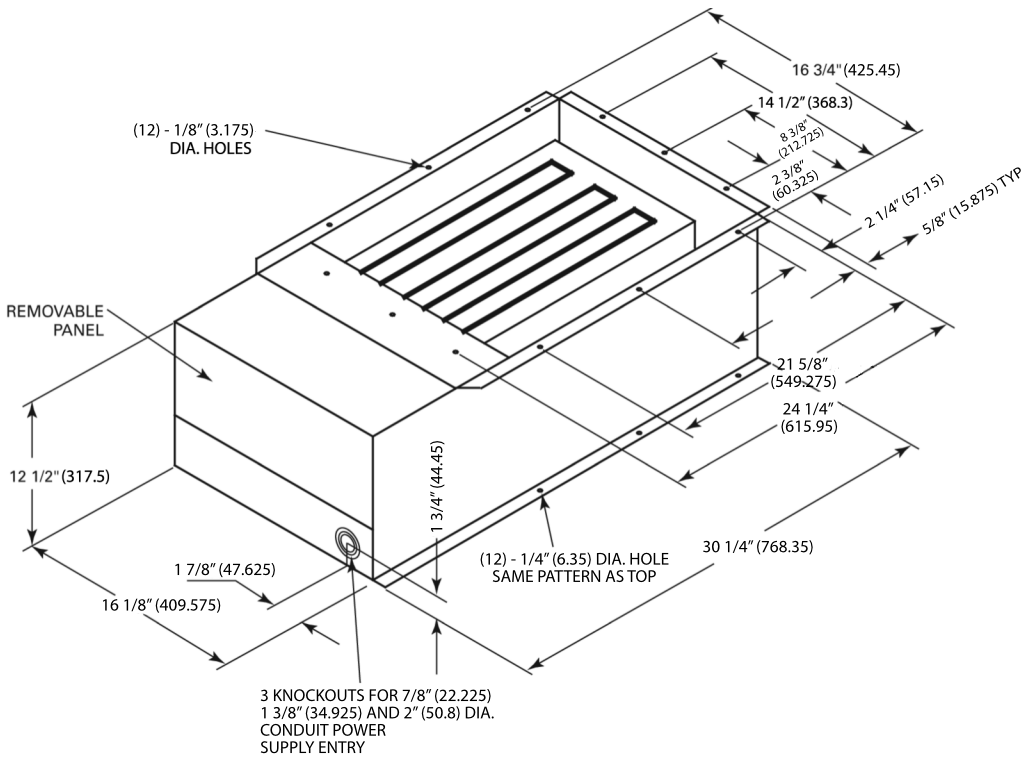
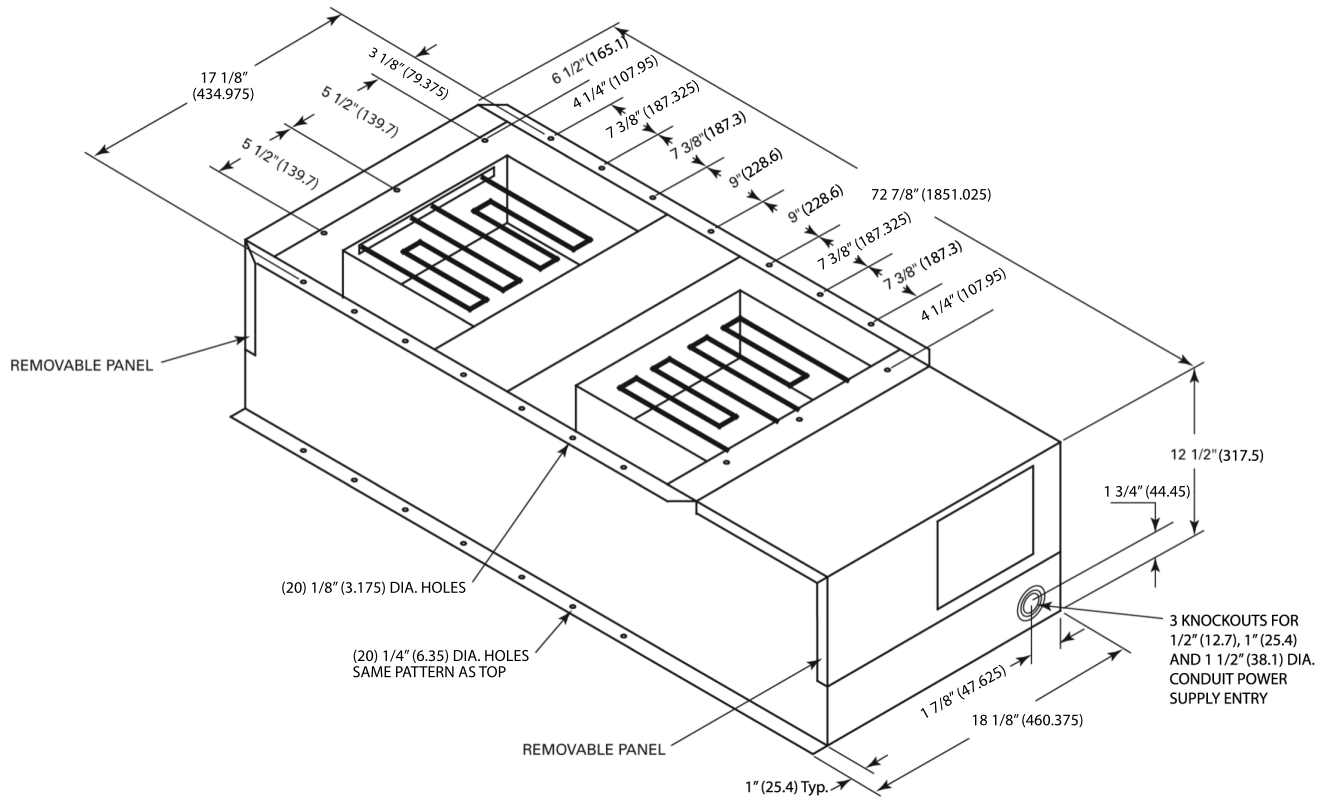
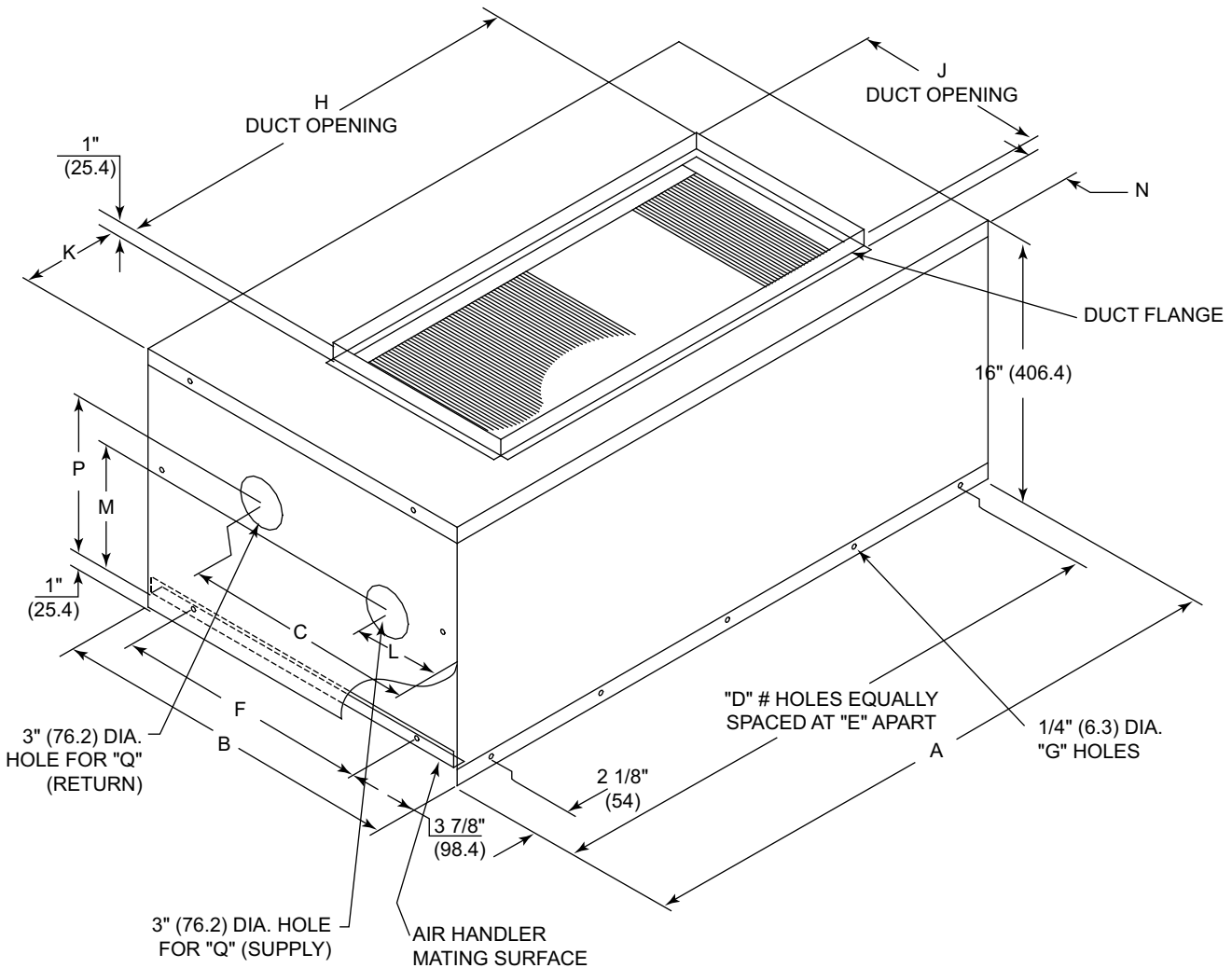


Figure 22. Electric heater accessory for 10.4-16.7 ton air handlers – in (mm)



Dimensional Data

Figure 23. Hot water coil accessory – in (mm)



Note: Duct flange available as kit. See accessories chapter for details.

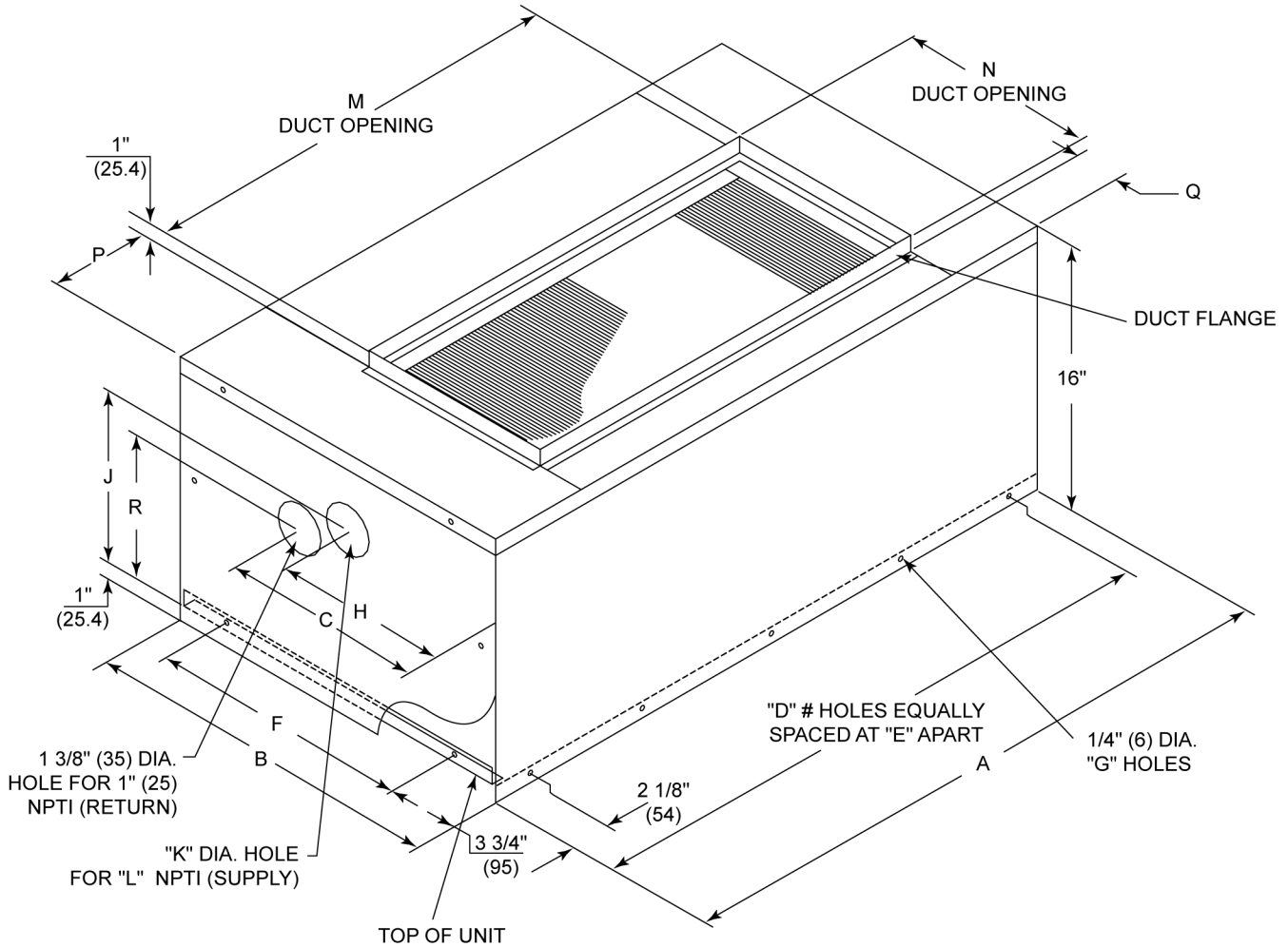
Table 86. Hot water coil accessory – in (mm)

Model No.	A	B	C	D	E	F	G	H
BAYWATR027	38.14 (969)	22.74 (576)	13.74 (349)	5 (127)	9 (229)	13.65 (347)	16 (406)	26 (660)
BAYWATR028	47.74 (1213)	25.74 (654)	15.95 (405)	5 (127)	10.84 (275)	17.17 (436)	16 (406)	30 (762)
BAYWATR029	63.84 (1621)	25.74 (654)	15.95 (405)	6 (152)	11.84 (301)	17.16 (436)	18 (457)	36 (914)
BAYWATR030	79.74 (2025)	29.18 (741)	14.36 (365)	8 (203)	10.85 (276)	19.67 (500)	22 (559)	51 (1295)
BAYWATR031	92.74 (2356)	31.24 (793)	16.48 (419)	8 (203)	10.85 (276)	19.67 (500)	22 (559)	64 (1626)
Model No.	J	K	L	M	N	P	Q	
BAYWATR027	12 (305)	6 (152)	4.94 (125)	7.79 (198)	2.88 (73)	10.24 (260)	2 NPT (51) NPTI	
BAYWATR028	18 (457)	8.88 (225)	8.45 (215)	10.27 (261)	2.88 (73)	7.77 (197)	2.5 NPTI (64) NPTI	
BAYWATR029	18 (457)	13.88 (352)	8.45 (215)	10.03 (255)	2.88 (73)	7.58 (192)	2.5 NPTI (64) NPTI	
BAYWATR030	18 (457)	14.25 (362)	6.86 (174)	9.91 (252)	1.88 (48)	7.41 (188)	2.5 NPTI (64) NPTI	

Table 86. Hot water coil accessory – in (mm) (continued)

Model No.	J	K	L	M	N	P	Q
BAYWATR031	18 (457)	14.25 (362)	8.98 (228)	9.88 (251)	3.75 (95)	7.38 (187)	2.5 NPTI (64) NPTI

Note: Hot Water Coil Dimensions - inches (millimeters)

Figure 24. Steam coil accessory – in (mm)


Note: Duct flange available as kit. See accessories chapter for details.

Table 87. Steam coil accessory – in (mm)

Model No.	A	B	C	D	E	F	G	H	J	K
BAYWATR022	38.14 (969)	22.74 (577)	14.32 (364)	5 (127)	9 (229)	13.67 (347)	16 (406)	10.88 (276)	11.17 (284)	2 (51)
BAYWATR023	47.74 (1212)	25.74 (654)	20.14 (511)	5 (127)	10.84 (275)	17.17 (436)	16 (406)	10.88 (276)	11.17 (284)	2 (51)
BAYWATR024	63.84 (1621)	25.74 (654)	20.14 (511)	6 (152)	11.87 (301)	17.16 (436)	18 (457)	13.70 (348)	10.57 (268)	2.5 (64)
BAYWATR025	79.74 (2025)	29.18 (741)	18.55 (471)	8 (203)	10.85 (275)	19.67 (500)	22 (559)	12.11 (308)	10.05 (255)	2.5 (64)
BAYWATR026	92.74 (2355)	31.24 (793)	20.67 (525)	8 (203)	10.85 (275)	19.67 (500)	22 (559)	14.23 (361)	10.01 (254)	2.5 (64)

Dimensional Data

Table 87. Steam coil accessory – in (mm) (continued)

Model No.	L	M	N	P	Q	R
BAYWATR022	1.5 (38)	26 (660)	12 (305)	6 (152)	2.87 (73)	9.95 (253)
BAYWATR023	2 (51)	30 (762)	18 (457)	8.87 (225)	2.87 (73)	9.95 (253)
BAYWATR024	2 (51)	36 (914)	18 (457)	13.87 (352)	2.87 (73)	9.13 (232)
BAYWATR025	2 (51)	51 (1295)	18 (457)	14.12 (359)	1.87 (48)	8.61 (219)
BAYWATR026	2 (51)	64 (1626)	18 (457)	14.12 (359)	3.75 (95)	8.58 (218)

Figure 25. Discharge plenum and grille accessory

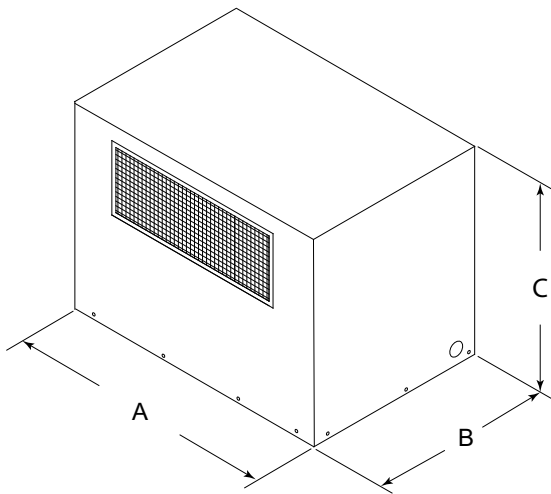
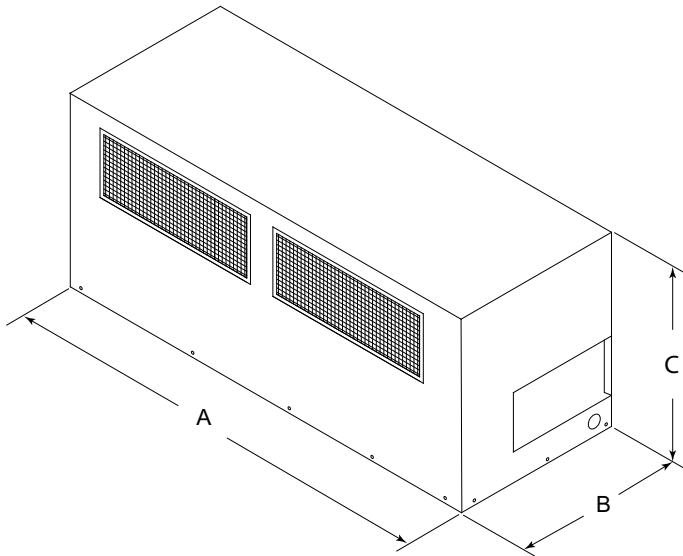


Table 88. Discharge plenum and grille dimensions – no heat – in (mm)

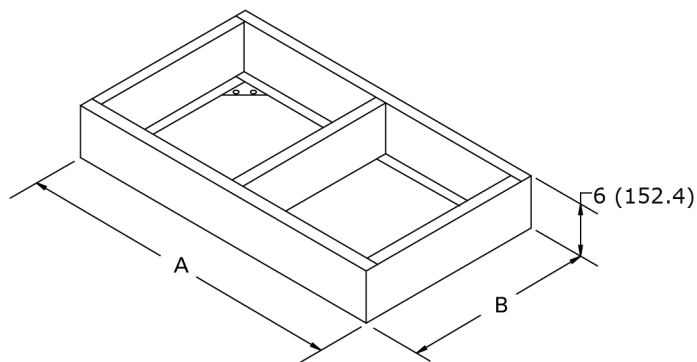
Unit	Model No. ^(a)	A	B	C
TWE051	BAYPLNM015	37.94 (963.6)	21.94 (557.2)	28 (711.2)
TWE072, TWE076	BAYPLNM016	47.5 (1206.5)	24.99 (634.7)	28 (711.2)
TWE101	BAYPLNM017	63.5 (1612.9)	24.99 (634.7)	28 (711.2)
TWE126, TWE156	BAYPLNM018 ^(b)	79.5 (2019.3)	27.63 (701.8)	22 (558.8)
TWE201	BAYPLNM019 ^(b)	92.5 (2349.5)	30.43 (772.9)	24 (609.6)

^(a) When installed horizontally, plenum/water coil must be self-supported.

^(b) For use with hydronic heat or no heat.

Figure 26. Discharge plenum and grille accessory

Table 89. Discharge plenum and grille dimensions (for use with electric heat) – in (mm)

Tons	Model No.	A	B	C
TWE051	BAYPLNM030	38.07 (967)	22.69 (576.3)	29.05 (738)
TWE072, TWE076	BAYPLNM031	47.86 (1216)	25.69 (652.5)	29.05 (738)
TWE101	BAYPLNM032	63.86 (1622)	25.69 (652.5)	29.05 (738)
TWE126, TWE156	BAYPLNM033	80.14 (2036)	29.10 (739.1)	35.11 (892)
TWE201	BAYPLNM034	92.96 (2361)	31.10 (789.9)	35.05 (890)

Figure 27. Subbase accessory – in (mm)

Table 90. Subbase dimensions – in (mm)

Tons	Model No.	A	B
TWE051	BAYBASE009	38 (965.2)	22.63 (574.8)
TWE072, TWE076	BAYBASE010	47.5 (1206.5)	25.51 (648.0)
TWE101	BAYBASE011	63.5 (1612.9)	25.52 (648.2)
TWE126, TWE156	BAYBASE012	79.5 (2019.3)	29.04 (737.6)
TWE201	BAYBASE013	92.5 (2349.5)	31.14 (791.0)

Weights

Heat Pump Condenser

Table 91. TWA R-410A unit and corner weights – kg (50 Hz)

Tons	Model No.	Shipping Max (kg)	Net Max (kg)	Corner Weights			
				1	2	3	4
5	TWA0604DA	163	148	50	38	25	34
	TWA0604DD	185	159	54	38	41	26
6.25	TWA0764DA	173	150	37	53	27	33
	TWA0764DD	209	183	63	44	47	30
8.33	TWA1014DA	224	211	74	49	53	34
	TWA1014DD	215	195	67	46	50	32
13	TWA1564DD	395	344	106	75	89	74
16.7	TWA2014DD	453	382	114	120	67	82

Figure 28. TWA060, 076, 101

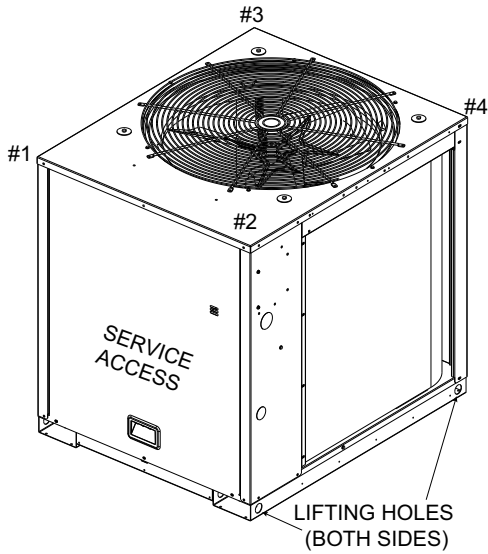
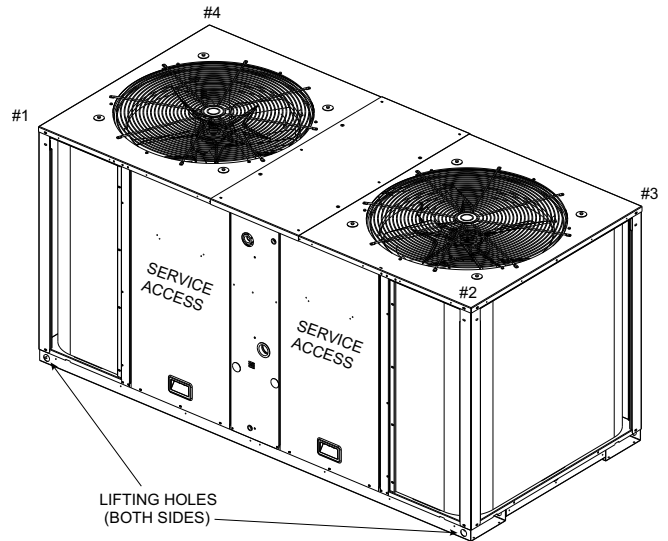


Figure 29. TWA156, 201



Air Handler

Table 92. Constant volume air handler (TWE) – unit and corner weights - (50 Hz)

1	2	3	4	1	2	3	4				
4.6	TWE0514DA	285	232	55	71	51	55	54	67	50	61
6	TWE0724DB	385	323	67	99	75	82	56	92	87	88
6.25	TWE0764DA/B	385	323	67	99	75	82	56	92	87	88
8.33	TWE1014DA/B	441	393	77	121	110	85	79	118	77	119
10.4	TWE1264DB	753	676	168	192	181	135	196	164	145	171
13	TWE1564DB	752	675	167	192	181	135	196	163	145	171
16.7	TWE2014DB	912	818	258	168	161	231	256	181	146	235

Figure 30. Vertical – TWE051, 072, 076, 101

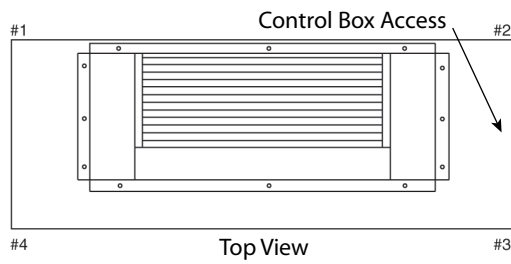


Figure 31. Vertical – TWE126, 156, 201

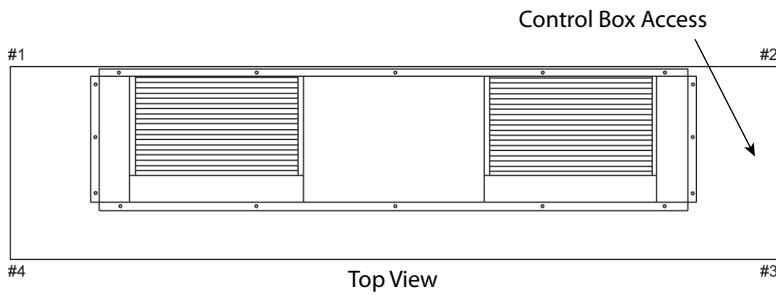
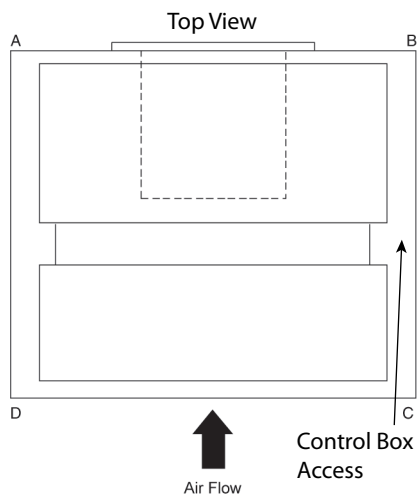
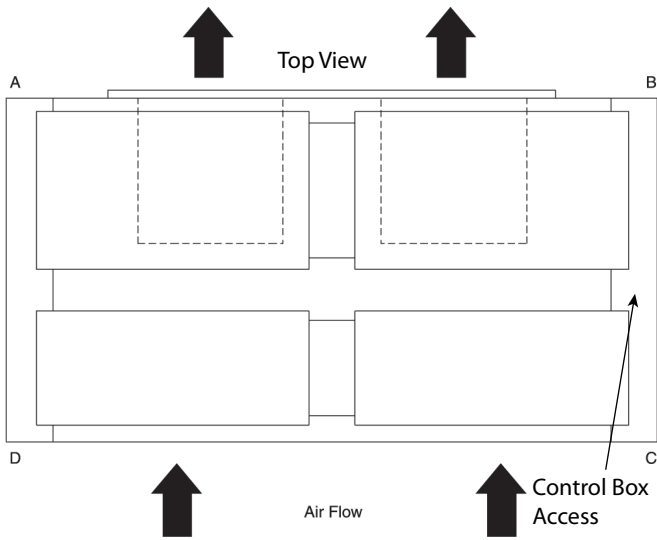


Figure 32. Horizontal – TWE051, 072, 076, 101



Weights

Figure 33. Horizontal – TWE126, 156, 201



Accessories

Table 93. Accessory weights (net lbs.)

Unit Used w/ Tons	Hot Water Coil	Steam Coil	Discharge Plenum and Grille with Hydronic Heat	Discharge Plenum and Grille without Heat	Discharge Plenum and Grille with Electric Heat	Return Air Grille	Electric Heat Min/Max	Subbase	Oversized Motor	RIS Isolator Floor Mount
5	86	94	63	58	115	3	32/43	14.4	31	2
6.25	116	131	78	73	160	5	27/45	19.4	48	2
8.33	165	148	97	92	195	7	27/45	23.5	50	2
10.4	211	234	—	230	235	10	79/100	28.4	80	2
13	211	234	—	230	235	10	79/100	28.4	80	2
16.7	242	261	—	145	265	12	79/100	31.7	88	2
Unit Used w/ Tons	RIS Isolator Suspended Mount	Steel Spring Isolator Floor Mount	Steel Spring Isolator Suspended Mount	Hail Guard	Control Transformer	Sensors	Expansion Module	Low Ambient	Service Valve	
5	9	12	6	21	4	—	13	13	5	
6.25	6	12	6	21	4	—	13	13	5	
8.33	7	12	6	28	4	—	13	13	5	
10.4	7	12	6	33	4	—	13	13	5	
13	7	12	6	55	4	—	2	2	5	
16.7	9	12	6	55	4	—	2	2	5	



Mechanical Specifications

Condensing Units

Standard Features

General

- Weatherproofed steel mounting/lifting rails
- Hermetic scroll compressors
- Plate fin condenser coils
- Fans and motors
- Standard operating range 50-125°F (min. 0°F with low ambient accessory)
- Nitrogen holding charge

Casing

- Zinc coated, heavy gauge, galvanized steel
- Weather resistant baked enamel finish
- Meets ASTM B117, 672 hour salt spray test
- Removable single side maintenance access panels
- Lifting handles in maintenance access panels
- Unit base provisions for forklift and/or crane lifting

Refrigeration System - Single Compressor (TWA060**A, TWA076**A, TWA101**A)

- Single refrigeration circuit with integral subcooling circuit
- Single direct drive hermetic scroll compressor
- Suction gas-cooled motor w/ $\pm 10\%$ voltage utilization range of unit nameplate voltage
- Reversing valve
- Crankcase heater
- Internal temperature and current sensitive motor overloads
- No compressor suction and/or discharge valves (reduced vibration/sound)
- Factory installed liquid line filter drier
- Phase loss/reverse rotation monitor
- External high pressure cutout device
- External low pressure cutout device
- Evaporator defrost control
- Loss of charge protection (discharge temperature limit)

Refrigeration System - Dual Compressor (TWA060**D, TWA076**D, TWA101**D, TWA156**D, TWA201**D)

- Two (2) separate and independent refrigerant circuits
- Each refrigeration circuit equipped with integral subcooling circuit
- Two (2) direct drive hermetic scroll compressor
- Suction gas-cooled motors w/ $\pm 10\%$ voltage utilization range of unit nameplate voltage
- Reversing valves
- Crankcase Heaters
- Internal temperature and current sensitive motor overloads
- Factory installed liquid line filter driers
- Phase loss/reverse rotation monitor
- No compressor suction and/or discharge valves (reduced vibration/sound)
- External high pressure cutout devices
- External low pressure cutout devices
- Evaporator defrost control
- Loss of charge protection (discharge temperature limits)

Condenser Coil (Fin and Tube)

- 3/8" internally enhanced copper tube
- Mechanically bonded to lanced aluminum plate fins
- Factory pressure and leak tested to 660 psig
- Perforated steel hail guards available (factory installed option or field installed accessory)

Condenser Fan

- 26" or 28" propeller fan(s)
- Direct drive
- Statically and dynamically balanced

Condenser Motor(s)

- Permanently lubricated totally enclosed or open construction
- Built-in current and thermal overloads
- Ball or sleeve bearing type

Controls

- Centralized microprocessor
- Indoor and outdoor temperature sensors drive algorithms, making decisions for all heating, cooling, and ventilation
- Integrated anti-short cycle timer
- Integrated time delay between compressors
- Completely internally wired
- Colored and keyed connectors and colored wires
- Contactor pressure lugs or terminal block
- Unit external mounting location for disconnect device
- Single point power entry

Factory Installed Options**Hail Guards**

- Condenser coil protection from hail, vandals, etc.
- Perforated, painted galvanized steel
- Factory or field installed

Black Epoxy Coated Condenser Coil (Fin and Tube)

- Thermoset vinyl coating
- Bonded to aluminum fin stock (prior to fin-stamping process)
- Economical protectant in mildly corrosive environments

BACnet Communication Options

- BACnet MS/TP -BACnet IP
- Allows unit communication with Trane or generic BACnet building automation controls

Advanced Diagnostics and LonTalk Communication Interface

- Factory or field installed
- Allows unit communication as a Tracer Lon® device
- Allows unit communication with generic LonTalk® Network building automation controls

Field Installed Options**Low Ambient (Fan ON/OFF)**

- Provides unit cooling operation to outdoor ambient of 0°F
- Low cost solution
- Discharge pressure controls condenser fan operation



Mechanical Specifications

Service Valves

- Liquid line service valve (with gauge port)
- Suction line service valve (with gauge port)

Vibration Isolators

- Neoprene-in-shear or spring flex choice
- Reduce vibration transmission to building structures, equipment, and adjacent spaces
- Reduce noise transmission to building structures, equipment, and adjacent spaces

Zone Sensor

- Interfaces with microprocessor units
- Manual or automatic programmable
- System malfunction lights
- Remote sensor options

Thermostat

- 1H/1C available
- 2H/1C available
- Manual or automatic changeover available
- Programmable and non-programmable solutions available

LonTalk Communication Interface

- Factory or field installed
- Allows unit communication as a Tracer Lon® device
- Allows unit communication with generic LonTalk® Network building automation controls

Air Handlers

Standard Features

General

- Completely factory assembled
- Convertible for horizontal or vertical configuration
- Convertible for cooling only or heat pump application
- Convertible for left or right external connections (refrigerant and/or electrical)
- Convertible for front or bottom air return
- Nitrogen holding charge

Casing

- Zinc coated, heavy gauge, galvanized steel
- Weather resistant baked enamel finish
- Access panels with captive screws
- Completely insulated with foil faced, cleanable, fire retardant, permanent, odorless glass fiber material
- Captured or sealed insulation edges
- Electrical connection bushings or plugs
- Refrigerant connection bushings or plugs
- Withstand elevated internal static pressure

Refrigeration System

- Single or dual circuit
- Distributor(s)
- Thermal expansion valves (TXVs)

Evaporator Coil

- 3/8" internally enhanced copper tube mechanically bonded to lanced aluminum plate fins

- Factory pressure and leak tested to 449 psig.
- Draw-through airflow
- Dual circuits are interlaced/intertwined
- Double sloped, removable, cleanable, composite drain pan
- Four drain pan positions

Indoor Fan

- Double inlet, double width, forward curved, centrifugal type fan
- Dual fans on 10.4 – 16.7 ton air handlers
- Adjustable belt drive
- Permanently lubricated bearings

Indoor Motor

- Adjustable motor sheaves (constant volume units)
- Thermal overload protection
- Permanently lubricated bearings
- Meet energy policy of 1992 (EPACT)
- Optional oversized motors for high static applications

Controls

- Completely internally wired
- Colored and keyed connectors, colored wires
- Magnetic indoor fan contactor
- Detachable low voltage connectors
- Single point power entry
- Evaporator defrost control

Filters

- Access from side coil panels
- Filters slide on rack
- One inch (1"), throwaway filters on 4.6 - 8.33 ton units
- Filter rack convertible to two inch (2") capability on 4.6 - 8.33 ton units
- Two inch (2"), throwaway filters on 10.4 - 16.7 ton units

Field Installed Options**Electric Heaters**

- Heavy duty nickel chromium elements
- Installs directly on fan discharge
- One or two stage control (dependent upon capacity)
- Single point power entry
- Terminal strip connections
- Heaters
 - Internally wye connected
 - Automatic line break high limit controls with secondary single action disc limits

Hydronic Heat Coils

- One row steam
- Two row hot water
- Installs directly on fan discharge
- Heavy gauge sheet metal casing matches air handler
- Convertible for horizontal or vertical configurations

Discharge Plenums and Grilles

- Vertical, free discharge applications
- Heavy gauge sheet metal casing matches air handler



Mechanical Specifications

- Satin-finished, 4-way adjustable louver grilles

Return Air Grilles

- Vertical, free discharge applications
- Satin-finished, non-adjustable louver grilles
- Replaces front lower access panel

Mounting Sub-Base

- Vertical floor mount configuration requirement
- Heavy gauge sheet metal casing matches air handler
- Provides additional clearance for condensate drain trapping
- Required when isolators are used

Vibration Isolators

- Neoprene-in-shear or spring flex choice
- Floor or suspended applications
- Reduce vibration transmission to building structures, equipment, and adjacent spaces
- Reduce noise transmission to building structures, equipment, and adjacent spaces

Oversize Motors

- High static applications
- Motor, sheaves, belt included

Filters

- 2 inch, MERV 13 high efficiency filters



Notes

Trane - by Trane Technologies (NYSE: TT), a global innovator - creates comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit trane.com or tranetechnologies.com.

Trane has a policy of continuous product and product data improvements and reserves the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.

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